

Resolute Bay Community Harbour

Construction Environmental Management Plan

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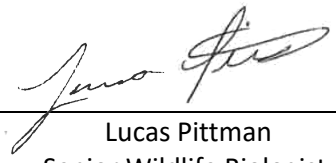
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The information presented in this document was compiled and interpreted exclusively for the purposes permitting requirements for the Resolute Bay Community Harbour. Dynamic Ocean Consulting Ltd. (Dynamic Ocean) in collaboration with Worley Canada Services Ltd. (operating as Worley Consulting) provided this report for the Government of Nunavut – Transportation and Infrastructure Nunavut (GN-TIN) solely for the purpose noted above.

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Any questions concerning the information or its interpretation should be directed to Victoria Burdett-Coutts (Dynamic Ocean) or Chris Meisl (Worley Consulting).

Acronyms and Abbreviations

Acronyms/Abbreviation	Definition
AHJ	Authorities Having Jurisdiction
AISR	Aquatic Invasive Species Regulations
ARDP	Archaeological Resource Discovery Plan
ASPPR	Arctic Shipping Pollution Prevention Regulations
ATV	All-Terrain Vehicle
AWPPA	*Arctic Waters Pollution Prevention Act*
BMPs	Best Management Practices
CaCl	Calcium chloride
CCG	Canadian Coast Guard
CCME	Canadian Council of Ministers of the Environment
CCEMP	Contractor Construction Environmental Management Plan
CD	Chart Datum
CEMP	Construction Environmental Management Plan
CEPA	*Canadian Environmental Protection Act*
CEQG	Canadian Environmental Quality Guidelines
CHSERP	Contractors Health and Safety and Emergency Response Plan
CIRNAC	Crown-Indigenous Relations and Northern Affairs Canada
CMSP	Contractors Marine Safety Plan
CMZ	Compliance Monitoring Zone
CNWA	*Canadian Navigable Waters Act*
CQBMP	Contractors Quarry and Blasting Management Plan
CSA	Canadian Standards Association
CSPRP	Contractors Spill Prevention and Response Plan
CTMP	Contractors Traffic Management Plan
CWP	Construction Work Plans
CWS	Canadian Wildlife Service
DFO	Fisheries and Oceans Canada
DFO-FFHPP	DFO-Fish and Fish Habitat Protection Program
DFO-SCH	DFO-Small Craft Harbours
DGs	Dangerous Goods
Dynamic Ocean	Dynamic Ocean Consulting Ltd.
ECCC	Environment and Climate Change Canada
ELC	Ecological Land Classification
EM	Environmental Monitor
EZ	Exclusion Zone

Acronyms/Abbreviation	Definition
FAA	*Fisheries Act* Authorization
GN	Government of Nunavut
GN-C&H	GN Department of Culture and Heritage
GN-DoE	GN Department of Environment
GN-PPD	GN Petroleum Products Division
GN-TIN	GN Departments of Transportation and Infrastructure
HADD	Harmful alteration, disruption or destruction
HTA	Hunters and Trappers Association
HWL	High Water Line
IIBA	Inuit Impact and Benefit Agreement
IMDG	International Maritime Dangerous Goods Code
IMO	International Maritime Organization
INAC	Indian and Northern Affairs Canada
IOL	Inuit Owned Land
IQ	Inuit Qaujimajatuqangit
LoA	Letter of Advice
LUP	Land Use Permit
MBCA	*Migratory Bird Convention Act*
MCTS	Marine Communications and Traffic Services
MMEZ	Marine Mammal Exclusion Zone
MMO	Marine Mammal Observer
MMR	Marine Mammal Regulations
MoU	Memorandum of Understanding
NA	*Nunavut Land Claims Agreement Act*
NavCan	Nav Canada
NAVWARN	Navigational Warning
NBRLUP	North Baffin Regional Land Use Plan
NEAS	Nunavut Eastern Arctic Shipping
NIRB	Nunavut Impact Review Board
NNI	Nunavummi Nangminiqaqtunik Ikajuuti
NOAA	National Oceanic Atmospheric Administration
NOTAM	Notice to Airmen
NoW	Notice of Works
NPC	Nunavut Planning Commission
NRCan	Natural Resources Canada
NSSI	Nunavut Sealink and Supply Inc.
NTUs	Nephelometric Turbidity Units

Acronyms/Abbreviation	Definition
NuPPAA	*Nunavut Planning and Project Assessment Act*
NWNSRTA	*Nunavut Waters and Nunavut Surface Rights Tribunal Act*
NWB	Nunavut Water Board
OEMP	Operations Environmental Management Plan
OHWL	Ordinary High Water Line
OPPR	Oil Pollution Prevention Regulations
PPE	Personal Protective Equipment
PSIR	Project Specific Information Requirements
QEC	Qulliq Energy Corporation
QEP	Qualified Environmental Professional
QIA	Qikiqtani Inuit Association
RNLUP	Recommended Nunavut Wide Land Use Plan
RoW	Right of Way
SAR	Species at Risk
SARA	*Species at Risk Act*
SCOPs	Standards and codes of practice
SDR	Screening Decision Report
SDS	Safety Data Sheets
SEC	Sediment and Erosion Control
TC	Transport Canada
The Project	Resolute Bay Community Harbour Project
TI NMCA	Tallurutiup Imanga National Marine Conservation Area
VEC	Valued Ecosystem Component
VSEC	Valued Socio-Economic Component
VHF	Very High Frequency
WHMIS	Workplace Hazardous Materials Information System
Worley Consulting	Worley Canada Services Ltd.
WQG	Water Quality Guidelines
WSCC	Workers Safety and Compensation Commission

1 Introduction

This document is the Construction Environmental Management Plan (CEMP) developed to support the permitting and detailed design of the Resolute Bay Community Harbour Project (the Project).

The Tallurutiup Imanga National Marine Conservation Area (TI NMCA) is an important designated area located in the Canadian Arctic, specifically in Lancaster Sound (Tallurutiup Imanga) and its adjacent waterways. This conservation area was established to protect and preserve the unique and ecologically important marine environment for Inuit and all Canadians. Establishment of protected areas within Canada's high Arctic basin, such as the TI NMCA, is a requirement of the Inuit Impact and Benefit Agreement (IIBA). A Memorandum of Understanding (MoU) between the Qikiqtani Inuit Association (QIA), the Government of Nunavut (GN), and the Government of Canada has resulted from the creation of the TI NMCA and was signed in the summer of 2021. The purpose of this agreement is to recognize that marine infrastructure is connected to community wellbeing as well as economic and social development, and to address the marine infrastructure deficit in several communities, including Resolute Bay and Grise Fiord. A portion of the waterfront within the several communities (such as Resolute Bay) that are within the TI NMCA is excluded through Article 4 of the IIBA (IIBA, 2019) to allow for the development of marine infrastructure. This will be accomplished with funding from the Government of Canada for a community harbour in both Resolute Bay and Grise Fiord.

Worley Canada Services Ltd., operating as Worley Consulting, has been retained by the GN-Transportation and Infrastructure Nunavut (TIN) to support the detailed design of a community harbour facility in Resolute Bay, Nunavut (Figure 1-1). Dynamic Ocean Consulting Ltd. (Dynamic Ocean) is supporting Worley Consulting on the permitting requirements for the Project. The Resolute Bay community harbour was a component of an earlier feasibility study, completed by Fisheries and Oceans Canada (DFO) – Small Craft Harbour (SCH) in 2019.

1.1 Project Location

The Project is located at Resolute Bay, a Hamlet on the southern shore of Cornwallis Islands in Parry Channel (74° 41.472'N, 94° 51.549'W; see Figure 1-1). The community is located in the Qikiqtaaluk Region, and conforms with the North Baffin Regional Land Use Plan (NBRLUP) (Nunavut Planning Commission (NPC, 2000)). While Resolute Bay is within the NBRLUP, the Recommended Nunavut Wide Land Use Plan (RNLUP) (NPC, 2023) will replace the NBRLUP once it is approved.

1.2 Project Overview

The Project will improve safety and access to water, functionality of boating activities, and reduce the congestion and environmental risks associated with the current use of the harbour (see Section 1.3 of the Resolute Bay Project Specific Information Requirements [PSIR] Report for existing infrastructure (Dynamic Ocean & Worley Consulting, 2025)).

The permanent components of the Project include the construction of:

- A new breakwater (to create a community harbour).
- Boat launch ramp.
- Small craft floating docks to support mooring of small craft vessels.
- Laydown area.

- Navigational aids.
- Harbour lighting.

Dredging is required on the leeward side of the breakwater to form a berth pocket and approach channel allowing larger boats to access (see Section 3.1 for construction activities). Details of the Project are presented in Section 3.

A General Arrangement of the community harbour is provided in Drawing 1-1. The final arrangement of the community harbour may change through the design development phase of the Project as GN-TIN plans to continue consulting with the community to refine the Project design; however, any design modifications that do occur, are not expected to change the predicted environmental effects discussed in the PSIR Report (Dynamic Ocean & Worley Consulting, 2025). Temporary components to support construction includes a quarry and haul road, with the quarry required to supply rock for construction, and a haul road to transport rock from the quarry to the community harbour. Project components are further described in Section 2.1.1 of the PSIR Report (Dynamic Ocean & Worley Consulting, 2025).

Construction is anticipated to require four years and is planned to occur from the open-water seasons of 2026 through to 2029.

During construction, the Project will use the existing scheduled sealift deliveries and scheduled flights, with the potential for use of chartered flights when additional cargo or construction crew capacity is required. Potable water, sanitary and solid waste disposal are anticipated to be provided via existing facilities. Fuel supply may use existing facilities, if there is sufficient capacity and quantity. If the existing facilities are not adequate, the contractor will be required to install temporary fuel storage facilities and/or arrange additional fuel shipments. Construction crew accommodations will be provided by a construction camp to be established by the construction contractor.

1.3 Document Scope

This document is the CEMP for the Project and has the following objectives:

- Target mandates of pertinent Authorities Having Jurisdiction (AHJ) and associated legislation to confirm Project permit approvals and relevant compliance requirements (see Section 2).
- Outline mitigation and monitoring measures to be implemented to minimize negative impacts to the physical, biological, and socio-economic environment associated with construction activities.
- Identify commitments made during consultation and confirm adherence to relevant Best Management Practices (BMPs) (see Section 5.1).

The CEMP is an evolving document and will be updated if any changes to compliance measures occur as a result of adaptive management or if additional measures are added through permit conditions.

Prior to construction, the contractor who is awarded the tenure will be required to develop a Contractor CEMP (CCEMP), which will replace this CEMP. Minimum requirements for the CCEMP are described in Section 5.3.1.

1.4 Consultation and Community Engagement

The GN-TIN are conducting a comprehensive consultation program to confirm that the Project will serve the needs and priorities of the community including hunters, fishers, recreational users, residents, and

businesses. Among the key objectives of the consultation program has been to collaborate with the community to identify potential Project effects and jointly develop suitable mitigation measures to minimize potential negative effects.

A detailed list of consultation events and feedback received to date is provided in Section 3 and Appendix A of the PSIR Report (Dynamic Ocean & Worley Consulting, 2025).

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INSET PLAN
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LEGEND

- HAUL ROAD ON EXISTING ROAD/TRACK
- ALTERNATE/ADDITIONAL HAUL ROUTE
- COMMUNITY STUDY AREA
- QUARRIES STUDY AREA
- EXISTING ROAD STUDY AREA
- STOCKPILE/LAYDOWN AREA
- QUARRY

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GOVERNMENT OF NUNAVUT
RESOLUTE BAY COMMUNITY
HARBOUR DEVELOPMENT

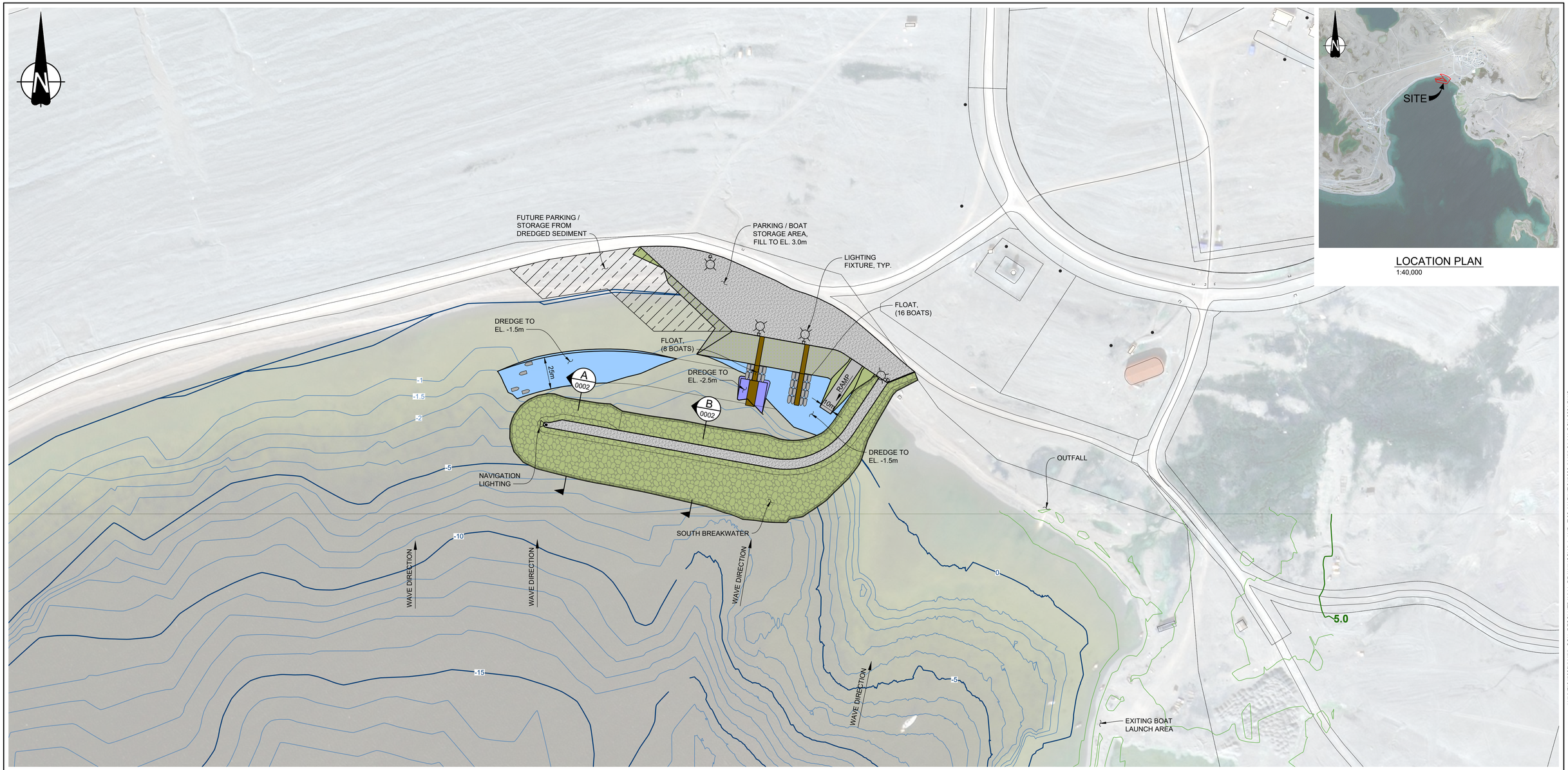
PROJECT COMPONENTS
(QUARRY, HAUL ROAD, COMMUNITY HARBOUR)

Date: 03-APR-25	Drawn by: JLC	Edited by: JLC	App'd by: CM

Worley Project Number: 317086-54175

DRG No: **Figure 1-1** REV: **2**

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LOCATION PLAN
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NOTES:

1. WATER DEPTHS PROVIDED BY CANADIAN HYDROGRAPHIC SERVICE, DEPARTMENT OF FISHERIES AND OCEANS IN A "LAS" FILE.

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C	28-NOV-24	ISSUED FOR CLIENT REVIEW	JLC	BJM	CM	DH	CM	-		
B	26-JUL-24	RE-ISSUED FOR CLIENT REVIEW	JLC	BJM	CM	DH	CM	-		
A	09-JUL-24	ISSUED FOR CLIENT REVIEW	JLC	-	CM	DH	CM	-		

D SHEET | SCALE SHOWN

WORLEY PROJECT No
317086-54175

ENGINEERING AND PERMIT STAMPS (As Required)

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CUSTOMER

Nunavut
Building Nunavut Together
Nunavuliuqatigiingniq
Bâtir le Nunavut ensemble

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RESOLUTE BAY
COMMUNITY HARBOUR
GENERAL ARRANGEMENT

DRG No
Drawing 1-1

REV
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2 Regulatory Framework

Construction and operation of the Project will require obtaining permits and approvals from: federal, territorial, and municipal governments; Inuit boards; and the QIA. The Project has engaged with AHJs, Inuit boards and the QIA to confirm that relevant legislation and regulations, policies, protocols and BMPs have been captured in the CEMP for compliance.

A summary of permits expected to be required for the Project is provided in Table 2-1, the majority of which will be held by GN-TIN, although several will be the responsibility of the contractor.

2.1 Acts and Legislation

Legislation pertinent to compliance requirements for the Project as delineated by the Project effects are summarized in this section.

2.1.1 International

- International Maritime Dangerous Goods Code (IMDG), International Maritime Organization (IMO), 2020 (IMO, 2020).

2.1.2 Federal

- *Arctic Waters Pollution Prevention Act, 1985* (AWPPA):
  - *Part 4(1) states that: "Except as authorized by regulations made under this section, no person or ship shall deposit or permit the deposit of waste of any type in the arctic waters or in any place on the mainland or islands of the Canadian arctic under any conditions where the waste or any other waste that results from the deposit of the waste may enter the arctic waters."*
  - Arctic Shipping Pollution Prevention Regulations (ASPPR), under AWPPA: to be referenced in relation to fuelling in the marine environment and ship owner's liability provisions regarding spillage of waste.
- *Canada Navigable Waters Act* (CNWA):
  - Section 3 states that: "*Except in accordance with the CNWA, it is prohibited to construct, place, alter, build, remove or decommission a work in, on, over, under, through, or across any navigable water.*"
- *Canadian Environmental Protection Act, 1999* (CEPA):
  - Interprovincial Movement of Hazardous Waste Regulations.
  - Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations.
  - Disposal at Sea Regulations.
- *Explosives Act.*
- *Transportation of Dangerous Goods Act.*
- *Canada Shipping Act:*
  - Oil Pollution Prevention Regulations (OPPR).

- Collision Regulations.

- *Fisheries Act:*
  - Section 34.4(1): No person shall carry on any work, undertaking or activity, other than fishing, that results in the death of fish.
  - Section 35(1): No person shall carry on any work, undertaking or activity that results in the harmful alteration, disruption or destruction of fish habitat.
  - Section 36: Subject to subsection (4), no person shall deposit or permit the deposit of a deleterious substance of any type in water frequented by fish or in any place under any conditions where the deleterious substance or any other deleterious substance that results from the deposit of the deleterious substance may enter any such water.
  - Marine Mammal Regulations (MMR).
  - Aquatic Invasive Species Regulations (AISR).
    - Sections 6 to 10 prohibit any person to import, possess, transport, release, or introduce members of species set out in Part 2 of the schedule into or within areas detailed within the schedule, unless otherwise exempt as outlined within Sections 11 to 17.

- *Species at Risk Act* (SARA):
  - Section 2(1): wildlife species means a species, subspecies, variety or geographically or genetically distinct population of animal or plant.
  - Section 32(1): No person shall kill, harm, harass, capture or take an individual of a wildlife species that is listed as an extirpated species, an endangered species or a threatened species.
  - Section 33: No person shall damage or destroy the residence of one or more individuals of a wildlife species that is listed as an endangered species or a threatened species, or that is listed as an extirpated species if a recovery strategy has recommended the reintroduction of the species into the wild in Canada.
  - Section 36(1): If a wildlife species that is not listed has been classified as an endangered species or a threatened species by a provincial or territorial minister, no person shall: (a) kill, harm, harass, capture or take an individual of that species that is on federal lands in the province or territory; (b) possess, collect, buy, sell or trade an individual of that species that is on federal lands in the province or territory, or any part or derivative of such an individual; or (c) damage or destroy the residence of one or more individuals of that species that is on federal lands in the province or territory.
  - Section 58(1) prohibits the damage or destruction of any part of designated critical habitat of a threatened, endangered, or extirpated species.

- Environment and Climate Change Canada (ECCC):
  - In Section 36 of the *Fisheries Act*, ECCC is the AHJ, and to meet this requirement, the CEMP has measures in place to confirm that there are no deleterious substances in the marine environment due to the Project.

- Furthermore, through the Canadian Wildlife Service (CWS), ECCC administers the *Migratory Birds Convention Act* (MBCA) (1994) and associated *Migratory Birds Regulations* (2022) to protect and conserve migratory birds in Canada. During the Nunavut Impact Review Board (NIRB) public consultation process, ECCC is likely to be engaged. Any damage to migratory birds, their eggs, or active nests would require consultation with ECCC.

- MBCA:
  - Migratory Birds Regulations:
    - Section 6: Subject to subsection 5(9), no person shall (a) disturb, destroy or take a nest, egg, nest shelter, eider duck shelter or duck box of a migratory bird, or (b) have in their possession a live migratory bird, or a carcass, skin, nest or egg of a migratory bird except under authority of a permit therefor.

2.1.3 Territorial

- *Commissioner's Land Act:*
  - Commissioner's Land Regulations.
- *Environmental Protection Act:*
  - Part 5 states that: "*Subject to subsection (3), no person shall discharge or permit the discharge of a contaminant into the environment…Unless the discharge is authorized by this Act or the regulations or by an order issued under this Act or the regulations.*"
  - Spill Contingency Planning and Reporting Regulations (R-068-93).
- *Explosives Use Act.*
- *Fire Safety Act.*
- *Nunavut Lands Claim Agreement Act:*
  - Article 13 Part 7 states that: "*With the exception of domestic or emergency use of waters as set out in Section 5 of the Northern Inland Waters Act RSC 1985, c. N-25, no person may use water or dispose of waste into water without the approval of the Nunavut Water Board.*"
- *Nunavut Agreement:*
  - Section 33 in part states that: "*a permit holder shall not survey, investigate, excavate or alter an archaeological site without the consent of the title holder to the land.*"
- *Nunavut Act:*
  - Nunavut Archaeological and Palaeontological Sites Regulations:
    - Part 5(1) states that: *"No person shall excavate, alter or otherwise disturb an archaeological site, or remove an archaeological artifact from an archaeological site, without a Class 2 permit."*
- *Nunavut Planning and Project Assessment Act* (NuPPAA).
- *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSRTA):

- Nunavut Water Regulations.

