J-1 Contracting Ltd. Terra Nova Quarry (EA Reg # 2313) - Water Management Plan (18.38 ha Quarry Area) Terra Nova, Central Newfoundland – Quarry File # 711:12924, 711:1787 & 711:13228

March 07,2025
(Quarry Permit Application Submitted)

December 18, 2025
(Water Resource Management Plan Submission Date)

Attached Documentation: Figure 1, Figure 2, Figure 3 & Google Earth Images

Introduction

J-1 Contracting Ltd. (J-1) is a locally owned and operated civil construction company operating in the Clarenville region of Newfoundland and Labrador. The Terra Nova Quarry area, ~2 km east of the town of Terra Nova has provided sand used for blending material in asphalt and winter road maintenance sand since the 1980's. The underlying sand is of high quality and is a limited industrial resource in the province.

The quarry area combines existing quarry lease File 711:1787 – 5.815 ha, File 711:12924 – 4.94 ha, and quarry permit application File 711:13228 – 7.624 ha issued or transferred to J-1. The combined area of all three sites covers 18.38 ha and will be developed under an approved quarry lease. The existing and proposed quarry operations inside the quarry lease involve crushing and screening activities using mobile/ heavy equipment to extract and export the available resource of sand material.

The submission of this Water Management plan is required for issuance of the 18.38 ha quarry lease and is conditional to its release from Environmental Assessment (Reg #2313). J-1 has submitted a detailed set of development, rehabilitation and closure plans to the Department of Energy and Mines.

Site Location and Access

The quarry project is ~2 km east of the town of Terra Nova, central Newfoundland within the National Topographic System (NTS) Index Map 02D/09 (**Figure 1**). The project is within a rural zone with permitted use as a mineral workings area. The Terra Nova National Park boundary is ~2.3 km southeast of project. An agriculture zone and commercial farming area (Crown Title #113935) is located ~1.6 km west of the lease. A wetland area adjacent to an inlet of the Terra Nova River is outside of the 50 m required buffer zone from the western quarry boundary (**Figure 2**). The Terra Nova River is located ~400 m northwest of the lease boundary.

The topographic relief inside the quarry dips gently from 120 m above sea level (asl) in the south to 95 m asl on the lower quarry floor in the north. Existing production benches in sand and gravel are 5 to 20 m in height and sloped to ~30-degrees where necessary. The access road enters the eastern quarry boundary at ~ 107 m asl and is the planned discharge point for quarry drainage (**Figure 3**). Elevations outside the project area decline gently towards the north. The shoreline of the inlet located ~400 m northwest sits at ~91 m asl. At the time of inspection there was no

