



## **NIRB Uuktuutinga Ihivriughikhamut #125480**

### **Cambridge Bay, NU. Freshwater Creek Riverbed Restoration**

**Uuktuutinga Qanurittuq:** New

**Havaap Qanurittunia:** Atuinakgiallit Apkuutit

**Uuktuutinga Ublua:** 8/13/2019 4:06:55 PM

**Period of operation:** from 0001-01-01 to 0001-01-01

**Piumayaat Angirutinga:** from 0001-01-01 to 0001-01-01

**Havauhikhaq Ikayuqtinga:** Jim MacEachern  
Municipality of Cambridge Bay  
23 Kamotik  
Cambridge Bay Nunavut X0B0C0  
Canada  
Hivayautit Nampanga:: 8679834654, Kayumiktukkut Nampanga:: 8679832193

# QANURITTUT

## Tukihiannaqtunik havaariyaumayumik uqauhiuyun

**Qablunaatitut:** The Hamlet of Cambridge Bay, NU is upgrading, in stages, the Existing Freshwater Creek Crossing located on the road to the local Cemetery some 2.5 km to the NW of town. Presently, there is a 30 m long Bailey Bridge on the crossing. The east end of this bridge rests directly on a high river bank. The west end is supported on a gravel-rock fill Causeway projecting into the river and blocking nearly one third of the Natural River Channel. This Causeway is subject to progressive yearly erosion, and associated siltation of the river, with need for significant repairs every several years. The last major washout was in 2010 when the bridge was closed for traffic for a few weeks. In the last few years the Hamlet has gradually installed a 45 m long New Bridge alongside the existing one. The abutments of the New Bridge are located beyond the High Water Mark of the Natural River Bed. The remaining Work on the Bridge Upgrading includes: •Removal of the existing Bailey Bridge: •Excavation-Removal from the Causeway, and the adjacent upstream Buffer Berm some 1,600 cubic meters mixture of gravel and rock. This Work is considered Alteration of the Riverbed. During Work, temporary siltation of the watercourse downstream from the crossing will take place. The Plan is to carry out the work this fall, at low water, within a time window established by the NIRB, DFO, NWB and other appropriate Regulators. The Long Term Impact of the proposed Alteration is highly positive. The erosion of the Riverbanks and Riverbed will be practically eliminated and 600 sq m fish habitat will be recovered. \*\* In addition to the scope as described above the following additional works form part of the project: - All material excavated and removed from the river will be incorporated in the road approaches to the new bridge. Equipment and labour hours for this work are included in the original application. - Timber deck and galvanised rail will be installed on the new bridge. The work will be completed in parallel with the road upgrading. Equipment and labour hours are included in the original application.

**Uiviititut:** Not Available

**Inuktitut:** Not Available

**Inuinnaqtun:** Ikaluktutiak, Nunavummi. Nuna Immap Attanni, Kuraan'ngmi igaqvik Hannahiman'nahuat iniqtiqluruKugaaq Miqhanun NaonaitqutHamletkut Ikaluktutiammi, Ikaaquin'nmik Hanahimang'nahuat kuran'ngmi, utqaup illuhikviq hanaiani. Taja kuraap ikan'ngnia takitjuta 30m. Ikaaqlik Kivaatani king'ngitqijauyuq uatamin. Ikaaqlik uataami illijauhijamuk kan'nganut ujaqait. Ujarait niruhipkaqtijuq kugaaq ingilrajuta, Kuraap immam haquriqammi nuna illuviup illarija kuranmun'ngaqpakpak ihuqtitivaquqlu. Taimailirang'ngammi kuraaq imma, hanajauqatainaktuk nuna. 2010mi kuraap imma king'ngqhiraluarammi, ikaaqlik ummiqhimavaktuk, Hamletkut nuttavjangmik ikaqvingmik illiriramiik, takitjuta 45m. Hanianiituk Ikaqvingmi. Kivataani, Uataamilu kingitqijauyuq. Hanajauhijamang'nahuaq imma: •Unguvaqtinnahuaktut tamna Baileymik ikarvik attiqhimayuq •Unguvaqtihiman'nahut ujangangmik, hirangminglu kurangmin, ukumaitjuta 1600 kiqqaritjutta Kuraap Nuna imma hanahiman'nahuaramiuq ihuqtitiniangmiuq. Immaiqtiliriangmirummi kuraak havaqhimanguhaqtat hamlet-kut havaaktit. Hapkuat NIRB, DFO, NWB allaitlu katimariyait taima havaquramiik ikaarvingmik. Hivullihapqut nagutqhiniat taimma. Nuna kuraap attanim illuviuplu nuna kattaralangilimain'niarunnaq. Imma 600 kiqqaritjuta, ikaluitlu ingilrajuta hanajauhijamang'nahuaq.

