







			major infrastructure exists on-site besides equipment storage and temporary access routes.	discovery of cultural materials during operations would be reported to the Nunavut Department of Culture and Heritage.	area is Iqalugaarjuup Nunanga Territorial Park, roughly 75 km north. There are no designated conservation areas immediately adjacent. The site is outside known critical wildlife habitats but lies within regional wildlife migration corridors.
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ᓄᓇᓕᓄᓐ	ᓄᓇᓕᓄᓐ	ᓄᓇᓕᓄᓐ	ᓄᓇᓕᓄᓐ
ᓄᓇᓕᓄᓐ	Brian Fleming	Hamlet of Whale Cove	2025-04-07

# ግልጽ ለግብርና ለውጥ ማስፈጸም

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ግልጽ ለግብርና ለውጥ ማስፈጸም

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ግብርና ለውጥ ማስፈጸም ለውጥ ማስፈጸም ለውጥ ማስፈጸም	Quarrying Permit	Active	2024-07-01	2025-06-30
ግብርና ለውጥ ማስፈጸም ለውጥ ማስፈጸም ለውጥ ማስፈጸም	Quarrying Permit	Active	2025-07-01	2026-06-30
ግብርና ለውጥ ማስፈጸም ለውጥ ማስፈጸም ለውጥ ማስፈጸም	APPLICATION FOR APPROVAL FOR THE USE OF WATER OR DEPOSIT OF WASTE WITHOUT A LICENCE	Applied, Decision Pending	2025-03-26	

## Project transportation types

Transportation Type	ግብርና ለውጥ ማስፈጸም ለውጥ ማስፈጸም ለውጥ ማስፈጸም	Length of Use
Land	Materials will be transported via the existing gravel haul road, located 5 km north of the runway. This road will undergo necessary upgrades to accommodate dump trucks for aggregate transport. Construction support includes loaders, excavators, motor graders, and water trucks for road preparation, maintenance, and dust suppression.	

## Project accommodation types

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compaction and dust suppression. the project site.



# **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**

1. Activities Included in This Project  
Pitting / Overburden Removal: Shallow pits and trenches will be dug at quarry site 4 (existing disturbed area), likely exposing permafrost and patterned ground. Overburden will be removed and stockpiled nearby for later site reclamation. Field mapping confirmed permafrost thaw sensitivities in low-lying depressions.  
Quarrying / Crushing / Stockpiling: Suitable aggregate (coarse sand, gravel) will be extracted using pneumatic breakers, loaded into trucks, crushed to desired specifications, and stored on a stable gravel pad.  
Road Use/Construction: Existing haul road (~5 km) will be repaired and compacted to transport material to the runway.  
Explosives Transportation and Blasting: No blasting is planned; material is friable and test pits showed acceptable fracturing.  
Washing: Optional water-washing may be used if excess fines are present in aggregate stockpiles, with water recycled per the water-use plan.  
Work in Navigable Waters: None—no marine or stream crossings at this site.  
2. Field Investigations  
Extensive test-pitting was conducted in March 2024 at 21 locations (AB24-08 to AB24-21 and RQ24-03 to RQ24-06). Results indicated a 0.3–0.6 m overburden layer (silt, organic matter) overlying coarse till. Gravel quality and quantity at the quarry site are sufficient for project needs, with no need for blasting.  
3. Carving Stone Deposits  
No stone suitable for carving (e.g., soapstone or schist) was identified during field investigations; no traditional quarry sites are present.  
4. Conceptual Design & Footprint  
The proposed borrow site is approximately 200 m × 150 m (~3 ha), located north of the airport. Aggregate extraction will occur within a defined pit footprint, with haul road tied into existing gravel road. Stockpile areas of ~0.5 ha are planned adjacent to the borrow site and at the runway.  
5. Material Type & Volume  
Up to 15,000 m<sup>3</sup> of

