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September 12, 2023

File: G23L8-002

Mark Cliffe-Phillips
Mackenzie Valley Review Board
200 Scotia Centre
Box 938, 5102-50th Avenue
Yellowknife NT X1A 2N7

Sent by email

Dear Mark Cliffe-Phillips,

Re: Inuvik Airport Stormwater Drainage Upgrade Project – Notice of Preliminary Screening Determination – Application for Type B Water Licence

The Gwich'in Land and Water Board (Board) met on September 12, 2023 and considered the Application Package from the Government of the Northwest Territories Department of Infrastructure (GNWT - INF) Water Licence (Licence) G23L8-002 for the Inuvik Mike Zubko Airport Stormwater Drainage Upgrade Project in accordance with the *Mackenzie Valley Resource Management Act (MVRMA)*.

The Board conducted a preliminary screening based on the public record for the proceeding. Based on the evidence provided, the Board is satisfied the screening has been completed according to section 125 of the MVRMA and has decided **not to refer** the Project to environmental assessment. The Board's Preliminary Screening Determination and Reasons for Decision, as required by section 121 of the MVRMA, is attached.

If the Board does not receive notice of referral to environmental assessment, it can proceed with the issuance of Licence G23L8-002 on September 23, 2023.

The Board and staff look forward to continued communications throughout the pause period. Please contact Executive Director Leonard DeBastien via email or at (867) 777-4954 with any questions or concerns regarding this letter.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Elizabeth Wright", with a small arrow pointing to the right at the end of the signature.

Elizabeth Wright
Chair, Gwich'in Land and Water Board

BCC'd to: GLWB Distribution List
Jason MacNeil, Regional Airport Manager, GNWT INF

Attached: Preliminary Screening Determination and Reasons for Decision



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Preliminary Screening Determination and Reasons for Decision

Water Licence Application	
File Number	G23L8-002
Company	Government of the Northwest Territories Department of Infrastructure
Project	Inuvik Airport Surface Water Drainage Upgrades
Location	Inuvik, NT
Activity	Miscellaneous Type B
Date of Decision	September 12, 2023

1.0 Decision

In accordance with subsection 124(1) of the [Mackenzie Valley Resource Management Act](#) (MVRMA), the Gwich'in Land and Water Board (GLWB or Board) met on September 12, 2023 to make a preliminary screening determination on the Application from the Government of the Northwest Territories Department of Infrastructure (Applicant or GNWT INF) for Water Licence G23L8-002 (Licence)¹ for Inuvik Airport Surface Water Drainage Upgrades (Project).²

The Board has decided not to refer the proposed Project to the Mackenzie Valley Environmental Impact Review Board (the Review Board) for Environmental Assessment because, based on the evidence, it is the Board's opinion that the proposed Project will not have a significant adverse impact on the environment or be a cause of public concern.

The Board's determination including reasons for its decision, are detailed in sections [3.0](#) and [4.0](#).

¹ See GLWB Online Registry for [GNWT INF-Inuvik Airport Drainage-Cover Letter and Water License Application Form-May31 23.pdf](#)

2.0 List of Defined Terms and Acronyms

Applicant	[Full Name of Company/Organization/Government]
Applications	The complete application package submitted by the Applicant for Water Licence [file number] and Land Use Permit [file number].
Board/GLWB	Gwich'in Land and Water Board
CRP	Closure and Reclamation Plan
EA/EIR	Environmental Assessment/Environmental Impact Review
GNWT	Government of the Northwest Territories
GNWT-ECC	Government of the Northwest Territories – Environment and Climate Change
GTC	Gwich'in Tribal Council
MVLWB	Mackenzie Valley Land and Water Board
MVRMA	Mackenzie Valley Resource Management Act
Minister	Minister of the Government of the Northwest Territories – Environment and Climate Change
ORS	Online Review System (www.new.onlinereviewssystem.ca)
Party	As per the LWB Rules of Procedure , an applicant, a person, or an organization participating in the regulatory proceeding for the Applications.
Project	The Inuvik Surface Water Drainage Upgrade Project which is the proposed development (as defined in Part 5 of the MVRMA). ³
Review Board	Mackenzie Valley Environmental Impact Review Board
SCP	Spill Contingency Plan
Standard Licence Conditions	LWB Standard Water Licence Conditions Template
TK	Traditional Knowledge
WMP	Waste Management Plan

3.0 Background and Scope of Screening

On May 31, 2023, GNWT INF applied to the GLWB for Type B Water Licence G23L8-002 for a period of twenty-five years. The purpose of this licence is to authorize the deposit of waste in association with the re-construction and subsequent operation and maintenance of the surface water drainage system at the Inuvik Mike Zubko Airport.

