



Response to Public Comments  
Application for Approval to Construct a Railway to the  
Canadian Transportation Agency

**April 14, 2025**  
**Mary River Project**  
**CTA File No. 24-44554**

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A. PRATT, MEMBER OF THE PUBLIC, NON-NUNAVUT RESIDENT

| ID <sup>1</sup> | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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| AP 01           | <p><i>The proposed railway's location and operation will significantly affect Inuit communities' traditional hunting grounds and disrupt local wildlife populations.</i></p> <p><i>The railway's construction through permafrost regions will alter caribou migration routes, potentially hindering their access to calving grounds.</i></p> <p><i>This disruption poses a threat to the subsistence hunting practices that are integral to Inuit culture and food security.</i></p> | <p>The individual has made several statements of fact without any supporting evidence. The only study that has looked at the potential effects of the Steensby Components of the Project on Inuit community's traditional hunting grounds and local wildlife populations, including caribou mobility (migration), is the Mary River Final Environmental Impact Statement (FEIS). The Mary River FEIS was developed over a six (6) year period that included extensive land use and wildlife studies, and the corresponding reports are included in Baffinland's Application to Construct a Railway. It is critical to understand that the Mary River FEIS, was publically reviewed and approved based on the supported conclusions harvesting and wildlife that with mitigations, no significant residual effects are expected with a high degree of confidence.</p> <p>Baffinland understands that the individual is more likely expressing concerns that have previously been raised by other participants and addressed accordingly. Baffinland provides here some additional information for ease of reference.</p> <p>Baffinland has consistently been engaging and collaborating with Inuit, including representatives of Nunavut Tunngavik Inc., Qikiqtani Inuit Association, the Hamlets and hunters and trappers organizations, Elders, youth and other groups within the communities of Arctic Bay, Clyde River, Igloolik, Pond Inlet, Sanirajak, Kinngait and Kimmirut on the Mary River Project (including the Steensby Railway) since 2008. Mitigating negative impacts to the community and enhancing positive benefits is a key consideration as the Steensby Railway moves forward.</p> <p>Baffinland has consistently heard from communities that caribou protection is a core value. The location of the Steensby Railway was selected based on an extensive alternatives analysis, which considered Inuit knowledge generously shared with us by local Inuit, as well as a number of technical studies (including permafrost and caribou habitat) carried out by independent environmental professionals to determine the best location for the rail alignment. Baffinland heavily relies on the information shared with it to ensure the Steensby Railway will be constructed and operated in a manner that will protect caribou.</p> <p>As mentioned above the Nunavut Impact Review Board (NIRB) carried out an environmental assessment of the Mary River Project in accordance with the Nunavut Agreement, which included extensive opportunities for written comments as well as public hearings. The NIRB was comprised almost entirely of Inuit Board members and Nunavut residents. The NIRB considered topics such as the location and route of the Steensby Railway, permafrost, caribou and wildlife protection, hunting practices, and evaluated the potential for impacts to Inuit culture and food security. Based on the NIRB's positive recommendation, the Minister approved the Mary River Project. The Project Certificate includes extensive terms and conditions to ensure the committed mitigations and monitoring programs described in the Mary River FEIS are implemented, which includes considerations for harvesting, permafrost and caribou protection, and these all apply to the Steensby Railway. Baffinland also administers and chairs a Terrestrial Environment Working Group (TEWG), which includes organizations with direct responsibilities or interests (including all hunters</p> | <p>For a detailed description of how Inuit information helped select the location of the Steensby Railway, see Section IID and Part 2 of the Application for Approval to Construct A Railway , available on our website here:<br/><a href="https://steensbyrailway.baffinland.com/resources/pdf/Application_for_a_Railway_Line_ENG.pdf">https://steensbyrailway.baffinland.com/resources/pdf/Application_for_a_Railway_Line_ENG.pdf</a></p> <p>For a detailed description of the assessment, mitigations, and adaptive management applicable to the topic of permafrost, see Row A.3 Permafrost (page 389-393) of the Summary of Interest of Localities table, available on our website here:<br/><a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>For further details on the topic of permafrost, please find Baffinland's previous responses to similar questions brought up during the federal consultation tours. See Section 8 Geotechnical (page 216 to 221) of the Federal Consultation Tour Response letter conducted in Dec 9 to 11, 2024, Appendix 3 of the Stakeholder Engagement Report , available on our website here:<br/><a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>See Section 2.5 Geotechnical (page 65 to 70) of the Federal Consultation Tour Response Letter conducted in Mar 3 to 7, 2025 within Appendix 2 of this document.</p> <p>For a detailed description of the assessment, mitigations, and adaptive management applicable to the topic of caribou (including caribou crossings), see Row B.2 Effects on Hunters and Land Users / Community Lifestyles (page 406 to 414) and C.1 Caribou (page 431 to 446) of the Summary of Interest of Localities table, available on our website here:<br/><a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>For further details on the topic of caribou, please find Baffinland's previous responses to similar questions brought up during the federal consultation tours. See Section 6 Caribou (page 200 to 208) of the Federal Consultation Tour Response letter conducted in Dec 9 to 11, 2024, Appendix 3 of the Stakeholder Engagement Report , available on our website here:<br/><a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>See Section 1.3 Caribou (page 23 to 30) of the Federal Consultation Tour Response Letter conducted in Mar 3 to 7, 2025 within Appendix 2 of this document.</p> <p>For a detailed description of the assessment, mitigations, and adaptive management applicable to the topic of hunting, see Row B.2 Effects on Hunters and Land Users / Community Lifestyles (page 402 to 420) of the Summary of Interest of Localities table, available on our website here:<br/><a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>For a detailed description of the assessment, mitigations, and adaptive management applicable to the topic of food security, see Row B.2 Effects on Hunters and Land Users / Community Lifestyles</p> |

<sup>1</sup> For convenient reference and tracking purposes, Baffinland has assigned separate ID numbers to each comment.

| ID <sup>1</sup> | Comment                                                                                                                                                                                                                                                                                                                          | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Supporting Documents                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 |                                                                                                                                                                                                                                                                                                                                  | <p>and trappers organizations) in the management of the terrestrial environment, including caribou. The TEWG oversees Baffinland’s terrestrial mitigation and monitoring programs on an annual basis and issues recommendations that directly factor into Baffinland’s adaptive management of the Project. NIRB (as well as other regulatory authorities and the QIA) also carry out monitoring programs in relation to the Mary River Project as part of the Annual Report process, with public opportunities for comment and in person meetings in the communities. Through this continuous monitoring process, the effectiveness of mitigations will be evaluated and adjusted through adaptive management as needed. Inuit are at the centre of this process.</p> <p>With respect to the reference to ‘migration” and “calving grounds”, the railway will not hinder access to any “calving ground”. Caribou in the Mary River Project area are Baffin Island Caribou. Unlike mainland caribou herds, Baffin Island Caribou do not tend to form “calving grounds” where caribou prefer to give birth in large numbers in the same areas year over year. Instead, Baffin Island Caribou tend to remain in the same general area for extended periods of time (i.e. years) and move as their food source (i.e. lichen) is depleted. When it is time to calve, Inuit have shared with us that caribou will find higher ground in the area to calve, while the post-calving period occurs at lower elevations. Although the Steensby Railway is not expected to disrupt caribou movement, based on the advice of Inuit, Baffinland has included dedicated caribou crossings in its designs, at locations that intersect with well-known and marked caribou trails.</p> <p>The Mary River Inuit Impact Benefit Agreement between Baffinland and the Qikiqtani Inuit Association (QIA) provides further obligations and processes designed to ensure cultural and Indigenous rights protection, protection of wildlife, continuing access to Mary River Project areas for hunting purposes, and to prevent negative impacts to hunters, including compensation measures.</p> <p>Taking into account all of the above, Baffinland is confident that the Steensby Railway will not have any significant negative effects to hunting practices, caribou movements, food security, or permafrost.</p> | <p>(page 414 to 420) of the Summary of Interest of Localities table, available on our website here: <a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>For further details on the topic of hunting and food security, please find Baffinland’s previous responses to similar questions brought up during the federal consultation tours. See Section 1 Walrus and Seal (page 163 to 174), Section 2 Fish and Fisheries (page 175 to 185), Section 6 Caribou (page 200 to 208) of the Federal Consultation Tour Response letter conducted in Dec 9 to 11, 2024, Appendix 3 of the Stakeholder Engagement Report, available on our website here: <a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>See Section 1.1 Marine Mammals (page 2 to 15), Section 1.2 Fish and Fisheries (page 15 to 23), Section 1.3 Caribou (page 23 to 30) and Section 4.1 Land Use (page 95 to 103) of the Federal Consultation Tour Response Letter conducted in Mar 3 to 7, 2025, within Appendix 2 of this document.</p> |
| AP 02           | <i>Additionally, the project's plan for year-round shipping through Foxe Basin raises concerns about increased vessel traffic and icebreaking activities. Such operations will adversely affect marine mammals like narwhals, bowhead whales, and walrus, which are culturally and nutritionally vital to Inuit communities.</i> | <p>The individual has made a statement of fact without any supporting evidence. The only study that has looked at the potential effects of the Steensby Components of the Project on year round shipping on marine mammals, including narwhal, bowhead whale, and walrus, is the Mary River Final Environmental Impact Statement (FEIS). The Mary River FEIS was developed over a six (6) year period and included extensive land use and wildlife studies, and the corresponding reports are included in Baffinland’s Application to Construct a Railway. It is critical to understand that the Mary River FEIS was publically reviewed and approved based on the supported conclusions that year round shipping will not have significant residual effects on marine mammals with a high degree of confidence.</p> <p>Baffinland understands that the individual is more likely expressing a concern, which has been previously raised and responded to. Some additional materials have been referenced in the supporting documents column for ease of reference.</p> <p>Year round shipping, ship traffic and icebreaking are incidental activities to developing a port but would occur regardless of the ports location on Baffin Island. Further, the Steensby Port area is</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p>For a detailed description of the assessment, mitigations, and adaptive management applicable to the topic of marine mammals, see Row H.1 Marine Mammals (page 528 to 539) of the Summary of Interest of Localities table, available on our website here: <a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>For further details on the topic of marine mammals, please find Baffinland’s previous responses to similar questions brought up during the federal consultation tours. See Section 1 Walrus and Seal (page 163 to 174) of the Federal Consultation Tour Response letter conducted in Dec 9 to 11, 2024, Appendix 3 of the Stakeholder Engagement Report, available on our website here: <a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>See Section 1.1 Marine Mammals (page 2 to 15) of the Federal Consultation Tour Response Letter conducted in Mar 3 to 7, 2025, within Appendix 2 of this document.</p>                                                                       |

| ID <sup>1</sup> | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | not significantly different from other port locations considered in the alternatives assessment. In fact, the Steensby Port occurs outside of any current or future planning marine protected areas, as does the entirety of the shipping route through the Nunavut Settlement Area. It is Baffinland’s position that concerns relating to year round shipping, ship traffic and icebreaking are immaterial to the consideration of the Steensby Railway alignment and are not discussed further here as a result.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| AP-03           | <i>Coastal communities that once thrived on fishing have seen their way of life vanish due to overfishing and industrial pollution. When fish stocks collapse, families who have fished for generations are left with no means to sustain themselves. For Inuit communities, hunting and fishing are just as critical—not just for food, but for culture, identity, and survival. The Steensby Railway, by disrupting wildlife migration and marine habitats, risks causing the same kind of irreversible devastation that coastal fisheries have suffered. And once it's gone, there's no bringing it back</i>                                                                                                                                                                                                                                                                                                                                                                                                                                          | <p>This is a topic that has been raised previously and that has been addressed.</p> <p>Compliance with Fisheries Act requirements, including no net loss plans developed in consultation with Inuit communities, as well as key overarching Project approvals such as the Project Certificate, which includes dedicated terms and conditions to address potential for negative effects to wildlife and fisheries, will help ensure that the construction and operation of the Steensby Railway will not have any significant impacts on fisheries resources. Continuous engagement with communities, Inuit and Inuit groups such as QIA and regulatory authorities with expertise on this topic will help evaluate the effectiveness of mitigations on an ongoing basis, and adjustments will be made as needed by adaptive management.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <p>For a detailed description of the assessment, mitigations, and adaptive management applicable to the topic of fisheries protection, see Row C.2 Fish (page 446 to 454) of the Summary of Interest of Localities table, available on our website here:<br/><a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>For further details on the topic of fisheries protection, please find Baffinland’s previous responses to similar questions brought up during the federal consultation tours. See Section 2 Fish and Fisheries (page 175 to 185) of the Federal Consultation Tour Response letter conducted in Dec 9 to 11, 2024, Appendix 3 of the Stakeholder Engagement Report, available on our website here:<br/><a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>See Section 1.2 Fish and Fisheries (page 15 to 23) of the Federal Consultation Tour Response Letter conducted in Mar 3 to 7, 2025, within Appendix 2 of this document.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| AP-04           | <p><i>To mitigate these impacts, it is crucial for Baffinland to:</i></p> <p><i>(a) Reassess Environmental Impact Assessments: Given the significant environmental and climatic changes since the project's initial approval in 2012, updated assessments are necessary to reflect current conditions and data.</i></p> <p><i>(b) Implement Robust Wildlife Protection Measures: Design and construct the railway with features that facilitate safe wildlife crossings, such as appropriately graded embankments and crossing structures tailored to caribou movement patterns.</i></p> <p><i>(c) Engage in Meaningful Consultation: Foster ongoing dialogue with Inuit communities to incorporate traditional knowledge and address concerns related to hunting practices and environmental preservation</i></p> <p><i>(d) Adopt Stringent Shipping Protocols: Limit shipping during critical periods for marine life, reduce vessel speeds to minimize noise pollution, and avoid icebreaking activities that could disrupt sea ice habitats.</i></p> | <p>This is a topic that has been raised previously and that has been addressed.</p> <p><b>With respect to Item (a)</b>, as noted above, the Mary River FEIS was completed and approved in 2012. The Mary River FEIS included an assessment of climate as its own valued ecosystem component (VEC) and climate change was considered within the cumulative effects assessment as a standalone variable. The climate change forecasts used in the Mary River FEIS were conservative and remain reliable to the period 2100. Subsequent amendments and regulatory requirements have prompted ongoing assessments and reviews of key environmental aspects, as outlined in Section 5.3 of the Stakeholder Engagement Report. Baffinland has participated in several review cycles with the Nunavut Impact Review Board (NIRB), including Amendments No. 1 through No. 5 to Project Certificate No. 005. These reviews have incorporated updated environmental data, new Inuit Qaujimagatuqangit (IQ), and community feedback. Updated baseline fieldwork and community-informed studies resumed in 2021, specifically targeting the Steensby Railway and Port areas.</p> <p>Appendix 1 provides an up to date summary of the supplemental baseline studies that have been completed for the Steensby Railway and Port since 2021.</p> <p>These studies have allowed for climate-related changes, such as permafrost degradation and altered caribou migration patterns, to be integrated into final project designs and environmental mitigation and monitoring frameworks. The inclusion of adaptive management principles ensures that if environmental conditions shift, project operations and mitigation strategies can be modified accordingly. The approved Project Certificate is equipped to ensure the continuous review and updating of mitigation and monitoring plans to reflect the most currently available data and best practices. A reconsideration is not needed to amend these proven processes.</p> | <p>For a detailed description of the assessment, mitigations, and adaptive management applicable to the topic of wildlife protection, see Row C.1 Caribou (page 431 to 446) and C.3 Other Wildlife (page 454 to 460) of the Summary of Interest of Localities table, available on our website here:<br/><a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>For further details on the topic of hunting and food security, please find Baffinland’s previous responses to similar questions brought up during the federal consultation tours. See Section 1 Walrus and Seal (page 163 to 174), Section 2 Fish and Fisheries (page 175 to 185), Section 6 Caribou (page 200 to 208) of the Federal Consultation Tour Response letter conducted in Dec 9 to 11, 2024, Appendix 3 of the Stakeholder Engagement Report, available on our website here:<br/><a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>See Section 1.1 Marine Mammals (page 2 to 15), Section 1.2 Fish and Fisheries (page 15 to 23), Section 1.3 Caribou (page 23 to 30) and Section 1.4 Birds (page 30 to 37) of the Federal Consultation Tour Response Letter conducted in Mar 3 to 7, 2025, within Appendix 2 of this document.</p> <p>For a detailed description of the assessment, mitigations, and adaptive management applicable to the topic of Inuit engagement, see Row D.1 Collection and Incorporation of IQ and Inuit Experience (page 460 to 467) of the Summary of Interest of Localities table, available on our website here:<br/><a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>For further details on the topic of Inuit engagement, please find Baffinland’s previous responses to similar questions brought up during the federal consultation tours. See Section 3 QIA-Led</p> |

| ID <sup>1</sup> | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Supporting Documents                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <p><b>With respect to Item (b),</b> as noted above, Baffinland confirms that it has included evidence in its Section 98 Application that the Steensby Railway will proceed with robust wildlife protection measures in place, including the design and construction of features that facilitate wildlife crossings, appropriately graded embankments, and crossing structures tailored to caribou movement patterns identified by local traditional land users with personal knowledge of the area.</p> <p><b>With respect to Item (c),</b> Baffinland confirms that it has included in its Section 98 application evidence of formal mechanisms that ensure meaningful ongoing consultation with Inuit communities to incorporate traditional knowledge and address concerns related to hunting practices and environmental preservation.</p> <p><b>With respect to item (d),</b> as noted above shipping protocols are not directly related to the location of the Steensby Railway, however, Baffinland has provided materials in the Supporting Document column for ease of reference.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>Tusaqtavut Reports (page 185 to 190) and Section 4 Inuit participation in Project Monitoring (page 190 to 195) of the Federal Consultation Tour Response letter conducted in Dec 9 to 11, 2024, Appendix 3 of the Stakeholder Engagement Report, available on our website here: <a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>See Section 3.1 Inuit Involvement and Participation in Project Monitoring (page 79 to 88) of the Federal Consultation Tour Response Letter conducted in Mar 3 to 7, 2025, within Appendix 2 of this document.</p> <p>For a detailed description of the assessment, mitigations, and adaptive management applicable to the topic of shipping, see Row H.2 Icebreaking (page 539 to 548) and H.3 Ballast Water (page 548 to 554) of the Summary of Interest of Localities table, available on our website here: <a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>For further details on the topic of shipping, please find Baffinland’s previous responses to similar questions brought up during the federal consultation tours. See Section 5 Ballast Water and Invasive Species (page 195 to 200), Section 10 Spill Response (page 226 to 236) of the Federal Consultation Tour Response letter conducted in Dec 9 to 11, 2024, Appendix 3 of the Stakeholder Engagement Report, available on our website here: <a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>See Section 2.3 Ballast Water and Invasive Species (page 49 to 54), Section 2.4 Southern Shipping Route (page 54 to 65), Section 6.1 Spill Response (page120 to 126) of the Federal Consultation Tour Response Letter conducted in Mar 3 to 7, 2025, within Appendix 2 of this document.</p> |
| AP-05           | <p><i>While Baffinland has supplied various documents under Section 98 of the Canadian Transportation Act, there are areas where additional information is necessary to fully comprehend the project's potential impacts:</i></p> <p><i>(a) Updated Environmental Data: Current studies on caribou populations, permafrost stability, and marine ecosystems are essential to assess the project's environmental footprint accurately.</i></p> <p><i>(b) Detailed Mitigation Strategies: Comprehensive plans outlining specific measures to protect wildlife and support Inuit subsistence activities should be clearly articulated.</i></p> <p><i>(c) Cumulative Impact Analysis: An evaluation of the combined effects of the railway, increased shipping, and other industrial activities in the region is needed to understand the broader environmental and social implications.</i></p> | <p>This is a topic that has been raised previously and that has been addressed.</p> <p><b>With respect to Item (a),</b> Baffinland confirms that recent studies on the topics of caribou, permafrost, and marine ecosystems have been carried out. See Table 1 at response to AP-04(a) above for details. Baffinland can confirm it has also recently hosted a three week North Baffin caribou population survey led by the Government of Nunavut with support by the Mittimatalik Hunters and Trappers Organization (MHTO). The results of the survey will further inform management direction related to the North Baffin caribou herd. To day the Total Allowable Harvest (TAH) is steadily increasing each year, recognizing the observed recovery of the North Baffin caribou population by Inuit harvesters. This recovery has occurred in the same period the Mary River Project was constructed and operated for a decade now.</p> <p><b>With respect to Item (b),</b> Baffinland confirms that it has provided a detailed summary of mitigation measures to protect wildlife and measures in place to support Inuit hunters and other subsistence activities in the Section 98 Application.</p> <p><b>With respect to Item (c),</b> Baffinland confirms that NIRB considered cumulative effects in its assessment of the Mary River Project. All components of the Mary River Project, including the Steensby Railway, were considered as part of that assessment. Interestingly, there are fewer industrial activities in the region at this time than was projected in 2012. Cumulative effects were</p> | <p>For a detailed description of the assessment, mitigations, and adaptive management applicable to the topic of caribou, see Row C.1 Caribou (page 431 to 446) of the Summary of Interest of Localities table, available on our website here: <a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>For further details on the topic of caribou, please find Baffinland’s previous responses to similar questions brought up during the federal consultation tours. See Section 6 Caribou (page 200 to 208) of the Federal Consultation Tour Response letter conducted in Dec 9 to 11, 2024, Appendix 3 of the Stakeholder Engagement Report , available on our website here: <a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>See Section 1.3 Caribou (page 23 to 30) of the Federal Consultation Tour Response Letter conducted in Mar 3 to 7, 2025 within Appendix 2 of this document.</p> <p>For a detailed description of the assessment, mitigations, and adaptive management applicable to the topic of permafrost, see Row A.3 Permafrost (page 389-393) of the Summary of Interest of Localities table, available on our website here: <a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

| ID <sup>1</sup> | Comment | Response                                                                                                                                                                                                                                                                                                   | Supporting Documents                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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|                 |         | also considered in subsequent amendments to the Project Certificate. A process to further consider cumulative effects will be directed by the NIRB in accordance with Ministerial direction issued in November 2023. This is also a topic that is considered as part of the NIRB annual reporting process. | <p>For further details on the topic of permafrost, please find Baffinland’s previous responses to similar questions brought up during the federal consultation tours. See Section 8 Geotechnical (page 216 to 221) of the Federal Consultation Tour Response letter conducted in Dec 9 to 11, 2024, Appendix 3 of the Stakeholder Engagement Report , available on our website here: <a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/ resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>See Section 2.5 Geotechnical (page 65 to 70) of the Federal Consultation Tour Response Letter conducted in Mar 3 to 7, 2025 within Appendix 2 of this document.</p> <p>For a detailed description of the assessment, mitigations, and adaptive management applicable to the topic of hunting, see Row B.2 Effects on Hunters and Land Users / Community Lifestyles (page 402 to 420) of the Summary of Interest of Localities table, available on our website here: <a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/ resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>For further details on the topic of hunting and food security, please find Baffinland’s previous responses to similar questions brought up during the federal consultation tours. See Section 1 Walrus and Seal (page 163 to 174), Section 2 Fish and Fisheries (page 175 to 185), Section 6 Caribou (page 200 to 208) of the Federal Consultation Tour Response letter conducted in Dec 9 to 11, 2024, Appendix 3 of the Stakeholder Engagement Report, available on our website here: <a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/ resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>See Section 1.1 Marine Mammals (page 2 to 15), Section 1.2 Fish and Fisheries (page 15 to 23), Section 1.3 Caribou (page 23 to 30) and Section 4.1 Land Use (page 95 to 103) of the Federal Consultation Tour Response Letter conducted in Mar 3 to 7, 2025, within Appendix 2 of this document.</p> <p>For a detailed description of the assessment, mitigations, and adaptive management applicable to marine topics, see Row H.1 Marine Mammals (page 528 to 539), H.2 Icebreaking (page 539 to 548) and H.3 Ballast Water (page 548 to 554) of the Summary of Interest of Localities table, available on our website here: <a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/ resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>For further details on the topic of marine topics, please find Baffinland’s previous responses to similar questions brought up during the federal consultation tours. See Section 1 Walrus and Seal (page 163 to 174), Section 5 Ballast Water and Invasive Species (page 195 to 200), Section 10 Spill Response (page 226 to 236) of the Federal Consultation Tour Response letter conducted in Dec 9 to 11, 2024, Appendix 3 of the Stakeholder Engagement Report, available on our website here: <a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/ resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>See Section 1.1 Marine Mammals (page 2 to 15), ) Section 2.3 Ballast Water and Invasive Species (page 49 to 54), Section 2.4 Southern Shipping Route (page 54 to 65) and 6.1 Spill Response (page 120 to 126) of the Federal Consultation Tour Response Letter conducted in Mar 3 to 7, 2025, within Appendix 2 of this document.</p> <p>For a detailed description of considerations of cumulative effects, see Part 7 of the Application for Approval to Construct A Railway , available on our website here:</p> |

| ID <sup>1</sup> | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Supporting Documents                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| AP-06           | <i>While the Steensby Railway project has the potential to contribute economically, it is imperative that its development does not come at the expense of Inuit livelihoods, cultural practices, and the fragile Arctic environment. A thorough reassessment and the implementation of stringent mitigation measures are essential to ensure that the project aligns with the principles of environmental sustainability and respect for Indigenous rights.</i> | <p>This is a topic that has been raised previously and that has been addressed. See response to AP-04 (a).</p> <p>Inuit have expressed a strong desire for economic benefits from the Mary River Project, including opportunities for employment. The Mary River Project currently comprises approximately 25% of the GDP of Nunavut. A workforce of 375 Inuit are employed or contracted at the Mary River Project and depend on it to support their livelihoods. Baffinland is the largest private employer in the Qikiqtani region. The Mary River Project will not continue as a trucking operation, the development of the Steensby Railway is critical to future operations. This future will see the benefits of the Project multiplied and delivered on a time scale no other Project in Canada’s territories can match. It cannot be understated how important this Project is to the sustainable development of the Qikiqtani region and its people. That being said, Inuit have been clear the Mary River Project cannot be developed without a deep respect for the importance of the land and waters we operate in. Baffinland has adopted the eight Inuit Societal Values into our own corporate values that compel us to operate with respect for the land, this commitment is reflected in the Project Certificate, the Mary River IIBA, and every author authorization and agreement in place to see the successful development and operation of the Mary River Project.</p> | <p>For further information on economic benefits, see Part 1 of the Application for Approval to Construct A Railway , available on our website here:<br/><a href="https://steensbyrailway.baffinland.com/resources/pdf/Application_for_a_Railway_Line_ENG.pdf">https://steensbyrailway.baffinland.com/resources/pdf/Application_for_a_Railway_Line_ENG.pdf</a></p> <p>See also Row F.1 Employment Opportunities, Benefits For Communities and Training (page 471 to 486) of the Summary of Interests of Localities table, available on our website here:<br/><a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>For further details on the topic of benefits to communities, please find Baffinland’s previous responses to similar questions brought up during the federal consultation tours. See Section 12 Benefits to Communities (page 243 to 249) of the Federal Consultation Tour Response letter conducted in Dec 9 to 11, 2024, Appendix 3 of the Stakeholder Engagement Report, available on our website here:<br/><a href="https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf">https://steensbyrailway.baffinland.com/resources/pdf/stakeholder_engagement_report-20250311.pdf</a></p> <p>See Section 5.1 Inuit Employment (page 109 to 115), and Section 5.2 Benefits for Communities (page 115 to 120) of the Federal Consultation Tour Response Letter conducted in Mar 3 to 7, 2025, within Appendix 2 of this document.</p> |

**APPENDIX 1 - SUPPLEMENTAL BASELINE STUDIES COMPLETED SINCE 2021**

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Table A.1 - Supplemental Baseline Studies Completed Since 2021

| Topic        | Subtopic             | Title                                                                                    | Location of document                                                                    | Study Dates                | Report Date |
|--------------|----------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|----------------------------|-------------|
| Archaeology  | N/A                  | 2023 Steensby Archaeology Program - Non-Technical Summary                                | 2024 Archaeology Activities – Steensby Component of the Mary River Project Memo (SD-81) | July - August 2023         | 01-Dec-23   |
| Archaeology  | N/A                  | 2024 Steensby Archaeology Program - Non-Technical Summary                                | 2024 Archaeology Activities – Steensby Component of the Mary River Project Memo (SD-81) | July - August 2024         | 16-Sep-24   |
| Atmospheric  | Meteorology          | 2020 Annual Air Quality, Dustfall and Meteorology Report - Meteorology at Steensby Inlet | 2020 NIRB Annual Report Appendix G.18                                                   | 2020                       | 06-May-21   |
| Atmospheric  | Meteorology          | 2021 Annual Air Quality, Dustfall and Meteorology Report - Meteorology at Steensby Inlet | 2021 NIRB Annual Report Appendix G.26                                                   | 2021                       | 30-Mar-22   |
| Atmospheric  | Meteorology          | 2022 Annual Air Quality, Dustfall and Meteorology Report - Meteorology at Steensby Inlet | 2022 NIRB Annual Report Appendix G.2.1 (SD-59)                                          | 2022                       | 21-Apr-23   |
| Atmospheric  | Meteorology          | 2023 Annual Air Quality, Dustfall and Meteorology Report - Meteorology at Steensby Inlet | 2023 NIRB Annual Report Appendix G.2.1 (SD-60)                                          | 2023                       | 30-Apr-24   |
| Freshwater   | Fish                 | Steensby Port Arctic Char Otolith Analysis                                               | Steensby Freshwater FAA Appendix F2 (SD-38)                                             | Jul-21                     | 24-Feb-22   |
| Freshwater   | Physical Environment | Water Withdrawal Notification and Hydrological Assessment – Steensby Component           | Steensby Freshwater FAA Appendix E (SD-38)                                              | 2006-2022                  | 28-Nov-23   |
| Freshwater   | Noise                | Construction of the Steensby Inlet Railway Underwater Noise Modelling Report: Freshwater | Steensby Freshwater FAA Appendix I2 (SD-38)                                             | Fall 2023                  | 15-Dec-23   |
| Freshwater   | Fish                 | Steensby Port and Railway Freshwater Habitat Surveys: Non-Fish Bearing Sites 2021-2023   | Steensby Freshwater FAA Appendix F1 (SD-38)                                             | June - September 2021-2023 | 01-Feb-24   |
| Freshwater   | Fish                 | Potential Offsetting Sites: 2023 Freshwater Habitat Surveys                              | To be include in the 2024 NIRB Annual Report                                            | August - September 2023    | 01-Apr-24   |
| Freshwater   | Fish                 | Freshwater and Fish Habitat Survey: Mary River and Tributary F 2023                      | To be include in the 2024 NIRB Annual Report                                            | Aug-23                     | 01-Apr-24   |
| Freshwater   | Fish                 | Fish Passage Assessment – Steensby Component                                             | Steensby Freshwater FAA Appendix F1 (SD-38)                                             | June - September 2021-2023 | 01-Feb-24   |
| Freshwater   | Fish                 | 2024 Steensby Freshwater Program - KP 85 Lake                                            | To be include in the 2024 NIRB Annual Report                                            | July - August 2024         | 28-Jan-25   |
| Freshwater   | Fish                 | 2024 Steensby Freshwater Program - Fishbearing Habitat Assessments                       | To be include in the 2024 NIRB Annual Report                                            | July - August 2024         | 04-Feb-25   |
| Freshwater   | Fish                 | 2024 Steensby Freshwater Program – Non-Fishbearing Habitat Assessments                   | To be include in the 2024 NIRB Annual Report                                            | July - August 2024         | 04-Feb-25   |
| Freshwater   | Fish                 | 2024 Steensby Freshwater Program -Cockburn Lake Gillnetting Report                       | To be include in the 2024 NIRB Annual Report                                            | July - August 2024         | 28-Jan-25   |
| Geotechnical | N/A                  | 2023 Geotechnical Investigation Report – Steensby Rail Alignment                         | SD-67                                                                                   | Spring - Summer 2023       | 31-Oct-23   |
| Marine       | Fish                 | 2021 Marine Fish and Fish Habitat Studies in Steensby Port Area                          | Draft in 2021 Annual Report.                                                            | 2021                       | 28-Mar-22   |
| Marine       | Physical Environment | Fixed wing survey - June 2023                                                            | 2023 NIRB Annual Report (SD-60)                                                         | 28-Jun-23 - 01-Jul-23      | 22-Aug-23   |
| Marine       | Physical Environment | Multibeam Bathymetric Survey in Steensby Inlet                                           | 2023 NIRB Annual Report (SD-60)                                                         | Sep-23                     | 18-Dec-23   |
| Marine       | Physical Environment | Steensby Inlet Fast Ice Study                                                            | 2023 NIRB Annual Report (SD-60)                                                         | 1996-2023                  | 18-Mar-24   |
| Marine       | Physical Environment | 2021-22 Physical Oceanography Program                                                    | 2023 NIRB Annual Report Appendix G.1 (SD-60)                                            | 2021-2022                  | 19-Apr-24   |
| Marine       | Noise                | Underwater Noise Modelling - Construction of Steensby Port                               | To be include in the 2024 NIRB Annual Report                                            | Jan-25                     | Jan-25      |
| Marine       | Noise                | Airborne Noise Modelling - Construction of Steensby Port                                 | To be include in the 2024 NIRB Annual Report                                            | Jan-25                     | Jan-25      |

| Topic       | Subtopic   | Title                                                                                                                             | Location of document                         | Study Dates        | Report Date |
|-------------|------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|--------------------|-------------|
| Terrestrial | Dust       | Terrestrial Environment – 2021 Annual Monitoring Report, which includes satellite based dust monitoring of the Steensby Port area | 2021 NIRB Annual Report                      | March - May 2021   | 01-Aug-22   |
| Terrestrial | Dust       | Terrestrial Environment – 2022 Annual Monitoring Report, which includes satellite based dust monitoring of the Steensby Port area | 2022 NIRB Annual Report (SD-59)              | March - May 2022   | 30-Apr-23   |
| Terrestrial | Dust       | Terrestrial Environment – 2023 Annual Monitoring Report, which includes satellite based dust monitoring of the Steensby Port area | 2023 NIRB Annual Report (SD-60)              | March - May 2023   | 30-Apr-24   |
| Terrestrial | Vegetation | Vegetation and Soils Base Metals Monitoring at Steensby, 2012–2022                                                                | 2022 NIRB Annual Report (SD-59)              | 2012-2022          | 01-Apr-23   |
| Terrestrial | Caribou    | 2023 Late-Winter Aerial Caribou Survey Summary Report                                                                             | 2023 NIRB Annual Report (SD-60)              | Mar-23             | 01-Mar-24   |
| Terrestrial | LiDAR      | LiDAR and Orthophoto of the Southern Corridor                                                                                     | To be include in the 2024 NIRB Annual Report | July - August 2024 | 17-Oct-24   |

Note: NIRB Annual Reports completed for 2021 and earlier can be found on the NIRB Registry website [linked here](#).

**APPENDIX 2 – PART B: SUMMARY OF TOPICS RAISED BY PARTICIPANTS DURING THE FEDERAL  
CONSULTATION TOUR (MARCH 3 TO 7)**

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## Part B.

### Summary of Topics Raised by Participants during the Federal Consultation Tour

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## **1. Wildlife**

### **1.1 Marine Mammals**

#### ***A. Summary of Feedback Shared During Tour***

A summary of the verbal feedback heard by Baffinland in relation to this topic during the Tour is provided below. The comments were generally made in Inuktitut by participants and translated into English by local interpreters.

