



Pond Inlet Marine Infrastructure Project

Nunavut Impact Review Board – Small Craft Harbour
End of Construction Report

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We trust that this report satisfies your requirements as per Condition No. 3 of the Nunavut Impact Review Board (NIRB) Screening Decision Report (SDR) (Permit No. 17XN030).

If there are further questions or details required, please contact the undersigned, Laura Borden, at any time by email at laura@dynamicocean.ca or by phone at 604-928-0193 (mobile).

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Disclaimer & Limitations of the Report

The information presented in this document was compiled and interpreted exclusively for the purpose of compliance reporting to the Nunavut Impact Review Board (NIRB) for the Pond Inlet Small Craft Harbour Project (the Project). Dynamic Ocean Consulting Ltd. (Dynamic Ocean) 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 Laura Borden.

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AHJ	Authorities Having Jurisdiction
BMPs	Best Management Practices
CEMP	Construction Environmental Management Plan
CCEMP	Contractor Construction Environmental Management Plan
CCME	Canadian Council of Ministers of the Environment
CGS	Community and Government Services
CIRNAC	Crown-Indigenous Relations and Northern Affairs Canada
CWP	Contractor Work Plan
DAS	Disposal at Sea
DFO	Fisheries and Oceans Canada
DGs	Dangerous Goods
DoE	Department of Environment
Dynamic Ocean	Dynamic Ocean Consulting Ltd.
ECCC	Environment and Climate Change Canada
EDT	Economic Development and Transportation
EI	Environmental Inspector
EM	Environmental Monitor
EMP	Environmental Management Plan
EnMCP	Environmental Compliance Monitoring Program
EZ	Exclusion Zone
FAA	<i>Fisheries Act</i> Authorization
FFHPP	Fish and Fish Habitat Protection Program
Fixed wharf	Fixed small craft wharf
GN	Government of Nunavut
HTA	Hunters and Trappers Association
HWL	High-Water Line
ISQG	Interim Sediment Quality Guidelines
LUP	Land Use Permit
MMO	Marine Mammal Observer
MP	Monitoring Plan
MSP	Marine Safety Plan
NIRB	Nunavut Impact Review Board

Acronym/Abbreviation	Definition
NoW	Notice of Work
NPC	Nunavut Planning Commission
NRCan	Natural Resources Canada
NRI	Nunavut Research Institute
NWB	Nunavut Water Board
OEMP	Operational Environmental Management Plan
PSPC	Public Services and Procurement Canada
PWGSC	Public Works and Government Services Canada
QIA	Qikiqtani Inuit Association
RAs	Regulatory Authorities
SCH	Small Craft Harbour
SDR	Screening Decision Report
SEC	Sediment and Erosion Control
SRM Consulting	SRM Consulting Ltd.
SRP	Spill Response Plan
TC	Transport Canada
The Hamlet	The Hamlet of Pond Inlet
The Project	Pond Inlet Marine Infrastructure Small Craft Harbour Project
The Proponent	Government of Nunavut
TIN	Transportation and Infrastructure Nunavut
TMP	Traffic Management Plan
Tower	Tower Arctic Ltd.
Worley Consulting	Worley Canada Services

Executive Summary

This report meets the requirements for the Final Report - Construction Condition 3 – Monitoring and Reporting Requirements – of the Nunavut Impact Review Board (NIRB) Screening Decision Report (SDR) for the Pond Inlet Small Craft Harbour (SCH) (Permit No. 17XN030). Construction of SCH was underway through four open-water seasons, where construction was initiated in 2018 and substantial completion was reached in 2021. The facilities were operational in 2022. There were no non-compliances with the NIRB SDR during construction. A Table of Concordance is provided to confirm how compliance with the SDR has been met with reference to details throughout the Report.

Permit Conditions Tables of Concordance

The Pond Inlet Small Craft Harbour (SCH) Nunavut Impact Review Board (NIRB) Permit No. 17XN030 conditions are summarized in Table 1. The Conditions are referenced to the relevant sections in the report for descriptions.

TOC 1: Permit Conditions

No.	Condition	Report Section
NIRB Recommended Project-Specific Terms and Conditions		
General		
1.	The Government of Nunavut (the Proponent) shall maintain a copy of the Project Terms and Conditions at the site of operation at all times.	Section 1.3
2.	The Proponent shall forward copies of all permits obtained and required for this project to the Nunavut Impact Review Board (NIRB) prior to the commencement of the project.	Section 1.3
3.	The Proponent shall operate in accordance with all commitments stated in correspondence provided to the Nunavut Planning Commission (NPC, Application to Determine Conformity, February 22, 2017), and the NIRB (Online Application Form, May 19, 2017, and Response to Comments, August 30, 2017).	Section 1.3
4.	The Proponent shall operate the site in accordance with all applicable Acts, Regulations and Guidelines.	Section 1.3
Water Use		
5.	The Proponent shall not use water, including constructing or disturbing any stream, lakebed or the banks of any definable water course unless approved by the Nunavut Water Board (NWB) or Fisheries and Oceans Canada (DFO).	Section 3.1
Waste Disposal		
6.	The Proponent shall keep all garbage and debris in bags placed in a covered metal container or equivalent until disposed of at an approved facility. All such wastes shall be kept inaccessible to wildlife at all times.	Section 3.2
Fuel and Chemical Storage		
7.	The Proponent shall store all fuel and chemicals in such a manner that they are inaccessible to wildlife.	Section 3.3
8.	Unless otherwise authorized by the NWB, the Proponent shall locate all fuel and other hazardous materials a minimum of thirty-one (31) meters away from high water mark of any water body and in such a manner as to prevent their release into the environment.	Section 3.3

No.	Condition	Report Section
9.	The Proponent shall ensure that re-fueling of all equipment occurs a minimum of thirty-one (31) meters away from the high water mark of any water body, unless otherwise authorized by the Nunavut Water Board.	Section 3.3.2
10.	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.	Section 3.3.2
11.	The Proponent shall ensure that appropriate spill response equipment and clean-up materials (e.g., shovels, pumps, barrels, drip pans, and absorbents) are readily available during any transfer of fuel or hazardous substances, at all fuel storage sites, and at all refuelling stations.	Section 3.3.3
12.	The Proponent shall remove and treat hydrocarbon contaminated soils on site or transport them to an approved disposal site for treatment.	Section 3.2
13.	The Proponent shall ensure that all personnel are properly trained in fuel and hazardous waste handling procedures, as well as spill response procedures. All spills of fuel or other deleterious materials of any amount must be reported immediately to the 24-hour Spill Line at (867) 920-8130.	Section 3.3
Wildlife - General		
14.	The Proponent shall ensure that there is no damage to wildlife habitat in conducting this operation.	Section 3.4
15.	The Proponent shall not harass wildlife. This includes persistently circling, chasing, hovering over, pursuing or in any other way harass wildlife, or disturbing large groups of animals.	Workers were informed during the Contractor's induction training on requirements for appropriate wildlife management.
16.	The Proponent shall ensure that all project personnel are made aware of the measures to protect wildlife and are provided with training and/or advice on how to implement these measures.	See No. 15
Migratory Birds and Raptor Disturbance		
17.	The Proponent shall not disturb or destroy the nests or eggs of any birds. If nests are encountered and/or identified, the Proponent shall take precaution to avoid further interaction and or disturbance (e.g., a 100 metres buffer around the nests). If active nests of any birds are discovered (i.e., with eggs or young), the Proponent shall avoid these areas until nesting is complete and the young have left the nest.	Section 3.4

