

Project Dashboard

Paallavvik Joint research/expedition between Wild Blue Media, Red Bull, University of Glasgow (149557)

Proposal Status: Conformity Determination Issued

Project Overview

Type of application: **New**

Proponent name:	Thomas Gaisford
Company:	Wild Blue Media

Schedule:

Start Date:	2021-07-19
End Date:	2021-08-28
Operation Type:	Annual

Project Description:

Dr Lydia Hallis has been researching the origins of the Earth's water using rock samples only found on Paallavvik and potentially Cape Searle. These were collected by a different team on previous research trips- I believe the most recent being 2004. Lydia's pioneering ion microprobe work on these unique samples has supported a new theory that the Earth's water may be derived from the dust swirling around the Sun before the planets formed. This could make it more likely that there are other water-rich planets like Earth. Lydia's team's paper on this was published in Science and garnered international press attention: - <https://www.theglobeandmail.com/news/national/earths-secrets-preserved-in-the-arctic-cliffs-of-padloping-island/article30731254/> - <https://www.sciencemag.org/news/2015/11/earth-may-have-kept-its-own-water-rather-getting-it-asteroids?rss=1> - <https://www.bbc.co.uk/news/uk-scotland-glasgow-west-34808620> Lydia herself has never managed to get to Paallavvik to take new samples due to the difficulties of access. This is where Will Gadd, a world-leading Canadian climber and paraglider, supported by Red Bull as an athlete, is aiming to step in. Will Gadd will lead the expedition to help Lydia survey and collect rock samples from the picrite volcanics of Cape Searle and Paallavvik for on-site chemical compositional analysis via XRF, and later analysis in Glasgow via ion microprobe. This is to establish the volatile element composition, including hydrogen and nitrogen isotope ratios, of the earliest melts from the proto-Icelandic mantle plume. This mantle plume is thought to represent an ancient deep mantle source region, untouched since the Earth's early history. The collected samples will be made available for study by other academics, including collaborators at the Scottish Universities Environmental Research Centre and the University of Alabama, who are interested in the noble gas contents of these samples. Wild Blue Media (UK) intend to film the process of the expedition and the exciting scientific breakthrough it could support. Permissions and support will be sought from persons within Nunavut- for help with logistics, travel and guiding. Due to Covid, we intend to minimise unnecessary contact with communities by travelling straight to Paallavvik and Cape Searle from Iqaluit.

Personnel:

Persons:	20
Days:	14

Project Map

List of all project geometries:

ID	Geometry	Location Name
7841	polygon	We intend to camp and obtain rock samples via climbing from the Northern end of Paallavvik and, if possible, from the cliffs of

Cape Searle at the NE of
Qaqaqut

Planning Regions:

Qikiqtani

Affected Areas and Land Types

Inuit Owned Surface Lands

Settlement Area

Project Land Use and Authorizations

Project Land Use

Scientific Research

Scientific Research

Licensing Agencies

NRI: Scientific Research Licence

CWS: National Wildlife Area permit under the Wildlife Area Regulations

QIA: Land Use Licence I

Other Licensing Requirements

No data found.

Material Use

Equipment

Type	Quantity	Size	Use
Helicopter B2 or B3	1	10.93m x 3.15m	To transport crew from Iqaluit. We have a number of transport options, but a direct transport from Iqaluit to Paallavvik by helicopter would be necessary if Covid restrictions are still in place as it would avoid contact between crew and communities.
small boat- likely RIB	1	TBC	The RIB would allow visual survey of the sea cliffs on Paallavvik and Cape Searle, and transport of climbers/scientists to the rock face
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.

Fuel Use

Type	Container(s)	Capacity	UOM	Use
Other	3	5	Liters	White gas for camping stoves- approx 1 litre/day For generators to recharge cameras and equipment. Amount of fuel used
Gasoline	7	20	Liters	will depend on power usage. Also to power any small boats we require to access sea cliffs. This would not be on Paallavvik. Helicopter would refuel in Iqaluit/ Qikitarjuaq. If we fly all crew from Iqaluit -> Paallavvik by helicopter then the helicopter will perform est 3 round trips at 6 hours/ tripAssume 40 GPH for
Aviation fuel	1	720	Gallons	

avg
consumption.

Hazardous Material and Chemical Use

Type	Container(s)	Capacity	UOM	Use
No records found.				

Water Consumption

Daily Amount (m³)	Retrieval Method	Retrieval Location
0.08	Water will be retrieved from clean streams, using a water jug to carry water back to camp. No alterations to bed and banks for a watercourse will be made.	TBD depending on final camp location

Waste and Impacts

Environmental Impacts

We have contacted wildlife researchers familiar with the area for advice on minimising disturbance. We are timing the trip to the site (first two weeks of August) according to when we have been advised fulmar populations are more likely to have left, and will continue to consult with CWS for our application. Once on the island, our footprint will be as light as possible. We will have experienced operators from Nunavut to ensure camping set up and activities are as low impact as possible.

Waste Management

Waste Type	Quantity Generated	Treatment Method	Disposal Method
Sewage (human waste)	20 people for 14 days	If we are advised on any additional treatment procedures required we will absolutely undertake them.	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.
Greywater	Minimal dishwater for 20	All dish soaps and soaps will	Soaps will be used at least 70

people for all be meters from
14 days biodegradable water
sources.
Strained
dishwater
will be
scattered at
least 70
meters from
water
sources.