

September 20, 2024

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**Sent VIA Email: [info@nirb.ca](mailto:info@nirb.ca)**

**Re: Conformity Determination for Baffinland Iron Mines Corp.'s Impact Statement Addendum for the "Sustaining Operations Proposal 2" Project Proposal and Commencement of the NIRB's Technical Review Period**

Hello Keith,

The Government of Nunavut (GN) would like to thank the Nunavut Impact Review Board (NIRB) for the opportunity to provide information requests (IRs) related to the assessment of Baffinland's "Sustaining Operations Proposal 2" (SOP 2), NIRB File # 08MN053.

The GN has reviewed the proposed project and impact statement addendum and has 14 information requests that would support further technical review of the SOP 2 proposal. The GN's IRs are appended to this letter.

The GN appreciates participating in the review of this project through the NIRB process. Should there be any concerns or need for follow-up, please feel free to contact me at [jbuller@gov.nu.ca](mailto:jbuller@gov.nu.ca).

Qujannamiik,



Justin Buller  
Interim Avatiliriniq Coordinator  
Government of Nunavut

<b>GN IR # 01</b>	
<b>Department</b>	Environment
<b>Organization</b>	Government of Nunavut
<b>Directed to</b>	Baffinland Iron Mines Corporation
<b>Subject/Topic</b>	Cumulative Effects Assessment for Caribou
<b>References</b>	<ul style="list-style-type: none"> <li>• Baffinland Iron Mines Corporation. Mary River Project – Phase 2 Proposal Final Environmental Impact Statement Addendum. Technical Supporting Document 27. Cumulative and Transboundary Effects Assessment. (August 2018)</li> <li>• Baffinland Iron Mines Corporation. Mary River Project – Sustaining Operations Proposal 2. Impact Statement Addendum, Main Document. (August 2024)</li> <li>• Knight-Piesold Consulting. Mary River Project – Phase 2- Supplement to Technical Supporting Document 27 - Cumulative Effects Assessment. Memorandum NB102-00181/53-A.01. (May 2019)</li> </ul>
<b>IDENTIFICATION OF ISSUE</b>	
<p>Baffinland Iron Mine Corporation's (BIMC, Baffinland or the Proponent) Mary River Project – Sustaining Operations Proposal 2 (SOP2) Impact Statement Addendum (IS Addendum) (BIMC, 2024) does not present quantitative methods and results concerning the cumulative effects assessment (CEA) for North Baffin caribou. Without clear details of the quantitative analyses of cumulative effects on this herd (e.g., habitat and movements), the Government of Nunavut (GN) is unable to evaluate the conclusions of the IS Addendum concerning this topic.</p>	
<b>IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE</b>	
<p>Section 8.7 of the IS Addendum discusses cumulative effects on the terrestrial environment, including North Baffin caribou. This section concludes that the cumulative effects of the Mary River Project and other projects/activities will be non-significant in terms of direct and indirect habitat loss and barriers to caribou movement. The GN notes that the IS Addendum does not present any quantitative analyses or results to support these conclusions. For example, section 8.7 of the IS Addendum omits information on the assumptions made when quantifying caribou habitat losses (direct or indirect) such as the Zone-of-Influence (ZOI) and disturbance coefficients utilized in analyses.</p>	

The Proponent completed a quantitative CEA for caribou habitat and movements as part of the Final Environmental Impact Statement (FEIS) Addendum for Baffinland's Phase 2 Proposal (e.g., BIMC, 2018; Knight-Piesold, 2019). However, the GN notes that is unclear whether this previous work informed the CEA for caribou presented in this IS Addendum.

Ultimately, without clear details of the quantitative analyses of cumulative effects on caribou habitat and movements, the GN is unable to assess the validity of the conclusions presented in the IS Addendum.

#### **REQUEST(S)/RECOMMENDATION(S)**

The GN requests/recommends the following:

- 1) The Proponent should provide details of the quantitative methods used for the CEA of caribou habitat loss (direct and indirect) that was conducted for the IS Addendum including (but not limited to); (a) the area of direct habitat loss associated with each project/activity listed in Table 8.6, and (b) details on the zone-of-influence and disturbance coefficients that were applied for each project/activity listed in Table 8.6 and the literature or other sources that informed these determinations.
- 2) The Proponent should provide details of the quantitative results for the CEA of caribou habitat loss (direct and indirect) that was conducted for the IS Addendum, including tables summarizing absolute and proportionate direct and indirect losses of habitat.
- 3) The Proponent should provide additional context as to how, or if, the CEA for caribou in this IS Addendum was informed by the quantitative CEA for caribou created during the Phase 2 Proposal. Pursuant to this, the Proponent should explain how, or if, peer-reviewed studies, published since 2018, were incorporated into CEA analyses for the IS Addendum.