The project will change the flow paths and discharge locations for the water that runs off the Airport lands into Chii Zhìt Van (Dolomite Lake/Airport Lake). It will involve constructing new drainage ditches and culverts within the existing airport property, including the runway, taxiways, and the natural areas to the east and west of the airport. The purpose of the drainage design is to prevent surface water from ponding around the runway and minimize further permafrost degradation in order to stabilize the runway, embankments, and building infrastructure.

³ “development” is defined in Part 5 of the [MVRMA](#) as:

“any undertaking, or any part or extension of an undertaking, that is carried out on land or water and includes an acquisition of lands pursuant to the *Historic Sites and Monuments Act* and measures carried out by a department or agency of government leading to the establishment of a park subject to the *Canada National Parks Act* or the establishment of a park under a territorial law.”

During construction, mitigation methods will be applied to reduce erosion and prevent sediment from entering into the drainage system and into Chii Zhìt Van and East Lake. Suspended solids can impact water quality and fish habitat, and may be considered a Waste under the Waters Act. Because Project activities have the potential to increase sediment loading into the lakes, a Licence Application was made to the Board.

In accordance with paragraph 125(1)(a) of the [MVRMA](#), the Board must conduct a preliminary screening of the proposed Project to determine and report to the Review Board whether, in its opinion, the proposed Project might have a significant adverse impact on the environment, or might be a cause of public concern. The details of the Board's analysis are set out in section [4.0](#) below.

3.1 Public Record and Regulatory Proceeding

To assist the Board in its preliminary screening determination for the Project, the Board distributed the Application for public review on June 9, 2023 inviting reviewers to provide comments and recommendations on the Application and the preliminary screening (e.g., on impacts and mitigation measures) using the Online Review System (ORS). Comments were due June 30, 2023, with responses from the Applicant due July 7. The Board received comments and recommendations from Environment and Climate Change Canada (ECCC) and Gwich'in Tribal Council Department of Heritage (GTC DCH).⁴ Board staff then drafted a Water Licence which was circulated for Public Review on July 21, with reviewer comments and Applicant Responses due on August 4 and August 11, respectively. ECC and GTC Department of Lands and Resources submitted comments.⁵

Since there were no requests to extend the reviewer comment deadline, the Board is satisfied that a reasonable period of notice was given to affected communities and First Nations, as required by subsection 63(2) of the [MVRMA](#).

4.0 Potential Impacts and Proposed Mitigations

Table 1 below summarizes:

- the potential impacts of the proposed Project provided by the Applicant;
- the proposed and potential mitigations for the potential impacts;
- the concerns that were identified during the regulatory proceeding and how the Applicant addressed those concerns; and
- the Board's analysis of the potential impacts and proposed mitigations.

⁴ See GLWB Online Registry for [GNWT INF-Inuvik Airport Drainage-Application Review Comments – Sep12_ 23](#)

⁵ See GLWB Online Registry for [GNWT INF-Inuvik Airport Drainage-Draft WL Review Comments – Sep12_ 23](#)

Table 1 Potential Impacts and Proposed Mitigations for the Proposed Project

Potential Impacts <i>Use an "X" to indicate which apply</i>	X	Potential Project Impacts and Proposed Mitigations <i>Describe the potential impact(s) and the proposed measure(s) to reduce each of these impacts.</i>	Board Analysis and Determination
ABIOTIC COMPONENTS			
Land			
Soil contamination	X	<p><u>Waste and petroleum hydrocarbon storage</u> Potential impact: Temporary on-site storage of waste (domestic garbage, waste petroleum products, hazardous waste) during construction and from normal airport operations could result in contamination of soil from improper storage or handling of the wastes.</p> <p>Proposed mitigation: Contractor to include a waste management plan (including hazardous waste) in their CEMP, to be approved by a GNWT representative, and follow the spill contingency plan in Attachment F. The Inuvik Airport follows waste management procedures for storing and disposing of materials such as used oil. Waste and hazardous waste are disposed of off site, at a licensed facility.</p> <p><u>Fuel transfer</u></p> <p>Potential impact: Transfer, storage, and use of petroleum products, or chemicals may result in a release to the environment. Use of motorized and heavy equipment may result in equipment malfunction and spills to the environment. Proposed mitigation: Contractor to follow the spill contingency plan included in Attachment F and update it with company- and project-specific information. The spill contingency plan will include mitigation measures for fuel storage and refuelling, including setback distances from</p>	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.