- *Public Health Act.*
- *Public Safety Act.*
- *Transportation of Dangerous Goods Act.*
- *Wildlife Act:*
  - Section 90(1): No person shall intentionally feed a wild animal.
  - Section 90(2): No person shall deposit or place in, on or about a place an attractant, if there is a reasonable likelihood that it would endanger a person, a wild animal or a domestic animal.
  - Section 72(1): Unless lawfully harvesting eggs, no person shall injure, molest or destroy an egg of a bird.
  - Section 72(2): Unless lawfully harvesting down, no person shall injure, molest or destroy (a) the nest of a bird when the nest is occupied by a bird or its eggs; or (b) the nest of any bird of prey or prescribed bird.
  - Section 73(1): No person shall, unless authorized by a licence, (a) engage in any activity, other than harvesting, that is likely to result in a significant disturbance to a substantial number of wildlife; or (b) break into, destroy or damage any abode of a bear, fox, beaver, muskrat, weasel, wolf or wolverine outside any municipality or prescribed area.
- *Territorial Land Act:*
  - Territorial Land Use Regulations:
    - Part 16 states that: "If, in the course of a land use operation, a suspected historic or archaeological site or burial site is unearthed or otherwise discovered, the permittee shall immediately:
      - (a) suspend the land use operation on the site.
      - (b) notify the engineer or an inspector of the location of the site and the nature of any unearthed materials, structures or artifacts."

2.1.4 Municipal

- By-Law 31 Land Administration.
- By-Law 63 Community Plan.
- By-Law 64 Zoning.

2.2 Permitting Requirements

Permitting requirements that are anticipated for the Project are summarized in Table 2-1.

Table 2-1: List of Potential Permitting Requirements for the Project

Legislation	Authority Having Jurisdiction	Construction Activity	Permit or Approval	Recommended Permit Timelines	Key Documentation	Responsibility of
Municipal (Hamlet)						
• *Nunavut Land Claims Agreement* (Nunavut Agreement, or NA), Article 14 (Planning and Lands Section) https://www.tunngavik.com/documents/publications/LAND_CLAIMS_AGREEMENT_NUNAVUT.pdf	Hamlet	Quarry (stockpiling, blasting, etc.)	Quarry permit	4 to 6 months (but very specific Hamlet to Hamlet)	• Hamlet application form. • Map depicting quarry boundaries and jurisdictional tenures.	• Contractor
Municipal By-Laws: • By-Law 31 Land Administration. https://cgs-pals.ca/downloads/land-admin-bylaws/ • By-Law 63 Community Plan. https://downloads.cgs-pals.ca/resolute_bay/community_plans/cp_bylaw.pdf • By-Law 64 Zoning. https://resolutebay.diligent.community/document/b0e295dc-628b-4b0a-b8b2-cc5fa1528cc6/?modified=2022-05-11T19:09:56.06	Hamlet	Construction camp and laydown areas.	Development and other occupancy permit	4 to 6 months (but very specific Hamlet to Hamlet)	• Hamlet application form.	• Contractor
		Community harbour components that are above the High-Water Line (HWL).				• GN-TIN
Territorial Requirements						
Institutions of Public Government						
• *Nunavut Land Claims Agreement Act,* Article 11 https://laws-lois.justice.gc.ca/eng/acts/N-28.7/FullText.html • *NuPPAA* https://laws-lois.justice.gc.ca/eng/acts/N-28.75/ • *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSRTA) https://laws-lois.justice.gc.ca/eng/acts/N-28.8/FullText.html • Nunavut Water Regulations	NPC	Development of land and water resources within Nunavut. All aspects of Project construction.	Conformity Determination (NPC File No. 150555) (referral to NIRB)	1 to 2 months	• Online application. • Project description and map.	• GN-TIN

Legislation	Authority Having Jurisdiction	Construction Activity	Permit or Approval	Recommended Permit Timelines	Key Documentation	Responsibility of
https://laws-lois.justice.gc.ca/eng/regulations/SOR-2013-69/index.html						
• NuPPAA https://laws-lois.justice.gc.ca/eng/acts/N-28.75/	NIRB	Any development of land and water resources within Nunavut as determined by NPC's Conformity Determination (NPC File No. 150555) All aspects of Project construction.	SDR (see Appendix B) (NIRB File No. 24XN058)	4 to 6 months	• Online application. • PSIR Report. • CEMP. • IQ and Consultation to inform baseline conditions and effects assessment.	• GN-TIN
• NWNSRTA https://laws-lois.justice.gc.ca/eng/acts/N-28.8/FullText.html • Nunavut Water Regulations https://laws-lois.justice.gc.ca/eng/regulations/SOR-2013-69/index.html	NWB	Potential for withdrawal of freshwater or the need to cross freshwater crossings for haul road construction.	Type B Water License	1 to 2 months	• Application Form.	• Contract or
Designated Inuit Organisation						
• *Nunavut Agreement* https://www.tunngavik.com/documents/publications/LAND_CLAIMS_AGREEMENT_NUNAVUT.pdf	QIA	Project work on Inuit Owned Land (IOL). No Project components sit on IOL and thus a permit from the QIA is not expected to be required.	RoW Agreement	2 months	• Application Form. • Online Portal. • To be obtained by contractor.	• Contract or
Government of Nunavut Departments						
• *Territorial Lands Act* https://www.laws-lois.justice.gc.ca/eng/acts/T-7/index.html • Land Use Territorial Regulations	GN-TIN	Construction of Project component above Ordinary High Water Line (OHWL) for land tenure under Commissioners or Untitled Municipal lands.	Land Use Permit (LUP)	2 months	• See CIRNAC description below.	• GN-TIN
		Construction facilities outside of Project components (e.g. camps, laydowns, stockpile, and quarry, etc.)				• Contract or

Legislation	Authority Having Jurisdiction	Construction Activity	Permit or Approval	Recommended Permit Timelines	Key Documentation	Responsibility of
https://laws-lois.justice.gc.ca/eng/regulations/C.R.C., _c._1524/index.html		above OHWL for land tenure under Commissioners or Untitled Municipal lands.				
• *Nunavut Environmental Protection Act* https://www.justice.gov.nt.ca/en/files/legislation/environmental-protection/environmental-protection.a.pdf	GN- Department of Environment (DoE)	If upland disposal (instead of re-use) of dredged sediment is needed, GN-DoE will need to be engaged to confirm the strategies in place to minimize negative environmental effects. There is potential for upland dispose (as opposed to re-use) given the amount of dredging required. Although sediment quality characteristics are the primary driver of its useability.	No approval	N/A, no approval, but engagement as early as possible is recommended to minimize disruption the NIRB process.	• Detailed plan for sediment disposal.	• GN-TIN
Federal						
• *Fisheries Act* https://laws-lois.justice.gc.ca/PDF/F-14.pdf	DFO	In-water or near-water works associated with the construction of the community harbour that have the ability to result in the Harmful alteration, disruption or destruction (HADD) to fish or fish habitat, as defined under the *Fisheries Act.* Typically, when it is determined a HADD will occur (residual effects), it is primarily due to the Project footprint (areas of seabed that are no longer available to fish).	Section 35(2) FAA or LoA	Legislative timelines are 60 and 90 days. The Minister has 60 days from the date of submission of an application to confirm the application is complete and 90 days to issue the FAA (DFO, 2024a). However, 18 to 24 months is recommended for planning as DFO- FFHPP will stop the clock as required to request response to fill information gaps.	• Effects assessment. • CEMP. • Description of HADD footprint. • Indigenous consultation and IQ to confirm baseline conditions, potential effects and offset ideas. • Offsetting Plan.	• GN-TIN
• CNWA http://laws-lois.justice.gc.ca/PDF/N-22.pdf	TC	In-water works associated with the construction and operations of the community harbour that have the potential to interfere with navigation.	Notice of Works (NoW) Application for Approval	6 to 12 months	• Online application. • CEMP. • Plan and side profile drawings. • Schematic layout. • Identify potential navigational interferences.	• GN-TIN
• Territorial Land Use Regulations https://laws-lois.justice.gc.ca/eng/Regulations/C.R.C., c. 1524/index.html	CIRNAC	In-water works relative to the use of the seabed (areas below the OHWL (and thus considered Crown Land).	Class A LUP	2 to 4 months	• Details surrounding ownership of land above and below	• GN-TIN

Legislation	Authority Having Jurisdiction	Construction Activity	Permit or Approval	Recommended Permit Timelines	Key Documentation	Responsibility of
					the HWL of the Project footprint. • CEMP. • Application form.	
• *Explosives Act* (Section 7): https://laws-lois.justice.gc.ca/PDF/E-17.pdf • Explosives Regulations (2013): https://laws.justice.gc.ca/PDF/SOR-2013-211.pdf	NRCan	Blasting – For any industrial explosive that is to be imported into or manufactured, transported, possessed or used in Canada. Transport, storage and acquisition of explosives.	Authorization of Explosives Magazine Licence Application	3 months	• Application form.	• Contract or

3 Construction Summary

The Project includes both temporary and permanent components and consist of marine and terrestrial based activities. Temporary components are primarily terrestrial based and include the operation of a quarry and haul road, with the quarry required to supply rock for construction, and a haul road to transport rock from the quarry to the community harbour. Temporary work platforms that are below the HWL will be required to support construction, if it is performed with land-based equipment.

The permanent component of the community harbour construction of a new breakwater, boat launch ramp, floating docks, laydown area, and lighting (see Drawing 1-1)). These Project components are further defined in Section 2.1 and 2 2 of the PSIR Report (Dynamic Ocean & Worley Consulting, 2025)

The anticipated construction activities and methods are presented below. Construction support areas may be required which will include a contractor laydown area and potentially a construction camp (discussed in Section 3.2).

3.1 Construction Activities

Construction activities associated with each Project component are summarized in Table 3-1. Construction details are provided in Table 3-2, which further defines activities at the community harbour, haul road and quarry. Activities are defined as either those above (land-based) or below (marine-based) the HWL, and those that are required to occur in or out of water. Construction at the community harbour will be either be with land- or marine-based equipment, a decision of which will be made by the contractor.

This CEMP covers the main construction activities that will be required and provides appropriate mitigations.

Maintenance activities are described in Section 3.8.

Table 3-1: Construction Activities Associated with the Community Harbour

Community Harbour	Quarry	Haul Road
Infill (laydown area, breakwater, boat ramp, shoreline)	Drilling and Blasting	Construction of new haul road
Installation of small craft floats	Crushing and Screening	Upgrades to existing road
Dredging	Stockpiling	Transportation of rocks
Stockpiling	Operation of equipment	Operation of equipment
Operation of equipment	-	Installation of culverts (potential)
Installation of navigation aids and harbour lighting	-	-

Table 3-2: Planned Project Construction Activities

Activity No.	Activity	Activity and Construction Detail	Marine / Land Based (Activity Location)	Above / Below HWL	In / Out-of-Water (if below HWL)
Mobilization, Preparation & Staging					
1A	Mobilization and staging	• Mobilization, use of, and demobilization of marine equipment. • Construction of the community harbour is expected to require both land- and marine-based equipment throughout Project activities; the contractor will make this decision.	Both	Both	Both
1B	Operation of equipment	• Equipment expected to be required for the construction of the community harbour is summarized in Section 3.5 (Table 3-5). • Equipment will arrive in Resolute Bay either by sealift, or, if marine-based construction is undertaken, may be transported by the contractor.	Both	Both	Both
1C	Stockpiling	• Stockpiling of aggregates will be required and will primarily be at the quarry and designated upland stockpile locations. Some stockpiling may occur at the community harbour. • Armour stones and aggregates will be piled and stored at the quarry and upland stockpile locations prior to being trucked to the construction site.	Land	N/A	N/A
1D	Infill sourcing	• Infill material will be produced from the quarry. • Quarry operations will produce aggregates to be used for driving surfaces, subbases, filter rock, and construction of the inner core of the breakwater and laydown areas. • Armour Stone and large boulders will be supplied for rip rap and shoreline protection. • Materials will be blasted and prepared as per specifications before being trucked to community harbour site. • Preparation of the material will depend on its intended purpose. • Quarry operations will include sorting and crushing of rock to produce smaller aggregates.	Both	Both	Both
Community Harbour					
2A	Laydown area (Infill)	• Infill and shoreline protection for the parking and boat storage laydown area will largely be the dredgeate (see Activity No. 4) and granular infilling (see Activity No. 1). Infill placement will be completed as per design drawings using land-based equipment. • A containment berm will be constructed prior to dredging to allow for repurposing of the dredged material as fill. Dredged sediments will be placed inside the berm; a crushed granular road structure will be placed on top to provide a suitable working surface. Other granular fill produced at the quarry may be used to create the laydown area.	Land	N/A	N/A
2B	Breakwater (Infill)	• A curved breakwater will be constructed, initiating on the western side of the community harbour and extending parallel to shore for approximately 320 m long. The breakwater will have a driving surface to allow for vehicle access along its length. A navigation light will be located at the offshore end of the breakwater. • The breakwater will be constructed of a rock fill core surrounded by rock armour. Rock placement will be completed as per design drawings using land or marine-based equipment.	Marine	Both	Both

Activity No.	Activity	Activity and Construction Detail	Marine / Land Based (Activity Location)	Above / Below HWL	In / Out-of-Water (if below HWL)
2C	Boat launch ramp (Infill)	• A boat ramp will be constructed of a rockfill core sourced from the quarry to facilitate vessel launches at all tide levels. The boat ramp will be finished with a crushed road surface and include sloped rip rap sides for erosion protection. • Material will be placed as per design drawings using land-based equipment.	Marine	Both	Both
2D	Shoreline	• The upland shoreline area will be graded and topped with crush gravel for vehicle access. Fill placed along the offshore edge of the shoreline and gently sloped down to the water to create a landing pad for the floating docks. • Fill will be placed and graded to create a slope with a coarse rock surfacing using land-based equipment.	Marine	Both	Both
3	Temporary rock platforms	• Should construction be land-based, temporary rock platforms may be required to support land-based equipment for work such as dredging and/or wharf construction. • Temporary rock platforms, if required, will likely be composed of gravel material and restricted to the dredge pocket footprints. • The fill will be repurposed and will be used to complete the laydown area and other permanent components of the Project. • Temporary rock platform requirement, composition, and repurposed location will be a decision made by the contractor.	Marine	Below	In-water
4	Dredging	• Dredging will be conducted at the following locations and will result in the removal of approximately 30,000 m^3 of sediment: o An entrance channel approximately 25 m wide will be dredged to -1.5 m Chart Datum (CD) leading into the inner harbour to an elevation of -1.5 m CD. o An area beneath the end of the west float will be dredged to -2.5 m CD to allow for larger draft vessels to moor in the harbour at all tide levels. • Dredging methodology will be confirmed by the contractor. Based on location and volume of dredging required, it is expected to be completed using conventional mechanical equipment, with materials dredged from the seabed, raised to the surface, and placed onto a scow or truck or placed in its final location. The contractor may propose to use marine-based equipment, including barges. • Dredgeate will be repurposed as fill for permanent components of the Project or disposed of upland with approval from the Hamlet.	Marine	Below	In-water
5	Small craft floating docks	• Two floating docks will be constructed and installed with capacity to accommodate 24 vessels. • Floating docks will be secured with a chain anchoring system using concrete anchor blocks on the seabed. • The floating docks are not intended to be left in place over winter; and will be removed prior to freeze up and stored above high water, to be redeployed the next summer following breakup and clearing of the harbour.	Marine	Below	In-water
6	Area lighting/electrical installation	• General area lighting will illuminate the laydown area, boat launch ramp (top only), and the access roads. The area lights and poles will be provided from Quilliq Energy Corporation (QEC). • Area lighting will illuminate the laydown area, boat launch ramp, breakwater roadway and access road.	Land	N/A	N/A
Quarry (70 m to 135 m from Water)					

Activity No.	Activity	Activity and Construction Detail	Marine / Land Based (Activity Location)	Above / Below HWL	In / Out-of-Water (if below HWL)
7	Drilling and blasting	• Drilling and blasting will be conducted at the quarry to support all required infill activities. The quarry will be one of two locations located approximately 2.5 km and 4 km southwest of the community harbour and 135 m and 70 m from the shoreline (see Figure 1-1). • Approximately 115,000 m^3 of bedrock is required to be blasted for the community harbour. • The rock will be sorted, crushed, screened, and stockpiled to produce various products. • Appropriate measures will be implemented to confirm Sediment and Erosion Control (SEC) will be in place to protect any nearby aquatic habitats. • Should local drainage be altered as part of the quarry development, GN-TIN will work with the contractor to confirm appropriate information is obtained for the submission of the NWB permit. • Near-water blasting will follow Guidelines for the Use of Explosives in or Near Canadian Waters (Wright & Hopky, 1998).	Land	N/A	N/A
8	Crushing and screening	• Crushing, sorting, and screening at the quarry of the rock will be required to produce general fill, rip rap, and various granular crushed products. • Run of quarry will be put through a rock crusher and screened to produce the aggregate gradations required.	Land	N/A	N/A
Haul Road					
9	Construction of the Haul Road	• Overall improvements to the existing road will be required to accommodate rock trucks and the combined traffic of local and construction vehicles, and may include road widening, alignment adjustment to suit truck traffic, pull outs, and grading. • An additional 100 m to 200 m of new haul road will be required to reach the targeted quarry location from the existing road. • If required, the contractor will be responsible for installation of culverts.	Land	N/A	N/A
10	Transportation of aggregate from the Quarry to the stockpile/ Community Harbour site	• Aggregates will be transported via rock trucks from the Quarry to the community harbour site. • Rocks trucks will be loaded with aggregates at the Quarry using a front-end loader or excavator and transported via the Haul Road.	Land	N/A	N/A
11	Maintenance of Haul Road during construction	• Maintenance of the Haul Road will be required to reduce dust production and manage impacts due to heavy equipment use of existing roads. • A combination of Calcium chloride (CaCl) and water will be applied for dust control. The road will be regraded to repair potholes created during hauling.	Land	N/A	N/A

3.2 Construction Support Areas

3.2.1 Contractor Laydown Area

Construction materials and equipment for the Project will be stored in a contractor laydown area(s). The location of the contractor laydown area will be a contractor led decision; however, several options were considered to confirm compliance for necessary permits (e.g. archaeological). The contractor will be required to work with the Hamlet and potential GN-TIN (Land Administration Office, if LUPs are required). Two potential locations for a contractor laydown area have been considered and are described in Table 3-3. The contractor will use the laydown area to store construction materials and equipment for the duration of the Project. Stockpiling locations and other laydown areas may be approved by the Hamlet.

Table 3-3 Potential Contractor Laydown Areas and Uses

Contractor Laydown Area	Uses
Within the laydown area of the community harbour.	• Stockpiling.
Within one of the quarry footprints.	• Sorting larger materials. • Stockpiling. • Crushing and Screening.

3.2.2 Construction Camp

Due to limited available local accommodations, non-local project personnel may be housed in a combination of local accommodations and a construction camp for up to 30 people. Prefabricated modular accommodation is expected to be brought into the community by the contractor to establish the camp, if there are not sufficient facilities available. The location of a potential camp has not been selected but will likely require up to approximately 0.5 hectares. The Hamlet has confirmed that there are existing areas in town suitable for establishing a construction camp, and there are existing accommodation facilities in Resolute Bay that could potentially house construction personnel. The location of the construction camp will be determined in consultation with the community and with approval from the Hamlet. If additional permits are required (e.g., NWB, GN-TIN (Land Administration Office)) in relation to the construction camp, these will be the responsibility of the contractor.

3.3 Schedule

Construction is scheduled to begin in the 2026 and will conclude in 2029, with works largely occurring in the open-water season. The Project is expected to be operational in the open-water season of 2030.

In the absence of a noise by-law in Resolute Bay, timing restrictions will be agreed with the Hamlet. At this time, it is anticipated there will be one 12-hour shift per day; however, the contractor may wish to complete some, generally non-disruptive, work at night. This may be limited to dredging, incidental low-tide work at the harbour and crushing and/or sorting of rock at the stockpiles/quarry. Such work extensions would proceed only after consulting with the community and obtaining approval from the Hamlet.

Table 3-4: Anticipated Schedule for the Project

Task	Timeline
Pre-Construction	
• Permitting, Baseline Surveys and Consultations	Aug-24 to Apr-26
• Schematic Design	Jun-24 to Aug-25
• Geotechnical Investigations	Spring 2025
• Detailed Design and Construction Documents Preparation	Summer 2025 to Dec-25
• Permitting Complete	Mar-26
• Construction Tender Period	Winter 2025 / Spring 2026
• Construction Contract Tender Period	Winter 2025 / Spring 2026
• Award of Construction Contract	Spring 2026
Construction	
• Mobilization of equipment and supplies. • Set up construction camp and equipment maintenance facilities, as required. • Prepare quarry and commence blasting for aggregate production and stockpile pads. • Set up crusher and complete test runs.	2026 Construction season (Jun-26 to Oct-26)
• Aggregate production. • Commence placement of breakwater core. • Dredging and onshore disposal.	2027 Construction season (Jun-27 to Oct-27)
• Aggregate production. • Breakwater core and armour placement. • Laydown/boat storage area and ramp fill placement • Dredging and onshore disposal. • Partial demobilization.	2028 Construction season (Jun-28 to Oct-28)
• Complete breakwater armour surfacing. • Electrical installations. • Community harbour floats, including installation and removal demonstration. • Final grading and compaction. • Remainder of demobilization.	2029 Construction season (Jun-29 to Oct-29)
Operations	
• Community harbour operations.	Spring 2030

3.4 Transportation (Mobilization and Demobilization)

Mobilization to site will commence with the sealift of the 2026 season, which typically arrives in Resolute Bay at the end of August or early September. For the first year of construction, mobilization will include equipment mainly for quarrying and earthworks, construction camp and miscellaneous construction consumables. At the end of the construction seasons, the site will be prepped for overwintering, and the main construction equipment is expected to remain on site. Planning must take into consideration the timing of the sealifts, and the materials and equipment that will be needed for the upcoming construction seasons. As tasks are completed and equipment is no longer needed, equipment will be demobilized from site and returned to the south via sealift.

Equipment mobilization and demobilization will be undertaken by the contractor. Most of the materials and equipment required for the construction of the Project will arrive on the annual sealift provided by Nunavut Eastern Arctic Shipping (NEAS), and Nunavut Sealink and Supply Inc. (NSSI).

Project personnel travelling to the site will use air travel and arrive either on regularly scheduled commercial flights, or on private charter flights if required.

3.5 Equipment

The anticipated construction equipment for the Project is as outlined in Table 3-5.