In Kimmirut there were seven comments on marine mammals:

*“Which area of South Baffin was included in the marine mammal study?”*

*“Want to ask about marine mammal studies and birds as well. We used to have animals and birds here, which the Inuit would not be trusted.”*

*“What would be the impacts on marine mammals? If there is no marine mammal impact, there is no objection and great opportunity for work.”*

*“Will we see ships from Kimmirut? Will we see ships every day? How will this impact marine mammals? Those ships are very loud, engines are loud and will impact marine mammals (seals). How much noise impact will occur? Will the marine mammals, seals leave the area and move away elsewhere? When ships go by, there won’t be any more animals to hunt. Can you minimize the engine noise under water?”*

*“We start hunting beluga from March to June, so 20 ships per month. We see belugas every day and rotate and their migrations. They are always close. If that ship goes 20 times a month, I expect to see many whales or seals. With a lot of the ship movement, we don’t see ice like we have seen before. I fear that if that ship keeps moving, we will not have any sea ice at all.”*

*“Shipping location is too close to Kimmirut. Coastline is where most of the sea mammals are located? Can you change the shipping lane?”*

*“People have seen around Pond Inlet – Narwhals that were regularly seen. What type of impacts has the shipping route to narwhals? Whales, seals, etc. What do we expect to see in this area?”*

In Kinngait there were three comments on marine mammals:

*"Regarding the shipping route, are they still going through the North (Milne Port), if not, I wonder what mammals are affected in that area."*

*"I would like to discuss the topic of monitoring marine mammals related to the Project. Our people representing the HTO want to know if there are negative impacts of the project, we hear very little of this. Question is if there are impacts and what we are monitoring. Baffinland leaves some part out from the monitoring and want to hear from DFO. We would like to hear from the bodies that review the monitoring, have representation on the project, if we don't hear from them."*

*"Does DFO have a picture of the narwhal travelling through Foxe Basin, will the ships travel through the migration route, and where the ships are in relation to the migration route?"*

In Igloolik there were six comments on marine mammals:

*"Compared to Pond Inlet Port, Steensby is very shallow. It is shallower than Milne and would pose a huge risk to the animals in the area, and to use too as this is sacred to us."*

*"Many of us have heard impacts of shipping into Milne Inlet where we have lost narwhals and marine mammals"*

*"Concern with shallow waters in North Foxe Basin, we live in walrus country and this will be a concern."*

*"We flew to Steensby Port before, right at the end, it is very deep. If they put more gravel, it will not be a hill. A ship can go right to the port."*

*"There is no mention of polar bears, no research has been done."*

*"Any noise will affect walrus mating and behaviour."*

In Arctic Bay there were three comments on marine mammals:

*"The only concern he has is if the ships do not affect the animals too much, he is ok with it."*

*"Our community has the most narwhals in our sea, and when there was mining up in Nanisivik, ships would come around May to pick up the materials from the mine. Back then, the ice used to be thick and ships would bring icebreakers, in the same area where*

*we go hunting for narwhals. There was no concern about the shipping trail and they started hunting where the ship passed through.”*

*“Did you already start studying or are you planning to do any studies on mammals or fish?”*

In Clyde River there was one comment on marine mammals:

*“How has the narwhal population been in the last couple of years?”*

### ***B. NIRB Review Conclusions and Mitigations related to Marine Mammals***

#### **Summary of NIRB Review Process Residual Effects Assessment and Prediction Confidence**

As set out in the 2012 FEIS, Baffinland conducted an extensive assessment of the marine environment, which relied on multiple lines of evidence, including available literature, IQ shared with Baffinland by Inuit, direct field research (e.g. aerial surveys), desktop studies (e.g. models, risk assessments), land use studies (e.g. Mary River Land use Study) and expert opinion. The assessment, considering this information, drew the following conclusions with respect to the Projects potential effects on marine mammals, respectively:

*“Based on the available evidence on ringed seal responses to on-ice industrial activity and vessel traffic, the planned mitigation measures, the overall health and population size of ringed seals in the RSA, and the baseline data used in the assessment, there is a high level of certainty in the predictions of residual effects (Table 8-5.4). No significant residual environmental effects are predicted for this indicator species.” (FEIS, Volume 8, Section 5.6.4)*

*“Based on the available evidence of walrus responses to vessel traffic, including icebreaking, the baseline data used in the assessment, the planned mitigation measures, the location of the port sites and shipping routes relative to walrus haulout sites, winter feeding areas, and potential calving areas, there is a high level of certainty in the residual effects predictions (Table 8-5.9). No significant residual environmental effects are predicted for this indicator species.” (FEIS, Volume 8, Section 5.7.4)*

*“Based on the planned mitigation measures, the baseline data used in the assessment, the location of port sites and shipping routes relative to potential feeding and calving areas, and the available evidence on beluga responses to vessel traffic and construction activities, there is a high level of certainty in the residual effects predictions, with the exception of disturbance effects in Hudson*

Strait and the potential effects of masking by project noise (Table 8-5.12). No significant residual effects are predicted for this indicator species. However, follow-up is required to monitor beluga responses to ore carrier traffic in Hudson Strait.” (FEIS, Volume 8, Section 5.8.4)

“Based on the planned mitigation measures, the baseline data used in the assessment, the location of port sites relative to potential feeding and calving areas, and the available evidence on narwhal responses to vessel traffic, the level of confidence in residual effects predictions is generally high (Table 8-5.15). No significant residual effects are predicted for this indicator species. However, follow-up is required to monitor narwhal responses to ore carrier traffic in Hudson Strait.” (FEIS, Volume 8, Section 5.9.4)

“Based on the available evidence on polar bear response to on-ice industrial activity and vessel traffic, the planned mitigation measures, and the baseline data used in the assessment, the level of certainty in the residual effects predictions is high (Table 8-5.22). No significant environmental residual effects are predicted for this indicator species.” (FEIS, Volume 8, Section 5.11.4)

In the Final Hearing Report for the Mary River Project, the Nunavut Impact Review Board considered marine wildlife and marine habitat in Section 4.12 by providing a summary of the views of the Proponent, the views and concerns of Interested Parties and the views of the Board to draw specific conclusions and recommendations, which materialized in a draft Project Certificate 005, which was approved by the Ministers and issued in final on December 28, 2012.<sup>1</sup>

**Summary of relevant requirements from the NIRB Review Process and recognized under Project Certificate No. 005 and other existing approvals/agreements**

The 2012 FEIS proposed a number of mitigations related to marine mammals through the assessment in Marine Effects Assessment at Volume 8, and the Shipping and Marine Wildlife Management Plan at Appendix 10D-10. The following table summarizes the mitigations for marine mammals included in the 2012 FEIS:

**Table 1. 2012 FEIS Marine Mammal Mitigation Measures**

| Project Activity                                                 | Mitigation Measure(s)                                                                        | Species                                             |
|------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-----------------------------------------------------|
| <b>Construction Phase</b>                                        |                                                                                              |                                                     |
| Dock construction: blasting (Steensby only), drilling (Steensby) | <ul style="list-style-type: none"> <li>Docks to be designed to minimize footprint</li> </ul> | Ringed Seal, Bearded Seal, Walrus, Beluga, Narwhal, |

<sup>1</sup> Note there have been subsequent amendments to Project Certificate No. 5, most recently in 2023.

|                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                               |
|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| only), dredging, and vessel traffic near dock sites                        | <ul style="list-style-type: none"> <li>• Blasting control plan as per DFO blasting guideline (e.g., Wright and Hopky, 1998); meeting 100 kPa overpressure limit</li> <li>• Monitoring for marine mammals in the blasting safety zone (500 m)</li> <li>• Drilling in late April/early May. Reduce vessel idling at dock site</li> <li>• Bubble curtain system</li> <li>• Blasting in late May to avoid pupping and nursing periods</li> <li>• Acoustic seal deterrent to prevent seals from entering the blast zone</li> <li>• Use of bear monitors for on-ice activities</li> </ul> | Bowhead Whale, Polar Bear                                                     |
| Vessel traffic to/from Milne and Steensby ports                            | <ul style="list-style-type: none"> <li>• Maintain constant speed and course when possible</li> <li>• Reduce vessel idling. Vessel to be designed to limit noise output</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                   | Ringed Seal, Bearded Seal, Walrus, Beluga, Narwhal, Bowhead Whale, Polar Bear |
| Aircraft Overflights                                                       | <ul style="list-style-type: none"> <li>• Maintain altitude of 450 m over marine waters when possible</li> <li>• Aircrafts prohibited from flying over marine mammals for sightseeing or photography</li> <li>• Aircraft prohibited from flying over walrus haulouts for sightseeing or photography</li> <li>• Walrus haulouts to be identified on maps prior to flights</li> </ul>                                                                                                                                                                                                  | Ringed Seal, Bearded Seal, Walrus, Beluga, Narwhal, Bowhead Whale, Polar Bear |
| Operation of worker camps                                                  | <ul style="list-style-type: none"> <li>• Educate workers on bear safety</li> <li>• Work areas to be kept clean of garbage, food scraps and toxic materials</li> <li>• Use of bear deterrent devices</li> </ul>                                                                                                                                                                                                                                                                                                                                                                      | Polar Bear                                                                    |
| <b>Operations Phase</b>                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                               |
| Vessel traffic to/from Milne Port (open-water period only)                 | <ul style="list-style-type: none"> <li>• Maintain constant course and speed when possible</li> <li>• Reduce vessel idling time at dock</li> <li>• Vessel to be designed to limit noise output</li> <li>• Reduce vessel speed in Milne Inlet</li> </ul>                                                                                                                                                                                                                                                                                                                              | Ringed Seal, Bearded Seal, Walrus, Beluga, Narwhal, Bowhead Whale, Polar Bear |
| Vessel traffic to/from Steensby Port, including ice management at the dock | <ul style="list-style-type: none"> <li>• Reduce vessel idling time at dock</li> <li>• Minimize footprint of ice disturbance at ore dock and along shipping route</li> <li>• Reduce vessel speed in pack ice and landfast ice</li> <li>• Shipping lane in landfast ice to be delimited with markers</li> <li>• Vessel to be designed to limit noise output</li> <li>• Marine mammal observers to be on select vessels to identify response and</li> </ul>                                                                                                                            | Ringed Seal, Bearded Seal, Walrus, Beluga, Narwhal, Bowhead Whale, Polar Bear |

|                                                            |                                                                                                                                                                                                                                                                                                                                                                                    |                                                                               |
|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
|                                                            | behaviors from shipping activities by marine mammals <ul style="list-style-type: none"> <li>• Commence ice breaking activity prior to period of lair and breathing hole creation</li> <li>• Maintain constant course and speed when possible</li> </ul>                                                                                                                            |                                                                               |
| Aircraft Overflights                                       | <ul style="list-style-type: none"> <li>• Maintain altitude of 450 m over marine waters when possible</li> <li>• Aircrafts prohibited from flying over marine mammals for sightseeing or photography</li> <li>• Aircraft prohibited from flying over walrus haulouts for sightseeing or photography</li> <li>• Walrus haulouts to be identified on maps prior to flights</li> </ul> | Ringed Seal, Bearded Seal, Walrus, Beluga, Narwhal, Bowhead Whale, Polar Bear |
| Operation of worker camps                                  | <ul style="list-style-type: none"> <li>• Educate workers on bear safety</li> <li>• Work areas to be kept clean of garbage, food scraps and toxic materials</li> <li>• Use of bear deterrent devices</li> </ul>                                                                                                                                                                     | Polar Bear                                                                    |
| <b>Closure Phase</b>                                       |                                                                                                                                                                                                                                                                                                                                                                                    |                                                                               |
| Vessel traffic: sealift removal of equipment and materials | <ul style="list-style-type: none"> <li>• Maintain constant speed and course when possible</li> <li>• Reduce vessel idling</li> <li>• Vessel to be designed to reduce noise output</li> <li>• Reduce vessel speed in Milne Inlet</li> </ul>                                                                                                                                         | Ringed Seal, Bearded Seal, Walrus, Beluga, Narwhal, Bowhead Whale, Polar Bear |
| Operation of worker camps                                  | <ul style="list-style-type: none"> <li>• Educate workers on bear safety</li> <li>• Use of bear deterrent devices</li> </ul>                                                                                                                                                                                                                                                        | Polar Bear                                                                    |

In addition to the mitigations listed above, which form a part of the evidentiary record on which the Nunavut Impact Review Board and the Ministers based their approval of the Mary River Project, Project Certificate 005 also provides specific direction on the Southern Shipping Route at Term and Condition 178 to address community concerns (see Attachment 1 enclosed). Subject to safety considerations and the potential for conditions, as determined by the crew of transiting vessels, to result in route deviations, the Proponent shall require project vessels to maintain a route to the south of Mill Island to prevent disturbance to walrus and walrus habitat on the northern shore of Mill Island. Prior to the issuance of Project Certificate 005, Baffinland had already proposed to alter the nominal Southern Shipping Route to follow south of Mill Island instead of north, and east of Rowley Island instead of west. In both cases those decisions were informed by community feedback and priorities to reduce disturbance on known walrus haul outs and areas of high harvesting concentrations.

**Follow Up Monitoring, Supplemental Baseline and Project Certificate Terms and Conditions**

While the FEIS 2012 residual effects assessments demonstrated the Project, with mitigations, was unlikely to have a significant effect on walrus or seal with a high degree of certainty, Baffinland is committed to ongoing marine effects monitoring for the life of the Project. This is also required under Project Certificate 005 and as a matter of best practice.

Baffinland will develop and implement a comprehensive marine environmental monitoring programs for the Steensby Component during all its phases, including pre-construction, construction, operation and closure.

Several examples of where Project Certificate 005 requires this are included here for reference (see Attachment 1 enclosed for more details):

- Terms and Conditions 99 and 101. Outline the required marine environmental monitoring for the Steensby Component, including supplemental baseline data collection on walrus and seal abundance, distribution and habitat in Steensby Inlet.
- Term and Condition 105. Baffinland will ensure measures to reduce the potential for interaction with marine mammals, particularly in Hudson Strait, are identified and implemented prior to commencement of shipping operations. This includes identification of alternate shipping routes through Hudson Strait for use when conflicts with marine mammals could arise, using methods such as aerial surveys.
- Term and Condition 119. Baffinland is already collecting supplemental baseline data on ringed seal birth lair abundance and distribution through aerial surveys done in 2021 and 2024. Results of supplemental baseline collection, along with close collaboration and engagement with Communities, QIA, Marine Environment Working Group (MEWG) and NIRB, will feed into the development and update of Steensby Construction and Operation Management Plans.
- Term and Condition 148. Requires Baffinland to undertake monitoring of the Project's harvesting interactions and how this relates to food security for the residents of North Baffin.
- Appendix B Commitment 005. Baffinland will work with the Hamlets and HTOs of Igloolik and Sanirajak to carry out additional baseline studies for marine, terrestrial, and avian wildlife related to Steensby.

Since 2021 Baffinland has been conducting fieldwork in support of various environmental authorizations required to develop specific elements of the Steensby Component of the Project. Table 3 provides a list of supplemental marine environment baseline programs that have been run since 2021, and that are planned prior to the commencement of significant ship traffic to Steensby Port.

**Table 2.** Steensby Supplemental Baseline Studies Related to the Marine Environment

| Topic                            | Description                                                                                                                      | Year       |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>Ongoing/Completed Studies</b> |                                                                                                                                  |            |
| Marine Mammal                    | Ringed Seal Aerial surveys                                                                                                       | 2021, 2024 |
| Fish                             | Marine Fish and Fish Habitat Studies in Steensby Port Area                                                                       | 2021       |
| Marine Environment               | Physical Oceanography Program at Steensby Port                                                                                   | 2021-2022  |
| Marine Environment               | Aerial ice survey                                                                                                                | 2023       |
| Marine Environment               | Bathymetric Survey in Steensby Inlet                                                                                             | 2023       |
| Marine Environment               | Steensby Inlet Fast Ice Study                                                                                                    | 2024       |
| Marine Environment               | Fuel Spill Dispersion Modelling                                                                                                  | 2024-2025  |
| Marine Environment               | Airborne Noise Modelling – Construction of Steensby Port Facility                                                                | 2025       |
| Marine Environment               | Underwater Noise Modelling - Construction of Steensby Port Facility – Marine Environment                                         | 2025       |
| <b>Future Studies</b>            |                                                                                                                                  |            |
| Marine Environment               | Surveys of marine water and sediment quality, marine vegetation, benthic invertebrates, fish and fish habitat, and other aspects | 2026       |
| Marine Mammal                    | Marine Mammal Season Aerial Surveys (Density and Distribution)                                                                   | 2026       |
| Marine Mammal                    | Walrus abundance and distribution survey                                                                                         | 2026       |

Baffinland will integrate the outcomes of supplemental fieldwork into applicable environmental management plans as required, and submit them in its Annual Report to the Nunavut Impact Review Board.

### ***C. Additional Monitoring and Mitigations and Management Plans Required under the Project Certificate and/or Other Approvals Relevant to Marine Mammals***

Baffinland continues to refine its environmental management plans planned for the Steensby Component of the Project based on the operations that have occurred since the original approval of the Mary River Project, and based on additional focused community and regulator engagements.

With respect to shipping activities, Baffinland has developed an industry leading marine monitoring program and mitigation plan for the Northern Shipping Route. Baffinland has proposed to work directly with communities and regulators through the Marine Environment Working Group and other forums to review the original Shipping and Marine Wildlife

Management Plan for the Southern Shipping Route, with a view to adapting lessons learned from the Northern Shipping Route, as feasible and appropriate.

In addition to the Shipping and Marine Wildlife Management Plan, other environmental management plans to be developed and applicable to the Steensby Component marine infrastructure and activities includes:

- Construction Environmental Management Plan
- Environmental Protection Plan
- Marine Monitoring Plan
- Ballast Water Management Plan

The Adaptive Management Plan will also apply to this topic. The Shipping and Marine Wildlife Management Plan will follow the system for adaptive management outlined in the Adaptive Management Plan. This requires the prior establishment of monitoring objectives, indicators, thresholds and responses based on low, moderate and high levels of risk. This system is designed to detect changes in the environment early enough to investigate before they present a more serious risk to the environment. Should it be determined that the change is reasonably Project related, Baffinland can implement one or more actions already identified in the Shipping and Marine Wildlife Management Plan, or a new mitigation not previously considered.

All environmental management plans will be subject to ongoing review and updates for the life of the Project. With respect to marine environment management plans, Baffinland will be supported by the advice of the Marine Environment Working Group, which includes HTO representatives from all impacted communities, and direct community engagement. Baffinland will report on the efficacy of its environmental management plans on a regular basis through its regulatory reporting obligations, as well as through its community engagement program.

#### ***D. Summary of Regulatory Application components which address this topic***

##### **Summary of FAA Application components which address this topic**

Baffinland also heard from Inuit that avoidance of marine mammal habitat during shipping was a topic of interest during its direct engagements (Marine FAA Appendix A, S.98 Application Supporting Document 69) and took care to address this item specifically in Fisheries Act Application. QIA also asked several questions in relation to this topic, specifically related to potential impacts of the Project on haulout habitat for seals and walruses.

#### ***Mitigation Measures***

In the Marine FAA Application, the following mitigation measures are proposed to address these concerns:

- **Vessel restrictions** (Marine FAA Vol.1, Section 7.2.9): Several measures will be implemented in alignment with Baffinland's Shipping and Marine Wildlife Management Plan, such as:
  - As safe navigation allows, Project vessels will transit along the established nominal shipping route.
  - Idling will be kept to a minimum in an effort to decrease underwater noise.
  - Vessels will maintain a constant course and speed when in transit.
  - When marine mammals appear to be trapped or disturbed by vessel movements, the vessel will implement appropriate measures to mitigate disturbance, including stoppage of movement until wildlife move away from the immediate area.
  - All vessels will not be operated in such a way as to separate an individual member(s) of a group of marine mammals from other members of the group.
  - All Project vessels will be provided with standard instructions to not approach within 300 m of a walrus or polar bear observed on sea ice.
  - Ships transiting along the shipping route through Hudson Strait will travel south of Mill Island, in part to avoid the known walrus haul-out location on the north side of the island.
  - Any accidental contact with marine mammals will be reported to DFO as per the *Marine Mammal Regulations*.
- **Icebreaking Restrictions** (Marine FAA Vol.1, Section 7.2.9.1): Measures will be implemented during icebreaking operations to limit the effect on fish and marine mammals, such as:
  - Icebreaking will commence as soon as sea ice begins to form during the fall freeze-up period between September and October. At this time, ringed seals are just beginning to establish breathing holes in the sea ice as part of their development of an overwinter territory, but this is not considered a critical life cycle period. Seals may avoid establishing breathing holes along the shipping route during this period, but this would be limited to the general swath of the nominal ship path, which is minimal in extent. Seals do not start denning until January when enough snow is available on the ice for them to build a den. The objective of the proposed mitigation involving icebreakers following the same general shipping track when approaching Steensby Port (from the start of ice freeze-up) is to dissuade ringed seals from frequenting sea ice habitats along the nominal shipping route including establishing overwinter territories and/or denning lairs (i.e., pupping areas) in these areas.
  - The shipping lane into Steensby Port will be delineated with markers that will identify the boundaries of previous vessel tracks and act as a guide for the next vessel.

- Icebreaking tugs and ore carriers will restrict their area of operation to the extent practical, so that the total areas of broken landfast ice at the Steensby Port is limited.
- Designated waiting areas for vessels will be established for Project vessels when waiting for an icebreaker escort in order to avoid important marine mammal habitat areas.
- Marine mammal observers will be stationed on select icebreaking vessels to observe for the presence of marine mammals and implement any corrective actions associated with vessel travel, in addition to recording potential marine mammal response and behaviours from icebreaking activities.
- When marine mammals appear to be trapped or disturbed by vessel movements, the vessel will implement appropriate measures to mitigate disturbance, including stoppage of movement until wildlife move away from the immediate area.
- **Design selection** (Marine FAA, Volume 1, Section 7.2.1)
  - Avoidance of in-water blasting: Changes were made to the port infrastructure design and construction approach to eliminate the need for use of in-water explosives. These modifications reduce the potential injury or death to fish and marine mammals due to blasting.
  - Avoidance of in-water works: Modifications to the design of the Ore Doc to eliminate requirements for in-water installation of any infrastructure. The infrastructure will be constructed through a push-out method, which will reduce the potential injury or death to fish and marine mammals due to underwater noise.
- **Construction Environmental Management Plan (CEMP)** (Marine FAA Vol.1, Section 7.2.1): A Fish and Marine Mammal Protection Measures section in the CEMP describes methods that will be used to mitigate and management effects on marine mammals and their habitats due to changes in water quality, underwater noise and ship strikes during construction.
- **Grey Water and Effluent Discharge Management** (Marine FAA Vol.1, Section 7.2.2):
  - All water discharged to the marine environment will be sampled and tested prior to discharge to confirm it meets the relevant discharge criteria.
  - Vessels arriving for construction will not be permitted to discharge effluent or grey water
  - Vessels arriving for construction are not expected to discharge ballast water.
  - Ore carriers arriving during operational shipping would manage ballast water exchange following an IMO D-2 compliant ballast water treatment system and neutralized prior to discharging.
- **Sediment and Erosion Control** (Marine FAA Vol.1, Section 7.2.3): A SEC Plan will be prepared for all near water and in-water works associated with the construction of the Steensby Port Facility in Steensby Inlet, including sea ice and snow maintenance, silt

curtain installation, turbidity monitoring, fish monitoring, nearshore blasting mitigation and pile installation mitigation.

Baffinland is committed to minimizing the environmental effects of construction activities and will work closely with DFO and other agencies to develop monitoring plans and reporting protocols suitable to assess the effectiveness of the mitigation measures and standards. The effectiveness of mitigation measures will be assessed, as outlined in the Marine FAA (Marine FAA Vol. 1, Table 17).

### *Offsetting Measures*

The aforementioned mitigation measures will be implemented during Steensby Port construction to minimize adverse effects on fish and marine mammals. To counteract harmful alternation, disruption and destruction (**HADD**) of fish habitat, as defined by the *Fisheries Act*, Baffinland is proposing marine fish habitat offsetting measures in the FAA applications. In the marine environment Baffinland is proposing a rocky reef, achieved through placement of coarse rock substrate in low to moderate value habitat areas identified near the Steensby Port site. Based on habitat offset monitoring results to date from Baffinland's current operation at Milne Port, those areas proposed for infilling with coarse rock materials are anticipated to be recolonized by marine organisms shortly following installation, eventually leading to localized enhancement of fish productivity and fish habitat in the vicinity of Steensby Port. Overall, the coarse rock infill area is anticipated to result in higher net productivity than the existing condition. The proposed 7.25 ha rocky reef offset habitat is deemed adequate to fully compensate for fish habitat losses due to the Steensby Port construction, and will be subject to an authorization from the Department of Fisheries and Oceans Canada. (Marine FAA Vol. 2, Section 1.2).

### **Summary of CTA Section 98 Application components which address this topic**

Specific details on marine mammals are not included in the Section 98 application, as this aspect is marine based and not part of the Steensby Railway. However, this Tour follow up document is being given to CTA as part of the Section 98 application, for context should CTA decision makers have interest in this topic. Baffinland included this issue in the summary of interest of localities table submitted as part of the Section 98 Application (see SD-69, Stakeholder Engagement Report).

### ***E. Conclusion***

Baffinland acknowledges the statements made by Tour participants on the topic of marine mammals during the Tour, and appreciates the opportunity for all dialogue on topics of interest. This feedback has been considered in relation to the 2012 FEIS, the outcomes of the NIRB review, the Project Certificate requirements (including terms and conditions,

commitments, monitoring programs and management plan updates), ongoing adjustments that have occurred through monitoring, mitigation, community feedback and adaptive management since the Project began, and the measures reflected in the current pending Federal applications.

Detailed responses to the specific comments on marine mammals raised during the Tour are as follows:

- Baffinland will follow the Shipping and Marine Mammals Management Plan to implement mitigation and management measures that minimize potential effects of shipping on marine mammals. Continual engagement with Inuit on mitigation measures and adaptive management will be undertaken to effectively mitigate potential impacts.
- To ensure sufficient marine mammal monitoring, Baffinland will conduct supplemental baseline studies on marine mammals before construction, as outlined in the Project Certificate Terms and Conditions. During construction, operations, and closure, extensive marine mammal monitoring programs will be conducted. If monitoring indicates further measures are needed, action will be taken under the Adaptive Management Plan, with Inuit involvement in the development and implementation of monitoring plans.
- To address impacts on Inuit harvesting of marine mammals, Baffinland will continuously engage with communities and hunters along the Southern Shipping Route to gather observations and assess the effectiveness of mitigation measures. Adaptive management will be implemented if needed. Additionally, the Mary River IIBA between the QIA and Baffinland provides financial compensation and benefits to Inuit, with Article 9 covering maritime shipping and Article 17 establishing the Wildlife Compensation Fund to support harvesters directly affected by project-related shipping impacts.
- Regarding concerns about shallow waters along the shipping route, Baffinland has conducted oceanographic and bathymetry studies in Steensby Inlet. If impacts on marine mammals from shipping in shallow waters are identified, mitigation and management measures will be implemented under the Shipping and Marine Mammals Management Plan. Continual engagement with Inuit on mitigation measures and adaptive management will be undertaken to minimize potential impacts.

Baffinland also recognizes that there are established community grievance feedback processes in place, and ongoing community consultation mechanisms led by Baffinland as well as NIRB and Inuit, which will continue to allow us to work closely with Inuit on addressing issues throughout the life of the Project.

As summarized above, taking into account all of these mechanisms, Baffinland remains confident that there are robust measures in place to ensure that Steensby Component activities proceed in a manner that is protective of marine mammals as well as Inuit cultural and rights-based activities relating to those species.

## **1.2 Fish and Fisheries**

### **A. Summary of Feedback Shared During Tour**

A summary of the verbal feedback heard by Baffinland in relation to this topic during the Tour is provided below. The comments were generally made in Inuktitut by participants and translated into English by local interpreters.

In Kimmirut, Baffinland recorded three comments about fish and fisheries:

*"We don't go fishing to Steensby Bay, Igloolik and Sanirajak population go there. That is all I wanted to say thank you."*

*"For the blasting of Steensby Port, will you control the rock that goes flying in the water?"*

*"We have noticed that fishing places – lack of rain has affected char in lakes. When winter comes, they all die in the river. We don't want that."*

In Igloolik, there were four comments on fish and fisheries:

*"Those two lakes that you mentioned are 32,000 lbs of fish quota that will be lost to hunters... Will there be competition for the loss of commercial fish quota?"*

*"I want the explosives to be tested, and they are only tested in a perfect world. We live in a fragile environment where it can fail. Dynamite or bombs used to construct a railway must combust 100% to reduce impact to the environment. Thank you. How about the monitoring to be done by DFO? And will it be funded by DFO?"*

*"The fish habitats will be destroyed. The ships that are coming up that will destroy the water in Steensby Inlet."*

*"Effects of vibrations of train on fish, research on this? Research on stock of fish? Monetary value for amount of habitat lost? Creating new rearing habitat and site cleanup, has these been identified and has there been engagement? Will there be monitoring? Is there projection models on what you want to do with the offset? Will there be threshold for the offset success?"*

In Arctic Bay, there was one comment on fish and fisheries:

*"Happy that there will be no explosions in the water."*

In Clyde River, there was one comment on fish and fisheries:

*“So these railways, they disturb animals?...So there is a chance the train will stop the fish?”*

### ***B. NIRB Review Conclusions and Mitigations related to Fish and Fisheries***

#### **Summary of NIRB Review Process Residual Effects Assessment and Prediction Confidence**

As discussed in Section 2B of Part A, Baffinland conducted an extensive assessment of the freshwater and marine environment for the 2012 FEIS. The Project’s residual effects on Arctic Char at Steensby Port and along the Railway are predicted to be localized, low in magnitude, reversible, and not significant, with a moderate to high level of confidence based on baseline studies, modeling, and established mitigation measures.

#### **Summary of relevant requirements from the NIRB Review Process and recognized under Project Certificate No. 005 and other existing approvals/agreements**

The 2012 FEIS proposed a number of mitigations related to fish and fisheries through the assessment in Freshwater Environment Effects Assessment at Volume 7, Marine Effects Assessment at Volume 8, and the Surface Water and Aquatic Ecosystems Management Plan at Appendix 10D-2. Specifically, for all works requiring the use of explosives (blasting) in or near water bodies, the “Guidelines for Use of Explosives In or Near Canadian Fisheries Water, 1998” will be followed. For a more comprehensive list of fish and fish habitat mitigation measures, see Section 2B of Part A.

In addition to the mitigations included in the 2012 FEIS, which form a part of the evidentiary record on which the Nunavut Impact Review Board and the Ministers based their approval of the Mary River Project, Project Certificate 005 also provides specific terms and conditions on mitigation measures for fish in the freshwater aquatic environment to address community concerns (see Attachment 1 enclosed).

#### **Follow Up Monitoring and Supplemental Baseline**

While the FEIS 2012 residual effects assessments demonstrated the Project, with mitigations, was unlikely to have a significant effect on fish with a moderate to high degree of certainty, Baffinland is committed to ongoing freshwater and marine effects monitoring for the life of the Project. This is required under Project Certificate 005 and as a matter of best practice.

Baffinland will develop and implement comprehensive freshwater and marine environmental monitoring programs for the Steensby Component during all its phases, including pre-

construction, construction, operation and closure. Several examples of where Project Certificate 005 requires this are included in Attachment 1 for reference.

Since 2021 Baffinland has been conducting fieldwork in support of various environmental authorizations required to develop specific elements of the Steensby Component of the Project. The following is a list of supplemental baseline programs that have been conducted since 2021, and those that are planned prior to the commencement of Steensby construction.

**Table 3. Steensby Supplemental Baseline Studies**

| Topic                            | Description                                                                                                                                                                                                                                                                                                                                                       | Year      |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>Ongoing/Completed Studies</b> |                                                                                                                                                                                                                                                                                                                                                                   |           |
| Marine                           | Marine Fish and Fish Habitat Studies in Steensby Port Area                                                                                                                                                                                                                                                                                                        | 2021      |
| Freshwater                       | Steensby Port Arctic Char Otolith Analysis                                                                                                                                                                                                                                                                                                                        | 2021      |
| Freshwater                       | Steensby Port and Railway Freshwater Habitat Surveys: Non-Fish Bearing Sites 2021-2023                                                                                                                                                                                                                                                                            | 2021-2023 |
| Freshwater                       | Potential Offsetting Sites: 2023 Freshwater Habitat Surveys                                                                                                                                                                                                                                                                                                       | 2023      |
| Freshwater                       | Fish Passage Assessment – Steensby Component                                                                                                                                                                                                                                                                                                                      | 2023      |
| Hydrology                        | Water Withdrawal Notification and Hydrological Assessment – Steensby Component                                                                                                                                                                                                                                                                                    | 2023      |
| Freshwater                       | Steensby Railway freshwater biota and habitat field surveys                                                                                                                                                                                                                                                                                                       | 2024      |
| Marine Environment               | Marine environment habitat survey of the intertidal zone in Steensby Port area                                                                                                                                                                                                                                                                                    | 2024      |
| Marine Environment               | Fuel Spill Dispersion Modelling                                                                                                                                                                                                                                                                                                                                   | 2024-2025 |
| Marine Environment               | Airborne Noise Modelling – Construction of Steensby Port Facility                                                                                                                                                                                                                                                                                                 | 2025      |
| Marine Environment               | Underwater Noise Modelling - Construction of Steensby Port Facility – Marine Environment                                                                                                                                                                                                                                                                          | 2025      |
| <b>Future Studies</b>            |                                                                                                                                                                                                                                                                                                                                                                   |           |
| Marine Environment               | Surveys of marine water and sediment quality, marine vegetation, benthic invertebrates, fish and fish habitat, and other aspects                                                                                                                                                                                                                                  | 2026      |
| Freshwater                       | Aquatic monitoring baseline study of waterbodies along the rail corridor and the freshwater environment at Steensby Port. Key data to be collected includes: hydrology, habitat, water quality, primary productivity, benthic invertebrate community, benthic invertebrate biomass, fish community, fish tissue quality, and non-lethal evaluation of fish health | 2025-2026 |

Baffinland will integrate the outcomes of supplemental fieldwork into applicable environmental management plans as required, and submit them in its Annual Reports to the Nunavut Impact Review Board and to the Nunavut Water Board, as relevant.

***C. Additional Monitoring and Mitigations and Management Plans Required under the Project Certificate and/or Other Approvals Relevant to Fish and Fisheries***

As outlined in Section 2C of Part A, Baffinland continues to refine its environmental management plans planned for the Steensby Component of the Project based on the operations that have occurred since the original approval of the Mary River Project, and based on additional focused community and regulator engagements.

Baffinland's Nunavut Water Board (**NWB**) Type 'A' Water Licence, the scope of which includes the Steensby Component, outlines fish protection requirements such as blasting monitoring and control measures, mesh screens on water intake hoses and limitations on in-stream activities. Continually, under the Water Licence Baffinland must implement several management plans relevant to fish and fisheries, including:

- Surface Water and Aquatic Ecosystem Management Plan
- Environmental Protection Plan
- Fresh Water Supply, Sewage and Wastewater Management Plan
- Spill Contingency Plan

Other environmental management plans applicable to the Steensby Component freshwater and marine infrastructure activities to be updated and developed include:

- Construction Environmental Management Plan
- Marine Monitoring Plan

The Adaptive Management Plan will also apply to this topic. The Surface Water and Aquatic Ecosystem Management Plan will follow the system for adaptive management outlined in the Adaptive Management Plan. This requires the prior establishment of monitoring objectives, indicators, thresholds and responses based on low, moderate and high levels of risk. This system is designed to detect changes in the environment early enough to investigate before they present a more serious risk to the environment. Should it be determined that the changes is reasonably Project related, Baffinland can implement one or more actions already identified in the Surface Water and Aquatic Ecosystem Management Plan, or a new mitigation not previously considered.

All environmental management plans will be subject to ongoing review and updates for the life of the Project. With respect to environment management plans relevant to monitoring of fish and fisheries, Baffinland will be supported by the advice of the Marine Environment Working Group, which includes HTO representatives from all impacted communities, and direct

community engagement. Baffinland will report on the efficacy of its environmental management plans on a regular basis through its regulatory reporting obligations, as well as through its community engagement program.

#### ***D. Summary of Regulatory Application components which address this topic***

##### **Summary of FAA Application components which address this topic**

Baffinland also heard from Inuit that protection of fish and fisheries was a core interest during its direct engagements (Freshwater FAA Appendix B, Marine FAA Appendix A, S.98 Application Supporting Document 69) and took care to address this item specifically in its applications.

##### ***Mitigation Measures***

In the FAA Applications, the following mitigation measures are proposed to address these concerns:

- **Grey water and effluent discharge management.** Implementation of a Fresh Water Supply, Sewage and Wastewater Management Plan and adherence to Baffinland's Type 'A' Water Licence with the NWB. (Marine FAA Vol.1, Section 7.2.2)
- **Sediment and erosion control.** Implementation of a Sediment and Erosion Control Plan for all near water and in-water works. (Marine FAA Vol. 1, Section 7.2.3)
- **Construction environmental monitoring.** Independent environmental monitors (IEMs) will be contracted by Baffinland in consultation with DFO to monitor the construction phase of the Steensby Railway and Port. The presence of fish will be monitored by IEMs during in-water works. If a large aggregation of fish is observed in the work area, and there is a high potential for injury to the fish, workers will be instructed to immediately stop works until fish are no longer observed within the work area. (Marine FAA Vol. 1, Section 7.2.4; Freshwater FAA, Section 7.1.)
- **Fish passage (construction).** Silt curtains will be placed so they maintain fish passage through the work area. (Marine FAA Vol. 1, Section 7.2.5)
- **Fish salvages.** If necessary, fish and invertebrates will be relocated (i.e. from infilled areas) to areas with similar habitat. (Marine FAA Vol. 1, Section 7.2.6)
- **Blasting mitigation.** Monitoring of water bodies as prescribed in the Type 'A' Water Licence, implementation of DFO *Guidelines for the Use of Explosives in or Near Canadian Fisheries Waters* and underwater monitoring will be conducted during blasting activities to confirm the exclusion zones are protective of marine mammal and fish injury. (Marine FAA Vol. 1, Section 7.2.7; Freshwater FAA 5.1.5)
- **Pile installation mitigation.** Measures to reduce impacts on fish from impact pile installation. (Marine FAA Vol. 1, Section 7.2.8)
- **Vessel restrictions.** Restrictions on vessels to prevent damage to fish habitat (Marine FAA Vol. 1, Section 7.2.9)

- **Spill prevention and response.** Implementation of management plans to prevent and respond to potential spills in the marine and freshwater environment. (Marine FAA Vol. 1, Section 7.2.10)
- **Aquatic invasive species mitigation.** Minimize effects from potential transport of non-native or invasive species by means of ballast or hull fouling. (Marine FAA Vol. 1, Section 7.2.11)
- **Fish passage (infrastructure).** Culverts and bridges have been designed to minimize intrusion into water bodies and reduce multiple crossings of the same watercourse. The design focuses on control of the rates of water flow in the vicinity of, and through, all crossings in order to control erosion and debris flow and to prevent ponding and damming. Additional bridges over fish-bearing waters and larger diameter culverts have been incorporated into the design of the Steensby Railway in order to facilitate fish migration. This design improvement was implemented from feedback received from communities and stakeholders. (Freshwater FAA, Section 5.1.3.1)

Baffinland is committed to minimizing the environmental effects of construction activities and will work closely with DFO and other agencies to develop monitoring plans and reporting protocols suitable to assess the effectiveness of the mitigation measures and standards (Freshwater FAA, Section 7). The effectiveness of mitigation measures will be assessed, as outlined in the Marine FAA (Marine FAA Vol. 1, Table 17).

### *Offsetting Measures*

The aforementioned mitigation measures will be implemented during Steensby Railway and Port construction to minimize adverse effects on fish. Continually, to counteract harmful alternation, disruption and destruction (**HADD**) of fish habitat, as defined by the *Fisheries Act*, Baffinland is proposing both marine and freshwater fish habitat offsetting measures in the FAA applications.

