NEWCRETE INVESTMENTS LTD.
BLACK MOUNTAIN NORTH QUARRY

Environmental Assessment Registration Document

Submitted by:
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1.0 NAME OF UNDERTAKING

Black Mountain North Quarry Permit Application

- Quarry Permit Identification
  - File 711:12143 covering 116.6 ha
- Environmental Assessment Registration Identification
  - File Reference No. 200.20.2616

2.0 PROPONENT

2.1 Name of Corporate Body

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3.0 THE UNDERTAKING

3.1 Nature of the Undertaking

The proposed project, referred to as the Black Mountain North Quarry, is a 116.6 ha quarry application area that sits within the region of Black Mountain Pond on the Avalon Peninsula, on NTS map sheet 1N/06 (**Figure 1**). The project will be developed under a quarry lease for sourcing sand and gravel material to supply Newcrete Investment Ltd. 's (Newcrete) aggregate and concrete production operations within the Avalon Peninsula and other parts of the province.

3.2 Purpose/Rationale/Requirement for the Undertaking

The oldest company in the Newcrete Partnership has been supplying ready-mix concrete to the Newfoundland market for over 70 years. In that time, the company has perfected a range of products and services for the benefit of the Newfoundland market. Newcrete has determined that the key factor for the success of their business is to maintain the quality of their concrete products, which is only achievable by sourcing aggregate material of a consistently high quality. Newcrete's goal is to continue to serve the ready-mix needs of Newfoundland for another 70 years and beyond. To achieve this goal, Newcrete employed a team for over a decade to explore, delineate and test sites to determine what aggregate material makes the highest quality concrete products. The result of all of this work is the discovery and the confirmation of the desirable aggregate quality found in the Black Mountain North deposit.

Newcrete employs 200 people in peak season, supplying ready-mix concrete for residential housing, commercial buildings, bridges, gravity base oil platforms, and other critical infrastructure projects in the province. Newcrete prides themselves on providing products and services in the safest, greenest and most cost-effective way possible. In order to maintain this, Newcrete has developed processing infrastructure at their current quarry lease in the Black Mountain Pond area (File #711:7544 / Lease #114308, **Figure 2**) that will continue to be used as the Black Mountain North quarry comes into production. Utilizing the current processing area while aggregate material is produced from the Black Mountain North application area will create a 'closed loop' flow of operations that eliminates the need for unprocessed aggregate to be trucked on public roads, thus increasing public safety, greatly reducing the projects carbon footprint and maximizing cost efficiency.

Newcrete has projected that the demand for their products will continue to grow significantly in the coming years. 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.

The aggregate materials produced on site will consist of, but are not limited to, concrete sand, blending sand, winter sand, Class A, Class B and 10 mm -14 mm stone. All glaciofluvial materials will be utilized where possible.

Currently, an excavator trail branches from a quarry haul road off the western end of Incinerator Road, which travels southwest to Newcrete's other quarries in the immediate area. This excavator trail, created to complete exploration test pit work, connects with an unlicensed ATV path that travels ~ 2.8 km north, through the center of the lease area and connects with Legion Road ~ 900 m north of the quarry area boundary (**Figure 2**). The construction of a ~ 480 m long haul road is proposed for the main quarry access (**Figures 3** and **4**). This proposed access road location will be applied for under a Crown Title License to Occupy (LTO) once the quarry application has moved to the stage of drafting and submitting a Quarry Lease Plan as required by the Department of Industry, Energy and Technology (DIET).

It is important to note that the ATV trail and public access to the areas north of the quarry will be maintained by Newcrete, who will relocate the ATV trail ~ 6 m outside the eastern lease boundary. The 6 m step out area will also include a 2 m wide security berm in order to restrict all public access to the quarry development areas (**Figures 3, 4** and **8**). The ATV trail reaches a dead end at the southern portion of the quarry area, and as such, impacts will be limited to users of the trail in the area. A depiction of the access road is presented on ***Figure 4***, and the construction of the access road is addressed in ***Section 4.3.1*.** The relocation and maintenance of the ATV trail is addressed in ***Section 4.3.2*** and a depiction of the relocated ATV trail with its associated features of interest are shown on ***Figure 8***.

The site will be quarried in segmented development block areas, and not all at once. Only ground within the active block footprint area will be developed at a time, limiting the overall disturbance within the lease area. The development blocks shown on ***Figure 9*** are preliminary in nature and do not represent the final production plan. The construction, 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 immediately northeast of Black Mountain Pond, ~ 1 km northwest of Incinerator Road off the Foxtrap Access Road. The immediate area has a long history of quarry development including the currently operating Pennecon Heavy Civil quarry (File #711:5364), Fairview Investments quarry (File # 711:6043) and two quarry areas operated by Newcrete (quarry Lease #114308 and quarry Permit #114931) located ~ 800 m south of the quarry area boundary. Platinum Construction Ltd.'s quarry permit application area, which has been released from EA review (File #711:11995), sits

~ 2.5 km to the east of the quarry (**Figure 2**). Two operational quarry permit areas are located ~ 1.5 km to the west, held by MacMix Concrete (File # 711:11039) and Butler's Sand and Stone Co. (File #71111746).

The quarry application area lies within the municipal boundary of the City of St. John's (within the City's former Rural (R) Zone) and within the Provincial Governments, Department of Fisheries, Forestry and Agriculture Forestry (F) Zone, in a domestic cutting area. (**Figure 2**). Originally, Newcrete Investments Limited applied in May of 2017 for a 130.2 ha quarry area in the current project location. This quarry area was denied by the City of St. John's Municipal Planning Department and by the Provincial Government of Newfoundland and Labrador's Department of Fisheries, Forestry and Agriculture, Forestry Division. After discussions with the Forestry Division and the completion of a Forest Cataloguing Study by Wildland Associates Limited (as discussed in **Section 4.2.3**), the Forestry Division gave approval to proceed in March of 2018.

The City of St. John's Municipal Planning Department initially denied the original quarry application as the 130.2 ha project area was zoned under a Rural (R) Zone. After the quarry area boundary was reduced to 117.7 ha in size, it was rezoned as a Mineral Workings (MW) Zone on June 8, 2023 by the city of St. John's Municipal Planning Department, allowing the application process for the quarry to proceed. In order to properly accommodate the relocated ATV trail, the quarry lease are was reduced to its current size of 116.6 ha. This was done following the initial EA draft review notes from Mineral Lands that were received by Newcrete in November of 2023.

As there are ongoing operational quarries and areas that are being progressively rehabilitated, the sand/gravel extraction and processing activities within the quarry are not anticipated to have an effect on nearby receptors any more than current operations in the region. The receptors near the project are shown on ***Figure 5*** and include industrial business areas, land held under Crown Titles and farmland. The closest receptor is an area of partially cleared land held by Robert Keith Brake under Crown Title #124144 which lies ~ 625 m to the north.

Roughly 25 ha of private farmland sits between ~ 850 m and ~ 1.3 km to the west of the project area held under Crown Title #71956 by Boyd Scott, Crown Title #131425 held by Bradley Terry Scott, and Crown Titles #125568 and #122520 held by Patrica Jefford (**Figure 5**). The other receptor areas consist of Newco Metal's auto recycling facility, located ~ 1.25 km southeast of the project area and the Offshore Safety and Survival Center, located ~ 800 m southeast of the project area, off Incinerator Road. The Trans Canda Highway is located over 2.2 km to the south of the lease area.

4.2 Physical Features

4.2.1 Project Site Description

The project area encompasses the majority of Black Mountain, with the peak sitting within the central to north area of the project at ~ 189 m asl (above sea level). The topography of the mountain exhibits elevations decreasing radially outward from the peaked area to ~ 118 m asl along the edge of Black Mountain Pond in the southwest. Development will occur from the south in the more low-lying areas and will progress towards the higher land to the north.

Black Mountain Pond is located 50 m southwest of the quarry area boundary, with a small stream from the pond flowing north-northwest, extending away from the lease boundary (**Figures 2** and **3**). The quarry area boundary was adjusted so that Black Mountain Pond and its associated stream were located 50 m from the application area, allowing development to maintain the 50 m buffer to watercourses as required by the Department of Industry, Energy and Technology, Mineral Lands Division.

The City of St. John's has designated multiple areas as wetlands that are scattered throughout the Black Mountain region. As with watercourses and waterbodies, the quarry application boundary was adjusted to maintain the required 50 m buffer to all wetlands within the area, this is indicated by the yellow buffer lines shown on ***Figures 2*** and ***3***. As the quarry area is host to completely undeveloped green space, it will require site clearing as discussed in ***Section 4.3.2***.

From an aggregate resource perspective, 143 test pits completed across the project area from 2013 to 2015 revealed that a thick wedge of high-quality aggregate material has been deposited from the southeast towards the northwest. This aggregate material meets CSA specifications for concrete aggregate and there is a significant resource present. This material will provide a long-term supply of sand and gravel for the Northeast Avalon within a relatively small footprint. A large outcrop of bedrock is noted to sit adjacent to the peak of Black Mountain in the northwestern portion of the quarry area in front of the development start point in the south. This outcropped area will provide a visual block of the quarry operations looking from the north, as discussed in ***Section 4.2.4***.