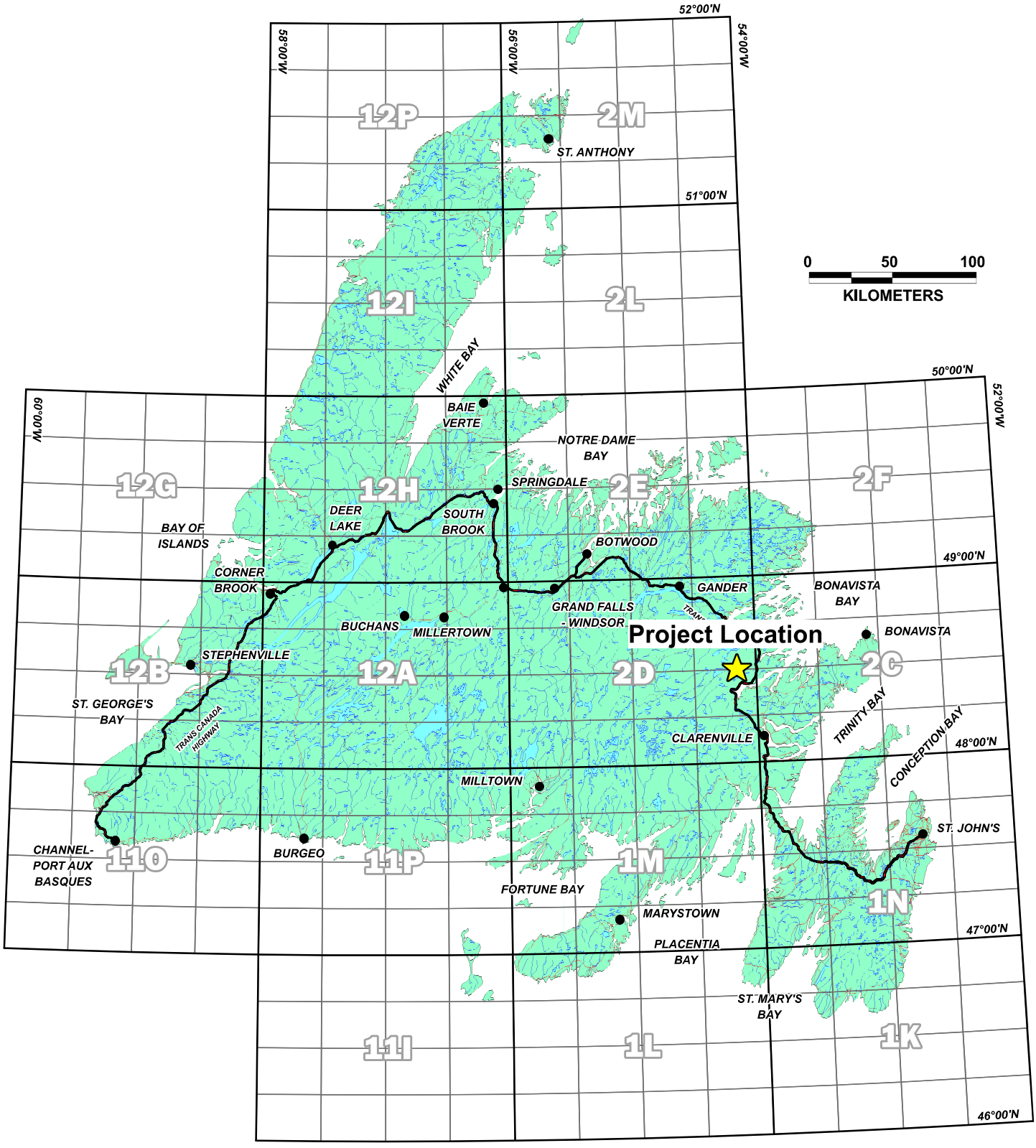

Figure 1: Project Location Map (N.T.S. 2D/09)