No.	Condition	Report Section
18.	The Proponent shall minimize activities during periods when birds are particularly sensitive to disturbance such as migration, nesting and moulting.	No wildlife features were identified, and activities did not interfere with sensitive periods such as migration, nesting or moulting.
Ground Disturbance		
19.	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.	Section 3.5
20.	The Proponent shall implement suitable erosion and sediment suppression measures on all areas before, during and after conducting activities in order to prevent sediment from entering any waterbody.	Section 3.5
21.	All construction and road vehicles must be fitted with standard and well-maintained noise suppression devices and engine idling is to be minimized.	Engine idling was kept to a minimum throughout construction.
Establishment of New Quarries		
22.	The Proponent shall clearly stake and flag put and quarry boundaries so they remain visible to other land users.	Section 3.8
23.	The Proponent shall locate quarry/put facilities so as to avoid all recreational sites and public use areas, and to protect unique geographical features and natural aesthetics.	Section 3.8
24.	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.	Section 3.8
25.	The Proponent shall ensure that silt fences/curtains are installed down gradient of any quarry activities.	Section 3.8
26.	The Proponent shall maintain an undisturbed buffer zone between the periphery of quarry sites and the high water mark of any water body that is of an adequate distance to ensure erosion control.	Section 3.8
27.	The Proponent shall locate screening and crushing equipment on stable ground, at a location with ready access to stockpiles.	Section 3.8
28.	The Proponent shall use water or other non-toxic and biodegradable additives for dust suppression as necessary to maintain ambient air quality without causing water to pool or runoff.	Section 3.8

No.	Condition	Report Section
Marine-Based Activities		
29.	The Proponent shall not deposit, nor permit the deposit of any fuel, chemicals, wastes (including waste water) into any marine waters.	There were no harmful substances (i.e., fuel, chemicals) or wastes deposited in the marine environment throughout construction
30.	The Proponent shall suspend all project activities should any dead fish or wildlife, or any injured wildlife be observed during any works or activities in and around the marine waters.	No injured or dead fish or wildlife were observed during construction
31.	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.	Section 3.9 An Offsetting Plan was developed as a component of the Fisheries and Oceans Canada – Fish and Fish Habitat Protection Program (DFO-FFHPP) <i>Fisheries Act</i> Authorizations (FAA) to compensate to for habitat loss or change due to the Project
32.	The Proponent shall implement suitable erosion and sediment suppression measures on all areas before, during, and after conducting activities in order to minimize turbidity plumes from the work site into the waterbody including the installation of silt screens.	Section 3.9.1
33.	Small craft harbour construction shall be carried out during periods when wind, wave and tidal conditions minimize the dispersion of silt and sediment from the work site.	Section 3.9.1
Restoration of Disturbed Areas		
34.	The Proponent shall remove all garbage, fuel, and equipment upon abandonment and completion of the construction activities.	Section 3.13
35.	The Proponent shall complete all clean-up and restoration of the lands used prior to the end of each field season and/or completion of site construction.	Section 3.13

No.	Condition	Report Section
Other		
36.	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.	Section 3.10
37.	The Proponent shall ensure that project activities do not interfere with Inuit wildlife harvesting or traditional land use activities.	See No. 15
38.	The Proponent should, to the extent possible, hire local people and access local services where possible.	Locals were hired as Marine Mammal Observers (MMOs) and in some cases equipment operators, and support staff at the local accommodation
39.	The Proponent shall ensure that access to work areas is controlled and restricted to construction personnel. This should include the posting of signs noting hazards during construction activities.	Section 3.10.2
40.	The Proponent should discuss potential implications of the project on on-land and marine traffic movement with the Hamlet of Pond Inlet, applicable territorial and federal government agencies, and local facility users before the implementation of the project.	Section 3.10
Monitoring and Reporting Requirements		
Environmental Management Plans – Constructions and Operations		
1.	Prior to the start of construction activities, the Proponent will provide the final Construction Environmental Management Plan to the NIRB including an updated Spill Contingency and Emergency Management Plans.	A Construction Environmental Management Plan (CEMP) was developed to support permitting. This was replaced by a Contractor CEMP (CCEMP), which met the minimum requirements outlined in the CEMP, for the construction phase of the Project. Section 4

No.	Condition	Report Section
2.	The Proponent will provide to the NIRB copies of any new or updated operational plans associated with management of the site, especially the most recent Emergency or Spill Response Plan for the operation of the dock that would include, but not limited to, identification of signage at the site, description of any consultation measures to educate the public on commitments made for re-fueling, and requirement for spill control and reporting from usage of the small craft harbour.	Section 4.2
Final Report – Construction		
3.	The Proponent shall submit a comprehensive final report to the NIRB at the completion of construction activities and prior to operations. This report must contain the following information:	
	- A summary of activities undertaken during the construction phase, including: - The process undertaken to determine if contaminants were present in the dredged material (including whether on-site or laboratory testing was undertaken). - Mitigation measures undertaken if contaminants were identified. - Reasons for any installation of silt fences or other erosion control measures and location.	Section 3.6 (Sediment Contaminants) Section 3.5(Sediment and Erosion Control [SEC])
	- A log of wildlife observed in or near the project site, especially marine mammals, including: - Identification of the wildlife observed and a brief description of the animal or group's behaviour. - A description of mitigation activities undertaken, specifically stop work events, and the outcome of the encounter. - Discussions that occurred with any regulatory authorities regarding wildlife encounters, recommendations, and any updated procedures that resulted.	Appendix A (Table A-1)
	Description of any fuel spills and response measures undertaken to contain or clean up the spill.	Appendix A (Table A-2)
	A summary of how the Proponent has complied with terms and conditions contained within this Screening Decision Report, and all conditions as required by other authorizations associated with the project proposal.	This Report provides a summary of compliance with the terms and conditions of the Screening Decision Report (SDR)

1 Introduction

This Report provides a summary of construction and environmental monitoring for the Pond Inlet Small Craft Harbour Project (the Project), which meets Condition No. 3 of the Nunavut Impact Reviewing Board (NIRB) Screening Decision Report (SDR) – Monitoring and Reporting Requirements. The Table of Concordance (TOC 1) at the beginning of this Report references the SDR Conditions to describe compliance commitments that occurred during SCH Project construction.

