



NIRB Application for Screening #125619

Paallavvik Joint research/expedition between Wild Blue Media, Red Bull, University of Glasgow

Application Type: New

Project Type: Scientific Research

Application Date: 6/11/2021 6:01:54 AM

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

Proposed Authorization: from 0001-01-01 to 0001-01-01

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Non-technical project proposal description

English: A collaborative research and filming trip to Paallavvik between Wild Blue Media , University of Glasgow and Red Bull. The proposed project is a geological research trip to obtain small rock samples from Paallavvik that can prove where the Earth's water came from. The samples are on cliffs which will require expert climbers to access. Will Gadd, a Canadian Red Bull climber and Dr Lydia Hallis, the leading expert geologist on this question, have teamed up to make this research possible. The research expedition will be filmed for international broadcast by Red Bull. The team of roughly 16 will be made up primarily of Nunavummiut and Candian crew, with lead scientist and two others from the UK. The team will camp on Paallavvik for 10 days in early August 2021- building no permanent structures and taking care not to leave any waste. Plans to travel to the island are subject to change due to Covid, but the majority of the team is currently planning to travel straight from Iqaluit to Pallavvik by aircraft in order to reduce contact with communities. All crew will comply with quarantine, testing, and vaccine requirements. The research work on Paallavvik will include taking small rock samples from the cliff faces using only manual tools. If the sample locations are high on the cliff faces, Will Gadd and 2 other climbers will help Dr Hallis access them. Paallavvik is close to the National Wildlife Area but the team will not enter this area. Qikitarjuaq is the closest community, and some of the team will be made up of Qikitarjuaq residents who will provide advice, logistical support, and boats. Why the research expedition is important The combination of professional climbers and geologists make this a unique opportunity to reveal the knowledge that the rocks on Paallavvik hold about the origins of the Earth's water. The results of this investigation could change our understanding of how likely it is that there is life on other planets. The weather window for climbing and accessing the island exists only in August, so it is very important that this work takes place at this time. The samples that Dr Hallis collects will be shared with research teams around the globe working on understanding the Earth's early history. This means the research expedition has the potential to advance understanding of other questions for generations to come. Data will be written up and shared in open access journals. The documentary of the research expedition will be broadcast internationally by Red Bull- showcasing the beauty of the region and including Nunavummiut voices as well as Nunavummiut crew.

French: N/A from understanding of the email sent from NIRB on 8th June 2021), the descriptions are required in languages of affected communities (Qikitarjuaq- Inuktitut/English). Please advise if this is not the case.

[illegible]

Operations Phase: from 2021-08-01 to 2021-08-15

Activities

Location	Activity Type	Land Status	Site history	Site archaeological or paleontological value	Proximity to the nearest communities and any protected areas
Landing on airstrip on Durban Island using Twin Otter plane. Crew will then be ferried to Paallavvik by boat.	Airstrip use or construction	Inuit Owned Sub-Surface Lands	Airstrip was built for the clean up operation on Paallavvik and Durban.	N/A	Closest protected area is National Wildlife Area 15km away. Closest community Qikitarjuaq 94km away
Research will take place on a number of cliffs on northern Paallavvik. Research will include aerial image capture, 3D modelling, climbing and small sample collection	Researching	Inuit Owned Sub-Surface Lands	Paallavvik previously had an Inuit community on the south of the island. It was a location of trading with Scottish whaling ships in the 1830s and later a part of the radar and weather stations-decommissioned 1956.	Northern end N/A	Proximity to National Wildlife Area 2km at nearest point. Distance to closest community Qikitarjuaq 80km
Proposed campsite will be on northern end of Paallavvik	Camp	Inuit Owned Sub-Surface Lands	Paallavvik previously had an Inuit community on the south of the island (not recorded near this camp) It was a location of trading with Scottish whaling ships in the 1830s and later a part of the radar and weather stations-decommissioned 1956. Has previously hosted research trips for geological research.	N/A	proximity to National Wildlife Area 5km. Distance to nearest community-Qikitarjuaq-80km.