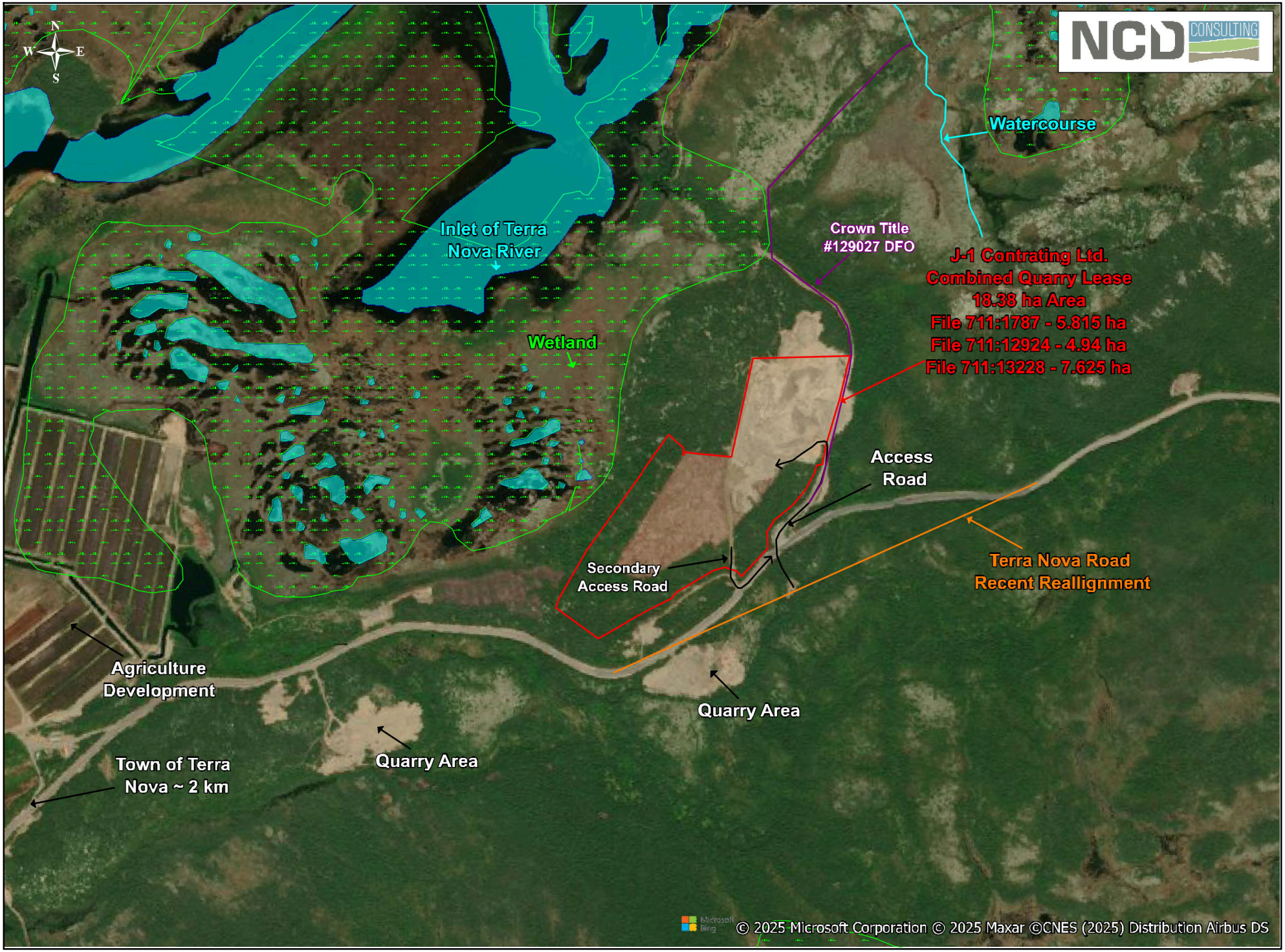

Figure 2: Regional Map of Rivers, Waterbodies and Wetlands (1:50,000 scale map features)