In the marine environment Baffinland is proposing a rocky reef, achieved through placement of coarse rock substrate in low to moderate value habitat areas identified near the Steensby Port site (Marine FAA Vol. 2, Section 1.2).

For the freshwater environment, Baffinland is proposing a combination of offsetting measures such as barrier removals, channel enhancements, freshwater rocky reefs, translocation of fish and community-based initiatives.

The proposed marine and freshwater offset habitat is intended to fully compensate for fish habitat losses due to the Steensby Port and Steensby Railway construction. It will be subject to authorizations from the Department of Fisheries and Oceans Canada.

### **Summary of CTA Section 98 Application components which address this topic**

As outlined in the S.98 Application, the location of the Steensby Railway has been extensively studied and developed by Baffinland, based on the substantial input and advice provided by Inuit, Inuit organizations, communities, and territorial and governmental representatives through the NIRB, NPC, and NWB processes, to, amongst other things: (i) minimize the potential impact and intrusion of the Steensby Railway on the local geography and wildlife; (ii) address the interests of the communities; and (iii) ensure that the railway can be operated safely and efficiently. As a result, the alignment of the Steensby Railway has been chosen to, in part, minimize intrusion into water bodies and reduce multiple crossings of the same watercourse, thereby minimizing the impact on fish and fish habitat.

The water crossings along the Steensby Railway will interact with an estimated 119 fish-bearing rivers and streams, and encroach at 26 fish-bearing lakes and ponds. There are only two fish species—namely, Arctic Char (*Salvelinus alpinus*) and Ninespine Stickleback (*Pungitius pungitius*)—present in the waterbodies within proximity of the Steensby Railway. As described above, Baffinland has applied to the DFO to obtain all remaining authorizations for the Steensby Railway water crossings as required under the *Fisheries Act*.

Furthermore, to reduce its impact on fish and fisheries, Baffinland has incorporated additional bridges over fish-bearing waters and larger diameter culverts into the design of the Steensby Railway in order to facilitate fish migration. More information is provided in the Background to the Application Brief at Part 2 [Location of the Steensby Railway], Part 3 [Alternative Alignments], and Part 7 [Environmental Assessment].

### ***E. Conclusion***

Baffinland acknowledges the statements made by Tour participants on the topic of fish and fisheries during the Tour, and appreciates the opportunity for all dialogue on topics of interest. This feedback has been considered in relation to the 2012 FEIS, the outcomes of the NIRB review, the Project Certificate requirements (including terms and conditions, commitments, monitoring programs and management plan updates), ongoing adjustments that have occurred through monitoring, mitigation, community feedback and adaptive management since the Project began, and the measures reflected in the current pending Federal applications.

Detailed responses to the specific comments on fish and fisheries raised during the Tour are as follows:

- With respect to the comments the use of explosives, the 2012 FEIS concludes ground disturbance and earthworks activities, including blasting, are not expected to result in significant adverse environmental effects on the water and sediment quality. Several environmental management plans will be implemented, as discussed above. Furthermore, effects of blasting on Arctic Char and their eggs will be mitigated through

development of a detailed blasting management plan, which will follow DFO blasting guidelines.

- With respect to the topic of freshwater monitoring, Baffinland will implement measures to monitor potential effects on water quality, freshwater fish, fish habitat, and other aquatic organisms through management plans described above. Monitoring programs will be implemented in alignment with the Project Certificate terms and conditions and Baffinland's Type 'A' Water Licence. As required, adaptive management measures will be implemented.
- To counteract harmful alternation, disruption and destruction of fish habitat, Baffinland proposed both marine and freshwater fish habitat offsetting measures in the FAA applications. In the marine environment Baffinland is proposing a rocky reef, achieved through placement of coarse rock substrate in low to moderate value habitat areas identified near the Steensby Port site. For the freshwater environment, Baffinland is proposing a combination of offsetting measures such as barrier removals, channel enhancements, freshwater rocky reefs, translocation of fish and community-based initiatives.
- Regarding comments on commercial fisheries, Baffinland's Project Certificate includes Term and Conditions which require Baffinland to conduct monitoring of marine fish and fish habitat, including monitoring for Arctic Char stock size and health condition in Steensby Inlet. In the event of the development of a commercial fishery in the Steensby Inlet area, Baffinland will update the monitoring program for marine fish and fish habitat to ensure that the ability to identify Arctic Char stock(s) potentially affected by Project activities and monitor for changes in stock size and structure of affected stocks and fish health (condition, taste) is maintained.

Baffinland also recognizes that there are established community grievance feedback processes in place, and ongoing community consultation mechanisms led by Baffinland as well as NIRB and Inuit, which will continue to allow us to work closely with Inuit on addressing issues throughout the life of the Project.

As summarized above, taking into account all of these mechanisms, Baffinland remains confident that there are robust measures in place to ensure that Steensby Component activities proceed in a manner that is protective of fish and fisheries as well as Inuit cultural and rights-based activities relating to those species.

### 1.3 Caribou

#### **A. Summary of Feedback Shared During Tour**

A summary of the verbal feedback heard by Baffinland in relation to this topic during the Tour is provided below. The comments were generally made in Inuktitut by participants and translated into English by local interpreters.

In Kinngait, Baffinland recorded one comment on caribou:

*“Caribou migrate, will the caribou migration has been studied and if they were, will they be monitored to see how much the railway will affect it?”*

In Igloolik, Baffinland recorded four comments on caribou:

*“The railway will have an impact on wildlife (fish habitat will be permanent, and caribou will be affected). Many of us would hunt caribou on Baffin Island before the moratorium. I am happy that caribou will be able to cross the railway.”*

*“You only heard a little bit of our concerns. Impact of lights from train on caribou in winter time and polar bear, not mentioned.”*

*“Who in the Government is responsible for the caribou? There is research from other mines related to impacts of linear infrastructure. If we have 6.5 trains per day, there are two months without light, how will light impact caribou, how much research has been done? We need more.”*

*“We go hunt there for caribou every year. Each time we go, we see caribou where the old camp is there now. We used to use it all year round before they implemented the ban on Baffin caribou.”*

In Arctic Bay, Baffinland recorded six comments on caribou:

*The main concern he [Mayor] has is with the caribou to pass the railway. As long as caribou can pass the railway, he doesn't really have any concerns. He supports the Railway, it will create more jobs and nobody is really using the land to survive how they used to back then. For example, over on the west side when caribous are migrating, they have to cross the road and drivers wait until all caribou have passed. If the railway is not dangerous, he wants the caribou to pass the railway if it is possible.*

*“We had a mining site here before, even though there was no railway, we had a highway from here up to the mine site. The mining was running for 40 years. We barely had any*

*caribou, but during those years, caribou started coming here. There was never any problems when the caribou are migrating and crossing the road. He is happy if there is a bridge or crossings for caribou to pass through the railway. They used to stop their vehicles when caribous are crossing the road during their migration."*

*"I don't like that because when the caribou starts migrating back here, it is concerning if the train will be around. Need to take a couple months off to give caribou a chance to migrate."*

*"Regarding caribou in the great lake area regarding caribou, when they migrate, about half a mile, they would stop because we need those caribou to migrate towards our area. The caribou in Steensby area migrates towards our area so it cannot be interrupted."*

*"Since Baffinland began, how many caribou have been disrupted or taken a different route? What did you notice about caribou migration and route?"*

*"Like I said, we had Nanisivik Mine. We had a lot of caribou before that mine, and it disappeared. We used to hunt caribou during Nanisivik, but the caribou did not mind the ships."*

In Clyde River, Baffinland recorded six comments on caribou:

*"The communities of Igloolik and Sanirajak see hundreds of caribou migrating onto Baffin Island, there will be a big line of railway for them to cross to go to Central Baffin Island. We have to go to the West to hunt caribou, so a community concern is if they build the railway in the proposed location, the migrating caribou may hear the noise and return to the mainland without migrating to Baffin Island."*

*"The concern we have on caribou migration, caribou is turning back, and part of the condition is to ensure that the caribou will be able to cross the railway without being scared."*

*"How did you study noise on caribou? GN does collaring with caribou. What will be done if there are impacts seen? Will the Project be stopped? The caribou migration on the mainland into Baffin Island is very close to Steensby and the railway to come to our area has to cross through Steensby. This is one of our main concerns in Clyde River."*

*"One of the caribou management measures could be for the communities of Igloolik and Sanirajak who when they see big herds of caribou, they can notify Baffinland to let them know there is a herd starting to migrate in Baffin Island to ensure the herd can migrate into Baffinland without any noise. Measures to reduce noise while they are migrating."*

*"It takes days to do that [caribou migration across Baffin Island], it does not happen every year, but when it does, it takes days."*

*"Can there be terms and conditions in the railway certificate that address caribou migration?" (Transport Canada confirmed the Railway Operating Certificate can have conditions for addressing caribou crossings).*

## **B. NIRB Review Conclusions and Mitigations related to Caribou**

### **Summary of NIRB Review Process Residual Effects Assessment and Prediction Confidence**

As discussed in Section 6B of Part A, Baffinland conducted an extensive assessment of caribou for the 2012 FEIS and concluded that the Project is not expected to significantly impact caribou population dynamics. There will not be notable changes in mortality, habitat loss, health, births, deaths, emigration, or immigration as a result of Project activities.

### **Summary of relevant requirements from the NIRB Review Process and recognized under Project Certificate No. 005 and other existing approvals/agreements**

The 2012 FEIS proposed a number of mitigations related to caribou through the assessment in Caribou Effects Assessment at Volume 6, and the Terrestrial Environment Mitigation and Monitoring Plan at Appendix 10D - 11. There will be caribou crossings at identified caribou trail locations along the railway. These will be constructed with finer fill material and graded. Finer fill will replicate natural trail conditions, preventing leg entrapment, and gentler gradients will reduce the visual barrier of the embankments. Railway operators will be made aware of the crossing areas, and will be required to report any caribou sighting along the railway. For a more comprehensive list of caribou mitigation measures included in the 2012 FEIS, see Section 6B of Part A.

In addition to the mitigations included in the 2012 FEIS, which form a part of the evidentiary record on which the Nunavut Impact Review Board and the Ministers based their approval of the Mary River Project, Project Certificate 005 also provides specific terms and conditions on caribou to address community concerns (see Attachment 1 enclosed).

### **Follow Up Monitoring and Supplemental Baseline**

While the 2012 FEIS residual effects assessments demonstrated the Project, with mitigations, was unlikely to have a significant effect on caribou with a high degree of certainty, Baffinland is committed to ongoing caribou effects monitoring for the life of the Project. This is required under Project Certificate 005 and as a matter of best practice.

Baffinland will develop and implement a comprehensive caribou monitoring programs for the Steensby Component during all its phases, including pre-construction, construction, operation and closure. Several examples of where Project Certificate 005 and other agreements requires this are included in Attachment 1 for reference.

Since 2021 Baffinland has been conducting fieldwork in support of various environmental authorizations required to develop specific elements of the Steensby Component of the Project. The following is a list of supplemental baseline programs that have been run since 2021, and that are planned prior to the commencement of the Steensby railway.

**Table 4. Steensby Caribou Supplemental Baseline Studies**

| Topic                            | Description                                                                                                                       | Year |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------|
| <b>Ongoing/Completed Studies</b> |                                                                                                                                   |      |
| Terrestrial                      | Terrestrial Environment – 2021 Annual Monitoring Report, which includes satellite based dust monitoring of the Steensby Port area | 2022 |
| Terrestrial                      | 2023 Late-Winter Aerial Caribou Survey Summary Report                                                                             | 2023 |
| <b>Future Studies</b>            |                                                                                                                                   |      |
| Terrestrial                      | Southern North Baffin Caribou Range Collaring Program                                                                             | 2025 |
| Terrestrial                      | Vegetation ELC Mapping, Ecosite Surveys, Rare Plant Surveys                                                                       | 2025 |
| Terrestrial                      | Wildlife and Wildlife Habitat Surveys                                                                                             | 2025 |

Baffinland will integrate the outcomes of supplemental fieldwork into applicable environmental management plans as required, and submit them in its Annual Reports to the Nunavut Impact Review Board.

***C. Additional Monitoring and Mitigations and Management Plans Required under the Project Certificate and/or Other Approvals Relevant to Caribou***

As outlined in Section 6C of Part A, Baffinland continues to refine its environmental management plans planned for the Steensby Component of the Project based on the operations that have occurred since the original approval of the Mary River Project, and based on additional focused community and regulator engagements. IQ continues to shape the Steensby Component and has informed several aspects of project planning. IQ was used to identify the location of historical caribou routes that interact with the railway and identify areas where caribou could cross. There will be regular dialogue with communities and Knowledge Holders to understand how caribou interact with the rail line.

Management Plans for Steensby Construction and Operation specific to caribou protection will include:

- Construction Environmental Management Plan
- Environmental Protection Plan
- Terrestrial Environment Mitigation and Management Plan.

The Adaptive Management Plan will also apply to this topic. Baffinland will use their adaptive management response framework to evaluate caribou monitoring results against objectives and thresholds. This system is designed to detect changes in the environment early enough to investigate before they present a more serious risk to the environment. Should it be determined that the changes are reasonably Project related, Baffinland can implement one or more actions already identified, or a new mitigation not previously considered. Adaptive management is also specifically required under Project Certificate TC 71 for caribou, Baffinland is committed to investigating any mortality to caribou resulting from project activity, and to investing in a precautionary monitoring and adaptive management program to mitigate caribou responses to development activities.

All environmental management plans will be subject to ongoing review and updates for the life of the Project. With respect to terrestrial environment management plans, Baffinland will be supported by the advice of the Terrestrial Environment Working Group, which includes HTO representatives from all impacted communities, and direct community engagement. Baffinland will report on the efficacy of its environmental management plans on a regular basis through its regulatory reporting obligations, as well as through its community engagement program.

#### ***D. Summary of Regulatory Application components which address this topic***

##### **Summary of FAA Application components which address this topic**

Although the freshwater FAA application focuses on impact to fish and fish habitat, consideration of caribou in terms of caribou crossings along the railway is considered. In Section 4.5 – Inuit Qaujimajatuqangit of the freshwater FAA, IQ related to caribou has been considered. More specifically, fishing is identified as an important part of Inuit diet and culture, and the information gathered reveals that fishing activities often coincide with summer caribou hunting activities (Freshwater FAA, Section 4.5). This information has been considered in the proposed offsetting measures.

##### **Summary of CTA Section 98 Application components which address this topic**

As part of the CTA Section 98 Application, further details regarding the railway caribou crossing design have been developed. In addition to the mitigation measures described within the NIRB review process, the following design requirements have been created for the Steensby Railway as detailed in CTA S.98 Application, Section III.2B.iii and SD-73. Caribou Protection Measures:

- **Slope of the crossing approaches** - A gentle slope with a gradient of 3h:1v has been proposed at these crossing locations to facilitate the safe passage of Caribou over the railway tracks. This slope will allow for ease of movement and reduce the risk of accidents.
- **Ballast Protection** - To protect the integrity of the ballast shape and slopes, a ballast protection will be installed, as depicted in the typical cross-section. This protection will help prevent erosion and maintain the stability of the railway tracks, ensuring continued safe passage for trains.
- **Removal of Wood Planking** - In consideration of winter conditions and potential hazards for Caribou, the wood planking between the two rails has been removed. This decision was made to mitigate slippery surfaces during icy conditions, reducing the risk of accidents for both Caribou and railway operations.
- **Monitoring and Maintenance Plan** - A comprehensive monitoring and maintenance plan will be implemented to track Caribou passage and assess the effectiveness of the crossing design. Regular inspections will be conducted to identify any necessary corrective actions and ensure the ongoing safety of both Caribou and railway operations.
- In response to potential safety concerns for both Caribou and railway operations, some of these crossings have been relocated to more suitable, easier and safer locations.

### ***E. Conclusion***

Baffinland acknowledges the statements made by Tour participants on the topic of caribou during the Tour, and appreciates the opportunity for all dialogue on topics of interest. This feedback has been considered in relation to the 2012 FEIS, the outcomes of the NIRB review, the Project Certificate requirements (including terms and conditions, commitments, monitoring programs and management plan updates), ongoing adjustments that have occurred through monitoring, mitigation, community feedback and adaptive management since the Project began, and the measures reflected in the current pending Federal applications.

Detailed responses to the specific comments on caribou raised during the Tour are as follows:

- With respect to the specific concerns related to the impacts of the railway on caribou movement, Baffinland will establish caribou crossings in specific locations, where historical trails are known to be located. The trail location was established considering IQ and the modified embankments will facilitate movement of caribou across the track. Snow banks will be reduced where needed to allow caribou to cross. Additional activity suspension procedures for the railway will be developed as required in consultation with the Terrestrial Environment Working Group and communities through rail specific workshops. Although the Steensby Railway general construction and design is not expected to present a barrier to caribou, this mitigation measure will reduce potential barriers for crossing.

- With respect to concerns raised about caribou migration, Baffinland's monitoring program for caribou include aerial surveys, tracking of incidental observations of caribou, remote motion-sensing cameras set up at select trails that cross or approach the railway, and the potential for a collaring program triggered if abundance monitoring information points to caribou avoidance of RSA. Wildlife monitoring will also be completed by HTO. Caribou Mortality will be monitored by tracking any mortality losses from the project and indirect impacts using a region wide hunter harvest study. Caribou health will also be monitored through the Vegetation Health monitoring program and the hunter-harvest study which will investigate concentration of metal in caribou tissues. These monitoring plans established under the Project Certificate continue to be considered robust.

Baffinland also recognizes that there are established community grievance feedback processes in place, and ongoing community consultation mechanisms led by Baffinland as well as NIRB and Inuit, which will continue to allow us to work closely with Inuit on addressing issues throughout the life of the Project.

This is an item that also has special consideration in the Inuit Impact Benefits Agreement with QIA, including on the topic of wildlife compensation.

As summarized above, taking into account all of these mechanisms, Baffinland remains confident that there are robust measures in place to ensure that Steensby Component activities proceed in a manner that is protective of caribou as well as Inuit cultural and rights-based activities relating to those species.

## 1.4 Birds

### A. Summary of Feedback Shared During Tour

A summary of the verbal feedback heard by Baffinland in relation to this topic during the tour is provided below. It should be noted that the comments were generally made in Inuktitut by participants and translated into English by local interpreters.

In Kinngait there were three comments about birds:

*"Since there are quite a few lakes, maybe there is eider ducks in those lakes. Where will they go?"*

*"Regarding birds, it could be a migration and could be impacted e.g. ptarmigans. There may not be birds there when you monitor the area and it depends on the season. It could be in the spring with ptarmigan in winter time, or eider ducks in the spring time. It could be that the railway later in the summer could have. Has it been monitored throughout the year, or is it just a specific season?"*

*"How many flights do you have to Mary River and what could be the impacts on birds?"*

### B. NIRB Review Conclusions and Mitigations related to Birds

#### **Summary of NIRB Review Process Residual Effects Assessment and Prediction Confidence**

As set out in the 2012 FEIS, Baffinland conducted an extensive assessment of the terrestrial and marine environment, which relied on multiple lines of evidence, including available literature, IQ shared with Baffinland by Inuit, direct field research (e.g. nest surveys), desktop studies (e.g. models, risk assessments), land use studies (e.g. Mary River Land use Study) and expert opinion. The assessment, considering this information, selected six species/species groups as key indicator species, including Peregrine Falcon, Snow Goose, Common and King Eider, Red-throated Loon, Thick-billed Murre, and Lapland Longspur. The following conclusions were made with respect to the Project's potential effects on Common and King Eiders:

*"Within the terrestrial RSA, the potential effects on Eider are expected to be low and localized to areas immediately adjacent to the Project footprint. Baseline surveys indicated that there is an abundant supply of nearby suitable habitat for these species to move to. However, very few birds are expected to be disturbed enough to abandon their traditional breeding sites.... The potential residual effect to Eiders is not significant." (FEIS, Volume 6, Section 4.7.1)*

“Within the marine RSA, no residual effects are predicted. Colonies are being avoided through ship routing and ship passage through foraging habitat, while frequent (once/week), will be of short duration. Based on expected compliance with the environmental protection regulations associated with the Canada Shipping Act (2001), implementation of the Shipping and Marine Wildlife Management Plan (Appendix 10D-10) and state-of-the-art design of the yet to be built ore carriers, no residual effects of chronic contaminant release are expected.” (FEIS, Volume 6, Section 4.7.2)

In the Final Hearing Report for the Mary River Project, the Nunavut Impact Review Board considered birds in Section 4.10 by providing a summary of the views of the Proponent, the views and concerns of Interested Parties and the views of the Board to draw specific conclusions and recommendations, which materialized in a draft Project Certificate 005, which was approved by the Ministers and issued in final on December 28, 2012.

**Summary of relevant requirements from the NIRB Review Process and recognized under Project Certificate No. 005 and other existing approvals/agreements**

The 2012 FEIS proposed a number of mitigations related to birds through the assessment in Terrestrial Effects Assessment at Volume 6, the Terrestrial Environment Management and Monitoring Plan at Appendix 10D-11, and the Shipping and Marine Wildlife Management Plan at Appendix 10D-10. General mitigation measures included in the FEIS that will be applied to all bird species within the Project Area include:

- Minimizing the project footprint to the extent possible, thus minimizing the direct loss of habitat and the reduction of habitat effectiveness (indirect habitat loss)
- Conducting nest searches in areas which will be disturbed during the nesting season (late May through late August), prior to any clearing of land
- Implementing a nest management plan which will apply to any nest sites located within 750 m of Project activity
- Minimizing potential effects to breeding birds by limiting Project activity and noise emissions to the extent possible, to non-nesting and non-migration periods (November–April)
- Avoidance of areas of large concentrations of foraging or moulting birds by Project personnel and equipment to the extent possible
- To the extent possible, preventing air traffic below 610 m above ground level (agl) over known nesting areas during the nesting period, and over any large concentrations of birds
- Developing appropriate aircraft approach and departure flight paths, to the extent possible, for the airstrips at the Milne and Steensby Inlet port sites with consideration for nearby bird populations to avoid disturbance and to minimize the likelihood of bird strikes

- Routing ships to maximize distances between the ships and shorelines, and to remain at least 2 km from seabird colonies to the extent possible
- Handling ship discharges in a way that conforms with the *Canada Shipping Act* and the *Arctic Waters Pollution Prevention Act*
- Developing effective oil spill emergency response plans in accordance with the *Arctic Waters Pollution Prevention Act*
- Minimizing dust production by implementing dust suppression methods, and thereby minimizing the Project's zone of influence and
- Employee training to ensure workers do not disturb, harass, or feed wildlife (including birds)

In addition to the mitigations listed above, which form a part of the evidentiary record on which the Nunavut Impact Review Board and the Ministers based their approval of the Mary River Project, Project Certificate 005 also provides specific direction on mitigation measures for birds at Terms and Conditions 65 - 72 (see Attachment 1 enclosed):

- Term and Condition 65. Baffinland shall ensure all employees working at project sites receive awareness training regarding the importance of avoiding known nests and nesting areas and large concentrations of foraging and moulting birds.
- Term and Condition 66. If Species at Risk or their nests and eggs are encountered during Project activities or monitoring programs, the primary mitigation measure must be avoidance. Baffinland shall establish clear zones of avoidance on the basis of the species-specific nest setback distances outlined in the Terrestrial Environment Management and Monitoring Plan.
- Term and Condition 67. Baffinland shall ensure that the mitigation and monitoring strategies developed for Species at Risk are updated as necessary to maintain consistency with any applicable status reports, recovery strategies, action plans and management plans that may become available during the duration of the Project.
- Term and Condition 68. Baffinland shall ensure flashing red, red strobe or white strobe lights and guy-wire deterrents are used on communications towers established for the Project. Consideration should also be given to reducing lighting when possible in areas where it may serve as an attractant to birds or other wildlife.
- Term and Condition 69. Prior to bird migrations and commencement of nesting, the Proponent shall identify and install nesting deterrents (e.g. flagging) to discourage birds from nesting in areas likely to be disturbed by construction/clearing activities taking place during the nesting season.
- Term and Condition 70. Baffinland shall protect any nests found (or indicated nests) with a buffer zone determined by the setback distances outlined in its Terrestrial Environment Mitigation and Monitoring Plan, until the young have fledged. If it is determined that observance of these setbacks is not feasible, the Proponent will develop nest-specific guidelines and procedures to ensure bird's nests and their young are protected.

- Term and Condition 71. Subject to safety requirements, the Proponent shall require all project related aircraft to maintain a cruising altitude of at least:
  - 650 m during point to point travel when in areas likely to have migratory birds
  - 1100 m vertical and 1500 m horizontal distance from observed concentrations of migratory birds
  - 1100 m over the area identified as a key site for moulting snow geese during the moulting period (July-August), and if maintaining this altitude is not possible, maintain a lateral distance of at least at least 1500 m from the boundary of this site.
- Term and Condition 72. The Proponent shall ensure that pilots are informed of minimum cruising altitude guidelines and that a daily log or record of flight paths and cruising altitudes of aircraft within all Project Areas is maintained and made available for regulatory authorities such as Transport Canada to monitor adherence and to follow up on complaints.

### **Follow Up Monitoring and Supplemental Baseline**

While the FEIS 2012 residual effects assessments demonstrated the Project, with mitigations, was unlikely to have a significant effect Common and King Eiders with a high degree of certainty, Baffinland is committed to ongoing marine effects monitoring for the life of the Project. This is also required under Project Certificate 005 and as a matter of best practice.

Baffinland will develop and implement a comprehensive marine environmental monitoring programs for the Steensby Component during all its phases, including pre-construction, construction, operation and closure.

Several examples of where Project Certificate 005 requires this are included here for reference (see Attachment 1 enclosed for more details):

- Term and Condition 73. Baffinland shall develop detailed and robust mitigation and monitoring plans for migratory birds, reflecting input from relevant agencies, the Qikiqtani Inuit Organization and communities as part of the Terrestrial Environment Working Group and to the extent applicable the Marine Environment Working Group.
- Term and Condition 74. Baffinland shall continue to develop and update relevant monitoring and management plans for migratory birds under the Proponent's Environmental Management System, Terrestrial Environment Mitigation and Monitoring Plan prior to construction. The key indicators for follow up monitoring under this plan will include: peregrine falcon, gyrfalcon, common and king eider, red knot, seabird migration and wintering, and songbird and shorebird diversity.
- Term and Condition 75. Baffinland's monitoring program shall assess and report, on annual basis, the extent of terrestrial habitat loss due to the Project to verify impact predictions and provide updated estimates of the total project footprint.

Since 2021 Baffinland has been conducting fieldwork in support of various environmental authorizations required to develop specific elements of the Steensby Component of the Project. Bird and nest surveys will be completed during the supplemental terrestrial environment baseline programs that are planned prior to the commencement of Steensby construction.

Baffinland will integrate the outcomes of supplemental fieldwork into applicable environmental management plans as required, and submit them in its Annual Report to the Nunavut Impact Review Board.

***C. Additional Monitoring and Mitigations and Management Plans Required under the Project Certificate and/or Other Approvals Relevant to Birds***

Baffinland continues to refine its environmental management plans planned for the Steensby Component of the Project based on the operations that have occurred since the original approval of the Mary River Project, and based on additional focused community and regulator engagements.

Management Plans for Steensby Construction and Operation specific to birds will include:

- Construction Environmental Management Plan
- Environmental Protection Plan
- Terrestrial Environment Mitigation and Management Plan
- Shipping and Marine Wildlife Management Plan

The Adaptive Management Plan will also apply to this topic. Baffinland will use their adaptive management response framework to terrestrial and marine monitoring results against objectives and thresholds. This system is designed to detect changes in the environment early enough to investigate before they present a more serious risk to the environment. Should it be determined that the changes are reasonably Project related, Baffinland can implement one or more actions already identified, or a new mitigation not previously considered.

All environmental management plans will be subject to ongoing review and updates for the life of the Project. With respect to marine and terrestrial environment management plans, Baffinland will be supported by the advice of the Marine and Terrestrial Environment Working Groups, which include HTO representatives from all impacted communities, and direct community engagement. Baffinland will report on the efficacy of its environmental management plans on a regular basis through its regulatory reporting obligations, as well as through its community engagement program.

***D. Summary of Regulatory Application components which address this topic***

**Summary of FAA Application components which address this topic**

Specific details on birds are not included in the FAA applications. As the majority of construction activities will be land-based, not requiring the support of vessels, traffic in Steensby Inlet will be limited to vessels delivering construction equipment, materials, supplies and barges to the construction camp. Baffinland will monitor birds during railway and port construction activities through their Construction Environmental Management Plan. However, this Tour follow up document is being given to DFO, for context should DFO decision makers have interest in this topic.

### **Summary of CTA Section 98 Application components which address this topic**

As discussed in the S.98 Application and Terrestrial Environment Mitigation and Monitoring Plan (SD-27.53), surveys of active migratory bird nests will be conducted when new site disturbances are required during breeding season. If nests are located, no-disturbance buffers are established.

Additionally, when conducting analysis of alternative rail routes from the Mine Site to Steensby Port, the alternative Western route travelled along the cliff base of the Tariujaq Arm which contains abundant water cover. This serves as a habitat for geese and other migratory birds that congregate there during spring season when other areas are snow-covered. This finding contributed to the selection of the current route for the Steensby Railway, as this route avoids the Tariujaq Arm.

### ***E. Conclusion***

Baffinland acknowledges the statements made by Tour participants on the topic of birds, and appreciates the opportunity for all dialogue on topics of interest. This feedback has been considered in relation to the 2012 FEIS, the outcomes of the NIRB review, the Project Certificate requirements (including terms and conditions, commitments, monitoring programs and management plan updates), ongoing adjustments that have occurred through monitoring, mitigation, community feedback and adaptive management since the Project began, and the measures reflected in the current pending Federal applications.

Detailed responses to the specific comments on birds raised during the Tour are as follows:

- Baffinland maintains a comprehensive terrestrial monitoring program under its Environmental Management System, which includes the monitoring of migratory birds. To minimize impacts on bird populations, mitigation measures are required by the Project Certificate and as a matter of best practice, as outlined above. These measures, along with ongoing terrestrial monitoring, will be implemented throughout all phases of the Steensby Component.
- Baffinland requires all Project related aircraft to maintain minimum cruising altitudes to mitigate impacts to migratory birds. Pilots are informed of minimum cruising altitude

guidelines and a daily log or record of flight paths and cruising altitudes of aircraft within all Project Areas is maintained and made available for regulatory authorities.

Baffinland also recognizes that there are established community grievance feedback processes in place, and ongoing community consultation mechanisms led by Baffinland as well as NIRB and Inuit, which will continue to allow us to work closely with Inuit on addressing issues throughout the life of the Project.

As summarized above, taking into account all of these mechanisms, Baffinland remains confident that there are robust measures in place to ensure that Steensby Component activities proceed in a manner that is protective of birds as well as Inuit cultural and rights-based activities relating to those species.

## **2. Project Activities**

### **2.1 Crossing/Bridges**

#### **A. Summary of Feedback Shared During Tour**

A summary of the verbal feedback heard by Baffinland in relation to this topic during the Tour is provided below. The comments were generally made in Inuktitut by participants and translated into English by local interpreters.

Two comments in Igloolik were recorded by Baffinland on water crossings:

*"I have a question, culverts clogged up during summer season and need work every year. To prevent clogging up and fish keep going smoothly, will you keep using the round culverts, who will look after them to keep them culverts."*

*"DFO mentioned that they have 26 lakes that the railway wants to cross, but you only have 8 included in the application. What about the rest of the lakes identified to cross?"*

One comment in Arctic Bay was recorded by Baffinland on water crossings:

*"When the railway is being constructed, how many bridges will there be for animals?"*

Two comments in Clyde River were recorded by Baffinland on water crossings:

*"Curious if there have been any studies for railway crossings in Canada, or is this the first study we are doing? Have you asked around on railways?"*

*"If there is a creek, small river or any water that they disturb, will it disturb any other mammals or the land? Will it do major impacts on any of the animals or the land?"*

#### **B. NIRB Review Conclusions and Mitigations related to Crossings/Bridges**

As discussed in Section 7B of Part A, Baffinland conducted an extensive assessment of the freshwater environment for the 2012 FEIS. The Project's residual effects on Arctic Char along the Steensby Railway and at Port are predicted to be low in magnitude, limited in extent, reversible, and not significant, with a high level of confidence in these assessments.

#### **Summary of relevant requirements from the NIRB Review Process and recognized under Project Certificate No. 005 and other existing approvals/agreements**

The 2012 FEIS proposed a number of mitigations related to potential impacts from crossings and bridges through the assessment in Freshwater Environment Effects Assessment at Volume

7 and the Surface Water and Aquatic Ecosystems Management Plan at Appendix 10D-2. Specifically, Baffinland will regularly monitor culverts to ensure they remain clear of snow and ice, removing any blockages as needed to maintain adequate water flow. Additionally, routine inspections of crossing conditions will be conducted to ensure they support safe and unobstructed fish migration. For a more comprehensive list of fish and fish habitat mitigation measures included in the 2012 FEIS, see Section 7B of Part A.

In addition to the mitigations included in the 2012, which form a part of the evidentiary record on which the Nunavut Impact Review Board and the Ministers based their approval of the Mary River Project, Project Certificate 005 also provides specific terms and conditions on mitigation measures for the freshwater aquatic environment, including biota and habitat (see Attachment 1 enclosed).

#### **Follow Up Monitoring and Supplemental Baseline**

While the residual effects assessments demonstrated the Project, with mitigations, was unlikely to have a significant effect with a high degree of certainty, Baffinland is committed to ongoing freshwater effects monitoring for the life of the Project. This is required under Project Certificate 005 and as a matter of best practice.

Baffinland will develop and implement comprehensive freshwater environment monitoring programs for the Steensby Component during all its phases, including pre-construction, construction, operation and closure.

Several examples of where Project Certificate 005 requires this are included in Attachment 1 for reference.

Since 2021 Baffinland has been conducting fieldwork in support of various environmental authorizations required to develop specific elements of the Steensby Component of the Project. The following is a list of supplemental baseline programs that have been run since 2021, and that are planned prior to the commencement of Steensby construction.

**Table 5. Steensby Supplemental Baseline Studies**

| Topic                            | Description                                                                            | Year      |
|----------------------------------|----------------------------------------------------------------------------------------|-----------|
| <b>Ongoing/Completed Studies</b> |                                                                                        |           |
| Freshwater                       | Steensby Port Arctic Char Otolith Analysis                                             | 2021      |
| Freshwater                       | Steensby Port and Railway Freshwater Habitat Surveys: Non-Fish Bearing Sites 2021-2023 | 2021-2023 |
| Freshwater                       | Potential Offsetting Sites: 2023 Freshwater Habitat Surveys                            | 2023      |

|                       |                                                                                                                                                                                                                                                                                                                                                        |           |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Freshwater            | Fish Passage Assessment – Steensby Component                                                                                                                                                                                                                                                                                                           | 2023      |
| Hydrology             | Water Withdrawal Notification and Hydrological Assessment – Steensby Component                                                                                                                                                                                                                                                                         | 2023      |
| Freshwater            | Steensby Railway freshwater biota and habitat field surveys                                                                                                                                                                                                                                                                                            | 2024      |
| <b>Future Studies</b> |                                                                                                                                                                                                                                                                                                                                                        |           |
| Freshwater            | Aquatic monitoring baseline study of waterbodies along the rail corridor and the freshwater environment at Steensby Port. Key data to be collected includes: habitat, water quality, primary productivity, benthic invertebrate community, benthic invertebrate biomass, fish community, fish tissue quality, and non-lethal evaluation of fish health | 2025-2026 |

Baffinland will integrate the outcomes of supplemental fieldwork into applicable environmental management plans as required, and submit them in its Annual Reports to the Nunavut Impact Review Board and to the Nunavut Water Board, as relevant.

***C. Additional Monitoring and Mitigations and Management Plans Required under the Project Certificate and/or Other Approvals Relevant to Crossings/Bridges***

As outlined in Section 7C of Part A, Baffinland continues to refine its environmental management plans planned for the Steensby Component of the Project based on the operations that have occurred since the original approval of the Mary River Project, and based on additional focused community and regulator engagements.

Baffinland’s Nunavut Water Board (NWB) Type ‘A’ Water Licence, the scope of which includes the Steensby Component, outlines requirements for stream crossings to minimize approach grades. Approaches shall be stabilized during construction and upon completion to control runoff, erosion and siltation to water bodies. Continually, under the Water Licence, Baffinland must implement several management plans relevant to crossings and bridges, including:

- Surface Water and Aquatic Ecosystem Management Plan
- Environmental Protection Plan

An environmental management plan applicable to the Steensby Component freshwater infrastructure activities to be developed includes the Construction Environmental Management Plan.

The Adaptive Management Plan will also apply to this topic. The Surface Water and Aquatic Ecosystem Management Plan will follow the system for adaptive management outlined in the Adaptive Management Plan. This requires the prior establishment of monitoring objectives, indicators, thresholds and responses based on low, moderate and high levels of risk. This system is designed to detect changes in the environment early enough to investigate before

they present a more serious risk to the environment. Should it be determined that the changes is reasonably Project related, Baffinland can implement one or more actions already identified in the Surface Water and Aquatic Ecosystem Management Plan, or a new mitigation not previously considered.

All environmental management plans will be subject to ongoing review and updates for the life of the Project. With respect to environment management plans relevant to monitoring of water crossings, Baffinland will be supported by the advice of the Environmental Working Groups, which includes HTO representatives from all impacted communities, and direct community engagement. Baffinland will report on the efficacy of its environmental management plans on a regular basis through its regulatory reporting obligations, as well as through its community engagement program.