		<p>waterbodies and drainage ditches, and the requirement for the contractor to inspect their equipment to ensure it is in good working order and free of leaks. The Inuvik Airport follows its Hazardous Material Response Plan, included in Attachment G.</p> <p>Work in potential contaminated area</p> <p>Potential impact: Construction of ditches through an existing contaminated area could result in</p>	
		<p>improper handling and mixing of impacted soil.</p> <p>Proposed mitigation: Associated reviewed the historical Phase II and Phase III Environmental Site Assessment (ESA) performed at the Inuvik Airport (Attachment J). No construction work is anticipated to occur in the known contaminated areas (i.e., contaminated soils treatment facility or the previous fire training area). If any soil has to be moved from a known contaminated site, it will be stockpiled in a contained area and testing before disposal or reuse.</p>	
Soil compaction	X	<p>Potential impact: Repeated equipment use in undisturbed areas during construction may result in soil compaction, which could affect vegetation growth and water infiltration.</p> <p>Proposed mitigation: Contractor to clearly mark access routes, work area boundaries, and clearing limits to</p>	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be

		minimize damage to undisturbed areas outside the project footprint. Contractor to use identified laydown or disturbed areas to store equipment and supplies. Compacted areas outside the project footprint should be restored (e.g., decompacted and seeded with a native seed mix).	a cause of public concern.
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Destabilization/erosion	X	<p>Potential impact: Vegetation clearing, grubbing, and soil excavation activities may result in exposed soil, which is prone to erosion from water runoff.</p> <p>Proposed mitigation (construction): Contractor to follow erosion and sediment control plan (Attachment E) and to include company-specific information in their CEMP. Proposed mitigation (design): Erosion and sediment control measures are incorporated in the proposed design of the drainage ditches (e.g., gabion basket check dams). Areas that will not have screened rock will be seeded with a native seed mix. See Section 4 of this application form, the design drawings (Attachment B), and erosion and sediment control plan (Attachment E) for details.</p>	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.
Change in soil structure	X	<p>Potential impact: Soil excavation, grading, and design of ditches will change soil structure.</p> <p>Proposed mitigation: Minimize disturbance area to that required for designing the ditches.</p>	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on
Inability to support vegetation	X	<p>Potential impact: Sections of the drainage ditch where non-woven geotextile fabric and screened</p>	Based on the described mitigations, it is the Board's opinion that the

		rock are installed will no longer support vegetation. There may be an inability to support vegetation due to compaction (see above). Proposed mitigation: None. This is a necessary component of the drainage ditch design to mitigate for erosion and sediment concerns. See soil compaction impact for mitigations.	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.
Other	N/A	N/A	
Water			
Groundwater			
Water table alteration	N/A	N/A	
Infiltration changes	X	<p>Clearing of vegetation Potential impact: Clearing and grubbing of vegetation may change the rate and location of surface water infiltration to groundwater. Proposed mitigation: Contractor to limit clearing and disturbance to that necessary to complete project activities.</p> <p>Drainage upgrades and diversion of drainage paths Potential impact: Changing the path along which some of the runoff flows will change the location where infiltration occurs. For example, most of the runoff that used to flow from the southeast corner of the airport will no longer flow through the natural drainage path to Chii Zhì Van. Upgrading the airport drainage will eliminate or reduce the amount of standing water at the airport. Proposed mitigation: None. This change is necessary to perform the upgrades to the airport drainage to protect airport infrastructure.</p>	<p>Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.</p> <p>Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.</p>

Changes in water quality	X	<p><u>Use of petroleum hydrocarbons</u></p> <p>Potential impact: Transfer, storage, and use of petroleum products during construction of the drainage ditches and operation of the airport may affect groundwater quality above permafrost, depending on the location and size of spill.</p> <p>Proposed mitigation: Contractor to follow spill contingency plan (Attachment F). Airport to follow Hazardous Material Response Plan (Attachment G).</p>	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.