## Personnel

Personnel on site: 6

Days on site: 10

Total Person days: 60

Operations Phase: from 2019-09-08 to 2019-09-23

## Hulilukaarutit

Inigiya	Hulilukaarut Qanurittuq	Nunannga Qanurittaakhaanik	Initurlinga qanuritpa	Initurlinga utuqqarnitat unaluuniit Ingilraaqnitat Uyarannguqtut akhuurninnga	Qanitqiyauyuq qanitqiamut nunallaat kitulluuniit ahiruqtaliyainnit nuna
Location of existing and new bridge also location of river bed restoration	Dredging	Municipal	th work consists in removal of causeway and buffer berm built long time ago in association with the old bridge	no site of such values are known in te work area	work site located 2.5 km to the north ob Cambridge Bay

### Nunaliin Ilauyun, Aviktuqhimayuniitunullu Ikayuuhiarunguyun

Nunauyuq	Atia	Timiuyuq	Upluani Uqaqatigiyaungmata
Ikaluktuttiak	Jim Mceachern	Municipal Government	2019-08-12

# Angiuttauvaktunik

Naunaiqlugu nunanga talvani havauhikhaq ittuq:

Kitikmeot

## Angiuttauvaktunik

Munariniqmut Ayuittiaqtuq	Angirutinga Qanurittuq	Tadja Qanurittaakhaanik	Ublua Tuniyauyuq/Uuktuqtuq	Umikvikhaa Ublua
Nunavut Imaligiyyit Katimayit	General Water Licence	Applied, Decision Pending		
Iqalukhiurniqmut Tariuqmilu Kaanata	Authorisation for window of Work in the river	Applied, Decision Pending		

## Project transportation types

Transportation Type	Qanuq Atuqtauniarmangaa	Length of Use
Air	Contractor's crew will travel to and from Cambridge Bay on scheduled flight	
Land	Crew will travel to and from site with pickup truck using existing access road	

## Project accomodation types

Nunauyuq

Alaanut,

## Ihuaqutivaluin Atuqtauyukhan

Hanalrutit atuqtaunahuat (ukuallu ikuutat, pampiutainnik, tingmitinik, akhaluutinik, hunaluuniit)

Hanalrutit Qanurittuq	Qaffiuyut	Aktikkulaanga – Qanurittullu	Qanuq Atuqtauniarmangaa
Large Excavator	1	5m x 5m	To be used for excavation of imported material from the riverbed. Equipment will be deployed on shore. Only bucket will be in contact with water
Large wheeled Loader	1	5m x 5 m	Used for removal of the excavated material and place it on the adjacent road approach
Dump Trucks	2	3m x 8m	To haul out excavated material

### Qanurittuq Urhuqyuaq unalu Qayangnaqtut Hunavaluit Aturninnga

Qanurittuq urhuqyuaq hunavaluit aturninnga:	Urhuqyuaq Qanurittuq	Qaffiuyut qattaryut	Qattaryuk Aktikkulaanga	Atauttimut Qaffiuyut	Ilanga	Qanuq Atuqtauniarmangaa
Diesel	fuel	1	350	350	Liters	daily refueling of equipment

### Imaqmik Aturninnga

Ubluq qanuraaluk (m3)	Aturumayain imavaluin utiqittagaani qanuq	Atulirumayain imavaluin utiqittagani humi
0	N/A	N/A

# Iqqakuq

## Ikkakunik Munakgiyauyunik

Havauhikhaq Hulilukaarut	Qanurittuq Iqqakut	Ihumagiyauyuq Qanuraaluktut Atuqtait	Qanuq Iqqakuurniarmangaa	Halummaqtirarnirutikhan piyutin
Dredging	Ikulalimanngittun iqqakuuvaluin	Estimated less than 10 cu m	During dredging some silt will be washed out and deposited into the Bay	No additional treatment considered

### Avatiliriniqmut Ayurhautingit:

The continuous erosion and repairs of the existing causeway, as well as the need for fording the will be eliminated. Some 800 sq. m. fish habitat will be recovered.