<b>GN IR # 02</b>	
<b>Department</b>	Environment
<b>Organization</b>	Government of Nunavut
<b>Directed to</b>	Baffinland Iron Mines Corporation
<b>Subject/Topic</b>	Residual Effects and Combined Effects Assessment for Caribou
<b>References</b>	<ul style="list-style-type: none"> <li>• Baffinland Iron Mines Corporation. Mary River Project – Sustaining Operations Proposal 2. Impact Statement Addendum, Main Document. (August 2024)</li> <li>• Baffinland Iron Mines Corporation. Mary River Project – Addendum to the Final Environmental Impact Statement for the Early Revenue Phase. (June 2013)</li> </ul>
<b>IDENTIFICATION OF ISSUE</b>	
<p>The IS Addendum’s assessment of SOP2 Residual Effects (i.e., effects from SOP2 only) and Combined Effects (i.e., effects of both SOP2 and the Approved Project) on caribou appears to rely on quantitative analyses that were conducted for the Early Revenue Phase (ERP) FEIS Addendum in 2013. Based on the GN’s review of the IS Addendum, it is unclear whether new data on North Baffin caribou and peer reviewed literature on the effects of roads and mine sites on caribou, generated since 2013, has been used to update the analyses of effects. Relying on outdated information could lead to inaccurate conclusions in the IS Addendum, as outdated information may not capture changes in population dynamics and other relevant factors. Without clear details on the inclusion of recent data and literature, the GN is unable to fully assess the conclusions of the IS Addendum.</p>	
<b>IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE</b>	
<p>Section 8.8 of the IS Addendum concludes the following regarding SOP2 Residual Effects and Combined Effects on North Baffin caribou:</p> <p>“The effects on caribou will remain limited to that predicted from the PDA and ZOI predicted in the Approved Project. While caribou are expected to behave differently near the Project, the combined effects will continue to be not significant on the North Baffin Island caribou herd.” (Page 234; BIMC, 2024)</p>	

Baffinland's assessment appears to be based largely upon the ERP FEIS Addendum from 2013 (BIMC, 2013). For example, the Proponent states:

"This SOP2 FEIS Addendum builds on the ERP FEIS Addendum, assessing the combined effects of maintaining the Northern Transportation Corridor at a level of 6 Mtpa (instead of 4.2 Mtpa as assessed and approved for the ERP) during the construction and initial operation of the Steensby Railway and Steensby Port. The nominal increase in transportation from 4.2 to 6 Mtpa is predicted to not substantially change the predicted effects on Terrestrial Environment VCs, as previously assessed in the ERP FEIS Addendum (Baffinland 2013)." (Pages 261-262; BIMC, 2024)

Analyses of effects on caribou conducted for the ERP FEIS Addendum are now nearly 12 years old. Over this period, new information on North Baffin caribou has been generated through various avenues including project monitoring, aerial surveys and collaring programs. In addition, several peer-reviewed articles investigating the effects of mines and roads on the movements, distribution, and habitat use of caribou have been published since 2013. These various sources of information have relevance to the IS Addendum and it is unclear whether/how such information was considered by the Proponent during the development of the SOP2 FEIS Addendum.

#### **REQUEST(S)/RECOMMENDATION(S)**

The GN requests/recommends the following:

- 1) The Proponent should provide a review of data on North Baffin caribou, collected since the 2013 ERP FEIS Addendum, and discuss how/if these data were used in the IS Addendum to update the effects assessment for caribou.
- 2) The Proponent should provide a review of literature, published since 2013, on the effects of roads and mines on caribou. As part of this review, the Proponent should indicate:
  - (a) how/if findings from these studies informed estimates for ZOI and disturbance coefficients used to calculate indirect habitat losses in the IS Addendum;
  - (b) how/if findings from these studies regarding the effect of traffic rates on the movements of caribou (in terms of probability of road crossing or avoidance) were used to inform the IS Addendum.
- 3) The Proponent should place the findings of recommendation #2 (as stated above) in the context of currently observed traffic rates on the project's Tote Road and those predicted to occur during the SOP2. This may help assess the degree to which the Tote Road and Steensby Railway (when under construction) will present a barrier to caribou movement.

<b>GN IR # 03</b>	
<b>Department</b>	Environment
<b>Organization</b>	Government of Nunavut
<b>Directed to</b>	Baffinland Iron Mines Corporation
<b>Subject/Topic</b>	2023 Caribou Aerial Survey Report
<b>References</b>	<ul style="list-style-type: none"> <li>Baffinland Iron Mines Corporation. Mary River Project – Sustaining Operations Proposal 2. Impact Statement Addendum, Main Document. (August 2024)</li> </ul>
<b>IDENTIFICATION OF ISSUE</b>	
<p>As indicated in the IS Addendum, the Proponent conducted a Late-Winter Aerial Caribou Survey in 2023. While the IS Addendum references the results of this survey, the GN notes that a copy of the survey report (complete with results) is not included in the IS Addendum or present on the Nunavut Impact Review Board (NIRB) Registry. Access to this recent report will help facilitate the GN's assessment of the conclusions of the IS Addendum as it pertains to North Baffin caribou.</p>	
<b>IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE</b>	
<p>Appendix 2.2 of the IS Addendum entitled "Steensby Baseline Studies Summary (2021-2024)", indicates that,</p> <p style="padding-left: 40px;">"A summary of baseline work carried out as of May 29, 2024 that has included varying amounts of direct involvement and participation by Inuit is summarized below and included in Table 1. Study reports are available upon request." (Page 1; BIMC, 2024)</p> <p>The GN acknowledges that the 2023 Late-Winter Aerial Caribou Survey Summary Report is listed in Table 1; as such, the report is available upon request from the Proponent. However, the GN believes that widespread access to this document via the NIRB Registry will help facilitate the evaluation of the conclusions of the IS Addendum by the GN and other intervenors.</p>	
<b>REQUEST(S)/RECOMMENDATION(S)</b>	
<p>The GN requests/recommends the following:</p>	

- 1) The Proponent should upload a copy of the 2023 Late-Winter Aerial Caribou Survey Summary Report to the NIRB Registry.