Table 3-5: Anticipated Construction Equipment

Equipment Type and Quantity	Size, Dimensions, Type	Proposed Use
Drills (2 to 3)	5 tons	Quarrying.
Excavators (3 to 5)	30 to 40 ton	Quarrying, handling armour stone, loading trucks, excavating, dredging, material placement.
Trucks (3 to 5)	35 to 40 ton articulating	Hauling quarried rock.
Front end loader (2 to 3)	966 to 988	Loading rock and moving cargo/equipment.
Compactor (1)	20 ton	Compacting road surfacing.
Dozer (1)	D8	Leveling placed rock and road surfaces.
Grader (1)	140	Road maintenance.
Spud barge/derrick (1)	20 m x 50 m deck with 150t crane	Dredging, moving/lifting materials and equipment.
Work boats (1 to 2)	Varies, 50 to 500 horsepower	Floating equipment movement and surveys.
Pickup truck (5)	Crew cab, ¾ ton	Crew and supplies movement.
Mini bus (1)	15 passenger	Daily crew mobilization from hotel/accommodation to Project site.
Fuel/service truck (1)	10 ton	Daily refueling and servicing of major mobile equipment, fueled from GN-Petroleum Products Division (GN-PPD) dispensers in Resolute Bay and/or Contractor supplied fuel storage facilities.
Telehandler (1)	5 ton	Moving materials and equipment.
Rough terrain crane (1)	80 ton	Lifting materials.
Rock Crusher (1 to 2)	-	Crushing run of quarry materials.

3.6 Site Preparation and Staging

For site mobilization, materials will be shipped to the Project site and a contractor laydown area will be established to store materials and equipment. Services to support the Project activities and personnel, including water use, waste management and accommodations, will be established. Further details on mobilization and demobilization are in Section 1.13 of the PSIR Report (Dynamic Ocean & Worley Consulting, 2025).

3.7 Operations

Operation of the Project is expected to begin in the open-water season of 2030 and will be defined by the Operations Plan which will be developed by GN-TIN in collaboration with the hamlet, and the users. This will be a public facility for the community and will not have access restrictions. Generally, the

community harbour operations will be similar to current, with improvements to vessel moorage, wave and wind protection, boat launching and storage.

3.8 Maintenance

The Operations Plan of the community harbour will be developed by the GN-TIN in concert with the local community. The harbour is owned and operated by the GN-TIN, but responsibility for ongoing maintenance and operations is yet to be determined by the GN-TIN and the community.

The general maintenance and operations activities of the community harbour are expected to include the following:

- Annual inspections of the harbour components.
- Spring clearing of culvert inlets and outlets of drifted snow.
- Deployment and recovery of the floating docks. It is expected that the floating docks will be stored on the laydown area or the shoreline adjacent to the launch ramp.
- Periodic sounding surveys to confirm there are no locations of accumulating sediments or boulders deposited by shifting ice.
- The regular maintenance is expected to be as follows:
    - Re-grading/compaction of the road surfaces and laydown areas.
    - Re-grading/compaction of the boat launch ramp.
        - Periodic replacement of float components, including chains, hinges, sleepers and deck.
    - Periodic re-dressing of riprap surface where rocks may have been plucked by ice.
    - Removal of creek-borne sediments captured in sedimentation stilling basin.
- Periodic removal of beach sediments accumulated in the sediment trap located on the south breakwater.
- Periodical maintenance dredging in the harbour.

An Operations Environmental Management Plan (OEMP) will be prepared with further information provided in Section 8.4 of the PSIR Report (Dynamic Ocean & Worley Consulting, 2025).

3.9 Decommissioning

The community harbour is considered a permanent structure with no plans for decommissioning.

4 Potential Environmental and Socio-Economic Effects

Potential impacts were considered relative to the proposed construction activities (described in Section 3) for the Project Study Area (described in Section 6.2 of the PSIR Report) (Dynamic Ocean & Worley Consulting, 2025) and specific to each of the Valued Ecosystem Components (VEC) and Valued Socio-Economic Components (VSEC). Impacts were considered for their potential to affect the baseline environmental and socio-economic conditions, as well as by the criteria NIRB uses for screening decisions:

- Could the Project have significant adverse effects on the environment, and Inuit harvesting?
- Could the Project have significant adverse effects on the well-being of northerners?
- Does the Project cause significant public concern?
- Does the proposal involve new technologies with unknown effects?

Potential impacts were categorized by the terms in Table 4-1 and are summarized in Appendix A (Table A- 1). This CEMP is exclusive the construction phase of the Project.

All impacts were considered either “Positive” or “Negative and Mitigatable” and thus no residual effects are expected subsequent to implementation of mitigation and monitoring measures.

Mitigation and monitoring measures will be implemented for the construction phase to minimize negative effects are described in Section 5. Further, the contractor will be required to develop Construction Work Plans (CWP) that will detail the methodology for implementing mitigation and monitoring measures (Section 5.3).

Table 4-1: Screening Assessment Categories

Category	Term in Appendix A (Table A- 1)	Definition
Positive	P	Net gain in functionality after construction or during operations.
Negative, non-mitigatable	N	Negative and will remain as a residual effect, after construction or during operations.
Negative, mitigatable	M	Negative, but measures can be put in place to minimize or eliminate the effect.
Unknown	U	Information is not available to confirm what effects will be.
No impact	Blank	There is a no effect, and thus considered neutral.

Note: see Appendix A (Table A- 1) for VECs and VSECs categories

5 Environmental Management

This section outlines BMPs and the minimum mitigation and monitoring measures required to be implemented during construction. Communication and reporting commitments are outlined as well as roles and responsibilities.

5.1 Best Management Practices and Guidance Documents

Guidelines and BMPs that will be incorporated into the CEMP, the CCEMP and into the Contractor CWPs include:

- DFO: Fish and Fish Habitat Protection Policy statement (DFO, 2019).
- DFO: Measures to Protect Fish and Fish Habitat (DFO, 2023b).
- DFO: Standards and Codes of Practice (DFO, 2024c).
- DFO: Nunavut Restricted Activity Timing Windows for the Protection of Fish and Fish Habitat (DFO, 2013).
- DFO: Guidelines for the Use of Explosives in or Near Canadian Water (Wright & Hopky, 1998).
- DFO: Pathways of Effects (DFO, 2024b).
- DFO: Interim Standard: In-Water Site Isolation (DFO, 2023a).
- National Oceanographic and Atmospheric Administration (NOAA) : 2024 Revisions to: Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 3.0) (NOAA, 2024).
- Government of Canada: General nesting periods of migratory birds (ECCC, 2024a).
- Government of Canada: Guidelines to reduce risk to migratory birds (ECCC, 2023).
- Government of Canada: Guidelines to avoid disturbance to seabird and waterbird colonies in Canada (ECCC, 2024b).
- Government of Canada: Guidelines for Spill Contingency Planning (Indian and Northern Affairs Canada, INAC, 2013).
- Government of Canada: Guidelines for the Preparation of Hazardous Material Spill Contingency Plans (ECCC, 1990).
- Government of Canada: National Oil Spill Preparedness and Response Regime (Transport Canada, 2019).
- Government of Canada: Northern Land Use Guidelines, Pits and Quarries, Revised 2013 (INAC, 2009).
- Government of Canada: Northern Land Use Guidelines, Access Roads and Trails, Revised 2013 (INAC, 2010).
- Government of Canada: Northern Land Use Guidelines, Applying Sustainable Development, Revised 2013 (INAC, 2003).

- Government of Canada: Northern Land Use Guidelines, Camp and Support Facilities, Revised 2013 (INAC, 2011).
- Government of Canada: Workplace Hazardous Materials Information System (WHMIS) (Health Canada, 2023).
- GN: 2014 Revisions to: Environmental Protection Service, and Environmental Guideline for Dust Suppression (GN, 2014).
- GN: Non-native and invasive species in Nunavut (GN & ECCC, 2022).
- GN: Contingency Planning and Spill Reporting in Nunavut. A Guide to the New Regulations (GN, 2022).
- GN: Environmental Guideline for the General Management of Hazardous Waste, Revised 2010 (GN, 1999a).
- GN: Environmental Guideline for Used Oil and Waste Fuel (GN, 2012).
- GN: Environmental Guidelines for Industrial Waste Discharges into Municipal Waste and Sewage Treatment Facilities, Revised 2011 (GN, 2002).
- GN: Environmental Guidelines for the Management of Contaminated Sites, Revised 2014 (GN, 1999b).
- Emergency and continuity management program, Canadian Standards Association (CSA) Z1600:17 (R2022) (CSA, 2022).
- A Best Practices Guide to Solid Waste Reduction, Canadian Construction Association, 2001 (Canadian Construction Association, 2001).
- National Fire Code of Canada, National Research Council Canada, Edition 11 (NRCC, 2022).
- Canadian Environmental Quality Guidelines (CEQG) (CCME, 2024).

5.2 Roles and Responsibilities

The requirements to meet regulatory commitments, will be undertaken by GN-TIN, the Construction Administration Team, and the contractor's team. The roles and responsibilities for each team with respect to management of environmental performance on the Project are set out below. The responsibility for the application of this CEMP encompasses all Project personnel from management to construction workers.

5.2.1 Government of Nunavut

The GN-TIN will undertake the following responsibilities to manage regulatory compliance:

- Communicating with AHJs on matters related to permitting and regulatory compliance.
- Continued consultation with the community and Hamlet.
- Reviewing and approving the CCEMP and other CWPs (described in Section 5.3).
- Coordination with the contractor to manage and communicate on compliance issues.

- Transmitting monitoring reports and incident notices to AHJs, community members and groups, as necessary.

5.2.2 Construction Administration Team – Worley Canada Services Ltd.

The Construction Administration Team of Worley Consulting will act on behalf of and report to the GN-TIN, whose roles will be defined prior to construction.

A summary of the roles is below:

- Support to the GN-TIN responsibilities summarized above.
- Monitor that the contractor's activities comply with contractual requirements and the approved design, including environmental requirements, regulations and relevant permits and approvals.
- Reviewing the qualifications of Environmental Monitors (EM) presented by the contractor to confirm on-site personnel are appropriately qualified.

5.2.3 Contractor Team

The contractor is responsible for the management of construction activities and the preparation of CWPs (see Section 5.3) for approval by the GN-TIN.

The contractor will retain a Qualified Environmental Professional (QEP) as the EM. The lead EM will be an applied scientist or technologist registered and in good standing with an appropriate professional organization or have equivalent post-secondary education and experience.

The lead EM shall be an independent third party responsible for oversight of the environmental team, and to provide the following services:

- Assist with the preparation of CWPs, including the CCEMP, in advance of construction, with updates as required for changes in methodology, legislative requirements, or due to adaptive management.
- Onsite EM services to confirm that land and marine-based construction are appropriately monitored.
- Conduct field inspections, taking necessary environmental samples to confirm compliance with the CCEMP and other relevant CWPs, for all contractor works.
- Record monitoring results, environmental compliance, and corrective actions.
- Prepare routine and incident reporting to GN-TIN.
- Instruct crews to suspend construction activities that do not accord with standards included in this CEMP, associated CWPs, or following an Environmental Incident.
- Communicate with all contractor personnel and provide training on environmental compliance requirements.
- Coordinate with the contractor's staff, including all sub-contractors, to confirm compliance with the CEMP and CWPs; government regulatory, approval and permit conditions, procedures, and field instructions from the Construction Administration Team.

- Lead training and awareness: promotion of environmental protection by contractor's staff, including the implementation of best management practices and procedures.
- Manage a data management system to securely store, manage, and transfer raw data collected during EM requirements (e.g., acoustic files, turbidity files) to GN-TIN.
- Preparation and submission to GN-TIN of weekly reports as described in Section 5.10.1.

5.3 Construction Work Plans

Prior to construction, the contractor will be responsible for submitting a construction method plans which describes the phases for mobilization, preparation, drilling, site clean up and restoration and demobilization.

In addition to method statements covering the execution of specific tasks, CWPs will be developed to meet the minimum requirements prior to construction as outlined below, and through applicable legalisation and AHJ approvals.

5.3.1 Contractors Construction Environmental Management Plan

The contractor will be responsible for developing a CCEMP, to be in compliance with this Regulatory CEMP and permit and approval conditions received from AHJs.

5.3.2 Contractors Marine Safety Plan

The Contractor Marine Safety Plan (CMSP) is intended to minimize traffic interferences for the community and confirm that Inuit harvesting rights are not impacted on land or in water. The CMSP will identify a communication plan for mariners, and regulatory authorities (Navigational Warning [NAVWARN]) and identify any temporary structures associated with the Project. It is also to confirm that mitigation measures (e.g., navigational markers and marine construction buoys) are being undertaken for the TC NoW permit to minimize navigational interferences.

5.3.3 Contractors Traffic Management Plan

The Contractors Traffic Management Plan (CTMP) is intended to confirm an appropriate plan is in place to manage site access, traffic through the community and ensure the community is informed of ongoing construction traffic safety concerns. This includes driver training and safety awareness, establishing a dedicated haulage route, management of road closures, and a public safety awareness campaign.

5.3.4 Contractors Spill Prevention and Response Plan

The Contractors Spill Prevention and Response Plan (CSPRP) will identify spill prevention and response procedures and confirm compliance with regulatory communication requirements in the event of accidental spills. The CSPRP will describe procedures for safe fuel handling and storage, including details of the requirements for secondary containment for all equipment in addition to any specific procedures required for near- or over-water fuelling. The purpose of the CSPRP is to establish policies, procedures, and a communication matrix for the steps to be followed during an accidental spill.

5.3.5 Contractors Quarry and Blasting Management Plan

A Contractors Quarry Blast Management Plan (CQBMP) is intended to confirm the procedures for the safe operation of the quarry during construction and blasting. The CQBMP will be developed to detail

the operations and maintenance to be undertaken by the contractor during community harbour construction, including site safety and security measures and steps for development, operation, maintenance and monitoring of the quarry, and dangerous goods storage and use. The CQBMP will also identify appropriate decommissioning of the quarry, including soil replacement, removal of waste and public safety measures.

5.3.6 Contractors Health and Safety and Emergency Response Plan

A Contractor Health and Safety and Emergency Response Plan (CHSERP) is intended to establish Health and Safety procedures to be undertaken to confirm a safe working environment and Emergency Response. The CHSERP will address all health and safety aspects of the Project as required by Nunavut Safety Acts and Regulations to address potential emergency situations (e.g., fire, vehicle or equipment incidents, major first aid, wildlife encounters or natural disasters) that could occur at the Project site during the construction phases.

5.4 Mitigation Measures

Mitigation measures to be implemented to minimize negative effects are provided in this section. The categories of considered impacts were developed during the NIRB permitting process, and while assigned to one category may be applicable to others. These measures, combined with the CWPs, see Section 5.3, and AHJ approvals constitute the regulatory compliance program.

5.4.1 General

General mitigation measures are described in Table 5-1.

Table 5-1: General

No.	Description
G1	A qualified EM (defined in 5.2.3) will be present full time during key construction activities (terrestrial- and marine-based).
G2	The contractor will prepare a CCEMP which at a minimum meets the requirements of this CEMP (further described in Section 5.3.1).
G3	The contractor will suspend all Project activities should any dead or injured fish or wildlife (including birds, bird eggs, and their nests) be observed during any works or activities in and around the community harbour, haul road, or quarry. Stop work procedures will be defined in the CCEMP but will meet the minimum requirements defined in Section 5.7.
G4	Stop work measures will be implemented should any non-compliance concerns arise. Corrective actions or adaptive management strategies will be discussed with the EM and implemented where necessary prior to re-starting work. Stop work procedures will be defined in the CCEMP, and at minimum meet the requirements discussed outlined in this CEMP as out detailed in AHJ approval.
G5	Lighting will be limited to the extent required to provide a safe work site and shielded and directed to reduce diffusion outside of the work area.
G6	Appropriate stop-work and non-compliance reporting will be implemented as applicable. See Sections 5.7, 5.8.

5.4.2 Project Permit and Approval Compliance

Mitigation measures associated with project permit and approval compliance are described in Table 5-2.

Table 5-2: Project Permit and Approval Compliance

No.	Description
PPAC1	The GN-TIN and their contractor will operate in compliance with applicable Acts, Regulations and Guidelines. This includes permits, approvals and authorizations received after issuance of this CEMP.
PPAC2	The contractor will maintain copies of Project permits, approvals and authorizations issued by AHJs at the site at all times. The CCEMP will describe where and how (e.g. digital, paper) these permits are being maintained.
PPAC3	The contractor will provide to GN-TIN copies of permit application(s) and contractor held permits.
PPAC4	A copy of each permit, license, or other authorization issued for the Project will be submitted to NPC and the NIRB as per S 137(4) of the NuPPAA. GN-TIN will be responsible for the submission of permits on behalf of the contractor.
PPAC5	Adherence to appropriate BMPs (see Section 5.1).
PPAC6	The contractor will review the CCEMP and Project issued permits with Project personnel prior to such parties participating in any construction or other physical activities on the Project site.

5.4.3 Ground Stability and Permafrost

Ground stability and permafrost mitigation measures are described in Table 5-3.

Table 5-3: Ground Stability and Permafrost

No.	Description
GSP1	The contractor will not move any equipment or vehicles unless the ground surface is capable of fully supporting the equipment or vehicles without rutting or gouging. Overland travel of equipment or vehicles must be suspended if rutting occurs. Measures to mitigate any potential rutting will be implemented if required.
GSP2	The contractor will confirm embankment thickness is suitable to limit disturbance to thermal regime.
GSP3	Haul road monitoring will be undertaken by the contractor to identify ground stability concerns. The contractor will undertake appropriate measures for stabilization, regular maintenance, of the haul road.

5.4.4 Surface Features

Surface features mitigation measures are described in Table 5-4.

Table 5-4: Surface Features

No.	Description
SF1	The Project will be conducted in a manner that minimizes surface disturbance outside of the Project site.
SF2	The contractor will return Project areas as directed by the Hamlet to their original condition upon completion of construction.

5.4.5 Hydrology

Mitigation measures for hydrology are described in Table 5-5.

Table 5-5: Hydrology

No.	Description
H1	The contractor will minimize the number of water crossings, where possible, and when required they will be appropriately sized.
H2	Work site boundaries will be flagged to prevent inadvertent loss or alteration of habitat.
H3	Water flow will be maintained in lowland areas by installing culverts and/or other drainage techniques during road construction as deemed appropriate.
H4	If water withdrawal is required to support the potential construction camp, dust management, etc., the contractor will obtain the appropriate approvals from the NWB and DFO-FFHPP.
H5	Installation of SEC measures as required (see Section 5.4.9 (Table 5-9)).

5.4.6 Air Quality

Mitigation measures for Air Quality are described in Table 5-6.

Table 5-6: Air Quality

No.	Description
AQ1	Machinery and equipment will be maintained in good working order to minimize emissions.
AQ2	The contractor will have an appropriate inspection and maintenance program in place for construction equipment and vehicles.
AQ3	Dust suppressants and/or watering will be used to reduce dust generation from blasting to acceptable levels.
AQ4	Approved dust suppressants and/or watering will also be used to reduce dust generation for use of the haul road. Dust suppressants will be in accordance with the GN Department of Sustainable Development, Environmental Protection Service, and Environmental Guideline for Dust Suppression (GN, 2014). The contractor will also be required to obtain the approval of the Hamlet for which dust suppressants are acceptable.

No.	Description
AQ5	Proactive maintenance will be undertaken to address problem areas of the haul road which may produce significant dust.
AQ6	The contractor will be responsible for the selection of appropriate construction material for any road construction that will not require significant dust management efforts.
AQ7	Appropriate measures will be included in the CTMP, See Section 5.3.3, to identify speed limits or other actions equipment operators need to consider to minimize dust, wildlife mortality, and other negative effects (Section 5.4.20.2).

5.4.7 Noise

Mitigations outlined within this section pertain to overland in-air noise. Noise mitigation measures are described in Table 5-7.

Table 5-7: Noise

No.	Description
N1	Sound producing construction activities (e.g., blasting, hauling) will be restricted to 12-hours/day during daytime. If the contractor requires to perform sound producing activities outside of this window the community shall be consulted and approvals obtained from the hamlet and GN-TIN.
N2	A notification protocol will be developed with input from the Hamlet and residents for advance notification of planned noise-causing activities, such as blasting.
N3	Any non-disruptive night works will require consultation with the community and approval by the Hamlet.
N4	Equipment will be located and oriented to minimize propagation of noise toward sensitive receptors.
N5	All construction and road vehicles must be fitted with standard and well-maintained noise suppression devices and engine revving and idling is to be minimized.

5.4.8 Sediment and Water Quality

Mitigation measures for sediment and water quality are described in Table 5-8.

Table 5-8: Sediment and Water Quality

No.	Description
SWQ1	The EM will confirm that no construction activity results in exceedances of the Canadian Council of Ministers of the Environment (CCME) Approved Water Quality Guidelines (WQG) outside the work area. Monitoring and compliance thresholds are outlined in Section 5.5.5.
SWQ2	The EM will confirm that no construction activity results in exceedances of the CCME Approved WQG outside the work area. Compliance thresholds are stipulated in Section 5.5.5.

No.	Description
SWQ3	The EM will confirm appropriate SEC monitoring measures are in place to confirm that land-based activities do not result in sediment or other deleterious substances entering aquatic environments (freshwater, marine). Where appropriate, SEC measures will be implemented (e.g., turbidity curtain, silt fences) (see Section 5.4.9).
SWQ4	The contractor will not deposit any deleterious substances (e.g. fuel, chemicals, waste) into any aquatic environment (freshwater, marine) waterbodies. Should such activities occur, appropriate measures for response and reporting must be stipulated in the CSPRP Section 5.3.4. The minimum measures for CSPRP are summarized in Section 5.4.24.
SWQ5	The contractor will not use any water nor construct or disturb any stream, lakebed or the banks of any definable water course unless otherwise authorized by the NWB.

5.4.9 Sediment and Erosion Control

Mitigation measures for SEC are described in Table 5-9.

Table 5-9: Sediment and Erosion Control

No.	Description
SEC1	The contractor will describe an appropriate SEC Plan to minimize sedimentation of the aquatic environment (freshwater, marine) during construction. This plan will include compliance requirements expected from DFO-FFHPP, NWB or any other pertinent AHJs.
SEC2	Run-off will be visually monitored by the EM. If there is evidence of effects to the aquatic environment (freshwater, marine), appropriate perimeter controls will be applied to minimize or prevent sediment from entering the watercourse. Should sediment enter watercourses, turbidity monitoring will be undertaken as outlined in Section 5.5.5.
SEC3	Stockpiling and storage of material must occur in upland designated areas and be controlled in a way that debris and sediment entering the aquatic environment (freshwater, marine) will be minimized.
SEC4	Temporary sediment control measures will be applied at the base of any soil or rock stockpiles if required.
SEC5	Culverts and/or other drainage features will be installed at water crossings and in lowland areas to maintain flow. Any activities completed as part of this mitigation measure must be conducted in compliance with requirements from NWB. Please note, fish bearing water courses are not expected to be encountered.

5.4.10 Terrestrial Vegetation

Mitigation measures for terrestrial vegetation are described in Table 5-10.

