



NIRB Application for Screening #125458

Iqaluit Quarry Area 1 and Area 2

Application Type: New

Project Type: Pits and Quarries

Application Date: 3/26/2019 12:12:02 PM

Period of operation: from 0001-01-01 to 0001-01-01

Proposed Authorization: from 0001-01-01 to 0001-01-01

Project Proponent: Danny Zita
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DETAILS

Non-technical project proposal description

English: The Iqaluit quarry deposits are proposed sites currently being explored by the Government of Nunavut and the City of Iqaluit that will be used to extract aggregate (gravel, sand etc...) to meet the construction demands of the community. These sites are located south and south-east of Iqaluit. The equipment that will be working on site if approved will be dump trucks to haul aggregate, crushers to break up material and loaders to extract aggregate. These quarries will remain active until all its aggregate are depleted. The City will use the proceeds from Quarry permit fees to remediate the area to a point in which the area's vegetation can grow back. These sites contain gravel, sand and silt suitable for construction purposes and road maintenance in reasonable quantities which makes these sites desirable locations. The sites are in reasonable proximity to Iqaluit which results in easier access for the residents of the community to retrieve gravel and also minimizes costs to the contractors and the City due to the fact that the dump trucks do not need to travel long distances. The Government did explore other quarry sites but we felt this was the best option due to the reasonable proximity to Iqaluit, its gravel reserves and the quality of the gravel.

French: Les sites proposés près d'Iqaluit font actuellement l'objet d'étude par le gouvernement du Nunavut et la ville d'Iqaluit, et seraient utilisés pour extraire des granulats (gravier, sable, etc.) pour répondre aux besoins en construction de la collectivité. Ces gisements sont situés au sud et au sud-ouest d'Iqaluit. Les équipements utilisés sur les lieux, si ceux-ci sont approuvés, seront des camions à benne pour transporter les granulats, des concasseurs pour fracturer le matériel et des chargeurs pour extraire ledit matériel. Ces carrières seront exploitées jusqu'à l'épuisement du matériel. La ville utilisera les revenus tirés des permis de carrières pour restaurer la zone de manière à ce que la végétation puisse repousser. Ces gisements contiennent du gravier, du sable et du limon convenant aux besoins de la construction et à l'entretien des routes, et en quantité suffisante, ce qui en fait des sites intéressants. Ces gisements sont situés à distance raisonnable d'Iqaluit, ce qui permet un accès facile aux résidents de la ville pour y obtenir du gravier et ainsi minimiser les coûts pour les entrepreneurs et la ville puisque les camions n'ont pas à franchir de longues distances. Le gouvernement a étudié d'autres endroits, mais nous sommes d'avis que ceux-ci offrent le meilleur choix compte tenu de leur proximité de la ville, des réserves de gravier et de sa qualité.

[illegible]

Personnel

Personnel on site: 3

Days on site: 1500

Total Person days: 4500

Operations Phase: from 2019-03-18 to 2029-03-17

Activities

Location	Activity Type	Land Status	Site history	Site archaeological or paleontological value	Proximity to the nearest communities and any protected areas
Quarry Site 1	Quarry/Borrow pit	Commissioners	unknown	unknown	within 2 km
Quarry Site 2	Quarry/Borrow pit	Commissioners	unknown	unknown	within 2km

Community Involvement & Regional Benefits

Community	Name	Organization	Date Contacted
Iqaluit	Jennifer Jarvis - City Planner and Development Officer	City of Iqaluit	2019-03-24

Authorizations

Indicate the areas in which the project is located:

South Baffin

Authorizations

Regulatory Authority	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Government of Nunavut, Community Government & Services	Approval letter to proceed	Active	2019-03-27	

Project transportation types

Transportation Type	Proposed Use	Length of Use
Land	Quarry material to be transported by dump truck	

Project accomodation types

Community

Material Use

Equipment to be used (including drills, pumps, aircraft, vehicles, etc)