granular material (coarse sand and gravel) will be extracted and crushed to 50–100 mm for runway surfacing.6. Overburden DepthOverburden varies from 0.3 to 0.6 m, composed of frost-disturbed silt and vegetative mat, and will be removed and stockpiled.7. Thermokarst Potential & PreventionMinor thermokarst terrain features were noted, including thaw-sensitive micro-depressions. Prevention will include limiting surface disturbance, preserving permafrost insulation, and avoiding draining depressions.8. Flooding & ControlsNo permanent watercourses; minor ponding may occur during thaw. Extraction areas will be graded to avoid pooling, and sediment fences will be installed.9. Erosion ControlsErosion control measures include installing silt fences around stockpiles, seeding disturbed areas, and maintaining gentle slopes to limit sediment runoff.10. Sedimentation ControlsBeaches of gravel and filter cloth will be used to trap sediment before it enters nearby low-ground areas; periodic inspections will detect any fines.11. Slumping PreventionSide slopes will be graded to a maximum of 3:1 and monitored periodically. Any slump activity will be stabilized with gravel fill.12. Moisture ContentGround moisture is typical of coarse till in active layer: slightly damp; lab tests confirm below-liquid limits, suiting compaction needs.13. Ice Lens EvidenceTest pits revealed polygonal ground frost-structures and minor ice lenses, indicating permafrost continuity. Measures to buffer thermal exposure include staged extraction and berming.14–15. Blasting Methods & Explosive StorageBlasting is not required, so explosives will not be used or stored at the site.16. ARD & Metal Leaching PotentialGeological analysis showed low sulfide content in amalgamated till; ARD/ML risk is negligible. No acid-generating materials present.17. Worker & Public Safety MeasuresAccess Control: Fencing around the quarry.Signage: Clear hazard and equipment signage posted.Training: Site-specific orientations for workers.PPE: Required use of hard hats, safety boots, high-visibility vests at all times.Traffic Management: Spotters for loading machinery, speed limit on haul road set at 20 km/h.Equipment Inspections: Daily safety and spill kit checks.

## **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**





resilient infrastructure design that accounts for cumulative climate effects.