<b>GN IR # 04</b>	
<b>Department</b>	Environment
<b>Organization</b>	Government of Nunavut
<b>Directed to</b>	Baffinland Iron Mines Corporation
<b>Subject/Topic</b>	Commercial Transportation Rate
<b>References</b>	<ul style="list-style-type: none"> <li>• Baffinland Iron Mines Corporation. Mary River Project – Sustaining Operations Proposal 2. Impact Statement Addendum, Executive Summary. (August 2024a)</li> <li>• Baffinland Iron Mines Corporation. Mary River Project – Sustaining Operations Proposal 2. Impact Statement Addendum, Main Document. (August 2024b)</li> </ul>
<b>IDENTIFICATION OF ISSUE</b>	
<p>As part of Baffinland’s SOP2 Proposal, the Proponent plans to maintain use of the Tote Road for the hauling of ore to Milne Inlet until the Steensby Railway achieves “commercial transportation rates” or until December 31, 2032; whichever comes first (Section 2; BIMC, 2024a). The Proponent states that the commercial transportation rate will be achieved when each of the following has occurred:</p> <p>“...(a) full commissioning and testing of the rail has been completed; (b) full construction of the Steensby Port infrastructure has been completed; and (c) the rail is running at an average 36,000 tonnes per day for not less than 30 consecutive days.” (Page 3; BIMC, 2024a).</p> <p>The GN notes that the IS Addendum does not provide additional context regarding how item (c) in Baffinland’s commercial transportation rates was derived and if alternative criteria were explored.</p>	
<b>IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE</b>	
<p>Under the SOP2 Proposal, the duration of Tote Road usage for hauling iron ore is directly influenced by Baffinland’s proposed definition of commercial transportation rate. Furthermore, the GN notes that this criterion has bearing on the temporal overlap between the Steensby Railway operation and the Tote Road operation (for ore hauling). This overlap in activities represents a corridor of industrial activity through the range of the North Baffin caribou herd. As</p>	



such, it is crucial that the Proponent provide additional information that was considered when determining this threshold.

#### **REQUEST(S)/RECOMMENDATION(S)**

The GN requests/recommends the following:

- 1) The Proponent should provide additional context (i.e., factors, assumptions and considerations considered) used in determining the threshold of an average of 36,000 tonnes/day for 30 consecutive days.
- 2) The Proponent should provide additional context on whether alternative thresholds were considered that could reduce the temporal overlap between the use of the Tote Road and Steensby Railway.

<b>GN IR # 05</b>	
<b>Department</b>	Environment
<b>Organization</b>	Government of Nunavut
<b>Directed to</b>	Baffinland Iron Mines Corporation
<b>Subject/Topic</b>	Project Schedule
<b>References</b>	<ul style="list-style-type: none"> <li>Baffinland Iron Mines Corporation. Mary River Project – Sustaining Operations Proposal 2. Impact Statement Addendum, Main Document. (August 2024)</li> </ul>
<b>IDENTIFICATION OF ISSUE</b>	
<p>In the IS Addendum, the Proponent provides cursory details on the Project's intended schedule regarding the Steensby Components. However, the GN notes that several aspects of the Project schedule remain unclear.</p>	
<b>IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE</b>	
<p>In section 2.3.1.2 of the IS Addendum, Baffinland indicates that construction of the Steensby Railway and Steensby Port facilities will take between 3 and 4 years following the receipt of remaining activity specific authorizations (Page 4; BIMC, 2024). However, the Proponent does not estimate or discuss the length of time required to bring the railway up to commercial transportation rates.</p> <p>The absence of this information presents uncertainty regarding Baffinland's proposed revision to Term and Commitment 179(a) with respect to the evacuation of remaining ore:</p> <p>“179(a). Until December 31, 2032, the Proponent is approved to ship up to six (6) Mtpa of iron ore through Milne Port, unless this condition has been further modified under section 112 of the Nunavut Planning and Project Assessment Act, S.C. 2013, c. 14, s. 2. or the Proponent achieves commercial transportation rates. During this period, the Proponent is also approved to ship up to 0.9 Mtpa of Stranded Ore. Stranded Ore means iron ore that was delivered in the previous year to Milne Port but that was not shipped in that year's shipping season due to weather or other shipping constraints. After December 31, 2032, the maximum total volume of all ore shipped via Milne Inlet in a calendar year returns to 4.2 million tonnes per year, unless this condition has been further modified under section 112 of the Nunavut Planning and Project Assessment Act, S.C. 2013, c. 14, s. 2. or the Proponent achieves commercial transportation rates along the Steensby railway.</p>	

If commercial transportation rates are achieved, the Proponent may evacuate any iron ore located at Milne Port by ship over a period of no more than two consecutive shipping seasons. After the completion of such evacuation, shipment of iron ore via Milne Port shall cease...”

