







kavamaliqidjutikharnik havagviingit, HTOtkut nunalaangitlu pulaagiaqaqtun ukuninga nayugakhaanun pigiaqagumik. Nayugainun pulaarutit upalungaiyaqtauhimayut qitqani napaani ublup uvalu ubluq tamaat hivitunia uvalu naittumik taimaaqtitauniaqtuq hilatigut uvaluuniin avatikkut qanuginiit. Hivuranarniq naunaiyaqnit iniqtauniat hivuani tamaita huliniit. Umiat auladjutait uvalu tulakviit uvalu hulidjutit tingmiyunun nayugaini titiraqhimayut niriuktauyut amigaitqiyaungilutik uvaluuniin nuutiqlugit hulaqutit avatipitingnun. Ilaujugut Katimajiujunut Ukiuqtaqtumi Umiarjuakkut Aqiiqattaqpaktunut Aulapkaijit (AECO, [www.aeco.no](http://www.aeco.no)) imaalu malikniaqtait katimajiiit auladjutikhangit uumajuliqinirmullu maliktakhat. Malingniaqtavullu Nunavut Kavamanga Maligutainni Qanuriliurnikkut Aulapkaijinun Nunavunmi uvanilu kavamatkut pitquidjutainnik aulapkainikkut haniani nanuinni tunijauhijun Umiarjuakkut Nunavunmi. Unaluttauq, uvagut nanminiq auladjutikhangit atuqtakhat Zodiac-mut qajanullu aulapkaidjutikhangit ukuallu Nanuit Aannuraallu Qajangnaitkutikhat Upalungaijautikhat.

**Personnel**

Personnel on site: 267

Days on site: 5

Total Person days: 1335

Operations Phase: from 2023-08-19 to 2023-08-23

## Activités

| Emplacement  | Type d'activité       | Statut des terres | Historique du site   | Site à valeur archéologique ou paléontologique   | Proximité des collectivités les plus proches et de toute zone protégée |
|--|-----------------------|-------------------|--|--|--|
| Pangnirtung /<br>66.20969650201118,<br>-63.81861577851659          | Tourism<br>Activities | Crown             | Pangnirtung is a small community located on Baffin Island in the Canadian territory of Nunavut. The region surrounding Pangnirtung has a rich archaeological history that spans thousands of years                 | Archaeological excavations in the area have revealed evidence of ancient Inuit occupation, including the remains of tent rings, stone tool fragments, and hunting implements. These findings provide valuable insights into the indigenous cultures that inhabited the region and their subsistence strategies.                                    | Pangnirtung  |
| Kekerten Island /<br>65.70218394993098,<br>-65.70428574709575      | Tourism<br>Activities | Crown             | Kekerten Island is an uninhabited island located in the Canadian Arctic Archipelago. Archaeological research on Kekerten Island has revealed evidence of prehistoric Thule culture.                                | Thule people, ancestors of the modern Inuit, occupied the island around 1,000 years ago. Excavations have uncovered stone houses, tent rings, and tools such as harpoon heads, knives, and scrapers. The artifacts found on Kekerten Island contribute to our understanding of early Inuit culture and their adaptation to the Arctic environment. | Pangnirtung  |
| Monumental Island /<br>62.770584670621005,<br>-63.44842256239589   | Tourism<br>Activities | Crown             | Situated in the Beaufort Sea, Monumental Island is known for its intriguing archaeological sites. The island is home to ancient Inuit hunting camps, with remnants such as tent rings, stone tools, and cache pits | These archaeological discoveries shed light on the subsistence strategies, social organization, and cultural practices of the indigenous people who relied on the marine resources of the area.  | Iqaluit  |
| Lower Savage Islands /<br>61.80953923772006,<br>-64.99695497441807 | Tourism<br>Activities | Crown             | : Lower Savage Island, also known as Nuvuk or Akvitaq in   | Archaeological investigations on Lower Savage Island have uncovered  | Iqaluit  |

|                                       |                    |       |  |  |         |
|---------------------------------------|--------------------|-------|--|--|---------|
|                                       |                    |       | Inuktitut, is an uninhabited island located off the northern coast of Hudson Bay. It is part of the Qikiqtaaluk Region and lies to the northwest of Marble Island. Lower Savage Island is known for its archaeological significance, particularly in relation to the Thule culture | evidence of ancient Thule dwellings, tent rings, and hunting structures. These remnants provide valuable insights into the lifestyle, subsistence strategies, and cultural practices of the Thule people. Artifacts such as stone tools, harpoon heads, bone implements, and pottery shards have been discovered on the island |         |
| Butterfly Bay / 62.98378°, -64.79746° | Tourism Activities | Crown | Bay located on Baffin Island. Named by mapmaker, Charles Francis Hall, the original name was Tukeliketa Bay. In Inuktitut, the name should properly be spelled Tarralikitaq. It means butterfly.   | .  | Iqaluit |