Equipment Type	Quantity	Size - Dimensions	Proposed Use
Loader	2	5.7m x 2.7m x 1.5m	excavate quarry material
Dump Trucks	3	8m x 2.5m x 3.4m	Haul quarry material
Water Truck	1	10 tons	Dust control
Passenger vehicles	2	NA	transport personnel
Screening & Crushing equipment	2	Unknown	Screen and crushing of sand and gravel

Detail Fuel and Hazardous Material Use

Detail fuel material use:	Fuel Type	Number of containers	Container Capacity	Total Amount	Units	Proposed Use
Gasoline	fuel	0	0	0	Liters	none stored on site
Diesel	fuel	0	0	0	Liters	none stored on site - used for Crusher/Screener/Loader
Hydraulic Fluids & Oils	hazardous	0	0	0	Liters	none stored on site - for heavy equipment maintenance
Anti-freeze	hazardous	0	0	0	Liters	none stored on site - for vehicles

Water Consumption

Daily amount (m3)	Proposed water retrieval methods	Proposed water retrieval location
0	n/a	n/a

Waste

Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional treatment procedures
Camp	Overburden (organic soil, waste material, tailings)	100000	dump truck	none

Environmental Impacts:

Accidental leaks and spillages of substances such as fuel or petroleum-based lubricants - if this occurs the City will call the NU 24-hour spill report line at (867) 920- 8130 and immediately extract and remove the aggregate at the point of the spill. The contaminated soil will be relocated to the community land farm. Noise and vibration effects from rock crushing/breaking and machinery.

Additional Information

SECTION A1: Project Info

SECTION A2: Allweather Road

SECTION A3: Winter Road

SECTION B1: Project Info

SECTION B2: Exploration Activity

SECTION B3: Geosciences

SECTION B4: Drilling

SECTION B5: Stripping

SECTION B6: Underground Activity

SECTION B7: Waste Rock

SECTION B8: Stockpiles

SECTION B9: Mine Development

SECTION B10: Geology

SECTION B11: Mine

SECTION B12: Mill

SECTION C1: Pits

No known carving stone deposits are located in this area. If a carving stone deposit is located then extraction of aggregate will cease until the City decides what they wish to do. The extraction of the aggregate will go down 1-3 meters. Should flooding become an issue, drainage ditches will be constructed to promote drainage away from the pit. We will continually monitor erosion or potential for erosion and implement control measures to minimize erosion. Minor slumping may occur to the landscape due to the extraction of aggregate but will be levelled off once the quarry is depleted. No evidence of ice lenses in the area. We currently do not blast and do not foresee having to blast. We will inform the public about the sight, and post signs around the site about the safety. Staff will also follow WSCC safety regulations around the site and area. Once this site is depleted of essential aggregate, the quarry will be leveled off to avoid any steep ditches using sand, silt and any other undesirable aggregate

SECTION D1: Facility

SECTION D2: Facility Construction

SECTION D3: Facility Operation

SECTION D4: Vessel Use

SECTION E1: Offshore Survey

SECTION E2: Nearshore Survey

SECTION E3: Vessel Use

SECTION F1: Site Cleanup

SECTION G1: Well Authorization

SECTION G2: Onland Exploration

SECTION G3: Offshore Exploration

SECTION G4: Rig

SECTION H1: Vessel Use

SECTION H2: Disposal At Sea

SECTION I1: Municipal Development

Description of Existing Environment: Physical Environment

Tidal processes and bathymetry in the project area – This section does not apply. Air quality – Appears excellent. There is no reason to believe that air quality should not be excellent. Climate conditions and predicted future climate trends – The arctic is undergoing apparent raise in average temperature in the long term. This will have no incidence of this quarry. Noise levels – Noise level is of low concern but will be typical of such heavy equipment

Description of Existing Environment: Biological Environment

Wildlife, including habitat and migration patterns – No wildlife observed, although any wildlife observed will be respected at all times during the work. Birds, including habitat and migration patterns – No birds observed, although any wildlife observed will be respected at all times during the work.