Temperature changes	N/A	N/A	
Other	N/A	N/A	
Permafrost			
Loss or change in extent	N/A	N/A	
Changes in seasonal fluctuations	N/A	N/A	
Change in persistence	X	<p>Potential impact: Upgrading the drainage ditches at the airport will reduce the amount of standing water, which lessens the impact to permafrost thaw. This is a positive potential impact. However, excavating new drainage ditches near permafrost may impact the permafrost, depending on depth.</p> <p>Proposed mitigation: Permafrost excavation will be limited to areas required for new construction only and conducted during the winter months to minimize thermal disturbance. Ditch networks are designed to ensure water flow is maintained to eliminate standing water and are sufficiently offset from airport infrastructure to protect against further permafrost degradation under or adjacent to the runway or taxiways as thermal equilibrium is reached.</p>	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.
Other	N/A	N/A	
Surface Water			
Water flow or level changes (permanent, temporary, seasonal)	X	<p>Potential impact: Increased peak water flow and runoff volumes in new proposed ditches and decreased peak water flow and runoff volumes in existing drainage paths. The drainage paths are not fish bearing. Runoff will ultimately flow to the same lakes that it does in existing conditions.</p> <p>Proposed mitigation: The drainage design has accounted for an increase in peak flow and runoff volume due to improvements planned at the Inuvik Airport. See the draft Inuvik Airport drainage design report in Attachment C.</p>	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.

Drainage pattern changes	X	<p>Potential impact: The proposed drainage design will change the location that runoff flows from the airport to Chii Zhit Van and East Lake. This will change the peak flow rate and volume of runoff water that discharges to both lakes at each outfall location.</p> <p>Proposed mitigation: The drainage upgrades were designed with the least amount of drainage pattern changes to maintain positive drainage from the airport.</p>	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.
Temperature changes	X	<p>Potential impact: Surface water temperature may be impacted by potential increased sediment loads during freshet and precipitation events that produce runoff.</p> <p>Proposed mitigation: See the erosion and sediment control plan for mitigation measures (Attachment E) and the monitoring plan for mitigations related to construction turbidity monitoring (Attachment D).</p>	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.
Changes in water quality	X	<p>Construction activities</p> <p>Potential impact: Vegetation clearing, excavation of new drainage ditches, and spills from equipment or fuel transfer and storage may impact the quality of runoff water that enters both lakes. Potential parameters of concern are total suspended solids, turbidity, petroleum hydrocarbons, and metals.</p> <p>Proposed mitigation: Contractor to follow the monitoring plan, erosion and sediment control plan, and spill contingency plan (Attachments D, E, and F). The monitoring plan includes monitoring for turbidity during construction. The contractor will follow the other plans and mitigations in their CEMP, which will be approved by a</p>	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.

		<p>GNWT representative before work begins.</p> <p>Runoff from airport operations</p> <p>Potential impact: Runoff from airport surfaces that enters both lakes may contain the parameters of concern described above and also glycol from deicing chemicals. Note that the use of deicing chemicals at the airport is not new and occurs only occasionally.</p> <p>Proposed mitigation:</p> <p>Spill contingency plan (Attachment F)</p> <p>Inuvik Airport's Hazardous Material Response Plan (Attachment G)</p> <p>Erosion control measures installed in drainage ditches (Section 4 of this application form)</p> <p>Environmental monitoring plan (Attachment D)</p>	
Changes in Water quality		Run off of ethylene glycol	SNP program updated to monitor for BOD and Dissolved oxygen, which can result indicate that glycol concentrations are high.
Wetland impairment	N/A	N/A	
Changes to aquatic habitat (see Biotic section below)	X	Potential impact: Clearing of riparian vegetation and work adjacent to a waterbody (at 5 m from the high-water mark).	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to
		Proposed mitigation: Submit a DFO Request for Review and follow requirements provided in the Letter of Advice from DFO. Contractor to follow environmental protocols for work adjacent to waterbodies in the environmental protocols of the contract specifications and the monitoring plan, erosion and sediment control plan, and spill contingency plan (Attachments D, E, and F). This includes having an	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.