4.2.2 Forest Cataloging and Site Restoration Study

Newcrete Investments entered discussions with the Department of Fisheries, Forestry and Agriculture, Forestry Division regarding the location of the lease within a domestic cutting area and the initial rejection of the application by the Department. It was agreed that both parties would explore offset tree planting in other areas outside the lease area and access would be maintained from the north into the undeveloped portion of the quarry area for domestic cutting. A Forest Cataloging Study and Site Restoration Report was completed by Wildland Associates Limited in January of 2017.

This forest density report was completed by Mr. Bruce A. Roberts, a Registered Professional Forester and Senior Research Ecologist. Mr. Roberts completed several field visits to the site in order to carry out a specific and detailed cataloging of present tree species across the project area. This also included the search for possible species of concern such as the globally rare Boreal Felt Lichen (BFL), of which none was found.

The study determined that the existing forest cover is composed primarily of black spruce, and eastern larch with some white spruce and balsam fir. Although balsam fir was at one point a more dominant species in the region, many mature trees in the study area were dead from insect kill in the 1980's. The report also noted that there was extensive blow-down (~ 30%) of mature balsam fir, white spruce, black spruce, and eastern larch in the area, which was attributed to hurricane Igor. Mr. Roberts' report considered the options for an optimal restoration of the area which he indicated could be successfully done through direct seeding and planting by knowledgeable groups such as Forest Without Borders or Tree Canada. The rehabilitation plans for the quarry area will be addressed during the drafting of the quarry lease plans required by DIET for approval before any site work can occur.

4.2.3 Existing Biophysical Environment

The site is located within the *Northeastern Barrens Subregion* of the *Maritime Barrens Ecoregion*. The climate of this ecoregion is heavily influenced by the Atlantic Ocean, which is characterized by short, cool summers and generally wet, moderate winters. The mean annual temperature is 5.5°C, with a mean summer temperature of 11.5°C and a mean winter temperature of -1°C. This ecoregion is generally host to high precipitation amounts with annual ranges from 1200 mm to over 1600 mm. It is also susceptible to prolonged periods of fog throughout the year.

The topography of this region is characterized by abrupt elevation changes along the coast with the rugged and rocky coastlines rising from sea level to over 250 m above sea level. The uplands are also rocky and jagged due to erosion while some low-lying areas have a rolling topography. Lichen and various mosses, including sphagnum moss, grow across low lying boggy areas. Conditions in this broad ecoregion are suitable for red fox, coyote, moose, and to a lesser extent black bear and lynx.

4.2.4 Site Visibility

Elevations within the quarry lease boundary range from ~ 189 m at the rock outcrop in the north-northwest, to ~ 118 m along the edge of Black Mountain Pond in the southwest. The southern end of the quarry, where development operations will begin, lies between ~ 120 m – 130 m while the eastern boundary runs between ~ 132 m and 170 m.

The southern edge of the Town of Conception Bay South (CBS) is roughly between 20 m and 80 m in elevation and is located over 2.6 km north of the lease area at its closest

point. Visibility of the site's working/development areas will be obscured from northern sightlines, as quarry operations will begin at the lower elevations in the southern end of the quarry lease. The height of land from the northern outcrop area (~189 m) will generally hide the southern working areas (~125 m), as production will carry quarry faces towards the north-northwest maintaining the height of land ahead of development (**Figure 6**). Furthermore, development may not reach the north-northwestern quarry area for many years, as development will likely progress in 5 - year increments from the south.

The Trans-Canda Highway is located over 2.2 km from the southern quarry lease boundary at its closest point. During the early stages of development, quarry working areas will be temporarily visible, however progressive reclamation operations will be actively undertaken for each exhausted development block area. As production progresses towards the north-northwest, the disturbed ground from the previously exhausted block will undergo the sloping of quarry faces and re-spreading of grubbing material, as discussed in ***Section 4.7***. This will limit the amount of disturbed ground that will be visible from the south at any one point. This portion of the highway also passes much closer to other visible developed quarry sites within 150 m and industrial business areas along Incinerator Road, adjacent to the lease area, as shown on ***Figure 7***.

To further soften the visual impact on the immediate area, Newcrete is currently undertaking the rehabilitation of the disturbed ground along the southern boundary of the Black Mountain Pond West (BMPW) quarry lease area (File # 711:7544, **Figure 7**). Additionally, Newcrete will be infilling and rehabilitating exhausted areas within the south and central portion of the BMPW quarry within the next 5 years, as dictated within Newcrete Investments Quarry Lease Development, Rehabilitation and Closure Plans submitted November 1, 2022.

Towards the east, the Foxtrap Access Road sits over 2.5 km away from the lease boundary at its closet point. Site visibility from the east will be variable, with sightlines further north-east being obscured by the elevation of the northern outcrop area, and visibility from the southeast being similar to that of the highway.

The western portion of the Peacekeepers Way/Conception Bay Highway and Daniels Road are located over 3.5 km west of the lease area. Visibility from these areas in the west is anticipated to be minimal in nature as elevations in the area generally decrease towards the west, and the hilly terrain of the Black Mountain area peaks at ~ 250 m in elevation, running between the lease and the western areas.

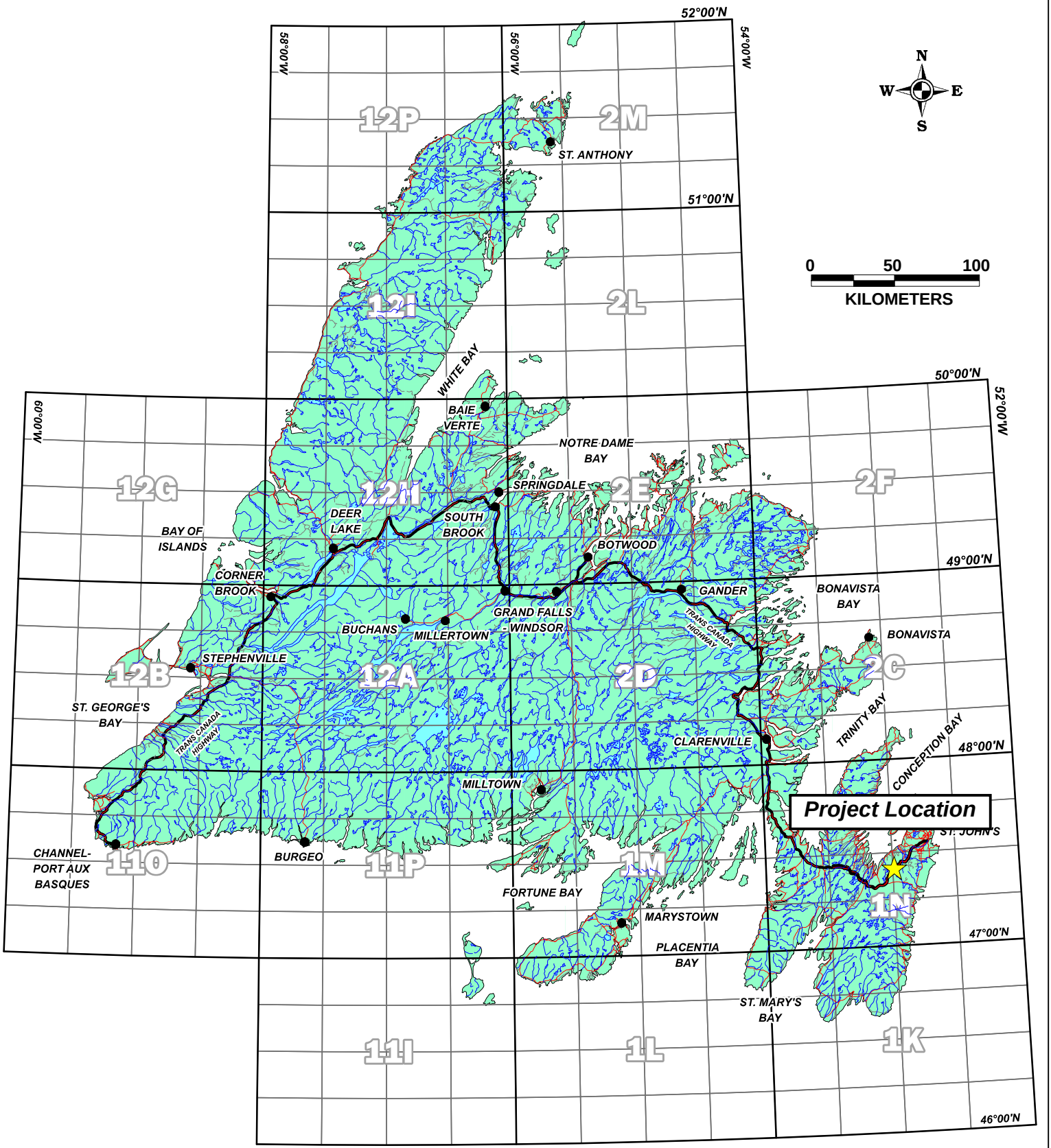


Figure 1: Project Location Map (N.T.S. 1N/06)