#### ***D. Summary of Regulatory Application components which address this topic***

##### **Summary of FAA Application components which address this topic**

Baffinland also heard from Inuit that protection of fish at water crossings was a core interest during its direct engagements (Freshwater FAA Appendix B; Marine FAA Appendix A; S.98 Application Supporting Document 69) and took care to address this item specifically in its applications.

In the FAA Applications, the following mitigation measures are proposed to address these concerns:

- **Sediment and Erosion Control.** Implementation of a Sediment and Erosion Control Plan for all near water and in-water works. (Marine FAA Vol. 1, Section 7.2.3)
- **Construction environmental monitoring.** Independent environmental monitors (IEMs) will be contracted by Baffinland in consultation with DFO to monitor the construction phase of the Steensby Railway and Port. The presence of fish will be monitored by IEMs during in-water works. If a large aggregation of fish is observed in the work area, and there is a high potential for injury to the fish, workers will be instructed to immediately stop works until fish are no longer observed within the work area. (Marine FAA Vol. 1, Section 7.2.4; Freshwater FAA, Section 7.1.)
- **Fish passage (infrastructure).** Culverts and bridges have been designed to minimize intrusion into water bodies and reduce multiple crossings of the same watercourse. The design focuses on control of the rates of water flow in the vicinity of, and through, all crossings in order to control erosion and debris flow and to prevent ponding and damming. Additional bridges over fish-bearing waters and larger diameter culverts have been incorporated into the design of the Steensby Railway in order to facilitate fish migration. This design improvement was implemented from feedback received from communities and stakeholders. (Freshwater FAA, Section 5.1.3.1)

Baffinland is committed to minimizing the environmental effects of construction activities and will work closely with DFO and other agencies to develop monitoring plans and reporting protocols suitable to assess the effectiveness of the mitigation measures and standards (Freshwater FAA, Section 7). The effectiveness of mitigation measures will be assessed, as outlined in the FAA and as required by DFO.

### *Offsetting Measures*

The aforementioned mitigation measures will be implemented during Steensby Railway construction to minimize adverse effects on fish. To counteract harmful alternation, disruption and destruction (**HADD**) of fish habitat, as defined by the *Fisheries Act*, Baffinland is proposing both freshwater fish habitat offsetting measures in the freshwater FAA application. Baffinland is proposing a combination of offsetting measures such as barrier removals, channel enhancements, freshwater rocky reefs, translocation of fish and community-based initiatives. The proposed offset habitat is intended to fully compensate for fish habitat losses due to the Steensby Railway construction. It will be subject to authorizations from the DFO.

### **Summary of CTA Section 98 Application Components Which Address this Topic**

The Steensby Railway alignment will require 42 bridges and at least 258 culverts. As part of the CTA Section 98 Application, further details regarding the Steensby Railway bridges and culvert design has been provided. In addition to the mitigation measures described within the NIRB review process, the following design requirements have been created for the Steensby Railway as detailed in CTA S.98 Application, Section III.5B.i.b and in SD-22 Railway Design Brief:

#### **Bridges**

- **Fish passage:** Bridge crossings over fish habitats will be assessed for fish passage requirements. Stream velocities after construction will be compared with those before construction. If the velocity has increased substantially after construction, lining material and boulders will be used to increase roughness and provide rest locations for fish. If special concern arises at a particular crossing location, additional channel enhancements such as rock clusters and habitat refuge pools will be incorporated into the design.
- **Vertical clearance:** The vertical clearance for the bridges will be 0.5 m between the levels of peak flow (Q200 + CC 40%) and the lower part of the bridge decks. Scour protection will be provided for all bridge structures. The 1:200 years peak flows and climate change factor (40%) will be used to assess flow and scour potential. Granular material shall be sized and used as rip-rap apron protection based on individual watercourse flows at each bridge site location based on a bridge waterway hydraulics report.

## Culverts

- **Fish passage:**
  - Culverts will be installed at the same slope as the existing stream and the length of the culvert will be minimized as a lack of light discourages fish passage. Methods to provide light will be considered for culverts longer than 50m located on streams with marginal to important fish habitat classifications.
  - Channelization for the culvert may increase the flow velocity. This can be mitigated by placing rocks and boulders in the culvert. Rocks and boulders increase the friction, reduce velocity, and provide resting locations for fish travelling upstream. Boulders may be bolted in place.
  - Culverts in fish bearing crossings will be embedded by at least 40% (or 20% for Pipe arch) to increase the wetted width.
  - Steep culverts with high velocities may cause the movement of rocks within the culvert. Baffles, and baffle inserts, may be installed to keep rocks in the culvert, increase the roughness and provide rest locations for fish. In addition, boulders should be placed downstream to provide resting locations for fish as they travel upstream to the culvert.
- **Dimensions:** Culverts should be designed to convey 1:200-year peak flows assuming the bottom half of the culvert is filled with ice and debris.
- **Vertical clearance:** The current culvert design has been based on the Q200 flow rates plus 40%.
- **Erosion Protection:** Erosion protection will be installed at all culverts except those located in bedrock. Rip rap aprons will be installed, and lengths and widths will vary depending on the class of culvert.

## E. Conclusion

Baffinland acknowledges the statements made by Tour participants on the topic of crossings and related topics during the Tour, and appreciates the opportunity for all dialogue on topics of interest. This feedback has been considered in relation to the 2012 FEIS, the outcomes of the NIRB review, the Project Certificate requirements (including terms and conditions, commitments, monitoring programs and management plan updates), ongoing adjustments that have occurred through monitoring, mitigation, community feedback and adaptive management since the Project began, and the measures reflected in the current pending Federal applications.

Detailed responses to the specific comments on water crossings raised during the Tour are as follows:

- With respect to fish protection and fish passage, Baffinland will implement mitigation measures to protect fish in water courses along the Railway, such as the watercourse crossings being designed to avoid or reduce effects on fish. Baffinland is also implementing environmental protection measures to install culverts at the same slope

as the existing stream, minimize culvert lengths and achieve culvert design velocities to mitigate potential effects to fish and fish habitat. These measures are subject to a Fisheries Act Authorization to be issued by the Department of Fisheries and Oceans Canada.

- With respect to monitoring to evaluate potential for effects from water crossings, Baffinland will incorporate the Steensby Railway into its freshwater monitoring programs, as required under the Project Certificate, and will involve Inuit in the development and implementation of those monitoring programs. Baffinland will continue to implement measures to monitor potential effects on water quality, freshwater fish, fish habitat, and other aquatic organisms through management plans described above. Monitoring programs will be implemented in alignment with the Project Certificate terms and conditions and Baffinland's Type 'A' Water Licence. As required, adaptive management measures will be implemented.

Baffinland also recognizes that there are established community grievance feedback processes in place, and ongoing community consultation mechanisms led by Baffinland as well as NIRB, and Inuit which will continue to allow us to work closely with Inuit on addressing issues throughout the life of the Project.

This is an item that also has special consideration in the Inuit Impact Benefits Agreement with QIA, including on the topic of wildlife compensation and Inuit access, as well as the Water Compensation Agreement with QIA, which ensures that Inuit are compensated for impacts on water and related rights as a result of the Project.

As summarized above, taking into account all of these mechanisms, Baffinland remains confident that there are robust measures in place to ensure that Steensby Component activities proceed in a manner that is protective of Inuit access, waters, fish and fisheries and caribou as well as Inuit cultural and rights-based activities relating to those species and environmental components.

## 2.2 Dust

### **A. Summary of Feedback Shared During Tour**

A summary of the verbal feedback heard by Baffinland in relation to this topic during the tour is provided below. It should be noted that the comments were generally made in Inuktitut by participants and translated into English by local interpreters.

In Kinngait, Baffinland recorded one comment on dust:

*“HTO Question regarding dust management, we were shown a picture of the cargo and cars with no cover and dust can travel long distances. Impacts of dust on vegetation and impacts of dust on lakes in winter time while hunting, we need to find freshwater to survive. We noticed that dust management was poor from what we were shown. There is not a lot of effort being put into dust management. We would like to see improvements in dust management and improve vegetation. If there is anything that can be done for dust management, it would be good.”*

In Igloolik, Baffinland recorded four comments on dust:

*“What regulations are you putting in to reduce the dust from the train? Are you proposing closed bucket to reduce the dust that comes off the train? Don’t tell me it doesn’t come out because it is too heavy, we have seen the dust on the road.”*

*“We know for a fact that iron comes from the trucks. The road is brown and the dust is red. There is no way that it is heavy enough to do this.”*

*“I have seen red dust in Canada (mainland). It would be great if the cars were covered on top. At least with canvas.”*

*“If the train is finally going through there, it will prevent from creating a lot of dust. They have planned it properly.”*

In Arctic Bay, Baffinland recorded three comments on dust:

*“When there is a railway, we have noticed between Baffinland and Milne Inlet that the dust goes everywhere and makes the area a reddish color. When the railway starts, will it be the same as from Baffinland to Milne Inlet?”*

*“Dust control, especially with the railway. The dust should be controlled as soon as it starts running, especially Pond Inlet. There seems to be a lot of dust. Right from the beginning, it would be better to have dust control management in place.”*

*"He was in the Dust Audit Committee for a 3 year term. The dust, does it affect the animals around the mine?"*

In Clyde River, Baffinland recorded two comments on dust:

*"Our concern in our community is dust control at Mary River. It was last year that one of our community member got a pink fox from the mine site around Mary River. Foxes used to be white, and now it is pink. I was there five years ago for a site visit on the Dust Audit Committee, and I have never seen so much dust on the land. From Mary River to Steensby, I only saw one animal. There was nothing so I am wondering if there will be something in place in the Steensby area."*

*"On the way to Milne Port, it is very red there and if we start using the railway, it might get better. I have gone to Arctic Bay by skidoo and it is similar to the Mary River site, when there is some ore, there is a lot of red dust. I have seen it around Arctic Bay and on the land around here when we went to Cape Christian, the land had red dust. It is not just this area. In 2018, they did some research on the dust and saw the satellite images on there and got information. They have mitigated and there is less dust now, the animals that are in their habitat. They don't run away even if it is not really pleasant to see."*

## **B. NIRB Review Conclusions and Mitigations related to Dust**

### **Summary of NIRB Review Process Residual Effects Assessment and Prediction Confidence**

As discussed in Section 14B of Part A, Baffinland conducted an extensive assessment on dust for the 2012 FEIS. While air quality exceedances are expected within the LSAs, they are generally reversible, and the overall effects of the Project on air quality are predicted to be not significant.

#### **Summary of relevant requirements from the NIRB Review Process and recognized under Project Certificate No. 005 and other existing approvals/agreements**

The 2012 FEIS proposed a number of mitigations related to air quality through the assessment in air quality Effects Assessment at Volume 5, and the Air Quality and Noise Abatement Management Plan at Appendix 10D - 1. Specifically, the transition to using railway transport in lieu of extensive haul roads and implementing reduced vehicle speed on roads will mitigate dust emissions. For a more comprehensive list of dust mitigation measures included in the 2012 FEIS, see Section 14B of Part A.

In addition to the mitigations included in the 2012 FEIS, which form a part of the evidentiary record on which the Nunavut Impact Review Board and the Ministers based their approval of

the Mary River Project, Project Certificate 005 also provides specific terms and conditions on dust to address community concerns (see Attachment 1 enclosed).

### **Follow Up Monitoring and Supplemental Baseline**

While the residual effects assessments demonstrated the Project, with mitigations, was unlikely to have a significant effect on caribou with a high degree of certainty, Baffinland is committed to ongoing caribou effects monitoring for the life of the Project. This is required under Project Certificate 005 and as a matter of best practice.

Baffinland will develop and implement a comprehensive caribou monitoring programs for the Steensby Component during all its phases, including pre-construction, construction, operation and closure. Several examples of where Project Certificate 005 and other agreements requires this are included in Attachment 1 for reference.

Since 2021 Baffinland has been conducting fieldwork in support of various environmental authorizations required to develop specific elements of the Steensby Component of the Project. The following is a list of supplemental baseline programs that have been run since 2021, and that are planned prior to the commencement of the Steensby railway.

**Table 6. Steensby Air Quality Supplemental Baseline Studies**

| Topic                            | Description                                                                                                                       | Year |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------|
| <b>Ongoing/Completed Studies</b> |                                                                                                                                   |      |
| Terrestrial                      | Terrestrial Environment – 2021 Annual Monitoring Report, which includes satellite based dust monitoring of the Steensby Port area | 2022 |
| Air Quality                      | Updated Air Quality Modelling Report for Steensby Component                                                                       | 2024 |

Baffinland will integrate the outcomes of supplemental fieldwork into applicable environmental management plans as required, and submit them in its Annual Reports to the Nunavut Impact Review Board.

### ***C. Additional Monitoring and Mitigations and Management Plans Required under the Project Certificate and/or Other Approvals Relevant to Dust***

As outlined in Section 14C of Part A, Baffinland continues to refine its environmental management plans planned for the Steensby Component of the Project based on the operations that have occurred since the original approval of the Mary River Project, and based on additional focused community and regulator engagements.

Management Plans for Steensby Components specific to dust will include:

- Construction Environmental Management Plan

- Environmental Protection Plan
- Air Quality and Noise Abatement Management Plan
- Terrestrial Environment Mitigation and Monitoring Plan
- Environmental Monitoring Plan

The Adaptive Management Plan will also apply to this topic. Baffinland will use their adaptive management response framework to evaluate air quality monitoring results against objectives and thresholds. This system is designed to detect changes in the environment early enough to investigate before they present a more serious risk to the environment. Should it be determined that the changes is reasonably Project related, Baffinland can implement one or more actions already identified, or a new mitigation not previously considered.

All environmental management plans will be subject to ongoing review and updates for the life of the Project. With respect to air quality management plans, Baffinland will be supported by the advice of the Terrestrial Environment Working Group, which includes HTO representatives from all impacted communities, and direct community engagement. Baffinland will report on the efficacy of its environmental management plans on a regular basis through its regulatory reporting obligations, as well as through its community engagement program.

#### ***D. Summary of Regulatory Application components which address this topic***

##### **Summary of FAA Application components which address this topic**

The FAA Applications include information about dust. In the Freshwater FAA, it is outlined that Dust suppression water sources are planned along the Steensby Railway as part of the construction phase of the Steensby Component. Eleven dust suppression water sources have been identified and a hydrological assessment of these water withdrawals is presented in Appendix E. In terms of mitigation measures, all water intakes will be equipped with fish screens in accordance with DFO's Interim code of practice: end-of-pipe fish protection screens for small water intakes in freshwater (Freshwater FAA, Section 3.3.2 – Dust Suppression).

In the marine FAA, the implementation of appropriate management practices for erosion control, including dust control is outlined (Marine FAA, Section 7.2.3 Sediment and Erosion Control).

##### **Summary of CTA Section 98 Application components which address this topic**

As outlined in the Section 98 Application, there are numerous environmental advantages arising from the transition of trucking to rail transportation including, notably, a decrease in both greenhouse gas and dust emissions. While Baffinland is already taking meaningful steps to reduce dust in collaboration with an Inuit-led Dust Audit Committee, transitioning ore transport from a Northern trucking operation to the Steensby Railway will significantly reduce dust

emissions along the Tote Road. The Dust Audit Committee is comprised of nominated representatives from the Hamlets and their Hunter and Trappers' associations including Pond Inlet, Igloolik, Clyde River, Sanirajak and Arctic Bay, as well as representatives from the QIA and facilitators and engineering subject matter experts from Nunami Stantec and CWA Engineers Inc.

Baffinland will extend its dust management system for the Mary River Mine to the Steensby Components as applicable. These dust management systems have been developed based on input from localities during the monitoring and Project Certificate commitment processes described in above.

### ***E. Conclusion***

Baffinland acknowledges the statements made by Tour participants on the topic of dust, and appreciates the opportunity for all dialogue on topics of interest. This feedback has been considered in relation to the 2012 FEIS, the outcomes of the NIRB review, the Project Certificate requirements (including terms and conditions, commitments, monitoring programs and management plan updates), ongoing adjustments that have occurred through monitoring, mitigation, community feedback and adaptive management since the Project began, and the measures reflected in the current pending Federal applications.

Detailed responses to the specific comments on dust raised during the Tour are as follows:

- With respect to concerns regarding dust mitigation measures, Baffinland implements the dustfall monitoring plan which is part of a strategy to identify and measure the effectiveness of dust mitigation measures along the entire material handling chain. Baffinland has developed the dust audit committee that is a third party review of conducts independent audits and identifies sources of dust, and develops recommendations to reduce dust emissions.
- With respect to impacts from dust on vegetation and water bodies, activities will be planned and conducted to minimize the project footprint within the PDA limiting disturbance. Baffinland is also implementing several mitigation measures, as outlined above, to reduce potential effects of dust on the environment.

Baffinland also recognizes that there are established community grievance feedback processes in place, and ongoing community consultation mechanisms led by Baffinland as well as NIRB and Inuit, which will continue to allow us to work closely with Inuit on addressing issues throughout the life of the Project.

As summarized above, taking into account all of these mechanisms, Baffinland remains confident that there are robust measures in place to ensure that Steensby Component activities proceed in a manner that addresses concerns regarding project-generated dust, in particular given the potential for this topic to impact on Inuit rights.

## **2.3 Ballast Water and Invasive Species**

### **A. Summary of Feedback Shared During Tour**

A summary of the verbal feedback heard by Baffinland in relation to this topic during the Tour is provided below. It should be noted that the comments were generally made in Inuktitut by participants and translated into English by local interpreters.

Baffinland recorded the following five comments on this topic in Igloolik:

*“Recently, we participated in a meeting with DFO on ballast water and they mentioned using chlorine to clean boats. Is there another solution for this, for cleaner solution that can be used on the boats?”*

*“121 ships, 1 billion litres of ballast water going to Steensby Inlet. Need to regulate all those ships with proper filter system.”*

*“All the ships should be studied, and the impacts on the ballast water and organisms in the water.”*

*“He wants to say every ship should be sampled. How information is learned from these, there may be some amendments to the past agreement to address those comments”*

*“We had heard that if the ship was coming from outside the country, when they would get to Canadian water system, they would remove the ballast water and fill with Canadian water, but we have heard on the negative impacts of shipping in Milne Inlet and we don’t hear our concerns.”*

Baffinland recorded the following two comments on this topic in Arctic Bay:

*“The main concern that people have if the water gets contaminated from the ships. He believes there is some waste that needs to be removed from the ships (ballast water) and the main concern is the contamination of the water as it will affect animals. The main concern is if the animals are contaminated, we might eat it without knowing it. He wants the animals to be protected from harm, such as contamination.”*

*“Is the ballast water safe or not when they [ships] are coming here?”*

### **B. NIRB Review Conclusions and Mitigations related to Ballast Water and Invasive Species**

#### **Summary of NIRB Review Process Residual Effects Assessment and Prediction Confidence**

As discussed in Section 5B of Part A, Baffinland conducted an extensive assessment of the marine environment for the 2012 FEIS. No effects on fish habitat in Steensby Inlet are anticipated from ballast water discharge, as species can adjust to minimal salinity changes, with a moderate to high level of confidence in the assessment based on modeling of ore dust and ballast water distribution.

**Summary of relevant requirements from the NIRB Review Process and recognized under Project Certificate No. 005 and other existing approvals/agreements**

The 2012 FEIS proposed mitigation related to ballast water discharge through the assessment in Marine Effects Assessment at Volume 8, and the Shipping and Marine Wildlife Management Plan at Appendix 10D-10. This plan outlines the rules and procedures, mitigation and management measures which reflect Baffinland's environmental commitments with respect to shipping activities along the Southern Shipping Route. The management plan was designed to minimize potential effects of the Mary River Project on the marine environment, including potential effects from transportation of aquatic invasive species (**AIS**)/Non-indigenous species (**NIS**) by means of ballast water or hull fouling. All ships will exchange ballast water in accordance with the *Ballast Water Control and Management Regulations* from Transport Canada. Baffinland will conduct both a mid-ocean exchange and use an International Maritime Organization (**IMO**) and Canadian Coast Guard approved Ballast Water Treatment System (**BWTS**) to mitigate introduction of non-native species.

In addition to the mitigations discussed above, which form a part of the evidentiary record on which the Nunavut Impact Review Board and the Ministers based their approval of the Mary River Project, Project Certificate 005 also provides specific terms and conditions on the exchange of ballast water at Terms and Conditions 86 – 91 (see Attachment 1 enclosed).

**Follow Up Monitoring and Supplemental Baseline**

While the FEIS 2012 residual effects assessments demonstrated the Project, with mitigations, was unlikely to have a significant effect with moderate to high degree of certainty, Baffinland is committed to ongoing marine effects monitoring for the life of the Project. This is required under Project Certificate 005 and as a matter of best practice.

Baffinland will develop and implement a comprehensive marine environmental monitoring programs for the Steensby Component during all its phases, including pre-construction, construction, operation and closure.

Several examples of where Project Certificate 005 requires this are included in Attachment 1 for reference.

Since 2021 Baffinland has been conducting fieldwork in support of various environmental authorizations required to develop specific elements of the Steensby Component of the Project. Prior to the commencement of significant ship traffic to Steensby Port, a baseline marine environmental effects program will collect supplemental data on marine water and sediment quality, marine vegetation, benthic invertebrates, fish and fish habitat, and other aspects of the marine environment.

Baffinland will integrate the outcomes of supplemental fieldwork into applicable environmental management plans as required, and submit them in its Annual Reports to the Nunavut Impact Review Board.

***C. Additional Monitoring and Mitigations and Management Plans Required under the Project Certificate and/or Other Approvals Relevant to Ballast Water and Invasive Species***

As outlined in Section 5D of Part A, Baffinland continues to refine its environmental management plans planned for the Steensby Component of the Project based on the operations that have occurred since the original approval of the Mary River Project, and based on additional focused community and regulator engagements.

With respect to shipping activities, Baffinland has developed an industry leading marine environmental effects and a NIS/AIS monitoring program and mitigation plan for the Northern Shipping Route. The Baffinland NIS/AIS monitoring program represents the most comprehensive monitoring program for NIS/AIS conducted by a marine port in Canada. Baffinland has proposed to work directly with communities and regulators through the Marine Environment Working Group and other forums to review the original Shipping and Marine Wildlife Management Plan for the Southern Shipping Route, with a view to adapting lessons learned from the Northern Shipping Route, as feasible and appropriate.

In addition to the Shipping and Marine Wildlife Management Plan, other environmental management plans to be developed and applicable to the Steensby Component marine infrastructure and activities includes:

- Ballast Water Management Plan
- Construction Environmental Management Plan
- Environmental Protection Plan
- Marine Monitoring Plan

The Adaptive Management Plan will also apply to this topic. The Shipping and Marine Wildlife Management Plan will follow the system for adaptive management outlined in the Adaptive Management Plan. This requires the prior establishment of monitoring objectives, indicators, thresholds and responses based on low, moderate and high levels of risk. This system is designed to detect changes in the environment early enough to investigate before they present

a more serious risk to the environment. Should it be determined that the change is reasonably Project related, Baffinland can implement one or more actions already identified in the Shipping and Marine Wildlife Management Plan, or a new mitigation not previously considered.

All environmental management plans will be subject to ongoing review and updates for the life of the Project. With respect to marine environment management plans, Baffinland will be supported by the advice of the Marine Environment Working Group, which includes HTO representatives from all impacted communities, and direct community engagement. Baffinland will report on the efficacy of its environmental management plans on a regular basis through its regulatory reporting obligations, as well as through its community engagement program.

#### ***D. Summary of Regulatory Application components which address this topic***

##### **Summary of FAA Application components which address this topic**

The aforementioned Shipping and Marine Wildlife Management Plan (FEIS Appendix 10D-10, Marine FAA Appendix E) outlines the rules and procedures, mitigation and management measures which reflect Baffinland's environmental commitments with respect to shipping activities along the Southern Shipping Route.

Mitigations as defined in the Shipping and Marine Wildlife Management Plan are applicable for Steensby Construction and Operation. The Marine FAA outlines these measures and considers them effective in mitigation of AIS/NIS (Marine FAA Vol. 1, Table 17). Measures include:

- Ballast water exchange plus ballast water management system (treatment) and mandatory compliance check before releasing
- Anti-fouling coatings meet regulations, applied to appropriate surfaces of vessel
- Visual inspection of vessels, maintenance of anti-fouling systems
- NIS/AIS monitoring

Project vessels during the construction phase are primarily domestic vessels and are not anticipated to release ballast water in Steensby Inlet. Baffinland requires all vessels arriving at Steensby or Milne Ports to meet Canadian and, where applicable, international standards to minimize hull fouling (Marine FAA Vol. 1, Section 6.2.1.5).

##### **Summary of CTA Section 98 Application components which address this topic**

Specific details on ballast water and invasive species are not included in the Section 98 application, as this activity is wholly marine based and not part of the Steensby Railway. However, this Tour follow up document is being given to CTA as part of the Section 98 application, for context should CTA decision makers have interest in this topic.

### ***E. Conclusion***

Baffinland acknowledges the statements made by Tour participants on the topic of ballast and invasive species, and appreciates the opportunity for all dialogue on topics of interest. This feedback has been considered in relation to the 2012 FEIS, the outcomes of the NIRB review, the Project Certificate requirements (including terms and conditions, commitments, monitoring programs and management plan updates), ongoing adjustments that have occurred through monitoring, mitigation, community feedback and adaptive management since the Project began, and the measures reflected in the current pending Federal applications. This is also a topic that is subject to extensive legal and technical requirements that apply industry-wide.

Detailed responses to the specific comments on ballast water and invasive species raised during the Tour are as follows:

- With respect to concerns on impacts to water quality from ballast water discharge, effluent dispersion modelling for ballast water discharge at Steensby Port was completed for the FEIS. The assessment predicted that impacts of discharge of ballast water on water quality will not be significant. Baffinland will continue to implement the Ballast Water Management Plan, including conducting ballast water salinity testing on foreign flag vessels.
- With respect to concerns on the introduction of AIS/NIS, Baffinland will follow the IMO's D-2 standard for the exchange and treatment of ballast water prior to discharge at Steensby Port. The process of exchanging ballast water in international waters followed by treatment significantly reduces any potential for the arrival of NIS into the Project area. The current Ballast Water Management Plan will be expanded to apply to Steensby Port. Baffinland, in consultation with the Marine Environment Working Group and communities through shipping specific workshops will evaluate the mitigations currently in practice at Milne Port for their feasibility with respect to Steensby Port. Baffinland will continue to implement the marine environmental effects and aquatic invasive species (AIS)/Non-indigenous species (NIS) monitoring program. The Baffinland NIS/AIS monitoring program represents the most comprehensive monitoring program for NIS/AIS conducted by a marine port in Canada.

Baffinland also recognizes that there are established community grievance feedback processes in place, and ongoing community consultation mechanisms led by Baffinland as well as NIRB and Inuit, which will continue to allow us to work closely with Inuit on addressing issues throughout the life of the Project.

As summarized above, taking into account all of these mechanisms, Baffinland remains confident that there are robust measures in place to ensure that Steensby Component activities proceed in a manner that will prevent changes to the marine environment as a result of ballast water exchange, and in turn will prevent negative impacts on any related Inuit rights.

## **2.4 Southern Shipping Route**

### **A. Summary of Feedback Shared During Tour**

A summary of the verbal feedback heard by Baffinland in relation to this topic during the tour is provided below. It should be noted that the comments were generally made in Inuktitut by participants and translated into English by local interpreters.

In Kimmirut there were ten comments about the Southern Shipping Route:

*"It looks like it will go close to Kimmirut for the shipping. Can it go a bit further down, could this be adjusted to have the shipping route further away from Kimmirut, is this something that can be done?"*

*"Can see the ships going through Hudson Strait for mining there, which we can see and will be able to see the ships coming through as we have witnessed some before."*

*"Were there studies regarding shipping in Hudson Strait in Kimmirut?"*

*"Will there be snow removal/icebreaking during the shipping in winter?"*

*"We receive sealifts in Kimmirut every year, and we were asking earlier if those ships are iron ore ships, and the other ships that go through here will be navigating the routes."*

*"On the map with the shipping route, the shipping route seems close to Baffin Island, too close to the coast line of Baffin Island. Is there anything that can be changed to go further away from Baffin Island? We see the ships going by, no more beluga, no more seals, no more fish. Is there anything that can be done to change it? Change the route or change Steensby Port to Clyde River."*

*"I was referring to the dash line between Baffin Island and Northern Quebec – this is so close to us. We will be able to see the ships. On another topic, when do we expect the shipping lane to start going back and forth and start producing iron ore? And how long do you expect to have ships going?"*

*"Shipping location is too close to Kimmirut. Coastline is where most of the sea mammals are located? Can you change the shipping lane?"*

*"Hunters provide food in nearby communities and want to understand before shipping what will be the impact on fishing."*

*"Does that mean that this [shipping] will impact wildlife on big island?"*

In Igloolik there were five comments about the Southern Shipping Route:

*"I would like to speak about this, shipping area between Baffinland and Northern Quebec. 66 ships for construction, want to speak to people in Quebec, and then we can ship year after year, will have negative impact on the environment. People of Northern Quebec, has the government been to Nunavik regarding Baffinland shipping? It would be good to speak to them and share our experience with Baffinland."*

*"I have requested other departments to discuss with other people in Northern Quebec. I am requesting funding to engage with Northern Quebec communities."*

*"If you don't approve what Baffinland is proposing, would there be another option for them to go to a different route instead of Steensby Port? Would the company lose its money and stop doing mining?"*

*"Steensby Port and Operation – over 220\* ships, 8 months shipping including ice breaking. Last time you were here, you said it was 12 months, now the time is changing to 8 months. Which one is true? 8 or 12 months?"*

*\*It was confirmed during the meeting that 220 was a typo. The correct number is 121 ships.*

*"How many ships are passing by, how many million tonnes are we sending over? This is what you guys are talking about, what do you think about the ships that are passing by? How many are there? For me, don't rush it."*

In Arctic Bay there was one comment about the Southern Shipping Route:

*"When will the ships go by?"*

In Clyde River there was one comment about the Southern Shipping Route:

*Shipping questions – 121 ships for 8 months, when will the shipping occur?*

## ***B. NIRB Review Conclusions and Mitigations related to the Southern Shipping Route***

### **Summary of NIRB Review Process Residual Effects Assessment and Prediction Confidence**

As set out in the 2012 FEIS, Baffinland conducted an extensive assessment on the location of the Southern Shipping Route and potential impacts of shipping, which relied on multiple lines of evidence, including available literature, IQ shared with Baffinland by Inuit, direct field research (e.g. aerial surveys), desktop studies (e.g. models, risk assessments), land use studies (e.g. Mary River Land use Study) and expert opinion. The assessment, considering this information, drew the following conclusions with respect to the Projects potential effects of shipping in Hudson Strait:

“The residual environmental effect of the Project on sea ice is predicted to be “*not significant*”. Although there will be some alteration of landfast ice in Steensby Inlet due to unavoidable icebreaking activities, the area of disrupted ice in relation to local and regional study areas is small and will not have any consequential effects on the local or regional ice regime.” (FEIS, Volume 8, Section 2.7)

“Given that the FEIS predicts no serious project effects on marine mammals within the RSA, it is not likely that there will be any residual indirect effects from the project in areas beyond the RSA.” (FEIS, Volume 8, Section 5.14)

In the Final Hearing Report for the Mary River Project, the Nunavut Impact Review Board considered the marine environment, marine water/ice in Section 4.11 and marine wildlife and marine habitat in Section 4.12 by providing a summary of the views of the Proponent, the views and concerns of Interested Parties and the views of the Board to draw specific conclusions and recommendations, which materialized in a draft Project Certificate 005, which was approved by the Ministers and issued in final on December 28, 2012.

### **Summary of relevant requirements from the NIRB Review Process and recognized under Project Certificate No. 005 and other existing approvals/agreements**

The 2012 FEIS proposed a number of mitigations related to shipping through the assessment in the Marine Effects Assessment at Volume 8, and the Shipping and Marine Wildlife Management Plan at Appendix 10D-10. The following table summarizes the mitigations for potential shipping impacts on marine mammals included in the 2012 FEIS:

**Table 7.** 2012 FEIS Shipping Mitigation Measures

| Project Activity                                                           | Mitigation Measure(s)                                                                                                                                                                                                                                  | Species                                                                       |
|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| <b>Construction Phase</b>                                                  |                                                                                                                                                                                                                                                        |                                                                               |
| Vessel traffic to/from Milne and Steensby ports                            | <ul style="list-style-type: none"> <li>• Maintain constant speed and course when possible</li> <li>• Reduce vessel idling. Vessel to be designed to limit noise output</li> </ul>                                                                      | Ringed Seal, Bearded Seal, Walrus, Beluga, Narwhal, Bowhead Whale, Polar Bear |
| <b>Operations Phase</b>                                                    |                                                                                                                                                                                                                                                        |                                                                               |
| Vessel traffic to/from Milne Port (open-water period only)                 | <ul style="list-style-type: none"> <li>• Maintain constant course and speed when possible</li> <li>• Reduce vessel idling time at dock</li> <li>• Vessel to be designed to limit noise output</li> <li>• Reduce vessel speed in Milne Inlet</li> </ul> | Ringed Seal, Bearded Seal, Walrus, Beluga, Narwhal, Bowhead Whale, Polar Bear |
| Vessel traffic to/from Steensby Port, including ice management at the dock | <ul style="list-style-type: none"> <li>• Reduce vessel idling time at dock</li> <li>• Minimize footprint of ice disturbance at ore dock and along shipping route</li> <li>• Reduce vessel speed in pack ice and landfast ice</li> </ul>                | Ringed Seal, Bearded Seal, Walrus, Beluga, Narwhal, Bowhead Whale, Polar Bear |

|                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                               |
|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
|                                                            | <ul style="list-style-type: none"> <li>• Shipping lane in landfast ice to be delimited with markers</li> <li>• Vessel to be designed to limit noise output</li> <li>• Marine mammal observers to be on select vessels to identify response and behaviors from shipping activities by marine mammals</li> <li>• Commence ice breaking activity prior to period of lair and breathing hole creation</li> <li>• Maintain constant course and speed when possible</li> </ul> |                                                                               |
| <b>Closure Phase</b>                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                               |
| Vessel traffic: sealift removal of equipment and materials | <ul style="list-style-type: none"> <li>• Maintain constant speed and course when possible</li> <li>• Reduce vessel idling</li> <li>• Vessel to be designed to reduce noise output</li> <li>• Reduce vessel speed in Milne Inlet</li> </ul>                                                                                                                                                                                                                               | Ringed Seal, Bearded Seal, Walrus, Beluga, Narwhal, Bowhead Whale, Polar Bear |

In addition to the mitigations listed above, which form a part of the evidentiary record on which the Nunavut Impact Review Board and the Ministers based their approval of the Mary River Project, Project Certificate 005 also provides specific direction on the Southern Shipping Route at the Term and Conditions below to address community concerns (see Attachment 1 enclosed):

- Term and Condition 104. Subject to safety considerations and the potential for conditions as determined by the crew of transiting vessels, to result in route deviations,
  - Baffinland shall require, for shipping to/from Steensby Port, project vessels to maintain a route to the south of Mill Island to prevent disturbance to walrus and walrus habitat on the northern shore of Mill Island. Where project vessels are required to transit to the north of Mill Island owing to environmental or other conditions, an incident report is to be provided to the Marine Environment Working Group and the NIRB within 30 days, noting all wildlife sightings and interactions as recorded by shipboard monitors.
  - The Proponent shall summarize all incidences of significant deviations from the nominal shipping routes for traffic to/from Milne Port and Steensby Port as presented in the FEIS and FEIS Addendum to the NIRB annually, with corresponding discussion regarding justification for deviations and any observed environmental impacts.
- Term and Condition 105. Baffinland shall ensure that measures to reduce the potential for interaction with marine mammals, particularly in Hudson Strait and Milne Inlet, are identified and implemented prior to commencement of shipping operations. These measures could include, but are not limited to:
  - Changes in the frequency and timing (including periodic suspensions) of shipping during winter months in Hudson Strait and during the open water season in

- Milne Inlet, i.e., when interactions with marine mammals are likely to be the most problematic
- Reduced shipping speeds where ship-marine mammal interactions are most likely
  - Identification of alternate shipping routes through Hudson Strait for use when conflicts between the proposed routes and marine mammals could arise
- Term and Condition 178. Where project vessels are required to transit to the north of Mill Island owing to environmental or other conditions, an incident report is to be provided to the Marine Environment Working Group and the NIRB within 30 days, noting all wildlife sightings and interactions as recorded by shipboard monitors. The Proponent shall summarize all incidences of deviations from the nominal shipping route as presented in the FEIS to the NIRB annually, with corresponding discussion regarding justification for deviations and any observed environmental impacts.
  - Term and Condition 180. The Marine Environment Working Group established for this Project shall invite a representative from Makivik Corporation to be a member of the Group.
  - Term and Condition 181. Regardless of whether Makivik Corporation participates as a member of the Marine Environment Working Group, the Marine Environment Working Group will provide Makivik Corporation with regular updates regarding the activities of the Marine Environment Working Group throughout the Project life cycle.
  - Term and Condition 182. Baffinland shall make available to Makivik Corporation any ship route deviation reports provided to the NIRB in accordance with the terms and conditions set out in Section 4.12.4 of the Final Hearing Report.

### **Follow Up Monitoring and Supplemental Baseline**

While the FEIS 2012 residual effects assessments demonstrated the Project, with mitigations, was unlikely to have a significant effect on sea ice or marine mammals in Hudson Strait, Baffinland is committed to ongoing marine effects monitoring for the life of the Project. This is also required under Project Certificate 005 and as a matter of best practice.