		environmental monitor on site when working within 30 m of Chii Zhit Van or East Lake.	
Other	N/A	N/A	
Air			
Changes in air quality	X	Potential impact: Temporary increase in particulate matter during construction from equipment use, traffic, and exposed soil. Proposed mitigation: The contractor is required to control dust by watering the roads and work areas, as required.	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.
Harm to living things	N/A	N/A	
Increased greenhouse gases	X	Potential impact: Temporary increase in greenhouse gases during construction activities from equipment and vehicle use. Proposed mitigation: Measures to reduce idling will be included in the contractor's CEMP, such as prohibiting vehicle idling.	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.
Other	N/A	N/A	
BIOTIC COMPONENTS			
Vegetation			
Direct loss of vegetation	X	Potential impact: Removal of approximately 110 ha of vegetation for the drainage ditches, including trees and shrubs. Proposed mitigation: Restrict vegetation removal to that necessary for construction by clearly marking clearing limits.	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be

			a cause of public concern.
Loss of Species at Risk or may-be-at-risk plants	N/A	<p>Potential impact: Removal of vegetation and construction activities could damage species at risk or may-be-at-risk plants.</p> <p>Proposed mitigation: A desktop review indicated that the plants currently listed as species at risk under the federal <i>Species at Risk Act</i> (SC 2002, c. 29) (SARA) and the <i>Species at Risk (NWT) Act</i></p>	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.
		(SNWT 2009, c. 16) (SAR NWT) are not located in the Inuvik area.	
Change in species composition	X	<p>Potential impact: Undisturbed vegetation consisting of trees and shrubs will be cleared to construct the drainage ditches, and areas that will not have screened rock will be replaced with a native grass seed mix that is low maintenance and does not attract wildlife.</p> <p>Proposed mitigation: Limit area cleared to that necessary for construction. Use grass seed mix that consists of native species.</p>	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.
Introduction of non-native (invasive) species	X	<p>Potential impact: Machinery, tools, and even clothing have the potential to spread invasive species. Additionally, by disturbing the ground, seeds of invasive species have the potential to germinate if they are brought closer to the soil's surface and can take advantage of bare ground.</p> <p>Proposed mitigation: Equipment cleaning to be done in Inuvik before arriving at the worksite. Regularly inspect machinery and remove debris and vegetation to prevent the spread of potential invasive species. During airport operations, monitor the area for growth</p>	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.

		of invasive species and remove them using a pre-determined effective method (e.g., hand pulling, trimming).	
Effects on plant health (dust, metals, toxins)	X	<p>Potential impact: Construction activities and increased equipment and vehicle use in the area may deposit dust on adjacent vegetation.</p> <p>Proposed mitigation: Implement dust-control methods (e.g., watering of roads, reduced speed limits), as required.</p>	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.
Increased risk of fire	X	<p>Potential impact: The use of machinery on unpaved or undeveloped ground has the potential to ignite vegetation. There is also potential for equipment to create sparks against rocks or other hard surfaces. Burning of vegetation piles has the potential to increase the risk of fire to the surrounding area.</p> <p>Proposed mitigation: Ensure equipment exhausts are clear of debris and all machinery is equipped</p>	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.
		with fire extinguishers. No equipment idling or parking on dry grass or vegetation. Obtain a burn permit from the Town of Inuvik if vegetation piles will be burned.	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on

Compaction of vegetation	X	<p>Potential impact: Equipment used during construction has the potential to compact vegetation outside the project area.</p> <p>Proposed mitigation: Clearly limit the project work area boundaries and minimize equipment use on undisturbed areas.</p> <p>Mark equipment access routes to avoid compacting vegetation.</p>	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.
Other	N/A	N/A	
Terrestrial Wildlife Habitat			
Direct loss or removal of habitat, dens, or nests	X	<p>Potential impact: Impact to breeding or nesting migratory birds and their nests if vegetation clearing is done during the breeding bird window, or to wildlife dens from vegetation removal.</p> <p>Additionally, migratory birds may nest in equipment, vehicles, brush stockpiles, or aggregate stockpiles that are sloped to a certain degree.</p> <p>Proposed mitigation: The majority of clearing and grubbing around the airport was completed outside the breeding bird window, with the exception of the proposed westward, eastward, and southwestward ditches.</p> <p>The contractor's CEMP is to outline procedures to address potential impacts to wildlife. These will include:</p> <ul style="list-style-type: none"> Clearing outside the bird breeding window, where possible; Completion of migratory bird awareness training by site staff; Completion of pre-clearing or pre-disturbance bird nest sweeps by a qualified environmental professional (QEP) before clearing, grubbing, or burning of brush piles within the breeding bird window. Pre-clearing sweeps for wildlife dens will also be completed. If active nests or breeding birds are found, a no-disturbance 	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.

