

**APPENDIX 1**  
**2023 SHIPPING AND MARINE MONITORING SUMMARY**

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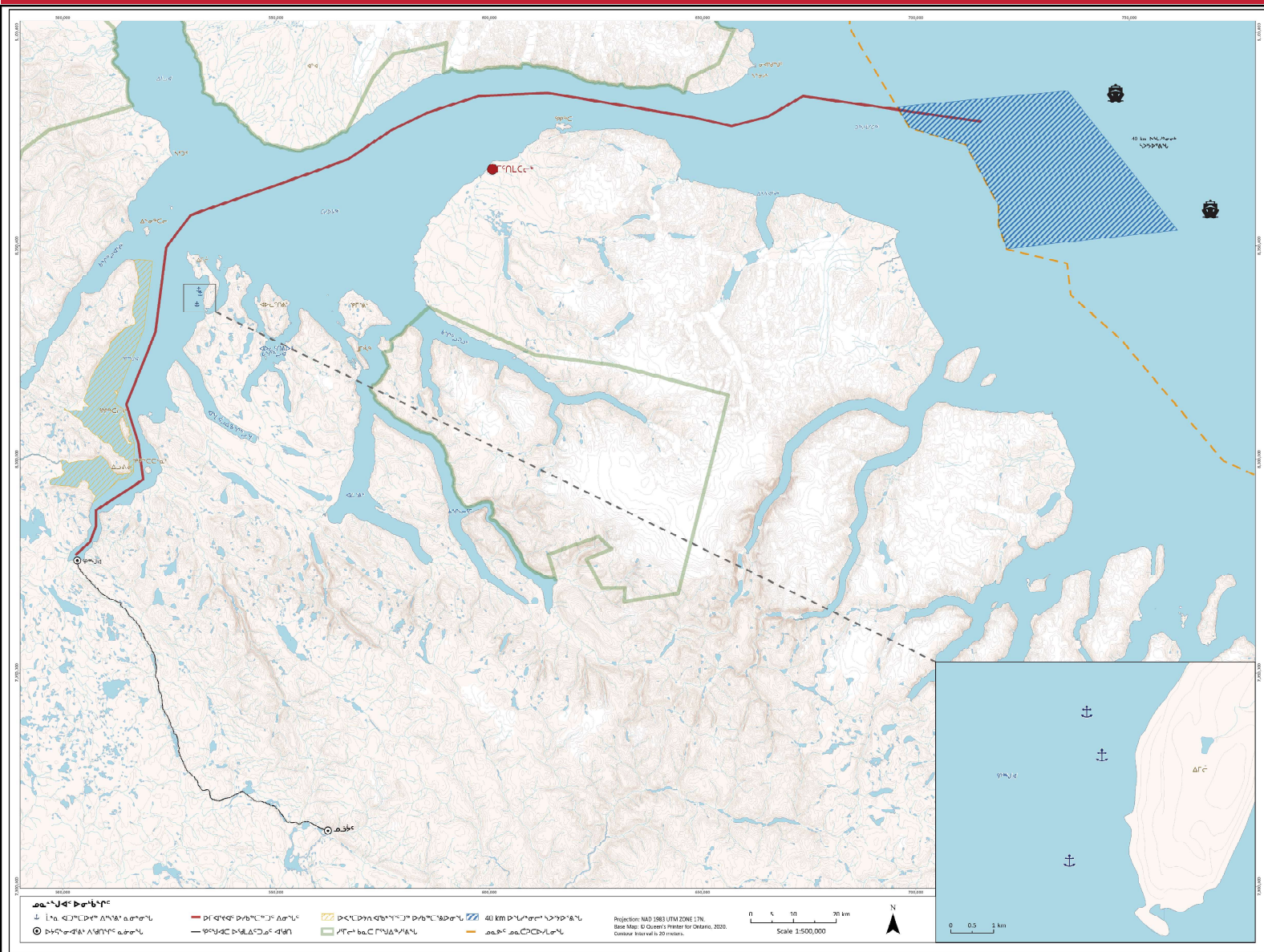
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**[www.baffinland.com](http://www.baffinland.com)**