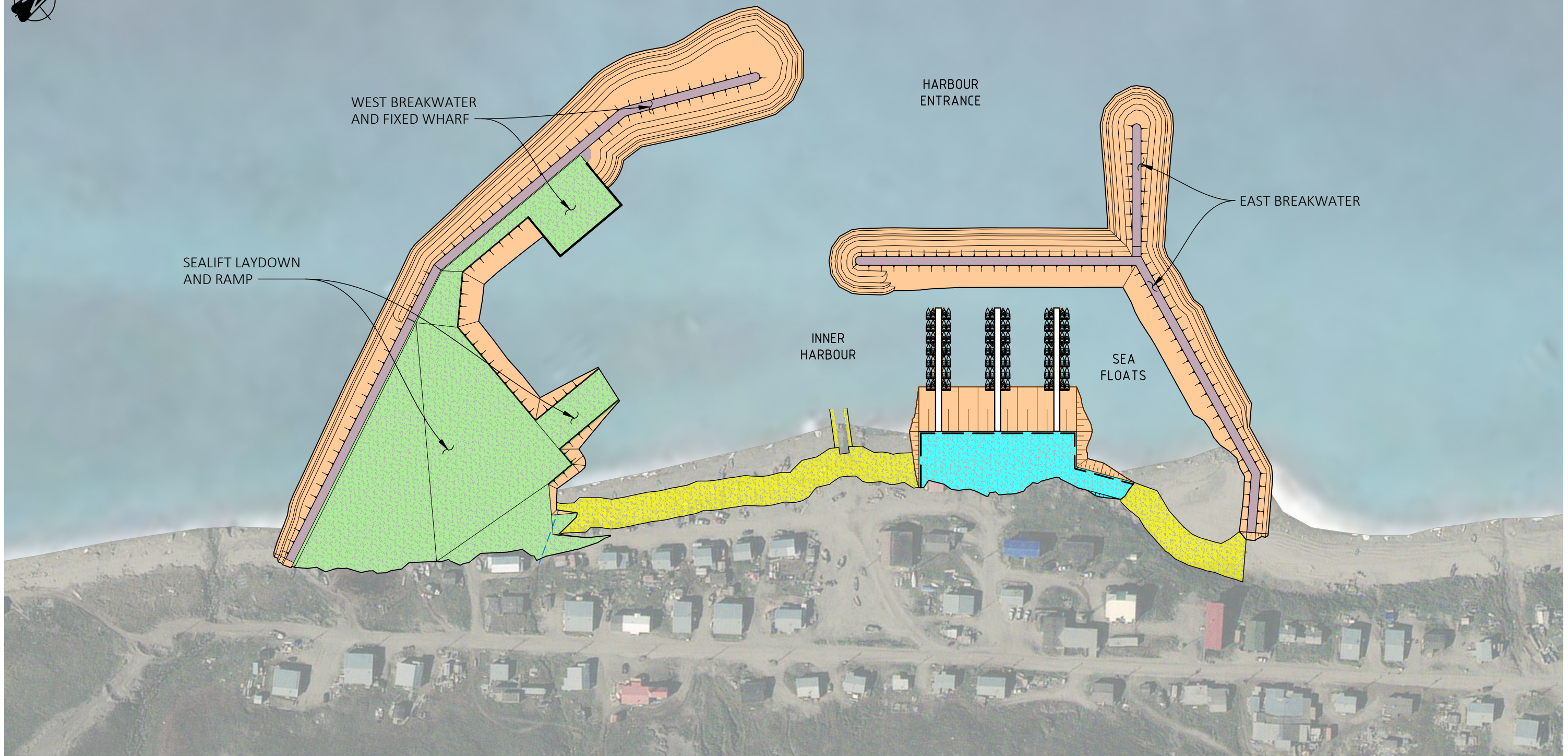
1.1 Background and Project Status

Construction of the Project occurred during the open-water seasons (June to November) over a four-year period from 2018 to 2021. Substantial completion of the Project was reached at the end of the 2021 open-water season, and the facility has been operational since 2022. Construction was led by the Government of Nunavut (GN) - Community and Government Services (CGS) and ownership and responsibility were transferred to the GN - Economic Development and Transportation (EDT). Effective April 1, 2025, GN-CGS and GN-EDT merged, and are now referred to as the Departments of Transportation and Infrastructure Nunavut (GN-TIN). Consultant support for detailed design and regulatory permitting was provided by Worley Canada Services Ltd (Worley Consulting, formerly Advisian), SRM Consulting Ltd. (SRM Consulting) and Dynamic Ocean Consulting Ltd (Dynamic Ocean). Tower Arctic Ltd. (Tower) was the construction contractor.

1.2 Project Components

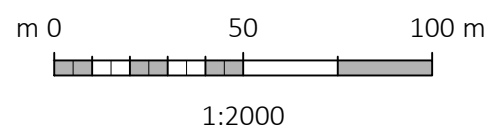
The Project components are depicted in Drawing 1-1 and include:

- West and east breakwaters.
- Sealift laydown and ramp.
- Fixed wharf.
- Small craft floats.
- Shoreline improvements.
- Dredging of access channel.



LEGEND:

- | | | | |
|--|--------------------------------------|--|------------------------------|
| | BATHYMETRIC CONTOUR (1m INTERVALS) | | FILL OR CUT SIDE SLOPE |
| | BATHYMETRIC CONTOUR (0.5m INTERVALS) | | GRAVEL BEACH - NON-DRIVEABLE |
| | TOPO CONTOUR (1m INTERVALS) | | GRAVEL - DRIVEABLE |
| | TOPO CONTOUR (0.5m INTERVAL) | | GRAVEL - FLOAT PAD |
| | BREAKWATER | | HARBOUR |



GOVERNMENT OF NUNAVUT POND INLET SMALL CRAFT HARBOUR				
GENERAL ARRANGEMENT				
	Date: 01-MAR-21	Drawn by: JLC	Edited by: JLC	App'd by: VBC
			Worley Project No. 307071-01148	
			FIG No Drawing 1-1	REV A
	This drawing is prepared for the use of our customer as specified in the accompanying report. Worley Canada Services Ltd. assumes no liability to any other party for any representations contained in this drawing.			

1.3 Permits and Regulatory Compliance

Permits pertinent to the Project are summarized in Appendix A (Table A-1). Tower was provided with copies of all permits and copies were kept on site during Project construction.

The GN-TIN generated and maintained a Commitment Register which incorporated all permit conditions and Contractor Construction Environmental Management Plan (CCEMP) (Tower, 2018a) mitigations. The commitment register was used by the Environmental Inspector (EI) on behalf of the GN-TIN to confirm compliance throughout construction.

Environmental monitoring during in-water construction was a contractual requirement of Tower to confirm regulatory compliance (permits, CEMP). Worley Consulting was responsible for providing the EI to oversee compliance requirements of Tower on behalf of the GN-TIN. This role is undertaken under sub-contract to Dynamic Ocean by Victoria Burdett-Coutts with support from Laura Borden. Charlotte Mougeot (SRM Consulting) functioned as regulatory advisor to the GN-TIN.

In addition to permit conditions, the following documents were developed to maintain a record of regulatory compliance:

- GN-TIN Commitment Register.
- CCEMP (Tower, 2018a).
- Monitoring Plan (MP) (Tower, 2021c).
- Spill Response Plan (SRP) (Tower, 2021b).
- Fuelling Method (Tower, 2018b).
- Tower Weekly Environmental Monitoring Reports.

The GN-TIN and their regulatory support team reviewed the Contractor Work Plans (CWPs) prior to the start of construction, and through construction when revisions occurred.

2 Construction Summary

Construction of the Project consisted of primary and supporting construction activities. Primary construction was considered those activities specific to the construction of the Project components (see Section 1.2), where supporting construction activities are those required to facilitate primary construction activities (e.g., crushing of rock).

A summary of construction activities for the Project is provided in Table 2-1. Construction start and stop dates of each activity are provided for each year of construction.

Table 2-1: Summary of Construction Activities

Construction Activity	Component	Construction Status			
		Start Date	Stop Date	Year	Year Complete
Infill	West Breakwater	1-Oct	31-Oct	2019	2021
		6-Jul	24-Oct	2020	
		12-Jul	10-Oct	2021	

Construction Activity	Component	Construction Status			
		Start Date	Stop Date	Year	Year Complete
	Laydown Area and Sealift Ramp	14-Sep	3-Oct	2020	2021
		5-Jul	10-Oct	2021	
	Temporary Causeway	1-Oct	31-Oct	2019	2020
		18-Jul	8-Oct	2020	
	East Breakwater	26-Jul	24-Oct	2020	2021
		30-Jun	23-Sep	2021	
	Sealift Ramp	14-Sep	3-Oct	2020	2020
	Float Pad	30-Jun	23-Sep	2021	2021
Pile Driving	Fixed Wharf	8-Jul	7-Oct	2020	2021
		24-Jun	1-Jul	2021	
Dredging	Float Pad	28-Aug	8-Sep	2021	2021
	SCH	19-Aug	28-Sep	2020	2021
		10-Jul	23-Sep	2021	
Gravel Surfacing	SCH-Inner Harbour	21-Jul	17-Oct	2021	2021
Small Craft Floats	Float Pad	24-Sep	1-Oct	2021	2021
Haul Road Construction	Haul Road	11-Aug	3-Sep	2018	2018
Blasting and Drilling	Quarry	1-Oct	31-Oct	2019	2021
		17-Jun	17-Sep	2020	
		1-May	20-Jun	2021	
Rock crushing	Quarry	17-Jun	30-Sep	2020	2021
		14-Jun	10-Oct	2021	
Wharf Construction	Fixed Wharf	17-Jun	20-Aug	2021	2021

3 NIRB Compliance Requirements

A summary of compliance and environmental monitoring undertaken throughout the Project, specific to the NIRB SDR, is provided in this section.

Types of monitoring performed throughout the Project are summarized in Table 3-1.