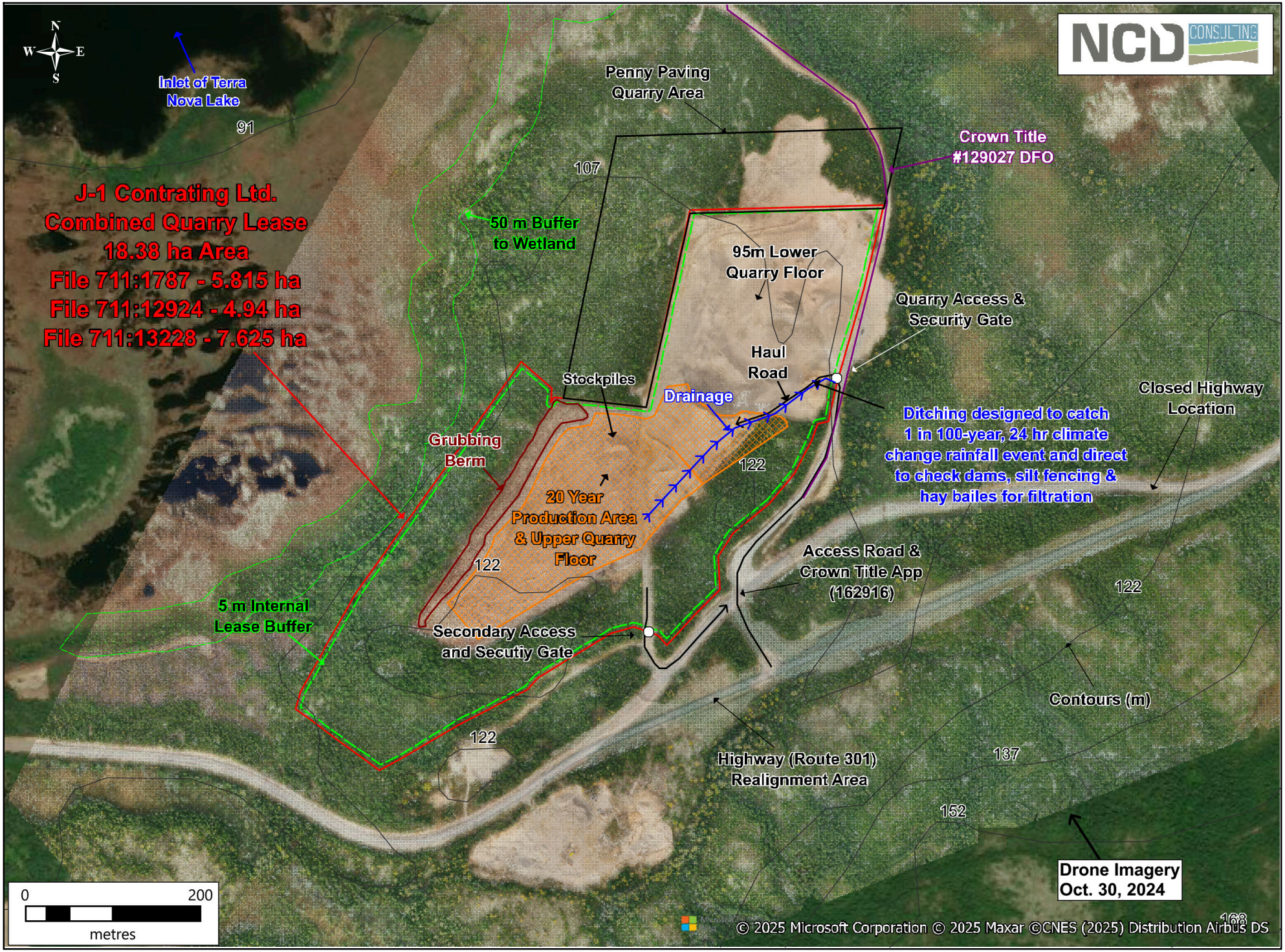

Figure 3: Water Management Plan

observed pooling water within the lease boundary, nor had it been reported or identified in historical satellite imagery.

Existing Site Plan

The current site plan and development areas daylight with topography to the north towards the quarry access road. The land surrounding the quarry is forested and will help prevent any impact on wetlands located ~ 70 m west of the lease boundary at its closest point. Additionally, windrowed grubbing stockpiled along the western development area has formed a berm preventing any site runoff towards the wetland (**Figure 3**). Surface water from the project area has historically drained primarily through the unconsolidated sand and gravel. The initial upper quarry floor depth is proposed at 112 m asl while the existing lower floor is ~95m asl and are above the local groundwater table. No pooling water was evident inside the quarry during inspection of the site on October 23rd, 2025.

Site Drainage

Drainage discharge areas from the quarry are directed to the main quarry entrance and security gate along the eastern lease boundary (**Figure 3**). This area daylights with the natural topography at ~100 m asl and declines gently towards the north outside of the lease boundary. Appropriate filtering techniques of any discharged water will be implemented such as check dams, silt fence and hay bales to meet water quality standards.

The planned drainage channel locations for the quarry will be constructed in the unconsolidated floor material to control drainage when required. The linear, ~ 0.5 m wide and ~ 0.5 m deep channels will daylight with topography in the northeast and direct drainage to the access road and outside the lease. Additional drainage channels or a change in drainage location may be implemented, if necessary, to control site drainage during times of excess surface runoff.

Adjacent Water Courses

An inlet of Terra Nova Lake is ~400 m northwest of the lease boundary. A wetland area is buffered ~70 m from the western quarry boundary (**Figure 2**).

