

ፍጹሙ ለሥራ ለሥራ ለሥራ ለሥራ ለሥራ

Inuinnaqtun: 5,000 m2 umiakuuqtitivik tukhiqtauyug nunallaami ihuaqhiyuumiqlugu umiakuuqtitinikkut auladjutit. Qanngit uyaraliaq pidjutiqarniaqtug pipkainikkut tamayanik ingilravikhanik tadjakaffuklu tutquumavikhanik agyarnikkut hunanik. Tamna umiakuurvikhaq iliugaqtauniaqtug nunalaani qayarnik uhiarvikharnik.

Post-Closure Phase: from to

Λ Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ Ν Ξ Ο Π Ρ Σ Τ Υ Φ Χ Ψ Ω

[illegible][illegible]

ᓄᑦᕐᒃᔭ ᖅ	ᐱᓂᖅ	ᓴᐁᓗᐱᖅᓂᓈᓂᓪᔫᖅ ᖅ	ᖅᓴᓯᓚ ᐁᓗᖅᓂᓈᐁᓇᐁᓇᐱᖅᕐᓂᖅ
Cᓵᖅᐱᖅ	AZAD ISMIAL	CGS Kitikmeot Region Project Manager	2024-09-01
Cᓵᖅᐱᖅ	David Irqitut	ASAO, Hamlet of Taloyoak	2024-11-26

$\subset \Delta^{\text{ac}}_j \wedge J^{\text{ac}}_{\text{ad}} \nabla^{\text{ac}}_r C \triangleright L^{\text{ac}}$

Project transportation types

Project accomodation types

Temporary Camp

മുൻപ്

Δρ_αℓ,

A^ad^c d^ar^ts^b d^cs^bc^ds^b h^ts^b Δ^cbⁱp^dn^jr^c ΔjCΔ^c, r^c-d^apⁿ^c, s^bl^crⁱs^b, m^er^d^c d^r^ar^c-d

[illegible]

ΔL^{5b} ◀^{5b} C▶^{5b} $\dot{\mathbf{L}}$ ^{5b} $\mathbf{J}$ ^{5b}

▷^c↳^c CĬ^{sb} ◀^{sb} C▷^{sb} ◀^{sb} ▷^{sb}	ᄃᄆ^{sb} ᄇᄃ^{sb} Cᄃ^c Cᄃ^c ᄃᄃ^{sb} <^c	ᄇP^c ᄇᄃ^{sb} Cᄃ^{sb} Cᄃ^c ᄃᄃ^{sb} <^c
4	Delivery to camp by hamlet for up to 8 people	hamlet water plant

$\triangle^b C d^c$
$$\Delta^b C d r n \sigma \Delta^c \sigma^c$$
[illegible]

$\triangleleft \nabla \cap \Gamma \triangleright C \dot{\sigma}^C \supset^C \triangleleft^b \supset^{qb} C \triangleright \gamma L \gamma^C$

This project will require the infilling of portions of the harbour to accommodate the 5,000 m2 laydown area. EXP has reached out to DFO to have preliminary discussions on how to mitigate environmental concerns as this project design progresses. EXP has attached the Flora and Fauna report authored to assist the design.

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

SECTION D1: Facility

The background work for the project include collecting site photos (attached), bathymetric data (attached within the design iteration), and granular material history (from the last 2 years construction of the sewage lagoon).The facility will have approximately 5000 m2 of area to accommodate sealift cargo delivery. The latest design iteration is attached.During operation of the facility, the sealift delivery will be received at the boat ramp in the same approach as currently realized. The delivery of the barge to the shore will be improved over the current situation as the ramp will allow for better movements, more storage, and limited delivery movements on the community road network. The current set up requires significant movements within the community during the delivery process.

SECTION D2: Facility Construction

The construction will see approximately 33,000 cubic metres of granular material imported to construct the sealift project. The material will be processed in the existing quarries, and transported to the site. Material placed below the water line will be coarse (larger than 10mm), with a well graded crushed rock utilized for the driving surface.Approximate quantities of granular material are:1. Borrow (below water) = 23,000 m32.