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# SHIPPING AND MARINE MONITORING SUMMARY

2023 Shipping Season

## BAFFINLAND SHIPPING

### Contents

- 1** Baffinland Shipping Activities
  - 2** Addressing Concerns
  - 3** Shipping Route
  - 4** Potential Effects on the Environment
  - 5** Marine Monitoring Programs
  - 6** Communications
- 







# BAFFINLAND SHIPPING ACTIVITIES

In 2023, Baffinland Iron Mines Corporation ('Baffinland' or the 'Company') will begin its shipping activities once certain minimum requirements have been met, including no presence of landfast ice along the entire Northern Shipping Route, and confirmation that the Pond Inlet floe edge has been closed.

Baffinland will continue to implement mitigation measures for the 2023 shipping season in direct response to Inuit input. In an effort to reduce potential cumulative impacts of the Project to narwhal during this sensitive time period, Baffinland will again delay the start of the shipping season until icebreaking is no longer required for ore carriers transiting towards Milne Port, as done in 2021 and 2022. With this decision, the trigger to commence the beginning of the 2023 shipping season will be the presence of a continuous path of 3/10ths or less ice concentrations between the entrance of Eclipse Sound and Milne Port. An icebreaker will therefore not be used to break ice and escort ore carriers when ice is greater than 3/10ths ice concentration. In 2022, Baffinland introduced the use of convoys, where vessels travelled in groups throughout the shipping season. This reduced total underwater sound exposure, reduced potential interactions with hunters, and limited the number of vessel observations. Baffinland will implement convoys opportunistically throughout 2023 when it is deemed safe and possible.

The final shipping schedule will depend on prevailing ice conditions. Once initiated, shipping will continue until approximately mid-to-late October, with all vessels exiting the Regional Study Area no later than October 31st, 2023. If Baffinland is approved to transport up to 6.0 million tonnes (and an excess of stranded ore from 2022) as outlined in the Sustaining Operations Proposal (SOP) application, then there is expected to be up to 84 ore carriers throughout the 2023 shipping season.

## What you've shared with us

Through valuable conversations with local community members, Baffinland has heard a number of concerns related to shipping through the Northern Shipping Route:

The potential for shipping to interfere with local hunting

The potential for dust to impact the marine environment, including water and sediment quality, and marine organisms