Table 3-1: Monitoring Summary

Construction Activity	General	Turbidity	Marine Mammal Observer (MMO)	Acoustic (Fish)	Acoustic (Marine Mammal)	Sediment and Erosion Control (SEC)	Dust Control	Year(s) Conducted
Infill	✓	✓	✓	-	-	-	-	2019, 2020, 2021
Pile Driving	✓	✓	✓	-	✓	-	-	2020, 2021
Dredging	✓	✓	✓	-	-	-	-	2020, 2021
Blasting, Drilling, Rock Crushing	✓	-	-	-	-	✓	✓	2018, 2019, 2020, 2021
Geotechnical Drilling	✓	✓	-	-	-	-	✓	2021
Stockpiling	✓	-	-	-	-	✓	✓	2018, 2019, 2020, 2021
Fuel Management	✓	-	-	-	-	-	-	2018, 2019, 2020, 2021
Spill Response	✓	-	-	-	-	-	-	2018, 2019, 2020, 2021
Rock/Sediment Transport	✓	-	-	-	-	✓	✓	2018, 2019, 2020, 2021

Note: Check marks indicate that monitoring types were used for the corresponding construction activity

3.1 Water Use

A Type B water license was obtained by Tower from the Nunavut Water Board (NWB) for the installation of seven culverts at water crossings along the haul road (Figure 3-1). In compliance with the NWB water license, regular and frequent monitoring was performed to oversee the stability of the water crossings and monitor for erosion, surface runoff and any resulting impacts on surface water quality.

No streams along the haul road were considered fish bearing.

Monitoring methods are described further in Section 3.5.

3.2 Waste Disposal

Tower was responsible for ensuring that all wastes (e.g., garbage, debris, scrap metal) were removed from Territorial lands to an approved landfill or disposal facility (Tower, 2018a). Debris was collected when necessary on site and transported to the municipal landfill.

Disposal of Dangerous Goods (DGs) consisted of contaminated material from spills (Appendix A (Table A-4)). The materials were stored in Quatrex containers on site and were sent south by sealift prior to the end of construction as there was no approved facility in Pond Inlet.

3.3 Fuel and Chemical Storage

3.3.1 Dangerous Goods Storage

A storage area for DGs was established within Towers's laydown area and within the explosive's storage area (Figure 3-1). Items were stored in designated shipping containers that were inaccessible to wildlife. A SRP was developed (Tower, 2021b) to outline procedures for secondary containment and spill prevention of DGs (Section 3.3.3) (Tower, 2021b).



Figure 3-1: Explosive Storage Area, Water Crossing and Haul Road

Source: Figure 3-4 of Advisian (2022)

3.3.2 Refuelling and Fuel Storage

Fuel for the Project was provided through the use of Tower's own fuel truck, which was refuelled using the Hamlet of Pond Inlet (the Hamlet) fuel supply. Diesel and gasoline were stored in a 500 L fuel storage tank within the laydown area, which is well in excess of 31 m from the marine environment or a freshwater watercourse. Tower developed a Fuelling Plan as one of their CWP's which identified procedures and mitigation measures required for fuelling (Tower, 2018b).

As is typical for marine construction projects, near-water fuelling was required for construction equipment. An amendment to the Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) Land Use Permit (LUP, Permit NoN2018X0011) was required to allow for fuelling within 31 m of water. Sufficient and standard mitigation measures were in place (e.g. secondary containment) to confirm that effects to the marine environment were minimized. There was one small spill that occurred near the marine environment (see Appendix A (Table A-4) Occurrence No. 12). The spill was addressed quickly to mitigate harm to the marine environment.

3.3.3 Spill Response

Tower developed a SRP as one of their CWP's (Tower, 2021b).

Tower's sequence of events to be followed in the event there is a spill were:

1. Verify surrounding conditions and control the leak.
2. Containment of the spilled product.
3. Inform the supervisor.
4. Recover contaminated material.
5. File environmental/investigation report.

Two general spill response stations were established for the Project, with smaller kits available in all vehicles and equipment. All spills were immediately reported to the 24-hour Spill Line per Condition 13 of the NIRB SDR and spill reports were completed the same day. As outlined in Section 9.7 of the MP (Tower, 2021c), spills that occur near or below the High-Water Line (HWL) reported the distance from the spill the nearest HWL.

A summary of spills reported by Tower throughout construction is provided in Appendix A (Table A-4).

3.3.4 Equipment Inspections

As per the CCEMP (Tower, 2018a), equipment was required to be routinely inspected for leaks, cracked hoses and other conditions that could result in spills. The Tower Environmental Monitor (EM) inspected equipment prior to the start of each construction season and regularly during construction to confirm equipment was free of leaks. Weekly equipment inspections were conducted by equipment operators and were documented in Tower's Weekly Environmental Monitoring Reports.

3.4 Wildlife Monitoring

No negative impacts to wildlife occurred during construction. Summaries of environmental monitoring activities for wildlife are provided in this section.

Monitoring types included:

- Pre-construction wildlife surveys.

- MMOs during in-water works.
- Hydroacoustic monitoring during underwater noise generating activities.
- Establishment of Exclusion Zones (EZs) during in-water activities.

Methodologies carried out by Tower for each of the monitoring types are provided in the respective section of the MP (Tower, 2021c).

3.4.1 Pre-Construction Wildlife Surveys

Pre-construction wildlife surveys were conducted at the beginning of each construction season and daily wildlife monitoring was performed by the EM. A summary of wildlife observations is provided in Appendix A (Table A-3).

3.4.2 Marine Mammals

Marine Mammal Observations were carried out for all infill, pile driving and dredging activities during construction. Marine Mammal Observers were either the EM, dedicated MMOs or equipment operators, which was determined by construction activity (Table 3-2).

Exclusion zones were required to minimize negative effects to marine mammals either due to physical interaction or noise disturbance. During in-water activities, an EZ was established and monitored by the MMO.

As per Condition 38 of the GN-TIN NIRB permit (Permit No. 17XN030), the dedicated MMOs were locally available people that were familiar with local species. The Tower EM trained the dedicated MMOs in procedures to be followed when marine mammals were observed in proximity to the construction site in relation to the relevant EZ.

For underwater noise generating activities (e.g. pile driving), real-time acoustic monitoring (pressure and sound) was undertaken for fish and marine mammals, as per condition 2.2.1.2 of the *Fisheries Act* Authorization (FAA) (DFO, 2020).

Observations of marine mammals and their behavior are provided in Appendix A (Table A-2).

Table 3-2: Marine Mammal Observer and Exclusion Zone Size by Construction Activity Type

Category	Activity Type			
	In-Water Infill	Out-of-Water Infill	Dredging	Pile Driving
EZ (m)	20	10	20	500 (adapted as per acoustic program)
MMO	Equipment operator	Equipment operator	Dedicated MMO	Dedicated MMO

3.5 Sediment and Erosion Control

Sediment and Erosion Control measures were implemented for activities located near water crossings along the haul road. A total of seven culverts were put in place during haul road construction in 2018.

Monitoring of crossings for erosion, runoff and water quality impacts was carried out twice annually, before and during the freshet, as well as after major precipitation events. The first inspection occurred at the beginning of the construction season, and the final inspection occurred at the beginning of freeze-up season.

In the event of erosion concerns at water crossings, corrective measures were taken as follows:

1. Silt fences and additional riprap installed.
2. Trenches dug to increase efficacy of silt fences.
3. Addition of aggregate material along slopes to improve stability when required.

Other areas subject to SEC monitoring were the stockpile and rock crushing areas. These areas were frequently monitored for erosion and runoff and were located on flat ground far from any watercourse.

3.6 Sediment Contaminants

Sediment sampling took place during the permitting phase of the Project to support reuse of the sediments. A comprehensive sediment sampling and analysis program was undertaken in 2016, with additional sampling undertaken in 2022 (see Appendix A (Figure A-1, Figure A-2)). Sediment samples were obtained from eight different sites within and around the proposed area of dredging. Laboratory analysis of sediment sample characteristics were compared against Environment and Climate Change Canada (ECCC) Disposal at Sea (DAS) Regulation (ECCC, 2018) and Canadian Council of Ministers of Environment (CCME) Sediment Quality Guidelines, Interim Sediment Quality Guidelines (ISQG) (CCME, 2003), for marine environments.

Chemical analysis of sediment at the SCH showed that all sediment characteristics were below CCME ISQG (CCME, 2003) and sediment reuse regulation guideline limits (Advisian, 2017).

3.7 Dust Suppression

Dust was at times generated from stockpiling and rock/sediment transport. Appropriate dust suppression measures were implemented, and dust was not an issue throughout the Project.