#### Engagement de la collectivité et avantages pour la région

| Collectivité | Nom                                      | Organisme     | Date de la prise de contact |
|--------------|--|---------------|-----------------------------|
| Pangnirtung  | Pang_sao@qiniq.com,<br>Pangedo@qiniq.com | Hamlet Office | 2023-05-28                  |

## Autorisations

Indiquez les zones dans lesquelles le projet est situé:

Transboundary  
South Baffin

### Autorisations

| Organisme de régulation  | Description des autorisations | État actuel     | Date de l'émission/de la demande | Date d'échéance |
|--|-------------------------------|-----------------|----------------------------------|-----------------|
| Gouvernement du Nunavut, ministère du Développement économique et des Transports | Outfitter's License           | Not Yet Applied |                                  |                 |
| Gouvernement du Nunavut, ministère de l'Environnement                            | Wildlife Observation License  | Not Yet Applied |                                  |                 |

### Project transportation types

| Transportation Type | Utilisation proposée                         | Length of Use |
|---------------------|--|---------------|
| Water               | Cruise Vessel - National Geographic Explorer |               |

### Project accomodation types

Autre,

## Utilisation de matériel

Équipement à utiliser (y compris les perceuses, les pompes, les aéronefs, les véhicules, etc.)

| Type d'équipement           | Quantité | Taille – Dimensions                      | Utilisation proposée   |
|-----------------------------|----------|--|--|
| Cruise Vessel - NG Explorer | 1        | 112 m long; 6471 gross registered tonnes | Transportation and accommodations for passengers and crew.   |
| Zodiacs                     | 11       | 19' long                                 | Transport passengers from vessel to provide scenic cruising along shoreline.   |
| Sea Kayak                   | 20       | 16ft long                                | Transport passengers from vessel to provide scenic cruising along shoreline. One safety Zodiac is assigned to be remain within close proximity to the kayaking operation at all times. |

Décrivez l'utilisation du carburant et des marchandises dangereuses

| Décrivez l'utilisation de carburant : | Type de carburant | Nombre de conteneurs | Capacité du conteneur | Quantité totale | Unités | Utilisation proposée  |
|---------------------------------------|-------------------|----------------------|-----------------------|-----------------|--------|-----------------------|
| Gasoline                              | fuel              | 30                   | 25                    | 750             | Liters | Gasoline for Zodiacs. |

Consommation d'eau

| Quantité quotidienne (m3) | Méthodes de récupération de l'eau proposées | Emplacement de récupération de l'eau proposé |
|---------------------------|---|--|
| 0                         |   | N/A  |

# Déchets

## Gestion des déchets

| Activités du projet | Type des déchets                 | Quantité prévue | Méthode d'élimination   | Procédures de traitement supplémentaires   |
|---------------------|----------------------------------|-----------------|---|--|
| Tourism Activities  | Déchets combustibles             | TBA             | Normally separated and incinerated by an IMO type approved incinerator (or removed for recycling or disposal ashore in certified ports); however there is NO incineration while in the NWA. Held until suitable/certified area to offload waste | .  |
| Tourism Activities  | Eaux grises                      | TBA             | The vessel is equipped with gray water holding tanks and an IMO certified sewage treatment plant and follows all MARPOL requirements.   | See attached for Gray Water details. The tank has the ability to hold 120 hours of gray water. No untreated gray water will be discharged. If it must be discharged it will be in accordance with Marpol Annex 5 and an equipment certificate can be provided to IRC if requested post voyage. Solid parts are removed by the system and can be retained on board for the duration of the NWP. |
| Tourism Activities  | Dangereux                        | TBA             | Held onboard until suitable and certified waste disposal company can attend for offload   | .  |
| Tourism Activities  | Déchets non combustibles         | TBA             | No discharges while in the NWA; elsewhere food passed through a macerator (<25mm) and disposed to sea as per MARPOL V and Polar Code at min 12 nm from nearest land or from areas of ice concentrations exceeding 1/10                          | .  |
| Tourism Activities  | Eaux usées (matières de vidange) | TBA             | Each vessel is required to comply with the MARPOL requirement for sewage treatment. All sewage, gray water and kitchen sink water is stored in tanks until  | Sludge is fully retained on board and discharged ashore.   |