Community Involvement & Regional Benefits

Community	Name	Organization	Date Contacted
Qikiqtarjuaq	Mayor Harry Alookie	Mayor	2021-06-11
Qikiqtarjuaq	Billy Arnaquq	Nunavut Experience Outfitting	2021-05-21

Authorizations

Indicate the areas in which the project is located:

Transboundary
South Baffin

Authorizations

Regulatory Authority	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Qikiqtani Inuit Association	For conducting research on Inuit owned lands.	Not Yet Applied		
Nunavut Research Institute	For conducting scientific research.	Not Yet Applied		

Project transportation types

Transportation Type	Proposed Use	Length of Use
Air	Twin otter transport from Iqaluit to Durban island. 1 person Paramotor/paraglide flight to collect imagery for 3D modelling. Non powered paraglide preferable but if conditions aren't suitable- paramotor will be used.	
Water	Boat transport for crew from Durban Island to Paallavvik	
Land	Getting around the island will be done on foot	

Project accomodation types

Temporary Camp

Material Use

Equipment to be used (including drills, pumps, aircraft, vehicles, etc)

Equipment Type	Quantity	Size - Dimensions	Proposed Use
Paraglide/ paramotor	1	10 metre span	World expert paraglider Will Gadd will use this equipment to obtain high quality footage of the cliffs- which the geologist will use to plan sample collection.
Twin Otter plane	1	15m x 20m	To transport crew from Iqaluit to Durban Island. This is a transport option we have chosen to reduce contact with the community at Qikitarjuaq as a Covid safety protocol.
Boat	1	TBC	To transport crew from airstrip on Durban Island to Paallavvik. To be on standby in case of emergency evacuation.

Detail Fuel and Hazardous Material Use

Detail fuel material use:	Fuel Type	Number of containers	Container Capacity	Total Amount	Units	Proposed Use
Other	fuel	3	5	15	Liters	White gas for camping stoves- approx 1 litre/day
Gasoline	fuel	7	20	140	Liters	For generators to recharge cameras and equipment. Amount of fuel used will depend on power usage. Also to power any small boats we require to access sea cliffs.
Aviation fuel	fuel	1	780	780	Gallons	Aviation fuel- will not be housed on site. Aircraft will refuel either from Qikitarjuaq or Iqaluit. 2 round trips estimated fuel use

Water Consumption

Daily amount (m3)	Proposed water retrieval methods	Proposed water retrieval location
0	Water will be retrieved from clean streams, using a water jug to carry water back to camp. No alterations to	Proposed water retrieval location TBD depending on final camp location but most likely a stream in the bowl on the

bed and banks for a watercourse will
be made.

northwest of the island.

Waste

Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional treatment procedures
Camp	Greywater	Minimal dishwater for 16 people for 10 days	Soaps will be used at least 70 meters from water sources. Strained dishwater will be scattered at least 70 meters from water sources.	All dish soaps and soaps will be biodegradable.
Camp	Sewage (human waste)	14 people	A temporary pit-latrine will be constructed for human waste. The pit-latrine will be at least 70m from water. At the end of stay the deep hole will be covered with soil.	N/A

Environmental Impacts:

We will remain outside the National Wildlife Area. In consultation with the Wildlife Service, the trip is proposed to take place in August to avoid disrupting birds as much as possible. No permanent structures will be built. All soaps used will be biodegradable. The human waste from the researchers and crew will be kept separate from contaminating water sources in a pit latrine. Fresh water will be required from streams on Paallavvik but every effort will be taken to minimise water usage.