3.8 Establishment of New Quarries

The quarry was located five km inland from the SCH. Quarry activities were associated with the productions of rock and aggregate material, activities undertaken were as follows:

- Drilling.
- Blasting.
- Crushing.
- Screening of blasted rock material.

The quarry site, prior to establishment, was a flat area covered with a thin layer of topsoil. The chosen site (a 20 m x 20 m area) was cleared of topsoil to minimize the potential for surface runoff.

Drilling and blasting activities were ongoing from August 2018 to June 2021 (see Section 2, Table 2-1). A total of 100 blasts were performed during construction. A summary of blasts that occurred is provided in Table 3-3.

Blasting signs were displayed around the quarry to inform community members of the activities.

Table 3-3: Quarry Blasting Summary

Year	Blasting Period	Number of Blasts
2018	Aug	32
2019	Sep-Oct	11
2020	Jun-Sep	25
2021	May-Jun	32

3.9 Marine Based Activities

3.9.1 Turbidity

Turbidity monitoring was carried out for construction activities that had the potential to result in sediment disturbance, using a combination of visual monitoring and water sampling. Compliance monitoring was carried out at the start of each new construction activity and subsequently was undertaken weekly for confirmatory sampling as described in the MP (Tower, 2021c). If turbidity level exceeded CCME guidelines for the protection of aquatic life (CCME, 2003), rate of infill or dredging was slowed to prevent excessive turbidity. Compliance monitoring was conducted as follows:

- Visual observation.
- Turbidity sampling when plume exceeds 100 m (compliance monitoring zone).

Following the initial turbidity sampling, the EM conducted visual monitoring of the construction activity for plumes. When plumes occurred, they were monitored by the EM for the duration of the plume, and plume size and activity were documented. If plumes exceeded 100 m from the construction activity, turbidity sampling was undertaken. While occasional plumes did occur, no turbidity generated from the Project construction resulted in concerns for deleterious substances.

A silt curtain was installed during the 2020 construction season to manage turbidity concerns associated with dredging activity.

A demonstrative photo of turbidity plumes is provided in Photo 3-1.

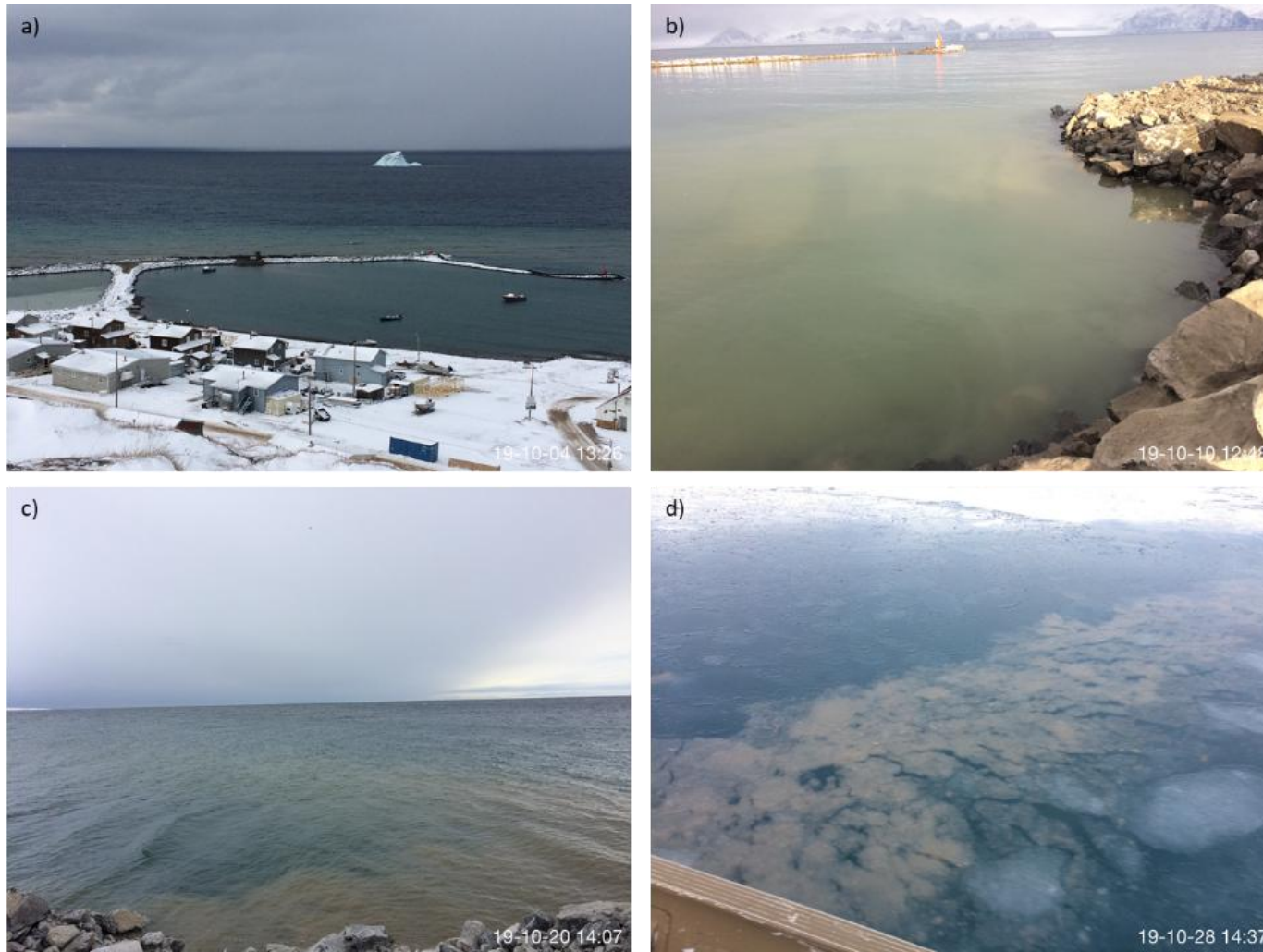


Photo 3-1: Representative Turbidity Plumes

Sources: (Tower, 2019)

3.10 Other

3.10.1 Community Consultation

3.10.1.1 Government of Nunavut

Community engagement, including consultation with the Mittimatalik Hunters and Trappers Association (HTA), the Qikiqtani Inuit Association (QIA) and the Hamlet was ongoing since the beginning of the Project. Collaboration with the HTA was instrumental in designing a SCH in Pond Inlet that would meet the needs and priorities of the community as well as ensuring that Inuit harvesting rights would not be affected by the Project.

3.10.1.2 Tower Arctic Ltd.

Prior to Project construction, Tower was required to develop a community consultation program. Community consultation was undertaken prior to and during each construction season to inform the community about planned construction activities and address any community concerns. Tower's community consultation program consisted of:

- Posting and distribution of pre-season construction information packages in town (e.g., post office information board, Facebook community group).
- Community open houses.
- Construction notices for specific construction activities with the potential to impact the community (posted online, on radio, and around the Hamlet).
- Meeting with community stakeholders and groups.

3.10.2 Community Construction Signs

English and Inuktitut signs were posted at access points to the SCH and quarry to warn of potential hazards (e.g. blasting). Notifications of these potential hazards/access changes were also posted to the Pond Inlet community Facebook page.

3.11 Cautionary Buoys

As a component of the Transport Canada (TC) Notice of Works (NoW) Approval, cautionary buoys were required to minimize navigational interferences and confirm marine users were informed on activities that may influence navigation routes. The approximate location of the buoys is provided in Figure 3-2.

Source: Figure 1-5 of Tower (2021a), which was adapted from Worley Consulting drawing

3.12 Community Access and Communication

Communication regarding community access was carried out by Tower, where they posted on Facebook and radio to inform the community when construction began for the season and where access was being restricted (Photo 3-2).

Maintaining access to the marine foreshore throughout construction was important for Pond Inlet subsistence fishers. To facilitate this, Tower submitted a 'Construction Area' in their MSP and committed to appropriate signage so that marine users were aware of construction activity and to confirm that marine access would not be limited. Tower also took arrival of sealift into their construction schedule to confirm sealift delivery would not be impacted by construction.