Baffinland will develop and implement a comprehensive marine environmental monitoring programs for the Steensby Component during all its phases, including pre-construction, construction, operation and closure. Several examples of where Project Certificate 005 requires this are included here for reference (see Attachment 1 enclosed for more details):

- Terms and Conditions 99 and 101. Outline the required marine environmental monitoring for the Steensby Component, including supplemental baseline data collection on walrus, beluga, bearded seal and anadromous Arctic Char abundance, distribution and habitat.
- Term and Condition 119. Baffinland is already collecting supplemental baseline data on ringed seal birth lair abundance and distribution through aerial surveys done in 2021 and 2024. Results of supplemental baseline collection, along with close

collaboration and engagement with Communities, QIA, Marine Environment Working Group (MEWG) and NIRB, will feed into the development and update of Steensby Construction and Operation Management Plans.

- Term and Condition 148. Requires Baffinland to undertake monitoring of the Project’s harvesting interactions and how this relates to food security for the residents of North Baffin.
- Appendix B Commitment 005. Baffinland will work with the Hamlets and HTOs of Igloodik and Sanirajak to carry out additional baseline studies for marine, terrestrial, and avian wildlife related to Steensby.

Since 2021 Baffinland has been conducting fieldwork in support of various environmental authorizations required to develop specific elements of the Steensby Component of the Project. Table 3 provides a list of supplemental marine environment baseline programs that have been run since 2021, and that are planned prior to the commencement of significant ship traffic to Steensby Port.

**Table 8.** Steensby Supplemental Baseline Studies Related to the Marine Environment

| Topic                            | Description                                                                                                                      | Year       |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>Ongoing/Completed Studies</b> |                                                                                                                                  |            |
| Marine Mammal                    | Ringed Seal Aerial surveys                                                                                                       | 2021, 2024 |
| Marine Environment               | Aerial ice survey                                                                                                                | 2023       |
| Marine Environment               | Steensby Inlet Fast Ice Study                                                                                                    | 2024       |
| Marine Environment               | Fuel Spill Dispersion Modelling                                                                                                  | 2024-2025  |
| <b>Future Studies</b>            |                                                                                                                                  |            |
| Marine Environment               | Surveys of marine water and sediment quality, marine vegetation, benthic invertebrates, fish and fish habitat, and other aspects | 2026       |
| Marine Mammal                    | Marine Mammal Season Aerial Surveys (Density and Distribution)                                                                   | 2026       |
| Marine Mammal                    | Walrus abundance and distribution survey                                                                                         | 2026       |

Baffinland will integrate the outcomes of supplemental fieldwork into applicable environmental management plans as required, and submit them in its Annual Report to the Nunavut Impact Review Board.

***C. Additional Monitoring and Mitigations and Management Plans Required under the Project Certificate and/or Other Approvals Relevant to the Southern Shipping Route***

Baffinland continues to refine its environmental management plans planned for the Steensby Component of the Project based on the operations that have occurred since the original approval of the Mary River Project, and based on additional focused community and regulator engagements.

With respect to shipping activities, Baffinland has developed an industry leading marine monitoring program and mitigation plan for the Northern Shipping Route. Baffinland has proposed to work directly with communities and regulators through the Marine Environment Working Group and other forums to review the original Shipping and Marine Wildlife Management Plan for the Southern Shipping Route, with a view to adapting lessons learned from the Northern Shipping Route, as feasible and appropriate.

In addition to the Shipping and Marine Wildlife Management Plan, other environmental management plans to be developed and applicable to the Steensby Component marine infrastructure and activities includes:

- Construction Environmental Management Plan
- Environmental Protection Plan
- Marine Monitoring Plan
- Ballast Water Management Plan

The Adaptive Management Plan will also apply to this topic. The Shipping and Marine Wildlife Management Plan will follow the system for adaptive management outlined in the Adaptive Management Plan. This requires the prior establishment of monitoring objectives, indicators, thresholds and responses based on low, moderate and high levels of risk. This system is designed to detect changes in the environment early enough to investigate before they present a more serious risk to the environment. Should it be determined that the change is reasonably Project related, Baffinland can implement one or more actions already identified in the Shipping and Marine Wildlife Management Plan, or a new mitigation not previously considered.

All environmental management plans will be subject to ongoing review and updates for the life of the Project. With respect to marine environment management plans, Baffinland will be supported by the advice of the Marine Environment Working Group, which includes HTO representatives from all impacted communities, and direct community engagement. Baffinland will report on the efficacy of its environmental management plans on a regular basis through its regulatory reporting obligations, as well as through its community engagement program.

#### ***D. Summary of Regulatory Application components which address this topic***

##### **Summary of FAA Application components which address this topic**

Baffinland also heard from Inuit that avoidance of marine mammal habitat during shipping was a topic of interest during its direct engagements (Marine FAA Appendix A, S.98 Application

Supporting Document 69) and took care to address this item specifically in Fisheries Act Application. The QIA also asked several questions in relation to shipping, specifically related to potential impacts of the Project on haulout habitat for seals and walruses.

### *Mitigation Measures*

In the Marine FAA Application, the following mitigation measures are proposed to address these concerns:

- **Vessel restrictions** (Marine FAA Vol.1, Section 7.2.9): Several measures will be implemented in alignment with Baffinland's Shipping and Marine Wildlife Management Plan, such as:
  - As safe navigation allows, Project vessels will transit along the established nominal shipping route.
  - Idling will be kept to a minimum in an effort to decrease underwater noise.
  - Vessels will maintain a constant course and speed when in transit.
  - When marine mammals appear to be trapped or disturbed by vessel movements, the vessel will implement appropriate measures to mitigate disturbance, including stoppage of movement until wildlife move away from the immediate area.
  - All vessels will not be operated in such a way as to separate an individual member(s) of a group of marine mammals from other members of the group.
  - All Project vessels will be provided with standard instructions to not approach within 300 m of a walrus or polar bear observed on sea ice.
  - Ships transiting along the shipping route through Hudson Strait will travel south of Mill Island, in part to avoid the known walrus haul-out location on the north side of the island.
  - Any accidental contact with marine mammals will be reported to DFO as per the *Marine Mammal Regulations*.
- **Icebreaking Restrictions** (Marine FAA Vol.1, Section 7.2.9.1): Measures will be implemented during icebreaking operations to limit the effect on fish and marine mammals, such as:
  - Icebreaking will commence as soon as sea ice begins to form during the fall freeze-up period between September and October. At this time, ringed seals are just beginning to establish breathing holes in the sea ice as part of their development of an overwinter territory, but this is not considered a critical life cycle period. Seals may avoid establishing breathing holes along the shipping route during this period, but this would be limited to the general swath of the nominal ship path, which is minimal in extent. Seals do not start denning until January when enough snow is available on the ice for them to build a den. The objective of the proposed mitigation involving icebreakers following the same general shipping track when approaching Steensby Port (from the start of ice freeze-up) is to dissuade ringed seals from frequenting sea ice habitats along the nominal shipping route including

establishing overwinter territories and/or denning lairs (i.e., pupping areas) in these areas.

- The shipping lane into Steensby Port will be delineated with markers that will identify the boundaries of previous vessel tracks and act as a guide for the next vessel.
- Icebreaking tugs and ore carriers will restrict their area of operation to the extent practical, so that the total areas of broken landfast ice at the Steensby Port is limited.
- Designated waiting areas for vessels will be established for Project vessels when waiting for an icebreaker escort in order to avoid important marine mammal habitat areas.
- Marine mammal observers will be stationed on select icebreaking vessels to observe for the presence of marine mammals and implement any corrective actions associated with vessel travel, in addition to recording potential marine mammal response and behaviours from icebreaking activities.
- When marine mammals appear to be trapped or disturbed by vessel movements, the vessel will implement appropriate measures to mitigate disturbance, including stoppage of movement until wildlife move away from the immediate area.
- **Construction Environmental Management Plan (CEMP)** (Marine FAA Vol.1, Section 7.2.1): A Fish and Marine Mammal Protection Measures section in the CEMP describes methods that will be used to mitigate and management effects on marine mammals and their habitats due to changes in water quality, underwater noise and ship strikes during construction.
- **Grey Water and Effluent Discharge Management** (Marine FAA Vol.1, Section 7.2.2):
  - All water discharged to the marine environment will be sampled and tested prior to discharge to confirm it meets the relevant discharge criteria.
  - Vessels arriving for construction will not be permitted to discharge effluent or grey water
  - Vessels arriving for construction are not expected to discharge ballast water.
  - Ore carriers arriving during operational shipping would manage ballast water exchange following an IMO D-2 compliant ballast water treatment system and neutralized prior to discharging.

Baffinland is committed to minimizing the environmental effects of construction activities and will work closely with DFO and other agencies to develop monitoring plans and reporting protocols suitable to assess the effectiveness of the mitigation measures and standards. The effectiveness of mitigation measures will be assessed, as outlined in the Marine FAA (Marine FAA Vol. 1, Table 17).

**Summary of CTA Section 98 Application components which address this topic**

Specific details on shipping are not included in the Section 98 application, as this aspect is marine based and not part of the Steensby Railway. However, this Tour follow up document is being given to CTA as part of the Section 98 application, for context should CTA decision makers have interest in this topic. Baffinland included this issue in the summary of interest of localities table submitted as part of the Section 98 Application (see SD-69, Stakeholder Engagement Report).

***E. Conclusion***

Baffinland acknowledges the statements made by Tour participants on the topic of the Southern Shipping Route during the Tour, and appreciates the opportunity for all dialogue on topics of interest. This feedback has been considered in relation to the 2012 FEIS, the outcomes of the NIRB review, the Project Certificate requirements (including terms and conditions, commitments, monitoring programs and management plan updates), ongoing adjustments that have occurred through monitoring, mitigation, community feedback and adaptive management since the Project began, and the measures reflected in the current pending Federal applications.

Detailed responses to the specific comments on the southern shipping route raised during the Tour are as follows:

- With respect to concerns about icebreaking, vessels will minimize the width of the shipping lane (to <1.5 km) by transiting along the same track as much as possible. Tugs and ore carriers will restrict their area of operation to the extent practical, so that the total area of broken landfast ice at the Steensby Port is limited. Continually, several environmental management plans will be implemented, as summarized above. The Shipping and Marine Mammals Management Plan aims to mitigate potential effects of shipping on the marine environment. Continual engagement with Inuit on mitigation measures and adaptive management will be undertaken to effectively mitigate potential impacts to the marine environment from shipping and ice breaking activities.
- With respect to concerns raised by localities around the shipping route, upon community consultation, Baffinland moved the shipping route east of Rowley and Koch Islands. This shipping route avoids important walrus habitat and will be less disruptive to wildlife and community use. The shipping route through Hudson Strait was also moved south of Mill Island, to avoid important areas for wildlife and local use, however, transiting to the north of Mill Island is still possible for matters of navigational safety.
- With response to comments on year-round shipping, Baffinland is approved to ship to Steensby Port 12 months of the year. The exact months Baffinland will ship depends on the ice conditions and availability of ice-breaking vessels. This will be determined based on operational conditions. Baffinland will continue to implement the Shipping and Marine Mammals Management Plan, should monitoring show that a change in the

environment is reasonably Project related, Baffinland can implement one or more actions already identified in the Plan, or a new mitigation not previously considered.

- Baffinland has conducted supplemental baseline studies for the Southern Shipping Route, as discussed in Table 9. The outcomes of supplemental fieldwork will be integrated into applicable environmental management plans as required, and submit them in its Annual Report to the Nunavut Impact Review Board.
- In response to comments around engagement with the Nunavik Region, Baffinland engages with the Makivik Corporation on matters related to the Southern Shipping Route. Makivik is a member of the Marine Environment Working Group and Baffinland will continue to engage them throughout all phases of the Steensby Component.

Baffinland also recognizes that there are established community grievance feedback processes in place, and ongoing community consultation mechanisms led by Baffinland as well as NIRB and Inuit, which will continue to allow us to work closely with Inuit on addressing issues throughout the life of the Project.

As summarized above, taking into account all of these mechanisms, Baffinland remains confident that there are robust measures in place to ensure that Steensby Component activities proceed in a manner that is protective of the marine environment as well as Inuit cultural and rights-based activities relating to the marine environment.

## 2.5 Geotechnical

### ***A. Summary of Feedback Shared During Tour***

A summary of the verbal feedback heard by Baffinland in relation to this topic during the Tour is provided below. The comments were generally made in Inuktitut by participants and translated into English by local interpreters.

Baffinland recorded one comment in Igloolik relating to geotechnical (i.e. how will Baffinland make sure the ground is good enough to build the railway):

*"It is crucial to have a safe railway operation. We know we have global warming and permafrost along the proposed railway. There is permafrost that would need to be halted."*

### ***B. NIRB Review Conclusions and Mitigations related to Landforms and Soils***

#### **Summary of NIRB Review Process Residual Effects Assessment and Prediction Confidence**

As discussed in Section 8B of Part A, Baffinland conducted an extensive assessment of the landforms, soil and permafrost for the 2012 FEIS. The Project will have minimal impact on sensitive landforms, with effects confined to the PDA, no disturbance outside it, and no cumulative effects anticipated.

#### **Summary of relevant requirements from the NIRB Review Process and recognized under Project Certificate No. 005 and other existing approvals/agreements**

The 2012 FEIS proposed a number of mitigations related to geotechnical design through the assessment in Sensitive Landforms Effects Assessment at Volume 6. Baffinland will conduct geotechnical investigations on structural foundations and have designed all bridges and culvert crossings for an appropriate hydraulic event return period with allowance made for ice accumulation. For a more comprehensive list of mitigation measures included in the 2012 FEIS, see Section 8B of Part A.

In addition to the mitigations listed above, which form a part of the evidentiary record on which the Nunavut Impact Review Board and the Ministers based their approval of the Mary River Project, Project Certificate 005 also provides specific terms and conditions on geotechnical design to address community concerns (see Attachment 1 enclosed).

Baffinland has designed and developed the infrastructure for the Steensby Railway to ensure that it meets the geotechnical requirements for railway operations in arctic conditions, and also to account for the anticipated effects of climate change in the region. Baffinland will monitor

permafrost integrity along the railway, and implement preventative measures to ensure that the integrity of the permafrost is maintained. In summary the geotechnical designs include the following to account of climate change effects:

- Planned and executed supplemental field and laboratory campaigns, including ground-penetrating radar surveys, additional boreholes in proposed cut or high-fill areas on ice-rich permafrost, and UAV photogrammetry surveys.
- Digitally mapped geomorphic terrain conditions and identified areas at risk of being affected by climate change along the proposed alignment.
- Performed advanced geotechnical and geothermal analyses to achieve the appropriate design recommendations.
- Following the guidance provided in CAN/BNQ 2501-500, and considering historic climate trends, CMIP6-SSP5 8.5 avg. was used for climate change projections.

### **Follow Up Monitoring and Supplemental Baseline**

While the residual effects assessments demonstrated the Project, with mitigations, was unlikely to have a significant effect on sensitive landforms with a high degree of certainty, Baffinland is committed to ongoing permafrost effects monitoring for the life of the Project. This is required under Project Certificate 005 and as a matter of best practice.

Baffinland will develop and implement a comprehensive permafrost monitoring program for the Steensby Component during all its phases, including pre-construction, construction, operation and closure. In the Project Certificate, Term and Condition 28 requires Baffinland to monitor the effects of the Project on the permafrost along the railway and all other Project affected areas including the Tote Road and must implement effective preventative measures to ensure that the integrity of the permafrost is maintained.

Geotechnical investigations have been carried out to identify sensitive landforms, and these areas are avoided when possible. Since the FEIS 2012 and the issuance of the Project Certificate an additional geotechnical field program was completed in 2023. This program was used to collect geotechnical information along the railway corridor to further improve confidence in the quantity and types of soils/rock within the construction area. The following is a list of supplemental baseline programs that have been run since 2021, and that are planned prior to the commencement of the Steensby Railway.

**Table 9. Steensby Landforms, Soils and Permafrost Supplemental Baseline Studies**

| Topic                            | Description                                                      | Year |
|----------------------------------|------------------------------------------------------------------|------|
| <b>Ongoing/Completed Studies</b> |                                                                  |      |
| Geotechnical                     | 2023 Geotechnical Investigation Report – Steensby Rail Alignment | 2023 |

|                       |                                                                                  |      |
|-----------------------|----------------------------------------------------------------------------------|------|
| Bathymetry            | Multibeam Bathymetric Survey in Steensby Inlet – Marine Survey Operations Report | 2023 |
| <b>Future Studies</b> |                                                                                  |      |
| Geotechnical          | Geotechnical Investigations to support detailed engineering design               | TBC  |

Baffinland will integrate the outcomes of supplemental fieldwork into applicable environmental management plans as required, and submit them in its Annual Reports to the Nunavut Impact Review Board and to the Nunavut Water Board, as relevant.

***C. Additional Monitoring and Mitigations and Management Plans Required under the Project Certificate and/or Other Approvals Relevant to Landforms, Soils and Permafrost***

As outlined in Section 8C of Part A, Baffinland continues to refine its environmental management plans planned for the Steensby Component of the Project based on the operations that have occurred since the original approval of the Mary River Project, and based on additional focused community and regulator engagements. There will be continuous dialogue with communities and Knowledge Holders to understand concerns with rail line.

Management Plans for Steensby Construction and Operation relevant to monitoring the ground conditions:

- Construction Environmental Management Plan
- Environmental Protection Plan
- Roads Management Plan
- Railway Maintenance Management Plan

The Adaptive Management Plan will also apply to this topic. Baffinland will use their adaptive management response framework to evaluate permafrost monitoring results against objectives and thresholds. This system is designed to detect changes in the environment early enough to investigate before they present a more serious risk to the environment. Should it be determined that the change is reasonably Project related, Baffinland can implement one or more actions already identified, or a new mitigation not previously considered.

All environmental management plans will be subject to ongoing review and updates for the life of the Project. Baffinland will report on the efficacy of its environmental management plans on a regular basis through its regulatory reporting obligations, as well as through its community engagement program.

***D. Summary of Regulatory Application components which address this topic***

**Summary of FAA Application components which address this topic**

Geotechnical considerations are an important part of both marine and freshwater FAAs as they are critical for the development of Port infrastructure and Railway crossings. As part of the FAA applications, the railway design has been developed considering the specific climatic conditions of the region. In addition to the mitigation measures described within the NIRB review process, the following requirements have been considered for the geotechnical design and best practices for construction in permafrost Freshwater FAA (Section 5.3.4 – Best Practices for Construction in Permafrost):

- Culverts and bridges have been designed to accommodate the 1:200-year flood event plus a contingency for ice buildup.
- Conduct comprehensive geotechnical site investigations help identify areas where the risk associated with excessive settlement is the greatest
- Construction methods and equipment will be appropriate for Arctic conditions and terrain consisting of permafrost, rock, and various soil types.
- Excavations will be reduced, especially in areas of known ice-rich permafrost.
- Prior to embankment construction, ground disturbance will be reduced, and vegetative or organic cover left in place to provide increased protection of the thermal regime.
- In areas where excavation is required, the foundations will be over excavated and backfilled with non-freeze/thaw susceptible fill to reduce frost heaving and settlement.
- Slopes will be flattened as necessary when being constructed in ice-rich or thaw sensitive materials and will be protected with thermal and erosion protection material, if required.
- In areas of thaw-sensitive active layer, stabilization berms may be used to reduce the effect of permafrost degradation at the toe of slopes.
- For high embankment fills on ice-rich materials, the side slopes may be flattened substantially, or stabilization berms constructed to reduce the creep deformation potential.
- To reduce the rate of creep settlement, embankments thicker than three metres should be constructed with flattened side slopes or with toe buttresses.
- For construction during the summer, woven geotextile may be required over unstable ground.
- Proper runoff collection and diversion drainage systems will be used to control runoff and erosion from affecting the modified thermal regime. As part of basic design, thermal modeling will be conducted for each typical embankment condition and configuration to identify the actual permafrost protection measures required and to predict the nature of the active layer and the effect that construction will have on the thermal regime over the life of the Project. The thermal modeling will incorporate potential warming trends resulting from climate change based on world-recognized global warming scenarios.

- Thaw settlements and surface sloughing of cut slopes is expected, particularly during the thaw seasons immediately following construction. The behaviour of both cut slopes and embankment fills will be monitored throughout these thaw seasons and remedial measures will be implemented as necessary.
- For example, it is expected that many of the cut slopes will need to be monitored as thaw settlements occur. Silt fences and other erosion protection measures will be installed as necessary to prevent siltation of adjacent drainage courses and waterbodies.
- Reduce changes to the hydrologic drainage patterns.
- Reduce the potential for the accumulation of snow drifting and snowbanks or mitigate during operations with snow fencing or other measures, to avoid resultant changes to the thermal regime.

#### **Summary of CTA Section 98 Application components which address this topic**

As part of the CTA Section 98 Application, the railway design has been developed considering the specific climatic conditions of the region. In addition to the mitigation measures described within the NIRB review process, the following requirements have been considered for the geotechnical design:

- Air convention embankments have been adopted which take advantage of the cold weather during winter to maintain or even reduce the thickness of the active layer.
- A winter construction only approach has been adopted for the construction of earthwork to minimize the disturbance to permafrost in the foundations of the railway embankment and the natural terrain. This approach will also benefit from frozen water crossings during construction.
- Limited compaction capabilities have been accounted for in design.
- Specifications have been added concerning the protection of regular earth fill material from seasonal moisture changes prior to construction to promote proper compaction avoiding future deformation.
- The high shear strength of permafrost soils/rock has been exploited for the design of temporary cut-slopes that are steeper than usually possible elsewhere.
- Retaining structures (**GRS**) have been selected that are able to tolerate high deformation, by utilizing blasted rockfill.
- Locally available blasted rockfill from along the alignment at the rock cut areas and the predetermined borrow sites has been used as a main construction material. Widening of rock cut areas has been evaluated for construction access, providing a better management of rockfall and drainage as well as providing more rock fill materials.
- A steel-pile substructure bridge design was adopted for bridge foundations.
- The active & permafrost thermal regimes were modelled using a gap-analysis & risk-based approach.
- Ice impacts including ice jacking of pile foundation systems has been considered.

- Hydrological models such as HEC-RAS were employed for peak flow estimates in the determination of riprap and other scour-hazard & ice-protection countermeasures.
- Material durability and strength both during piling installation and in services have been examined.
- Finally, sequenced construction methodology of pile installation and substructure construction (welding, mixing slurry, site access, etc.) was incorporated in design to address sensitivity and ground behavioral response in Arctic regions.

### ***E. Conclusion***

Baffinland acknowledges the statements made by Tour participants on the topic of geotechnical matters, and appreciates the opportunity for all dialogue on topics of interest. This feedback has been considered in relation to the 2012 FEIS, the outcomes of the NIRB review, the Project Certificate requirements (including terms and conditions, commitments, monitoring programs and required management plan updates), ongoing adjustments that have occurred through monitoring, mitigation, community feedback and adaptive management since the Project began, and the measures reflected in the current pending Federal applications.

A detailed response to the specific comment on landforms and soils raised during the Tour is as follows:

- With respect to ground stability of permafrost, railway infrastructure will be designed to protect the underlying permafrost from degradation due to construction. Continually, potential implications for the stability and safety of infrastructure on permafrost have been taken into account in engineering designs.

Baffinland also recognizes that there are established community grievance feedback processes in place, and ongoing community consultation mechanisms led by Baffinland as well as NIRB and Inuit, which will continue to allow us to work closely with Inuit on addressing issues throughout the life of the Project.

As summarized above, taking into account all of these mechanisms, Baffinland remains confident that there are robust measures in place to ensure that Steensby Component activities proceed in a manner that meets all applicable technical standards relating to engineering and construction and addresses the comments shared on the Tour.

## **2.6 Railway Construction**

### ***A. Summary of Feedback Shared During Tour***

A summary of the verbal feedback heard by Baffinland in relation to this topic during the tour is provided below. It should be noted that the comments were generally made in Inuktitut by participants and translated into English by local interpreters.

In Igloolik there were four comments on railway construction:

*“For the quarries, I am wondering if they can use the rock to build the railway instead of borrowing rock from anywhere else.”*

*“When they start the quarry blasting, when do you expect to start this and for how long?”*

*“Six rail compounds will be located along the railway, what happens to those compounds when the construction is done?”*

*“In construction, winter roads will be built around during construction. What happens in the spring and fall with these roads?”*

### ***B. NIRB Review Conclusions and Mitigations related to Railway Construction***

#### **Summary of NIRB Review Process Residual Effects Assessment and Prediction Confidence**

Baffinland included an extensive Project Description in Volume 3 of the FEIS, which includes detailed information on the construction of Steensby Railway (Section 2.5) and Steensby Port (Section 2.6). These construction plans were developed based on multiple lines of evidence, including available literature, direct field research (e.g. geotechnical surveys), desktop studies (e.g. models, risk assessments), regulatory requirements, best practices and expert opinion. The FEIS, considering this information, evaluated the potential effects from construction in environment-specific volumes of the FEIS.

In the Final Hearing Report for the Mary River Project, the Nunavut Impact Review Board considered construction per ecosystemic effect by providing a summary of the views of the Proponent, the views and concerns of Interested Parties and the views of the Board to draw specific conclusions and recommendations, which materialized in a draft Project Certificate 005, which was approved by the Ministers and issued in final on December 28, 2012.

**Summary of relevant requirements from the NIRB Review Process and recognized under Project Certificate No. 005 and other existing approvals/agreements**

The 2012 FEIS proposed a number of construction mitigations related to quarries, construction camps and winter roads through Volume 3 Project Description Sections 2.5-2.6, Borrow Pit and Quarry Management Plan (Appendix 10D-6) and Preliminary Mine Closure and Reclamation Plan (Appendix 10G). The following table summarizes the mitigation measures included in the 2012 FEIS:

**Table 10.** 2012 FEIS Mitigation Measures related to Quarries and Temporary Construction Infrastructure

| Project Activity   | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Quarrying          | <ul style="list-style-type: none"> <li>Materials from identified quarries and borrow sources have been tested and found non-acid generating and non-reactive</li> <li>Additional testing will be completed to ensure sources used during Construction consist of non-reactive material</li> <li>Retain vegetation to maintain slope stability</li> <li>Maintain natural drainage patterns</li> <li>Maintain vegetation buffer zones to protect water bodies</li> <li>Construct ditches to direct runoff away from site</li> <li>Locate the development in a well-drained area</li> <li>Salvage and properly store organics, topsoil, and overburden for use in reclamation</li> <li>Limit sediment movement using silt fences or straw bales</li> <li>Use rip-rap to reinforce drainage channel corners and water discharge points</li> <li>Revegetate where required to stabilize slopes</li> <li>Limit sediment movement or use settling ponds before discharging</li> <li>Use proper fuel containment and handling techniques, and have spill kits accessible</li> <li>Use proper explosives handling techniques to minimize wastage</li> <li>Minimize sources of in-pit water by diverting surface water away from the development area</li> <li>Place ice-rich material to thaw in a location where meltwater will not re-enter pit</li> <li>Limit pit or quarry depth</li> <li>Spray water and use dust skirts on conveyors to minimize dust</li> </ul> |
| Construction Camps | <ul style="list-style-type: none"> <li>Where possible, permanent support infrastructure will be built during construction and will be used during both construction and operation phases</li> <li>Temporary infrastructure needed only for the construction phase will be removed once construction is complete</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                           | <ul style="list-style-type: none"> <li>• Where practicable, inactive areas will be progressively reclaimed during construction and operations</li> <li>• Where possible, construction camps will be downsized to accommodate reduced personnel during operations</li> </ul>                                                                                                                                                   |
| Construction Access Roads | <ul style="list-style-type: none"> <li>• To the extent possible, the access roads will be within the railway right-of-way</li> <li>• Roads no longer required during operations, such as the railway construction access road, will be decommissioned               <ul style="list-style-type: none"> <li>○ All water crossings will be removed and the natural drainage of the area will be restored</li> </ul> </li> </ul> |

In addition to the mitigations listed above, which form a part of the evidentiary record on which the Nunavut Impact Review Board and the Ministers based their approval of the Mary River Project, Project Certificate 005 also provides specific direction on construction to address community concerns (see Attachment 1 enclosed):

- Term and Condition 30. Baffinland shall develop site-specific quarry operation and management plans in advance of the development of any potential quarry site or borrow pit.
- Term and Condition 31. Baffinland shall ensure that Project activities are planned and conducted in such a way as to minimize the Project footprint.
- Term and Condition 40. Baffinland shall include revegetation strategies in its Site Reclamation Plan that support progressive reclamation and that promote natural revegetation and recovery of disturbed areas compatible with the surrounding natural environment.
- Appendix A, Commitment 65. Baffinland is committed to developing a Quarry Management Plan for each of the quarries developed for the Mary River Project and to ensure that all quarry materials used are non-acid generating and non-metal leaching in chemical characteristics.
- Appendix A, Commitment 66. Baffinland is committed to the development and implementation of a monitoring program during the construction and other phases of the Mary River Project.

The NWB Type A Water Licence also includes the following relevant requirements:

- Part D. Item 3: Quarrying activities shall be conducted in accordance with all applicable legislation, guidelines and industry standards including the Northern Land Use Guidelines, Pits and Quarries
- Part D. Item 6: The Licensee shall submit to the Board for review, an addendum to the Plan referred to in Part D, Item 5a for any quarry site selected for future development that the plan does not adequately address. If the content of the existing quarry plan referred to under Part D, Item 5a does not adequately address the proposed activities for the management requirements of the selected Quarry site, the Licensee shall submit to the Board for approval, a site-specific Quarry management plan.

- Part D. Item 13: The Licensee shall maintain a minimum thirty-one (31) meter undisturbed buffer zone between the periphery of Quarry sites and the ordinary High-Water Mark of any Water body unless otherwise approved by the Board in writing. The Licensee shall not excavate and/or remove material from any Quarry beyond a depth of one (1) meter above the ordinary High-Water Mark or above the groundwater table, to prevent the potential contamination of groundwater unless otherwise approved by the Board in writing. The Licensee shall construct and operate the Mine Site and associated infrastructure and facilities in accordance with all applicable legislation and industry standards.
- Part D. Item 14: All surface runoff from Quarry activities associated with the Project, where flow may directly or indirectly enter a Water body, shall be sampled Weekly and not exceed the Effluent quality limits under Part D, Item 15.

Continually, each quarry site located on Crown Land will be the subject of a quarry permit application which will include an estimate of available resources, a quarry specific development plan, drainage plan, and closure plan. Three quarry permit applications are presented in Attachment 6 of the Type A Water Licence application (FEIS Appendix 3B).

#### **Follow Up Monitoring and Supplemental Baseline**

Baffinland is committed to ongoing environmental effects monitoring for the life of the Project. This is required under Project Certificate 005 and as a matter of best practice. Baffinland will develop and implement comprehensive environmental monitoring programs for the Steensby Component during all its phases, including pre-construction, construction, operation and closure. The Project Certificate requires environmental monitoring during the construction phase in specific ecosystemic terms and conditions, key Terms and Conditions include:

- Term and Condition 20. Baffinland shall monitor the effects of explosives residue and related by-products from project-related blasting activities as well as develop and implement effective preventative and/or mitigation measures, including treatment, if necessary, to ensure that the effects associated with the manufacturing, storage, transportation and use of explosives do not negatively impact the Project and surrounding areas.
- Term and Condition 33. Baffinland shall include relevant Monitoring and Management Plans within its Environmental Management System, Terrestrial Environment Management and Monitoring Plan (TEMMP).
- Term and Condition 50. Baffinland shall continue to develop and implement Project-specific monitoring for the terrestrial environment, and will demonstrate appropriate refinements to design, incorporation of analytical methods and elaboration of methodologies. The monitoring plan shall contain clear thresholds to allow for the assessment of long-term trends and cumulative effects where project interactions are identified. Coordination and cooperation will be required where data collection, analysis and interpretation, or

responsibility for mitigation and management requires the efforts of multiple parties (e.g., government, Qikiqtani Inuit Association, communities).

- Term and Condition 54. The Proponent shall provide an updated Terrestrial Environmental Management and Monitoring Plan which shall include, but not be limited to the following:
  - Details of the methods and rationale for conducting monitoring prior to the commencement of construction

A geotechnical field program was completed in 2023. This program was used to collect geotechnical information along the railway corridor to further improve confidence in the quantity and types of soils/rock within the construction area.

Baffinland will integrate the outcomes of supplemental fieldwork into applicable environmental management plans as required, and submit them in its Annual Reports to the Nunavut Impact Review Board and to the Nunavut Water Board, as relevant.

***C. Additional Monitoring and Mitigations and Management Plans Required under the Project Certificate and/or Other Approvals Relevant to Railway Construction***

Baffinland continues to refine its environmental management plans planned for the Steensby Component of the Project based on the operations that have occurred since the original approval of the Mary River Project, and based on additional focused community and regulator engagements. There will be continuous dialogue with communities and Knowledge Holders to understand concerns with rail line.

Management Plans for relevant to Steensby construction activities include:

- Construction Environmental Management Plan
- Borrow Pit and Quarry Management Plan
- Quarry-specific management plans
- Interim Closure and Reclamation Plan

The Adaptive Management Plan will also apply to this topic. Baffinland will use their adaptive management response framework to evaluate permafrost monitoring results against objectives and thresholds. This system is designed to detect changes in the environment early enough to investigate before they present a more serious risk to the environment. Should it be determined that the change is reasonably Project related, Baffinland can implement one or more actions already identified, or a new mitigation not previously considered.

All environmental management plans will be subject to ongoing review and updates for the life of the Project. Baffinland will report on the efficacy of its environmental management plans on a regular basis through its regulatory reporting obligations, as well as through its community engagement program.

***D. Summary of Regulatory Application components which address this topic*****Summary of FAA Application components which address this topic**

Baffinland also heard from Inuit that protection of the environment from construction activities was an interest during its direct engagements (Freshwater FAA Appendix B, Marine FAA Appendix A) and took care to address this item specifically in its applications.

***Mitigation Measures***

In the FAA Applications, the following mitigation measures are proposed to address these concerns:

- **Blasting mitigation.** Monitoring of water bodies as prescribed in the Type 'A' Water Licence, implementation of DFO *Guidelines for the Use of Explosives in or Near Canadian Fisheries Waters* and underwater monitoring will be conducted during blasting activities to confirm the exclusion zones are protective of marine mammal and fish injury. (Marine FAA Vol. 1, Section 7.2.7; Freshwater FAA 5.1.5)
- **Sediment and Erosion Control.** Implementation of a Sediment and Erosion Control Plan for all near water and in-water works. (Marine FAA Vol. 1, Section 7.2.3)
- **Construction environmental monitoring.** Independent environmental monitors (IEMs) will be contracted by Baffinland in consultation with DFO to monitor the construction phase of the Steensby Railway and Port. The presence of fish will be monitored by IEMs during in-water works. If a large aggregation of fish is observed in the work area, and there is a high potential for injury to the fish, workers will be instructed to immediately stop works until fish are no longer observed within the work area. (Marine FAA Vol. 1, Section 7.2.4; Freshwater FAA, Section 7.1.)

Baffinland is committed to minimizing the environmental effects of construction activities and will work closely with DFO and other agencies to develop monitoring plans and reporting protocols suitable to assess the effectiveness of the mitigation measures and standards (Freshwater FAA, Section 7). The effectiveness of mitigation measures will be assessed, as outlined in the FAA and as required by DFO.

**Summary of CTA Section 98 Application components which address this topic**

The construction of the Steensby Railway is planned to occur over a three-year period. Baffinland will source rock fill and aggregate for the construction of the Steensby Railway from approximately 19 quarries along the railway alignment. These quarries, approved under the Project Certificate and shown in S.98 Application SD-24, will provide an estimated 7,000,000 m<sup>3</sup> of rock fill for the railway embankment and an additional 400,000 m<sup>3</sup> of rock ballast for the track. These figures exclude any fill material excavated and reused during earthworks.

During construction, the quarries will include ditches, diversions, and ponds as required, with details outlined in the respective “Quarry Plans” in SD-24. Drilling and blasting will be necessary for quarry excavation and for cutting along various sections of the railway embankment, including Tunnel #1 and Tunnel #2. Blasting effects will be managed through approved blasting plans developed prior to construction, ensuring compliance with federal regulations and the Project Certificate.

Excavated earthworks material will be used as fill for the railway embankment. Any material unsuitable for reuse will be managed as follows:

- Unsuitable material from railway cuts will be placed in shaped berms or used to fill low-lying areas along the alignment.
- Soil spoils will be disposed of at least 31 meters from any surface water body, as determined and approved by a qualified engineer, to prevent sediment runoff.

During construction, winter roads will facilitate the transport of facilities, equipment, personnel, fuel, and explosives to the six construction compounds along the rail alignment. Winter roads will be constructed from Mine Site going south and from Steensby Port heading north along the rail alignment. These roads will be decommissioned after construction, with activities including restoring natural drainage, recovering materials placed for traction, and removing temporary equipment such as snow fencing.

The Interim Closure and Reclamation Plan (ICRP) has been included in the S.98 Application (SD-27.67), and includes all aspects of the Approved Project. The main objectives of the ICRP are to set out the objectives and criteria for the successful closure and reclamation of the site, develop options for the reclamation of various areas on site, and to plan research efforts to address uncertainties with respect to closure. Baffinland continues to work with the QIA and other stakeholders to update the ICRP as the Project progresses towards the Steensby Component.

Continually, Baffinland will comply with its Borrow Source and Quarry Management Plan to guide quarry operations (SD-27.66). As needed, site specific measures will be listed in an Addendum to this Plan. Quarrying activities shall be conducted in accordance with all applicable legislation, guidelines and industry standards including the Northern Land Use Guidelines, Pits and Quarries.<sup>2</sup>

### **E. Conclusion**

Baffinland acknowledges the statements made by Tour participants on the topic of construction, and appreciates the opportunity for all dialogue on topics of interest. This

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<sup>2</sup> Indigenous and Northern Affairs Canada (INAC). (2009). *Northern land use guidelines: Pits and quarries*. Government of Canada.

feedback has been considered in relation to the 2012 FEIS, the outcomes of the NIRB review, the Project Certificate requirements (including terms and conditions, commitments, monitoring programs and required management plan updates), ongoing adjustments that have occurred through monitoring, mitigation, community feedback and adaptive management since the Project began, and the measures reflected in the current pending Federal applications.