	<p>buffer will be implemented until the young have fledged the nest (to be determined by the QEP and discussed with GNWT–INF Environmental Affairs); Developing a response protocol for the discovery of a breeding or nesting migratory bird, or active wildlife den; Inspecting heavy equipment and buildings daily before use for potential nests of bank swallow (<i>Riparia riparia</i>) and barn swallow <i>Hirundo rustica</i>); Sloping stockpiles to less than 70% to deter birds from nesting in them; and Before blasting activities at the quarry, conducting wildlife sweeps for large mammals within 500 m of the blast site.</p>	<p>Based on the described mitigations, it is the Board’s opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.</p>
<p>Loss or removal of keystone species and/or Species at Risk habitat</p>	<p>Potential impact: Peregrine falcon (<i>Falco peregrinus</i>) have been observed on Chii Zhìt Van.8 Peregrine falcon are listed as “sensitive” under the NWT General Status Rank of “May be at Risk” species. There is potential for peregrine falcon nests to be located in the vicinity of construction work near Chii Zhìt Van because they nest on sheltered ledges or crevices in cliffs near water.</p> <p>The QEP will be aware of the potential for peregrine falcon nests during the pre-clearing bird nest surveys and will implement appropriate no- disturbance setback distances, where required.</p> <p>Bank swallow and barn swallow have the potential to occur in the project area; however, the project area is not considered an area containing critical habitat for either species.910</p> <p>Other species listed under SARA, the Committee on the Status of Endangered Wildlife in Canada, or SAR NWT [e.g., wolverine (<i>Gulo gulo</i>), grizzly bear (<i>Ursus arctos</i>), polar bear (<i>Ursus maritimus</i>),</p>	<p>Based on the described mitigations, it is the Board’s opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.</p>

		<p>rusty blackbird (<i>Euphagus carolinus</i>), eskimo curlew (<i>Numenius borealis</i>), short-eared owl (<i>Asio flammeus</i>), horned grebe (<i>Podiceps auritus</i>), and red-necked phalarope (<i>Phalaropus lobatus</i>)] have the potential to occur in the project area; however, the project area is not considered an area containing critical habitat for these species, and a significant impact or loss to habitat is not anticipated.</p> <p>Woodland caribou (boreal population) (<i>Rangifer tarandus</i>) are listed as a threatened under SARA and SAR NWT. The boreal population prefers to live in areas with no human disturbance and is unlikely to frequent the Inuvik Airport area.</p> <p>The project area overlaps with an NWT Important Wildlife Area for moose. Construction activities may temporarily deter moose from the area.</p> <p>Proposed mitigation: See mitigations listed under the direct loss or removal of habitat, dens, or nests impact.</p>	<p>Based on the described mitigations, it is the Board’s opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.</p>
Fragmentation of wildlife corridor	X	<p>Potential impact: Clearing of vegetation contributes to fragmentation for wildlife; however, most of the clearing is located within commissioner’s land held under reserve by the Inuvik Airport and within property boundaries held by GNWT – Department of Lands.</p> <p>Proposed mitigation: Reduce clearing to that necessary for construction.</p>	<p>Based on the described mitigations, it is the Board’s opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.</p>

Direct injury or mortality	X	<p>Potential impact: Human–wildlife conflicts from increased presence of people in the area. Injury or mortality from increased vehicle traffic in the area. Reducing the amount of standing water around the airport will reduce the presence of wildlife (e.g., birds), which will decrease the potential for aircraft bird strikes. This is a positive potential impact.</p>	Based on the described mitigations, it is the Board’s opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.
		<p>Proposed mitigation: Contractor to include procedures that address the potential for human– wildlife conflicts in their CEMP. This will include: Crew members will have wildlife awareness training and be equipped with deterrents such as air horns and bear spray; Airport vehicle traffic will need to adhere to low speed limits; Crew members will participate in a wildlife observation reporting program; and Garbage and scented items will be properly stored.</p>	Based on the described mitigations, it is the Board’s opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.
Disturbances to key lifecycle stages: breeding, feeding, nesting, staging	X	<p>Potential impact: There is potential for there to be a greater disturbance to mammals and fish from construction during their key lifecycle stages.</p> <p>Proposed mitigation: The contractor’s CEMP must include mitigations for impacts to wildlife from construction activities. A least-risk timing window is provided in the contractor specifications and identifies a caution window for caribou and moose (which have the potential to be in the project area, although unlikely) during their calving and post-calving cycles, for grizzly bears during their sensitive foraging life cycles, and for lake whitefish and lake trout. Extra caution will be taken by the QEP conducting wildlife sweeps before higher disturbance construction activities.</p>	Based on the described mitigations, it is the Board’s opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.