|  |  |   |  |
|--|--|---|--|
|  |  | <p>it can be processed. The treatment plant chlorinates and flocculates sewage, separating solids and liquids. If possible, all waste will be held in tanks and disposed of only if necessary. If tank is full, then untreated sewage will be discharged at a moderate rate en route at a speed of no less than 4 knots when the ship is more than 12 nautical miles from land. MARPOL permits discharges of treated sewage beyond the 3-nautical mile range.</p> |  |
|--|--|---|--|

**Répercussions environnementales :**

Please see attached document.

# **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 de l'environnement existant : Environnement physique**

The Canadian Arctic Archipelago covers an area of around 1 500 000 sq km and consists of 94 major islands and more than 36 000 minor ones. The archipelago is bound by the Beaufort Sea to the west and by Hudson Bay and the Canadian mainland to the south. The various islands of the Canadian Arctic Archipelago are separated by a series of waterways collectively known as the Northwest Passage. In the past, the Northwest Passage has been impassable owing to its thick, year-round sea ice. Ice patterns are changing due to climate change. Mountain regions exist amongst Tundra landscapes.

### **Description de l'environnement existant : Environnement biologique**

Lindblad Expeditions is experienced in travelling in sensitive ecosystems and the vessel has been designed to reduce impact on flora and fauna. Operations in Antarctica and Svalbard are similar in nature, and the NGEX vessel was designed to mitigate environmental impact specifically for sensitive regions as these. The vessel has an X-Bow design as it creates less resistance in the sea and thus reduces fuel consumption and vessel noise. Two separate engine rooms and a double propulsion system is a part of the required enhanced safety. In addition, the two rotating propulsion units improve manoeuvrability, which is particularly important in ice infested waters. With state-of-the-art engines, bow thrusters and stabilizers, the vessel is quiet in operation, thus making minimal impact to wildlife affected by engines noise. Emissions to air and water are limited by the strictest marine regulations and the engines are therefore running on low sulphur Marine Gas Oil. No fuel tanks are arranged directly towards the shell, this reduces the risk of oil spill into the sea in case of an accident. The vessel has a treatment system for the ballast water to avoid the spread of biological organisms from one area to another, and she is designed to minimize the impact on marine life by causing low underwater noise levels. To minimize the power consumption, all lighting is based on LED technology and the waste heat from engine cooling water and from the exhaust gas is recovered and used for heating purposes and freshwater production. When in operation the vessel will ensure in wildlife concentrated areas ships speed will be reduced. The vessel is sailing between 8-13 knots in the IRS and the full capacity of the ship is 22 knots. Therefore, speed is of utmost consideration when sailing in wildlife rich areas. In addition, the ship design and operation, when onshore wildlife monitors will establish a perimeter at all land stops to ensure dangerous wildlife is spotted as far in advance as possible. No food will be brought ashore to avoid attracting wildlife. Scout boats will search the area before any zodiac cruise. Polar bear denning areas, caribou calving, walrus haul outs and migratory groundswell be avoided. We will follow all guidelines and regulations for wildlife, and we will also follow any recommendations set forth from the communities, and the Hunters and Trappers Organizations. The vessel will be transiting through wildlife habitats and passengers and crew will be landing ashore in areas where wildlife may be present. Passengers and crew will also be visiting areas where delicate tundra flora and vegetation are found. This activity could be indirectly disruptive to certain animal and plant species. The Species at Risk found within proposed project area; American Black Bear American Coot; Baikal Sedge; Bald Eagle; Bank Swallow; Barn Swallow; Bering Cisco; Boreal Owl; Buff-breasted Sandpiper Bull Trout; Canada Lynx; Canada Warbler; Caribou; Collared Pika; Columbia Spotted Frog Common Loon; Common Nighthawk Dolly Varden; Double-crested Cormorant Dune Tachinid Fly; Eskimo Curlew; Golden Eagle; Great Grey Owl ; Grizzly Bear; Gypsy Cuckoo Bumble Bee; Gyrfalcon; Horned Grebe; Little Brown Myotis; Merlin; Narrow-leaved Wallflower; Northern Goshawk atricapillus subspecies Northern Grey Wolf; Northern Harrier; Northern Hawk Owl; Northern Mock Goldenweed; Northern Myotis; Olive-sided; Flycatcher; Peregrine Falcon anatum/tundrius; Peregrine Falcon tundrius subspecies; Polar Bear; Red Knot roselaari type; Rednecked Grebe; Red-tailed Hawk; Rough-legged Hawk; Rust;