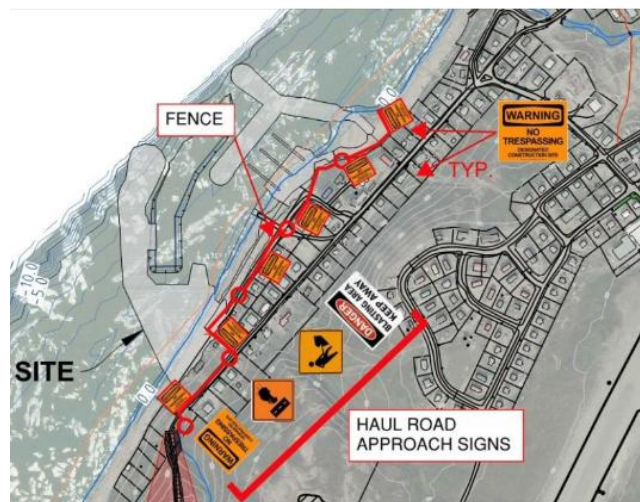
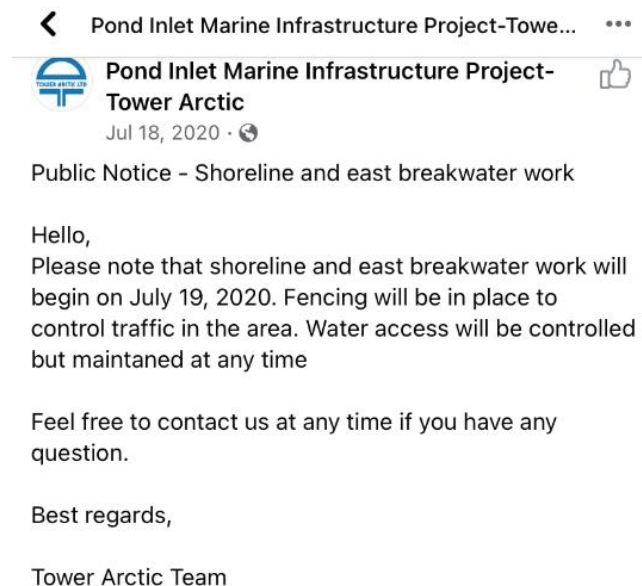


Photo 3-2: Community Access Restriction Notice

Source: (Tower, 2020)

3.13 Restoration of Disturbed Areas

By the end of construction in 2021 all equipment was either demobilized or stored at Tower's laydown area.

Tower was required to submit a check list at the end of each construction season. This can be found in the Appendix of the Fisheries and Oceans Canada Fish and Fish Habitat Protection Program (DFO-FFHPP) annual construction reports and can be provided to the NIRB upon request.

No site restoration activities were undertaken at the SCH as it is permanent marine infrastructure.

4 Monitoring and Reporting Requirements

4.1 Monitoring Report

This Report provides a summary of compliance with the terms and conditions of the SDR. All monitoring activities undertaken throughout the Project relevant to the SDR are summarized in Section 3 (Table 3-1). Wildlife logs are provided in Appendix A, Table A-3, with further description of wildlife monitoring and mitigation available in Section 3.4.

4.2 Environmental Management Plans

Several Environmental Management Plans (EMPs) were developed for the Project and were implemented through the CWP's developed by Tower (Table 4-1). Copies of EMPs and CWP's were submitted to the NIRB prior to the start of Project construction and during construction following document updates.

A SRP was developed by Tower for the Project for the construction phase. The construction SRP was included in the CEMP, which was submitted to NIRB. Updated SRP's were submitted to NIRB prior to the start of construction season when updates were made.

See Table 4-1 for a detailed list of EMPs in place during construction.

4.2.1 Operational Environmental Management Plan

The GN-TIN are responsible for the management of the SCH and have been working in collaboration with the Hamlet to implement a management plan for the SCH. The Operational Environmental Management Plan (OEMP) is inclusive of a SRP procedure, requirements for small craft float removals and ongoing maintenance requirements for the SCH.

Table 4-1: Small Craft Harbour Project Construction - Environmental Management Plans

Report	Phase	Description	Developed By	Reference
CEMP	Permitting	The CEMP describes the mandates of pertinent Authorities Having Jurisdiction (AHJ), associated legislation to confirm permit approvals and relevant compliance requirements for the construction of the Project. This document details and outlines commitments, environmental effects and Project-specific mitigation and monitoring measures implemented during construction to minimize negative effects to physical, biological and socio-economic features associated with construction.	Advisian	(Advisian, 2018)
CCEMP	Construction	The Contractor developed a CCEMP to outline environmental management requirements that met the minimum requirements of the CEMP.	Contractor	(Tower, 2018a)
MP	Construction	The Contractor developed a MP to detail their Environmental Monitoring Compliance Program (EnMCP) to meet the commitments outlined in the CEMP. This included wildlife (including marine mammal), underwater noise and turbidity monitoring programs.	Contractor	(Tower, 2021c)
Traffic Management Plan (TMP)	Construction	The Contractor developed a TMP to manage land-based transportation to and from the SCH. This included: Outlining the requirements and management for site access, traffic within the SCH and communication plans between pertinent personnel to address traffic management related concerns.	Contractor	(Tower, 2018c)

Report	Phase	Description	Developed By	Reference
		Providing commitments for the community to access and use the SCH, including details on safety restrictions on access, and the process for interactions and controls with sea lift operators.		
MSP	Construction	The Contractor developed an MSP to outline safety management for marine-related construction. The plan included the requirements stipulated in the TC Approval received for the Project.	Contractor	(Tower, 2021a)
SRP	Construction	The Contractor developed an SRP, which included: - Plans for responding to emergencies and accidental spills. - Outlined of spill response procedures in the event of emergencies consistent with Best Management Practices (BMPs), legislation, and GN procedures. - Outlined of a schedule for checking spill kits. - Specified spill response materials and spill kit contents, notification, and communication commitments. - Identified fuel storage locations and handling procedures.	Contractor	(Tower, 2021b)

4.3 Summary of Requirements

Construction activities undertaken are described in Section 2. A summary of requirements is provided in Table 4-2, and regulatory inspections conducted throughout the Project construction is provided in Table 4-3.

Table 4-2: Summary of Requirements

Requirement	Summary
Activities	
The process undertaken to determine if contaminants were present in the dredged material including whether on-site or laboratory testing was undertaken.	For reuse of sediments a permit was issued by ECCC to manage for reuse of dredged sediment from the SCH. To support the application, a sediment sampling program was implemented (see Section 3.6). All metals and other contaminants were below guidelines or lab detectability, therefore no mitigation measures were necessary.
Mitigation measures undertaken if contaminants were identified.	Not relevant, there were no contaminants identified during the Project construction. Management measures were in place for accidental spills as summarized in Section 3.6.
Reasons for any installation of silt fences or other erosion control measures and location.	Addressed in Section 3.5.
Wildlife	
The Proponent shall ensure that there is no damage to wildlife habitat in conducting this operation.	See Section 3.4.1.
The Proponent shall not harass wildlife. This includes persistently circling, chasing, hovering over pursuing or in any other way harass wildlife, or disturbing large groups of animals.	Workers were informed during the Contractor's induction training on requirements for appropriate wildlife management.
The Proponent shall ensure that all project personnel are made aware of the measures to protect wildlife and are provided with training and/or advice on how to implement these measures.	Workers were informed during the Contractor's induction training on requirements for appropriate wildlife management.
Fuel	
Description of any fuel spills and response measures undertaken to contain or clean up the spill.	See Section 3.3 and Appendix A, (Table A-4)

Requirement	Summary
Compliance	
A summary of how the Proponent has complied with terms and conditions contained within this Screening Decision Report, and all conditions as required by other authorizations associated with the project proposal.	This Report