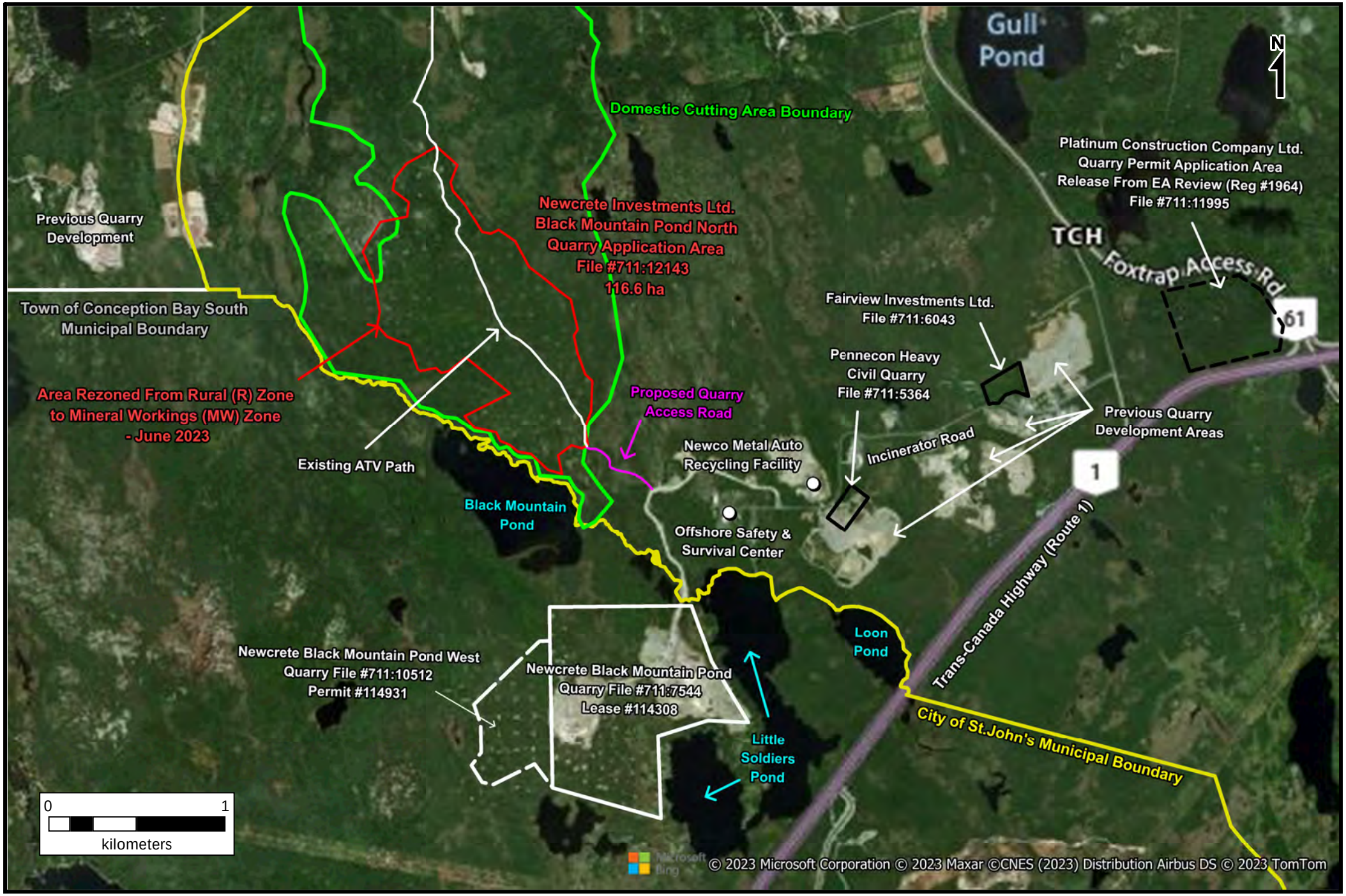


Figure 2: Quarry Area Location Map

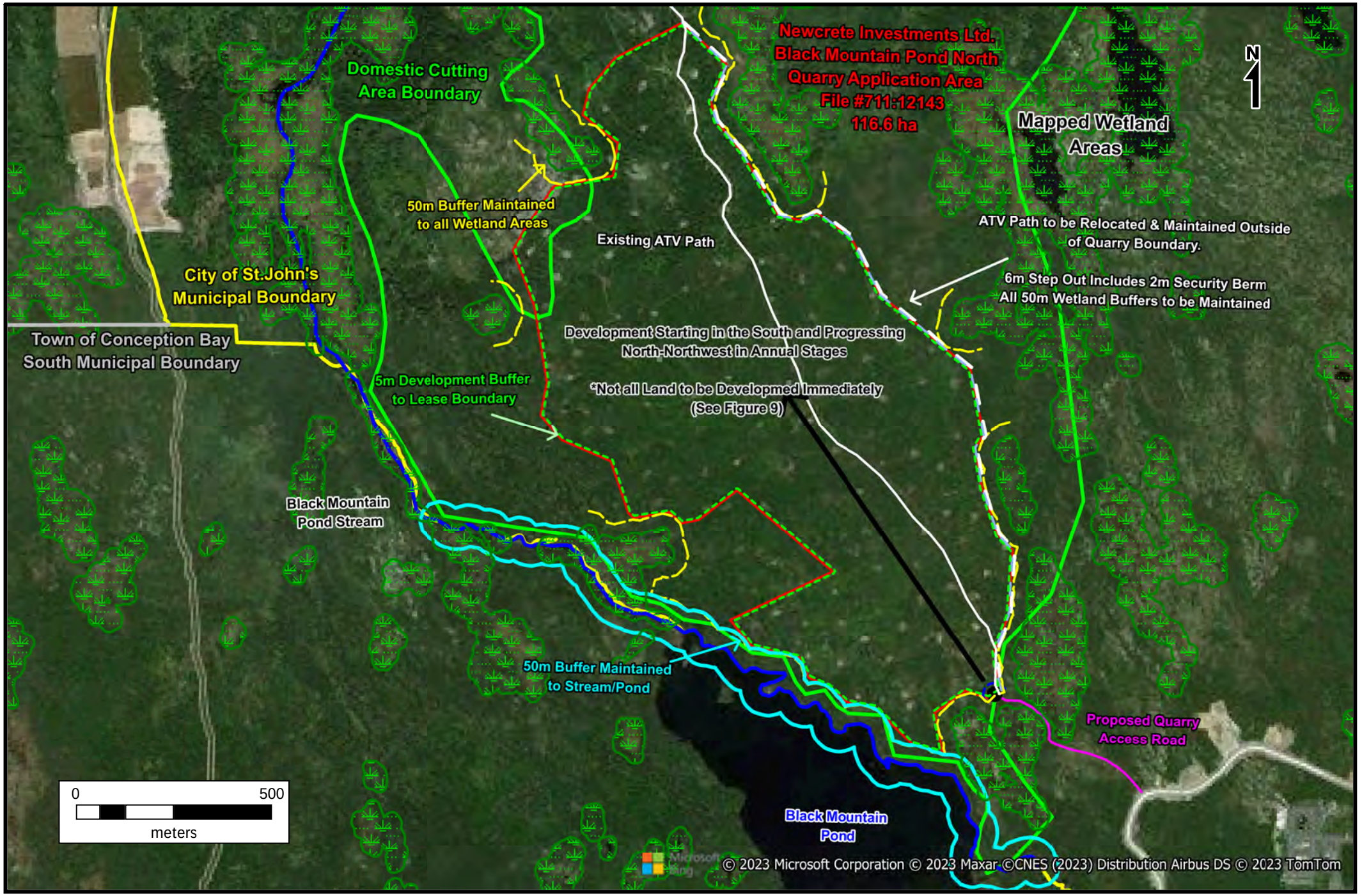


Figure 3: Detailed Quarry Area Map

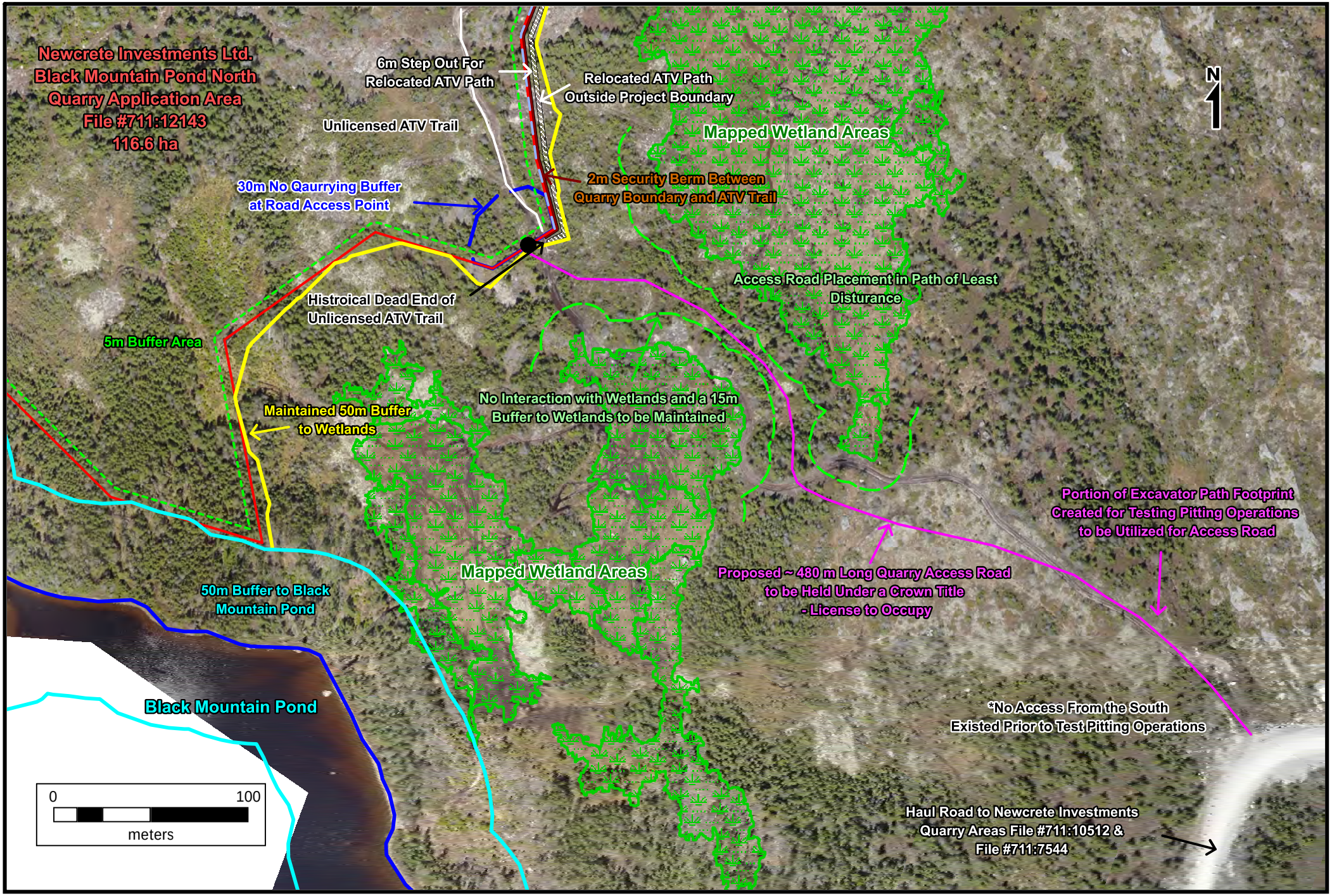


Figure 4: Quarry Access Road Map

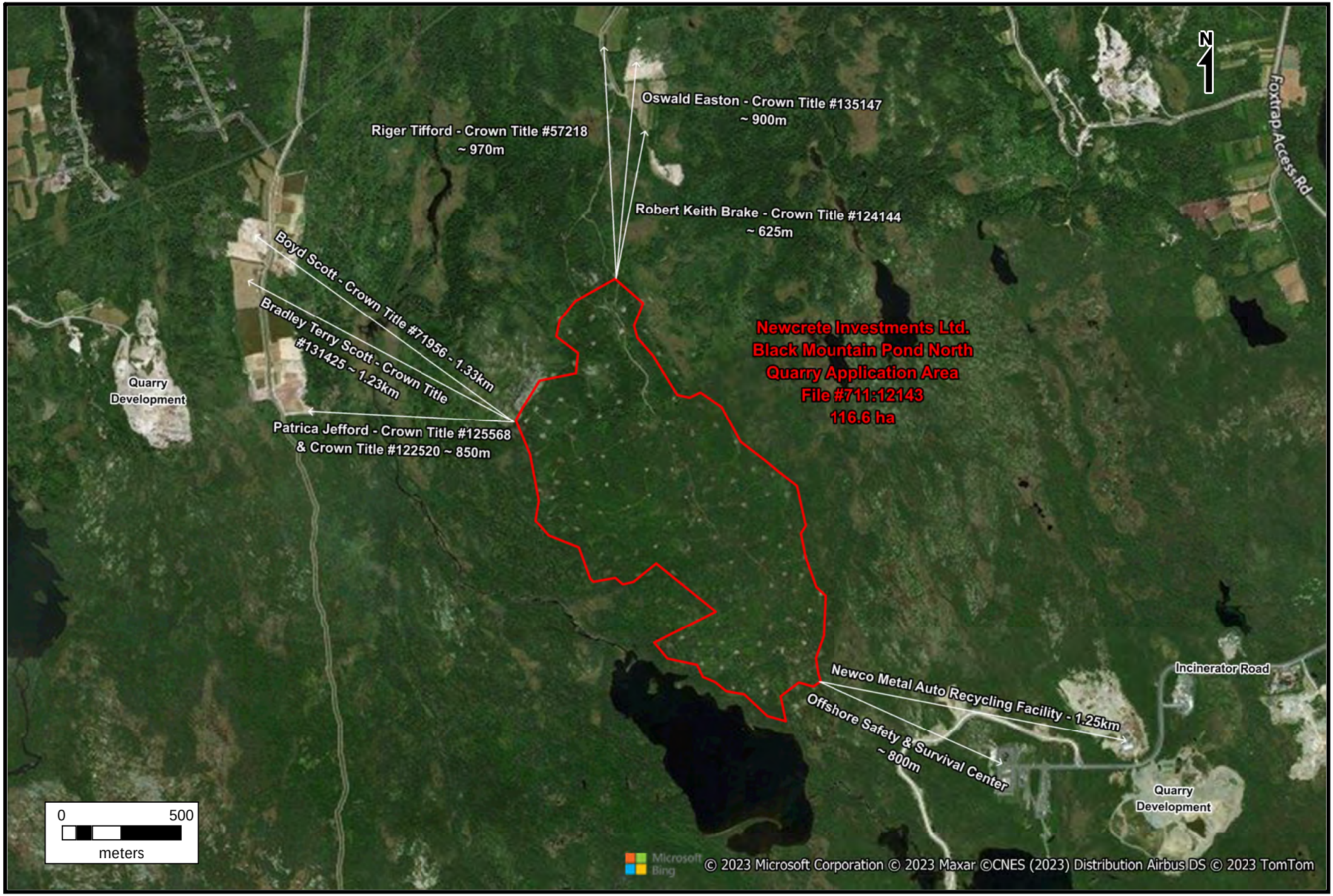


Figure 5: Receptor Location Map

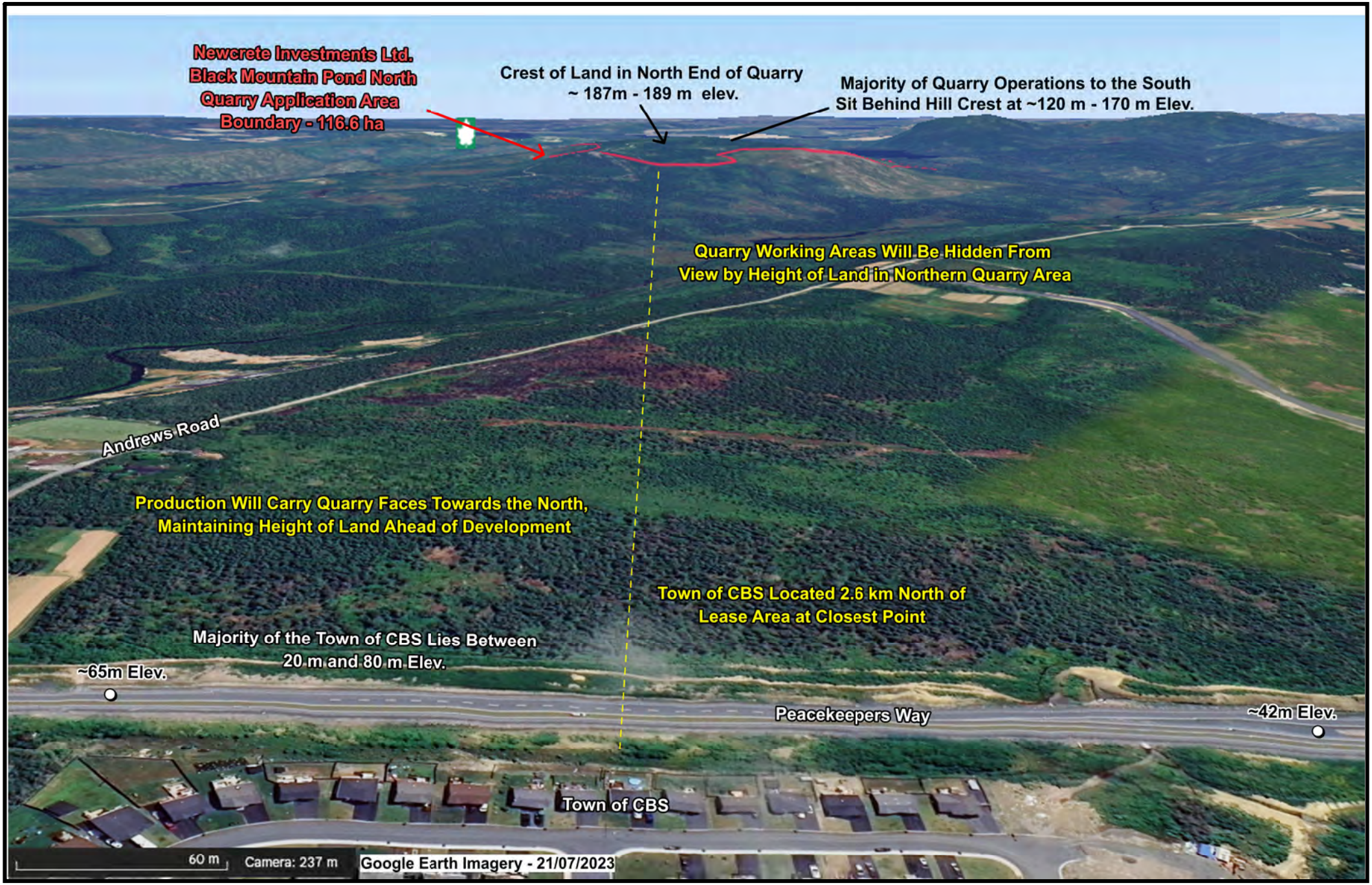


Figure 6: Example of Site Visibility From The North (Looking South)

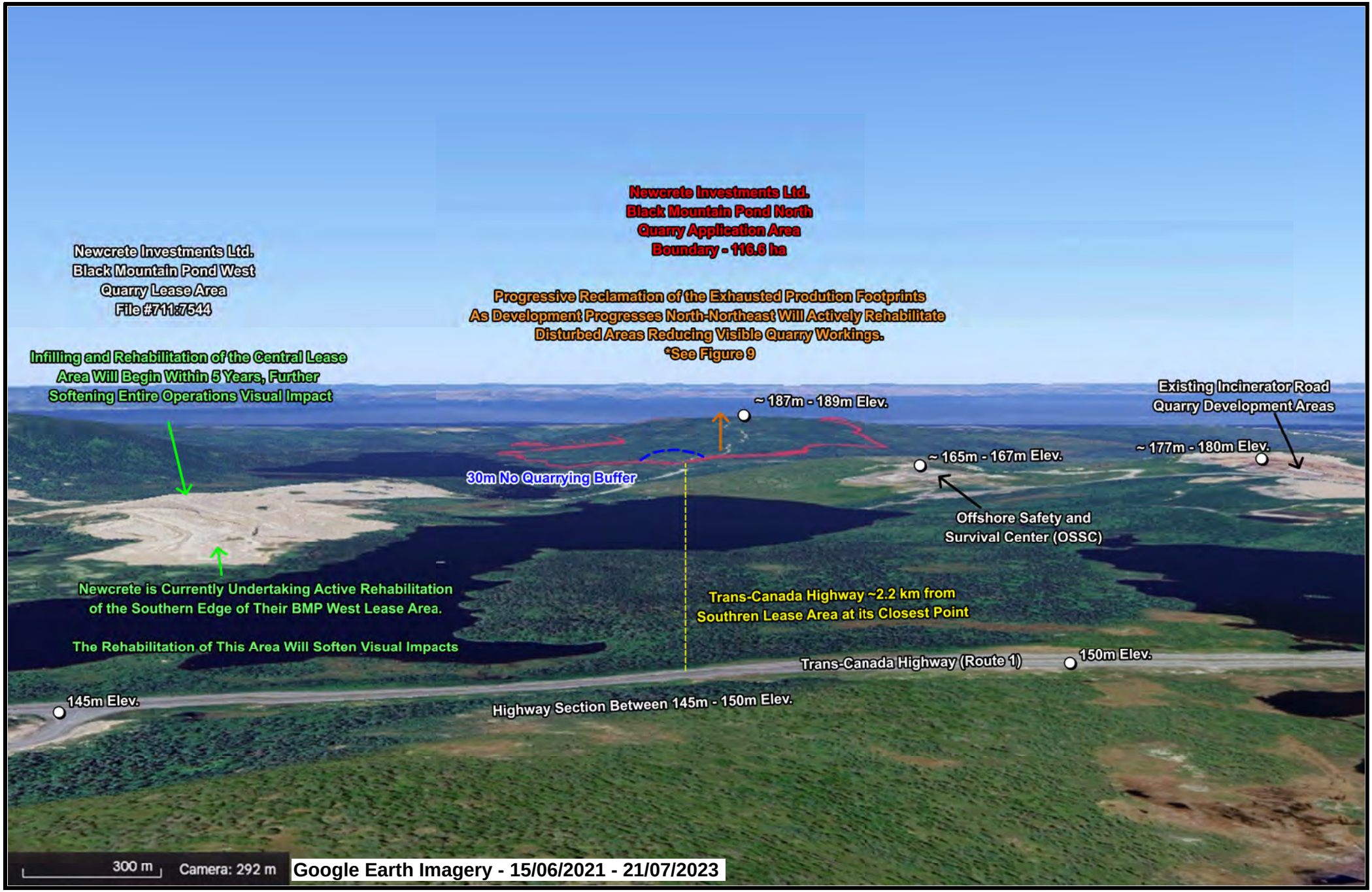


Figure 7: Example of Site Visibility From The South (Looking Northeast)

4.3 Construction, Operation and Maintenance

The construction aspect of the proposed project will begin with the creation of a quarry access road within the proposed area shown on ***Figures 2*** to **4** which will be followed by the relocation of the current ATV trail within the lease area (**Figure 8**), as discussed in the following ***Section 4.3.1*** and ***Section 4.3.2***. Upon completion of the access road and ATV trail relocation, the following stage of construction will involve clearing of the site from trees and the removal and preservation of organics/subsoils before development proceeds.

The development operations of this quarry will generally progress north-northwest, starting in the south and progressing away from the quarry entrance, extracting sand and gravel aggregate material in development blocks as shown on ***Figures 3*** and ***9***. The clearing of organics and treed areas will happen in yearly phases and not all at once, as dictated by development and demand, in order to minimize disturbances of the land within the quarry area. Processing on site will consist of crushing and screening the extracted material with any/all secondary processing to occur at Newcrete's established Black Mountain Quarry lease area in the southwest (see **Section 4.3.5**).