Blackbird; Sharp-shinned Hawk; Short-eared Owl; Snowy Owl; Spiked Saxifrage; Spoonhead; Sculpin; Squanga Whitefish; Trumpeter Swan; Western Bumble Bee mckayi subspecies; Western Toad; Wolverine; Wood Biso; Wood's Sagebrush; Woodland caribou; Yellow-billed Loon; Yukon Aster; Yukon Draba Wolverine.

### **Description de l'environnement existant : Environnement socio-économique**

A community visit is planned for Pagnirtung. The intention is for the vessel to clear into Canada via CBSA and also visit the community. The intention is to work with the community to develop a program that allows the passengers to learn about the culture in a respectful and engaging manner. Passenger landing fees are paid to the Hamlet to ensure there is a fiscal benefit to the community. While the federal covid regulations have been dropped, we will adhere to any/all covid protocols requested by the communities. Appropriate archaeological permits have been applied for, and the onboard archaeologist will ensure all procedures are respected.

### **Miscellaneous Project Information**

### **Identification des répercussions et mesures d'atténuation proposées**

Please see attached document.

### **Répercussions cumulatives**

Cumulative impact is the impact of combined past, present and reasonably foreseeable activities and these activities occur over time and space. It is understood that cumulative impact may be the result of the repetitive occurrence of a single activity, the combined effect of multiple activities by some or several agents and that cumulative impact may be additive, interactive, synergistic, and antagonistic or a result of biomagnification. Tour operators who regularly travel to remote areas for example have refined their operating procedures to consider the assumption that cumulative impacts could occur and consequently