Detailed responses to the specific comments on railway construction raised during the Tour are as follows:

- Baffinland will source rock fill and aggregate for the construction of the Steensby Railway from approximately 19 quarries along the railway alignment. These quarries are approved under the Project Certificate. Continually, each quarry site located on Crown Land will require a quarry permit issued by CIRNAC. Excavated earthworks material will be used as fill for the railway embankment where possible. Baffinland will implement the Construction Environmental Management Plan, Borrow Pit and Quarry Management Plan and quarry-specific management plans to effectively manage and mitigate potential environmental impacts from quarrying.
- To the extent possible, access roads will be within the railway right-of-way. Roads no longer required during operations, such as the railway construction access road, will be decommissioned. All water crossings will be removed and the natural drainage of the area will be restored.
- With regards to comments related to the closure of temporary construction infrastructure for Steensby, where possible, permanent support infrastructure built during construction will be used during both construction and operation phases. Temporary infrastructure needed only for the construction phase will be removed once construction is complete. Camps will be decommissioned and include dismantling of the water treatment and sewage treatment systems, where practical, buildings, equipment and machinery will be reused. All fuel storage containers will be drained and removed from the camp sites for disposal at an approved facility, soils suspected of hydrocarbon contamination will be tested and all disturbed areas will be regarded to restore the natural drainage of the area and will be scarified to encourage natural re-vegetation. Quarries and Borrow Pits once exhausted or no longer required, sites will be graded to maintain safe side slopes and re-establish the natural drainage of the area.

Baffinland also recognizes that there are established community grievance feedback processes in place, and ongoing community consultation mechanisms led by Baffinland as well as NIRB and Inuit, which will continue to allow us to work closely with Inuit on addressing issues throughout the life of the Project.

As summarized above, taking into account all of these mechanisms, Baffinland remains confident that there are robust measures in place to ensure that Steensby Component activities proceed in a manner that meets all applicable technical standards relating to construction and addresses the comments shared on the Tour.

### 3. Project Monitoring

#### 3.1 Inuit Involvement and Participation in Project Monitoring

##### ***A. Summary of Feedback Shared During Tour***

A summary of the verbal feedback heard by Baffinland in relation to this topic during the Tour is provided below. The comments were generally made in Inuktitut by participants and translated into English by local interpreters.

In Kimmirut there was one comment on Inuit Involvement and Participation in Project Monitoring:

*“Where can we find results of studies?”*

In Kinngait there were two comments on this topic:

*“We would like to hear from the bodies that review the monitoring, have representation on the project, if we don’t hear from them.”*

*“Baffinland has arranged to have community liaison officers in Kinngait and Kimmirut, once that happens, the liaison officers will be able to provide this information.”*

In Igloolik there were nine comments on this topic:

*“The studies are from Baffinland, have you received any baseline reports from Baffinland and the communities affected by this? What about reports from the Inuit side? Can you wait long enough for us to give you those baseline studies.”*

*“I feel that we need to help reduce the impact and start doing monitoring. Paul Quassa mentioned Terrestrial Environment and ISP, they are funded by Baffinland. I feel that others should start doing the monitoring for us.”*

*“We observe wildlife and our land, and we should be recognized as biologists, environmental specialists for our knowledge. We grow up knowing our land, and you just come here a few days a year. What about the rest of the year when animals move around? HTO used to be against wildlife researchers, but right now, we are pushing to do research because it disturbs wildlife. Given this project, although we don’t want our wildlife to be disturbed, we try and support 100% of the research requested. Get to know the community, get to know our land. We want that time to present to you our submission and our speaking points, and we are running out of time.”*

*“What type of employment could you give us for local people to write reports on problems created? Their whole report may not be true and make sure they are running two reports that a company wants to make itself a good company to employ. How do you ensure transparency between the company and local people?”*

*“Each study had a lot of review, and yet it was expected for the hamlets and HTAs to be able to read it, understand it and be able to address it. A lot of research has been done by Baffinland, DFO, TC, but it is all buried in the NIRB website and hard to access.”*

*“The HTA had to get WWF to get a technical advisor to help them review things.”*

*“For the inspections, will government speak about inspections for all aspects of the environment, can the locals be involved in inspections with the help of the GoC and BIM.”*

*“We have tried to do proposals to do research, but we don’t have our own funds to do this research. In order for the research to be valid, we only found 1 certified lab in Canada, so need specialized people (biologists, scientists) for the research to be valid. We need certified scientists and certified laboratory that can do detailed analysis of the animals.”*

*“Floating fuel hose – not if there will be leaks, but when there will be leaks. Will Inuit be involved as those inspectors?”*

In Arctic Bay there were three comments on this topic:

*“For communities closer to the railway, Hall Beach, Cape Dorset, have you seen or heard their concerns from those communities? I would like to know if they have any concerns because they are impacted more than us.”*

*“And if you start the railway, we want to know everything about what is being impacted and what is happening. What they told us is that you can check the computers to answer any questions you have, but Elders don’t use computers so we can’t review this.”*

*“There are caribou and polar bear monitors, walrus and other animals that walk, or marine mammals. Because Inuit know the animals more than the people from out of the Territory. We know our animals and it would create more jobs for the Inuit if they did their own monitoring for the animals because we know more about them than the biologists and scientists. The thing that we don’t know is what is inside their blood, health hazards. It is great for you to be here, but it is best if we work together to conduct studies.”*

In Clyde River there was one comment on this topic:

*“Building this railway, first I thought it would be for Phase 2, and when it was not approved, I learned the Railway for Steensby was approved years before. I wonder why there wasn’t any consultation on the Railway plan on Steensby.”*

***B. NIRB Review Conclusions and Mitigations related to Inuit Involvement and Participation in Project Monitoring***

**Summary of NIRB Review Process Residual Effects Assessment and Prediction Confidence**

In the 2012 FEIS, Baffinland conducted an extensive assessment of the socio-economic environment, including livelihood and employment, which relied on multiple lines of evidence, including available literature, interviews with residents of the LSA workers and family members, discussions with community representatives, topic-specific workshops in communities, as well as meetings and interviews with government officials. The assessment of wage employment as it relates to creation of jobs in the LSA and employment of LSA residents drew the following conclusions with respect to the Projects potential effects on wage employment:

“Job creation is a positive effect that will be experienced by way of the six point-of-hire communities. The effect may be experienced across the community as an opportunity for residents across the demographic spectrum. The availability of jobs may have beneficial effects even for those not employed; for example, it may encourage students to see the value of education or consider the livelihood paths they wish to pursue. Based on the high magnitude and continuous frequency of labour demand, the positive effect of Project job creation on wage employment is assessed to be significant. This assessment is in line with community perceptions about the Project.” (FEIS, Volume 4, Section 4.4.3)

In the Final Hearing Report for the Mary River Project, the Nunavut Impact Review Board considered livelihood and employment in Section 5.3 by providing a summary of the views of the Proponent, the views and concerns of Interested Parties and the views of the Board to draw specific conclusions and recommendations, which materialized in a draft Project Certificate 005, which was approved by the Ministers and issued in final on December 28, 2012.

**Summary of relevant requirements from the NIRB Review Process and recognized under Project Certificate No. 005 and other existing approvals/agreements**

As stated in Volume 4 of the FEIS, Inuit and community members will be involved in the ongoing implementation, review and adaption of monitoring and mitigation measures. The

following mechanisms were identified to provide opportunities for participation (Volume 4, Section 15.8.1):

- Engagement of Baffinland Liaison Officers and Inuit Employment Coordinator and other company managers/supervisors to provide insight and improve communications between the company and communities
- Baffinland Stakeholder Engagement Plan activities, and Inuit involvement in Valued Ecosystem Component (**VEC**) monitoring programs
- Participation in the Qikiqtani Socio-Economic Monitoring Committee (**Q-SEMC**) which is structured to support community input and direction into socio-economic monitoring through its primary composition of hamlet mayors and other officials
- Participation in the joint QIA / Baffinland IIBA Executive and Management Committees which will make decisions related to initiatives designed to improve access of Inuit to opportunities and to mitigate impacts at community level
- QIA Mary River Project Review Committees
- Communication and collaboration with Inuit front-line service providers in communities

Continually, Baffinland will develop and implement a comprehensive environmental monitoring programs for the Steensby Component during all its phases, including pre-construction, construction, operation and closure. Several examples of where Project Certificate 005 provides specific direction on Inuit participation and feedback on monitoring programs are included here for reference (see Attachment 1 enclosed):

- Term and Condition 4. Baffinland shall endeavor to include the participation of Inuit from affected communities and other communities in Nunavut when undertaking climate-change related studies and research.
- Term and Condition 15. The Proponent shall collaborate to the extent possible with the Qikiqtani Inuit Association and local Hamlet organizations when undertaking consultation with all affected communities regarding railway, Tote Road and marine shipping operations. During these consultations, it is recommended that the Proponent provide information including video, audio, and photographic representation as well as any other aids (i.e. models) that may enhance the general public's understanding of railway, Tote Road and marine shipping operations, as well as all safety considerations for members of the public who may be travelling around the project area.
- Term and Condition 63. Baffinland shall liaise with local Hunters and Trappers Organizations in advance of carrying out terrestrial wildlife surveys. At a minimum, The Proponent shall also meet annually in person with Hunters and Trappers Organizations to discuss wildlife monitoring and mitigation plans and address community concerns regarding wildlife interactions.
- Term and Condition 125. Prior to use of acoustic deterrent devices, the Proponent shall carry out consultations with communities along the shipping routes and nearest to Steensby Inlet and Milne Inlet ports to assess the acceptability of these devices.

Feedback received from community consultations shall be incorporated into the appropriate mitigation plan.

- Term and Condition 125(a). The Proponent shall consult with potentially-affected communities and groups, particularly Hunters' and Trappers' Organizations regarding the identification of project vessel anchor sites and potential areas of temporary refuge for project vessels along the shipping routes within the Nunavut Settlement Area. Feedback received from community consultations shall be incorporated into the most appropriate mitigation or management plans.
- Term and Condition 126. Monitoring programs shall be designed to ensure that local users of the marine area in communities along the shipping route have opportunity to be engaged throughout the life of the Project in assisting with monitoring and evaluating potential project-induced impacts and changes in marine mammal distributions.
- Term and Condition 127. The Proponent shall ensure that communities and groups in Nunavik are kept informed of project shipping activities and are provided with opportunity to participate in the continued development and refinement of shipping related monitoring and mitigation plans.
- Term and Condition 128. The Proponent shall consult with local communities as fish habitat off-setting options are being considered and demonstrate its incorporation of input received into the design of the Fish Habitat Off-Setting Plan required to offset the Harmful Alteration, Disruption or Destruction of Fish and Fish Habitat (HADD).
- Term and Condition 162. Reasonable efforts shall be made to engage Elders and community members of the North Baffin communities to have community level input into its monitoring programs and mitigative measures, to ensure that these programs and measures have been informed by traditional activities, cultural resources, and land use as such may be implicated or impacted by ongoing Project activities.
- Term and Condition 163. Baffinland shall continue to engage and consult with the communities of the North Baffin region to ensure they are kept informed about the Project activities, and management and monitoring plans continue to evolve in an informed manner.
- Term and Condition 166. The Proponent should ensure through its consultation efforts and public awareness campaigns that the public have access to shipping operations personnel for transits into and out of both Steensby Inlet port and Milne Inlet port either via telephone or internet contact, in order that any questions regarding ice conditions or ship movements that could assist ice users in preparing for travel may be answered by Project staff in a timely fashion.
- PC No. 005 Amendment 005 Commitment 005: Baffinland will work with the Hamlets and HTOs of Igloolik and Sanirajak to carry out additional baseline studies for marine, terrestrial, and avian wildlife related to Steensby.

Inuit participation in monitoring programs provide valuable knowledge and skill sets for program implementation. Inuit participants have been involved in the monitoring programs at all levels since Project inception (with the exception of 2020 due to COVID-19 restrictions) and will continue to be involved during Steensby construction and operation. For example, in 2023 there were:

- Twelve Inuit Shipping Monitors in Pond Inlet for the shipping season
- Eight Inuit participants in terrestrial monitoring programs
- Fifteen Inuit participants in marine monitoring programs
- Three Inuit participants in the Steensby archaeology program. Additionally, an Elder from Igloodik, Natalino Piugattuk, toured archaeological excavations at the Mary River Mine Site, participated in a helicopter survey of the Steensby Rail alignment, including the planned Steensby Port site, as well as landing at eight different archaeology sites.
- Baffinland's Site Environment Team has seven Inuit technicians and specialists as well as four QIA environmental monitors.

Additionally, Baffinland leads the Marine Environment Working Group (**MEWG**) and Terrestrial Environment Working Group (**TEWG**). Both the MEWG and TEWG include members from the five North Baffin HTOs. As the Steensby Component develops, representatives from the HTOs in Kinngait and Kimmirut will be invited to attend working group meetings. These working groups serve as a platform for Inuit to be presented with annual monitoring results and be involved in program development.

***C. Additional Monitoring and Mitigations and Management Plans Required under the Project Certificate and/or Other Approvals Relevant to Inuit Involvement and Participation in Project Monitoring***

Baffinland continues to refine its environmental management plans planned for the Steensby Component of the Project based on the operations that have occurred since the original approval of the Mary River Project, and based on additional focused community and regulator engagements. There will be continuous dialogue with communities and Knowledge Holders to understand concerns with rail line. Baffinland has proposed to work directly with communities and regulators through the Terrestrial and Marine Environment Working Groups and other forums to review management plans related to Steensby, with a view to adapting lessons learned from the Northern Operation as feasible and appropriate.

With respect community involvement in Project monitoring, Baffinland will continue to implement its Community and Stakeholder Engagement Plan (**CSEP**). THE CSEP was developed by Baffinland to ensure the interests of communities are respected and incorporated into the Project. In addition to the CSEP, Baffinland will develop an Inuit Training Plan ahead of construction of the Steensby Component.

The Adaptive Management Plan will also apply to this topic. Baffinland will use their adaptive management response framework to evaluate monitoring results against objectives and thresholds. This system is designed to detect changes in the environment early enough to investigate before they present a more serious risk to the environment. Should it be determined that the change is reasonably Project related, Baffinland can implement one or more actions already identified, or a new mitigation not previously considered.

All environmental management plans will be subject to ongoing review and updates for the life of the Project. Baffinland will report on the efficacy of its environmental management plans on a regular basis through its regulatory reporting obligations, as well as through its community engagement program.

#### ***D. Summary of Regulatory Application components which address this topic***

##### **Summary of FAA Application components which address this topic**

The complementary measures proposed by Baffinland in the FAAs provide opportunities for Inuit participation (Marine FAA Vol. 2 Section 3.9, Freshwater FAA Section 8.3). For instance, community involvement in stream enhancements and beach clean-ups (Marine FAA Appendix A-1, Freshwater FAA Appendix B1). Participation of Inuit in offsetting and complementary measures will be highly encouraged by Baffinland.

##### **Summary of CTA Section 98 Application components which address this topic**

The Section 98 Application includes an overview of employment on the Mary River Project. In response to comments from the localities about the need for employment and other economic benefits and opportunities, Baffinland communicated to localities that the construction of the Steensby Components of the Mary River Project will create an overall increase in employment opportunities with the Mary River Project and will also increase the benefits to Qikiqtani Inuit under the Mary River IIBA. The construction of the Steensby Components will bring better financial stability to the Mary River Project and, in turn, stabilize employment and contracting opportunities. Baffinland has also committed that no Inuit will lose their jobs as a result of the transition from trucking to railway and, as described in the Background to the Application Brief at **Part 1, Section III.1D** [*Summary of Regulatory History of the Mary River Project*] (starting at page 40), the Steensby Component will also support the timely sharing of benefits with Qikiqtani Inuit under the Mary River IIBA.

Furthermore, Baffinland shared some of the key data related to Inuit benefits and employment. To date, through the Mary River IIBA and other community partnerships, Baffinland has cumulatively paid more than \$164 million in financial benefits to Qikiqtani Inuit, provided over \$150 million in wages to Inuit employees and contractors, reached over \$1.79 billion in contracts awarded to Inuit firms, provided over \$3.8 million through its Sponsorship and Donation Program, seen over 650 graduates of pre-employment training programs, and

delivered over 229,000 hours of training to Inuit employees, amongst other socio-economic benefits.

Baffinland estimates that the total value of financial benefits which will flow to Inuit and Nunavut over the life of the Mary River Project (including the Steensby Railway) will exceed \$5 billion CAD in direct payments to the Governments of Nunavut and Canada, and to Inuit Organizations, including QIA and Nunavut Tunngavik Inc. (NTI), as well as more than \$1 billion CAD paid directly to Inuit through employment at the Mary River Project.

### ***E. Conclusion***

Baffinland acknowledges the statements made by Tour participants on the topic of Inuit direct involvement in monitoring during the Tour, and appreciates the opportunity for all dialogue on topics of interest. This feedback has been considered in relation to the 2012 FEIS, the outcomes of the NIRB review, the Project Certificate requirements (including terms and conditions, commitments, monitoring programs and required management plan updates), ongoing adjustments that have occurred through monitoring, mitigation, community feedback and adaptive management since the Project began, and the measures reflected in the current pending Federal applications.

Detailed responses to the specific comments on Inuit involvement in Project monitoring raised during the Tour are as follows:

- With respect to the integration of IQ and Inuit experiences in Project planning and monitoring, Baffinland is committed to engaging with communities and stakeholders to integrate feedback and IQ into the project design and railway alignment. Since 2006, IQ has been collected and integrated in the railway alignment and other aspects of the Project. For example, IQ helped to identify and refine the optimal alignment and location of likely caribou crossings areas. Baffinland will continue to involve Inuit and incorporate evolving IQ in the Steensby Railway as the detailed design is being finalized, such as by confirming the final crossing locations for hunters and caribou. Several plans, agreements and initiatives are being implemented to enable IQ collection and involvement of Inuit in monitoring activities, including through the IIBA, Tusaqtavut studies and Inuit Stewardship Program. Furthermore, Baffinland's engagement activities in the communities have been carried out by an Inuit-led team, which allows for integration of Inuit experience in the Project.
- With respect to involvement of Inuit into monitoring, Baffinland funds QIA to hire and employ Inuit environmental monitors at the mine site. Furthermore, Baffinland funds working groups that are created to address any monitoring issues that arise, such as the independent Dust Audit Committee, which was established in 2022 and includes participants from the five key localities.
- With respect to community engagement on Project monitoring, Baffinland engages Elders and community members of the North Baffin communities to have community

level input into monitoring programs and mitigative measures, to ensure that these programs and measures have been informed by traditional activities, cultural resources, and land use as such may be implicated or impacted by ongoing Project activities. Baffinland will continue to engage and consult with the communities of the North Baffin region to ensure they are kept informed about the Project activities, and management and monitoring plans continue to evolve in an informed manner.

- With regard to Inuit involvement in supplemental baseline studies for the Steensby Component, Baffinland is committed to work with the Hamlets and HTOs of Igloodik and Sanirajak to carry out additional baseline studies for marine, terrestrial, and avian wildlife related to Steensby.

Baffinland also recognizes that there are established community grievance feedback processes in place, and ongoing community consultation mechanisms led by Baffinland as well as NIRB and Inuit, which will continue to allow us to work closely with Inuit on addressing issues throughout the life of the Project.

As summarized above, taking into account all of these mechanisms, Baffinland remains confident that there are robust measures in place to ensure that Steensby Component activities proceed in a manner that will ensure that Inuit continue to have opportunities to directly participate in Project monitoring, including monitoring of the Steensby Component.

### **3.2 Baseline Studies**

#### **A. Summary of Feedback Shared During Tour**

A summary of the verbal feedback heard by Baffinland in relation to this topic during the tour is provided below. It should be noted that the comments were generally made in Inuktitut by participants and translated into English by local interpreters.

In Igloolik there were five comments about baseline studies:

*“In the fall of 2024, Igloolik and Hall Beach came together and wanted to see baseline studies in the area before any decisions were made. At our last meeting in December, we invited you here to get an understanding of how your departments are connected to Baffinland, because we are beginning to understand the extremity of this Project.”*

*“The studies are from Baffinland, have you received any baseline reports from Baffinland and the communities affected by this? What about reports from the Inuit side? Can you wait long enough for us to give you those baseline studies?”*

*“For 2006-2010, Paul Quassa referenced on the studies, can we get the information that you mention? I feel that we are impacted. Also, regarding monitoring – thank you for your monitoring Baffinland.”*

*“We would like updated research. My granddaughter is starting at 14, so that is outdated. Even 2018 is outdated. That is expired data.”*

*“We have been working with Oceans North and are still at the planning stage for underwater noise disturbance to get accurate baseline data before the shipping route has started. If construction starts now, we won’t see what has. Our first step would be to write up a proposal but we don’t specialize in this.”*

In Arctic Bay there was one comment about baseline studies:

*“Down at Steensby, before it starts, the animals in the water or the land, they should be studied before it starts or after it starts to identify how it affected the animals on the land and water. It will be crucial information to prepare before it happens and when it starts.”*

#### **B. NIRB Review Conclusions and Mitigations related to Baseline Studies**

##### **Summary of NIRB Review Process Residual Effects Assessment and Prediction Confidence**

As set out in the 2012 FEIS, Baffinland conducted an extensive environmental baseline assessments, which relied on multiple lines of evidence, including available literature, IQ shared with Baffinland by Inuit, desktop studies (e.g. models, risk assessments), field programs (i.e. aerial surveys), land use studies (e.g. Mary River Land Use Study) and expert opinion. These assessments, considering this information, drew conclusions with respect to the Projects potential environmental effects which can be found in their respective FEIS volumes.

In the Final Hearing Report for the Mary River Project, the Nunavut Impact Review Board considered supplemental baseline assessments in Section 4.12.4 by providing a summary of the views of the Board to draw specific conclusions and recommendations, which materialized in a draft Project Certificate 005, which was approved by the Ministers and issued in final on December 28, 2012.

**Summary of relevant requirements from the NIRB Review Process and recognized under Project Certificate No. 005 and other existing approvals/agreements**

**Follow Up Monitoring and Supplemental Baseline**

Baffinland is committed to ongoing environmental effects monitoring for the life of the Project. This is required under Project Certificate 005 and as a matter of best practice. Several examples of where Project Certificate 005 requires this are included here for reference (see Attachment 1 enclosed for more details):

- Term and Condition 21. The Proponent shall ensure that the scope of the Aquatic Effects Monitoring Plan (AEMP) includes, at a minimum monitoring of non-point sources of discharge, selection of appropriate reference sites, measures to ensure the collection of adequate baseline data and the mechanisms proposed to monitor and treat runoff, and sample sediments.
- Term and Condition 34. The Proponent shall conduct soil sampling to determine metal levels of soils in areas with berry-producing plants near any of the potential development areas, prior to commencing operations.
- Term and Condition 55. Developing “wolf indices” for presence/abundance of wolves (by conducting studies) to set a baseline pre-construction baseline.
- Term and Condition 78. Baffinland shall update the baseline information for landfast ice using a long-term dataset (28 years), and with information on inter-annual variation. The analysis for pack and landfast ice shall be updated annually using annual sea ice data (floe size, cover, concentration) and synthesized and reported in the most appropriate management plan.
- Term and Condition 87. Implement a monitoring program that needs to be able to detect changes that may have biological consequences and should be initiated several years prior to any ballast water discharge into Steensby Inlet and Milne Inlet to collect sufficient baseline data and should continue over the life of the Project.

- Terms and Conditions 99 and 101. Outline the required marine environmental monitoring for the Steensby Component, including supplemental baseline data collection on walrus, beluga, bearded seal and anadromous Arctic Char abundance, distribution and habitat, as well as freshwater systems.
- Term and Condition 100. Baffinland shall update its Shipping and Marine Wildlife Management Plan, to include avoidance of polynyas and mitigation measures designed for potential fuel spills along the shipping lane during the winter months, with consideration for the impact of spilled fuel on marine mammals when they might be less mobile or able to avoid contact with spilt fuel or fumes.
- Term and Condition 119. Baffinland is already collecting supplemental baseline data on ringed seal birth lair abundance and distribution through aerial surveys done in 2021 and 2024. Results of supplemental baseline collection, along with close collaboration and engagement with Communities, QIA, Marine Environment Working Group (MEWG) and NIRB, will feed into the development and update of Steensby Construction and Operation Management Plans.
- Project Certificate No. 005, Amendment 005 Commitment 005. Baffinland will work with the Hamlets and HTOs of Igloolik and Sanirajak to carry out additional baseline studies for marine, terrestrial, and avian wildlife related to Steensby.

Since 2021 Baffinland has been conducting fieldwork in support of various environmental authorizations required to develop specific elements of the Steensby Component of the Project. Desk-based studies have been undertaken since 2020. The table below provides a list of supplemental environmental baseline studies and field programs that have been run since 2020, and that are planned prior to the commencement of construction of the Steensby Component.

**Table 11.** Supplemental Baseline Studies for the Steensby Component

| Year                | Topic       | Study                                                                                                                             |
|---------------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------|
| <b>Past Studies</b> |             |                                                                                                                                   |
| 2020                | Marine      | Ice conditions and ship access to the Steensby Inlet port site                                                                    |
| 2021, 2024          | Marine      | Ringed Seal Aerial Surveys                                                                                                        |
| 2021-2022           | Marine      | Physical Oceanography Program                                                                                                     |
| 2021                | Marine      | Marine Fish and Fish Habitat Studies in Steensby Port Area                                                                        |
| 2021-2023           | Freshwater  | Steensby Port and Railway Freshwater Habitat Surveys: Non-Fish Bearing Sites                                                      |
| 2021                | Terrestrial | Terrestrial Environment – 2021 Annual Monitoring Report, which includes satellite-based dust monitoring of the Steensby Port area |
| 2021-2023           | Atmospheric | Satellite dustfall mapping of Steensby Inlet                                                                                      |
| 2023                | Marine      | Fixed wing ice survey                                                                                                             |
| 2023                | Marine      | Multibeam Bathymetric Survey in Steensby Inlet                                                                                    |
| 2023                | Freshwater  | Potential Offsetting Sites: Freshwater Habitat Surveys                                                                            |

| Year                   | Topic          | Study                                                                                                                                                                                                                      |
|------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2023                   | Freshwater     | Water Withdrawal Notification and Hydrological Assessment – Steensby Component                                                                                                                                             |
| 2023                   | Freshwater     | Steensby Port Arctic Char Otolith Analysis                                                                                                                                                                                 |
| 2023                   | Freshwater     | Fish Passage Assessment – Steensby Component                                                                                                                                                                               |
| 2023                   | Freshwater     | Construction of the Steensby Inlet Railway Underwater Noise Modelling Report: Freshwater                                                                                                                                   |
| 2023                   | Terrestrial    | Aerial caribou survey                                                                                                                                                                                                      |
| 2023                   | Geotechnical   | Geotechnical Investigation Report – Steensby Rail Alignment                                                                                                                                                                |
| 2023-2024              | Archaeology    | Archaeology surveys                                                                                                                                                                                                        |
| 2024                   | Marine         | Steensby Inlet Fast Ice Study                                                                                                                                                                                              |
| 2024                   | Marine         | Marine environment habitat survey of the intertidal zone in Steensby Port area                                                                                                                                             |
| 2024                   | Freshwater     | Freshwater environment aquatic habitat surveys at proposed water intake sites, and fish and fish habitat surveys at lake encroachments/stream crossings and culvert locations not previously surveyed along rail alignment |
| 2024                   | Terrestrial    | LiDAR                                                                                                                                                                                                                      |
| 2025                   | Marine         | Underwater Noise Modelling – Construction of Steensby Port                                                                                                                                                                 |
| 2025                   | Marine         | Airborne Noise Modelling – Construction of Steensby Port                                                                                                                                                                   |
| <b>Current Studies</b> |                |                                                                                                                                                                                                                            |
| Present                | Marine         | Spill modelling for the Southern Shipping Route                                                                                                                                                                            |
| Present                | Atmospheric    | Air quality modelling for the Steensby Railway                                                                                                                                                                             |
| Present                | Atmospheric    | Noise modelling for the Steensby Railway                                                                                                                                                                                   |
| <b>Future Studies</b>  |                |                                                                                                                                                                                                                            |
| Pre-construction       | Marine         | Marine environment baseline program (marine water and sediment quality, vegetation, benthic invertebrates, fish and fish habitat)                                                                                          |
| Pre-construction       | Marine         | Walrus abundance and distribution                                                                                                                                                                                          |
| Pre-construction       | Marine         | Marine mammal aerial survey                                                                                                                                                                                                |
| Pre-construction       | Freshwater     | Freshwater environment baseline program (water quality, fish health, habitat, benthic invertebrates)                                                                                                                       |
| Pre-construction       | Terrestrial    | Terrestrial environment baseline program (surveys for caribou, vegetation ELC mapping, ecosite surveys, rare plants, wildlife and habitat, birds and nests)                                                                |
| Pre-construction       | Archaeology    | Protection and mitigation of archaeological sites                                                                                                                                                                          |
| Pre-construction       | Socio-economic | In-community socio-economic baseline program                                                                                                                                                                               |

Baffinland will integrate the outcomes of supplemental fieldwork into applicable environmental management plans as required, and submit them in its Annual Report to the Nunavut Impact Review Board.

***C. Additional Monitoring and Mitigations and Management Plans Required under the Project Certificate and/or Other Approvals Relevant to Baseline Studies***

Baffinland continues to refine its environmental management plans planned for the Steensby Component of the Project based on the operations that have occurred since the original approval of the Mary River Project, and based on additional focused community and regulator engagements. Baffinland will integrate the outcomes of supplemental baseline studies into applicable environmental management plans as required.

The Adaptive Management Plan will continue to apply to Baffinland's environmental management plans. They will follow the system for adaptive management outlined in the Adaptive Management Plan. This requires the prior establishment of monitoring objectives, indicators, thresholds and responses based on low, moderate and high levels of risk. This system is designed to detect changes in the environment early enough to investigate before they present a more serious risk to the environment. Should it be determined that the change is reasonably Project related, Baffinland can implement one or more actions already identified in the respective Management Plan, or a new mitigation not previously considered.

All environmental management plans will be subject to ongoing review and updates for the life of the Project. With respect to marine and terrestrial environment management plans, Baffinland will be supported by the advice of the Terrestrial and Marine Environment Working Groups, which includes HTO representatives from all impacted communities, and direct community engagement. Baffinland will report on the efficacy of its environmental management plans on a regular basis through its regulatory reporting obligations, as well as through its community engagement program.

***D. Summary of Regulatory Application components which address this topic***

**Summary of FAA Application components which address this topic**

Supplemental baseline studies were conducted to support Baffinland's FAA Applications. Key studies integrated into the applications include:

- Water Withdrawal Notification and Hydrological Assessment (Freshwater FAA Appendix E)
- Potential Offsetting Sites: Freshwater Habitat Surveys (Freshwater FAA Appendix F1)
- Steensby Port Arctic Char Otolith Analysis (Freshwater FAA Appendix F2)
- Fish Passage Assessment – Steensby Component (Freshwater FAA Appendix H)

- Construction of the Steensby Inlet Railway Underwater Noise Modelling Report: Freshwater (Freshwater FAA Appendix I2)
- Physical Oceanography Program, Multibeam Bathymetric Survey in Steensby Inlet, Marine Fish and Fish Habitat Studies in Steensby Port Area (Marine FAA Section 5.1.2)
- Underwater Noise Modelling - Construction of Steensby Port (submitted to DFO in January 2025)
- Airborne Noise Modelling - Construction of Steensby Port (submitted to DFO in January 2025)

### **Summary of CTA Section 98 Application components which address this topic**

Baffinland has prepared updated analyses, technical memos and railway engineering reports to support the S.98 Application and detailed engineering. For example, updated analyses attached as supporting documents in the S.98 Application include:

- Ongoing community engagement since operations began in 2014, as detailed in the Stakeholder Engagement Report (SD-69)
- Updated freshwater and marine field programs between 2021 and 2023 in areas covering the Mary River Mine site, Steensby Railway and Steensby Port (SD-38)
- Hydrological watercourse studies carried out in 2023 to support site specific crossing designs, including conventional, aerial (LIDAR), drone and acoustic Doppler current profiler surveys (SD-38)
- Satellite-based dust monitoring of the Steensby Port area (SD-60.39-60.42)
- Aerial caribou survey in March 2023 covering the regional study area from Milne Port to Steensby Port to identify the location, number and composition of caribou in relation to current and future infrastructure (SD-83)
- Additional archaeological surveys carried out in 2024 to determine the presence of archaeological sites along the Steensby Railway alignment, following which some limited archeological mitigation was carried out (SD-81)
- Geotechnical surveys were carried out in 2023 to identify ice-rich areas along the Steensby Railway alignment, to address future thaw and settlement issues in the final railway design, and to inform the final railway alignment (SD-67)
- Since 2012, Baffinland and the QIA have carried out supplemental Inuit land use studies to support the ongoing development of the Mary River Project and the PIP Amendments. Those land use studies are consistent with the original studies carried out to support the 2012 FEIS, and are current to the drafting of the S.98 Application (SD-71)
- The original assessment of noise and vibration impacts from the Steensby Railway was recently reviewed and reconfirmed on May 6, 2024 by RWDI Consulting Engineers, who confirmed that effects predictions for the Steensby Railway presented in the 2012 FEIS remain valid (SD-66)

- The infrastructure for the Steensby Railway meets the geotechnical requirements for railway operations in arctic conditions and accounts for the anticipated effects of climate change in the region (e.g. Warming and thawing of permafrost), per a May 2024 memorandum from Systra (SD-64)

### ***E. Conclusion***

Baffinland acknowledges the statements made by Tour participants on the topic of supplemental baseline studies during the Tour, and appreciates the opportunity for all dialogue on topics of interest. This feedback has been considered in relation to the 2012 FEIS, the outcomes of the NIRB review, the Project Certificate requirements (including terms and conditions, commitments, monitoring programs and management plan updates), ongoing adjustments that have occurred through monitoring, mitigation, community feedback and adaptive management since the Project began, and the measures reflected in the current pending Federal applications.

Detailed responses to the specific comments on baseline studies raised during the Tour are as follows:

- With regard to Inuit involvement in supplemental baseline studies for the Steensby Component, Baffinland is committed to work with the Hamlets and HTOs of Igloolik and Sanirajak to carry out additional baseline studies for marine, terrestrial, and avian wildlife related to Steensby.
- Baffinland's project certificate includes terms and conditions regarding collection of updated baseline information prior to Steensby construction. Baffinland has been conducting supplemental baseline studies since 2020 and will continue to do so prior to construction (see Table 16). Outcomes will be integrated into applicable environmental management plans as required, and submit them in its Annual Report to the Nunavut Impact Review Board.

Baffinland also recognizes that there are established community grievance feedback processes in place, and ongoing community consultation mechanisms led by Baffinland as well as NIRB and Inuit, which will continue to allow us to work closely with Inuit on addressing issues throughout the life of the Project.

As summarized above, taking into account all of these mechanisms, Baffinland remains confident that there are robust measures in place to ensure that Steensby Component activities proceed in a manner that is protective of the environment as well as Inuit cultural and rights-based activities relating to those species.

## **4. Effects on Communities and Individuals**

### **4.1 Land Use**

#### **A. Summary of Feedback Shared During Tour**

A summary of the verbal feedback heard by Baffinland in relation to this topic during the tour is provided below. It should be noted that the comments were generally made in Inuktitut by participants and translated into English by local interpreters.