# **Additional Information**

## **SECTION A1: Project Info**

The Work consists in restoration of riverbed to its original condition. No alternative site was considered

## **SECTION A2: Allweather Road**

No presence of deleterious material is anticipated.

## **SECTION A3: Winter Road**

## **SECTION B1: Project Info**

## **SECTION B2: Exploration Activity**

## **SECTION B3: Geosciences**

## **SECTION B4: Drilling**

## **SECTION B5: Stripping**

## **SECTION B6: Underground Activity**

## **SECTION B7: Waste Rock**

## **SECTION B8: Stockpiles**

## **SECTION B9: Mine Development**

## **SECTION B10: Geology**

## **SECTION B11: Mine**

## **SECTION B12: Mill**

## **SECTION C1: Pits**

## **SECTION D1: Facility**

## **SECTION D2: Facility Construction**

## **SECTION D3: Facility Operation**

## **SECTION D4: Vessel Use**

## **SECTION E1: Offshore Survey**

## **SECTION E2: Nearshore Survey**

## **SECTION E3: Vessel Use**

## **SECTION F1: Site Cleanup**

## **SECTION G1: Well Authorization**

## **SECTION G2: Onland Exploration**

## **SECTION G3: Offshore Exploration**

## **SECTION G4: Rig**

## **SECTION H1: Vessel Use**

## **SECTION H2: Disposal At Sea**

## **SECTION I1: Municipal Development**

### **Qanurittuq Ittunik Avatinga: Avatingalluanga**

The Existing Crossing features 30 m long Bailey Bridge. The east end of the Bailey rests on 3.0 meter high river bank. The west end is supported on a gravel-rock fill Causeway projecting into the river and constricting nearly one third of the Natural River Channel. This causeway is subject to progressive yearly erosion, and associated siltation of the river, with need for significant repairs every several years. The last major washout was in 2010 when the bridge was closed for traffic for a few weeks. In the last 6 years the Hamlet has gradually installed a 45 m long Bridge alongside the existing one. The abutments of the New Bridge are metal Bin-walls located beyond the High Water Mark of the Natural River Bed. At no point heavy equipment or bridge elements have been in contact with the river flow during construction, or otherwise. The remaining Work on the Bridge Upgrading is related to restoration of the riverbed to its original width and depth and includes: •Removal of the existing Bailey Bridge, •Excavation-Removal from the Causeway, and the adjacent upstream Buffer Berm some 1,600 cubic meters mixture of gravel and rock. Nearly half of this material is located above the water level, and the other half is below.

### **Qanurittuq Ittunik Avatinga: Inuuhimayunut Avatinga**

The fall fish run is estimated to be over by September 15. The dredging will take place within a time window authorised by the DFO

### **Qanurittuq Ittunik Avatinga: Inungit-maniliurutingit Avatinga**

The Existing Bridge is designed for light traffic only, i.e. pickup trucks and four-wheelers. Heavy trucks, retrieving gravel on the other side, frequently ford the river a few hundred meters upstream from the bridge crossing, causing siltation and general contamination.

### **Miscellaneous Project Information**

N/A

### **Naunaiyainiq ukuninnga Ayurhautingit unalu Piumayaat Ikikliyuumiutinahuarutit**

Temporary siltation of the stream during dredging

### **Tamatkiumayunik Ihuikgutivaktunik**



The continuous erosion and repairs of the existing causeway, as well as the need for fording the will be eliminated. Some 800 sq. m. fish habitat will be recovered.