Additional Information

SECTION A1: Project Info

SECTION A2: Allweather Road

SECTION A3: Winter Road

SECTION B1: Project Info

SECTION B2: Exploration Activity

SECTION B3: Geosciences

SECTION B4: Drilling

SECTION B5: Stripping

SECTION B6: Underground Activity

SECTION B7: Waste Rock

SECTION B8: Stockpiles

SECTION B9: Mine Development

SECTION B10: Geology

SECTION B11: Mine

SECTION B12: Mill

SECTION C1: Pits

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

Description of Existing Environment: Physical Environment

Camp site is 5 km from protected National Wildlife Area. No crew to enter National Wildlife Area. From reports from previous geological survey- some cliff faces have occasional rockfalls. Expert geologist and climbing team will avoid potential flaking faces.

Description of Existing Environment: Biological Environment

Potential encounters with Polar Bears. Bear perimeter fence to be used on camp and bear watch to be maintained with experienced guides from Iqaluit and Qikitarjuaq to mitigate risk of close encounters. Guides also to advise on minimally disruptive camping (non harmful biodegradable soaps etc)

Description of Existing Environment: Socio-economic Environment

Paallavvik uninhabited. Research site 80km from Qikitarjuaq. Area used for some hunting- local Qikitarjuaq hunters/guides to be employed to advise.

Miscellaneous Project Information

- Human health risk assessment- and Emergency Response Plan. Secret Compass to provide overarching safety advice. 3 ACMG qualified guides on site with First Aid training as well as experienced polar guides and local guides for situational hazard awareness. Evacuation procedures via either helicopter scrambled from Iqaluit, or Twin Otter plane landing on Durban Island. Projected evac time between 8-12 hours. Full risk assessment to be conducted before travel. to meet stringent production insurance checks.

Identification of Impacts and Proposed Mitigation Measures

- Minimal impact via disturbance of flora and fauna from camping. Mitigation via minimally disruptive camping methods e.g. preventing any water course contamination, only staying for 10 days, no permanent structures. Furthermore research limited to 10 days on site- all further processing of samples etc to occur off site. -Plane landing on Durban Island will use pre-existing airstrip. No extra building/disruption of habitat required for landing. -Socioeconomic impacts- positive employment for Qikitarjuaq and Iqaluit residents. COVID risk mitigated by all crew complying with stringent multiple PCR tests, quarantine, and vaccination. Travel plans deliberately created to avoid excess contact between crew and wider community (e.g. at Qikitarjuaq) by direct travel to Paallavvik. -Positive impact via international broadcast of documentary showcasing the beauty of Paallavvik and the region

Cumulative Effects

-Cumulative impact potential- This trip is intended to collect geological samples that can be shared with other research

teams, reducing the need for further sampling and further trips. There have been previous research trips to collect suitable samples, but the sample sharing from this trip should negate the need for trips in the near future. - Potential for the documentary to increase interest in travel to Nunavut. This may have both positive socioeconomic effects and potential negative environmental effects. Stressing the importance of flora and fauna in the documentary will hopefully mitigate negatives by prompting more sustainable tourism.