The potential for vessels to affect marine mammals

The potential for shipping activity to harm the health of the marine ecosystem

# ADDRESSING CONCERNS



## How has Baffinland addressed these concerns?

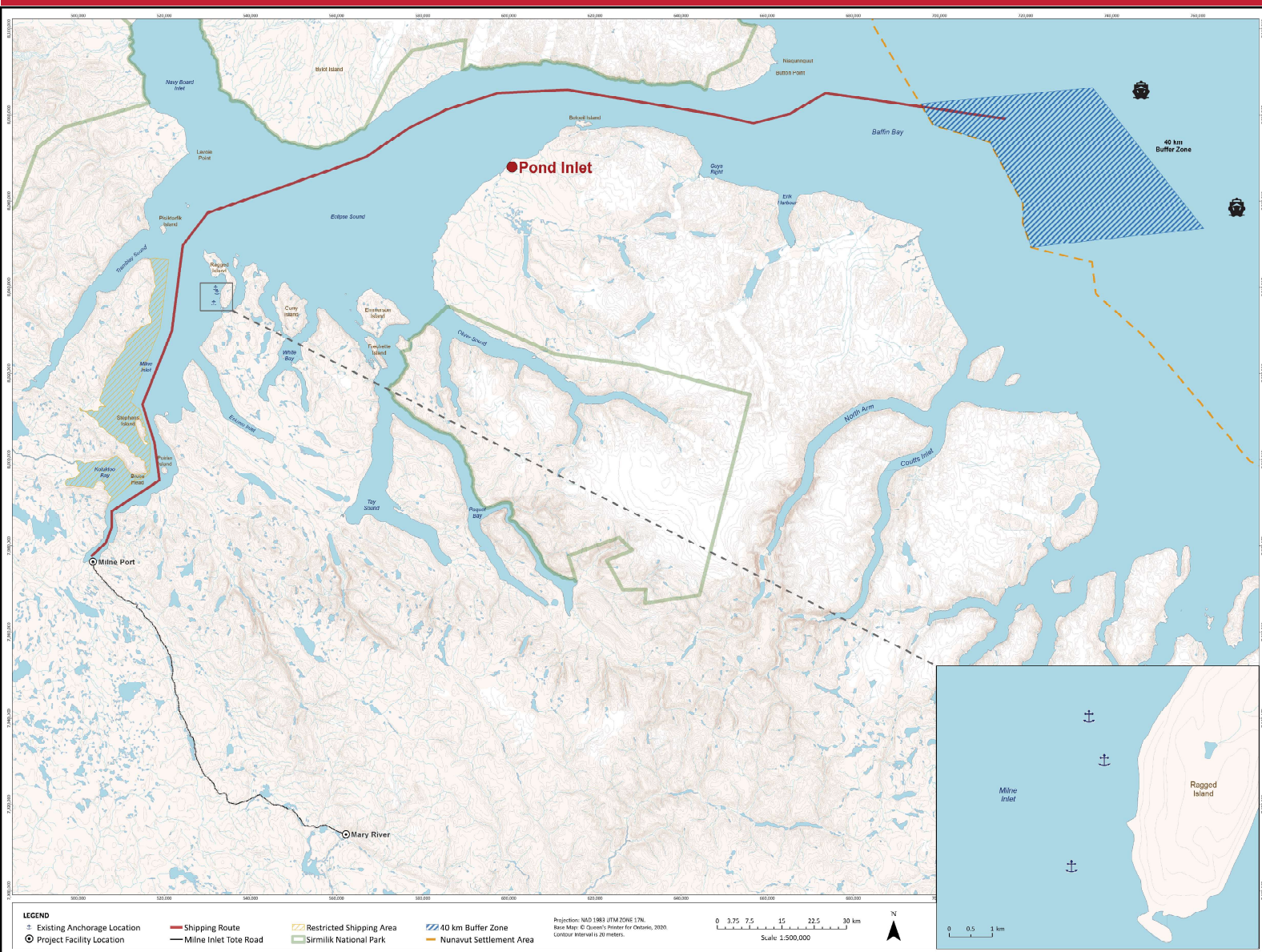
Baffinland is committed to continuing to monitor any potential effects of shipping activities. Here are some of the measures we will be implementing to manage and mitigate potential issues:

1. Baffinland vessels will not break through landfast ice and will wait for confirmation that the floe edge has been closed before entering Eclipse Sound. In 2023, the shipping season will only start once it is confirmed that there is a continuous path of 3/10ths or less ice concentrations between the entrance of Eclipse Sound and Milne Port.
2. Convoys and larger vessels will be used opportunistically to further reduce total underwater sound exposure and reduce the total number of vessel transits.
3. Vessels will follow the approved Northern Shipping Route, unless deviations are required to ensure safe sailing conditions. We have a notification system that alerts Baffinland staff if any Baffinland vessels are travelling above the speed limit (maximum of 9 knots) or outside of the approved Northern Shipping Route by more than 1 nautical mile (nm).
4. A maximum of three vessels can be anchored or drifting at Ragged Island at any one time. Vessels are only permitted to drift within the established drifting zone and Ragged Island, which is strictly for safety purposes.
5. Ensuring that all Baffinland vessels follow the Standing Instructions to Masters which provides information to vessel captains on speed limits, the shipping route, and anchorage locations.
6. No grey water, sewage or ballast water will be discharged in Eclipse Sound by ore carriers. Ballast water is only discharged by ore carriers at Milne Port after compliance testing.
7. Baffinland continues to enforce “no-go zones,” which include the western shoreline near Bruce Head and Koluktoo Bay to minimize interference with hunting activities.
8. Baffinland will continue to work with community members, Hunters and Trappers Organizations and Hamlets to ensure that all concerns related to shipping activities are considered. Full-time Shipping Monitors will be available in the Baffinland Pond Inlet office to support daily tracking and viewing of vessels passing through Eclipse Sound all the way to Milne Port.
9. Baffinland will conduct marine mammal aerial surveys and shore-based monitoring throughout the 2023 shipping season to monitor narwhal relative abundance, calving rates, and behaviour.
10. Baffinland will continue to implement dust suppression and mitigation measures, as well as monitor dust concentrations in Milne Inlet and surrounding areas.
11. The use of scrubbers is prohibited within the Regional Study Area.
12. Vessels turn off the main engine at anchorage and only use auxiliary power, unless warranted for safety reasons, to reduce sound exposure.
13. Baffinland conducts voluntary salinity testing on board each ore carrier calling to Milne Port prior to discharging ballast water. All Project vessels are required to conduct a ballast water exchange prior to arriving at Milne Port and all vessels with a treatment system on board are required to treat ballast water in addition to conducting an exchange. In 2023, 90+ % of vessels will undergo both ballast water exchange and treatment.

**It is important to remember that the health and safety of people is always Baffinland’s top priority. In some situations, the vessel captains may need to deviate away from standard operating procedures to ensure safe passage.**



# SHIPPING ROUTE



## HAVE QUESTIONS OR CONCERNS?

If you are on the water and have an immediate concern, **contact our shipping monitor via VHF radio channel 26.**

**Visit the Baffinland office** and speak with our shipping monitors or **view vessel tracks** in the Mittimatalik Hunters and Trappers Organization (MHTO) building, 2nd floor.

Email us at:  
[shipping@baffinland.com](mailto:shipping@baffinland.com)

Call us at:  
**(867) 899-1807**

For shipping updates visit:  
[www.baffinland.com](http://www.baffinland.com)

> Operation  
> Shipping & Monitoring





# POTENTIAL EFFECTS ON THE ENVIRONMENT

Shipping may affect marine mammals:

- Distribution and abundance
- Behaviour
- Habitat

Shipping could potentially affect the local marine environment by:

- Introducing aquatic invasive species
- Altering the quality or quantity of fish habitat
- Altering water quality near Milne Port



Five Narwhal Observed in Milne Inlet (4 August 2022) at a Distance of 4 Km from a Southbound Vessel

# MARINE MONITORING PROGRAMS

## What are we doing to monitor the marine environment?

To monitor potential effects from shipping on the marine environment, Baffinland will be running a number of different monitoring programs throughout the shipping season.

The marine monitoring programs will:

- Measure the effects that shipping is having on the marine environment
- Assess the accuracy of predictions of effects
- Determine if adaptive mitigation measures need to be developed.



**Marine Mammal Aerial Surveys**

Monitors the abundance and distribution of narwhal and other marine mammal species in Project area throughout the summer.



**Bruce Head Shore-based Monitoring**

Investigates narwhal response to shipping along the Northern Shipping Route by observing them from the top of Bruce Head.



**Marine Environmental Effects and Aquatic Invasive Species and Habitat Offset**

Monitors water and sediment quality including metals, benthic infauna, epifauna and epiflora, fish abundance and health (focus on Arctic char) including contaminant analysis, and ballast water compliance testing.