Table 5-10: Terrestrial Vegetation

No.	Description
TV1	Project personnel will receive training to minimize negative effects on terrestrial vegetation (see Section 5.4.15 for details).
TV2	Vehicle inspection requirements will be implemented to confirm equipment is clean and free of soil, invasive plants, and/or their seeds prior to arrival on site (see Section 5.4.21).
TV3	Monitoring of disturbed areas for non-native and invasive species, as defined by the GN and ECCC (2022) will occur on a regular basis. The frequency of monitoring will be described in the CCEMP Section 5.3.1
TV4	If the construction camp is built in a previously undeveloped area, the contractor will be responsible for conducting an appropriate pre-construction vegetation survey in advance of installation of the construction camp (see Section 5.5.4 for minimum survey requirements).
TV5	SEC measures will be implemented (see Section 5.4.9).
TV6	Dust management measures will be implemented (see Section 5.4.6).

5.4.11 Wildlife and Migratory Birds (Including Marine Birds)

Mitigation measures for wildlife and migratory birds are described in Table 5-11.

Table 5-11: Wildlife and Migratory Birds

No.	Description
WMB1	A pre-construction survey and sweep for wildlife (including migratory and marine birds) will be conducted by a qualified professional prior to initiating work in all Project areas. Minimum requirements are summarized in Section 5.5.3 and will be detailed in the CCEMP.
WMB2	In the event a sensitive species or wildlife habitat feature is identified, buffers (work exclusion zones) will be implemented to minimize disturbance to wildlife. Any protected feature that is harmed, destroyed, or disturbed will be reported, and may result in immediate notification to pertinent AHJs (see Section 5.11.1).
WMB3	Monitoring of identified nests will be conducted by the EM to determine efficacy of implemented setbacks and buffers. Buffers may need to be increased based on 'alert' and 'flush' behavior to any varying work activities.
WMB4	Speed limits will be implemented to minimize negative effects to wildlife (see Section 5.4.20.2).
WMB5	Project personnel will receive training to minimize negative effects to wildlife (see Section 5.4.15).
WMB6	Work site boundaries will be flagged to prevent inadvertent loss or alteration of habitat outside of the designated Project footprint.
WMB7	No blasting will occur within established buffers from protected wildlife habitat features.
WMB8	If there are large flocks of marine or migratory birds near the Project during sound producing activities (such as blasting), the EM will document their behaviour to confirm there are no adverse reactions. Work may need to be paused to allow birds to resume normal activity if birds continually flush or appear agitated by the activities.

No.	Description
WMB9	Polar bear sightings will be reported immediately so that appropriate actions can be taken to avoid conflict situations. In collaboration with the Hamlet and Hunters and Trappers Association (HTA), the CCEMP will identify who and where sightings are to be reported.
WMB10	Sightings of wildlife species, with particular attention to species at risk, will be recorded on a wildlife sighting form (including time, date, location, activity, and proximity to Project personnel). Wildlife sightings will be tracked in order to respond appropriately to emerging trends.
WMB11	A zero-tolerance policy regarding the harassment, disturbance, and feeding wildlife whilst working on the Project will be implemented.
WMB12	If the construction camp is built in a previously undeveloped area, the contractor will be responsible for conducting an appropriate wildlife survey in advance of construction (see Section 5.5.3).
WMB13	Wildlife will be given the right-of-way so as not to chase, weary, harass or injure animals on the road.

5.4.12 Fish and Fish Habitat (Including Marine Mammals)

Mitigation measures for fish, fish habitat, and marine mammals are described in Table 5-12.

Table 5-12: Fish and Fish Habitat (Including Marine Mammals)

No.	Description
FMM1	Visual monitoring will be undertaken as per Section 5.5.2. All aquatic works will cease in the event of fish kill/injury or stress to aquatic wildlife is observed near the Site until the EM can provide guidance for the continuation of works.
FMM2	Construction equipment operators will maintain vigilance for marine mammals: minimum approach distances and best practices as outlined in the MMR must be adhered to, and protected areas as outlined within the most recent Notice to Mariners published by the Canadian Coast Guard (CCG) at the time of construction will be followed.
FMM3	Should monitoring of the Exclusion Zone (EZ) occur in low light or dark conditions, the contractor will describe in the CCEMP what measures will be taken to confirm the Marine Mammal Observer (MMO) has the ability to monitor the EZ in low light conditions. Minimum requirements for the management of the EZ are described in Section 5.5.7.
FMM4	The contractors EM will be responsible for confirming defining 'near water' for distance from the HWL to the blasting location, either based on physical distance or based on the blast charge. Monitoring commitments will be in compliance with the Guidelines for the Use of Explosives in or Near Canadian Water (Wright & Hopky, 1998).
FMM5	Water will not be extracted from any fish-bearing waterbody unless undertaken in compliance with NWB and DFO-FFHPP legislative requirements (e.g. permitted through NWB, water intake is in compliance with DFO-FFHPP's Standards and Codes of Practice [SCOPs] for end of pipe fish protection screens) (DFO, 2024c).

No.	Description
FMM6	If fish are encountered in creeks during haul road upgrades or quarry development, they will be rescued from the area and returned downstream. Adaptive management measures will be implemented for any further construction in or about that creek.
FMM7	No disturbance to the seabed outside of the Project footprint shall occur (with the exception of barge spudding and vessel anchoring)
FMM8	If marine-based equipment is used by the contractor, and if temporary pads need to be constructed on the foreshore for overwinter storage, the location will be discussed with and approved by DFO-FFHPP
FMM9	Land-based sources of sediment (stockpiling, placement of rock fill, drainage ditches) will be controlled in a way that debris and sediment will not enter the aquatic environments (marine, freshwater)
FMM10	Any additional commitments as specified in a DFO Letter of Advice (LoA) or FAA will be incorporated into the CCEMP.

5.4.13 Species at Risk

Mitigation measures for Species at Risk (SAR) are described in Table 5-13.

Table 5-13: Species at Risk

No.	Description
SAR1	If species at risk are reported or observed, the EM will record, document, and monitor their presence (including time, date, location, activity, and proximity to Project personnel) and determine potential impacts to species at risk, as well as any modification to construction activities that may be required to protect species at risk.
SAR2	Caribou are not expected in the Project area. However, if caribou are sighted near a workspace, the EM will determine if work stoppage is required and when work can commence.
SAR3	Measures to protect caribou will follow those outlined in Appendix I of the NBRLUP (NPC, 2000).

5.4.14 Archaeological and Culturally Significant Sites

Mitigation measures for archaeological and culturally significant sites are described in Table 5-14.

Table 5-14: Archaeological and Culturally Significant Sites

No.	Description
ARC1	Any additional archaeological survey work that may be required as directed by the GN-Department of Culture and Heritage (GN-C&H) will be conducted prior to construction.
ARC2	The contractor will develop an Archaeological Resource Discovery Plan (ARDP) and be implemented should historical or palaeontological features (e.g. stone features, stone tools, modified bone, fossils) be found during construction.
ARC3	If potential human remains are found within the footprint during construction, the measures outlined in the ARDP will be implemented.

No.	Description
ARC4	Project personnel will be prohibited from collecting any archaeological or palaeontological materials.
ARC5	Project personnel will receive training on the implementation of ARDP requirements (see Section 5.4.15).
ARC6	If the construction camp is built in a previously undeveloped area or changes are made to the Project footprint, the contractor will be responsible for confirming any archaeological survey requirements in advance of construction.

5.4.15 Training

Mitigation measures related to training are described in Table 5-15.

Table 5-15: Training

No.	Description
TRN1	The Project personnel induction program will include an Inuit cultural awareness component to promote understanding and respect for local culture and residents.
TRN2	Project personnel will be educated on the wildlife (particularly SAR) expected to occur in the area according to scientific research and IQ/traditional knowledge through site induction and toolbox sessions.
TRN3	Project personnel will be trained on the risks of damaging or disturbing vegetation and sensitive communities.
TRN4	Project personnel will be briefed regarding the potential negative effects of construction activities to archaeological and palaeontological resources and will be familiar with the ARDP.
TRN5	Project personnel will be trained in the use of fire suppression aids. The contractor will describe measures in the CHSERP (Section 5.3.6).
TRN6	Project personnel will be trained and qualified to safely handle the hazardous waste and materials. The contractor will describe measures in the CCEMP (Section 5.3.1).
TRN7	The contractor will properly train Project personnel in fuel and hazardous waste handling procedures, as well as spill response procedures. The contractor will describe measures in the CSPRP (Section 5.3.4).
TRN8	Project personnel will be trained in the spill prevention and response requirements during site induction and subsequent toolbox talk sessions. The contractor will describe measures in the CSPRP (Section 5.3.4).

5.4.16 Communication

Mitigations outlined in Table 5-16 pertain to communication with AHJs, stakeholders, the Hamlet, HTA, and community members.

Table 5-16: Communication

No.	Description
COM1	Appropriate communication and documentation measures will be in place for reportable incidents (Section 5.10.2), non-compliances (Section 5.8) and adaptive management

No.	Description
	measures implemented (Section 5.6). The communication protocol will be described in the CCEMP Section 5.3.1.
COM2	A notification protocol will be implemented with input from the Hamlet, HTA, cabin owners, community members and other stakeholders for advance notification of planned noise-causing activities (e.g., blasting).
COM3	Construction notices will be posted as outlined in Section 5.11.2. The contractor will detail locations and timeline of where and when the construction notices will be posted within the CCEMP Section 5.3.1.
COM4	Communication requirements as required by permit conditions to pertinent AHJs will be completed as required. Parties responsible for AHJ communications is addressed in Section 5.11.1.
COM5	The contractor will engage with the HTA, Hamlet, cabin owners, and the community prior to every construction season to discuss employment opportunities and hiring processes, planned construction activities, the Project schedule, and to obtain feedback from the community to confirm that construction activities do not impede or interfere with any community activities and harvesting.
COM6	The contractor will coordinate with the health centre supervisor and the fire chief in the development of the CHSERP.
COM7	The Project will consult and coordinate with cruise ship operators and outfitters to confirm that their access is not impeded, and the safety of passengers is maintained.
COM8	The contractor will include the GN-TIN representative on communications with AHJs, stakeholders or other community groups related to Project activities.
COM9	Communication protocols will be established to notify the community of marine activities, including ongoing consultation with the community and HTA.
COM10	An appropriate communication plan will be detailed in the CCEMP Section 5.3.1. to confirm that the EM and MMO have clear communication protocols with the contractor's site supervisor/foreman should shut down or other activities be required to be quickly communicated during construction.
COM11	Should blasting occur, blasting notices will be posted on radio, social media, at the Hamlet and HTA offices, the Co-op store, and on Very High Frequency (VHF) radio. Blasting will generally occur at the same time every day so that residents can plan accordingly. In-person checks will be done at the two adjacent cabins, prior to blasting.

5.4.17 Land and Resource Use

Mitigation measures related to land and resource use are described in Table 5-17

Table 5-17: Land and Resource Use

No.	Description
LRU1	The contractor will conduct project activities in a manner that will not interfere with Inuit harvesting or traditional land use activities.

No.	Description
LRU2	Appropriate access for boaters to launch their boats and access to the marine environment will consistently be maintained throughout construction.
LRU3	Project personnel will not hunt or fish, unless proper Nunavut authorizations have been acquired.
LRU4	The contractor will construct skidoo access over any potential barriers caused by the work, including stockpiles or stockpile pads to allow hunters to pass through.
LRU5	Road closures for blasting will be limited to approximately 30 mins/day once a day.
LRU6	Daily road closure notices will be posted on radio, social media, at the Hamlet and HTA offices, the Co-op store, and on VHF radio.
LRU7	Road closures will aim to be at the same time every day so residents can plan accordingly.
LRU8	Communication requirements pertinent to land and resource use as described in Section 5.4.16.
LRU9	Prior to demobilization at the end of each construction season, the contractor will meet with a designated HTA representative to confirm that the Project site has been left in a state to maintain access throughout the winter months. If concerns are raised, the contractor will make corrections that are accepted by the HTA representative prior to end of season demobilization.

5.4.18 Human Health and Community Wellness, Infrastructure, and Services

Mitigation measures related human health and community wellness, infrastructure, and services are described in Table 5-18.

Table 5-18: Human Health and Community Wellness, Infrastructure, and Services

No.	Description
HCIS1	The contractor will prepare a Code of Conduct for all Project personnel. As part of their employment with the contractor, Project personnel will be required to sign the Code of Conduct governing their behaviour on the job and during recreational hours to reduce the likelihood of negative social effects on the community. This will include adherence to all rules at construction sites and at the construction camp.
HCIS2	There will be a zero-tolerance policy for possession or use of marijuana, illicit drugs, or alcohol.
HCIS3	First aid response will be conducted in accordance with Workers Safety and Compensation Commission (WSCC) requirements and emergency medevac procedures will be in place for the construction workforce. The contractor will ensure they have an adequate supply of first aid supplies and medication to not put additional strain on the community medical facility. The contractor shall take into consideration the remote location of the project, that emergency medevac may take time, and to ensure construction workers are fit for duty prior to mobilising to site.

No.	Description
HCIS4	Communication requirements pertinent to human health and community wellness, infrastructure, and services as described in Section 5.4.16.
HCIS5	The contractor will describe fire response procedures in the CHSERP Section 5.3.6 as well as provide training to Project personnel on the use of fire suppression aids to minimize impacts to the local fire service.
HCIS6	The CCEMP will describe appropriate measures to be taken to confirm there is no strain put on the community's fuel supply (see Section 5.3.1).
HCIS7	The contractor will have a dedicated fuel truck for meeting Project fuel requirements and have available temporary code compliant fuel tanks for fuel storage during construction, if necessary, to confirm that the community's fuel supply is not impacted by the Project.
HCIS8	The contractor will provide dedicated water and sewage trucks to support construction needs should there be a strain on the community services.
HCIS9	Traffic management procedures will be in place as described in Section 5.4.20.
HCIS10	Safety measures as stipulated in the CHSERP to be followed (Section 5.3.6).
HCIS11	The contractor will identify houses/buildings that are at risk of falling rock and implement measures to prevent blasting fly rock and vibrations from damaging nearby cabins. Control fencing will be installed (e.g., 1.8 m tall orange fencing using rebar) uphill of these buildings and will be detailed within the CQBMP (see Section 5.3.5).
HCIS12	The contractor will work with the Hamlet on determining a suitable location for the construction camp. The location of the construction camp must be approved by the Hamlet.

5.4.19 Employment, Training and Business Opportunities

Measures related to employment, training and business opportunities are described in Table 5-19.

Table 5-19: Employment, Training and Business Opportunities

No.	Description
ETBO1	The contractor will comply fully with the GN's Nunavummi Nangminiqaqtunik Ikajuuti (NNI) Policy (01 April 2017) and will aim to maximize participation of Inuit labour, training and Inuit owned businesses on the Project.
ETBO2	Communication requirements pertinent to employment, training and business opportunities as described in Section 5.4.16.

5.4.20 Traffic Management

Measures to meet compliance requirements in this section will be detailed in the CMSP and CTMP (described in Sections 5.3.2, 5.3.3 for minimum requirements).

5.4.20.1 Marine Transportation

Mitigation measures related to marine transportation are described in Table 5-20.

Table 5-20: Marine Transportation

No.	Description
MT1	Communication with marine users (e.g., sealift, commercial fishing fleets, tourism operators, fuel carriers, CCG, local boaters) to confirm access is not disrupted. This communication plan will be detailed in the CMSP (see Section 5.3.2).
MT2	Prior to the commencement of any vessel-related activities, the contractor must contact the CCG Marine Communications and Traffic Services (MCTS) Program, regarding the issuance of a NAVWARN to advise the marine community of potential hazards associated with the Project (email: NAVWARN.MCTSPrescott@innav.gc.ca, Telephone: 613-925-0666, Facsimile: 613-925-4519). The NAVWARNs must be terminated when appropriate at the end of each construction season.
MT3	During vessel-related activities, the contractor will: • Position vessels and equipment associated with the Project in such a manner so as not to obstruct line of sight to navigational aids or markers. • Exhibit the appropriate lights and day shapes at all times (compliance with the Collision Regulations). • Monitor the VHF channel used for MCTS communications in the respective area at all times and participate as necessary. • Be familiar with vessel movements in areas affected by the Project. • Plan and execute the Project in a manner that will not impede navigation or interfere with vessel operations. • During night hours, moor the rig and associated equipment outside the navigation channel with lighting accordance with all applicable regulations.
MT4	The marine working area will be clearly defined with safety and navigational buoys.
MT5	Construction vessels will keep to pre-defined work areas and routes that will not interfere with sealift deliveries and to minimize the impact on existing traffic and navigation.
MT6	Clear communication protocols or procedures for vessels working in the area will be established.
MT7	A permit or approval will be issued by TC under the CNWA, which will include notification and communication protocols for marine users to be aware of potential navigation interferences. contractor will be updated with any additional requirements.
MT8	Vessels will be appropriately marked in accordance with the Collision Regulations administered by TC.
MT9	Compliance with the MMR for appropriate distances to marine mammals during vessel transit.
MT10	Movement of vehicles and machinery will be restricted if any large congregations of wildlife or birds occur in the community harbour. The EM will determine if work stoppage is required and when work can commence.

5.4.20.2 Land Based Transportation

Mitigation measures related to land-based transportation are described in Table 5-21.

Table 5-21: Land Based Transportation

No.	Description
LT1	Drivers will be properly trained and licensed. Personnel will be encouraged to drive defensively and courteously.
LT2	A Project specific speed limit of 20 km/hr will be enforced for the haul road route, unless otherwise specified by the Hamlet. Speed limits will be set such that community safety is maintained, for the control of dust mobilization, and minimization of harm to wildlife. The details of this will be summarized in the CTMP Section 5.3.3.
LT3	All vehicles will have adequate lighting so they can be easily seen.
LT4	Combustion emissions sources (machinery) and staging areas for vehicles and heavy-duty machinery will be located away from sensitive receptors.
LT5	Consultation and coordination with existing road service providers in the Hamlet. Road use will not disrupt the delivery of community services (including emergency services) and will be done in consultation with the Hamlet administration.
LT6	Construction equipment will be sized correctly for the task and in compliance with Hamlet road restrictions.
LT7	Traffic control measures will be implemented at intersections along the haul road route, as required. This may include the use of a traffic monitor.
LT8	Road improvements will allow for pullouts for resident vehicles and rock trucks to pass one another and to ease tight turns. This will be determined by the contractor.
LT9	Given the volume of truck traffic expected and the fact that roads are shared by many users including All-Terrain Vehicles (ATVs), snow machines, trucks, cyclists, and pedestrians, appropriate safety measures for shared use will be defined in the CTMP to avoid traffic accidents (see Section 5.3.3).
LT10	Ongoing visual assessments of the potential for dust generation and combustion emissions will be conducted (during work and/or when machinery is operating) to determine requirement for the implementation of dust suppression measures.
LT11	Suitable dust suppressants (non-toxic and biodegradable) to reduce dust generation to acceptable levels will be used.
LT12	The contractor will minimize the impact to useable parking and storage at the community harbour and adjust their work plan to support the community's needs in the area.
LT13	The contractor will consult and coordinate with the sealift companies and the Hamlet to avoid conflicts with sealift operations.
LT14	A traffic awareness campaign concerning road safety, particularly for children and teens will be implemented in the community. The contractor will describe this strategy in their CTMP (see Section 5.3.3).

5.4.20.3 Air Based Transportation

Mitigation measures related to air-based transportation are described in Table 5-22.

Table 5-22: Air Based Transportation

No.	Description
AT1	To minimize impacts on air transportation, the Project will plan accordingly to avoid monopolizing commercial flights. Private charter flights will be used when necessary to transport work crews, leaving seats on scheduled flights available for community use.
AT2	Due to the Project site being in proximity of the Resolute Bay airport, the contractor will be responsible to confirm if Notice to Airmen (NOTAM) will be required through Nav Canada (NavCan). If a required, a notice must be filed with NavCan a minimum of 10 days prior to the start of each construction season to confirm the time of and seasonal duration of blasting and other activities that could affect air traffic. Initial communication with NavCan must be a minimum of 30 days prior to construction to confirm what measures are required.

5.4.21 Equipment Operation and Maintenance

Mitigation measures related to equipment operation and maintenance are described in Table 5-23.

Table 5-23: Equipment Operation and Maintenance

No.	Description
EOM1	Vehicle washing areas for haul trucks, if required, will only be permitted in specific areas and will include a water separator sized appropriately for expected flows and conditions. Permitted vehicle washing areas will be detailed within the CTMP (see Section 5.3.3).
EOM2	All equipment will be maintained and in good working order to prevent leaking or spilling of deleterious substances into the environment (e.g., hydraulic fluid, lubricants, diesel, gasoline).
EOM3	The contractor will confirm that the appropriate equipment is selected for site conditions (i.e. trucks have appropriate power and braking capabilities to handle the steepness of the haul road) and appropriately maintained (e.g. regularly scheduled brake and light checks). If deemed necessary, the contractor will provide a runaway lane.
EOM4	The contractor will develop a site inspection protocol and maintenance program to confirm their equipment is maintained in an appropriate condition for Project use and site conditions.
EOM5	Vehicles and equipment mobilized to site will be inspected before departing place of origin to confirm they are clean and free of soil, invasive plants, and seeds prior to arrival on site.
EOM6	Revving of engines on mobile or stationary machines will be limited and equipment not in use will be shut down (restrict idling).
EOM7	Gas or diesel engine exhausts will be fitted with noise mufflers, where available.
EOM8	All lubricants and hydraulic fluids used on equipment that will be working below the HWL will be biodegradable and non-toxic, as appropriate.
EOM9	Heavy equipment will only use the intertidal access during low-tide (dry) conditions, and only under circumstances that have been agreed to with DFO-FFHPP.

No.	Description
EOM10	At no time will equipment operate 'in-water'. The contractor will confirm appropriate equipment reach for land-based construction or work schedule works around appropriate tides.

5.4.22 Hazardous Material Handling, Storage, and Disposal

Mitigation measures related to hazardous material handling, storage, and disposal are described in Table 5-24.