4.3.1 Access Road Construction

The proposed location for the ~ 480 m long quarry access road is presented in detail on ***Figure 4***. This route will utilize a portion of the disturbed footprint of the currently existing excavator access trail, which branches from the western quarry haul road off Incinerator Road, and heads northwest towards the southern quarry area boundary. This will help reduce additional disturbances to the surrounding land during construction of the road. Upon release from EA, an application for a License to Occupy (LTO) for the access road will be submitted to the Department of Fisheries, Forestry and Agriculture, Crown Lands Division. It is important to note that this excavator trail was created during the test pitting operations which took place between 2013 and 2015, no access from the dead end of the current ATV trail and the haul road towards the southeast existed prior to the test pitting.

The proposed location for the access road represents the path of least disturbance and incorporates the topography of the area. It is also designed to provide the most substantial buffer to the wetlands which surround the quarry lease area. As depicted on ***Figures 3*** and ***4***, the wetland areas mapped by the City of St. John's encompass a large portion of the land surrounding the quarry. The proposed access road location was chosen as utilizing alternate paths to the quarry would involve the road traversing directly through wetland areas, which Newcrete Investments commits to avoiding. The presented road location (as shown on **Figure 4**) will run between two wetland areas along the southern quarry area boundary, avoiding any direct interaction. Furthermore, the proposed location

provides the ability to maintain a 15 m buffer to these wetlands adjacent to the access road.

As the road will not cross/interact with any watercourses, the installation of culverts will not be required. At the southern boundary where the access road enters the quarry, a 30 m no quarrying buffer area will be maintained, as shown on ***Figure 4***.

While the utilization of the established excavator trail will reduce the new disturbances of the access road area, construction of the road will take place in some green space areas. This is required in order to maintain the 15 m buffer areas to the wetlands and to avail of more suitable grades for road construction. As such, some tree removal and stripping of organics and subsoil materials will take place. All merchantable timber that may need to be cleared will be done by either handheld chainsaws or mechanical harvesting equipment and will be garnered under a commercial cutting permit issued by the Department of Fisheries, Forestry and Agriculture. All merchantable timber will be stacked in 6 to 8 feet lengths where possible. All grubbing material removed during construction will be stockpiled within the lease boundary and all subsoil materials will be windrowed along the road edge as berm material or stockpiled within the quarry (**Figure 9**).