Description of Existing Environment: Socio-economic Environment

Archaeological and culturally significant sites (e.g. pingos, soap stone quarries) in the project and adjacent areas – None observed Land (should archaeological sites be encountered, all work will stop, permits will be applied for and archaeological investigation will proceed) and resource use in the area, including subsistence harvesting, tourism, trapping and guiding operations – The area surrounding the quarry areas is used as a gravel extraction activity. There are no subsistence harvesting or tourism activity within or surrounding the new quarry areas.

Miscellaneous Project Information

The areas are of low value habitat for terrestrial mammals and birds. However, the following measures are planned to mitigate potential negative effects on wildlife during operational phases:• A zero-tolerance policy regarding the harassment, disturbance and feeding of wildlife will be implemented. • All workers will be educated on the wildlife (particularly species at risk) expected to occur in the area, including IQ/traditional knowledge. • Food, food waste, and other attractants will be handled, stored and disposed of safely to avoid attracting and habituating animals. • Polar bear sightings will be immediately reported to the Site Supervisor recording the time, date, location, activity, and proximity to

workers. This will be followed site protocols to keep workers and the public at large safe during the wildlife encounter. • Movement of vehicles and machinery will be restricted as required for any wildlife occurrences in the area. • Species at risk, or other features such as bird nests will trigger documentation and wildlife management protocols to minimize wildlife disturbance. • Work site boundaries will be flagged to prevent inadvertent loss or alteration of wildlife habitat. As well, the project will comply with the Migratory Bird Regulations pursuant to the Migratory Bird Convention Act. • If active nests are encountered, the nesting areas will be avoided until nesting is complete. • The nest will be protected with a buffer zone appropriate for the species. • Best practices will be applied as appropriate as per the Regulations. Water requirements for dust management during excavation and loading activities will be from the existing water supply infrastructure in the Hamlet. It is anticipated that water will be delivered by the Hamlet's trucked water service or a locally contracted water truck. There will be no extraction or discharge of water from or into fresh water bodies. Fuel will be provided by the Hamlet's facilities and supplies. There will be no storage of fuel on site. There will be no storage of hazardous material on site. There will be no use of explosives

Identification of Impacts and Proposed Mitigation Measures

Excavation of material at the identified sites will expose underlying permafrost to warming and may cause permafrost thaw and slumping. Mitigation measures will be in place to limit or prevent excessive thaw such as: ensuring positive drainage away from the pit face and restricting excavation to the active layer in shallow sources.

Cumulative Effects

The overall cumulative effects are good: a good source of granular material was found, its development will provide a good source of gravel for the City and its development will provide employment in Iqaluit. No negative regional or cumulative economic effects associated with the quarries were identified.