Table 5-24: Hazardous Material Handling, Storage, and Disposal

No.	Description
HZM1	All measures related to storage and appropriate handling of fuel are in Section 5.3.4.
HZM2	Project personnel will receive appropriate training for the storage and handling of dangerous goods and hazardous material (Section 5.4.15).
HZM3	The contractor must outline appropriate measures for storage and disposal of any materials considered as hazardous materials within the CCEMP; measures outlined within this section must also be incorporated.
HZM4	Inspections of the hazardous waste and materials management will be performed and recorded at least weekly.
HZM5	The contractor, on behalf of GN-TIN , will confirm there is no storage of hazardous material within thirty-one metres of the HWL of any aquatic environment (freshwater, marine) or within the same proximity to other sensitive habitats in such a manner to prevent their release into the environment unless otherwise authorized by the pertinent AHJs (e.g. NWB, or DFO-FFHPP).
HZM6	Based on the properties of the waste or materials to be stored, a suitable container will be selected: hazardous materials will be stored in their original containers, where possible, or in containers specially manufactured for the purpose of storing a specific hazardous waste or materials.
HZM7	Containers used for hazardous waste and materials will not be used for non-hazardous waste types.
HZM8	All hazardous waste and materials will be stored on a firm working surface that is impervious to leaks and stored within a container of at least 110% capacity of the total volume of substances to be stored and will be inaccessible to wildlife.
HZM9	Drainage into and from the storage area will be controlled, and/or suitable secondary containment implemented, to prevent spills or leaks from leaving the site and to prevent run-off from entering the site.
HZM10	Containers will be sound, sealable and not damaged or leaking and closed at all times, except when in use.
HZM11	Incompatible waste and materials will be stored in a manner that, in the event of a spill or accidental release, contact is not possible (i.e. corrosive materials must be kept away from flammable materials).

No.	Description
HZM12	Containers will be placed in a manner that can readily and easily be inspected for signs of leakage, corrosion, or deterioration. Leaking, corroded, or deteriorated containers will immediately be removed, and their contents transferred to a sound container.
HZM13	Hydrocarbon contaminated soils will be removed and treated on site or transported to an approved disposal site for treatment.
HZM14	Shipping and transportation of Dangerous Goods (DGs) will be registered with Government of Nunavut and appropriate shipping documents will accompany movements of DGs in accordance with the federal *Transportation of Dangerous Goods Act* and *Regulations*. The contractor will outline appropriate measures to satisfy this requirement within the CSPRP and CQBMP (see Sections 5.3.4, 5.3.5).
HZM15	Records are to be maintained indicating the type and quantity of waste being stored along with the date, type and quantity of hazardous waste brought into or removed from the facility. These records are to be provided in GN-TIN in the pertinent weekly report (see Section 5.10.1) and made available upon request.
HZM16	Any open source of ignition, open flame, hot works, or smoking is prohibited in the hazardous waste and materials storage area. Designated smoking areas will have appropriate fireproof containers for waste.
HZM17	Storage and handling procedures designed to prevent harm to personnel and the environment from hazardous materials, as per the Safety Data Sheets (SDS), will be implemented. SDS will be kept on-site.
HZM18	Storage and transportation of explosives will be appropriately permitted through NRCan, Transport Canada and other pertinent AHJs as required.

5.4.23 Waste Management (Including Wastewater)

Mitigation measures related to hazardous material handling, storage, and disposal are described in Table 5-25.

Table 5-25: Waste Management

No.	Description
WM1	Daily site cleaning (housekeeping practices) and routine inspections will be completed to confirm materials are correctly sorted and placed in the proper bins. Inspections are to be documented, and documentation made available to GN-TIN if requested.
WM2	All waste that cannot be disposed of at the local landfill will be removed from site for disposal at an Approved Facility. The acceptance criteria of the Approved Facility will be confirmed by the contractor. If waste needs to be accumulated and stored until the end of construction, the storage location will be confirmed by the contractor, with appropriate storage measures in the CCEMP (see Section 5.3.1).
WM3	Any debris that enters the marine environment will be retrieved and disposed an approved facility.
WM4	All garbage, fuel, and equipment will be removed upon abandonment and completion of the construction activities.

No.	Description
WM5	All Project activities will be conducted in a manner that prevents waste material including deleterious substances from entering any aquatic environment (freshwater, marine).
WM6	All food, food waste, and other attractants will be handled, stored, and disposed of safely to avoid attracting and habituating animals.
WM7	Waste will be segregated in clearly marked waste containers applicable to the end use (e.g. landfill waste categories used by the Hamlet, [i.e. wood waste]).
WM8	Domestic waste containers will be kept closed (e.g. equipped with lids, covers / tarps over skips) at all times except when bins are being emptied or filled, to prevent scavenging by wildlife and domestic animals, as well as to control odour.
WM9	Waste will not be deposited in, or placed on land, ice or where the waste may enter Arctic waters.

5.4.24 Spill Prevention and Response Plan

Mitigation measures related to spill prevention and response are described in Table 5-26.

Table 5-26: Spill Response and Prevention Plan

No.	Description
SPRP1	All spills will be reported in accordance with the *Spill Contingency Planning and Reporting Regulations* by calling the 24-hour Spill Report Line at 867-920-8130.
SPRP2	Relevant prevention and response measures as detailed in the pertinent sections of this CEMP for equipment maintenance and operation, storage of waste (including DGs), and fuelling practices.
SPRP3	Appropriate training measures as outlined in Section 5.4.15.
SPRP4	Spill kits will be readily available, appropriately stocked, and will be appropriate to the type and amount of hazardous and waste materials anticipated for the Project. Standard spill kits typically contain absorbent booms, socks, pads, waste bags and ties, and Personal Protective Equipment (PPE) such as gloves and goggles. Further details on the contents of the spill kits will be provided by the contractor.
SPRP5	All fuel-carrying equipment will be accompanied with spill prevention, containment, and clean-up materials that are suitable for the volume of fuels carried.
SPRP6	The contractor will develop designated fueling locations to minimize the number of areas of risk. Procedures outlining management of land and marine based equipment fueling will be detailed within the CSPRP and abide by BMPs.
SPRP7	A boom will be available on site in the event of a spill, and all equipment should have a spill kit readily available. The contractor personnel are to be trained in the deployment of this emergency spill equipment.
SPRP8	The CSPRP will consider additional measures required during shoulder seasons, should launching boats be challenging (e.g. deployment of boom). Shoulder seasons are considered times of year when ice conditions do not allow the safe deployment of a vessel.

No.	Description
SPRP9	The CSPRP will describe response procedures to be implemented in the event of an accidental release; and refuelling and storage practices for operation of equipment over or near water (see Section 5.3.4).
SPRP10	Actions to prevent and respond to accidental release of deleterious substances into the marine environment will be undertaken by the EM. Minimum measures will be detailed in relevant CCEMP, CSPRP (see Sections 5.3.1, 5.3.4).

5.5 Monitoring by the Environmental Monitor

Monitoring measures, completed by the EM to meet compliance requirements, are described in this section, with details to be summarized in the CCEMP (see Section 5.3.1). The EM will be responsible for appropriate documentation of construction activities and for environmental monitoring to confirm measures are tracked for reporting, and that information and details are available for conducting necessary communications with AHJs, stakeholders, the Hamlet, and the HTA.

5.5.1 General

Primary responsibilities of the EM will be to:

- Conduct regular monitoring with additional presence based on sensitivity of construction activities or when extreme adverse conditions are anticipated on site.
- Undertake monitoring during below HWL construction and any other higher risk activities, such as equipment encroachment near aquatic environments (freshwater, marine), or those associated with emergency events.
- Visual monitoring of construction as outlined in Section 5.5.2.
- Monitor and adaptively manage work procedures as necessary to limit environmental effects.
- Monitor wildlife features (e.g., nests), buffers, and setbacks as outlined in Section 5.4.11.
- Monitor chance find species at risk, as outlined in Section 5.4.13.
- Monitor for large congregations of seabirds and communicate with Project personnel to avoid those areas while the birds are present.
- Routinely check to verify that equipment in use at Project site is in good working condition.
- Routinely check to determine that the required emergency response materials, including the spill kits, are on site and appropriately stocked during Project construction.
- Confirm site personnel are aware of and trained in emergency procedures outlined in the CSPRP.
- Confirm that mitigations outlined within Section 5.4 are strictly adhered to.
- Report any non-compliance or unplanned events as outlined in Section 5.8.
- Reporting requirements as described in Section 5.10.

5.5.2 Visual Monitoring

Visual monitoring during the Project will be ongoing and will include:

- Monitoring of stressors on aquatic species, fish kills, any fish spawning/migration activity.
- Sightings and behavioural observations of terrestrial wildlife, including any injured wildlife observed.
- Monitoring of any sensitive habitat features and buffers identified during the pre-construction terrestrial wildlife sweep (see Section 5.5.3).
- Incidental SAR occurrences.
- Observe for the presence of marine mammals to avoid physical interaction and maintain a Marine Mammal Exclusion Zone (MMEZ) of 20 m (see Section 5.5.7).

Details of sightings including species, number, and behaviour of wildlife observed will be included in the pertinent weekly reports (see Section 5.10.1).

5.5.3 Pre-Construction Terrestrial Wildlife Sweep

A pre-construction terrestrial wildlife (including migratory and marine birds) sweep will be conducted by the EM or a qualified wildlife biologist, within seven days of the start of construction in the pertinent Project component (e.g. haul road, quarry). Works must not begin until this sweep has been completed and confirmed that additional mitigation measures are not required. The sweep should include the Project footprint plus a 100 m buffer. The purpose is to identify sensitive wildlife and their habitat features, such as active bird nests, wildlife dens, and wildlife foraging or traveling routes. Where work has not started within seven days following the wildlife sweep, the area should be re-swept for new wildlife features (e.g., nests) that may have established in the interim.

In the event a sensitive species or habitat feature is identified, buffers (work exclusion zones) will be implemented to minimize disturbance to wildlife until the feature becomes no longer active (e.g., until the young have permanently left the nest). Buffers will be based upon ‘alert’ and ‘flush’ behaviour distances of individuals as determined by the EM and/or standard government-recommended setback distances.

5.5.4 Pre-Construction Vegetation Survey

In the event of footprint relocation or expansion into previously undisturbed and unmapped areas (such as areas outside the previously mapped Project Study Area), an Ecological Land Classification (ELC) survey, terrestrial vegetation inventory, and rare plant assessment will be conducted by a qualified vegetation specialist to identify vegetation communities and plants occurring within the new area.

Vegetation communities will be grouped based on similar characteristics such as species composition, topographical position, moisture regime, and percent cover of bedrock. Vegetation communities will be identified using a combination of field verification and interpretation of desktop aerial imagery. The vegetation inventory will be conducted using a random meander technique, and vascular and non-vascular species encountered will be inventoried. The rare plant assessment will target areas where desktop pre-mapping identifies potentially unique habitats or vegetation communities.

5.5.5 Turbidity

During construction activity near the aquatic environment and in the event there are concerns/considerations for effects to water quality based on visual monitoring, turbidity monitoring will be conducted based on federal CCME WQG (CCME, 1999) for turbidity. The CCME criteria for turbidity summarized in Table 5-27.

A turbidity Compliance Monitoring Zone (CMZ) will be defined by the contractor and outlined in the CCEMP (see Section 5.3.1) based on construction activity type for when compliance monitoring is to be conducted. The CMZ will be based on logical reasoning for where turbidity effects due to the Project should have reasonably dissipated.

The contractor will detail within the CCEMP the procedure for turbidity compliance monitoring within the CMZ. Compliance sampling will be conducted at a minimum of three locations around the perimeter of the defined CMZ in addition to background measurements (e.g., measurements taken in advance of construction, at nearby unimpacted locations).

Table 5-27: Project Turbidity Thresholds

Flow State	Turbidity Threshold
Clear flow water	• Maximum increase of 8 Nephelometric Turbidity Units (NTUs) from background levels for a short-term exposure (e.g., 24-hour period). • Maximum average increase of 2 NTUs from background levels for a longer-term exposure (e.g., 30-day period).
High flow or turbid water	• Maximum increase of 8 NTUs from background levels at any one time when background levels are between 8 and 80 NTUs. • Should not increase more than 10% of background levels when background is > 80 NTUs.

5.5.6 Sediment and Erosion Control

The contractor will be responsible for implementing SEC measures (e.g. sediment traps, silt fences). The EM will verify appropriate controls have been put in place prior to the start of construction and the contractor will be responsible for inspecting and maintaining the controls daily to confirm they are functioning as intended. Water quality at the Project site will be monitored for sediment run-off; if visual monitoring identifies sediment run-off, turbidity will be monitored as detailed in Section 5.5.4.

5.5.7 Marine Mammal Observation

Marine Mammal Observers will be required to monitor the presence of marine mammals in defined marine mammal exclusion zones around in-water construction activities (dredging, infill, near-water blasting).

- The MMOs will be required to observe for the presence of marine mammals to avoid physical interaction and maintain a Marine Mammal Exclusion Zone (MMEZ) which will at a minimum be 20 m, or as defined by DFO-FFHPP or through community engagement.

- The MMO will monitor for stress related behaviours to marine mammals in the area. If observed, adaptive management will be implemented or, if necessary, stop work procedures will be implemented until effective mitigation measures are in place.
- DFO- FFHPP will be engaged during the RFR (or FAA) process to confirm if additional requirements for EZs or hydro-acoustic monitoring are required during blasting activities for the protection of fish or marine mammals.
- The CCEMP will define:
  - Behaviour's that will be observed for.
  - How the MMO requirements will be managed.
  - What EZ will be for all in-water activities.
  - Any additional requirements due to 'near water' blasting as specified in the DFO LoA or FAA.

5.6 Adaptive Management

During the Project, it may be necessary to modify methodology and address site conditions not foreseen in this CEMP. A communication plan will be described in the CCEMP, Section 5.3.1, to confirm how engagement between the EM, the contractor, and GN-TIN are carried out to accept any changes. The EM will then evaluate any additional potential environmental effects or regulatory requirements. Mitigation measures will be updated, if required, and documented within the CCEMP. Adaptive management reporting will be detailed within the construction monitoring reports in accordance with Section 5.10.1.

5.7 Stop Work

Stop work procedures will be implemented, when necessary, based on specific conditions. A clear communication strategy must be described in the CCEMP, Section 5.3.1, to outline how EMs/MMOs can notify the construction site supervisor/foreman when this is necessary.

5.8 Non-Compliance

In the event of a Project non-compliance or a potential non-compliance with the CEMP, CCEMP, and/or applicable environmental permits, the EM/MMO has the authority to suspend construction activities and/or implement adaptive mitigation strategies (see Section 5.6) to re-instate Project compliance.

The contractor will maintain and retain records associated with, or produced by, actions or activities undertaken to achieve compliance or that indicate non-compliance with Project permit conditions. These records must be made available at the request and must be documented in the pertinent weekly report. Non-compliances must be reported to GN-TIN immediately (before end of construction shift). Non-compliance reporting protocol to pertinent AHJs will be determined by GN-TIN and communicated to the contractor prior to the start of construction.

5.9 Complaints Process

An effective and well-functioning complaints process is an essential part of managing community relations. For residents, project effects such as noise, dust, vibration, traffic, influx of Project personnel, and restricted access can cause disturbances or stress, and may result in public concerns about health and safety.

The contractor will implement a procedure for reporting complaints from residents and stakeholders (see Section 5.10.1). The objectives of the procedure are to:

- Provide affected people with straightforward and accessible ways for making a complaint.
- Confirm that appropriate and mutually acceptable corrective actions are identified and implemented, if deemed appropriate.
- Verify that complainants are satisfied with outcomes of corrective actions.
- A complaints log will be maintained and communicated to the GN-TIN in pertinent weekly EM reports.

The procedure will be pro-active and responsive, and will involve the following components:

- The contractor will identify who on their team is responsible for complaints communication.
- As part of the communications protocol, a complaints process will be maintained whereby complaints are received and recorded by the contractor and responded to if response is required.
- The contractor will identify who is responsible for communications in the CCEMP.
- The contractor will receive, log, and track complaints within a specified time frame.
- The contractor will confirm that there is a response to complaints within a specified acceptable time frame. The name of the contractor will be provided to Project personnel and residents and stakeholders.

5.10 Reporting

Reporting requirements including incident reporting and AHJ reporting during the Project is outlined within this section.

5.10.1 Construction Monitoring Reports

A bi-weekly summary monitoring report will be prepared by the EM during construction. The monitoring reports will be submitted as directed by GN-TIN. The contractor will provide a reporting schedule, which must also be approved by GN-TIN. See Section 5.10.1.1 for minimum contents of construction monitoring reports. The EM will be responsible for taking appropriate daily notes and for tracking the MMO notes for relevant activities. The EM reports will be developed with sufficient detail to allow for the GN-TIN environmental team to develop AHJ reports (annual, end of construction).

5.10.1.1 Minimum Reporting Contents

Weekly reports will, at a minimum, contain:

- Construction activities being conducted.
- Photographs of construction and status (e.g., percent complete).
- Name(s) of EM/MMO on-site.
- Date.
- Weather conditions.

- Equipment used and its condition.
- Environmental meeting notes (including tailgate) and key issues discussed.
- Design updates and construction activities for that period.
- Mitigation measures implemented during that period as well as any future proposed activities.
- A record of community concerns/complaints received.
- Compliance and sighting report of terrestrial and marine organisms observed by the EM and Project personnel during construction. Project personnel will report sightings to the EM. This will include a detail of species, number, behaviours of the wildlife observed.
- Water sampling data (if conducted).
- Acoustic monitoring (if conducted).
- Summary of any adaptive management actions required.
- Outstanding environmental issues and/or non-compliances, including corrective actions.
- Planned activities for the following two weeks.

5.10.2 Reportable Incidents

The contractor will be responsible for the reporting of incidents to GN-TIN. Prior to construction, the GN-TIN will confirm incident reporting protocol to the contractor to confirm that pertinent AHJs are appropriately informed.

Adaptive management measures, stop work orders issued, and Project non-compliances must be reported as summarized in Sections 5.6, 5.7, and 5.8 respectively.

5.10.2.1 Canadian Environmental Protection Act

In the event of an emergency that is reportable under the CEPA, 1999. A reportable incident is defined as an incident resulting in:

- A potential/actual contravention of legislation. According to Section 64 of CEPA, substances are considered harmful if they are entering or could enter the environment in quantities or concentrations or under conditions that:
    - Have or may have an immediate or long-term harmful effect on the environment or its biological diversity.
    - Constitute or may constitute a danger to the environment on which life depends.
    - Constitute or may constitute a danger to human life or health in Canada.
- A potential/actual contravention of a permit/approval condition.
- A significant non-compliance with this CEMP resulting in environmental effect.
- Adaptive management measures implemented, and results of additional monitoring triggered by the exceedance can be submitted to DFO-FFHPP, if requested.

5.10.2.2 Government of Nunavut Department of Environment

All spills that occur in excess of the minimum reportable quantities described in Schedule B of the Spill Planning and Reporting Guidelines, must be reported to GN-DoE via email (spills@gov.nt.ca) or via the 24-hour spill reporting line (1-867-920-8130).

5.10.2.3 Fisheries and Oceans Canada – Fish and Fish Habitat Protection Program

Potential fisheries violations, due to Project construction must be reported to DFO through the Nunavut office 24-hour spill reporting hotline (1-867-920-8130) or by email (fisheriesprotection@dfo-mpo.gc.ca). Violations could include HADD and death of fish not authorized in the FAA, or injury/mortality of SARA species.

5.10.2.4 Environment and Climate Change Canada

Environment and Climate Change Canada has authority over the MBCA, terrestrial SARA species, and Section 36(3) of the *Fisheries Act*.

Any harm, destruction, or disturbance to terrestrial SAR species (plants and animals), as well as birds, nests, or eggs are afforded protection under the MBCA will be considered reportable. Such events result in immediate notification to the CWS branch of ECCC through the toll-free 24-hour reporting hotline at 1-800-668-6767 or through email (ec.enviroinfo.ec@canada.ca).

Deposit of deleterious substances are prohibited under Section 36(3) of the *Fisheries Act*, unless specifically authorized under a *Fisheries Act* regulation or by a regulation under other federal legislation. Any deposit whether made directly into water frequented by fish or indirectly must be immediately reported to ECCC's environmental notification system by calling the 24-hour telephone number for the region in which the event occurred.

5.11 Communications

Communications with the community, stakeholders, and AHJs will be required throughout the Project.

5.11.1 Authorities Having Jurisdiction Communication & Reporting

Annual or end of construction reports will be required to be submitted to pertinent AHJs (DFO-FFHPP, NWB, NIRB). GN-TIN will be responsible for submitting the reports to AHJs. GN-TIN will confirm who is responsible for preparing the reports, whether it be the contractor's EM or the owners EI.

Communications with the community, stakeholders, and AHJs will be required throughout the Project.

Communications with AHJs will be undertaken by the permit holder. A GN-TIN representative will be copied on regulatory communications for contractor held permits.

Non-compliance incident reporting protocol will be confirmed with the contractor prior to the start of construction.

5.11.2 Social Media, Website and Community Postings

Construction notices, including blasting and daily road closure notices, will be translated and at minimum be posted publicly on social media, community radio, VHF radio, the Hamlet, the HTA office, and the Co-op Store. The contractor will detail locations and of where and when the construction notices will be posted within the CCEMP (see Section 5.3.1). Blasting will be timed to occur at the same time every day so that residents can plan accordingly.

5.11.3 Hamlet and Hunters and Trappers Association

The contractor will be required to provide the CTMP, Section 5.3.3, to the Hamlet and HTA for their review and approval.

Continued consultation and coordination of construction activities with the HTA and Hamlet throughout construction.

5.12 Training and Competency

Training and competency measures will be in place to confirm that the contractor's staff are qualified for the tasks they undertake. Necessary training requirements are specified in Section 5.4.15.

The workforce will be comprised of skilled and semi-skilled labour including the following: heavy equipment operator; truck driver, driller, blaster, crane operator; welder; marine deckhand; tug operator; mechanic; electrician; and general labourers. Work rotations for non-local labour will be determined by the contractor and will comply with applicable WSCC regulations (WSCC, 2021).

The Project will comply fully with the GN's NNI Policy (01 April 2017) and will aim to maximize participation of Inuit labour, training and Inuit owned businesses on the Project (GN, 2017).

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Appendix A: Supporting Tables

Table A- 1: Nunavut Impact Review Board Environmental Effects Table

	Physical	Designated Environmental Areas	Geological Site Conditions	Surface Features	Ground Stability and Permafrost	Hydrology	Air Quality	Noise	Climate Conditions	Marine Sediment and Water Quality	Coastal Morphology and Bathymetry	Tides and Currents	Biological	Vegetation (Terrestrial)	Wildlife	Birds (Migratory and Marine)	Marine Fish Habitat	Fish and Marine Mammals	Species at Risk	Socio-Economic	Employment, training and business opportunities	Land and resource use	Tourism	Local and regional traffic patterns	Community Health and Wellness	Community Infrastructure and services	Archaeological and culturally significant sites
Construction																											
Infill							M	M		M	M			M	M	M	M	M	M		P	M	M	M	M	M	
Dredging							M	M		M	M					M	M	M	M		P	M	M	M	M	M	
Installation of Floating docks							M	M		M							M	M	M		P	M	M	M	M	M	
Drilling and Blasting					M		M	M		M					M		M	M	M		P	M	M	M	M	M	M[1]
Crushing and Screening							M	M							M				M		P	M	M	M	M	M	M[1]
Stockpiling																			M		P	M	M	M	M	M	M[1]
Haul Road Upgrades														M	M	M			M		P	M	M	M	M	M	M[1]
Drainage for quarry or haul roads (culverts)					M										M	M					P	M	M	M	M	M	
Mobilization/Demobilization of equipment							M	M						M					M		P	M	M	M	M	M	
Construction equipment (marine, land based)							M	M		M				M	M	M	M	M	M		P	M	M	M	M	M	
Light (illumination of Project site)														M	M	M		M	M		P	M	M	M	M	M	
Fuel storage, refueling, accidental spills							M	M		M				M	M	M	M	M	M		P	M	M	M	M	M	
Construction workforce							M	M													P	M	M	M	M	M	
Marine Access							M	M													P	P	P	P	P	P	
Road access							M	M							M	M											
Fuel storage, refueling, accidental spills							M	M						M	M	M										M	
Cargo delivery (sealift operations)																											
Boat launching																					P	P	P	P	P	P	
Decommissioning																											
Not applicable.																											