The construction of this access road will involve building a gravel road to a preferred width of approximately 5 - 7 m, which will be completed by a combination of excavators, bulldozers and tandem or tandem-tandem dump trucks, with an excavator also used to load the dump trucks (for a list of required personnel/equipment see **Section 4.6**). Dump trucks will transport the road building material and place it in the desired locations, which will then be spread and reworked to the required widths by excavator. Material for road construction will likely be sourced from Newcrete's other operational quarries within the immediate area (File #'s 711:7544 & 711:10512, shown on ***Figure 2***) but if other factors hinder the supply of this material, it may also be trucked in from other approved quarry sites in the surrounding area.

4.3.2 ATV Trail Relocation and Maintenance

A 2.2 km portion of the unlicensed ATV trail runs north-northwest through the middle of the lease area. The trail begins at a dead-end in the southern end of the quarry area and extends through the central area of the quarry lease, exiting from the northern portion of the quarry and continuing north from the boundary (**Figure 3**). To continue local access and use of this trail for woodcutting, recreational use, and general ATV access, Newcrete Investments commits to relocating this 2.2 km portion of the trail to a safe area outside the lease boundary and maintaining it throughout the construction and production stages of the quarry operations.

As the trail within the lease area sits within the development footprint of most of the planned production areas, Newcrete will relocate this portion outside of the eastern lease

boundary. A 6 m step out area from the lease boundary has been accounted for in order to allow ample space to create a suitably wide trail and to construct a security/safety berm, all while maintaining the required buffer areas to the wetlands adjacent to the quarry. A 2.5 m (over 8 ft) wide ATV trail will be created along the edge of the 6 m step out area. A 2 m wide security berm of subsoils will be placed between the relocated trail and the eastern lease boundary (**Figure 8**). This will also allow for a 1.5 m space between the edge of the trail and the toe of the security berm.

In order to provide a secure and safe working environment for employees and secured access to the trail for the public, Newcrete will relocate the ATV trail currently within the lease boundary area, in its entirety, to outside of the eastern boundary during the initial construction stage of the quarry. This includes construction of the entire 2.2 km security berm along the eastern lease boundary prior to the onset of production. This will restrict access to all future working areas while providing unimpeded trail access for the public.

Clearing a path for the relocated ATV trail will involve the clearing of trees and some organics/subsoils. All merchantable timber that needs to be cleared will be done by either handheld chainsaws or mechanical harvesting equipment and will be garnered under a commercial cutting permit issued by the Department of Fisheries, Forestry and Agriculture. The 2 m wide safety berm will be constructed from subsoil material stripped during the relocation of the ATV trail. Additional subsoil material may be sourced from the quarry area if required during the construction phase. All organic material stripped during the construction of the ATV trail will be stockpiled in the lease area for rehabilitation. The construction of the trail will be primarily completed by an excavator/bulldozer (for a list of required personnel see **Section 4.6**).

4.3.3 Road Maintenance

The constructed access road entering the quarry will be a gravel road which will, over time, typically require maintenance. This will be completed by utilizing 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**).

4.3.4 Site Clearing

As the quarry area hosts undisturbed forested ground, tree removal will be required for development. As noted above, merchantable timber will be cleared either by handheld chainsaws or mechanical harvesting equipment and will be stacked in 6 to 8 feet lengths where possible and will be collected under a commercial cutting permit.

Organic grubbing material cleared from the site will be stockpiled separately from other stripped materials within the lease area. Removed surficial soils, subsoils and mineral soils will be windowed to create a 5 m development buffer area along the quarry

boundary. This windrowed material may also be used to assist in the construction of the perimeter berm along the ATV trail, any additional subsoil material will be stockpiled on site to be used during future reclamation efforts (**Figure 9**).

It is important to note that development of this quarry will not take place across the entire 116.6 ha area immediately. To minimize disturbance of the land within the quarry area and to allow for progressive reclamation to occur (**Section 4.7**), development within the quarry will be undertaken in stages. Therefore, the site clearing will be taking place only within areas required for development to progress.

It is important to note that the grubbing and subsoil stockpile areas depicted on ***Figure 9*** are preliminary in nature and merely depict a suggested location for the eventual stockpiles. Newcrete may utilize these stockpile locations, or they may relocate the stockpiles to provide for a more efficient flow of operations, such as the footprints of the active quarry development blocks.

4.3.5 Quarry Construction, Development and Operation

The quarry construction work will consist of clearing the site from trees, grubbing and subsoils while windrowing and stockpiling the materials as discussed in ***Section 4.3.4***. The general direction of development shown on ***Figures 3*** and **9** is preliminary and may be adjusted later in the design process.

The initial stages of development in the quarry will begin along the south-southeastern boundary, and work towards the northwest. Operations adjacent to the quarry entrance will maintain the 30 m no quarrying buffer as depicted on ***Figure 4***.

In order to provide a preliminary depiction of development within the lease area, Newcrete Investments has estimated that up to 200,000 m^3 – 220,000 m^3 of aggregate material will be extracted from the lease area on a yearly basis. This volume of material is what Newcrete anticipates will be required to supply their concrete production operations going forward. Although, this number is speculative at this time and may be adjusted at later stages of the quarry design process due to things like changes in market demands or the timeframe of the quarry's release from EA.

The development block areas depicted on ***Figure 9*** are designed from estimated topography data with a maximum depth of 5 m in order to stay compliant with Occupational Health and Safety Regulations with respect to maximum face heights. Each development block is roughly estimated to contain between ~ 350,000 m^3 and 900,000 m^3 of aggregate material, or ~ 2 - 5 years of production. It is important to note that the data used to determine the block volumes was minimal, and the accuracy and presentation of the volumes is more suggestive in nature. At the current planning stage, volumes noted are a suggested potential of the production blocks and may not reflect the true volume present. A more substantial and defined dataset will be utilized for the final

production planning outline within the quarry during the eventual drafting of a set of Quarry Lease Plans (QLP) to be reviewed and approved by the Department of Industry, Energy and Technology under the Quarry Materials Act.

Production operations will extract the sand and gravel material from each development block area, gradually moving north-northwest once the targeted material in that footprint has been exhausted. During production, extraction activities will consist of removing the sand and gravel material by heavy equipment, such as excavators, front-end loaders, and dump trucks (see **Section 4.6** for a list of anticipated employees required).

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 5 m. No blasting of any bedrock will take place within the quarry lease area. Further detailed phase plans for production within the quarry will be outlined with the eventual drafting of a set of Quarry Lease Plans (QLP).

To mitigate any interaction with the adjacent watercourse and waterbodies, operations during development will implement drainage ditching along the perimeter of the production areas under active development. As the quarry sits on Black Mountain, the topographic profile of the area will naturally drain any water away from the quarry area to the outer boundary in all directions. Overland flow will be directed down slope with the natural topography and Newcrete will install check dams, hay bales and silt fencing within the drainage ditches for sediment control, if necessary, before discharge into vegetated areas

Processing activities within the quarry area will involve the extracted material being crushed and screened into the required aggregate sizing before being stockpiled on site. The crusher and screener setup will be mobile in nature and will be readily moved as required to facilitate more productive processing or to allow progressive reclamation to occur. Any required secondary processing, including the washing of aggregate material and the production of any concrete, will not be completed in this quarry.

Material slated for secondary processing after initial processing will be loaded into trucks and brought to Newcrete’s other quarry area located ~ 800 m southwest, off the quarry haul road (quarry Lease #114308). As stated by Newcrete in ***Section 3.2***, utilizing the processing area in the southern quarry lease area will create a ‘closed loop’ flow of operations that eliminates the need for unprocessed aggregate to be trucked on public roads, thus increasing public safety, greatly reducing our carbon footprint and maximizing cost efficiency. Production operations in quarry Lease #114308 will continue both prior to and during the Black Mountain North quarry coming into production.