Borrow (above water) = 5,000 m³. Crushed Rock Driving surface = 3,000 m³. Rip Rap shore protection = 2,000 m³. Work is anticipated to require a full construction season of material production, followed by a construction season of material placement. The consultant would have personnel onsite to visualize the progress of the contractor. Given the large amount of fill being infilled into the water, the material placed below the water will be free of fines (will be larger than 10mm). This will minimize the sediment into the water, and improve the ability to minimize ongoing settlement of the fill. DFO will be consulted on this procedure moving forward, with the potential requirement of a turbidity curtain type of installation (although this would be challenging to maintain within the harbour).

SECTION D3: Facility Operation

The facility will require relatively minimal maintenance during its lifespan. With the shoreline protection in place, it is not expected that wave erosion to be a critical item. This will further be minimized in the future with the proposed breakwater construction (outside of current scope). Maintenance to the driving surface of the sealift will be by conventional means. Additional gravels would be required on an as-needed basis to resolve pot holes and sealift equipment disturbances.

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

It is not expected that any sea vessels would be required for construction, aside from potential small-craft boats to collect future bathymetric data. Those vessels would be rented from local people, as was undertaken for the October 2024 bathymetric study.

SECTION H2: Disposal At Sea

A disposal permit has not yet been applied for through Environment Canada. When discussion with DFO, the consultant was made to believe that it was under their authority to review and approve the procedures, materials, etc. The consultant will review this in the new year with environment Canada. The infilling of the harbour is required to improve the capacity for sealift delivery. The infilling will be completed using granular aggregates produced within the community. General gradations will be between 10 and 100mm, in order to reduce the impact to water quality. Infilling will be required at the end of the harbour, as per the initial design documents. The clean granular material used for the project will aim to reduce the impact marine life, and improve the conditions for the community for sealift delivery and boat launching. The infilling area is where the sealift already arrives, with the new configuration providing more suitable facilities to unload and store the delivered goods. It is expected that the delivery of aggregates will be over a full construction season (approx 4 months). The aggregate, once placed, will be similar to the existing materials on the seabed given that they will be produced from materials of similar geology. The larger rock material placed

at the surface could be favourable for fish habitat. During construction, rock will be transported from quarry locations (see project map) along the existing community roads (see project map). It is understood that the community is involved in discussing future road networks that may allow construction traffic to divert away from the main road network; however, it is likely that this would only be realized following the current project timelines.

SECTION I1: Municipal Development

New construction will provide an area to for loading/unloading sealift delivery supplies. The project will require aggregates to be processed from current quarry sites and imported to the sealift site for construction. The contractor will require construction equipment to facilitate the product, transport, and install of aggregate materials to create the sealift site. The project will see aggregates imported and installed to raise the elevation of the area to approximately 2m above sea level. The contractor will be required to provide their procedures to complete the work. These submittals (not limiting to) will require detailed safe work and safe job procedures, environmental guidelines for equipment use, maintenance requirements, and their tool box safety meetings that will be regularly occurring during construction. As this project will involve multiple pieces of construction equipment, noise and emissions typical of construction sites will be realized. At this time, it is anticipated that the contractor would be requiring at least 1 excavator, 1 loader, 1 bulldozer, 1 compactor, and 3 trucks. In total, the final product will be a crushed rock surfaced receiving area for the sealift. The ramp within the project will be also used as a community boat ramp for recreational use and fisheries. The constructed area will be fit up with six lights that can be controlled by the community.

[illegible]

Project will largely encompass marine environment at the end of the harbour, where the existing sealift operations currently take place. The quarry / material borrow sites are existing and currently in operation, as was used in the 2023-2024 lagoon project. The existing shoreline is rocky, with the eastern portion of the harbour being exposed bedrock. As surveyed (topographic and bathymetric surveys), the site is suitable for construction without much risk for soft and unsuitable soils. (Survey information is attached) The aggregates for the project will be processed in existing quarry locations in the community. These sources were used within the recent lagoon project. The project area is already used for the sealift delivery. The new project will improve this operation, while also providing a community boat ramp to facilitate recreational and fishing vessels.

[illegible]

The proposed sealift site is a rocky shoreline and harbour (see photos). The project will require the infilling of portions of the water to accommodate the project dimensions (water depth at the end of the sealift improvement site is approximately 6metres). A flora and fauna report (desktop study) is attached. A preliminary discussion with DFO has occurred, with future discussions required once the design is finalized.

[illegible]

This project will support the community in improving the sealift delivery process, while also giving access to a boat ramp. The boat ramp is needed as more than 10 community members now launch their boats daily, so an improved ramp is required. While in the community for engagement meetings in December 2024, a member of community planning was in the community. There is development planned for the eastern portion of the community, and the sealift project has been adjusted from the original concept to potentially connect to the new community area. This coordination could possibly improve the community use of the area.