Emphasis added by reviewer.

The GN believes that the text, as written, does not clearly state if the two consecutive shipping seasons are activities that will occur (or are intended to occur) prior to December 31, 2032.

#### **REQUEST(S)/RECOMMENDATION(S)**

The GN recommends/requests the following:

- 1) The Proponent should provide information on the anticipated time (including minimum and maximum time estimates) required to bring the railway up to the proposed commercial transportation rate following its construction.
- 2) The Proponent should provide a graphic illustrating estimated timelines for the temporally inter-dependent phases of the project (i.e., railway financing, authorization and construction, railway attainment of commercial transportation rates, phasing out of Tote Road use, and the shipping period for evacuation of remaining ore from Milne Inlet). This graphic should include minimum and maximum estimates in months (as appropriate).
- 3) The Proponent should clarify whether the 2 years for evacuating remaining ore from Milne Inlet is an activity that will occur prior to the December 31, 2032, expiry date.

<b>GN IR # 06</b>	
<b>Department</b>	Environment
<b>Organization</b>	Government of Nunavut
<b>Directed to</b>	Baffinland Iron Mines Corporation
<b>Subject/Topic</b>	Caribou Observations and Current Baseline
<b>References</b>	<ul style="list-style-type: none"> <li>• Baffinland Iron Mines Corporation. Mary River Project – Sustaining Operations Proposal 2. Impact Statement Addendum, Main Document. (August 2024)</li> <li>• Baffinland Iron Mines Corporation. Mary River Project – Addendum to the Final Environmental Impact Statement for the Early Revenue Phase. (June 2013)</li> </ul>
<b>IDENTIFICATION OF ISSUE</b>	
<p>Section 8 of the IS Addendum omits data on caribou from sources such as height-of-land surveys, incidental observations, and the recent 2023 Late-Winter Aerial Caribou Survey 2023. The omission of this relevant and recent data impacts the GN's ability to evaluate the conclusions of the IS Addendum.</p>	
<b>IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE</b>	
<p>Section 8 of the IS Addendum notes that the assessment of Residual Effects, Combined Effects and Cumulative Effects on caribou is largely based on the FEIS Addendum for the ERP (BIMC, 2013). For example, the Proponent states that:</p> <p>“This SOP2 FEIS Addendum builds on the ERP FEIS Addendum, assessing the combined effects of maintaining the Northern Transportation Corridor at a level of 6 Mtpa (instead of 4.2 Mtpa as assessed and approved for the ERP) during the construction and initial operation of the Steensby Railway and Steensby Port. The nominal increase in transportation from 4.2 to 6 Mtpa is predicted to not substantially change the predicted effects on Terrestrial Environment VCs, as previously assessed in the ERP FEIS Addendum (Baffinland 2013).” (Page 191; BIMC 2024)</p> <p>In summarizing, current (post-2013) knowledge of caribou around the Project, section 8.1.6 of the IS Addendum states that:</p>	

“Height-of-Land caribou surveys initiated in 2013 have detected relatively few caribou. While eight (8) caribou were recorded in 2013, no caribou were observed during Height-of-Land surveys from 2014–2016. The lack of observations during Height-of-Land surveys coincides with very few incidental caribou sightings between the Mine Site and Milne Port.” (Page 203; BIMC 2024)

“Baffinland’s site-specific monitoring activities (e.g., Height of Land, snow track surveys and incidental observations) and a March 2023 aerial survey show caribou distribution and numbers possibly increasing, starting in the southern portion of the PDA, agreeing with traditional knowledge of caribou recovery shared with Baffinland during the preparation of the FEIS.” (Page 204; BIMC 2024)

These statements regarding trends in caribou distribution and abundance are not supported by evidence that is readily accessible to reviewers, including the GN. For example, the IS Addendum does not provide data, to corroborate that lack of observations from Height-of-Land (HOL) surveys from 2013 to the present. Furthermore, the IS Addendum does not provide maps, tables or other results to specifically demonstrate how Baffinland’s site-specific monitoring activities (e.g., HOL surveys, snow track surveys, incidental observations) and the 2023 aerial survey show that caribou distribution and numbers are possibly increasing.

Finally, noting that the Proponent signed a data and sample sharing agreement with the GN in April 2023 (Table 8.1; BIMC, 2024), the IS Addendum does not present maps, tables or analyses of relevant collar data collected since 2013.

Given that the SOP2 proposal covers an 8-year period and is largely based on an assessment conducted over a decade ago, the GN emphasizes the need for a thorough analysis and presentation of caribou data collected since 2013.

#### **REQUEST(S)/RECOMMENDATION(S)**

The GN requests/recommends the following:

- 1) The Proponent should provide a table showing the number of caribou observed annually from 2013 to 2023 via HOL surveys versus the number observed within, or within sight of the Project Development Area (PDA) and in regions outside the PDA.
- 2) The Proponent should provide a series of maps showing all incidental caribou sightings made by Baffinland employees or contractors and all HOL-based observations from 2013 to 2023, by year. Symbology should be used in these maps to distinguish these two types of observations.
- 3) The Proponent should provide maps, tables or other results to specifically demonstrate how Baffinland’s site-specific monitoring activities (e.g., HOL survey, snow track

surveys, incidental observations and the 2023 aerial survey) show that caribou distribution and numbers are possibly increasing.