Table 4-3: Regulatory Inspections for the Project

Year	Regulatory Authority	Personnel Attending	Title	Construction Week	Date
2018	DFO-FFHPP	Andrea Doherty	Senior Biologist	Pre-Construction	26-Aug-18 to 29-Aug-18
		William Glass	Senior Fish and Fish Habitat Protection Biologist		
2019	DFO-FFHPP	Andrea Doherty	Senior Biologist	Pre-Construction	25-Sept-19 to 27-Sept-19
		Steven Cho	Fish and Fish Habitat Protection Biologist		
2020	CIRNAC	Jonathan Mesher	Resources Management Officer	Week 11	20-Aug-20
	GN	Daniel Inuarak	Environmental Protection Officer	Week 14	09-Sept-20
2021	CIRNAC	Jonathan Mesher	Resources Management Officer	Week 13	23-Jul-21 to 24-Jul-21

5 References

- Advisian. (2017). Pond Inlet Marine Infrastructure Project: Marine Baseline Report. Prepared for Government of Nunavut. Doc No: 307071-01148-01-EN-REP-0003. 05 May 2017. Rev 0.
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- Advisian. (2022). Pond Inlet Project - 2021 Construction Season Annual Report. *Fisheries Act* Authorization Nos: 17-HCAA-00551 / 19-HCAA-01020. Prepared for Government of Nunavut. Prepared by Advisian. Doc No: 307071-01148-01-EN-REP-0008. 31 January 2022. Rev 0.
- CCME. (2003). Canadian Water Quality Guidelines for the Protection of Aquatic Life. Prepared by Canadian Council of Ministers of the Environment. 23pp. Available at: <https://ccme.ca/en/res/wqimanualen.pdf>. .
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- ECCC. (2018). Characterization of Dredged Material for Open Water Disposal. Prepared by A. C. Environmental Protection Branch. June 2018. Available at: ec.immersionenmeratl-disposalatseaatl.ec@canada.ca.
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- Tower. (2018b). Fueling Method Work Plan - Pond Inlet Marine Infrastructure. Prepared for Government of Nunavut. Doc No: 15255-00331-07-TA-GN-CWP-0005-2. 22 September 2018. Rev 2.
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- Tower. (2021b). Pond Inlet Marine Infrastructure Project -Spill Response Plan Work Plan. Prepared for Government of Nunavut. Prepared by Tower Arctic Ltd. Doc No: 15255-00331-07-TA-GN-CWP-0003-6. 14 May 2021. Rev 6.

Tower. (2021c). Pond Inlet Marine Infrastructure Project. Environmental Monitoring Plan. Prepared for Government of Nunavut. Prepared by Tower Arctic Ltd. Doc No: 15255-00331-TA-07. 28 May 2021. Rev 13.

Appendix A: Supporting Tables and Figures

Table A-1: Pond Inlet Project Permits

Regulatory Authority	Permit Type	Permit Number	Issued	Expiry	Permit Holder
Federal					
TC	Approval (NoW)	8200-2017-600071	30-Jan-18	-	GN
NRCan	Explosive Magazine Permit	U300112/E	21-Jun-18	30-Jun-2022	TA
CIRNAC	LUP	N2019X0012	06-Jun-19	14-Aug-2025	GN
DFO	<i>Fisheries Act</i> Authorization	17-HCAA-00551	23-Apr-19	01-Dec-2021	GN
		19-HCAA-01020	01-Oct-19		
PSPC, formerly known as Public Works and Government Services Canada (PWGSC)	LoO	17XN030	07-May-18	07-May-2023 (or until the transfer from the Crown to the Commissioner is completed)	GN-CGS
Territorial					
NIRB	Screening Decision Report	17XN030	02-Oct-17	End of Project	GN
NWB	Type B Water License	8BW-PIM1821	23-Jul-21	01-Jan-2022	TA
Nunavut Research Institute (NRI)	Research Permit (field work associated with baselines and FAA)	02 060 20R-M	11-Jan-21	31-Dec-2021 (re-issued annually)	GN
Municipal					
Hamlet of Pond Inlet	Pre-Development Permit	0711	27-Jul-18	-	GN
Hamlet of Pond Inlet	Quarry Permit	02-27-2020-01	27-Feb-20	27-Feb-2021	TA

Table A-2: Marine Mammal Observations

Date	Activity	Species	Number of Species Observed	Exclusion Zone (m)
2018				
No observations.				
2019				
No observations.				
2020				
13-Jul-20	No in-water activity	Seal	1	
17-Jul-20	No in-water activity	Whale	1	
18-Jul-20	No in-water activity	Whale	1	
23-Jul-20	Infill	Ring seal	1	20
28-Jul-20	No in-water activity	Narwhals	Group	
30-Jul-20	No in-water activity	Whale	1	
04-Aug-20	Infill	Ring seal	1	20
04-Aug-20	Infill	Seal	1	20
18-Aug-20	Infill	Killer whales	2	20
20-Aug-20	Infill, Dredging	Sperm Whales	4	20
22-Aug-20	Infill	Narwhals	5	20
24-Aug-20	No in-water activity	Narwhals	Group	
19-Sep-20	No in-water activity	Bowhead whale	1	
26-Sep-20	No in-water activity	Narwhals	10	
26-Sep-20	No in-water activity	Whale	1	
01-Oct-20	Infill, Dredging	Harp seal	10	20
02-Oct-20	Infill, Dredging	Harp seal	20	20
02-Oct-20	Infill, Dredging	Harp seal	12	20

Date	Activity	Species	Number of Species Observed	Exclusion Zone (m)
03-Oct-20	Infill, Dredging	Harp seal	15	20
04-Oct-20	Infill, Dredging	Harp seal	15	20
18-Oct-20	No in-water activity	Narwhals	1	
2021				
24-Jun-21	Pile Driving	Seal	14	500
26-Jun-21	Pile Driving	Seal	9	500
26-Jun-21	Pile Driving	Seal	14	500
27-Jun-21	Pile Driving	Seal	10	500
28-Jun-21	Pile Driving	Seal	11	500
29-Jun-21	Pile Driving	Seal	1	500
29-Jun-21	Pile Driving	Seal	1	500
30-Jun-21	Pile Driving	Seal	7	500
30-Jun-21	Pile Driving	Seal	11	500
10-Jul-21	Dredging	Seal	1	20
10-Jul-21	Dredging	Narwhals	Group	20
12-Jul-21	Dredging	Ringed Seal	1	20
15-Jul-21	Dredging	Ringed Seal	2	20
18-Jul-21	No in-water activity	Narwhals	Group	
19-Jul-21	No in-water activity	Ringed Seal	1	
19-Jul-21	No in-water activity	Ringed Seal	1	
24-Jul-21	No in-water activity	Humpback Whale	1	
26-Jul-21	Dredging	Ringed Seal	1	20
31-Jul-21	Dredging	Ringed Seal	1	20
31-Jul-21	Dredging	Bearded Seal	1	20
01-Aug-21	Dredging	Ring Seal	1	20

Note: Grey infill = Not applicable

Table A-3: Pre-Construction Wildlife Survey Summary

Date	Location	Species	Number of Species Observed
2018			
07-Sep-18	Haul Road	White geese	>10
08-Sep-18	Haul Road	White geese	>10
09-Sep-18	Haul Road	White geese	>10
10-Sep-18	Haul Road	White geese	>10
11-Sep-18	Haul Road	White geese	>10
12-Sep-18	Haul Road	White geese	>10
13-Sep-18	Haul Road	White geese	>10
14-Sep-18	Haul Road	White geese	>10
15-Oct-18	Municipal Landfill	Polar bear	1
2019			
09-Oct-19	Explosives storage area	Red fox	1
10-Oct-19	Haul Road	Red fox	1
11-Oct-19	Haul Road	Red fox	1
13-Oct-19	Haul Road	Red fox	1
15-Oct-19	Explosives storage area	Red fox	1
17-Oct-19	Haul Road	Red fox	1
18-Oct-19	Haul Road	Red fox	1
19-Oct-19	Haul Road	Red fox	1
21-Oct-19	Haul Road, Quarry	Red fox	1
23-Oct-19	Haul Road	Red fox	1
24-Oct-19	Haul Road	Red fox	1
25-Oct-19	Haul Road	Red fox	1
25-Oct-19	SCH	Gulls	5