Quarrying Method and Production Related to Water Management

J-1 plans to utilize the available sand and gravel resources at ~8,500 m^3 annually to meet consumer demand and this was estimated from the last 10 years of production volumes. A development of ~5 m in height will progress southward to the 112 m level in a series of phases required to meet one year of production. Crushing of coarse gravel may be required while the sand can simply be excavated, screened and/or sold as a direct product. The aggregate materials will be stockpiled inside the quarry until it is loaded into tandem, tandem-tandem, or semi-dump trucks (using loaders/excavators) and trucked off site.

The proposed production area was previously cleared of trees, and the stripped grubbing is stockpiled in a berm adjacent to the western boundary. No development is planned within the internal 5 m lease buffer zone. Clearing and stripping of a 0.17 ha area is required in year 3 to

help create a more direct haul road to the production area and avoid a bottle neck configuration. The remaining forested areas inside the lease may eventually be cleared beyond the initial 20 year plan. The grubbing and topsoil encountered will be separated as best as possible, preserved in stockpiles in areas and/or used in berms to be utilized as closure reclamation material. Any required cutting will be completed under a commercial cutting permit issued by the Department of Fisheries, Forestry and Agriculture.

Site Water Management

This Water Resource Management Plan for the proposed quarry development area is considered adequate to control overland runoff from the site that has previously permeated through the quarry floor. Drainage channels are proposed to direct any surface water towards the quarry entrance where it can daylight with the surrounding natural topography and vegetation. No site water will be discharged toward the wetland area ~ 70 m outside the western boundary. A security berm composed of grubbing has been placed in this area providing additional site water containment. Site water filtration techniques will be used as required near the quarry entrance, using rock check dams and silt screens and/or hay bales. Additional containment inside the project may be required should a 1 in 100-year 24-hour climate change rainfall event occur to adequately remove suspended fine-grained particles. J-1 commits to this Water Management Plan, ensuring that site water runoff conforms to the Environmental Control Water and Sewage Regulations, 2003 and that siltation will not enter the adjacent wetlands and watercourses. A minimum 50 m buffer to all watercourses and wetlands will be maintained as required by the Quarry Materials Division.