- 4) The Proponent should provide a review of the collar data collected since 2013, including maps of locations and movements overlapping the IS Addendum's study area for caribou. The Proponent should provide analyses of interactions with the Project should sample size permit, and clearly indicate if sample sizes are too small to support analyses.

<b>GN IR # 07</b>	
<b>Department</b>	Environment
<b>Organization</b>	Government of Nunavut
<b>Directed to</b>	Baffinland Iron Mines Corporation
<b>Subject/Topic</b>	Timing of Shipping
<b>References</b>	<ul style="list-style-type: none"> <li>• Baffinland Iron Mines Corporation. Mary River Project – Sustaining Operations Proposal 2. Impact Statement Addendum, Main Document. (August 2024)</li> <li>• Nunavut Impact Review Board. Project Certificate No. 005, Amendment 005. (November 2023)</li> </ul>
<b>IDENTIFICATION OF ISSUE</b>	
<p>The IS Addendum, as written, does not clearly indicate how the Proponent will use historical data on inter-annual ice condition variations along the northern shipping route to ensure spring shipping is not initiated when ice cover exceeds 3/10ths, and to avoid breaking last fast ice at any point during the shipping season. Project-related icebreaking has the potential to impact polar bear habitat. As such, details concerning the above are necessary for the GN to evaluate the IS Addendum's conclusions.</p>	
<b>IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE</b>	
<p>Sea ice is crucial for polar bears as it provides a stable platform for hunting prey, traveling between feeding areas, mating, and rearing young. Ice-breaking activities threaten polar bear habitat by fragmenting the ice, disrupting hunting grounds, and forcing bears to swim longer distances, which leads to higher energy expenditure.</p> <p>Term and Condition 185 of the current project certificate states that:</p> <p>“All project related shipping associated with the Northern Shipping route shall observe the following conditions, subject to the variances and/or exceptions below:</p> <p>a) The Proponent must avoid breaking landfast ice at all times during the shipping season.</p>	

b) The Proponent shall confirm a continuous path of 3/10th ice concentrations along the Northern Shipping route is available prior to commencement of the shipping season.

c) The Proponent is required to plan for and cease all shipping from Milne Port by October 31.

The Proponent may proceed with a variance to condition (b) above, or under exceptional circumstances that may occur from time to time seek an exception to condition (c)...

...Exceptional circumstances include events that are unforeseen and occur outside of Baffinland's control but will not include contingencies that the Proponent should reasonably have planned for. Examples of unforeseen events may include: a breakdown in loading equipment, weather disruptions to shipping schedules, or a later than expected ice break up past July 15."

(NIRB, 2023)

Section 1.4 of the IS Addendum presents data on historical ice conditions along the Northern Shipping Route to estimate the length of the shipping season for SOP2 that would comply Term and Condition 185 (BIMC, 2024). Also presented in this section are data on variation in historical shipping season start and end dates that complied with the ice condition restrictions in Term and Condition 185 (e.g., Table 1.5 and 1.6; BIMC, 2024). In discussing the variable and unpredictable nature of ice conditions and the challenges this presents in scheduling ore ships, the Proponent states that:

"Unanticipated and unpredictable conditions have now presented themselves two years in a row resulting in additional uncertainty, costs and lower ore shipments than originally planned. As a result of the constraints in TC185 and historical ice conditions, Baffinland's shipping season is expected to be somewhere between 72 and 92 days in length in any given year (Table 1.7) making the opportunity to obtain a variance or exception to the constraints under TC 185 vital."

The GN notes that this section of the IS Addendum lacks an explanation or demonstration of how the Proponent has historically scheduled ships to account for known interannual variation in ice, thus avoiding the need to seek variances or exceptions to the ice restrictions in Term and Condition 185.

#### **REQUEST(S)/RECOMMENDATION(S)**

The GN requests/recommends the following:

- 1) The Proponent should provide context regarding how data on interannual variation in ice conditions, such as that presented in tables 1.5 to 1.6 of the IS Addendum, is/will be used to plan the arrival dates of the first and last ore ships each year.



- 2) The Proponent should provide, for each year of ore shipping from Milne Inlet to date, a table showing the arrival dates of the first and last ore ships at the boundary of the northern shipping route prior to the vessels transiting to Milne Port. For ships that arrived but were unable to immediately commence passage along the northern shipping route due to ice conditions, the Proponent should provide the date they arrived, as opposed to the date they began passage along the northern shipping route.