Date	Location	Species	Number of Species Observed
27-Oct-19	Haul Road	Red fox	1
30-Oct-19	Haul Road	Arctic fox	1
30-Oct-19	Haul Road	Red fox	1
2020			
27-Jul-20	Camp site	Arctic hare	1
12-Aug-20	SCH	Cormorant	1
14-Aug-20	SCH	Cormorant	3
15-Aug-20	Garage	Long tailed weasel	1
19-Aug-20	Garage	Long tailed weasel	1
31-Aug-20	Haul Road	White geese	80
01-Sep-20	Haul Road	White geese	100
03-Sep-20	Haul Road	White geese	40
09-Sep-20	Haul Road	White geese	20
10-Sep-20	Haul Road	White geese	30
12-Sep-20	Haul Road	White geese	50
13-Sep-20	Haul Road	White geese	30
19-Sep-20	Haul Road	Fox	1
19-Sep-20	Haul Road	Falcon	1
20-Oct-20	Haul Road	Red fox	2
21-Oct-20	Haul Road	Red fox	2
21-Oct-20	SCH	Long tailed weasel	1
22-Oct-20	Haul Road	Red fox	3
22-Oct-20	Haul Road	Red fox	1
23-Oct-20	Haul Road	Arctic fox	1

Date	Location	Species	Number of Species Observed
2021			
30-Jun-21	Camp site	Sandhill crane	3
03-Jul-21	Camp site	Arctic hare	1
11-Jul-21	SCH	Arctic loon	1
11-Jul-21	SCH	Small sea birds	5
31-Jul-21	Camp site	Arctic hare	1

Table A-4: Summary of Spills that Occurred at the Small Craft Harbour

Occurrence No. During the Construction Season	Date	Location	Spill Report No.	Summary	Corrective Action
2019					
1	10-Aug-19	Quarry	19-414	Approximately 5 L of biodegradable hydraulic oil was spilled from an excavator due to mechanic breakage.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
2020					
1	16-Jul-20	Stockpile	20-20222	Approximately 40 L of biodegradable hydraulic oil was spilled from an excavator due to mechanic breakage.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
2	17-Jul-20	Stockpile	20-20223	Approximately 30 L of biodegradable hydraulic oil was spilled from a drill rig due to mechanic breakage.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
3	30-Jul-20	Quarry	20-20247	Approximately 0.3 L of fuel was spilled from a safety can.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
4	06-Aug-20	Haul Road	20-20261	Approximately 120 L of biodegradable hydraulic oil was spilled from a rock truck due to mechanic breakage.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
5	07-Aug-20	Stockpile	20-20264	Approximately 0.1 L of biodegradable hydraulic oil was	The spill was controlled using absorbents. Contaminated soil was

Occurrence No. During the Construction Season	Date	Location	Spill Report No.	Summary	Corrective Action
				spilled from a rock truck due to mechanic breakage.	removed, and the reclamation was visually confirmed.
6	07-Aug-20	Garage	20-20266	Approximately 5 L of fuel was spilled from while fuelling a welder.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
7	07-Aug-20	Stockpile	20-20263	Approximately 2 L of biodegradable hydraulic fuel was spilled while fuelling an excavator.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
8	10-Aug-20	Quarry	20-20274	Approximately 2 L of biodegradable hydraulic fuel was spilled while fuelling an excavator.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
9	15-Aug-20	Quarry	20-20277	Approximately 10 L of biodegradable hydraulic oil was spilled from an excavator due to mechanic breakage.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
10	20-Aug-20	Stockpile and Quarry	20-20281	Approximately 5 L of fuel was spilled.	Contaminated soil was removed, and the reclamation was visually confirmed.
11	22-Aug-20	Stockpile	20-20283	Approximately 1 L of fuel was spilled from a fuel truck while fuelling.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
12	08-Sep-20	East Breakwater	Unknown	Approximately 1 L of fuel was spilled from an excavator while fuelling.	The spill was controlled using absorbents. Contaminated soil was

Occurrence No. During the Construction Season	Date	Location	Spill Report No.	Summary	Corrective Action
					removed, and the reclamation was visually confirmed.
2021					
1	11-Jul-21	Wharf	20-21xxx	Approximately 5 L of Preston was spilled from a bulldozer due to mechanic breakage.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
2	11-Jul-21	Garage	20-21xxx	Approximately 5 L of Preston was spilled from a rock truck due to mechanic breakage.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
3	26-Jul-21	Garage	20-21318	Approximately 2 L of fuel was spilled from a rock truck due to mechanic breakage.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
4	06-Aug-21	SCH	20-21318	Approximately 20 L of biodegradable hydraulic oil was spilled from an excavator due to mechanic breakage.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
5	16-Aug-21	SCH	20-21348	Approximately 30 L of biodegradable hydraulic oil was spilled from an excavator due to mechanic breakage.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
6	24-Aug-21	SCH	20-21364	Approximately 0.2 L of biodegradable hydraulic oil was	The spill was controlled using absorbents. Contaminated soil was

Occurrence No. During the Construction Season	Date	Location	Spill Report No.	Summary	Corrective Action
				spilled from an excavator due to mechanic breakage.	removed, and the reclamation was visually confirmed.
7	26-Aug-21	SCH	20-21364	Approximately 7 L of biodegradable hydraulic oil was spilled from an excavator due to mechanic breakage.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
8	29-Aug-21	Sealift Laydown	20-21371	Approximately 1 L of biodegradable hydraulic oil was spilled from an excavator due to mechanic breakage.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
9	29-Aug-21	Sealift Laydown	20-21371	Approximately 1 L of grease was spilled.	Contaminated soil was removed, and the reclamation was visually confirmed.
10	03-Sep-21	Shoreline	20-21382	Approximately 0.5 L of biodegradable hydraulic oil was spilled from a skytrack due to mechanic breakage.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
11	12-Sep-21	Wharf	20-21394	Approximately 2 L of biodegradable hydraulic oil was spilled from an excavator due to mechanic breakage.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
12	28-Oct-21	Sealift Laydown	20-21460	Approximately 5 L of biodegradable hydraulic oil was spilled from a drill due to mechanic breakage.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
13	07-Sep-21	Garage	20-21294	Approximately 8 L of fuel was spilled while fuelling a rock truck.	Contaminated soil was removed, and the reclamation was visually confirmed.

Occurrence No. During the Construction Season	Date	Location	Spill Report No.	Summary	Corrective Action
14	14-Sep-21	Quarry	20-20335	Approximately 1.5 L of biodegradable hydraulic oil was spilled from an excavator due to mechanic breakage.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
15	21-Sep-21	Shoreline	20-20346	Approximately 1.5 L of transmission oil was spilled from an excavator due to mechanic breakage.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
16	27-Sep-21	Haul Road	20-20360	Approximately 2 L biodegradable hydraulic oil was spilled from a drill rig while handling.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
17	28-Sep-21	Wharf Access	20-20365	Approximately 2 L biodegradable hydraulic oil was spilled from an excavator due to mechanic breakage.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
18	29-Sep-21	Shoreline	20-20376	Approximately 0.5 L of motor oil was spilled from a pickup truck due to mechanic breakage.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
19	30-Sep-21	Shoreline	20-20369	Approximately 0.5 L of an unknown substance was spilled.	Contaminated soil was removed, and the reclamation was visually confirmed.
20	4-Oct-21	Stockpile	20-20381	Approximately 2 L of biodegradable hydraulic oil was spilled from a loader due to mechanic breakage.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.

Occurrence No. During the Construction Season	Date	Location	Spill Report No.	Summary	Corrective Action
21	5-Oct-21	Garage	20-20384	Approximately 1 L of motor oil was spilled from a fuel truck due to mechanic breakage.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
22	07-Oct-21	Haul Road	20-21295	Approximately 5 L of Preston was spilled from a rock truck due to mechanic breakage.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.
23	11-Oct-21	Garage	20-20394	Approximately 1 L of fuel was spilled during handling.	The spill was controlled using absorbents. Contaminated soil was removed, and the reclamation was visually confirmed.

Source: Tower EM Reports 2018 - 2022