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Google Earth Images

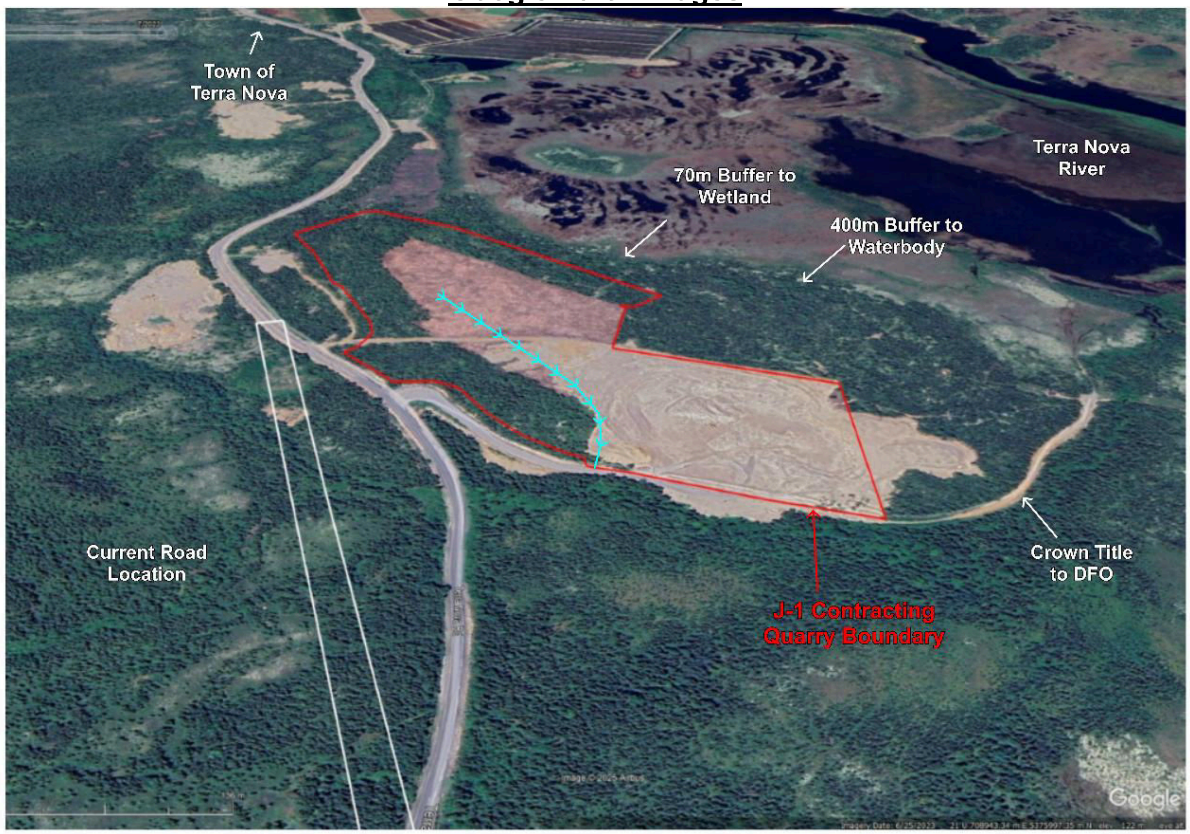

Plate 1: View of the quarry area looking west.