GN IR # 08	
Department	Environment
Organization	Government of Nunavut
Directed to	Baffinland Iron Mines Corporation
Subject/Topic	Terrestrial Environment Mitigation and Monitoring Plan
References	<ul style="list-style-type: none"> <li>• Baffinland Iron Mines Corporation. Mary River Project – Sustaining Operations Proposal 2. Impact Statement Addendum, Main Document. (August 2024)</li> <li>• Baffinland Iron Mines Corporation. Terrestrial Environment Mitigation and Monitoring Plan. BAF-PH1-830-P16-0027. (March 2023)</li> <li>• Nunavut Impact Review Board. Project Certificate No. 005, Amendment 005. (November 2023)</li> </ul>
IDENTIFICATION OF ISSUE	
<p>The GN notes that the IS Addendum does not clearly indicate what version of the Terrestrial Environment Mitigation and Monitoring (TEMMP) Plan will be in effect for the SOP2 Project. Mitigation measures directly affect estimation of residual effects and significance determinations within the IS Addendum. As such, it is important that the GN and other reviewers have information and access to the relevant TEMMP.</p>	
IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE	
<p>As noted in the methodology section of the IS Addendum (Section 6; BIMC), final significance determinations regarding Project effects were made by the Proponent after accounting for the mitigation measures that will be implemented. The mitigation measures are detailed in a series of management plans, which the Proponent states:</p> <p style="padding-left: 40px;">“[H]ave been updated to reflect all commitments made to date through NIRB’s annual monitoring and other regulatory processes, including the PIP and SOP series of approvals.” (Page 41; BIMC, 2024)</p> <p>However, a review of the TEMMP submitted as part of the IS Addendum (# BAF-PH1-830-P16-0027) shows that it does not reflect all commitments (specifically with respect to caribou protection measures) made during the Production Increase Proposal Renewal (PIPR) and</p>	

Sustaining operations Proposal (SOP) series of approvals, as listed in Appendix B of the Project Certificate (NIRB, 2023).

Elsewhere in the SOP2 FEIS Addendum the Proponent states,

“Multiple management plans have undergone or continue to undergo review between Baffinland and the QIA to incorporate the adaptive management mechanisms described in the Adaptive Management Plan, with a priority for the [Environmental Management Plans] EMPs that relate to narwhal, seal, Arctic char, caribou, dust and culture, resources and land use. Once the active reviews of EMPs are complete, any final plans will be submitted to the NIRB on a timeline to be mutually agreed upon between Baffinland and QIA. This timeline may be subject to change based on both parties’ ability to come to mutual agreement on each management plan.” (Pages 109-110; BIMC, 2024)

This statement suggests there is a revised version of the TEMMP that may incorporate all commitments made to date by the Proponent regarding caribou protection.

Noting that mitigation measures directly affect estimation of residual effects and significance determinations, it is unclear which version of the TEMMP will be implemented during the SOP2 Project and which version reviewers should rely upon in conducting their reviews of the IS Addendum.

#### **REQUEST(S)/RECOMMENDATION(S)**

The GN request/recommends the following:

- 1) The Proponent should clarify which version of the TEMMP will be implemented during the SOP2 project. If a revised TEMMP is being prepared, the Proponent should clarify whether/when this document will be available to intervenors, and during which stage of the NIRB's review of the IS Addendum.

<b>GN IR # 09</b>	
<b>Department</b>	Environment
<b>Organization</b>	Government of Nunavut
<b>Directed to</b>	Qikiqtani Inuit Association
<b>Subject/Topic</b>	Zone-of-Influence Estimation from the North Baffin Caribou Study
<b>References</b>	<ul style="list-style-type: none"> <li>• Baffinland Iron Mines Corporation. Mary River Project – Sustaining Operations Proposal 2. Impact Statement Addendum, Main Document. (August 2024)</li> <li>• Nunavut Impact Review Board. Project Certificate No. 005, Amendment 005. (November 2023)</li> </ul>
<b>IDENTIFICATION OF ISSUE</b>	
<p>Based on the GN's review of the IS Addendum, the GN notes missing details regarding the IQ-based study of North Baffin caribou. Given the importance of this study in revising caribou mitigation measures for the Project, more information on study design, methodology and schedule is required to facilitate the GN's fulsome review of the IS Addendum.</p>	
<b>IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE</b>	
<p>As part of the IS Addendum, and per commitments made in 2022 as part of the PIPR approval, the Proponent stated that they will fund an IQ-based study of North Baffin caribou, led jointly by the Qikiqtani Inuit Association (QIA) and Hunters and Trapper Organizations (HTOs), that will be used to:</p> <p style="padding-left: 40px;">“[To] identify areas within the vicinity of the Project that are sensitive to caribou and to gather data to support the re-estimation of the Zone of Influence around the Project. Once complete, Baffinland and the QIA will re-estimate the Zone of Influence for caribou with input from the TEWG, and determine appropriate mitigation measures to apply in designated Project Protection Zones, including requirements for the suspension of blasting, helicopter overflights, road traffic, and measures to reduce dustfall. Baffinland agrees to implement the revised Caribou Protection Measures upon agreement of the location of Project Protection Zones and the mitigation measures that will apply in these zones.” (Page 213, BIMC 2024)</p> <p>Pursuant to this, the IS Addendum indicates that,</p>	

“QIA has hired an ISP manager and support staff and is undertaking the North Baffin Caribou IQ Study as part of the ISP program. Initial engagement anticipated to take place in March 2024.” (Page 213; BIMC, 2024)

Given the importance of this study in revising caribou mitigation measures for the Project, more information on study design, methodology, and schedule is required by the GN.

#### **REQUEST(S)/RECOMMENDATION(S)**

The GN requests/recommends the following:

- 1) The QIA provide details of the study design, methodology, and schedule.
- 2) The QIA indicate whether these findings will be implemented during the life of the SOP2 Project.
- 3) The QIA, if applicable, provide examples from the literature or other sources where similar studies may have been done before.