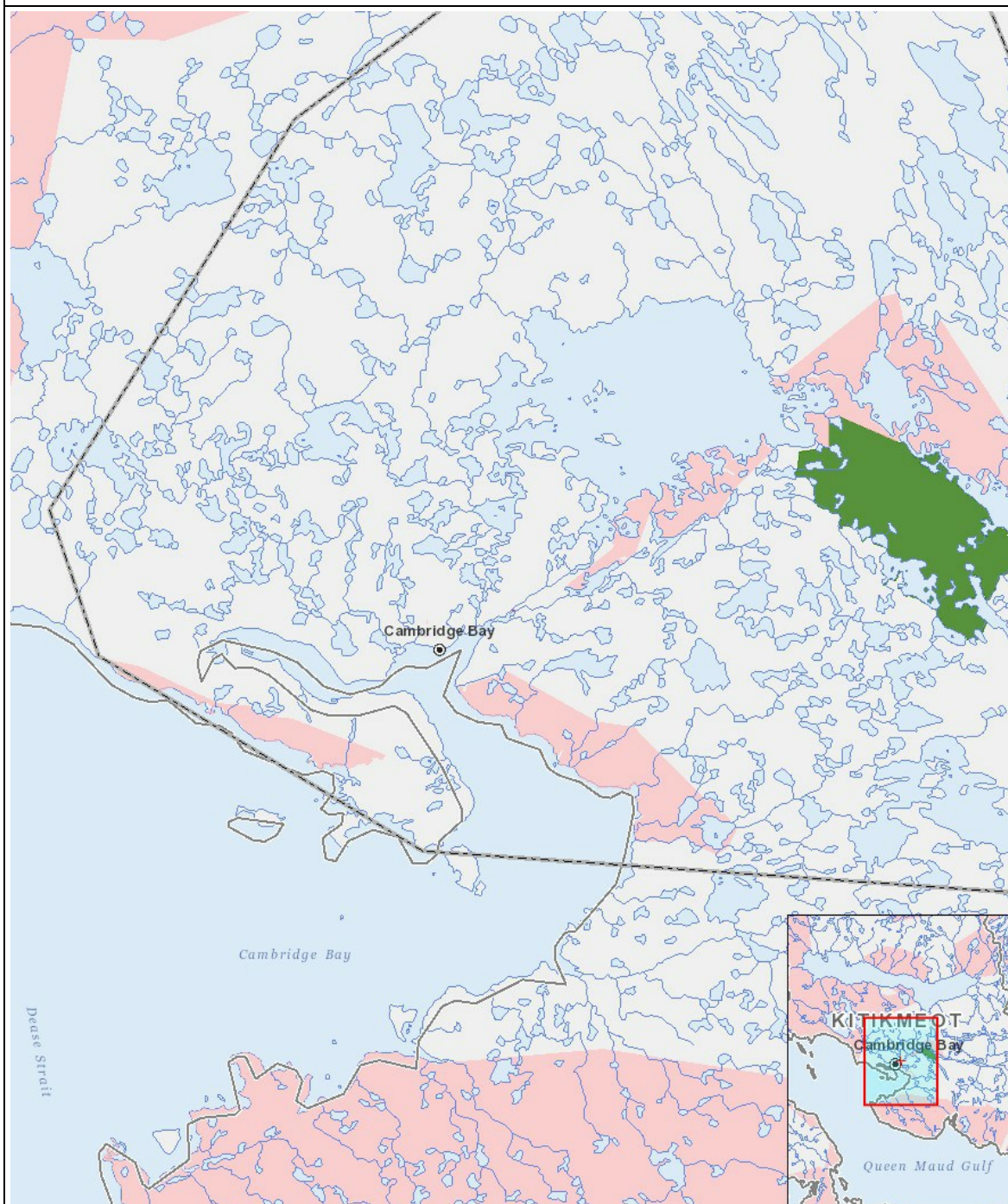
# Impacts

## Ilitariyauniq Avatiliriniqmut Ayurhautingit

		PHYSICAL	Designated environmental areas	Ground stability	Permafrost	Hydrology / Limnology	Water quality	Climate conditions	Eskers and other unique or fragile landscapes	Surface and bedrock geology	Sediment and soil quality	Tidal processes and bathymetry	Air quality	Noise levels	BIOLOGICAL	Vegetation	Wildlife, including habitat and migration patterns	Birds, including habitat and migration patterns	Aquatic species, incl. habitat and migration/spawning	Wildlife protected areas	SOCIO-ECONOMIC	Archaeological and cultural historic sites	Employment	Community wellness	Community infrastructure	Human health
Havakvinga																										
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Aulapkaininnga																										
Dredging		-	P	-	-	P	-	-	-	-	-	-	-	-		-	-	-	P	-		-	-	P	-	-
Piiqtauniq																										
-		-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

(P = Nakuuyuq, N = Nakuungittut unalu mikhilimaittuq, M = Nakuungittut unalu mikhittaaqtuq, U = Naluyauyuq)

# Havaariyauyukhamut Nayugaa



## List of Project Geometries

- |   |          |  |
|---|----------|--|
| 1 | polyline | Location of existing and new bridge also location of river bed restoration |
|---|----------|--|