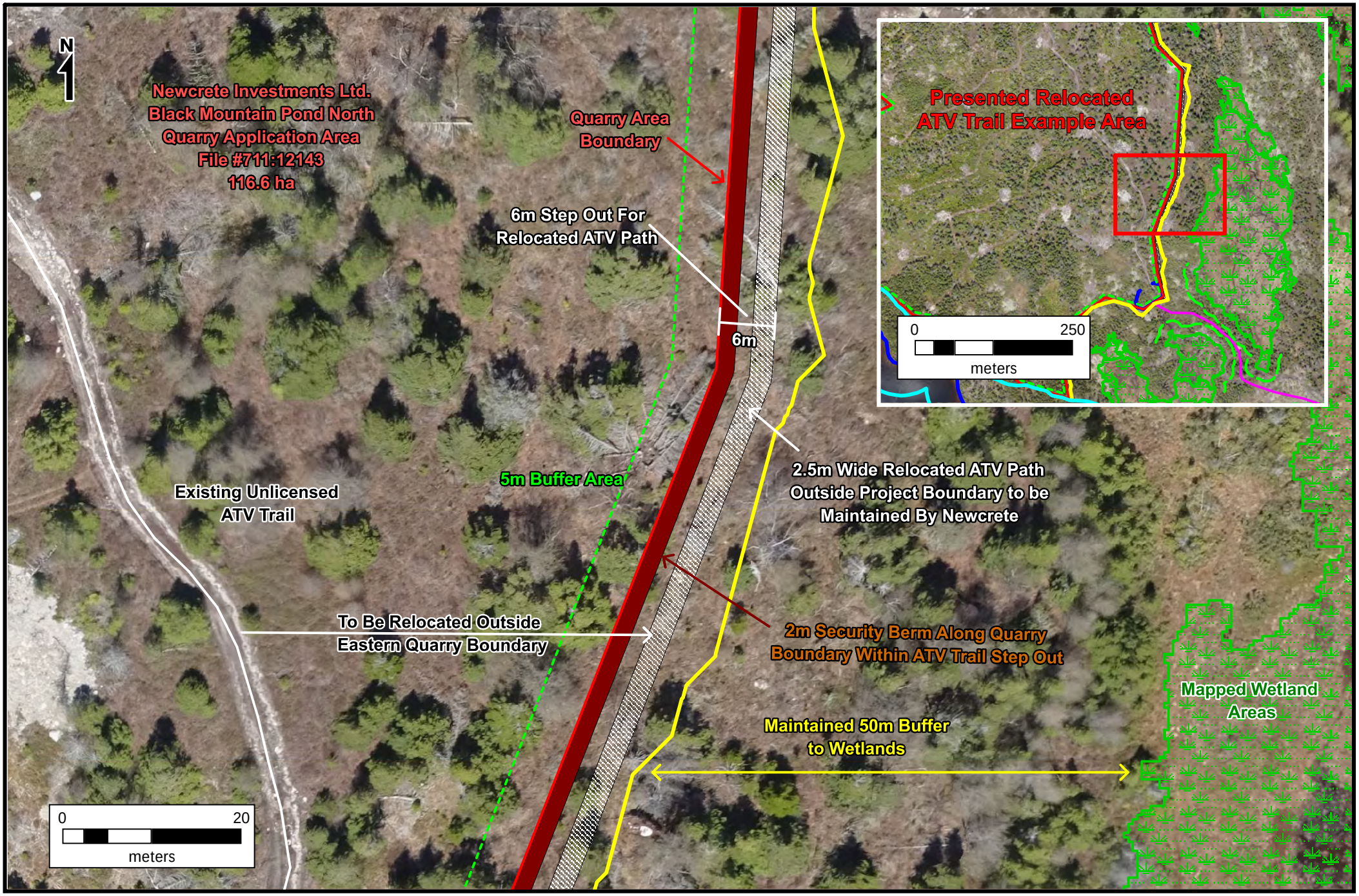


Figure 8: Relocated ATV Trail Map

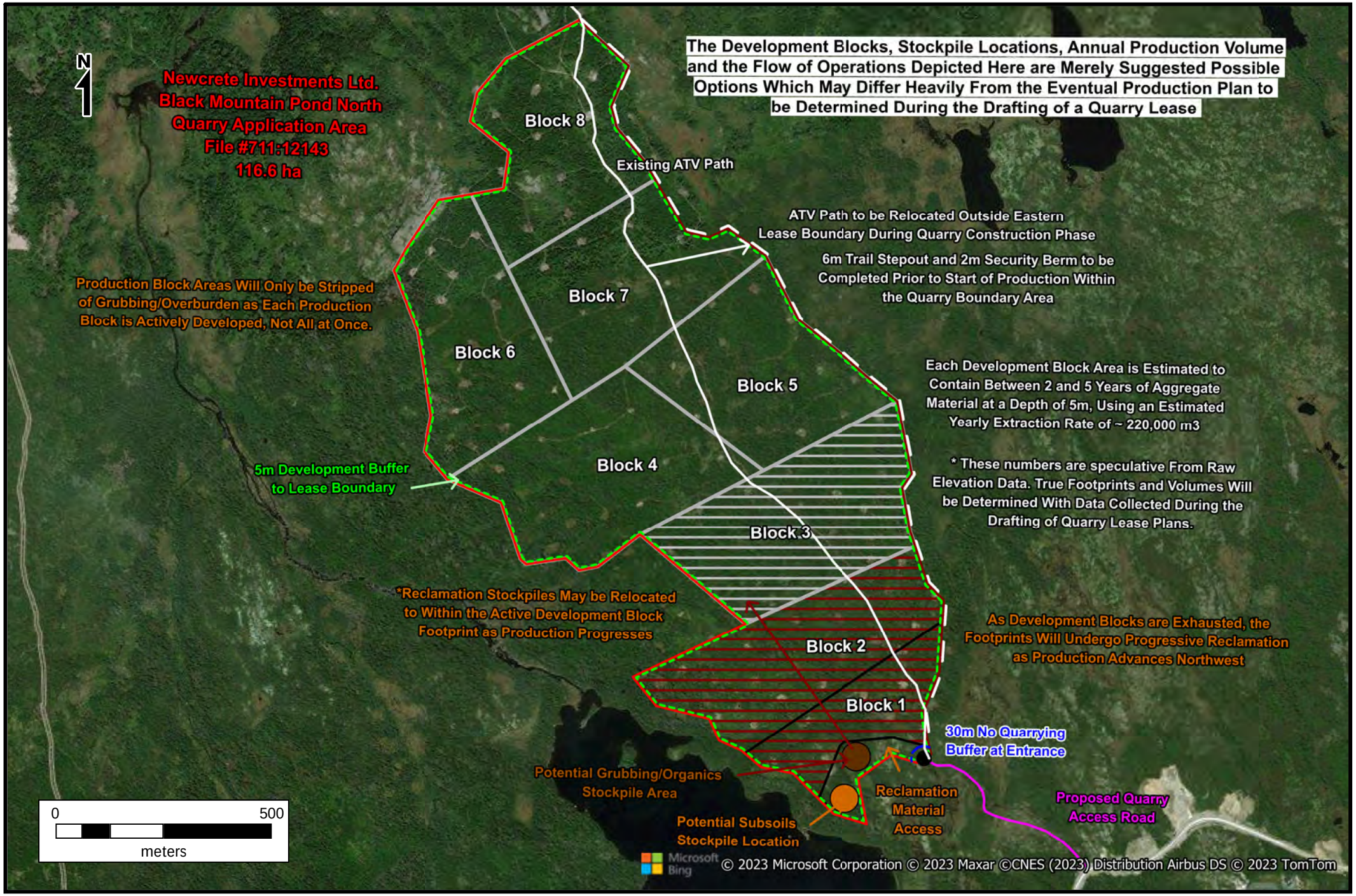


Figure 9: Preliminary Production Layout Map

With the anticipated full approval of the quarry development plan and anticipated release from EA review, typical quarrying activities are slated to take place as soon as possible within the quarry area. This is expected between March and April but will ultimately be dictated by the timing of approval and severity of winter conditions. Depending on these factors, activities may be shifted to the Summer of 2024.

4.4 Potential Sources of Pollution During Construction and Operation

The construction and operational phases of the development will utilize equipment such as chainsaws, timber harvesting equipment, 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. Site clearing will be completed in phases, with only areas required for production cleared, reducing the overall potential of excessive dust and pollution impacts. Thus, the entire 116.6 ha will not be stripped of its organic cover initially. Dust created by equipment operation along roads will be kept at a minimum by the watering of roads as required. 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 of the quarry site are not anticipated to have an effect on nearby receptors any more than the adjacent quarries or the industrial business activities in the area. All 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 work environment.

4.4.3 Domestic Waste and Sewage

During the quarry construction phases, portable lavatories will be located within the proposed quarry boundaries and will be utilized as required. Once regular quarry production operations begin, a fixed washroom area with an accompanied buried septic tank may be implemented on site, or employees may utilize the facilities within Newcrete's other operational quarries to the south. In the event that a fixed washroom is constructed on site, prior to construction or excavation for any bathroom facilities, the proper permits from Service NL will be acquired. Domestic waste generated during construction and

operation will be collected and disposed of in accordance with the Environmental Protection Act 2002. Waste will be removed by an approved sewage service provider.

4.4.4 Fuel

Diesel fuel will be required to operate the development and processing equipment that will be located within the quarry area. Fuel may be supplied through the petroleum storage tanks and/or a mobile fuel truck from Newcrete's other nearby quarry sites. Alternatively, petroleum storage tanks may be placed on site to facilitate the most efficient flow of operations.