<b>GN IR # 10</b>	
<b>Department</b>	Environment
<b>Organization</b>	Government of Nunavut
<b>Directed to</b>	Baffinland Iron Mines Corporation
<b>Subject/Topic</b>	Caribou Mitigation Measures
<b>References</b>	<ul style="list-style-type: none"> <li>• Baffinland Iron Mines Corporation. Mary River Project – Sustaining Operations Proposal 2. Impact Statement Addendum, Main Document. (August 2024)</li> <li>• Nunavut Impact Review Board. Project Certificate No. 005, Amendment 005. (November 2023)</li> </ul>
<b>IDENTIFICATION OF ISSUE</b>	
<p>The IS Addendum contains a series of caribou mitigation measures that contribute to the Proponent's conclusion that the Project would have a non-significant effect on North Baffin caribou. These mitigation measures lack important details necessary for reviewers to evaluate their effectiveness and thus the accuracy of the IS Addendum's conclusions.</p>	
<b>IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE</b>	
<p>Sections 8.3.6 and 8.3.7 of the IS Addendum provide summaries of caribou mitigation measures. Understanding exactly how and when these mitigation measures will be implemented is critical in reviewing the accuracy of the assessment conclusions.</p> <p>The GN notes that many of these mitigation measures arose from commitments made by the Proponent during the NIRB's reviews of the PIPR (2022) and SOP (2023). These commitments are detailed in Tables 1 and 2 of Appendix B in the current Project Certificate No. 005 (NIRB, 2023). Given the passage of time, specific details of these measures should be available for the review of the IS Addendum. For brevity, the GN has articulated these specific requests in the section below.</p>	
<b>REQUEST(S)/RECOMMENDATION(S)</b>	
<p>The GN requests/recommends the following:</p>	

**Table 1 – Commitment #2**

- 1) The Proponent should clarify when and how 'guiding animals away from worksites' would be implemented.
- 2) The Proponent should clarify what criteria will govern the decision to guide caribou away.
- 3) The Proponent should clarify whether caribou will be guided away to allow Project activities (e.g., blasting, loading of ore and trucking along the Tote Road) to proceed.
- 4) The Proponent should clarify the criteria used to determine where limiting sensory disturbance is feasible and where it is not.
- 5) The Proponent should clarify whether safety concerns for personnel are the only situation in which limiting disturbance may not be possible.
- 6) The Proponent should clarify if there are any financial or operational considerations involved in the decision whether to limit disturbance.
- 7) The Proponent should clarify how lead caribou will be detected and identified (i.e., what criteria), including what monitoring is proposed to effectively achieve this.
- 8) The Proponent should clarify the number of observed caribou needed to trigger the lead caribou measure.
- 9) The Proponent should clarify if the Project's road will be completely closed to traffic to facilitate lead caribou to cross. This includes temporal information and how this mitigation be implemented.
- 10) The Proponent should define "non-essential."

**Table 1 – Commitment #64**

- 11) The Proponent should provide details of the interim Project Protection Zones and measures that were intended to be in place by April 2023. If these zones have not been established, the Proponent should provide information as to when are they expected to be available to reviewers of the IS Addendum.
- 12) The Proponent should clarify the details of the blasting restrictions (e.g., the distance and caribou group size thresholds).
- 13) The Proponent should define "essential mining activities" with respect to Deposit 1.
- 14) The Proponent should clarify where else, apart from the mine site at Deposit 1, blasting would occur during the SOP2 project and be subject to this restriction.
- 15) The Proponent should provide details of these helicopter operation restrictions, including distance thresholds.
- 16) The Proponent should provide details on what "heightened measures" entails and the number of caribou which trigger these heightened measures.
- 17) The Proponent should clarify if any mitigations restricting or stopping hauling of ore along the Tote Road have been put in place for caribou.

**Table 2 – Commitment #14**

- 18) The Proponent should provide details of the interim measures that have been developed in response to this commitment, in particular caribou group size and distance thresholds that will trigger suspension of Tote Road haul traffic (one of the activities listed under this commitment).

GN IR # 11	
<b>Department</b>	Environment
<b>Organization</b>	Government of Nunavut
<b>Directed to</b>	Baffinland Iron Mines Corporation
<b>Subject/Topic</b>	Project and Public Traffic
<b>References</b>	<ul style="list-style-type: none"> <li>• Baffinland Iron Mines Corporation. Mary River Project – Sustaining Operations Proposal 2. Impact Statement Addendum, Main Document. (August 2024)</li> <li>• Baffinland Iron Mines Corporation. Roads Management Plan. BAF-PH1-830-P16-0023. (March 2019)</li> </ul>
IDENTIFICATION OF ISSUE	
<p>Under the SOP2 Proposal, use of the Tote Road by Project vehicles has the potential to be significantly reduced. The reduction in Project traffic could make the Tote Road more attractive for public use and could facilitate efficient access to caribou habitat. Consequently, harvesting pressure on North Baffin caribou may be increased. Despite this potential effect, the GN notes that topic is not addressed in the IS Addendum.</p>	
IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE	
<p>As indicated in Baffinland’s Roads Management Plan, the Tote Road is considered a public road (BIMC, 2019). Section 11.1.10 of the IS Addendum details that Baffinland maintains a Hunter and Visitor Access Log to record information about land users that pass through or use Project areas (presumably including the public use of the Tote Road). Information collected through the Hunter and Visitor Access Log states that common reasons for passing through or using Project areas include “...hunting and caribou hunting; fishing; collecting fuel; having a meal; requesting supplies; and repairing / picking up snowmobiles.” (Page 396; BIMC, 2024)</p> <p>As indicated by the Proponent, once the Southern Railway is operational, the Tote Road will no longer be used to transport ore; this facet of SOP2 represents a reduction of roughly 118 ore haul truck round trips per day (Page 137; BIMC, 2024). Reduction of traffic on the Tote Road may make travel on the Tote Road safer, easier, and more appealing to members of the public. Should enhanced public access result, this may increase in hunting pressure on Baffin caribou during the life of the Project. The GN notes that this potential effect does not appear to have been considered or assessed by the Proponent within the IS Addendum.</p>	