Note: See Section 4 (Table 4-1) for Screening Assessment Categories

1 Only if the southern quarry is used

Appendix B: NIRB Screening Decision Report

SCREENING DECISION REPORT
NIRB FILE No.: 24XN058

Related to NIRB File No.: 24YN030
Commission File No.: 150555
Related to Commission File Nos.: 149159 & 150435

June 18, 2025

Following the Nunavut Impact Review Board's (NIRB or Board) assessment of all materials provided, the NIRB is recommending that a review of Government of Nunavut-Department of Community Services' "Resolute Bay Community Harbour Project" is not required pursuant to Article 12, Section 12.4.4(a) of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada* (*Nunavut Agreement*) and s. 92(1)(a) of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2 (*NuPPAA*).

Subject to the Proponent's compliance with the terms and conditions as set out in below, issued in accordance with s. 92(2)(a) of *NuPPAA*, the NIRB is of the view that the project proposal is not likely to cause significant public concerns, and it is unlikely to result in significant adverse environmental and social impacts. The NIRB therefore recommends that the responsible Minister(s) accepts this Screening Decision Report.

OUTLINE OF SCREENING DECISION REPORT

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REGULATORY FRAMEWORK

The primary objectives of the NIRB are set out in Article 12, Section 12.2.5 of the *Nunavut Agreement* and are confirmed by s. 23 of the *NuPPAA*. The purpose of screening is provided for under Article 12, Section 12.4.1 of the *Nunavut Agreement* and s. 88 of the *NuPPAA*.

As set out under Article 12, Section 12.4.4 of the *Nunavut Agreement* and s. 92(1) of the *NuPPAA*, upon conclusion of the screening process, the Board must provide its written report the Minister indicating one of three options:

(a) a review of the project is not required;

(b) a review of the project is required; or

(c) the project should be modified or abandoned.

PROJECT OVERVIEW & THE NIRB ASSESSMENT PROCESS

On December 16, 2024, the NIRB received a referral to screen Government of Nunavut – Department of Community Services' "Resolute Bay Community Harbour Project" project proposal (NIRB File No.: 24XN058) from the Nunavut Planning Commission (Commission), with an accompanying positive conformity determination with the North Baffin Regional Land Use Plan.

All documents received and pertaining to this project proposal can be accessed from the NIRB's Public Registry by using any of the following search criteria or www.nirb.ca/project/126136.

- Project Name: Resolute Bay Community Harbour Project
- NIRB File No.: 24XN058
- NIRB Application No.: 126136

1. Screening Process Timelines

The following key stages were completed for the screening process:

Table 1: NIRB's Assessment Process

Date	Stage
December 16, 2024	Receipt of project proposal and positive conformity determination (North Baffin Regional Land Use Plan) from the Commission
December 16, 2024	Pursuant to s. 144(1) of the *NuPPAA*, the NIRB requested an application on Public Registry and provide information
January 14, 2025	Requested again for the information in order to carry out screening pursuant to s. s. 144(1) of the *NuPPAA*
January 24, 2025	Proponent requested an extension to provide the information in support of the application

Date	Stage
April 4, 2025	Receipt of online application from Proponent
April 4, 2025	Scoping pursuant to s. 86(1) of the *NuPPAA*
May 6, 2025	NIRB conducted an inclusion or exclusion of scope
May 6, 2025	Public engagement and comment request (which included terms and conditions) was issued in English and translations were issued later to the community of Resolute Bay.
May 27, 2025	Receipt of public comments
May 13, 2025	Pursuant to s. 92(4) of the *NuPPAA*, a ministerial extension requested due to limited capacity from the Minister of Northern and Arctic Affairs seeking an extension to the 45-day timeline for the provision of the Board's Report
June 18, 2025	Issuance of Screening Decision Report

2. Project Scope

Project:	Resolute Bay Community Harbour Project
Location:	Qikiqtani region, Municipal Boundaries of Resolute Bay
Summary of Project Description:	The Proponent intends to construct a community harbour and supporting infrastructure in the Hamlet of Resolute Bay. Components of the Project would include the construction of a new breakwater, boat launch ramp, laydown and storage area(s), small craft floats, and access roadways with slope protection; dredging of a harbour basin and entrance channel; install of area and navigational lighting; and development of a quarry and haul road.
Project Proposed Timeline:	2026 to 2029: construction of harbour and associated facilities during open-water season with work at quarry and other areas extending before and after the open-water season. 2030 to 2080: operations of harbour and facilities.

As required under s. 86(1) of the *NuPPAA*, the Board accepts the scope of the project as set out by Government of Nunavut – Department of Community Services in the proposal. The scope of the project proposal includes the following undertakings, works, or activities:

- Construction of community harbour and offshore infrastructure with final footprint being approximately 30,000 square metres (m^2) with seaward extent of 170 metres (m) from the shoreline. In-water harbour construction works to occur during open-water season:
    - Construction of a 320 m long breakwater from coarse run-of-quarry and rock armour to provide protection from winds and waves;
    - Dredging and removal of approximately 8,000 cubic metre (m^3) sediment to create a 25 m wide harbour basin and entrance channel;
    - Construction of boat launch ramp(s);
    - Installation of small craft floating docks (by anchors and chain) to support mooring of up to 24 small craft vessels;
    - Installation of electrical infrastructure including harbour and navigational lighting;

    - Improved shoreline by grading and levelling to create a driving surface;
- Development of supporting infrastructure:
    - Stockpile, laydown, aggregate production and storage areas near the harbour;
        - Dredged sediment to be repurposed as fill for laydown area
    - Access roads with slope protection;
    - Upgrades to an existing 2.5 kilometre (km) community road into a 4 km haul road for use between quarry site and proposed harbour:
        - Widening of surface to accommodate construction traffic;
        - Development of pull-outs;
        - Upgrades to collapsed and/or installation of additional culverts along the haul road;
    - Development of temporary site offices and garages to facilitate construction personnel and administrative duties;
- Development of one (1) quarry site, aggregate stockpile and laydown area with facilities transferred to Hamlet following completion of harbour facilities:
    - Selection of one (1) quarry site out of two (2) based on rock quality;
    - Use of two (2) to three (3) drills for quarrying purposes;
    - Use of explosives to develop the quarry;
    - Crushing and screening of blasted rock to produce various granular materials;
    - Stockpiling of aggregates until needed;
    - Use of approximately 115,000 m^3 (235,000 tonnes) of rock and granular materials of varied sizes for construction materials;
- Use of heavy equipment for transport of quarry materials and construction activities (loaders, grader, compactor, dozer, spud barge/derrick, rough terrain crane, rock crushers, excavators, trucks, telehandler);
- Use of one (1) to two (2) boats for in-water project activities;
- Daily transport of personnel to the project site by pickup and mini-bus;
- Daily refueling and servicing of major mobile equipment by fuel/service truck;
- Use of chemicals and hazardous materials, including oxyacetylene, paint, explosives, propane, lube and oils;
- Use of fuel sourced from the community fuel facility; if not sufficient, installation of temporary fuel storage facilities and/or additional fuel shipments by contractor;
- Daily usage of up to 5 m^3 of water from existing community water supply for project activities to suppress dust on roads, earthworks, cleaning of facilities and human consumption;
- Combustible and non-combustible wastes to be disposed at community landfill;
- Hazardous wastes to be transported south and disposed in accordance with regulations;
- Use of local accommodations and facilities;
- Potential development of construction camp by contractor for up to 30 personnel, if local accommodations not sufficient;
- Ongoing community consultations regarding the proposed project;
- Potential hiring of local community members in the construction of the facility and environmental monitoring;
- Operation of the facility to be coordinated with the community:
    - Annual inspection and maintenance of harbour components;
    - Spring clearing of culvert inlets and outlets of snow;

- Recovery of small craft floating docks prior to freeze-up and deployment for following ice breakup and clearing of the harbour;
- Periodic sounding surveys to confirm no accumulations of sediments or deposited boulders due to shifting ice; and
- Ongoing regular facility maintenance.

3. Inclusion or Exclusion to Scoping List

The NIRB has identified that the previously assessed environmental, geoscience, geophysics, and archaeological field programs to support the detailed design phase of the Community Harbour Facilities in Resolute Bay in relation will not be considered in the current assessment as the works and activities were previously assessed under NIRB File No. 24YN030 and continues to apply under the previous approvals that may be in force. This includes the second drilling program to be undertaken in 2025 to inform geotechnical requirements for the detailed design of the harbour facility. Further information on the activities previously approved can be accessed from the NIRB's online public registry at www.nirb.ca/project/125979.

4. Public Comments and Concerns

Notices regarding the NIRB's screening of this project proposal were distributed to community organizations (Table 1) as well as to relevant federal and territorial government agencies, Inuit organizations and other parties requesting they provide the Board with any comments or concerns regarding:

- Whether the project proposal is likely to arouse significant public concern; and if so, why;
- Whether the project proposal is likely to cause significant adverse eco-systemic or socio-economic effects; and if so, why;
- Whether the project proposal is likely to cause significant adverse impacts on wildlife habitat or Inuit harvest activities; and if so, why;
- Whether the project proposal is of a type where the potential adverse effects are highly predictable and mitigable with known technology, (and providing any recommended mitigation measures); and
- Any matter of importance to the Party related to the project proposal.

On or before May 27, 2025 the NIRB received comments from the following interested parties:

Table 2: Comments Received

Commenting Party	NIRB Doc ID No.
Fisheries and Oceans Canada	355429
Transport Canada	355466

a. Summary of Comments and Concerns Received

The following provides a summary of the comments and concerns received by the NIRB in relation to "Resolute Bay Community Harbour Project":

Fisheries and Oceans Canada (DFO)

- Concerns with respect to fish and their habitat, and recommended the Proponent review and implement any relevant Measures to protect fish and fish habitat.
- Noted that the Tallurutiup Imanga National Marine Conservation Area is an important designated area located in the Canadian Arctic, specifically in Lancaster Sound and its adjacent waterways.
- Recommended the Proponent complete and submit a request for review form as the proposal meets the criteria for a site specific review.
- Noted that in order to comply with the *Fisheries Act*, the Proponent should follow DFO's protective measures for fish and fish habitat and standard codes of practice.
- Noted that it is the Proponent's *Duty to Notify* DFO if they have cause, or are about to cause, the death of fish by means other than fishing and/or the harmful alteration, disruption or destruction of fish habitat.

Transport Canada (TC):

- Noted no concerns with the proposed project but notes the project is subject to acts and regulations administered by Transport Canada, including:
  - *Canadian Navigable Waters Act (CNWA)*
  - *Canada Shipping Act, 2001*
  - *Marine Liability Act*
  - *Arctic Waters Pollution Prevention Act*
  - *Arctic Shipping Safety and Pollution Prevention Regulations*
  - *Marine Transportation Security Act*
- Noted that the works and activities would require approval under the CNWA and recommended the Proponent submit its application for approval through TC's Navigation Protection Program.
- Recommended the Proponent consult the Canadian Coast Guard and Canadian Hydrographic Services to ensure the following:
  - Impacts on navigational aids, if any, are identified.
  - The new facility included on the appropriate chart(s).
  - Advice marine traffic of the work being undertaken.
- Recommended consulting with the shipping industry, particularly community resupply companies, about the proposed project.

5. Comments and Concerns with respect to Inuit Qaujimaningit, Indigenous and Community Knowledge

No concerns or comments were received with respect to Inuit Qaujimaningit, Indigenous and Community Knowledge in relation to this project proposal.

ASSESSMENT OF THE PROJECT PROPOSAL IN ACCORDANCE WITH PART 3 OF *NUPPAA*

In determining whether a review of the project is required, the Board considered whether the project proposal had potential to result in significant ecosystemic or socio-economic impacts. Table 3. The Board took particular care to consider Inuit Qaujimaningit, Indigenous and

Community Knowledge in carrying out its assessment and determination of the significance of impacts.

The following is a summary of the Board's assessment of the factors that are relevant to the determination of significant impacts with respect of this project proposal:

Table 3: Summary of the Board's Assessment of Factors s. 90 *NuPPAA*

Factor	Comment
The size of the geographic area, including the size of wildlife habitats, likely to be affected by the impacts.	▪ The physical footprint of the proposed project is located within the community of Resolute Bay and consist of the construction of a community harbour and offshore infrastructure (approximately 30,000 square metres) with infill of the seabed with aggregate materials. Additional components include the development of a quarry, a haul road, laydown areas and a potential construction camp. ▪ The proposed project would take place within the habitat of fish and marine mammals (such as Arctic char, sculpin, bearded seal, ringed seal, narwhal and bowhead and beluga whale), and seasonal foraging grounds for far ranging species such as migratory and non-migratory birds, terrestrial mammals including wolverine, Arctic fox, Arctic hare, and Species at Risk such as Polar Bear, buff-breasted sandpiper, red knot, and red-necked phalarope.
The ecosystemic sensitivity of that area.	▪ No specific areas of ecosystemic sensitivity have been identified by the Proponent within the physical footprint of the proposed project.
The historical, cultural and archaeological significance of that area.	▪ The Proponent noted that five (5) sites of significance were recorded in a 2019 survey while four (4) new sites were documented in 2024 in the areas for portions of the small craft harbour and access roads. The Proponent noted that no archaeological or palaeontological sites were identified within the proposed northern quarry study area; however, the alternative southern quarry area contains five (5) sites that would require mitigation.
The size of the human and the animal populations likely to be affected by the impacts.	▪ The proposed project would occur in and around the community of Resolute Bay; as such the residents of the hamlet and local wildlife populations may be affected by project impacts.
The nature, magnitude and complexity of the impacts; the probability of the impacts occurring; the frequency and	▪ A zone of influence of up to 30 km from the most potentially-disruptive project activities was selected for the NIRB's assessment.

Factor	Comment
duration of the impacts; and the reversibility or irreversibility of the impacts.	▪ With adherence to the relevant regulatory requirements and application of the mitigation measures recommended by the NIRB, no significant residual effects are expected to occur.
The cumulative impacts that could result from the impacts of the project combined with those of any other project that has been carried out, is being carried out or is likely to be carried out.	▪ Table 4 is a list of past, present and reasonably foreseeable projects. The Board notes that the potential for cumulative impacts to human population and terrestrial wildlife resulting from noise activities in the area from transportation of personnel and development activities has been identified and considered in development of the recommended mitigation measures set out below.
Any other factor that the Board considers relevant to the assessment of the significance of impacts.	▪ Public support for the proposed project was provided by several organizations from the community of Resolute Bay and the NIRB has considered these comments in the assessment of the significance of impacts in relation to the proposal. ▪ No other relevant factors were identified; however, see below for Regulatory Requirements mandating mitigation and/or reporting.

Regulatory Requirements

The Proponent is also advised that the following legislation may apply to the Project:

Acts and Regulations

1. The *Fisheries Act* (http://laws-lois.justice.gc.ca/eng/acts/F-14/index.html).
2. The *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (http://laws-lois.justice.gc.ca/eng/acts/n-28.8/).
3. The *Migratory Birds Convention Act* (http://laws-lois.justice.gc.ca/eng/acts/M-7.01/), the *Migratory Birds Regulations* (https://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,_c._1035/index.html) and the *Migratory Bird Sanctuary Regulations* (https://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,_c._1036/index.html).
4. The *Species at Risk Act* (https://laws-lois.justice.gc.ca/eng/acts/s-15.3/.). Attached in **Appendix A** is a list of Species at Risk in Nunavut.
5. The *Wildlife Act (Nunavut)* and its corresponding regulations (http://www.canlii.org/en/nu/laws/stat/snu-2003-c-26/latest/snu-2003-c-26.html).
6. The *Nunavut Act* (http://laws-lois.justice.gc.ca/eng/acts/N-28.6/). The Proponent must comply with the proposed terms and conditions listed in the attached **Appendix B**.

7. The *Transportation of Dangerous Goods Act* (http://laws-lois.justice.gc.ca/eng/acts/t-19.01/) and the *Transportation of Dangerous Goods Regulations* (http://www.tc.gc.ca/eng/tdg/clear-tofc-211.htm).
8. The *Canadian Environmental Protection Act* (http://laws-lois.justice.gc.ca/eng/acts/C-15.31/).
9. The *Storage Tank System for Petroleum Products and Allied Petroleum Products Regulations* (http://laws-lois.justice.gc.ca/eng/regulations/SOR-2008-197/FullText.html). The Proponent must identify their tank system to Environment and Climate Change Canada and installation of new systems must comply with the regulations' design requirements.
10. The *Arctic Waters Pollution Prevention Act* (http://laws-lois.justice.gc.ca/eng/acts/A-12/) and the *Arctic Shipping Safety and Pollution Prevention Regulations* (https://laws-lois.justice.gc.ca/eng/regulations/SOR-2017-286/index.html).
11. The *Marine Liability Act* (http://laws-lois.justice.gc.ca/eng/acts/M-0.7/).
12. The *Canadian Navigable Waters Act* (https://laws.justice.gc.ca/eng/acts/N-22/).
13. The *Territorial Quarrying Regulations* (http://www.canlii.org/en/ca/laws/regu/crc-c-1527/latest/crc-c-1527.html) or equivalent.
14. The *Explosives Act* (https://laws-lois.justice.gc.ca/eng/acts/e-17/) and *Explosives Regulations* (https://laws-lois.justice.gc.ca/eng/regulations/SOR-2013-211/index.html).

Other Applicable Guidelines

15. The *Guidelines for the use of Explosives in or near Canadian Fisheries Waters* (http://publications.gc.ca/site/eng/82558/publication.html).
16. The *Northern Land Use Guidelines, Volume 07: Pits and Quarries* (http://publications.gc.ca/site/eng/360991/publication.html).

Table 4: Past, Present, and Reasonably Foreseeable Projects Considered

NIRB Project Number	Project Title	Project Type
Proposed Developments – undergoing assessment		
25YN016	Resolute Bay Geothermal Potential	Research
Present Projects – approved or in operation		
17QN032	Resolute Bay 2017 Quarry Administration Agreement	Pits and Quarries
19WN050	Renewal and Amendment of the Resolute Bay Utilidor System Water Licence #3 BM-RUT 1520 Type A for Ten (10) yrs. term	Infrastructure
22YN043	Multidisciplinary Observatory for Arctic Climate Change and Extreme Events Monitoring (MOACC)	Research
23YN008	Permafrost Pathways Monitoring Network	Research
23YN033	Resolute Bay, Nunavut MET Tower	Research
24YN030	Grise Fiord and Resolute Bay Field Program	Research

NIRB Project Number	Project Title	Project Type
24YN044	Inuit Qaujisarnirmut Pilirijjutit on Arctic Shipping Risks in Inuit Nunangat	Research
24TN051	One Ocean Expedition - Norwegian tall ship through Northwest Passage and the Nunavut region in 2025	Tourism
25YN003	IceBird Winter 2025	Research
Past Projects		
16QN064	Resolute Bay 2016 Quarry Administration Agreement	Pits and Quarries
19YN031	Fisheries and Oceans Canada - Small Craft Harbour - Four Harbour Feasibility Study Field Program	Research
23YN005	Helicopter-based radar survey of Devon Ice Cap	Research
23YN006	Geothermal Energy Potential at Cambridge Bay and Resolute Bay	Research
23YN026	Identifying Putative Microbial Drivers of Methane Flux on Earth and Mars	Research
23TN028	Fridtjof Nansen - 2023 Northwest Passage	Tourism

VIEWS OF THE BOARD

In considering the above factors, the Board has identified the following and respectfully provides its views regarding whether or not the proposed project has the potential to result in significant impacts. The NIRB has also proposed terms and conditions that would mitigate the potential adverse impacts identified.