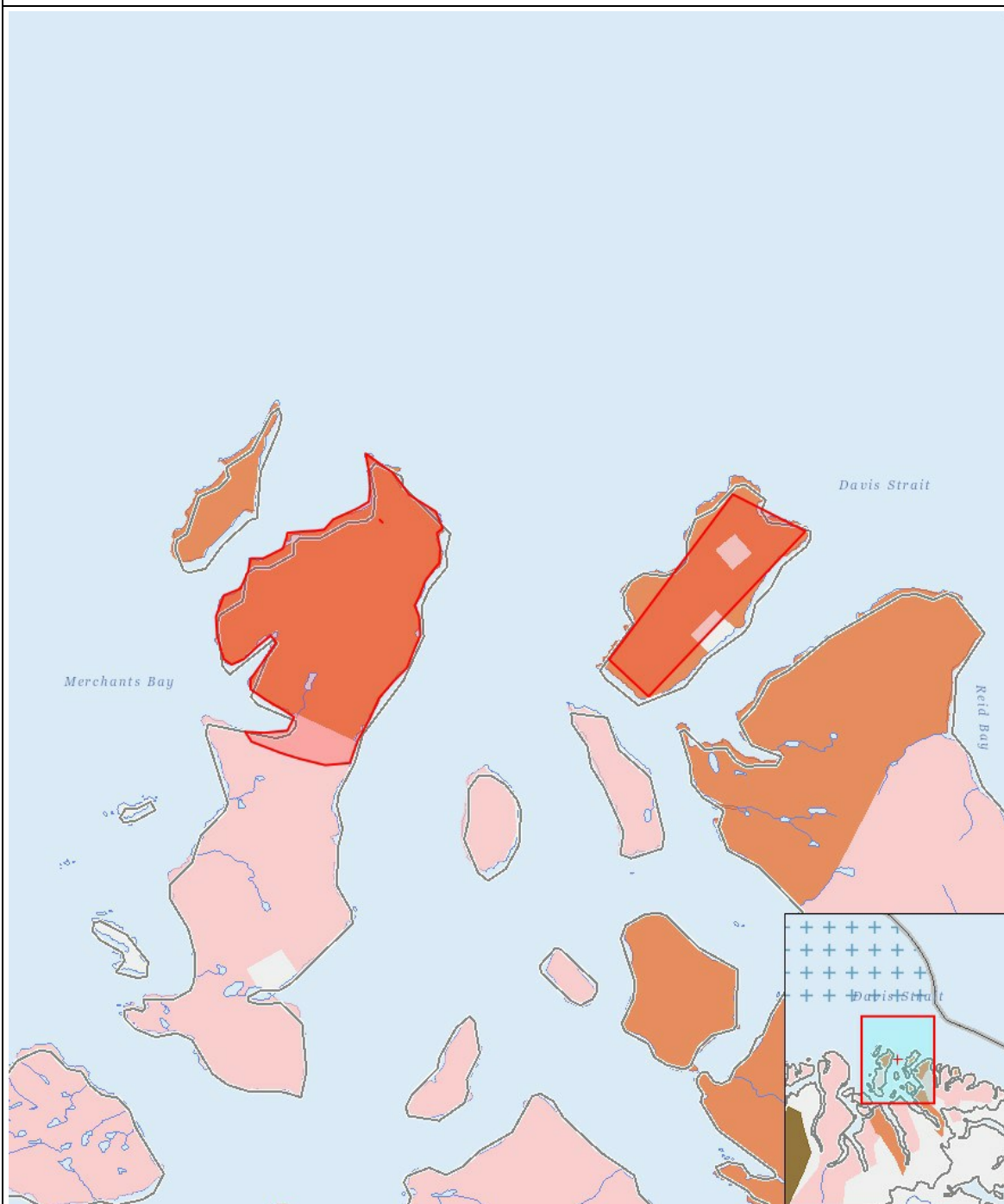
Impacts

Identification of Environmental Impacts

		P H Y S I C A L																B I O L O G I C A L																S O C I O - E C O N O M I C															
		Designated environmental areas																Vegetation																Archaeological and cultural historic sites															
		Ground stability																Wildlife, including habitat and migration patterns																Employment															
		Permafrost																Birds, including habitat and migration patterns																Community wellness															
		Hydrology / Limnology																Aquatic species, incl. habitat and migration/spawning																Community infrastructure															
		Water quality																Wildlife protected areas																Human health															
		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																																															

(P = Positive, N = Negative and non-mitigatable, M = Negative and mitigatable, U = Unknown)

Project Location



List of Project Geometries

- 1 polygon Landing on airstrip on Durban Island using Twin Otter plane. Crew will then be ferried to Paallavvik by boat.
- 2 polygon Research will take place on a number of cliffs on northern Paallavvik. Research will include aerial image capture, 3D modelling, climbing and small sample collection
- 3 polygon Proposed campsite will be on northern end of Paallavvik