**Shipboard Observer Monitoring**

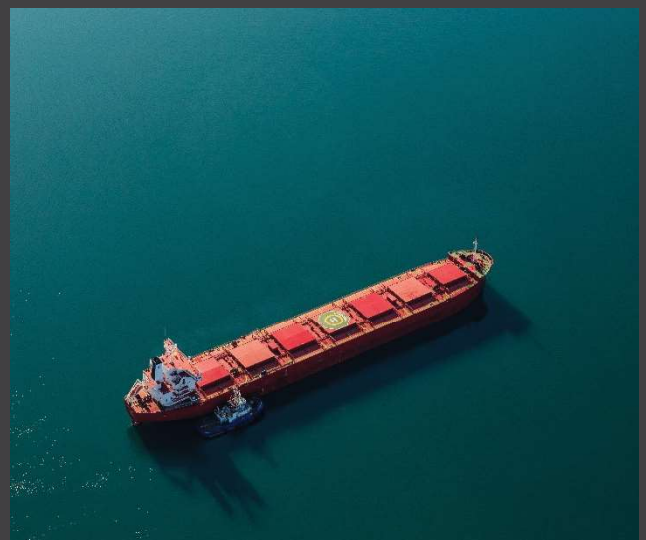
Marine Mammal Observers (MMOs) based off of the icebreaker MSV Botnica monitor for potential ship strikes on marine mammals in the Regional Study Area and document the relative abundance of marine mammal and seabird species in the Project area relevant to icebreaking operations.





### Passive Acoustic Monitoring

Potential monitoring of underwater noise at two (2) locations near Bruce Head and Ragged Island. Acoustic recorders will be deployed in late July, 2023 and retrieved in October to download data from the shipping season. Both recorders will be re-deployed in October to overwinter during 2024 and capture icebreaker transits at the end of the 2023 shipping season. This program is contingent on whether cape-sized vessels will be used throughout the 2023 shipping season.



### Aquatic Invasive Species Ballast Water Monitoring (DFO Collaboration)

Baffinland will be launching a two-week pilot program in September, 2023 in collaboration with the Department of Fisheries and Oceans that will focus on biological sampling of ballast water. This program is intended to monitor for the introduction of invasive species through ballast water discharges and will include training workshops in the community of Pond Inlet.

## COMMUNICATIONS

In order to provide better communications about Baffinland vessel activities, full-time Shipping Monitors will be available over the entire shipping season working from the Baffinland Pond Inlet office located in the Mittimatalik Hunters and Trappers Organization (MHTO) office building (2nd Floor). If you have questions, comments or concerns about Baffinland vessels, please contact Baffinland by visiting one of our Shipping Monitors, or provide your concern to a representative from the MHTO who can then relay the message to Baffinland.

In addition to interacting directly with Shipping Monitors, vessel traffic in 2023 may be monitored through a variety of methods including:

1. Accessing the Baffinland website ([www.baffinland.com](http://www.baffinland.com)) and follow the path to "Operation>Shipping & Monitoring", access also available in the Baffinland Pond Inlet office.
2. Visiting the Pond Inlet Baffinland office to observe live tracking of vessels through the Automatic Identification System (AIS) monitoring station, and learning more about the type of vessels that Baffinland requires for its operations.
3. Announcements about upcoming vessel activity including convoys will be made on the local Pond Inlet radio at regular intervals.
4. Listening to periodic announcements of daily and upcoming vessel activity including convoys on marine VHF radio channel 26.
5. Accessing Facebook pages for Baffinland Iron Mines, Pond Inlet News and Pond Inlet Hunters Information Page for periodic postings about past, current and future shipping activities.





## QUESTIONS? HERE IS HOW YOU CAN REACH US

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Peter Akman

#### **Head of Stakeholder Relations**

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**+1 289 834 0744**

**2275 Upper Middle Road East**

**Suite 300**

**Oakville, Ontario**

**L6H 0C3**

If you have questions, comments or concerns about Baffinland vessels, please contact us by visiting one of our Shipping Monitors at the Baffinland Pond Inlet office (in Mittimatalik Hunters and Trappers Organization (MHTO) building, 2nd floor), contact us via marine VHF radio channel 26, or provide your concern directly to the MHTO. For specific vessel operation concerns, if possible, please indicate the name of the vessel, location, the date and time of observation, as well as any details about your concern. Please provide photos and video if available.

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