Miscellaneous Project Information

Site photos from September 2024 are attached. They document the condition of the shoreline at the time of the September sealift arrival. The front end specifications for the project will include environmental response and requirements. As is typical for projects near water, the contractor will have limitations to their storage of equipment for overnight/non-work days, requirements for fueling, spill mitigation/prevention, and working near the water. Water quality testing can be regimented during construction should it be a requirement of environment Canada or DFO. There is no expectation of waste generation at the project site.

A waste management plan can be developed by the contractor to identify the collection and disposal of any waste generated from their camp and project management site trailer locations.

[illegible]

This project will require the infilling of a portion of the harbour to accommodate the sealift receiving area. As such, there will be impacts to the fish habitat. The following mitigation measures are accounted for in the design:

1. The aggregate placed below the water level will be free of fine materials. This will improve the placement ability, but also deposit less sediment into the water. This mitigation is incorporated to provide better water quality for aquatic life in the project area.
2. The project site will offset potential fish habitat. With the new design incorporating coarse granular material (gravels, cobbles, boulders), this is commonly viewed as desirable fish habitat.
3. All aggregates produced for the project will be acquired from already existing quarry sites. The work does not envision new undeveloped quarry sites being required.
4. The quarry sites are on the opposite side of the community from the construction site. This will mean that work will see an increase of construction traffic through the community for the works. A detailed plan will be required by the contractor to ensure that travel through the community will not impact community members.

Cumulative Effects

This project will provide an overall benefit to the community. With the improved sealift receiving capacity being a major reason for the project, this project will further see benefits to the community with the boat launch and parking area of truck and trailers.

Impacts

$\mathbb{A}^1_{\mathbb{A}^1} \times_{\mathbb{A}^1} \mathbb{A}^1 \rightarrow \mathbb{A}^1$

		PHYSICAL															BIOLOGICAL															SOCIO-ECONOMIC																																																																															
		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					Vegetation					Wildlife, including habitat and migration patterns					Birds, including habitat and migration patterns					Aquatic species, incl. habitat and migration/spawning					Wildlife protected areas					Archaeological and cultural historic sites					Employment					Community wellness					Community infrastructure					Human health				
ከፊርማ																																																																																																															
Camp		U	P	M	-	M	M	U	P	M	M	U	M		M	M	M	U	M		M	M	M	U	M		U	P	U	P	U																																																																																
Access Road		N	N	N	-	N	N	N	N	N	N	M	P		N	N	N	N	N		N	N	N	N	N		N	P	M	M	U																																																																																
Offshore Infrastructure (port, break water, dock)		U	M	M	-	M	N	N	N	M	P	M	P		M	U	M	U	U		U	P	P	P	U		U	P	P	P	U																																																																																
ፖሊሲናፍርማ																																																																																																															
Camp		U	P	M	-	P	U	U	P	P	P	U	M		U	U	U	P	U		U	P	P	P	U		U	P	P	P	U																																																																																
Access Road		N	N	N	-	N	N	N	N	N	N	N	N		N	N	N	N	N		N	N	N	N	N		N	N	N	N	N																																																																																
Offshore Infrastructure (port, break water, dock)		U	P	N	-	P	N	M	N	P	M	M	M		M	P	M	P	U		U	P	P	P	U		U	P	P	P	U																																																																																
ፈጣሪናፍርማ																																																																																																															
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-																																																																																

$$(P = \langle b \rangle \Delta_P \cap \Gamma^a \mathbb{C}^b, N = \langle b \rangle \Gamma^a \Gamma^b \mathbb{C}^a \mathbb{C}^b \mathbb{C}^a \mathbb{C}^b, M = \langle b \rangle \Gamma^a \Gamma^b \mathbb{C}^a \mathbb{C}^b \mathbb{C}^a \mathbb{C}^b, U = \mathbb{C}^a \Gamma^a \mathbb{C}^a \mathbb{C}^a \mathbb{C}^a)$$

List of Project Geometries

1	polygon	Proposed work area.
2	polygon	Proposed camp area
3	polygon	Rock Quarry
4	polygon	far far away sandpit
5	polygon	material quarry site
6	polyline	Construction Traffic Route