Effects on population abundance	N/A	N/A	
Change in species diversity	N/A	N/A	
Effects on wildlife health (toxins, metals, etc.)		<p>Potential impact: Surface water quality may be impacted by construction and operation activities.</p> <p>Proposed mitigation: Contractor to follow the monitoring plan, erosion and sediment control plan, spill contingency plan, and general waste management methods listed in Section 8 of this application form and those to be included in the contractor's CEMP and approved by a GNWT representative.</p>	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.
Changes to migratory movement patterns	N/A	N/A	
Changes to predator-prey relationships	N/A	N/A	
Human-wildlife conflicts	X	<p>Potential impact: See direct injury or mortality impact.</p> <p>Proposed mitigation: See direct injury or mortality impact.</p>	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause
Other	N/A	N/A	
Aquatic Habitat			
Breeding disturbances	N/A	N/A	
Change in species diversity	N/A	N/A	

Effects on health (toxins, metals, sediment, etc.)	X	<p>Potential impact: Fish and aquatic species may be impacted by an increase in sediment loading in surface water during construction.</p> <p>Proposed mitigation: Contractor to follow the monitoring plan, erosion and sediment control plan, spill contingency plan, and general waste management methods listed in Section 8 of this application form, those to be included in the contractor's CEMP and approved by a GNWT representative, and requirements listed in the Letter of</p>	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.
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		Advice to be issued by DFO. Results will be compared to the Canadian Council of Ministers of the Environment Canadian Water Quality Guidelines for the Protection of Aquatic Life.	
Changes to migratory movement patterns	N/A	N/A	
Changes to predator-prey relationships	N/A	N/A	
Effects on population abundance	N/A	N/A	
Change in species diversity	N/A	N/A	
Other	N/A	N/A	
CULTURAL COMPONENTS			
Wildlife Harvesting			
Loss or reduction in game species populations	N/A	N/A	
Effects on traditional land use, subsistence, and harvesting rights	X	Potential impact: There may be a temporary impact on traditional land use in the Chii Zhìt Van area during construction activities from the increase of equipment use and noise during construction. No long-term impact has been identified. Proposed mitigation: Reduce disturbance to the	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.
		area necessary for construction. Restrict equipment access to identified access routes.	Based on the described mitigations, it is the Board's opinion that the
Other	N/A	N/A	
Cultural Integrity and Heritage Resources			
Change to or loss of cultural integrity	N/A	N/A	
Change to or loss of traditional lifestyle	X	Potential impact: There may be a temporary impact on traditional lifestyle in the Chii Zhìt Van area during construction activities from the increase of equipment use and noise during construction. No long-term impact has been identified.	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be

		Proposed mitigation: Reduce disturbance to the area necessary for construction. Restrict equipment access to identified access routes.	a cause of public concern.
Change to or loss of heritage resource	X	<p>Potential impact: Disturbance of heritage resources from clearing and ground disturbance activities in currently undisturbed areas.</p> <p>Proposed mitigation: The project work area boundaries and a shapefile of the project footprint was emailed to the Prince of Wales Northern Heritage Centre (PWNHC). The PWNHC reviewed the footprint and had no concerns. An archaeological impact assessment was completed in 2020 for the potential quarry expansion (Attachment K). The PWNHC reviewed the assessment and summarized the management recommendations to be followed (Attachment L).</p> <p>The contractor's CEMP is to include procedures for uncovering potential archaeological sites under the <i>Archaeological Sites Act (SNWT 2014, c. 9)</i> and <i>Archaeological Sites Regulations (R- 024-2015)</i>.</p>	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.
Other		No impact identified.	