Ecosystem, wildlife habitat and Inuit harvesting activities:

Valued Component	Migratory and non-migratory birds, terrestrial wildlife and Species at Risk
Potential effects:	Potential adverse effects to migratory birds and non-migratory birds, terrestrial wildlife (such as Arctic hare, Arctic fox, and wolverine), Species at Risk (such as Polar Bear, buff-breasted sandpiper, red knot, and red-necked phalarope), and their migratory routes from noise and visual disturbance generated from the construction activities of the proposed project including the development and use of a quarry site, development of a haul road and laydown areas, transportation of aggregate by truck, the construction of the community harbour and offshore infrastructure, and the daily transportation of personnel.
Nature of Impacts:	The potential for impacts are considered to be likely and intensive during the summer months as the construction activities would coincide with the nesting and breeding season for migratory and non-migratory birds. The project area is within the range of bird species that are afforded protection, including Arctic terns, brants, glaucous gulls, parasitic jaegers, snow buntings, snow geese, snowy owl, red-throated loon and Baird's sandpiper. However, the proximity to existing infrastructure also

	reduces the possibility of additional impacts to wildlife. The potential for impacts are considered to be limited and temporary, and any resulting impacts would be expected to be reversible once the construction activities are complete.
Mitigating Factors:	The Proponent committed to implement measures to mitigate potential negative impacts to wildlife, including but not limited to educating personnel on wildlife procedures, storing and disposing of all wildlife attractants appropriately, ensure wildlife are not chased or harassed and given the right-of-way, and conduct a pre-construction wildlife sweep prior to start of construction. The Board also recommends terms and conditions such as seasonal restrictions which are expected to mitigate potential adverse impacts to terrestrial wildlife and migratory birds.
Proposed Terms and Conditions:	Waste Management – 9 Fuel and Chemical Storage – 11 and 19 Noise – 23 Wildlife (General) – 24 through 27 Migratory Birds and Raptors Disturbance – 28 through 30 Caribou Disturbance– 31 through 34 Road and Ground Disturbance – 36 Marine-Based Activities – 50 and 51

Valued Component	Marine waters, marine mammals and marine habitat
Potential effects:	Potential adverse impacts to marine mammals and marine habitat (e.g., fish and benthic populations) and key critical habitat (calving, post-calving areas, and migratory pathways) resulting from increased noise and/or physical disturbance associated with the construction of the community harbour and offshore infrastructure. Cumulative effects on marine wildlife and marine habitat could occur if multiple activities are encountered in the same area
Nature of Impacts:	The potential for impacts is applicable to the area within the harbour of Resolute Bay and the depositing of aggregate materials directly into the marine environment is very likely to permanently remove habitat or seasonal foraging grounds for marine wildlife (such as fish, crustaceans, bearded seal, ringed seal, Arctic char, and sculpin), within the project footprint. This potential negative impact is irreversible and permanent. Since construction is scheduled to be completed during the open water season, the project activities are likely to degrade water quality, consequently reducing or degrading the suitability of habitat by marine aquatics, especially bottom feeders, to a greater geographic extend outside of the project area. These potential impacts are negative but short-term and reversible once construction of the community harbour is complete. However, the establishment of a boat launch ramp and the installation of small craft floating docks would increase the boating use of the area, resulting in increased vessel traffic into the foreseeable

	future that may cause increased noise and substrate disturbance to marine mammals and their habitat in the long run.
Mitigating Factors:	The Proponent noted that it will develop an Offset Plan if DFO determines that a *Fisheries Act* Authorization is required to offset the loss of seabed due to the construction. Further, the Proponent committed to implementing measures that would minimize impacts to marine wildlife and habitat such as implementing a turbidity monitoring program, hiring Marine Mammal Observers, and using turbidity curtains and other means for in-water works. The Board is recommending terms and conditions to ensure the project activities minimize adverse impacts to marine wildlife and their habitat.
Proposed Terms and Conditions:	Water courses/Water bodies – 7 and 8 Waste Management – 9 Fuel and Chemical Storage –11 through 13, 17 and 19 Wildlife-General – 24 through 26 Migratory Birds and Raptors Disturbance – 30 Marine-Based Activities – 50 through 54

Valued Component	Surface water quality, freshwater and aquatics, and fish and fish habitat
Potential effects:	Potential adverse impacts to freshwater quantity and quality, and fish and fish habitat are likely from the dust associated from the construction activities being proposed project including the development and use of a quarry site, development of a haul road and laydown areas, transportation of aggregate by truck, storage at the laydown areas, daily transportation of personnel, potential development of a construction camp, temporary storage fuel facility.
Nature of Impacts:	The potential impacts are considered to be limited and temporary and any resulting impacts would be expected to be reversible once the construction activities are complete.
Mitigating Factors:	The Proponent proposes to use water from the existing community water supply to suppress dust on roads and earthworks. The Proponent also committed to implement appropriate Sediment and Erosion Control measures to ensure land-based activities do not result in sediment or other substances entering the aquatic environment. If necessary, the Proponent noted that equipment such turbidity curtains would be installed. The Board recommends that the Proponent follows regulatory authorities' guidance and engage community members to avoid, reduce, and off-set the harm to freshwater fish and fish habitat, including in the selection of the quarry site.
Proposed Terms and Conditions:	Water Courses/Water Bodies – 6 through 8 Waste Management – 9 Fuel and Chemical Storage – 11 through 13, 17 and 20

	Aggregate Removal within Existing and New Quarries – 37 through 39 Land Use and Restoration of Disturbed Areas – 45 Camps – 49

Valued Component	Land, terrestrial vegetation and ground stability
Potential effects:	Potential adverse impacts to the ground stability, vegetation quality, and terrain due to the construction activities of the proposed project including the development and use of a quarry site, development of a haul road and laydown areas, transportation of aggregate by truck, storage at the laydown areas, daily transportation of personnel, potential development of a construction camp, temporary storage fuel facility, the construction of the community harbour and offshore infrastructure, and any potential spills.
Nature of Impacts:	The potential for impacts is considered to be limited and temporary if regulations and best practices for construction activities are followed. The potential for impacts due to other activities is considered to be minimal due to the localized nature of the construction and operational activities.
Mitigating Factors:	The Proponent proposes to use water from the existing community water supply to suppress dust on roads and earthworks. The Proponent noted that the contractor would be responsible for the development and implementation of a Spill Response Plan that will minimize potential effects to terrestrial vegetation. The Board is recommending terms and conditions to ensure that project activities do not negatively affect land, terrestrial vegetation, and ground stability.
Proposed Terms and Conditions:	Waste Management – 9 and 10 Fuel and Chemical Storage – 11 through 13, 15 through 18, and 20 Wildlife (General) – 24 Road and Ground Disturbance – 35 and 36 Aggregate Removal within Existing and New Quarries – 38 through 40 Land Use and Restoration of Disturbed Areas – 43 through 47 Camps – 48 and 49

Valued Component	Air quality
Potential effects:	Potential adverse effects to air quality from emissions and dust during the construction activities of the proposed project including the development and use of a quarry site, development of a haul road and laydown areas, transportation of aggregate by truck, storage at the laydown areas, daily transportation of personnel, potential development of a construction camp, temporary storage fuel facility, and the construction of the community harbour and offshore infrastructure.
Nature of Impacts:	The potential for adverse impacts are considered to be likely as the construction activities would increase emissions from the use of additional diesel- and gas-powered vehicles, and increase in dust from

	blasting and crushing at the quarry site, transportation of the aggregate and stockpile wind erosion. The proposed project activities are likely to induce human health issues, such as respiratory conditions in vulnerable demographics including young children and the elderly. The potential for impacts are considered to be limited and temporary and any resulting impacts would be expected to be reversible once construction is complete.
Mitigating Factors:	The Proponent has committed to implement measures that are designed to mitigate the potential negative impacts to air quality, including the use of approved dust suppressants, and inspection and maintenance of construction equipment and vehicles.
Proposed Terms and Conditions:	Air Quality – 21 and 22

Valued Component	Public access and traditional land use activities
Potential effects:	Potential adverse impacts to access to the public and traditional land use activities due to construction activities and development of the quarry site and haul road. However, the proposed project could also be considered as community-beneficial for community members involved in recreational use fisheries operations as the proposed community harbour facility would support safe access to the land and sea.
Nature of Impacts:	The potential for adverse impacts are considered to be likely as the timing of the construction activities would coincide with community members potentially wanting to use the area for access to public and traditional land activities and may impede access to boaters. Further, the noise from the construction activities may temporarily change distribution of harvested terrestrial or marine species through avoidance and may affect personal enjoyment of the land. The potential for impacts are considered to be intensive but temporary and any resulting impacts would be expected to be reversible. However, as noted above, the development of the community harbour facility would serve small boat users with the objective of improving access and safety for existing and future users in support of community fish and marine mammal harvesting. No specific concerns or impacts to public and traditional land use activities in the area have been identified; however, community support letters[1] were provided as part of the project proposal which noted the need for the infrastructure to improve access to traditional activities.
Mitigating Factors:	The Proponent has committed to working with the Hamlet of Resolute Bay to implement measures to reduce and mitigate potential negative

1 Resolute Bay Hunters and Trappers Association (NIRB Doc Id #: 353929); and Hamlet of Resolute Bay (NIRB Doc Id #: 353930);

	impacts from noise on community members and traditional activities. The Proponent has also committed to implement measures to mitigate potential negative impacts on Inuit harvesting. The Board also is recommending terms and conditions to ensure project activities are informed by available Inuit Qaujimaningit and that project activities do not interfere with access to Inuit wildlife harvesting or traditional land use activities. Further, it is recommended that the Proponent engage with local residents, if possible and practical, regarding planned activities in the area.
Proposed Terms and Conditions:	Waste Management – 9 Fuel and Chemical Storage – 19 Wildlife-General – 24 Caribou Disturbance – 31 through 33 Aggregate Removal within Existing and New Quarries – 41 and 42 Land Use and Restoration of Disturbed Areas – 43 through 46 Marine-Based Activities – 50 and 53 Public Consultation – 57 Traditional Harvesting & Public and Traditional Land Use – 58

Socio-economic effects on northerners:

Valued Component	Historical, cultural and archeological sites
Potential effects:	Potential adverse impacts to historical, cultural and archeological sites in or near the project area as the Proponent noted that five (5) sites of significance were recorded in a 2019 survey while four (4) new sites were documented in 2024 in the areas for portions of the small craft harbour and access roads. The Proponent also noted that no archaeological or palaeontological sites were identified within the proposed northern quarry study area; however, the alternative southern quarry area contains five (5) sites that would require mitigation.
Nature of Impacts:	The potential for negative impacts is applicable to the area of the southern quarry, if it is to be developed by the Proponent; otherwise, the Project activities are not likely to have adverse impacts on historical, cultural and archeological sites.
Mitigating Factors:	The Proponent noted that if the southern quarry site is used, archaeological buffers may need to be implemented and that permitting would be required from the Culture and Heritage Department. The Proponent indicated that there would be no other impacts to archaeological or culturally significant sites from the construction and operation of the community harbour facilities. The Board is recommending terms and conditions to ensure project activities are informed by available Inuit Qaujimaningit and in compliance with regulations to protect historical, cultural and archeological resources.

Proposed Terms and Conditions:	Heritage Sites – 55 and 56 Public Consultation – 57

Valued Component	Local employment, contracting and economic opportunities
Potential effects:	Potential positive impacts as the proposed project is likely to bring about positive impacts on local employment and generate economic opportunities for the community of Resolute Bay. The Proponent noted the use of local accommodation services, training and hiring of local labour, expenditures in local business, and the potential of non-local workers purchasing arts and crafts from local artisans. The project proposed could also be considered beneficial to the community and community members as the community harbour facility may be used by other industries such as cruise ship tenders.
Nature of Impacts:	Positive economic benefits in relation to the construction of the project are likely but short-term for the duration of the construction phase. Further, additional local employment may occur during the operations of the facility as the Hamlet of Resolute Bay would be responsible for the maintenance and operations of the facility. The completion of the project will improve local infrastructure and is likely to induce future economic opportunities, including small scale fisheries operations and other recreational activities. Public comments noted that the development of the infrastructure is an important project for the community as it the community harbour would help to address the marine infrastructure deficit in the community, including providing safety and efficiency for boating.
Mitigating Factors:	The Board recommends terms and conditions to ensure the Proponent continues to inform the community of the proposed construction activities, provides training and employment opportunities to the residents of the community and offer procurement to local businesses.
Proposed Terms and Conditions:	Public Consultation – 57 Local Hiring and Services – 59

Significant public concern:

Valued Component	Public Concerns/Public support
Potential effects:	No significant public concern was expressed during the public commenting period for this file; however, there is potential adverse effects to Inuit harvesting, marine mammals and habitat, and terrestrial wildlife.
Nature of Impacts:	Each of the potential concerns were discussed in previous sections and the potential for impacts is considered to be minimal as long as the Proponent follow the recommended terms and conditions.
Mitigating Factors:	The Board recommends terms and conditions to ensure that to the Proponent continues to inform the community of the proposed construction activities, to the extent possible hire locally and access local

	services where possible, and to ensure planned activities in the area utilizes available Inuit Qaujimaningit.
Proposed Terms and Conditions:	Public Consultation – 57 Local Hiring and Services – 59

Technological innovations for which the effects are unknown:

- No specific issues have been identified associated with this project proposal.]

Administrative Conditions:

To encourage compliance with applicable regulatory requirements and assist the Board and responsible authorities with compliance and effects monitoring for project activities, the following project-specific terms and conditions have been recommended: 1-5.

In considering the above factors and subject to the Proponent's compliance with regulatory requirements and the terms and conditions necessary to mitigate against the potential adverse environmental and social effects, the Board is of the view that the proposed project is unlikely to cause significant public concern and its adverse ecosystemic and socioeconomic impacts are unlikely to be significant, or are highly predictable and can be adequately mitigated by known technologies.

RECOMMENDED PROJECT-SPECIFIC TERMS AND CONDITIONS

The Board is recommending the following specific terms and conditions to apply in respect of the project:

General

1. Government of Nunavut – Department of Community Services (the Proponent) shall maintain a copy of the Project Terms and Conditions at the site of operation at all times and make it accessible to enforcement officers upon request.
2. The Proponent shall operate in accordance with all commitments stated in correspondence provided to the Nunavut Planning Commission (NPC File No.: 150555), and the NIRB (Online Application Form, April 4, 2025). This information should be accessible to enforcement officers upon request.
3. The Proponent shall operate the site in accordance with all applicable Acts, Regulations and Guidelines.
4. The Proponent shall ensure that it meets the standards and/or limits as set out in the authorizing agencies' permits or licences as required for this project.
5. The Proponent shall ensure that all personnel, staff and contractors are adequately trained prior to commencement of all project activities, and shall be made aware of all operational plans, management plans, guidelines and Proponent commitments relating to the project.

Water courses/Water bodies (including fresh and marine waters)

6. The Proponent shall ensure that no disturbance of the stream bed, lakebed or the banks of any definable watercourse be permitted, except where deemed necessary for maintaining

project-specific operational commitments or approved by a responsible authority in cases of spill management.

7. The Proponent shall implement erosion and sediment suppression measures on all areas during all project activities in order to prevent sediment or fugitive dust from entering any water body or surrounding environment. Erosion prevention measures may include berms or silt fences.
8. The Proponent shall not deposit, nor permit the deposit of any fuel, chemicals, wastes (including wastewater) or sediment into any water body. The Proponent should have in place an Emergency Spill Response Plan that is approved by the appropriate authorizing agency(ies).

Waste Management

9. The Proponent shall manage all hazardous and non-hazardous waste including food, domestic wastes, debris and petroleum-based chemicals (e.g., greases, gasoline, glycol-based antifreeze) in such a manner to avoid release into the environment and access to wildlife at all times until disposed of appropriately or at an approved facility.
10. The Proponent shall dispose of all combustible wastes as required by the appropriate authorizing agencies. All non-combustible wastes from the project site shall be removed to an approved facility for disposal.

Fuel and Chemical Storage

11. The Proponent shall locate all fuel and other hazardous materials a minimum distance away from the high-water mark of any water body and environmentally sensitive areas as required by the appropriate authorizing agencies. The materials shall be stored in such a manner as to prevent their release into the environment.
12. The Proponent shall use adequate secondary containment or a surface liner (e.g., self-supporting insta-berms and fold-a-tanks) when storing barreled fuel and chemicals at all locations.
13. The Proponent shall ensure that re-fuelling of all equipment occurs a minimum distance away from the high-water mark of any water body as required by the appropriate authorizing agencies.
14. Fuel and hazardous material storage areas should be clearly marked with signs or flagging to avoid accidental breaks and punctures, and to ensure areas remain visible during the winter months.
15. All fuel and chemical storage containers must be clearly marked with the Proponent's name for ease of identification.
16. The Proponent shall routinely inspect and document the conditions of fuel and hazardous material storage containers and containment areas as required by the appropriate authorizing agencies. Fuel containment areas shall be kept clear of debris, water and snow to facilitate inspections for leaks.

17. The Proponent shall have a Spill Contingency Plan in place at all fuel storage or transfer locations and shall ensure that appropriate spill response equipment and clean-up materials (e.g., shovels, pumps, barrels, drip pans, and absorbents) are readily available.
18. The Proponent shall follow the authorizing agencies' direction for management and removal of hazardous materials and wastes (e.g., contaminated soils, sediment and waste oil).
19. The Proponent shall ensure that wildlife deterrent systems are utilized at the time of a spill incident in order to avoid wildlife (terrestrial or marine) and migratory birds from being contaminated.
20. The Proponent shall ensure that all spills of fuel or other deleterious materials of 100 litres or more must be reported immediately to the 24-hour Spill Line at (867) 920-8130.

Air Quality

21. The Proponent shall take appropriate dust suppression measures in conducting all activities for this Project including using approved dust suppression additives and techniques as necessary to maintain ambient air quality.
22. The Proponent shall eliminate unnecessary idling to reduce greenhouse gas emissions as much as possible.

Noise

23. All construction and road vehicles must be fitted with standard and well-maintained noise suppression devices.

Wildlife – General

24. The Proponent shall not substantially alter or damage or destroy any wildlife habitat in conducting this operation unless otherwise authorized by the appropriate authorizing agencies.
25. The Proponent shall not chase, weary, harass or molest wildlife. This includes persistently circling, chasing, hovering over, pursuing or in any other way harass wildlife, or disturbing large groups of animals.
26. The Proponent shall not hunt or fish, unless proper Nunavut authorizations have been acquired.
27. The Proponent shall ensure that all wildlife have the right-of-way on any roads or trails. Vehicles are required to slow down or stop and wait to permit the free and unrestricted movement of wildlife across roads or trails at any location.

Migratory Birds and Raptors Disturbance

28. The Proponent shall carry out all phases of the project in a manner that protects migratory birds and avoids harming, killing or disturbing migratory birds or destroying, disturbing or taking their nests or eggs. In this regard, the Proponent shall take into account Environment and Climate Change Canada's *Avoidance Guidelines*. The Proponent's actions in applying the *Avoidance Guidelines* shall be in compliance with the *Migratory Birds Convention Act, 1994* and with the *Species at Risk Act*.

29. The Proponent shall not disturb or destroy the nests or eggs of any birds. If active nests of any birds are discovered or located (i.e., with eggs or young), the Proponent shall avoid these areas until nesting is complete and the young have naturally left the vicinity of the nest by establishing a protection buffer zone[2] appropriate for the species and the surrounding habitat.
30. The Proponent shall not pursue seabirds or waterbirds swimming on the water surface and shall avoid concentrations of these birds if encountered on the water.

Caribou Disturbance

31. The Proponent shall avoid interfering with any paths or crossings known to be frequented by caribou during periods of migration as identified by current land use plans in place and/or by Inuit Qaujimaningit.
32. The Proponent shall not locate any operation or undertake activities that could block or cause any diversion to migration of caribou.
33. The Proponent shall immediately cease activities likely to interfere with the migration or calving of caribou until such time as the caribou have passed.
34. The Proponent shall not construct or operate any camp, or cache any fuel within ten (10) kilometres of any designated caribou water crossings.

Road and Ground Disturbance

35. The Proponent shall not move any equipment or vehicles unless the ground surface is in a state capable of fully supporting the equipment or vehicles without rutting or gouging. Overland travel of equipment or vehicles must be suspended if rutting occurs.
36. The Proponent shall ensure snowbank heights along the road/trail are managed to allow wildlife visibility and passage. Further, the Proponent shall ensure breaks are created along snowbanks along the road/trail at regular intervals to allow wildlife passage.

Aggregate Removal within Existing and New Quarries

37. The Proponent shall not remove any material from below the ordinary highwater mark of any lake or stream and shall maintain an undisturbed buffer zone as required by the appropriate authorizing agencies between quarry site and any high water mark of any water body to ensure erosion control.
38. The Proponent shall install silt fences/curtains down stream of any quarry activities.
39. The Proponent shall ensure there is no obstruction of natural drainage, flooding or channel diversion from quarry/pit access, stockpiles, or other structures or facilities.
40. The Proponent shall locate screening and crushing equipment on stable ground, at a location with ready access to stockpiles.
41. The Proponent shall clearly stake and flag pit and quarry boundaries, so they remain visible to other land users.

2 Recommended setback distances to define buffer zones have been established by Environment and Climate Change Canada for different bird groups nesting in tundra habitat and can be found at www.ec.gc.ca/paom-itmb.

42. The Proponent shall locate quarry/pit facilities so as to avoid all recreational sites and public use areas, and to protect unique geographical features and natural aesthetics.

Land Use and Restoration of Disturbed Areas

43. The Proponent shall use existing trails where possible during project activities on the land.

44. The Proponent shall ensure that the land use area is kept clean and tidy at all times.

45. The Proponent shall avoid disturbance on slopes prone to natural erosion, and alternative locations shall be utilized.

46. The Proponent shall remove all garbage, fuel and equipment at the end of each field season and/or upon completion of work and/or upon abandonment.

47. The Proponent shall ensure that all disturbed areas are restored to a stable or pre-disturbed state using Best Available Technology Economically Achievable (BATEA) upon completion of work and/or abandonment.

Camps

48. The Proponent shall ensure that all camps are located durable surfaces, such as gravel or sand that is consolidated and can withstand repeated, heavy use. Measures shall be put in place to prevent erosion, trail formation and damage to the ground.

49. The Proponent shall not erect camps or store materials on the surface ice of lakes or streams, except that which is for immediate use.

Marine-Based Activities

50. The Proponent shall ensure that noise be kept to a minimum and shall refrain from making sharp or loud noises, blowing horns or whistles and shall maintain constant engine noise levels.

51. The Proponent shall suspend all project activities should any dead fish or wildlife (both marine and terrestrial), or any injured wildlife be observed during any works or activities in and around the marine waters. Activities may only be resumed on the recommendation of the authorizing agencies.

52. The Proponent shall report all incidents, injuries or sightings of marine mammals to the appropriate authorizing agencies.

53. The Proponent shall implement measures designed to minimize disturbance to seabed sediments and benthic communities and marine wildlife when carrying out project activities within the marine environment.

54. Construction shall be carried out during periods when wind, wave and tidal conditions minimize the dispersion of silt and sediment from the work site.

Heritage Sites

55. The Proponent shall ensure that archaeological and paleontological sites are not purposely or inadvertently disturbed by clients or staff as a result of project activities.

56. The Proponent shall ensure that all clients and staff are aware of the Proponent's responsibilities and requirements regarding archaeological or palaeontological sites that are

encountered during land-based activities. This should include briefings explaining the prohibitions regarding removal of artifacts, and defacing or writing on rocks and infrastructure.

Other

57. The Proponent should engage with local residents regarding planned activities in the area and should solicit available Inuit Qaujimaningit and information regarding current recreational and traditional usage of the project area which may inform project activities. Posting of translated public notices and direct engagement with potentially interested groups and individuals prior to undertaking project activities is strongly encouraged.
58. The Proponent shall ensure that project activities do not interfere with Inuit wildlife harvesting or traditional land use activities.
59. The Proponent should, to the extent possible, hire local people and access local services where possible.

MONITORING AND REPORTING REQUIREMENTS

In addition, the Board is recommending the following:

Spill Contingency Plan

1. The Proponent shall ensure its Spill Contingency Plan include the up to date emergency contact numbers for the Government of Nunavut-Department of Environment, Manager of Environmental Protection (867-975-7748) and Environment and Climate Change Canada, Enforcement Branch (867-975-4644).
2. The Proponent shall implement the recommendations found in the 2003 CCME Guidance Document PN 1326 entitled "*Environmental Code of Practice for Above Ground and Underground Storage Tank Systems containing Petroleum Product and Allied Petroleum Products*".

OTHER NIRB CONCERNS AND RECOMMENDATIONS

In addition to the project-specific terms and conditions, the Board is recommending the following:

Change in Project Scope

1. Responsible authorities or Proponent shall notify the Nunavut Planning Commission and/or Parks Canada as appropriate, and the NIRB of any changes in operating plans or conditions, including phase advancement, associated with this project prior to any such change.

Copy of licences, etc. to the Board and Commission

2. The NIRB respectfully requests that responsible authorities submit a copy of each licence, permit or other authorization issued for the Project to the NIRB to assist in enabling possible project monitoring that may be required. Please forward a copy of the licences, permits and/or other authorizations to the NIRB directly at info@nirb.ca or upload a copy to the NIRB's online registry at www.nirb.ca.