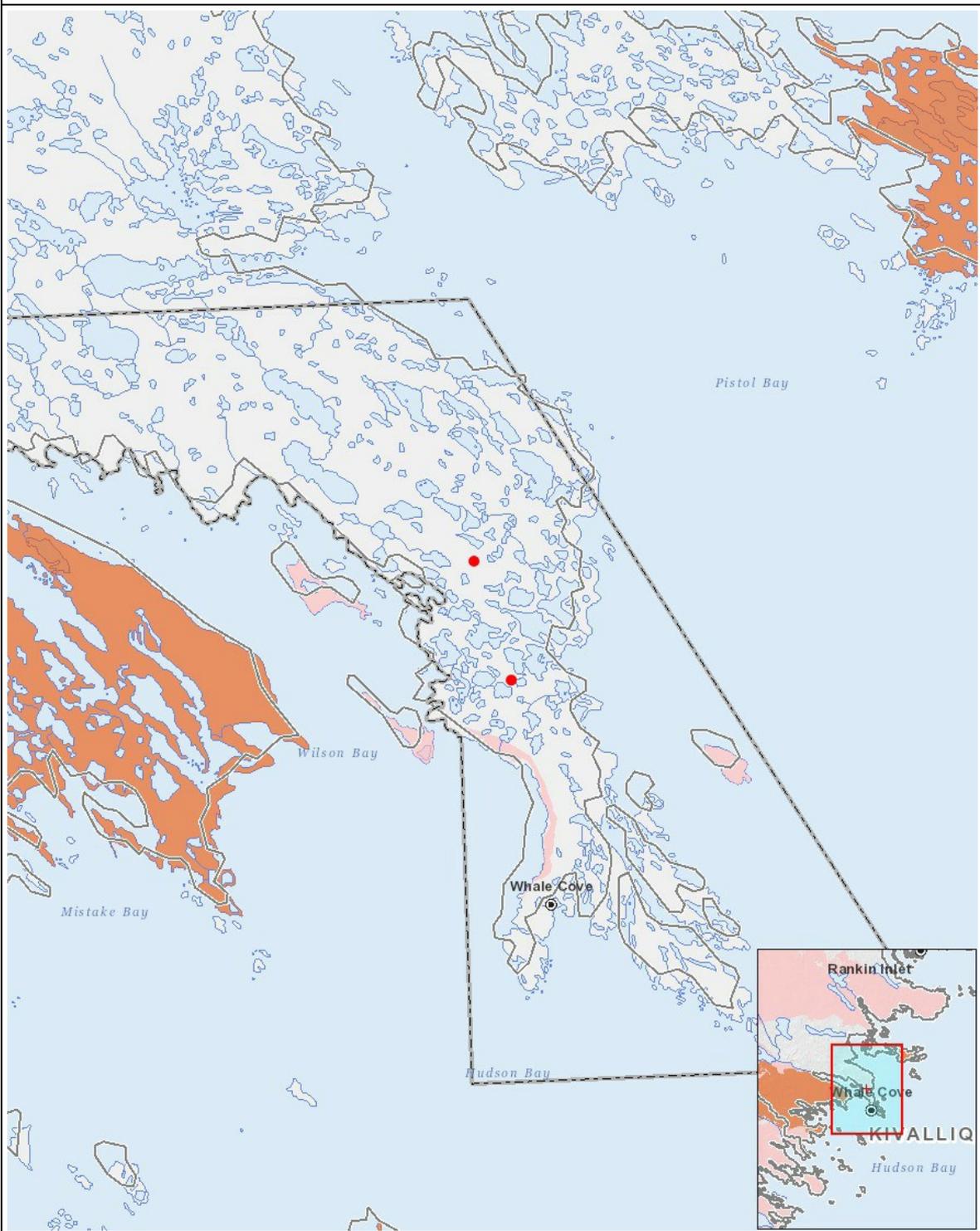
**4. Subsistence & Wildlife Use**  
Cumulatively, multiple infrastructure projects—roads, gravel extraction, marine access—increase disturbance to migratory corridors for caribou, polar bears, and birds. The rehabilitation’s wildlife-mitigation measures (buffers, timing restrictions) build on existing monitoring and patrol frameworks to help offset added pressure.

**5. Social & Economic Considerations**  
Increased activity and infrastructure upgrades bring jobs, training, and improved medevac reliability—supporting local economy and wellbeing. Simultaneously, improved access to goods and services may alter traditional lifestyles, increasing subsistence harvesting pressures and transport-based pollution. Community oversight is required to balance benefits and cultural sustainability.

**Holistic View & Strategic Approach**  
This project’s cumulative impact is primarily additive, layering with past quarry use and future development plans across land (haul roads), water (river intake, marine traffic), and social fabrics (skills, jobs, pressures on local culture). To manage this, project design aligns with regional strategies and applies a precautionary approach, including:  
Integrating runoff and dust control with quarry management.  
Scheduling around wildlife migrations and subsistence seasons.  
Liaising with regional authorities and Hunters and Trappers Organizations.  
Designing climate-resilient structures compatible with projected permafrost thaw.  
Reporting and adaptive monitoring to detect incremental impacts early.

**Conclusion**  
By situating the runway rehabilitation within the broader nexus of existing and future projects in the Kivalliq Region, Whale Cove adopts a proactive regionally integrated strategy. This ensures development benefits—such as safety, socioeconomics, and access—are realized while reinforcing incremental mitigation to prevent cumulative degradation of fragile Arctic ecosystems and community wellbeing.





List of Project Geometries

- |   |       |  |
|---|-------|--|
| 1 | point | Whale Cove Airport-Site location           |
| 2 | point | Whale Cove Airport-Quarry and Pit location |