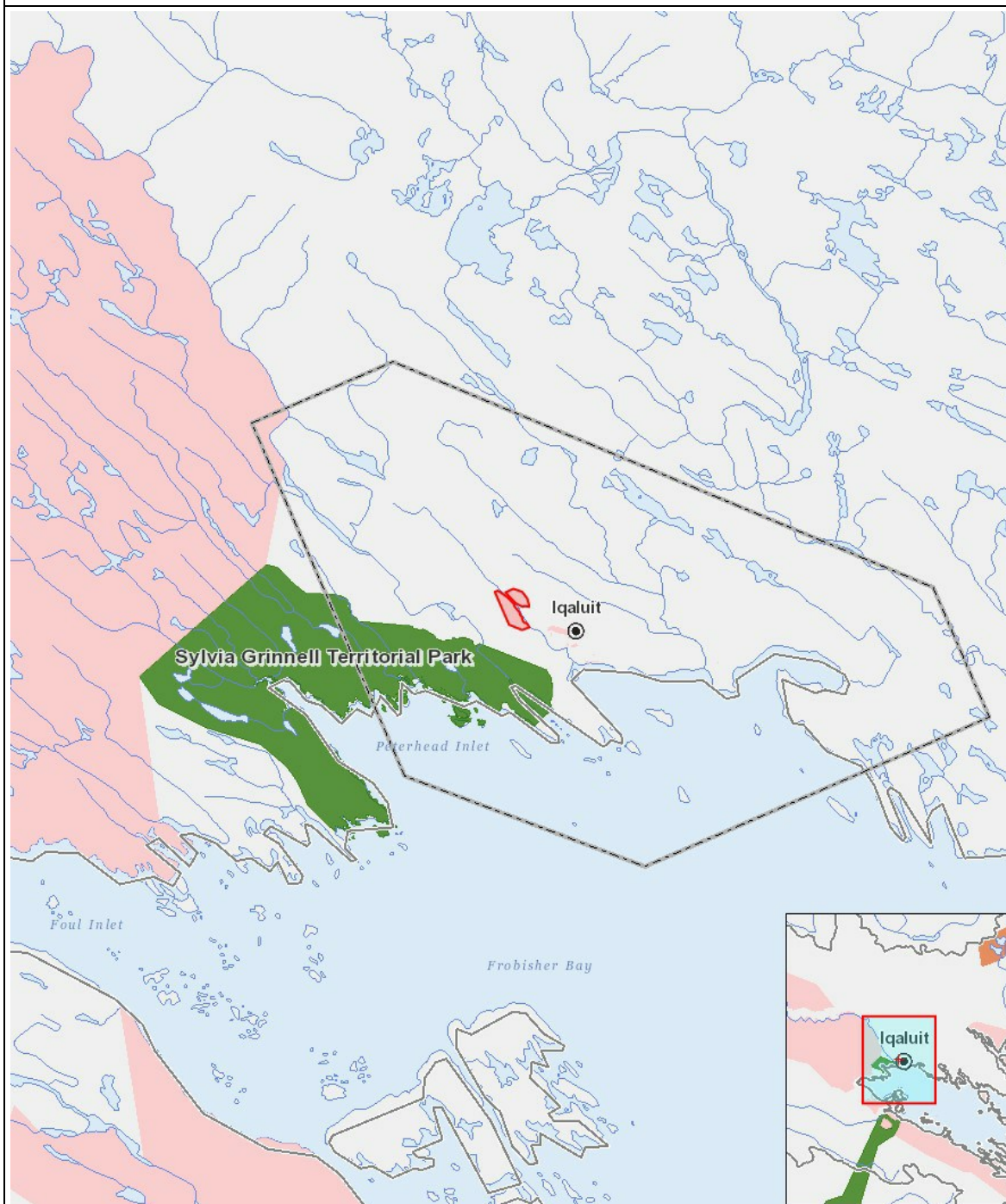
Impacts

Identification of Environmental Impacts

		PHYSICAL	Designated environmental areas	Ground stability	Permafrost	Hydrology / Limnology	Water quality	Climate conditions	Eskers and other unique or fragile landscapes	Surface and bedrock geology	Sediment and soil quality	Tidal processes and bathymetry	Air quality	Noise levels	BIOLOGICAL	Vegetation	Wildlife, including habitat and migration patterns	Birds, including habitat and migration patterns	Aquatic species, incl. habitat and migration/spawning	Wildlife protected areas	SOCIO-ECONOMIC	Archaeological and cultural historic sites	Employment	Community wellness	Community infrastructure	Human health
Construction																										
-		-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-
Operation																										
Quarry/Borrow pit		-	-	N	-	-	-	-	-	N	-	-	-	N		N	-	-	-	-		P	-	-	-	-
Decommissioning																										
-		-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

(P = Positive, N = Negative and non-mitigatable, M = Negative and mitigatable, U = Unknown)

Project Location



List of Project Geometries

1	polygon	Quarry Site 1
2	polygon	Quarry Site 2