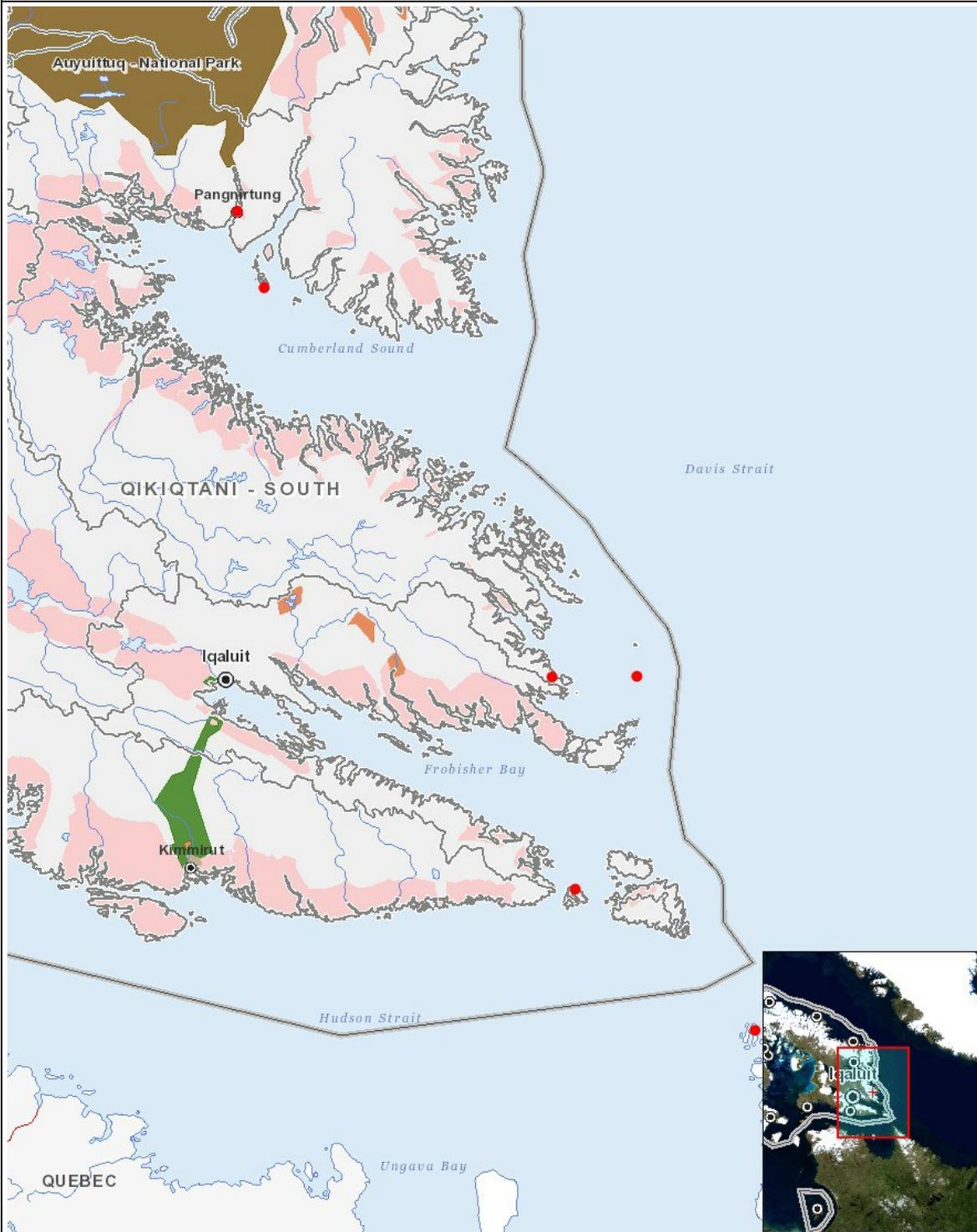
# Impacts

## Identification des répercussions environnementales

|                       | 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 |
|-----------------------|----------|--------------------------------|------------------|------------|-----------------------|---------------|--------------------|---|-----------------------------|---------------------------|--------------------------------|-------------|--------------|------------|------------|--|---|---|--------------------------|----------------|--|------------|--------------------|--------------------------|--------------|
| <b>Construction</b>   |          |                                |                  |            |                       |               |                    |   |                             |                           |                                |             |              |            |            |  |   |   |                          |                |  |            |                    |                          |              |
| -                     | -        | -                              | -                | -          | -                     | -             | -                  | -   | -                           | -                         | -                              | -           | -            | -          | -          | -  | -   | -   | -                        | -              | -  | -          | -                  | -                        | -            |
| <b>Exploitation</b>   |          |                                |                  |            |                       |               |                    |   |                             |                           |                                |             |              |            |            |  |   |   |                          |                |  |            |                    |                          |              |
| Tourism Activities    | M        | -                              | -                | -          | M                     | -             | -                  | -   | -                           | -                         | -                              | M           | M            | -          | M          | M  | M   | M   | -                        | P              | -  | -          | -                  | -                        | -            |
| <b>Désaffectation</b> |          |                                |                  |            |                       |               |                    |   |                             |                           |                                |             |              |            |            |  |   |   |                          |                |  |            |                    |                          |              |
| -                     | -        | -                              | -                | -          | -                     | -             | -                  | -   | -                           | -                         | -                              | -           | -            | -          | -          | -  | -   | -   | -                        | -              | -  | -          | -                  | -                        | -            |

(P = Positive, N = Négative et non gérable, M = Négative et gérable, U = Inconnue)

## Site du projet



## Liste des géométries de projet

- 1 point Pangnirtung / 66.20969650201118, -63.81861577851659
- 2 point Kekerton Island / 65.70218394993098, -65.70428574709575
- 3 point Monumental Island / 62.770584670621005, -63.44842256239589
- 4 point Lower Savage Islands / 61.80953923772006, -64.99695497441807
- 5 point Button Islands / 60.61643888115971, -64.17676646574418
- 6 point Butterfly Bay / 62.98378°, -64.79746°