In Igloodik there were seven comments about land use:

*“Are there studies of ore carriers and ice breakers and impacts on navigation?”*

*“Is Steensby Inlet, I was born there and there are so many birds, seals, fish and caribou. But with the ships passing by, will it be ok for hunters?”*

*“Steensby Port area, beaches are perfect for fermenting walrus meat for Igloodik/Sanirajak and most of the North.”*

*“Why is snowmobile not mentioned in navigation approvals?”*

*“With regards to navigable water crossings, how are there only 8 water crossings as part of the navigable water body compared to 42 bridges.”*

*“Navigable waters act – it defines bodies of waters, and it define vessels. I would argue that a skidoo will also be a vessel, and hard water is still water – so the concerns raised related to travelling on a skidoo I would argue it is a responsibility.”*

*“We looked through the railway plans and it looks like it will go through the land. If they do this, it will not be too much of a problem the way they have planned it before. If they try to take a different route, it will be worst. We have seen it before with the helicopter in the area where they want to put the railway. The campgrounds are not going to be touched at all by the railway. I am just trying to say that it is being planned properly.”*

In Arctic Bay there were four comments about land use:

*“It is not our main rail, so we don’t have any comments or concerns. We don’t use it for hunting, only during Nunavut quest. We used to go caribou hunting by skidoo, but no further comments.”*

*“The hunting will never stop. What I heard is the journey will be a long ride from Mary River to the Port with the train. Will anyone be able to provide a cabin for the hunters as there to help with travel and safety?”*

*“Are they building any cabins for hunters but it is so long from Pond Inlet to Arctic Bay, so if there are 2-4 cabin along the Railway?”*

*“With the route for shipping area, I know Kinngait and Kimmirut will be impacted because the walrus habitat. They need all the lighting during their season to go hunting. You will have to put that there for the lights because walrus hunting in the area.”*

In Clyde River, there were two comments about Land Use:

*HTO participants commented that people from Clyde River do not boat in the Steensby area (railway or Port) as it is too far away from our community.*

*“Regarding the communities of Igloodik and Sanirajak, I am curious if they had any concerns in those two communities related to boating.”*

## ***B. NIRB Review Conclusions and Mitigations related to Land Use***

### **Summary of NIRB Review Process Residual Effects Assessment and Prediction Confidence**

As set out in the 2012 FEIS, Baffinland conducted an extensive assessment of land use by Inuit, which relied on multiple lines of evidence, including available literature, IQ shared with Baffinland by Inuit, desktop studies, land use studies (e.g. Mary River Land Use Study, FEIS Appendix 4C) and expert opinion. The assessment, considering this information, drew the following conclusions with respect to the Projects potential effects on land users:

*“The prediction confidence of the above assessment is high because the Project will interact with land-users in the manners identified in the assessment: by water, ice and land travel and at camps. The mitigation measures are well suited to address the safety issues resultant from Project interactions with land-users while ensuring their ability to continually use the land for their cultural pursuits.” (FEIS, Volume 4, Section 10.5.4)*

*“The Project will interact with current land-use activities such as harvesting, travel and camping. Direct adverse residual effects on these activities are acknowledged. With planned mitigation described in the Key Indicator assessments, these effects are predicted to be not significant... Baffinland acknowledges that shipping, port activities and rail line operations may potentially affect Inuit travel. However, this will not result in significant adverse effects on travel and camps. Individuals' ability to travel and camp throughout the land use study area will not be meaningfully altered—the negative*

effects are only evident at points of project interaction including Milne Inlet, Milne Inlet Tote Road, Mine Site, Railway, and Steensby Port.” (FEIS, Volume 4, Section 10.6)

“The Project requires marine shipping, two ports sites with dock infrastructure, and several large bridges. Coastal waterways are used by small watercraft during the open-water season. There is limited or no current historical use of the inland waterways by watercraft for navigational purposes. In consideration these factors and mitigation, no significant potential adverse residual effects are expected. Any interruption in navigability due to construction or maintenance of bridges or dock infrastructure will be temporary. Bridges constructed over navigable waters will be built with sufficient freeboard to ensure crossings do not impede navigability.” (FEIS, Volume 9, Section 5.6)

In the Final Hearing Report for the Mary River Project, the Nunavut Impact Review Board considered culture, resources and land use in Section 4.7 by providing a summary of the views of the Proponent, the views and concerns of Interested Parties and the views of the Board to draw specific conclusions and recommendations, which materialized in a draft Project Certificate 005, which was approved by the Ministers and issued in final on December 28, 2012.

**Summary of relevant requirements from the NIRB Review Process and recognized under Project Certificate No. 005 and other existing approvals/agreements**

The 2012 FEIS proposed a number of mitigations related to land use through the assessment in Human Environment at Volume 4, Cumulative Effects and Other Assessments at Volume 9, Section 5, the Environmental Protection Plan at Appendix 10B and the Railway Management Plan at Appendix 10D-9. The following mitigations for land users were included in the 2012 FEIS:

- Icebreaking vessels will minimize the width of the shipping lane (to <1.5 km) by transiting along the same track as much as possible.
- The shipping lane into Steensby Port will be delineated with markers that will identify the boundaries of previous vessel tracks.
- Icebreaking tugs and ore carriers will restrict their area of operation to the extent practical, so that the total area of broken landfast ice at the Steensby Port is limited.
- Land users travelling across landfast ice in Steensby Inlet will be required to detour to avoid the ship track. Safe detour routes around the ship's track in the area of the Port and along part of the landfast ice will be marked for safety purposes.
- Fuel, food and shelter will be provided at Steensby Port to offset the additional costs for traveling around Steensby Port and the shipping route.
- Proposed snowmobile crossings at strategic locations will consist of signage, a surface treatment of finer filled material over the embankments, and wooden timbers next to the steel rails, to prevent ATVs and snowmobiles from getting caught.

In addition to the mitigations listed above, which form a part of the evidentiary record on which the Nunavut Impact Review Board and the Ministers based their approval of the Mary River Project, Project Certificate 005 also provides specific direction on land users at the following Term and Condition and commitments to address community concerns (see Attachment 1 enclosed).

- Term and Condition 162. Baffinland should make all reasonable efforts to engage Elders and community members of the North Baffin communities in order to have community level input into its monitoring programs and mitigative measures, to ensure that these programs and measures have been informed by traditional activities, cultural resources, and land use as such may be implicated or impacted by ongoing Project activities.
- Term and Condition 165. Baffinland is strongly encouraged to provide buildings along the rail line and Milne Inlet Tote Road for emergency shelter purposes, and shall make these available for all employees and any land users travelling through the Project area. In the event that these buildings cannot, for safety or other reasons be open to the public, the Proponent shall set up emergency shelters (e.g. seacans outfitted for survival purposes) every 1 kilometre along the rail line and Milne Inlet Tote Road. These shelters must be placed along Tote Road and rail routing prior to operation of either piece of infrastructure, and must be maintained for the duration of project activities, including the closure phase.
- Term and Condition 175. In coordination and consultation with the Qikiqtani Inuit Association and the Hunters and Trappers Organizations of the North Baffin communities and Coral Harbour, provide updates to the Shipping and Marine Mammals Management Plan to include adaptive management measures it proposes to take should the placement of reflective markers along the ship track in winter months not prove to be a feasible method of marking the track to ensure the safety of ice-based travelers.
- Appendix A, Commitment 16: Baffinland is committed to designing the rail track to allow for snow machine and ATV crossings at points intersecting with identified travel routes.
- Appendix A, Commitment 20: Baffinland is committed to installing ploughs on the sides of locomotives in order to ensure that the rail line is kept clear of snow during Railway operations.

### **Follow Up Monitoring and Supplemental Baseline**

While the FEIS 2012 residual effects assessments demonstrated the Project, with mitigations, was unlikely to have a significant effect on land users with a high degree of certainty, Baffinland is committed to ongoing engagement with land users and environmental monitoring for the life of the Project. This is also required under Project Certificate 005 and as a matter of best practice.

Baffinland will integrate the outcomes of community level input into its monitoring programs and mitigative measures, to ensure that these programs and measures have been informed by traditional activities, cultural resources, and land use. As a result, environmental management plans will be updated as required and submitted in the Annual Report to the Nunavut Impact Review Board.

***C. Additional Monitoring and Mitigations and Management Plans Required under the Project Certificate and/or Other Approvals Relevant to Land Use***

In accordance with Section 5.7.16 of the Nunavut Land Claims Agreement, Baffinland will allow Inuit engaged in traditional activities to have access to all of the Project Area and to all lands, waters and marine areas used for the Project, except where project activity is undertaken.

The Mary River IIBA between Baffinland and the QIA fulfils the requirements of the Nunavut Agreement set out in Article 26 and applies to the entire Mary River Project, including the Steensby Component. The IIBA identifies mitigation measures to address issues raised by Inuit about the Project and establishes significant financial compensation and benefits to Inuit.

Article 13 identifies mitigation measures for Inuit travel and access, in which Baffinland must:

- Provide fuel at the Project facilities for detouring around Project infrastructure and also the associated shipping route at Steensby Inlet in landfast ice;
- Provide food and shelter at Project facilities;
- Support Inuit in identifying, communicating and using safe routes in or around the Project infrastructure and marine shipping routes;
- Implement any other proposed Inuit travel mitigation measures, including those forwarded from the Annual Project Review Forum and agreed to by the Parties.

In addition, Baffinland continues to refine its environmental management plans planned for the Steensby Component of the Project based on the operations that have occurred since the original approval of the Mary River Project, and based on additional focused community and regulator engagements. There will be continuous dialogue with communities and Knowledge Holders to understand land users' interactions with rail line and Steensby Port.

Management Plans for Steensby Construction and Operation relevant to land users:

- Construction Environmental Management Plan
- Environmental Protection Plan
- Railway Maintenance Management Plan

The Adaptive Management Plan will also apply to this topic. Inputs from community engagement are integrated into this process, allowing the Project to be adjusted over time based on feedback from Inuit and other stakeholders. Through the Adaptive Management Plan and specific measures outlined in the Project Certificate, Baffinland can implement one or more actions identified or a new mitigation not previously identified.

All environmental management plans will be subject to ongoing review and updates for the life of the Project. Baffinland will report on the efficacy of its environmental management plans on a regular basis through its regulatory reporting obligations, as well as through its community engagement program.

***D. Summary of Regulatory Application components which address this topic***

**Summary of Navigation Protection Program Application components which address this topic**

The *Canadian Navigable Waters Act* (CNWA) regulates infrastructure projects that may interfere with navigation. Before construction, Transport Canada must assess whether the infrastructure will impede safe passage of a navigable waterbody and determine if modifications or mitigation measures are required. Baffinland has applied for approval under the Navigation Protection Program for bridges which cross navigable waters along the Steensby Railway, as well as infrastructure at Steensby Port.

Eight bridges along the Steensby Railway were identified to cross navigable waters based on travel routes from land use studies and an assessment of the water bodies' physical characteristics. For Steensby Port, applications were submitted for the construction of the island causeway, construction dock, ore dock, anchor moorings, and floating fuel line. These applications are currently under review by Transport Canada and were presented by TC during the Tour.

**Summary of FAA Application components which address this topic**

The FAA applications incorporated results from community engagement and IQ studies on land use (i.e. fishing areas) into assessing impacts and identification of proposed offsetting methods.

The complementary measures proposed in Baffinland's FAAs (Marine FAA Vol. 2 Section 3.9, Freshwater FAA Section 8.3) aim to benefit communities by conducting research on fisheries significant to Inuit, with opportunities for their participation. Additionally, communities have expressed interest in beach clean-ups at various sites near the Steensby Port site and Sanirajak to address fuel drums, camp remnants, and other waste materials, ultimately benefitting communities and land users (Marine FAA Appendix A-1, Freshwater FAA Appendix B1).

**Summary of CTA Section 98 Application components which address this topic**

As detailed in Paragraph 52 of the S.98 Application, the design of the Steensby Railway includes an estimated nine snowmobile/all-terrain vehicle (ATV) crossings which will permit hunters and other local land users to safely cross the railway at locations determined in consultation with

Inuit. The crossings are proposed at locations specifically identified by Inuit where seasonal travel routes can overlap the Steensby Railway alignment. The crossings will use the same size fill material as that required for caribou, and even gentler slopes to approach the rail line, with wooden timbers between the tracks and signage to enhance visibility.

The Application also explains this topic and how it was addressed in the Stakeholder Engagement Report (see SD-69) in Section 7.3. As detailed in the Stakeholder Engagement Report, IQ identified the importance of maintaining the ability for travel across the railway, and was used to identify ideal locations to establish land user crossings. As outlined in paragraph 102 (b) of the Section 98 Application, Baffinland has incorporated snowmobile/ATV and caribou crossings into the design of the railway, the locations for which have been determined in consultation with Inuit. There will be continuous dialogue with communities and Knowledge Holders to understand how land users interact with the railway throughout the life of the Project.

In response to certain concerns raised by the communities, Baffinland has also developed an “Additional Level Crossing Construction Decision Matrix” to be followed in the event that a new level crossing location is desired or identified by hunters and land users after the Steensby Railway is in operation.<sup>140</sup> This decision matrix was initially developed through a land user workshop in 2019 and will be updated and maintained through the life of the Mary River Project, in collaboration with Inuit and the communities.

In November 2023, Baffinland advanced verification and site-specific selections for land use and caribou crossings along the Steensby Railway through in community engagements, which included invitation to QIA representatives. Baffinland plans to continue to engage land users and knowledge holders throughout the remainder of the planning and construction period to ensure adequate installation of caribou crossings. This can also continue through operations as new information is provided. The rail embankment can be modified with equipment that will be at site for maintaining the railway line, so that if any areas require the installation of new caribou crossings, Baffinland is equipped and prepared to do that.

Specific details on the land user detour around the Southern Shipping Route are not included in the Section 98 application, as this aspect is marine based and not part of the Steensby Railway. However, this Tour follow up document is being given to CTA as part of the Section 98 application, for context should CTA decision makers have interest in this topic. Baffinland included this issue in the summary of interest of localities table submitted as part of the Section 98 Application (see SD-69, Stakeholder Engagement Report).

### ***E. Conclusion***

Baffinland acknowledges the statements made by Tour participants on the topic of land use, and appreciates the opportunity for all dialogue on topics of interest. This feedback has been considered in relation to the 2012 FEIS, the outcomes of the NIRB review, the Project Certificate requirements (including terms and conditions, commitments, monitoring programs and

management plan updates), ongoing adjustments that have occurred through monitoring, mitigation, community feedback and adaptive management since the Project began, and the measures reflected in the current pending Federal applications.

Detailed responses to the specific comments on land use raised during the Tour are as follows:

- With respect to the loss of ice limiting winter travel routes for land users, Baffinland has identified a detour route to avoid the ship track. Safe detour routes around the ship's track in the area of the Port and along part of the landfast ice will be delineated with markers for safety. To compensate for the extra distance land users will need to travel, food and fuel will be available along the detour route at the Steensby Port site.
- With respect to water crossings impacting travel along the rail line, Baffinland will require approval from Transport Canada under the Navigation Protection Program to construct bridges across navigable waterways. Applications for 8 bridges along the rail are currently under review by Transport Canada.
- With respect to comments regarding ability of Inuit hunters to cross the Railway, the design of the Steensby Railway includes an estimated nine snowmobile/all-terrain vehicle (ATV) crossings which will permit hunters and other local land users to safely cross the railway at locations determined in consultation with Inuit. The crossings are proposed at locations specifically identified by Inuit where seasonal travel routes can overlap the Steensby Railway alignment. The crossings will use the same size fill material as that required for caribou, and even gentler slopes to approach the rail line, with wooden timbers between the tracks.

Baffinland also recognizes that there are established community grievance feedback processes in place, and ongoing community consultation mechanisms led by Baffinland as well as NIRB and Inuit, which will continue to allow us to work closely with Inuit on addressing issues throughout the life of the Project.

As summarized above, taking into account all of these mechanisms, Baffinland remains confident that there are robust measures in place to ensure that Steensby Component activities proceed in a manner that is protective of land use as well as Inuit cultural and rights-based activities.

## **4.2 Mine Closure**

### ***A. Summary of Feedback Shared During Tour***

A summary of the verbal feedback heard by Baffinland in relation to this topic during the tour is provided below. It should be noted that the comments were generally made in Inuktitut by participants and translated into English by local interpreters.

In Kimmirut there were two comments about mine closure:

*“What does South Baffin look like in 100 years? Have you researched this? Will we still have a home?...What happens at end of mine life?”*

*“My last question is how many years if it is approved for the Project to go ahead, how many years will we have the mine?”*

In Clyde River there was one comment about mine closure:

*“When the mine reaches the end of its life, is clean up included in the Certificate of Fitness?”*

### ***B. NIRB Review Conclusions and Mitigations related to Mine Closure***

#### **Summary of NIRB Review Process Residual Effects Assessment and Prediction Confidence**

As set out in the 2012 FEIS, Baffinland conducted an extensive assessment of the environment, which relied on multiple lines of evidence, including available literature, IQ shared with Baffinland by Inuit, direct field research, desktop studies (e.g. models, risk assessments), land use studies (e.g. Mary River Land use Study) and expert opinion. The assessment, considering this information, led to the following commitments with respect to Project closure:

*“Throughout all phases of the Project, Baffinland will plan and conduct operations in a manner designed to return Project sites to a safe and environmentally stable condition. Baffinland will undertake progressive reclamation throughout the mine life. Temporary facilities will be decommissioned and removed as their use ceases. Borrow areas, quarries, temporary roads and other disturbed sites will be stabilized to limit erosion of ground surfaces and rehabilitated once they are no longer required. Environmental and safety monitoring will continue as long as necessary to ensure that closure objectives have been met.” (FEIS, Volume 2, Section 2.6)*

In the Final Hearing Report for the Mary River Project, the Nunavut Impact Review Board considered impacts of closure and reclamation per VEC (i.e. Section 5.3 Livelihood and

Employment) by providing a summary of the views of the Proponent, the views and concerns of Interested Parties and the views of the Board to draw specific conclusions and recommendations, which materialized in a draft Project Certificate 005, which was approved by the Ministers and issued in final on December 28, 2012.

**Summary of relevant requirements from the NIRB Review Process and recognized under Project Certificate No. 005 and other existing approvals/agreements**

The 2012 FEIS proposed a number of mitigations related to Project closure through the Preliminary Mine Closure and Reclamation Plan at Appendix 10G. The following key mitigation and monitoring measures were included:

- Project related facilities were designed and constructed to minimize the footprint and to be temporary in nature.
- During the Operations Phase of the Project, Baffinland will strive to develop partnerships with communities and appropriate businesses, government, and non-government organizations (NGOs) that foster sustainable development initiatives in the nearby communities through its Inuit Impact and Benefit Agreement (IIBA) commitments so that the adverse impacts of Project may be offset.
- Post closure monitoring will continue until closure objectives have been met or shown by monitoring results. This is estimated to last five years.
- Monitoring and follow-up inspections will be conducted to assess the physical and chemical stability of various components after closure and reclamation of the facilities.
- Biological monitoring and follow-up inspections will assess the effectiveness of the reclamation.
- No facilities are expected to be left as a result of the Project that will require monitoring or management in perpetuity.

In addition to the mitigations listed above, which form a part of the evidentiary record on which the Nunavut Impact Review Board and the Ministers based their approval of the Mary River Project, Project Certificate 005 also provides specific direction on closure and reclamation (see Attachment 1 enclosed):

- Term and Condition No. 149: Prior to the commencement of operations, the Proponent is required to undertake an analysis of the risk of temporary mine closure, giving consideration to how communities in the North Baffin region may be affected by temporary and permanent closure of the mine, including economic, social and cultural effects.
- Appendix A, Commitment 38: Baffinland is committed to investigating and exploring the potential for native species of flora to be used for re-vegetating areas disturbed within the project area.
- Appendix A, Commitment 40: Baffinland is committed to undertaking environmental effects monitoring during the mine life mine as well as after closure.

Baffinland's Type 'A' Water Licence also includes specific conditions pertaining to closure, including:

- Part C of the Water Licence describes the conditions applying to closure security, including the requirement for Baffinland to provide and maintain adequate closure and reclamation security with the Minister.
- Schedule C of the Water Licence includes a description of the Annual Security Review process.

Continually, the QIA-Baffinland Commercial Lease requires Baffinland to provide and maintain adequate closure and reclamation security with QIA for disturbances on Inuit Owned Lands.

### **Follow Up Monitoring and Supplemental Baseline**

Baffinland is committed to ongoing environmental effects monitoring for the life of the Project, including closure. This is required under Project Certificate 005 and as a matter of best practice.

Baffinland will develop and implement comprehensive environmental monitoring programs for the Steensby Component during all its phases, including pre-construction, construction, operation and closure. It should be noted that most of the Terms and Conditions within the Project Certificate are required during all Project phases, including closure. Several examples of where Project Certificate 005 requires this are included here for reference (see Attachment 1 enclosed for more details):

- Term and Condition 2. Baffinland shall provide the results of any new or revised assessments and studies done to validate and update climate change impact predictions for the Project and the effects of the Project on climate change in the Local Study Area and Regional Study Area as defined in the Proponent's Final Environmental Impact Statement. Project phases where this is required includes Construction, Operations, Temporary Closure/Care and Maintenance, Closure and Post-Closure Monitoring.
- Term and Condition 17. Baffinland shall develop and implement effective measures to ensure that effluent from project-related facilities and/or activities, including sewage treatment plants, ore stockpiles, and mine pit, satisfies all discharge criteria requirement established by the relevant regulatory agencies prior to being discharged into the receiving environment. Project phases where this is required includes Construction, Operations, Temporary Closure/Care and Maintenance, Closure and Post-Closure Monitoring.
- Term and Condition 40. The Proponent shall include revegetation strategies in its Site Reclamation Plan that support progressive reclamation and that promote natural revegetation and recovery of disturbed areas compatible with the surrounding natural environment.
- Term and Condition 50. Baffinland shall continue to develop and implement Project-specific monitoring for the terrestrial environment, and will demonstrate

appropriate refinements to design, incorporation of analytical methods and elaboration of methodologies. The monitoring plan shall contain clear thresholds to allow for the assessment of long-term trends and cumulative effects where project interactions are identified. Project phases where this is required includes Construction, Operations, Temporary Closure/Care and Maintenance, Closure and Post-Closure Monitoring.

- Term and Condition 76. The Proponent shall develop a comprehensive Marine Environmental Effects Monitoring Program to address concerns and identify potential impacts of the Project on the marine environment. Project phases where this is required includes Construction, Operations, Temporary Closure/Care and Maintenance, Closure and Post-Closure Monitoring.

Since 2021 Baffinland has been conducting fieldwork in support of various environmental authorizations required to develop specific elements of the Steensby Component of the Project. Baffinland will integrate the outcomes of supplemental fieldwork into applicable environmental management plans as required, and submit them in its Annual Report to the Nunavut Impact Review Board.

***C. Additional Monitoring and Mitigations and Management Plans Required under the Project Certificate and/or Other Approvals Relevant to Mine Closure***

Baffinland continues to refine its environmental management plans planned for the Steensby Component of the Project based on the operations that have occurred since the original approval of the Mary River Project, and based on additional focused community and regulator engagements.

With respect to mine closure planning, in January 2022, Baffinland submitted the updated report 'Temporary Closure Planning: Socio-Economic Considerations for the Mary River Project' to the Nunavut Impact Review Board, which considers risks for temporary mine closure and how communities in the North Baffin region may be affected by it, including economic, social and cultural effects. In 2019, Baffinland retained Environmental Dynamics Inc. (EDI) to complete a desktop review of available practices and recent advances from Arctic mine reclamation in Canada's northern territories and Alaska, USA. Following this, a field program to assess current conditions and establish test plots was implemented in 2019. The first field component (summer 2019) focused on surveying natural/unassisted revegetation at the Project and establishing a preliminary trial design. The second field component (summer 2021) expanded the number of survey locations and reclamation trial sites. Periodic follow-up monitoring occurred in summer 2020-2023.

The Adaptive Management Plan will also apply to this topic. The Preliminary Mine Closure and Reclamation Plan will follow the system for adaptive management outlined in the Adaptive Management Plan. This requires the prior establishment of monitoring objectives, indicators,

thresholds and responses based on low, moderate and high levels of risk. This system is designed to detect changes in the environment early enough to investigate before they present a more serious risk to the environment. Should it be determined that the change is reasonably Project related, Baffinland can implement one or more actions already identified in the Preliminary Mine Closure and Reclamation Plan, or a new mitigation not previously considered.

All environmental management plans will be subject to ongoing review and updates for the life of the Project. With respect to environmental management plans, Baffinland will be supported by the advice of the Environmental Working Groups, which includes HTO representatives from all impacted communities, and direct community engagement. Baffinland will report on the efficacy of its environmental management plans on a regular basis through its regulatory reporting obligations, as well as through its community engagement program.

#### ***D. Summary of Regulatory Application components which address this topic***

##### **Summary of FAA Application components which address this topic**

Specific details on closure are not included in the FAA applications, however, this Tour follow up document is being given to DFO for context should DFO decision makers have interest in this topic.

##### **Summary of CTA Section 98 Application components which address this topic**

As described in the Application to Construct a Railway, the long-term success of the project requires a railway to service the mine and lower fixed transportation costs. The railway will increase operating efficiencies and reduce operating costs for the Mary River Project, which is key for the long-term viability of the mine and, in turn, will address the desire expressed by localities for increased employment, financial payments, and other economic opportunities under the Mary River IIBA that are available as a result of the Mary River Project.

The Interim Closure and Reclamation Plan (ICRP) has been included in the application and includes all aspects of the Approved Project. Baffinland continues to work with the QIA and other stakeholders to update the ICRP as the Project progresses.

Long-term closure planning for the Mary River Project will continue to be communicated through the regulatory application process under NIRB. Any required risk assessments or perspectives will be considered and reported at that time.

#### ***E. Conclusion***

Baffinland acknowledges the statements made by Tour participants on the topic of mine closure during the Tour, and appreciates the opportunity for all dialogue on topics of interest. This feedback has been considered in relation to the 2012 FEIS, the outcomes of the NIRB

review, the Project Certificate requirements (including terms and conditions, commitments, monitoring programs and management plan updates), ongoing adjustments that have occurred through monitoring, mitigation, community feedback and adaptive management since the Project began, and the measures reflected in the current pending Federal applications.

Detailed responses to the specific comments on mine closure raised during the Tour are as follows:

- With respect to studying socio-economic conditions after mine closure, in January 2022, Baffinland submitted the updated report 'Temporary Closure Planning: Socio-Economic Considerations for the Mary River Project' to the Nunavut Impact Review Board, which considers risks for temporary mine closure and how communities in the North Baffin region may be affected by it, including economic, social and cultural effects. Baffinland will also conduct an in-community socio-economic supplemental baseline study ahead of Steensby construction.
- With respect to clean up of the Project after closure, Baffinland will return Project sites to a safe and environmentally stable condition. The ICRP has been updated during the operation of the Project and includes all aspects of the Approved Project, including the reclamation of the temporary infrastructure. Baffinland continues to work with the QIA to update the ICRP as the Project progresses.

Baffinland also recognizes that there are established community grievance feedback processes in place, and ongoing community consultation mechanisms led by Baffinland as well as NIRB and Inuit, which will continue to allow us to work closely with Inuit on addressing issues throughout the life of the Project.

As summarized above, taking into account all of these mechanisms, Baffinland remains confident that there are robust measures in place to ensure that Steensby Component activities proceed in a manner that is protective of the environment upon closure of the mine as well as Inuit cultural and rights-based activities relating to those species.

## **5. Employment and Benefits**

### **5.1 Inuit Employment**

#### ***A. Summary of Feedback Shared During Tour***

A summary of the verbal feedback heard by Baffinland in relation to this topic during the tour is provided below. It should be noted that the comments were generally made in Inuktitut by participants and translated into English by local interpreters.

In Kimmirut there were two comments about Inuit employment:

*“What type of unique opportunities will children have to be employed at Baffinland. Will they be able to work on the ships? Another one is train engineer training, will there be opportunities for this? Will there be opportunities to work at Baffinland but stay here in Kimmirut, either on land or at sea? And train engineers?”*

*“If there is no marine mammal impact, there is no objection and great opportunity for work. My grandchildren work there and are quite pleased to go work up there. I am in support of Steensby Railway and the Port.”*

In Igloolik there were two comments about Inuit employment:

*“What is being put in place is for the future generation so they have jobs. This is not for me personally, the measures put in place, if being followed, there are people that will try to stop it but it has to keep going. There will be jobs available for the people.”*

*“When the Mary River Project was being processed, they did approve the railway and their reasons were employment for young, and they are helping us with their salaries. It is true that there are training programs which help young people enter the workforce. There are benefits provided by Baffinland, so we must commend them and not just show the negative.”*

In Clyde River there was one comment about Inuit employment:

*“Baffinland is a big employer in Nunavut and brings employment benefits all throughout Nunavut and want to ensure our concerns are heard and implemented.”*

#### ***B. NIRB Review Conclusions and Mitigations related to Inuit Employment***

#### **Summary of NIRB Review Process Residual Effects Assessment and Prediction Confidence**

In the 2012 FEIS, Baffinland conducted an extensive assessment of the socio-economic environment, including livelihood and employment, which relied on multiple lines of evidence, including available literature, interviews with residents of the LSA workers and family members, discussions with community representatives, topic-specific workshops in communities, as well as meetings and interviews with government officials. The assessment of wage employment as it relates to creation of jobs in the LSA and employment of LSA residents drew the following conclusions with respect to the Projects potential effects on wage employment:

“Job creation is a positive effect that will be experienced by way of the six point-of-hire communities. The effect may be experienced across the community as an opportunity for residents across the demographic spectrum. The availability of jobs may have beneficial effects even for those not employed; for example, it may encourage students to see the value of education or consider the livelihood paths they wish to pursue. Based on the high magnitude and continuous frequency of labour demand, the positive effect of Project job creation on wage employment is assessed to be significant. This assessment is in line with community perceptions about the Project.” (FEIS, Volume 4, Section 4.4.3)

In the Final Hearing Report for the Mary River Project, the Nunavut Impact Review Board considered livelihood and employment in Section 5.3 by providing a summary of the views of the Proponent, the views and concerns of Interested Parties and the views of the Board to draw specific conclusions and recommendations, which materialized in a draft Project Certificate 005, which was approved by the Ministers and issued in final on December 28, 2012.

**Summary of relevant requirements from the NIRB Review Process and recognized under Project Certificate No. 005 and other existing approvals/agreements**

Several examples of where Project Certificate 005 provides specific direction on Inuit employment are included here for reference (see Attachment 1 enclosed):

- Term and Condition 135. Baffinland is encouraged to consider offering additional options for work/study programs available to Project employees (in addition to study programs at project sites that would be offered to employees when off shift).
- Term and Condition 136. Baffinland is encouraged to work with training organizations and/or government departments offering mine-related or other training in order to provide additional opportunities for employees to gain meaningful and transferable skills, credentials and certifications especially where such training of employees offered by the Proponent remains valid only at the Mary River Project sites.
- Term and Condition 141. Baffinland is encouraged to work with the Qikiqtani Inuit Association prior to construction in order to prioritize the provision of training of Inuit to serve as employees in monitoring or other such capacities.

- Appendix A Commitment 89. Baffinland is committed to hiring practices that are consistent with the terms and conditions in the memorandum of understanding for the IIBA.
- Appendix A Commitment 90. Baffinland is committed to hiring Inuit at all levels in the company for the Mary River Project and intends to put a targeted recruitment program in place to ensure that Inuit, especially Inuit of the North Baffin Region, are hired.
- Appendix A Commitment 91. Baffinland is committed to the preferential hiring of employees from the defined points of hire, which include the communities of Pond Inlet, Igloolik, Hall Beach, Arctic Bay and Iqaluit. Baffinland may consider other points of hire if it deems that there are sufficient numbers individuals available in those communities who want to work at the project.
- Appendix A Commitment 92. Baffinland is committed to implementing a targeted training plan to build capacity among Inuit to fulfill positions within the organization; some of the capacity building initiatives include refresher training, work ready training and education support programs.
- Appendix A Commitment 93. Baffinland is committed to providing a cross-cultural training to both Inuit and non-Inuit employees and to institute anti discriminatory policies and mechanisms to minimize any potential cultural conflicts in the workplace.
- Appendix A Commitment 94. Baffinland is committed to providing training linked to specific job positions and to endeavor to implement job creation partnerships with interested organizations.
- Appendix A Commitment 95. Baffinland is committed to distributing information related to available employment at the Mary River Project through its website, community newspapers and other methods of advertising.
- Appendix A Commitment 105. Baffinland is committed to ensuring employees who are unilingual Inuktitut speakers will not face barriers to employment at the Mary River Project by hiring Inuktitut translators. Baffinland is also committed to providing work training programs and other relevant employment information in both Inuktitut and English.

The Mary River IIBA between Baffinland and the QIA fulfils the requirements of the Nunavut Agreement set out in Article 26 and applies to the entire Mary River Project, including the Steensby Component. The IIBA identifies mitigation measures to address issues raised by Inuit about the Project and establishes significant financial compensation and benefits to Inuit. Schedule 2.2 and 2.3 of the IIBA state that Inuit must have the opportunity for equitable and meaningful participation in the Project, and the QIA and Baffinland have agreed to maximizing Inuit Participation over time through training, contracting and employment objectives.

#### **Follow Up Monitoring and Supplemental Baseline**

While the FEIS 2012 assessment of Project job creation on wage employment is positive, Baffinland is committed to ongoing socio-economic monitoring for the life of the Project. This is also required under Project Certificate 005 and as a matter of best practice. Baffinland will develop and implement a comprehensive socio-economic environmental monitoring program for the Steensby Component during all its phases, including pre-construction, construction, operation and closure.

Since 2021 Baffinland has been conducting fieldwork in support of various environmental authorizations required to develop specific elements of the Steensby Component of the Project. An in-community supplemental baseline socio-economic monitoring program is planned prior to the start of construction.

***C. Additional Monitoring and Mitigations and Management Plans Required under the Project Certificate and/or Other Approvals Relevant to Inuit Employment***

Baffinland continues to refine its environmental management plans planned for the Steensby Component of the Project based on the operations that have occurred since the original approval of the Mary River Project, and based on additional focused community and regulator engagements.

Baffinland developed a draft Socio-Economic Monitoring Plan (SD-27.75) which will be finalized and applied during the Steensby Component. The Socio-Economic Monitoring Plan will include measures such as:

- Outlining socio-economic monitoring indicators
- Steps for data collection, analysis and reporting
- Adaptive management to improve socio-economic performance of the Project.

Other management plans to be developed and/or are applicable to the Steensby Component activities include:

- Inuit Training Plan
- Community and Stakeholder Engagement Plan

The Adaptive Management Plan will also apply to this topic. The Socio-Economic Monitoring Plan will follow the system for adaptive management outlined in the Adaptive Management Plan. This requires the prior establishment of monitoring objectives, indicators, thresholds and responses based on low, moderate and high levels of risk. This system is designed to detect changes in the environment early enough to investigate before they present a more serious risk to the environment. Should it be determined that the change is reasonably Project related, Baffinland can implement one or more actions already identified in the Socio-Economic Monitoring Plan, or a new mitigation not previously considered.

All environmental management plans will be subject to ongoing review and updates for the life of the Project. With respect to socio-economic management plans, Baffinland will be supported by the advice of the Mary River Socio-Environment Monitoring Working Group, and direct community engagement. Baffinland will report on the efficacy of its environmental management plans on a regular basis through its regulatory reporting obligations, as well as through its community engagement program.

***D. Summary of Regulatory Application components which address this topic***

**Summary of FAA Application components which address this topic**

The implementation of complementary measures for the marine and freshwater FAAs offsetting will provide opportunity for Inuit employment through involvement in stream enhancement, beach clean-ups and community-based research projects (Marine FAA Vol. 2 Section 3.9, Freshwater FAA Section 8.3).

**Summary of CTA Section 98 Application components which address this topic**

The Section 98 Application includes an overview of employment on the Mary River Project. In response to comments from the localities about the need for employment and other economic benefits and opportunities, Baffinland communicated to localities that the construction of the Steensby Components of the Mary River Project will create an overall increase in employment opportunities with the Mary River Project and will also increase the benefits to Qikiqtani Inuit under the Mary River IIBA. The construction of the Steensby Components will bring better financial stability to the Mary River Project and, in turn, stabilize employment and contracting opportunities. Baffinland has also committed that no Inuit will lose their jobs as a result of the transition from trucking to railway and, as described in the Background to the Application Brief at **Part 1, Section III.1D** [*Summary of Regulatory History of the Mary River Project*] (starting at page 40), the Steensby Component will also support the timely sharing of benefits with Qikiqtani Inuit under the Mary River IIBA.

Furthermore, Baffinland shared some of the key data related to Inuit benefits and employment. To date, through the Mary River IIBA and other community partnerships, Baffinland has cumulatively paid more than \$164 million in financial benefits to Qikiqtani Inuit, provided over \$150 million in wages to Inuit employees and contractors, reached over \$1.79 billion in contracts awarded to Inuit firms, provided over \$3.8 million through its Sponsorship and Donation Program, seen over 650 graduates of pre-employment training programs, and delivered over 229,000 hours of training to Inuit employees, amongst other socio-economic benefits.

Baffinland estimates that the total value of financial benefits which will flow to Inuit and Nunavut over the life of the Mary River Project (including the Steensby Railway) will exceed \$5

billion CAD in direct payments to the Governments of Nunavut and Canada, and to Inuit Organizations, including QIA and Nunavut Tunngavik Inc. (NTI), as well as more than \$1 billion CAD paid directly to Inuit through employment at the Mary River Project.

### ***E. Conclusion***

Baffinland acknowledges the statements made by Tour participants on the topic of Inuit employment, and appreciates the opportunity for all dialogue on topics of interest. This feedback has been considered in relation to the 2012 FEIS, the outcomes of the NIRB review, the Project Certificate requirements (including terms and conditions, commitments, monitoring programs and required management plan updates), ongoing adjustments that have occurred through monitoring, mitigation, community feedback and adaptive management since the Project began, and the measures reflected in the current pending Federal applications.

A detailed response to the specific comments on Inuit employment raised during the Tour is as follows:

- With respect to the specific topic of employment opportunities for Inuit, Baffinland is the largest private employer in the Qikiqtani region. To date, through the Mary River IIBA and other community partnerships, Baffinland has cumulatively provided over \$150 million in wages to Inuit employees and contractors, reached over \$1.79 billion in contracts awarded to Inuit firms, amongst other socio-economic benefits. Baffinland will continue to prioritise Inuit employment and business opportunities, in compliance with Project Certificate Terms and Conditions, commitments and IIBA provisions.

Baffinland also recognizes that there are established community grievance feedback processes in place, and ongoing community consultation mechanisms led by Baffinland as well as NIRB and Inuit, which will continue to allow us to work closely with Inuit on addressing issues throughout the life of the Project.

As summarized above, taking into account all of these mechanisms, Baffinland remains confident that there are robust measures in place to ensure that Steensby Component activities proceed in a manner that will ensure that Inuit continue to have opportunities to be employed on the Project.

## **5.2 Benefits for Communities**

### ***A. Summary of Feedback Shared During Tour***

A summary of the verbal feedback heard by Baffinland in relation to this topic during the Tour is provided below. The comments were generally made in Inuktitut by participants and translated into English by local interpreters.