Social and Economic Well-being			
Increased human health hazard and risk	X	<p>Potential impact: Risk to the public and worker health during construction.</p> <p>Proposed mitigation: Contractor to restrict public access to the work area. The contractor and</p>	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause

		workers will comply with the NWT <i>Occupational Health and Safety Regulations</i> (R-039-2015).	
Economic opportunities or losses (employment, training)	X	<p>Potential impact: The project presents economic opportunities for local contractors.</p> <p>Proposed mitigation: The tender will be weighted to favour local contracting companies per the terms of the GNWT's Business Incentive Program.</p>	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.
Change in ecological, cultural, social, or economic values identified for protection in approved Land Use Plans	X	<p>Potential impact: The drainage upgrades will protect infrastructure that contributes to the economic values of the Gwich'in area. The improvements to the drainage system and incorporation of erosion and sediment control measures in the ditch design will likely reduce sedimentation concerns once ditches are stabilized and vegetation is established. Potential impacts to water resources during construction from sedimentation will be mitigated.</p> <p>Proposed mitigation: See mitigations for impacts to water quality, identified above.</p>	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.
Impairment of the recreational or traditional uses of the land or water	X	<p>Potential impact: There will be an increase in traffic on the Public Quarry Road during certain stages of construction and an increase in noise during construction. There may be temporary restrictions to the access point to Chii Zhìt Van from the Public Quarry Road during blasting. Other restrictions to access to Chii Zhìt Van are not anticipated at this time. There will be a temporary increase in disturbance from construction, such as noise, vegetation clearing, and equipment use, on the north shore of Chii Zhìt Van during active construction that may impair the use of the area for</p>	Based on the described mitigations, it is the Board's opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.

		<p>recreational or traditional uses of the land.</p> <p>Proposed mitigation: Access to Chii Zhìt Van along the Public Quarry Road will be maintained, except for during active blasting at the quarry.</p> <p>Chii Zhìt Van is a relatively large lake, and significant impact is not anticipated.</p>	
Impairment of the aesthetic quality of the land or water	X	<p>Potential impact: Native vegetation will be cleared and replaced with screened rock and with a native grass seed mix along ditch alignments.</p> <p>Two previously natural outfall locations will be replaced with gabion basket check dams for erosion and sediment control. Proposed mitigation: Only one drainage ditch and outfall to Chii Zhìt Van is proposed.</p>	<p>Based on the described mitigations, it is the Board’s opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.</p>

Changes to the use of the area by other non- Indigenous people (e.g., trappers, outfitters, residents, hunters, forest harvesters, other authorized projects)	X	<p>Potential impact: There will be a temporary increase in disturbance from construction, such as noise, vegetation clearing, and equipment use, on the north shore of Chii Zhìt Van during active construction that may deter the use of the area by non-Indigenous people.</p> <p>Proposed mitigation: Chii Zhìt Van is a relatively large lake, and significant impact is not anticipated.</p>	Based on the described mitigations, it is the Board’s opinion that the proposed activities are unlikely to have significant adverse impact on the environment and/or be a cause of public concern.
Other	N/A	N/A	

4.1 Consideration of Potential Impacts

Based on the potential impacts and proposed mitigations identified above in Table 1, the Board considered whether the Project might have a significant adverse impact on the environment. In general, impacts of the Project on the environment can be mitigated through the use of standard licence conditions and/or project-specific conditions established by the Board as per the LWB [Standard Process for Creating New Conditions](#). These conditions may include requirements for management and monitoring plans that provide detailed information regarding the implementation of mitigation measures and the evaluation of their effectiveness.

These conditions may include requirements for management and monitoring plans that provide detailed information regarding the implementation of mitigation measures and the evaluation of their effectiveness.

A draft Licence was circulated for review during the regulatory proceeding, and all Parties were given the opportunity to provide comments and recommendations on the draft conditions. In finalizing the conditions, the Board considers all of the evidence provided through the regulatory proceeding.

4.2 Consideration of Public Concern

In addition to considering the potential impacts of the Project, the Board considered whether the Project might be a cause of public concern.

Based on the evidence provided during the regulatory proceeding, the Board did not identify any comments or issues that indicate that the Project is a cause of public concern.

5.0 Conclusion

The Board has reviewed all the evidence received during the regulatory process with respect to the Preliminary Screening of the proposed Project. Based on the evidence, it is the Board's opinion that the proposed Project [will not have a significant adverse impact on the environment or be a cause of public concern as set out in paragraph 125(1)(a) of the [MVRMA](#). The Board has therefore decided not to refer the proposed Project to Environmental Assessment. If the Board does not receive a notice of referral to environmental assessment by September 22, 2023 the Board can issue the Licence on September 23, 2023.

SIGNATURE



September 12, 2023

Elizabeth Wright, Chair
Gwich'in Land and Water Board

Date