Use of Inuit Qaujimaningit

3. The Proponent is encouraged to work with local communities and knowledge holders to inform project design, to carry out the project, and to confirm or validate the perspectives represented in publications, and reports produced as part of the project. Care should be taken to ensure that Inuit Qaujimaningit and local knowledge collected for the project is used with permission and is accurately represented.

Bear and Carnivore Safety

4. The Proponent should review the Government of Nunavut's booklet on Bear Safety, which can be downloaded from this link: http://gov.nu.ca/sites/default/files/bear_safety_-_reducing_bear-people_conflicts_in_nunavut.pdf. Further information on bear/carnivore detection and deterrent techniques can be found in the "*Safety in Grizzly and Black Bear Country*" pamphlet, which can be downloaded from this link: https://www.enr.gov.nt.ca/sites/enr/files/resources/safety_in_grizzly_and_black_bear_country_english.pdf.

5. There are polar bear and grizzly bear safety resources available from the Bear Smart Society with videos on polar bear safety available in English, French and Inuktitut at http://www.bearsmart.com/play/safety-in-polar-bear-country/. Information can also be obtained from Parks Canada's website on bear safety at the following link: http://www.pc.gc.ca/eng/pn-np/nu/quttinirpaaq/visit/visit6/d.aspx or in reviewing the "*Safety in Polar Bear Country*" pamphlet, which can be downloaded from the following link: http://www.pc.gc.ca/eng/pn-np/nu/quttinirpaaq/visit/visit6/~/media/pn-np/nu/auyuittuq/pdf/shared/PolarBearSafety_English.ashx.

6. Any problem wildlife or any interaction with carnivores should be reported immediately to the local Government of Nunavut, Department of Environment Conservation Office (Conservation Officer of Resolute Bay, phone: (867) 252-3879).

Species at Risk

7. The Proponent review Environment and Climate Change Canada's "Environment Assessment Best Practice Guide for Wildlife at Risk in Canada", available at the following link: http://www.sararegistry.gc.ca/virtual_sara/files/policies/EA%20Best%20Practices%202004.pdf. The guide provides information to the Proponent on what is required when Wildlife at Risk, including *Species at Risk*, are encountered or affected by the project.

Migratory Birds

8. The Proponent review Canadian Wildlife Services' "Key migratory bird terrestrial habitat sites in the Northwest Territories and Nunavut", available at the following link: http://publications.gc.ca/site/eng/317630/publication.html and "Key marine habitat sites for migratory birds in Nunavut and the Northwest Territories", available at the following link: http://publications.gc.ca/site/eng/392824/publication.html. The guide provides information to the Proponent on key terrestrial and marine habitat areas that are essential to the welfare of various migratory bird species in Canada.

9. For further information on how to protect migratory birds, their nests and eggs when planning or carrying out project activities, consult Environment and Climate Change Canada's Incidental Take web page and the fact sheet "Planning Ahead to Reduce the Risk of Detrimental Effects to Migratory Birds, and their Nests and Eggs" available at: http://publications.gc.ca/collections/collection_2013/ec/CW66-324-2013-eng.pdf.

Heritage Resources

10. During the assessment, the NIRB has identified that no archaeology surveys have been conducted in the proposed project areas and that potential for the presence of archaeological resources is likely, therefore the Proponent shall contact the Department of Culture and Heritage to initiate a field archaeology assessment program prior to undertaking any land disturbance activities.

Transport of Dangerous Goods and Waste Management

11. Environment and Climate Change Canada recommends that all hazardous wastes, including waste oil, receive proper treatment and disposal at an approved facility.

12. The Proponent shall ensure that proper shipping documents (waste manifests, transportation of dangerous goods, etc.) accompany all movements of dangerous goods. Further, the Proponent shall ensure that the shipment of all dangerous goods is registered with the Government of Nunavut Department of Environment, Department of Environment Manager. Contact the Manager (867) 975-7748 to obtain a manifest if dangerous goods including hazardous wastes will be transported.

13. The Proponent shall provide an authorization or letter of conformation of disposal be obtained from the owner/operator of the landfill to be used for disposal of project-related wastes.

Crown Indigenous and Northern Affairs Canada

14. Crown Indigenous and Northern Affairs Canada (CIRNAC) impose mitigation measures, conditions and monitoring requirements pursuant to the Federal Land Use Permit, which require the Proponent to respect the sensitivities and importance of the area. These mitigation measures, conditions and monitoring requirements should be in regard to the location and area; type, location, capacity and operation of facilities; use, storage, handling and disposal of chemical or toxic material; wildlife and fisheries habitat; and petroleum fuel storage.

15. CIRNAC consider the importance of conducting regular Land Use Inspections, pursuant to the authority of the Federal Land Use Permit, while the project is in operation. The Land Use Inspections should be focused on ensuring the Proponent is in compliance with the conditions imposed through the Federal Land Use Permit.

Nunavut Water Board

16. The Nunavut Water Board impose mitigation measures, conditions and monitoring requirements pursuant to the Water Licence, which require the Proponent to respect the sensitivities and importance of water in the area. These mitigation measures, conditions and monitoring requirements should be in regard to use of water, snow and ice; waste disposal;

access infrastructure and operation for camps; drilling operations; spill contingency planning; abandonment and restoration planning; and monitoring programs.

Crown Indigenous and Northern Affairs Canada – Water Resources Division

17. CIRNAC – Water Resources Division should consider the importance of conducting regular inspections, pursuant to the authority of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, while the project is in operation. Inspectors should focus on ensuring the Proponent is in compliance with the conditions imposed through the Water Licence.

CONCLUSION

The foregoing constitutes the Board's screening decision with respect to the Government of Nunavut – Department of Community Services' "Resolute Bay Community Harbour Project". The NIRB remains available for consultation with the Minister regarding this report as necessary.

Dated _____June 18, 2025_____ at Iqaluit, NU.



Albert Ehaloak, *Acting* Chairperson

Attachments: Appendix A: Species at Risk in Nunavut
Appendix B: Archaeological and Palaeontological Resources Terms and Conditions for Land Use Permit Holders

APPENDIX A: SPECIES AT RISK IN NUNAVUT

Due to the requirements of Section 79(2) of the *Species at Risk Act*, S.C. 2002, c. 29 *(SARA)*, and the potential for project-specific adverse effects on listed wildlife species and its critical habitat, measures should be taken as appropriate to avoid or lessen those effects, and the effects need to be monitored. Project effects could include species disturbance, attraction to operations and destruction of habitat. This section applies to all species listed on Schedule 1 of *SARA*, as listed in the table below, or have been assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), which may be encountered in the project area. This list may not include all species identified as at risk by the Territorial Government. The following points provide clarification on the applicability of the species outlined in the table.

- Schedule 1 is the official legal list of Species at Risk for *SARA*. *SARA* applies to all species on Schedule 1. The term "listed" species refers to species on Schedule 1.
- Schedule 2 and 3 of *SARA* identify species that were designated at risk by the COSEWIC prior to October 1999 and must be reassessed using revised criteria before they can be considered for addition to Schedule 1.
- Some species identified at risk by COSEWIC are "pending" addition to Schedule 1 of *SARA*. These species are under consideration for addition to Schedule 1, subject to further consultation or assessment.

If species at risk are encountered or affected, the primary mitigation measure should be avoidance. The Proponent should avoid contact with or disturbance to each species, its habitat and/or its residence. All direct, indirect, and cumulative effects should be considered. Refer to species status reports and other information on the Species at Risk Registry at http://www.sararegistry.gc.ca for information on specific species.

Monitoring should be undertaken by the Proponent to determine the effectiveness of mitigation and/or identify where further mitigation is required. As a minimum, this monitoring should include recording the locations and dates of any observations of Species at Risk, behaviour or actions taken by the animals when project activities were encountered, and any actions taken by the proponent to avoid contact or disturbance to the species, its habitat, and/or its residence. This information should be submitted to the appropriate regulators and organizations with management responsibility for that species, as requested.

For species primarily managed by the Territorial Government, the Territorial Government should be consulted to identify other appropriate mitigation and/or monitoring measures to minimize effects to these species from the project.

Mitigation and monitoring measures must be undertaken in a way that is consistent with applicable recovery strategies and action/management plans.

Schedules of *SARA* are amended on a regular basis, so it is important to check the *SARA* registry (www.sararegistry.gc.ca) to get the current status of a species.

Updated: September 2024

Terrestrial Species at Risk[3]	COSEWIC Designation	Schedule of *SARA*	Government Organization with Primary Management Responsibility[4]
Buff-breasted Sandpiper	Special Concern	Schedule 1	Environment and Climate Change Canada (ECCC)
Common Nighthawk	Threatened	Schedule 1	ECCC
Eskimo Curlew	Endangered	Schedule 1	ECCC
Harlequin Duck	Special Concern	Schedule 1	ECCC
Harris's Sparrow	Special Concern	Schedule 1	ECCC
Horned Grebe	Special Concern	Schedule 1	ECCC
Ivory Gull	Endangered	Schedule 1	ECCC
Olive-sided Flycatcher	Threatened	Schedule 1	ECCC
Peregrine Falcon	Special Concern	Schedule 1	ECCC
Red Knot Islandica Subspecies	Special Concern	Schedule 1	ECCC
Red-necked Phalarope	Special Concern	Schedule 1	ECCC
Ross's Gull	Threatened	Schedule 1	ECCC
Rusty Blackbird	Special Concern	Schedule 1	ECCC
Short-eared Owl	Special Concern	Schedule 1	ECCC
Porsild's Bryum	Threatened	Schedule 1	Government of Nunavut (GN)
Transverse Lady Beetle	Special Concern	No Schedule	GN
Caribou (Dolphin and Union Population)	Endangered	Schedule 1	GN
Caribou (Barren-ground Population)	Threatened	No Schedule	GN
Caribou (Torngat Mountains Population)	Endangered	No Schedule	GN
Grizzly Bear (Western Population)	Special Concern	Schedule 1	ECCC
Peary Caribou	Endangered	Schedule 1	GN
Polar Bear	Special Concern	Schedule 1	ECCC
Wolverine	Special Concern	Schedule 1	GN
Atlantic Walrus (High Arctic Population)	Special Concern	No Schedule	Fisheries and Oceans Canada (DFO)
Atlantic Walrus (Central/Low Arctic Population)	Special Concern	No Schedule	DFO
Beluga Whale (Cumberland Sound Population)	Threatened	Schedule 1	DFO
Beluga Whale (Eastern Hudson Bay Population)	Endangered	No Schedule	DFO
Beluga Whale (Eastern High Arctic-Baffin Bay Population)	Special Concern	No Schedule	DFO
Beluga Whale (Western Hudson Bay Population)	Special Concern	No Schedule	DFO
Atlantic Cod (Arctic Lakes Population)	Special Concern	No Schedule	DFO
Fourhorn Sculpin (Freshwater Form)	Data Deficient	Schedule 3	DFO
Lumpfish	Threatened	No Schedule	DFO
Thorny Skate	Special Concern	No Schedule	DFO

3 The Department of Fisheries and Oceans has responsibility for aquatic species.

4 Environment and Climate Change Canada (ECCC) has a national role to play in the conservation and recovery of Species at Risk in Canada, as well as responsibility for management of birds described in the Migratory Birds Convention Act (MBCA). Day-to-day management of terrestrial species not covered in the MBCA is the responsibility of the Territorial Government. Populations that exist in National Parks are also managed under the authority of the Parks Canada Agency.

APPENDIX B: ARCHAEOLOGICAL AND PALAEONTOLOGICAL RESOURCES TERMS AND CONDITIONS FOR LAND USE PERMIT HOLDERS

INTRODUCTION

The Department of Culture and Heritage (CH) routinely reviews land use applications sent to the Nunavut Water Board, Nunavut Impact Review Board and the Indigenous and Northern Affairs Canada. These terms and conditions provide general direction to the permittee/proponent regarding the appropriate actions to be taken to ensure the permittee/proponent carries out its role in the protection of Nunavut's archaeological and palaeontological resources.

TERMS AND CONDITIONS

1) The permittee/proponent shall have a professional archaeologist and/or palaeontologist perform the following **Functions** associated with the **Types of Development** listed below or similar development activities:

	Types of Development (See Guidelines below)	**Function** (See Guidelines below)
a)	Large scale prospecting	Archaeological/Palaeontological Overview Assessment
b)	Diamond drilling for exploration or geotechnical purpose or planning of linear disturbances	Archaeological/Palaeontological Overview Assessment and/or Inventory and Documentation and/or Mitigation
c)	Construction of linear disturbances, Extractive disturbances, Impounding disturbances and other land disturbance activities	Archaeological/Palaeontological Overview Assessment and/or Inventory and Documentation and/or Mitigation

Note that the above-mentioned functions require either a Nunavut Archaeologist Permit or a Nunavut Palaeontologist Permit. CH is authorized by way of the *Nunavut and Archaeological and Palaeontological Site Regulations*[5] to issue such permits.

[5] P.C. 2001-1111 14 June, 2001

2) The permittee/proponent shall not operate any vehicle over a known or suspected archaeological or palaeontological site.
3) The permittee/proponent shall not remove, disturb, or displace any archaeological artifact or site, or any fossil or palaeontological site.
4) The permittee/proponent shall immediately contact CH at (867) 934-2046 or (867) 975-5500 should an archaeological site or specimen, or a palaeontological site or fossil, be encountered or disturbed by any land use activity.
5) The permittee/proponent shall immediately cease any activity that disturbs an archaeological or palaeontological site encountered during the course of a land use operation until permitted to proceed with the authorization of CH.
6) The permittee/proponent shall follow the direction of CH in restoring disturbed archaeological or palaeontological sites to an acceptable condition. If these conditions are attached to either a Class A or B Permit under the Territorial Lands Act Indigenous and Northern Affairs Canada directions will also be followed.
7) The permittee/proponent shall provide all information requested by CH concerning all archaeological sites or artifacts and all palaeontological sites and fossils encountered in the course of any land use activity.
8) The permittee/proponent shall make best efforts to ensure that all persons working under its authority are aware of these conditions concerning archaeological sites and artifacts and palaeontological sites and fossils.
9) If a list of recorded archaeological and/or palaeontological sites is provided to the permittee/proponent by CH as part of the review of the land use application the permittee/proponent shall avoid the archaeological and/or palaeontological sites listed.
10) Should a list of recorded sites be provided to the permittee/proponent, the information is provided solely for the purpose of the proponent's land use activities as described in the land use application, and must otherwise be treated confidentially by the proponent.

Legal Framework

As stated in Article 33 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada* (*Nunavut Agreement*):

Where an application is made for a land use permit in the Nunavut Settlement Area, and there are reasonable grounds to believe that there could be sites of archaeological importance on the lands affected, no land use permit shall be issued without written consent of the Designated Agency. Such consent shall not be unreasonably withheld. [33.5.12]

Each land use permit referred to in Section 33.5.12 shall specify the plans and methods of archeological site protection and restoration to be followed by the permit holder, and any other conditions the Designated Agency may deem fit. [33.5.13]

Palaeontology and Archaeology
Under the *Nunavut Act*[6], the federal government can make regulations for the protection, care and preservation of palaeontological and archaeological sites and specimens in Nunavut. Under the *Nunavut Archaeological and Palaeontological Sites Regulations*[7], it is illegal to alter or disturb any palaeontological or archaeological site in Nunavut unless permission is first granted through the permitting process.

Definitions
As defined in the *Nunavut Archaeological and Palaeontological Sites Regulations*, the following definitions apply:

> *"archaeological site" means a place where an archaeological artifact is found.*
>
> *"archaeological artifact" means any tangible evidence of human activity that is more than 50 years old and in respect of which an unbroken chain of possession or regular pattern of usage cannot be demonstrated, and includes a Denesuline archaeological specimen referred to in section 40.4.9 of the Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement).*
>
> *"palaeontological site" means a site where a fossil is found.*
>
> *"fossil" includes:*
> *Fossil means the hardened or preserved remains or impression of previously living organisms or vegetation and includes:*
> *(a) natural casts;*
> *(b) preserved tracks, coprolites and plant remains; and*
> *(c) the preserved shells and exoskeletons of invertebrates and the preserved eggs, teeth and bones of vertebrates.*

Guidelines for Developers for the Protection of Archaeological Resources in the Nunavut Territory

(**Note:** Partial document only, complete document at: www.ch.gov.nu.ca/en/Archaeology.aspx)

Introduction
The following guidelines have been formulated to ensure that the impacts of proposed developments upon heritage resources are assessed and mitigated before ground surface altering activities occur. Heritage resources are defined as, but not limited to, archaeological and historical sites, burial grounds, palaeontological sites, historic buildings and cairns Effective collaboration between the developer, the Department of Culture, and Heritage (CH), and the contract archaeologist(s) will ensure proper preservation of heritage resources in the Nunavut Territory. The roles of each are briefly described.

[6] s. 51(1)
[7] P.C. 2001-1111 14 June, 2001

CH is the Nunavut Government agency which oversees the protection and management of heritage resources in Nunavut, in partnership with land claim authorities, regulatory agencies, and the federal government. Its role in mitigating impacts of developments on heritage resources is as follows: to identify the need for an impact assessment and make recommendations to the appropriate regulatory agency; set the terms of reference for the study depending upon the scope of the development; suggest the names of qualified individuals prepared to undertake the study to the developer; issue an archaeologist or palaeontologist permit authorizing field work; assess the completeness of the study and its recommendations; and ensure that the developer complies with the recommendations.

The primary regulatory agencies that CH provides information and assistance to are the Nunavut Impact Review Board, for development activities proposed for Inuit Owned Lands (as defined in Section 1.1.1 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada* (*Nunavut Agreement*)), and the Indigenous and Northern Affairs Canada, for development activities proposed for federal Crown Lands.

A developer is the initiator of a land use activity. It is the obligation of the developer to ensure that a qualified archaeologist or palaeontologist is hired to perform the required study and that provisions of the contract with the archaeologist or palaeontologist allow permit requirements to be met; i.e. fieldwork, collections management, artifact and specimen conservation, and report preparation. On the recommendation of the contract archaeologist or palaeontologist in the field and the Government of Nunavut, the developer shall implement avoidance or mitigative measures to protect heritage resources or to salvage the information they contain through excavation, analysis, and report writing. The developer assumes all costs associated with the study in its entirety.

Through his or her active participation and supervision of the study, the contract archaeologist or palaeontologist is accountable for the quality of work undertaken and the quality of the report produced. Facilities to conduct fieldwork, analysis, and report preparation should be available to this individual through institutional, agency, or company affiliations. Responsibility for the curation of objects recovered during field work while under study and for documents generated in the course of the study as well as remittance of artifacts, specimens and documents to the repository specified on the permit accrue to the contract archaeologist or palaeontologist. This individual is also bound by the legal requirements of the *Nunavut Archaeological and Palaeontological Sites Regulations*.

Types of Development

In general, those developments that cause concern for the safety of heritage resources will include one or more of the following kinds of surface disturbances. These categories, in combination, are comprehensive of the major kinds of developments commonly proposed in Nunavut. For any single development proposal, several kinds of these disturbances may be involved

- *Linear disturbances: including the construction of highways, roads, winter roads, transmission lines, and pipelines;*
- *Extractive disturbances: including mining, gravel removal, quarrying, and land filling;*

- *Impoundment disturbances: including dams, reservoirs, and tailings ponds;*
- *Intensive land use disturbances: including industrial, residential, commercial, recreational, and land reclamation work, and use of heritage resources as tourist developments.*
- *Mineral, oil and gas exploration: establishment of camps, temporary airstrips, access routes, well sites, or quarries all have potential for impacting heritage resources*.

Types of Studies Undertaken to Preserve Heritage Resources

Overview: An overview study of heritage resources should be conducted at the same time as the development project is being designed or its feasibility addressed. They usually lack specificity with regard to the exact location(s) and form(s) of impact and involve limited, if any, field surveys. Their main aim is to accumulate, evaluate, and synthesize the existing knowledge of the heritage of the known area of impact. The overview study provides managers with baseline data from which recommendations for future research and forecasts of potential impacts can be made. A Class I Permit is required for this type of study if field surveys are undertaken.

Reconnaissance: This is done to provide a judgmental appraisal of a region sufficient to provide the developer, the consultant, and government managers with recommendations for further development planning. This study may be implemented as a preliminary step to inventory and assessment investigations except in cases where a reconnaissance may indicate a very low or negligible heritage resource potential. Alternately, in the case of small-scale or linear developments, an inventory study may be recommended and obviate the need for a reconnaissance.

The main goal of a reconnaissance study is to provide baseline data for the verification of the presence of potential heritage resources, the determination of impacts to these resources, the generation of terms of reference for further studies and, if required, the advancement of preliminary mitigative and compensatory plans. The results of reconnaissance studies are primarily useful for the selection of alternatives and secondarily as a means of identifying impacts that must be mitigated after the final siting and design of the development project. Depending on the scope of the study, a Class 1 or Class 2 Permit is required for this type of investigation.

Inventory: A resource inventory is generally conducted at that stage in a project's development at which the geographical area(s) likely to sustain direct, indirect, and perceived impacts can be well defined. This requires systematic and intensive fieldwork to ascertain the effects of all possible and alternate construction components on heritage resources. All heritage sites must be recorded on Government of Nunavut Site Survey forms. Sufficient information must be amassed from field, library and archival components of the study to generate a predictive model of the heritage resource base that will:

- allow the identification of research and conservation opportunities;
- enable the developer to make planning decisions and recognize their likely effects on the known or predicted resources; and

- make the developer aware of the expenditures, which may be required for subsequent studies and mitigation. A Class 1 or 2 permit is required.

Assessment: At this stage, sufficient information concerning the numbers and locations of heritage resources will be available, as well as data to predict the forms and magnitude of impacts. Assessments provide information on the size, volume, complexity and content of a heritage resource, which is used to rank the values of different sites or site types given current archaeological knowledge. As this information will shape subsequent mitigation program(s), great care is necessary during this phase.

Mitigation: This refers to the amelioration of adverse impacts to heritage resources and involves the avoidance of impact through the redesign or relocation of a development or its components; the protection of the resource by constructing physical facilities; or, the scientific investigation and recovery of information from the resource by excavation or other method. The type(s) of appropriate mitigative measures are dictated by their viability in the context of the development project. Mitigation strategies must be developed in consultation with, and approved by, the Department of Culture and Heritage. It is important to note that mitigation activities should be initiated as far in advance of the construction of the development as possible.

Surveillance and monitoring: These may be required as part of the mitigation program.

Surveillance may be conducted during the construction phase of a project to ensure that the developer has complied with the recommendations.

Monitoring involves identification and inspection of residual and long-term impacts of a development (i.e. shoreline stability of a reservoir); or the use of impacts to disclose the presence of heritage resources, for example, the uncovering of buried sites during the construction of a pipeline.