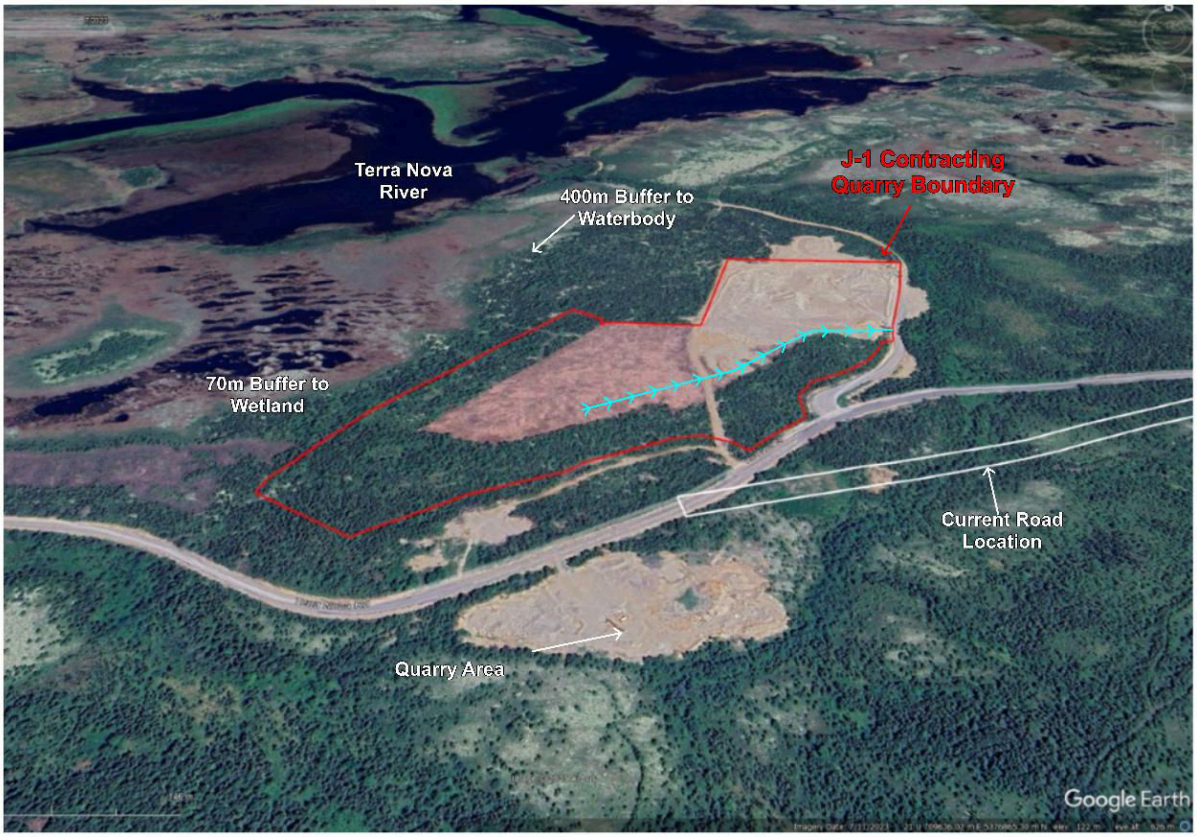

Plate 2: View of the quarry area looking north.

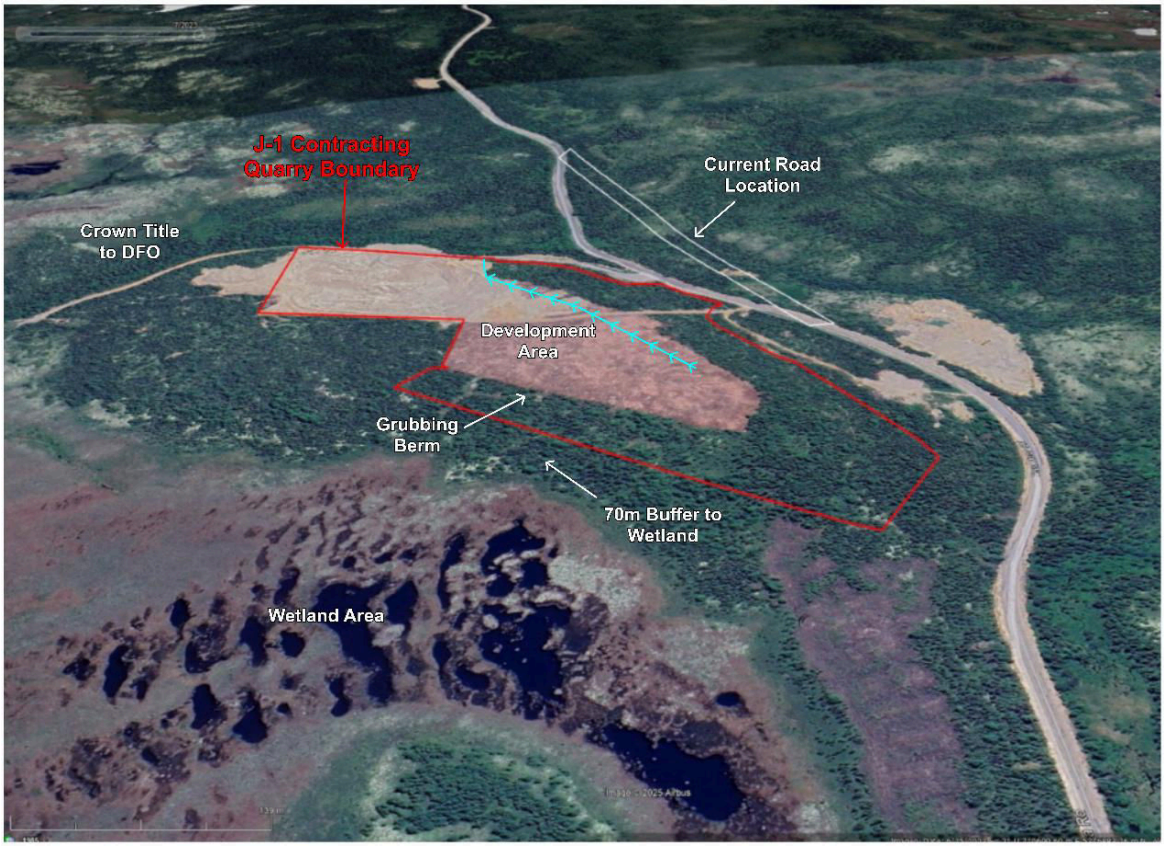

Plate 3: View of the quarry area looking east.

Plate 4: View of the quarry area looking south.