In the event that a petroleum fuel storage tank will be held on site, all required permitting including the Registration of Gasoline and Associated Products and a Mobile Fuel Storage Tank Permit will be acquired from the Government Service Branch – Operations Division of the Government of Newfoundland & Labrador. Any potential fuel storage tanks will also comply with the required Storage Tank System Test from Service NL. The handling of petroleum products on site will comply with the Storage and Handling of Gasoline and Associated Products Regulations. All fuel stored on site will be placed in a spill tray that would exceed the capacity of the storage unit placed within it.

Fuel storage areas will be regularly checked, and emergency spill kits will be available on site at all times for containment and cleanup of any hydrocarbon leaks. All equipment will be kept in good operating order with regular inspections in an effort to proactively prevent spill incidents and identify leaks. Any leaks or spills in excess of 70 liters or any amount of fuel interacting with Black Mountain Pond, its associated streams or any of the surrounding wetland areas will be immediately reported to the Provincial Environmental Emergency Telephone Line and cleaned up.

4.4.5 Effluent

There is a potential for erosion and the transport of fine-grained particles during construction activities in relation to clearing of the land. This will be monitored on a constant basis during construction while clearing takes place and, if required, appropriate mitigating measures in line with industry best management practices will be utilized.

The first step will be to create erosion control ditches with check dams, hay bales, and silt fencing to filter water leaving the site. Site runoff will then be directed towards vegetated areas that will act as an additional filter for fine particles. Gradual phased development of the site will ensure that the organic layer will not be stripped all at once, this will reduce the amount of erosion.

The same process will be applied for the operational phases of the project. Site runoff will be directed to various vegetated areas depending on what stage of development is occurring. If required as a larger footprint is developed and/or progressive reclamation is

in progress, a small shallow depression may be constructed to temporarily hold water within the quarry. This allows for suspended sediment to deposit prior to water being released into vegetated areas along ditches with check dams, hay bales and silt fencing. All water released into the environment will meet the regulatory requirements of the *Environmental Control Water and Sewage Regulations (2003)* as well as provincial permits.

4.5 Potential Resource Conflicts During Construction and Operation

Potential resource conflicts during construction and operation of the quarry could include the following: encounters with wildlife, the use of the area by the public for recreational purposes such as ATV riding, hiking/berry picking, and domestic wood cutting.

Any encounter with wildlife shall follow regulations stated in the Wildlife Regulations under the *Wildlife Act (CC. 96-809)*. The permit area is within an identified waterfowl zone, as such, 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 through monitoring of wildlife. The historical nature of industrial activity in the area combined with the general developed nature of the Northeast Avalon is expected to limit the wildlife present in the area.

The region is host to trails used by locals for hiking, ATV riding and other recreational activities. However, the construction and operation of this quarry area is not expected to cause significant disturbance for local access to the non-developed areas further north of the quarry. This is due to the existing ATV trail within the quarry area being relocated and maintained by Newcrete for general public access throughout the construction, development, and operation of the quarry (**Figures 3**, **4** and **8**). The access road at the quarry entrance will be gated and the relocated ATV trail barricaded where it meets the quarry access road in the south.

The 116.6 ha project lies within the Provincial Governments Forestry (F) Zone in a domestic cutting area. The immediate use of land for domestic cutting is not anticipated to have an overly significant impact because of the amount of merchantable timber in the quarry area compared to the overall size of the broad domestic cutting area, which encompasses over 515 ha. Access around the quarry development will be maintained for recreational users and domestic wood cutters as development moves north and areas to the south are rehabilitated.

Throughout the construction and operational activities in the quarry, the 50 m buffer between Black Mountain Pond and the adjacent Black Mountain Pond stream will be maintained, as will the required 50 m buffer to all wetlands adjacent to the boundary (shown on **Figure 3**). These buffers will allow the quarry to maintain adequate distance from all water bodies (including wetlands) as per the Water Resources Management

Division of the Department of Municipal Affairs and the Mineral Lands Division from the Department of Industry, Energy and Technology of the Government of Newfoundland and Labrador.

As presented, the construction and usage of the proposed quarry access road will maintain a 15 m buffer to the wetland areas adjacent to the road in the south and a 30 m no quarrying buffer will be maintained around the quarry entrance point.

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

- Within the proposed quarry area, a 5 m wide buffer will be left intact where no resources will be excavated alongside the quarry boundary (shown on **Figures 3, 4** and **9**). Berms constructed from the windrowed subsoil material will be placed within the 5 m buffer area inside the lease boundary.
- Water from precipitation and overland flow for the entire site will be controlled using the mitigation measures previously mentioned in ***Section 4.3*** & ***Section 4.4***
- The pit floor will be kept lower than the perimeter berms where present as development progresses to contain precipitation water within the quarry site in order to direct it through appropriate drainage channels and additional filtration methods (silt screening, hay bales etc.…)

4.6 Occupation

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

The construction phase of the project will require up to 7 employees to complete. Operation of the quarry will require up to a maximum of 14 employees to run when fully active at peak operational levels annually. Fluctuations in material demand may lead to a change in the number of required employees and annual production rates. The required labor force will be sourced from the existing Black Mountain quarry as operations gradually shift to the new Black Mountain North area. Thus, no new employees will be required.

Construction

- 1 Site Supervisor/Foreman (70010)
- 2 Heavy Equipment Operators –Excavator/Bulldozer (73400)
- 1 Heavy Equipment Operator – Tree Harvester/Mulcher (73400)
- 2 Heavy Equipment Operator – Dump Trucks (73400)

Operation

- 1 Quarry Manager (82020)
- 1 Quarry Supervisor/Foreman (82020)
- 3 Heavy Equipment Operator – Loader/Excavator (73400)
- 4 Heavy Equipment Operator – Crusher/Screener (73400)
- 3 Heavy Equipment Operator – Tandem or Semi Dump Trailers (73400)
- 1 Quarry Laborer (75110)
- 1 HSE Advisor (22232)

4.7 Reclamation and Closure

As discussed in ***Section 4.3.4***, during site clearing, any stripped grubbing material which contains organic components will be persevered on site separately from the underlying surficial soils and mineral soils. This is to prevent dilution of the organic components in the grubbing material which are required to promote revegetation of the disturbed areas after rehabilitation.

During rehabilitation efforts, the surficial soils and subsoil material that is windowed in the 5m buffer area or stockpiled on site will be used to slope all exposed quarry faces within that rehabilitation area to a 30 – degree slope. Then, a uniform layer of the separately preserved grubbing material will be re-spread across all disturbed areas, including the slopes created from subsoils, to promote natural revegetation. The area may be then hydroseeded to further promote revegetation. Furthermore, as discussed in ***Section 4.2.2***, optimal restoration of the disturbed forested areas on rehabilitated quarry ground can be successfully done through direct seeding and planting by knowledgeable groups such as Forest Without Borders or Tree Canada.

As discussed in ***Section 4.2.4***, the above noted rehabilitation practices will be ongoing as Newcrete will actively undertake the progressive rehabilitation of development blocks as they are exhausted of aggregate resources. 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 bonding in place. The volumes required, expected times, timeline of direct tree seeding and determined bonding costs for progressive rehabilitation within the quarry will be detailed within the aforementioned lease plan document.

5.0 SCHEDULE

The proposed schedule for this project is as follows:

Initial Submission of Registration Document	September 2023
Resubmission of Registration Document	December 2023
Commencement of Construction and Operations	March - April 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

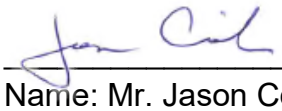
Department/Regulatory Agency	Status	Possible Required Approvals/Permits
Municipal Affairs and Environment - Land Use Planning	Approved	Quarry Application Area Rezoned as Mineral Workings Area (06/2023)
Municipal Affairs and Environment - Water Resources Management Division	Conditional Approval	
Municipal Affairs and Environment - Environmental Assessment Division	Project Registration Required	Environmental Assessment Registration
Industry, Energy and Technology - Mineral Lands Division	Conditional Approval	Quarry Lease Plans to be Drafted Upon EA Release
Industry, Energy and Technology – Electricity and Alternative Energy	Approved	
Transportation and Infrastructure	Approved	
Tourism, Culture, Arts and Recreation - Tourism	Approved	
Tourism, Culture, Arts and Recreation – Historical Resources	Approved	
Tourism, Culture, Arts and Recreation - Parks	Conditional Approval	Comments Pending EA Registration
Service NL	Conditional Approval	Comments Pending EA Registration
Fisheries, Forestry and Agriculture - Fisheries	Conditional Approval	Comments Pending EA Registration
Fisheries, Forestry and Agriculture - Forestry	Approved	Operating Permit & Commercial Cutting Permit
Fisheries, Forestry and Agriculture - Crown Lands	Approved	
Fisheries, Forestry and Agriculture - Land Management	Approved	
Fisheries, Forestry and Agriculture - Wildlife	Conditional Approval	Comments Pending EA Registration

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 Newcrete Investments Ltd. 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. Jason Coish
Position: Senior Vice President
Newcrete Investments Ltd.

December 15/2023
Revision Approval Date