REQUEST(S)/RECOMMENDATION(S)
<p>The GN requests/recommends the following:</p> <ol style="list-style-type: none"><li>1) The Proponent should provide an assessment of the potential for public use of the Tote Road during the SOP2 Project to increase and whether this could become an important pathway to future effects with respect to North Baffin caribou.</li></ol>

<b>GN IR # 12</b>	
<b>Department</b>	Culture and Heritage
<b>Organization</b>	Government of Nunavut
<b>Directed to</b>	Baffinland Iron Mines Corporation
<b>Subject/Topic</b>	Cultural Heritage Resource Protection Plan
<b>References</b>	<ul style="list-style-type: none"> <li>Baffinland Iron Mines Corporation. Mary River Project – Cultural Heritage Resource Protection Plan. BAP – PH1-830-P16-0006- Rev 3. Page 4 of 12, first paragraph</li> </ul>
<b>IDENTIFICATION OF ISSUE</b>	
<p>There is an inconsistency in the description of the Cultural Heritage Resources Protection Plan (pg. 4, ¶1), <i>“This document replaces a previous version of March 13, 2014. December 2010.”</i> Which date is accurate?</p>	
<b>IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE</b>	
<p>The GN believes it to be important for reviewers to know which document is being referred to, and whether it is the current and applicable plan.</p>	
<b>REQUEST(S)/RECOMMENDATION(S)</b>	
<p>The GN requests/recommends the following:</p> <ol style="list-style-type: none"> <li>1) Please indicate the correct date that the latest version of the CHRPP replaces. Also, please confirm whether the March 7, 2016, version is the latest version of the plan for consideration.</li> </ol>	

<b>GN IR # 13</b>	
<b>Department</b>	Culture and Heritage
<b>Organization</b>	Government of Nunavut
<b>Directed to</b>	Baffinland Iron Mines Corporation
<b>Subject/Topic</b>	Cultural Heritage Resource Protection Plan
<b>References</b>	<ul style="list-style-type: none"> <li>Baffinland Iron Mines Corporation. Mary River Project – Cultural Heritage Resource Protection Plan. BAP – PH1-830-P16-0006- Rev 3, Page 4 of 12, Section 1.1.1 Archaeological Potential.</li> </ul>
<b>IDENTIFICATION OF ISSUE</b>	
<p>This section needs to be updated and include references to all the years archaeological work was carried out (2006 to 2024).</p> <p>The sentence: <i>“No sites have been discovered to date at the Mary River Mine site”</i> is incorrect. In 2023, archaeological sites located outside the kitchen area were mitigated.</p>	
<b>IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE</b>	
This error mischaracterizes the presence of archaeological sites in and around the project site.	
<b>REQUEST(S)/RECOMMENDATION(S)</b>	
<p>The GN requests/recommends the following:</p> <ol style="list-style-type: none"> <li>1) Please include references to all of the years archaeological work has been carried out for the Mary River Project;</li> <li>2) Provide the current number of archaeological sites recorded (2006-2024) within the Mary River Project footprint (from Milne to Steensby Inlet);</li> <li>3) Work closely with the project archaeologist to update the information provided in this section.</li> </ol>	

<b>GN IR # 14</b>	
<b>Department</b>	Culture and Heritage
<b>Organization</b>	Government of Nunavut
<b>Directed to</b>	Baffinland Iron Mines Corporation
<b>Subject/Topic</b>	Cultural Heritage Resource Protection Plan
<b>References</b>	<ul style="list-style-type: none"> <li>Baffinland Iron Mines Corporation. Mary River Project – Cultural Heritage Resource Protection Plan. BAP – PH1-830-P16-0006- Rev 3. Page 12 of 12, Section 5: References .</li> </ul>
<b>IDENTIFICATION OF ISSUE</b>	
In Section 5, the References need to be updated to reflect the archaeological work carried out since 2006 (2006-2024.) Refer also to GN IR #13.	
<b>IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE</b>	
This error mischaracterizes the presence of archaeological sites in and around the project site.	
<b>REQUEST(S)/RECOMMENDATION(S)</b>	
<p>The GN requests/recommends the following:</p> <ol style="list-style-type: none"> <li>1) References to all archaeological work between 2006 and 2024 should be included in the current CHRPP. Refer to the 2023 Archaeological Site Status Report and project archaeologist for any necessary additions.</li> </ol>	