Baffinland recorded three comments in Igloolik on community benefits:

*“When was the last IIBA negotiations for the people of Sanirajak and Igloolik? I know for a fact that it was agreed it would occur every 3 years, for the past 14 years, haven’t heard about negotiations on the IIBA.”*

*“We don’t have infrastructure and no plans for us to get infrastructure, somewhere to go.”*

*“We want to ask a question to Baffinland. Through the IIBA, would you be willing to help us with our dreams? Igloolik is the biggest community and lack of infrastructure. We need more infrastructure, we need help. Would you be willing to help with a multi-purpose complex for the youth? We also need a small craft harbour from DFO.”*

### ***B. NIRB Review Conclusions and Mitigations related to Benefits for Communities***

#### **Summary of NIRB Review Process Residual Effects Assessment and Prediction Confidence**

As discussed in Section 12B of Part A, Baffinland conducted an extensive assessment of the socio-economic environment for the 2012 FEIS. The Project will have a significant beneficial effect on the Benefits, Royalties, and Taxation VSEC through IIBA contributions, royalties, rents, and taxes, with no adverse residual effects expected.

#### **Summary of relevant requirements from the NIRB Review Process and recognized under Project Certificate No. 005 and other existing approvals/agreements**

The Mary River IIBA between Baffinland and the QIA fulfils the requirements of the Nunavut Agreement set out in Article 26 and applies to the entire Mary River Project, including the Steensby Component. The IIBA identifies mitigation measures to address issues raised by Inuit about the Project and establishes significant financial compensation and benefits to Inuit (S. 98 Application, Supporting Document 72). Baffinland and the QIA are evaluating the scope of updating the 2018 Mary River IIBA to reflect the current development of the Steensby Component of the Project. Before updating the IIBA in relation to the Steensby Component of

the Project, Baffinland and QIA will need to conclude the process to update the current Mary River IIBA to reflect important commitments agreed to in relation to the Inuit Certainty Agreement, Production Increase Proposal Renewal and the Sustaining Operations Proposal.

In addition to the IIBA, whose future implementation formed a part of the evidentiary record on which the Nunavut Impact Review Board and the Ministers based their approval of the Mary River Project, Project Certificate 005 also provides specific direction on community benefits in TCs 151, 156 and 160. Appendix B Commitments detail how Baffinland will engage with Igloolik to develop community infrastructure commitments, such as road paving and women and youth centres (Commitment 008), as well as fund the Pond Inlet Training Centre (Commitments 014 - 015) (see Attachment 1 for further details).

### **Follow Up Monitoring and Supplemental Baseline**

While no adverse residual effects with regard to benefits, royalties and taxation were demonstrated in the FEIS, Baffinland is committed to ongoing socio-economic monitoring for the life of the Project. This is required under Project Certificate 005 and as a matter of best practice.

Baffinland will develop and implement a comprehensive socio-economic environment monitoring programs for the Steensby Component during all its phases, including pre-construction, construction, operation and closure. Several examples of where Project Certificate 005 requires this are included in Attachment 1 for reference.

Since 2021 Baffinland has been conducting fieldwork in support of various environmental authorizations required to develop specific elements of the Steensby Component of the Project. An in-community supplemental baseline socio-economic monitoring program is planned for 2026.

Baffinland will integrate the outcomes of all supplemental fieldwork into applicable environmental management plans as required, and submit them in its Annual Reports submitted to the Nunavut Impact Review Board.

### ***C. Additional Monitoring and Mitigations and Management Plans Required under the Project Certificate and/or Other Approvals Relevant to Community Benefits***

As outlined in Section 12C of Part A, Baffinland continues to refine its environmental management plans planned for the Steensby Component of the Project based on the operations that have occurred since the original approval of the Mary River Project, and based on additional focused community and regulator engagements.

With respect to community benefits, Baffinland implements a Socio-Economic Monitoring Plan which will be applied during the Steensby Component. In addition to the Socio-Economic Monitoring Plan, other management plans to be developed and applicable to the human environment of the Steensby Component activities includes:

- Inuit Training Plan
- Community and Stakeholder Engagement Plan

The Adaptive Management Plan will also apply to this topic. The Socio-Economic Monitoring Plan will follow the system for adaptive management outlined in the Adaptive Management Plan. This requires the prior establishment of monitoring objectives, indicators, thresholds and responses based on low, moderate and high levels of risk. This system is designed to detect changes in the environment early enough to investigate before they present a more serious risk. Should it be determined that the changes are reasonably Project related, Baffinland can implement one or more actions already identified in the Socio Economic Monitoring Plan, or a new mitigation not previously considered.

All environmental management plans will be subject to ongoing review and updates for the life of the Project. With respect to the Socio-Economic Monitoring Plan, Baffinland will be supported by the advice of the Socio-Economic Monitoring Working Group and direct community engagement. Baffinland will report on the efficacy of its environmental management plans on a regular basis through its regulatory reporting obligations, as well as through its community engagement program.

#### ***D. Summary of Regulatory Application components which address this topic***

##### **Summary of FAA Application components which address this topic**

The complementary measures proposed in Baffinland's FAAs (Marine FAA Vol. 2 Section 3.9, Freshwater FAA Section 8.3) aim to benefit communities by conducting research on fisheries significant to Inuit, with opportunities for their participation. Additionally, communities have expressed interest in beach clean-ups at various sites near the Steensby Port site and Sanirajak to address fuel drums, camp remnants, and other waste materials, ultimately benefitting communities and land users (Marine FAA Appendix A-1, Freshwater FAA Appendix B1).

##### **Summary of CTA Section 98 Application components which address this topic**

The detailed information on benefits discussed below was included in the Section 98 Application (Section III.1G, Line 54) as this was identified as an interest of localities during engagement (S.98 Supporting Document 69).

Baffinland is the largest private employer in the Qikiqtani region and is one of the largest private employers in Nunavut. Baffinland has committed to maximizing Inuit employment in its operations and to delivering other long-term socio-economic benefits to the community, including through the IIBA. Over \$150 million in wages have been paid to Inuit employees and contractors since operations began.

As of August 2024, over \$164 million has been paid to Qikiqtani Inuit under the IIBA, along with \$1.79 billion in contracts awarded to Inuit firms. Additionally, Baffinland has contributed \$3.8 million through its Sponsorship and Donation Program, supported over 650 pre-employment training program graduates, and delivered more than 229,000 hours of training to Inuit employees.

In 2023 alone, Baffinland and its partners contributed over \$1.5 million toward social, recreational, educational and cultural initiatives in communities such as Arctic Bay, Clyde River, Igloolik, Pond Inlet, Sanirajak, and Iqaluit. This included payments of \$270,000 to the Tasiuqtiit Working Group for community wellness initiatives and \$500,000 in sponsorships and community donations. Baffinland also supports school-based programs like the School Lunch Program and laptop donations.

Baffinland estimates that the total value of financial benefits which will flow to Inuit and Nunavut over the life of the Project (including the Steensby Railway) will exceed \$5 billion CAD in direct payments to the Governments of Nunavut and Canada, and to Inuit Organizations, including QIA and Nunavut Tunngavik Inc., as well as more than \$1 billion CAD paid directly to Inuit through employment at the Project.

These estimates do not reflect other monetary and non-monetary benefits which will flow to Qikiqtani Inuit, other Nunavummiut, and Canadians generally as a result of the Mary River Project, such as the opportunities and training that generations of Qikiqtani Inuit and other Nunavummiut will experience as a result of the Mary River Project. The Steensby Component will bring better financial stability to the Mary River Project and, in turn, stabilize employment and contracting opportunities.

### ***E. Conclusion***

Baffinland acknowledges the statements made by Tour participants on the topic of benefits to Inuit, and appreciates the opportunity for all dialogue on topics of interest. This feedback has been considered in relation to the 2012 FEIS, the outcomes of the NIRB review, the Project Certificate requirements (including terms and conditions, commitments, monitoring programs and management plan updates), ongoing adjustments that have occurred through monitoring, mitigation, community feedback and adaptive management since the Project began, and the measures reflected in the current pending Federal applications.

A detailed response to the specific comments on community benefits raised during the Tour is as follows:

- The Mary River IIBA between Baffinland and the QIA fulfils the requirements of the Nunavut Agreement set out in Article 26 and applies to the entire Mary River Project, including the Steensby Component. The IIBA identifies mitigation measures to address issues raised by Inuit about the Project and establishes significant financial compensation and benefits to Inuit. Baffinland and the QIA are evaluating the scope of updating the 2018 Mary River IIBA to reflect the current development of the Steensby Component of the Project. Before updating the IIBA in relation to the Steensby Component of the Project, Baffinland and QIA will need to conclude the process to update the current Mary River IIBA to reflect important commitments agreed to in relation to the Inuit Certainty Agreement, Production Increase Proposal Renewal and the Sustaining Operations Proposal.

Baffinland also recognizes that there are established community grievance feedback processes in place, and ongoing community consultation mechanisms led by Baffinland as well as NIRB and Inuit, which will continue to allow us to work closely with Inuit on addressing issues throughout the life of the Project.

As summarized above, taking into account all of these mechanisms, Baffinland remains confident that there are robust measures in place to ensure that Steensby Component activities proceed in a manner that provides for significant benefits to Inuit.

## 6. Safety and Emergency Response

### 6.1 Spill Response

#### ***A. Summary of Feedback Shared During Tour***

A summary of the verbal feedback heard by Baffinland in relation to this topic during the Tour is provided below. The comments were generally made in Inuktitut by participants and translated into English by local interpreters.

Baffinland recorded three comments on this topic in Kinngait:

*"If there was a spill in the area, will you tell us? This will affect everyone all over Baffin Island, it will affect our hunting."*

*"If there is a spill in the community, want the community to be informed directly."*

*"Will you not know if there is a spill?"*

Baffinland recorded three comments on this topic in Igloolik:

*"It was a spill in the ocean and it is not being monitored by a different company. How can we believe that when Canadian government departments. We will feel the impacts, if they say it is a 10L spill what is actually a 1000L spill, who will oversee this?"*

*"The proposed floating dock in Steensby, we have rough waters, possibility of fuel spills, it will be a long time to have this there – a floating fuel tank."*

*"Question is for Baffinland – fuel spill modelling, Baffinland has yet to come to fuel spill modelling consultation."*

#### ***B. NIRB Review Conclusions and Mitigations Related to Spill Response***

##### **Summary of NIRB Review Process Residual Effects Assessment and Prediction Confidence**

As discussed in Section 10B of Part A, Baffinland conducted an extensive assessment on the possible malfunction and accidents related to the Project for the 2012 FEIS. A significant but unlikely effect is a large fuel spill along the shipping route, which could moderately impact marine environments and severely affect seabirds, though effects would be short-lived and reversible due to diesel fuel volatility.

**Summary of relevant requirements from the NIRB Review Process and recognized under Project Certificate No. 005 and other existing approvals/agreements**

The 2012 FEIS proposed a number of mitigations related to spill through the assessment in Malfunctions and Accidents Assessment at Volume 9, the Emergency and Spill Contingency Plan at Appendix 10C – 1, Milne Port Oil Pollution Emergencies Plan at Appendix 10C – 2, Hazardous Materials and Hazardous Waste Management Plan Appendix 10C – 5, Wastewater Management Plan Appendix 10D – 3, and Spill Emergency Response Plan at Appendix 3B. Baffinland will follow relevant regulations (i.e. Arctic Shipping Pollution Prevention Regulations, Oil Pollution Prevention Regulations, Response Organizations and Oil Handling Regulations) to ensure spill mitigation measures are in place. For a more comprehensive list of spill mitigation measures included in the 2012 FFEIS, see Section 10B of Part A.

In addition to the mitigations listed above, which form a part of the evidentiary record on which the Nunavut Impact Review Board and the Ministers based their approval of the Mary River Project, Project Certificate 005 also provides specific terms and conditions on spill mitigation to address community concerns (see Attachment 1 enclosed).

**Follow Up Monitoring and Supplemental Baseline**

A significant effect identified is the potential for a large fuel spill to occur along the shipping route. While unlikely to occur and depending upon location and other factors such as weather, a diesel spill by a tanker in the open water could result in a moderate magnitude effect to most marine environmental components and a high magnitude effect to seabirds. A large spill, depending upon the location and sensitivity of the area, could have a large extent (Level II or possibly Level III) but effects are short lived due to the volatility of the diesel fuel (Level I duration). For light diesel fuel, the effects are reversible.

In response to concerns raised during community engagement on the Steensby Component, Baffinland has decided not to proceed with using an overwintering fuel barge for storage at Steensby Inlet.

The other spill scenarios residual effects assessments were considered unlikely to have a significant effect with a high degree of certainty, Baffinland is committed to ongoing effects monitoring for the life of the Project. This is required under Project Certificate 005 and as a matter of best practice.

Baffinland will develop and implement comprehensive spill response and emergency preparedness plans for the Steensby Component during all its phases, including pre-construction, construction, operation and closure.

Several examples of where Project Certificate 005 and other agreements requires this are included in Attachment 1 for reference.

Additional modelling and studies related to spill and spill prevention are ongoing and planned in the near future, as outlined in Table 5. As part of its ongoing Steensby Spill Modelling, Baffinland will engage with the communities of Igloolik, Kinngait, Kimmirut, and Sanirajak to provide an overview of the selected modelling locations. Baffinland will also continue to provide study updates and facilitate discussions within the MEWG, where HTO representatives from impacted communities are members.

**Table 12.** Steensby Studies on Spills and Spill Prevention

| Topic                         | Description              | Year      |
|-------------------------------|--------------------------|-----------|
| <b>Ongoing/Future Studies</b> |                          |           |
| Spill Response                | Steensby Spill Modelling | 2024-2025 |
| Shipping                      | Risk Analysis            | 2025      |

Baffinland will integrate the outcomes of supplemental studies into applicable environmental management plans as required, and submit them in its Annual Reports to the Nunavut Impact Review Board and to the Nunavut Water Board, as relevant.

***C. Additional Monitoring and Mitigations and Management Plans Required under the Project Certificate and/or Other Approvals Relevant to Spill Response***

As outlined in Section 10C of Part A, Baffinland continues to refine its environmental management plans planned for the Steensby Component of the Project based on the operations that have occurred since the original approval of the Mary River Project, and based on additional focused community and regulator engagements. Baffinland’s preparedness strategy emphasizes regulatory compliance, proactive planning, effective management plans, and maintaining well-trained on-site emergency response teams. For fuel spill responses, Baffinland committed to involving North Baffin communities in spill response exercises during construction and operations. Baffinland will maintain a self-sufficient emergency response capacity for operational incidents. Until this fleet becomes fully operational, Baffinland will rely on the Canadian Coast Guard for search and rescue and assistance with accidental events during ship transit to port sites.

Management Plans for Steensby Construction and Operation relevant to spill and emergency response:

- Construction Environmental Management Plan
- Environmental Protection Plan
- Hazardous Materials and Hazardous Waste Management Plan

- Steensby Port Oil Pollution Emergencies Plan
- Emergency and Spill Contingency Plan
- Spill at Sea Response Plan

The Adaptive Management Plan will also apply to this topic. Baffinland will use their adaptive management response framework to evaluate monitoring results against objectives and thresholds. This system is designed to detect changes in the environment early enough to investigate before they present a more serious risk to the environment. Should it be determined that the changes is reasonably Project related, Baffinland can implement one or more actions already identified, or a new mitigation not previously considered.

All environmental management plans will be subject to ongoing review and updates for the life of the Project. With respect to spill management plans, Baffinland will be supported by the advice of the Terrestrial Environment Working Group and Marine Environment Working Group, which includes HTO representatives from all impacted communities, and direct community engagement. Baffinland will report on the efficacy of its environmental management plans on a regular basis through its regulatory reporting obligations, as well as through its community engagement program.

#### ***D. Summary of Regulatory Application components which address this topic***

##### **Summary of FAA Application components which address this topic**

Baffinland also heard from Inuit that they were concerned about the risk of spills associated with a fuel barge (Marine FAA, Appendix A) and took care to address this item specifically in Fisheries Act Application. QIA also asked questions in relation to the potential frequency, magnitude and dispersal patterns of spills in the vicinity of Steensby Port and along the shipping route (Marine FAA, Appendix A).

#### ***Mitigation Measures***

In the Marine FAA Application, the following mitigation measures are proposed to address these concerns:

- **Construction Environmental Management Plan** (Marine FAA Vol.1, Section 7.2.1): Several mitigation measures are outlined in the Deleterious Section of the plan to prevent spills and associated adverse effects to the aquatic environment.
- **Spill Prevention and Response** (Marine FAA Vol.1, Section 7.2.10): The deposition of deleterious substances into the marine environment will be mitigated by the application of the following management plans:
  - Environmental Protection Plan
  - Emergency Response and Spill Contingency Plan

- Oil Pollution Prevention Plan
- Waste Management Plan
- Spill at Sea Response Plan
- **Spill Prevention** (Marine FAA Vol.1, Section 7.2.10.1): Several measures are outlined to describe spill prevention measures to be implemented during construction works, such as storing fuel and other deleterious substances in secondary containment located a minimum of 31 m from any waterbody, storing hazardous wastes in lined and bermed facilities, emergency spill response equipment to be stored on site.
- **Spill Response** (Marine FAA Vol.1, Section 7.2.10.2): Daily inspections of equipment during the construction phase to evaluate that the equipment remains in good working condition and poses minimal risk of equipment failure and/or spillage, as well as implementation of comprehensive spill response measures during construction works and in the event of any spill in the marine environment.

The Adaptive Management Plan will also apply to this topic. Baffinland will use their adaptive management response framework to evaluate spill response. This system is designed to detect changes in the environment early enough to investigate before they present a more serious risk to the environment. Should it be determined that the changes is reasonably Project related, Baffinland can implement one or more actions already identified, or a new mitigation not previously considered.

#### **Summary of CTA Section 98 Application components which address this topic**

Baffinland will implement a Railway Emergency Response Plan, which is included as part of the S.98 Application (SD-25). As outlined in the Application and the Plan, the Steensby Railway operations will include a spill collection system which consists of a 30-meter-long containment pit covering both tracks and the island fueling station at the Steensby Port.

Baffinland's existing Spill Contingency Plan (BAF-PH1-830-P16-0036SD-26003626) identifies the potential for accidental release of hazardous material to the environment and provides spill scenarios and identifies protocols for prevention, response and recovery. Prior to the implementation of rail operations, this plan will be updated to incorporate additional potential risks of release related to rail operations. Site specific response plans in the case of a spill or derailment at the four proposed bridge locations will also be incorporated into Baffinland's Spill Contingency Plan.

#### ***E. Conclusion***

Baffinland acknowledges the statements made by Tour participants on the topic of spill prevention during the Tour, and appreciates the opportunity for all dialogue on topics of interest. This feedback has been considered in relation to the 2012 FEIS, the outcomes of the

NIRB review, the Project Certificate requirements (including terms and conditions, commitments, monitoring programs and management plan updates), ongoing adjustments that have occurred through monitoring, mitigation, community feedback and adaptive management since the Project began, and the measures reflected in the current pending Federal applications.

Detailed responses to the specific comments on spills raised during the Tour are as follows:

- With respect to spill response, Baffinland will be self-sufficient for Search and Rescue operations (SAR) and response to environmental emergencies but will share relevant information with the RCMP and GN.
- Baffinland will adhere to the aforementioned management plans, which outline the necessary measures to prevent or minimize accidental fuel discharge and mitigate any negative impacts. Additionally, Baffinland will be supported by the Marine Environment Working Group—including HTO representatives from affected communities, as well as through direct community engagement and adaptive management on spill response management plans.
- With respect to reporting spills and community involvement, Baffinland reports spills in accordance with the relevant spill contingency planning and reporting regulations and guidelines. Baffinland continues to be committed to investing in community-based training initiatives. QIA and community input will largely determine the community-based training agendas and the development of subsequent community-based training programs.

Baffinland also recognizes that there are established community grievance feedback processes in place, and ongoing community consultation mechanisms led by Baffinland as well as NIRB and Inuit, which will continue to allow us to work closely with Inuit on addressing issues throughout the life of the Project.

As summarized above, taking into account all of these mechanisms, Baffinland remains confident that there are robust measures in place to ensure that Steensby Component activities proceed in a manner that addresses the need for appropriate spill prevention and response measures to be in place for the life of the Project, in particular given the potential for this topic to impact on Inuit rights.

## **6.2 Accidents and Malfunctions**

### **A. Summary of Feedback Shared During Tour**

A summary of the verbal feedback heard by Baffinland in relation to this topic during the tour is provided below. It should be noted that the comments were generally made in Inuktitut by participants and translated into English by local interpreters.

In Kimmirut there were two comments about accidents and malfunctions:

*"I would like to say my thoughts regarding Steensby Inlet and the shipping route. That is probably the quickest route, I am concerned about anything that could happen an incident. If there is a sunken ship, it is a concern."*

*"We use the beacons for navigation during the summer as well we know that ships close to Northern Quebec use the beacon on big island and see the ships coming through. Now the navigation route, I have a questions with regards to Big Island proximity, are the requirements to take those routes and use those beacons on islands? The beacons that flash on the island for the ships to take the route? Are those the requirements?"  
(It was confirmed during the meeting that for safe navigation, beacons will need to be used by vessels if navigating nearby Kimmirut).*

In Kinngait there were two comments on accidents and malfunctions:

*"For the railway insurance, once it is applied, will the insurance be in place throughout the life of the railway."*

*"For Certificate of Fitness, what guidelines and policies have to be approved before there is a rail road running?"*

### **B. NIRB Review Conclusions and Mitigations related to Accidents and Malfunctions**

#### **Summary of NIRB Review Process Residual Effects Assessment and Prediction Confidence**

As set out in the 2012 FEIS, Baffinland conducted an extensive assessment of potential accidents and malfunctions which relied on multiple lines of evidence, including available literature, community feedback, risk assessments and expert opinion. The assessment, considering this information, led to the following conclusions with respect to accidents and malfunctions:

*"Trains carrying ore or other non-hazardous materials are not anticipated to derail, but if derailment occurs, it will delay scheduled shipment of ore. There will be no significant*

impact to the environment, since the ore contains no known toxic substances.” (FEIS Volume 9, Section 3.4.1)

“Baffinland will have up to four dedicated ice breaking tug boats anchored at Steensby Inlet. A Baffinland tug boat or an international marine safety organization will be contact for assistance in case of unresolved engine failure along the Hudson Strait or in the Foxe Basin. Although a ship engine failure is a possible event, the risk associated with such a failure is considered low.” (FEIS Volume 9, Section 3.6.2)

“All tankers will have anti-collision devices with alarms and radar to ensure that collisions are avoided. Furthermore, marine heavy oil (MHO) used for powering the ship is stored within a double-hulled containment inside the ship. Fuel tanker grounding or collision causing a fuel spill is predicted as being unlikely with a low risk.” (FEIS Volume 9, Section 3.6.4)

In the Final Hearing Report for the Mary River Project, the Nunavut Impact Review Board considered accidents and malfunctions in Section 6.1 by providing a summary of the views of the Proponent, the views and concerns of Interested Parties and the views of the Board to draw specific conclusions and recommendations, which materialized in a draft Project Certificate 005, which was approved by the Ministers and issued in final on December 28, 2012.

**Summary of relevant requirements from the NIRB Review Process and recognized under Project Certificate No. 005 and other existing approvals/agreements**

The 2012 FEIS proposed a number of mitigations related to accidents and malfunctions through the assessment in the Cumulative Effects and Other Assessments at Volume 9, the Shipping and Marine Wildlife Management Plan at Appendix 10D-10, Railway Maintenance Management Plan (10D-9.1), and Railway Emergency Response Plan (Appendix 10D-9.2). The following key mitigations for were included in the 2012 FEIS.

**Table 13. 2012 FEIS Mitigation Measures for Railway and Shipping Accidents and Malfunctions**

| Topic   | Mitigation Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Railway | <ul style="list-style-type: none"> <li>The engineering design will take into account factors such as permafrost thickness and seasonal thawing of ice, rail alignment, efficient signaling, etc.</li> <li>Ballast material selection and thickness will be carefully engineered</li> <li>Signal effectiveness will be constantly monitored and changes or adjustments made as quickly as possible</li> <li>End-of-train detectors will detect whether cars have been uncoupled</li> <li>Emergency response procedures will be implemented as soon as possible during accidental derailments</li> <li>A dispatcher will oversee all track movements, granting exclusive authority for track occupancy</li> </ul> |

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          | <ul style="list-style-type: none"> <li>• Dark Territory Management: Fixed blocks with wayside signs will be used; train crews receive and confirm occupancy authority via radio</li> <li>• Computer-Assisted Manual Block System (CAMBS) provides visual track status, verifies occupancy, and alerts dispatchers to conflicts</li> <li>• Track safety systems includes track circuits for broken rail detection and wayside detectors for train defects (e.g., hot wheels, dragging equipment)</li> <li>• Wheel impact detector (WILD site) at the port terminal identifies wheel defects, with data transmitted to the Control Centre</li> <li>• Rock-fall detectors will alert the dispatcher</li> <li>• Dispatchers will track forecasts and may halt operations during severe storms</li> </ul>                                                                                                                                                                                                                                                                                                                            |
| Shipping | <ul style="list-style-type: none"> <li>• Before any voyage, the engine system will be inspected to ensure that it is in good working condition</li> <li>• Repair and maintenance tools and equipment will be provided on each ship</li> <li>• Spare parts and if possible spare engines will be kept on board for potential engine failures</li> <li>• Baffinland will have up to four dedicated ice breaking tug boats anchored at Steensby Inlet</li> <li>• A Baffinland tug boat or an international marine safety organization will be contacted for assistance in case of unresolved engine failure along the Hudson Strait or in the Foxe Basin</li> <li>• The possibility of ship grounding will be prevented or minimized by properly engineered design</li> <li>• Ships will adhere to the established shipping lanes as there is detailed bathymetry data available</li> <li>• The crew will be well-trained and follow ship-specific operating procedures</li> <li>• As much as possible, port facilities will have dedicated personnel to direct incoming ships around any potential grounding locations</li> </ul> |

In addition to the mitigations listed above, which form a part of the evidentiary record on which the Nunavut Impact Review Board and the Ministers based their approval of the Mary River Project, Project Certificate 005 also provides specific direction on Accidents and Malfunctions to address community concerns:

- Term and Condition 177. The Proponent shall enroll any foreign flagged vessels commissioned for Project-related shipping within Canadian waters into the relevant foreign program equivalent to Transport Canada's Marine Safety Delegated Statutory Inspection Program.
- Term and Condition 178. Subject to safety considerations and the potential for conditions, as determined by the crew of transiting vessels, to result in route deviations, the Proponent shall require project vessels to maintain a route to the south of Mill Island to prevent disturbance to walrus and walrus habitat on the northern shore of Mill Island. The Proponent shall summarize all incidences of deviations from the nominal shipping route as presented in the FEIS to the NIRB annually, with corresponding discussion regarding justification for deviations and any observed environmental impacts.

### **Follow Up Monitoring and Supplemental Baseline**

While the FEIS 2012 assessments demonstrated that railway and shipping accidents and malfunctions, with mitigations, were low risk, Baffinland is committed to ongoing implementation of mitigation measures and management plans for the life of the Project. This is also required under Project Certificate 005 and as a matter of best practice.

Since 2021 Baffinland has been conducting fieldwork in support of various environmental authorizations required to develop specific elements of the Steensby Component of the Project. Desk-based studies have been undertaken since 2020. The below table provides a list of supplemental baseline programs that have been run since 2020.

**Table 14.** Steensby Supplemental Baseline Studies related to Accidents and Malfunctions

| Topic              | Description                                                    | Year      |
|--------------------|----------------------------------------------------------------|-----------|
| Marine Environment | Ice conditions and Ship Access to the Steensby Inlet Port Site | 2020      |
| Geotechnical       | Geotechnical Investigation Report – Steensby Rail Alignment    | 2023      |
| Marine Environment | Aerial ice survey                                              | 2023      |
| Marine Environment | Multibeam Bathymetric Survey in Steensby Inlet                 | 2023      |
| Marine Environment | Steensby Inlet Fast Ice Study                                  | 2024      |
| Marine Environment | Fuel Spill Dispersion Modelling                                | 2024-2025 |

Baffinland will integrate the outcomes of supplemental fieldwork into applicable environmental management plans as required, and submit them in its Annual Report to the Nunavut Impact Review Board.

### ***C. Additional Monitoring and Mitigations and Management Plans Required under the Project Certificate and/or Other Approvals Relevant to Accidents and Malfunctions***

Baffinland continues to refine its environmental management plans planned for the Steensby Component of the Project based on the operations that have occurred since the original approval of the Mary River Project, and based on additional focused community and regulator engagements. Baffinland’s preparedness strategy emphasizes regulatory compliance, proactive planning, effective management plans, and maintaining well-trained on-site emergency response teams. Baffinland will maintain a self-sufficient emergency response capacity for operational incidents. Until this fleet becomes fully operational, Baffinland will rely on the Canadian Coast Guard for search and rescue and assistance with accidental events during ship transit to port sites.

Management Plans for Steensby Construction and Operation relevant to accidents and malfunctions:

- Construction Environmental Management Plan
- Environmental Protection Plan
- Shipping and Marine Wildlife Management Plan
- Railway Emergency Response Plan
- Railway Maintenance Management Plan
- Spill at Sea Response Plan

The Adaptive Management Plan will also apply to this topic. Baffinland will use their adaptive management response framework to evaluate monitoring results against objectives and thresholds. This system is designed to detect changes in the environment early enough to investigate before they present a more serious risk to the environment. Should it be determined that the changes is reasonably Project related, Baffinland can implement one or more actions already identified, or a new mitigation not previously considered.

All environmental management plans will be subject to ongoing review and updates for the life of the Project. With respect to environmental impacts from accidents and malfunctions, Baffinland will be supported by the advice of the Terrestrial Environment Working Group and Marine Environment Working Group, which includes HTO representatives from all impacted communities, and direct community engagement. Baffinland will report on the efficacy of its environmental management plans on a regular basis through its regulatory reporting obligations, as well as through its community engagement program.

***D. Summary of Regulatory Application components which address this topic***

**Summary of FAA Application components which address this topic**

Baffinland also heard from Inuit that they were concerned about the risk of spills associated with shipping accidents (Marine FAA, Appendix A) and took care to address this item specifically in Fisheries Act Application. QIA also asked questions in relation to the potential frequency, magnitude and dispersal patterns of spills in the vicinity of Steensby Port and along the shipping route (Marine FAA, Appendix A). As the concerns were surrounding the impacts of spills from a shipping incident, mitigation measures proposed in the Marine FAA can be found in the Spill Response Section of this document at 6.1-D.

**Summary of CTA Section 98 Application components which address this topic**

The S.98 Application also explains railway accidents and malfunctions and how these are addressed. As described in the Stakeholder Engagement Report (see SD-69) the Railway Emergency Response Plan (SD-41.509) addresses the procedures to be followed in the event of

a train accident or derailment. Should there be an accident, there are procedures laid out in the emergency response plans and IIBA that Baffinland will follow.

Pursuant to Sections 90 to 94 of the *Canada Transportation Act*, Baffinland is required to obtain a Certificate of Fitness (CoF) for the proposed construction and operation of the Steensby Railway.

Baffinland's, in collaboration with their insurance broker, Aon, selected the most suitable insurance provider pollution liability policy and the wrap-up liability policy within the certificate of insurance, which would include an all-encompassing policies covering Baffinland's third-party and general liability exposures for the construction of the Steensby Railway.

As Baffinland progresses into operations, an additional Certificate of Fitness will be required that is based on the insurance liabilities that are unique to the operation of the Steensby Railway as opposed to the construction. The division of responsibilities for operating the railway line will be outlined in the Certificate of Fitness application to the Agency with supporting documentation (i.e. contract or agreement with the railway operator). The Certificate of Fitness will ensure at all times that all activities related to the construction and operation of the railway are adequately insured.

### ***E. Conclusion***

Baffinland acknowledges the statements made by Tour participants on the topic of accidents and malfunctions during the Tour, and appreciates the opportunity for all dialogue on topics of interest. This feedback has been considered in relation to the 2012 FEIS, the outcomes of the NIRB review, the Project Certificate requirements (including terms and conditions, commitments, monitoring programs and management plan updates), ongoing adjustments that have occurred through monitoring, mitigation, community feedback and adaptive management since the Project began, and the measures reflected in the current pending Federal applications.

Detailed responses to the specific comments on accidents and malfunctions raised during the Tour are as follows:

- With respect to accidents along the shipping route, Baffinland conducted extensive studies for the FEIS to select the southern shipping route, and continues to collect updated information for bathymetry and ice conditions ahead of commencing Steensby shipping. Baffinland will integrate the outcomes of supplemental fieldwork into applicable environmental management plans as required. Baffinland will maintain a self-sufficient emergency response capacity for operational incidents. Until this fleet becomes fully operational, Baffinland will rely on the Canadian Coast Guard for search and rescue and assistance with accidental events during ship transit to port sites.
- With respect to railway insurance, Baffinland must obtain a Certificate of Fitness for the construction and operation of the Steensby Railway, ensuring insurance coverage for

liabilities, with a separate certificate required for operational risks. The Certificate of Fitness will ensure at all times that all activities related to the construction and operation of the railway are adequately insured.

Baffinland also recognizes that there are established community grievance feedback processes in place, and ongoing community consultation mechanisms led by Baffinland as well as NIRB and Inuit, which will continue to allow us to work closely with Inuit on addressing issues throughout the life of the Project.

As summarized above, taking into account all of these mechanisms, Baffinland remains confident that there are robust measures in place to ensure that Steensby Component activities proceed in a manner that addresses the need for appropriate accident prevention and emergency response measures to be in place for the life of the Project, in particular given the potential for this topic to impact on Inuit rights.

## 7. Cultural and Archaeological Sites

### 7.1 Archaeology/Cultural Sites

#### *A. Summary of Feedback Shared During Tour*

A summary of the verbal feedback heard by Baffinland in relation to this topic during the Tour is provided below. The comments were generally made in Inuktitut by participants and translated into English by local interpreters.

In Kinngait, Baffinland recorded one comment regarding archaeological/culturally important sites:

*“What will they do with the archaeology sites?”*

#### *B. NIRB Review Conclusions and Mitigations related to Cultural Sites*

##### **Summary of NIRB Review Process Residual Effects Assessment and Prediction Confidence**

Baffinland conducted an extensive assessment of the archaeology and cultural sites for the 2012 FEIS. With approved mitigation and protection plans, the Project will avoid, protect, and minimize impacts on archaeological sites, resulting in negligible residual effects on cultural resources

##### **Summary of relevant requirements from the NIRB Review Process and recognized under Project Certificate No. 005 and other existing approvals/agreements**

The 2012 FEIS proposed a number of mitigations related to archaeology through the assessment in Cultural Resource Effects Assessment at Volume 4, and the Cultural and Heritage Resource Protection Plan at Appendix 10F - 2. Where possible, archaeological sites will be avoided or protected with fencing. Where sites cannot be avoided or fenced, they will undergo systematic data recovery. For a more comprehensive list of archaeological mitigation measures, see Section 13B of Part A.

In addition to the mitigations listed above, which form a part of the evidentiary record on which the Nunavut Impact Review Board and the Ministers based their approval of the Mary River Project, Project Certificate 005 and other agreements also provides specific direction on cultural resources to address community concerns (see Attachment 1 enclosed).

##### **Follow Up Monitoring and Supplemental Baseline**

The 2012 FEIS residual effects assessments demonstrated the Project, with mitigations, was unlikely to have a significant effect on archeological sites with a high degree of certainty. Baffinland continues to undertake archaeology surveys along the planned Steensby Rail alignment and Port to mitigate and minimize impacts of construction and operations on culturally significant sites.

Multiple archaeological sites have already been identified, and the majority of archaeological surveys along the Steensby Component have been complete. The options for mitigation actions are provided within the Cultural Heritage Resource Protection Plan. In summary, the archaeological resources can either be avoided or mitigated (excavated). All archaeological work completed in each year requires a permit from the Government of Nunavut, Department of Culture and Heritage and all artifacts go to the Inuit Heritage Trust.

Since 2021 Baffinland has been conducting fieldwork in support of various environmental authorizations required to develop specific elements of the Steensby Component of the Project. The following is a list of archaeological surveys that have been complete since 2021, and that are planned prior to the commencement of the Steensby Railway.

**Table 15. Steensby Archaeological Surveys**

| Topic                            | Description                                                                                          | Year |
|----------------------------------|------------------------------------------------------------------------------------------------------|------|
| <b>Ongoing/Completed Studies</b> |                                                                                                      |      |
| Archaeology                      | Summary of Baffinland's 2023 Data Collection Programs and Planning                                   | 2023 |
| Archaeology                      | 2024 Archaeology Activities – Steensby Component of the Mary River Project                           | 2024 |
| Archaeology                      | Archaeology surveys of Steensby area along quarries, planned winter road and Railway alignment.      | 2024 |
| <b>Future Studies</b>            |                                                                                                      |      |
| Archaeology                      | Protection and mitigation of archaeological sites to allow preservation of archaeological resources. | 2026 |

Baffinland will integrate the outcomes of supplemental fieldwork into applicable environmental management plans as required.

***C. Additional Monitoring and Mitigations and Management Plans Required under the Project Certificate and/or Other Approvals Relevant to Cultural Sites***

As outlined in Section 13B of Part A, Baffinland continues to refine its environmental management plans planned for the Steensby Component of the Project based on the

operations that have occurred since the original approval of the Mary River Project, and based on additional focused community and regulator engagements.

Management Plans for Steensby Construction and Operation specific to the topic of archaeology will include:

- Construction Environmental Management Plan
- Environmental Protection Plan
- Socio-economic Monitoring Plan
- Cultural Heritage Resource Protection Plan

Baffinland will continue to retain qualified project archaeologists as required by the Project to develop mitigation plans as part of archaeological permit applications submitted to Government of Nunavut Department of Cultural Heritage (**GNDCH**) for review. Permit applications will be required when archaeological work is ongoing, which will include a description of the sites and the mitigation method to be applied. GNDCH is ultimately responsible for the issuing of archaeological permits, wider consultation with other stakeholders is also required, including approval of permit applications by the Inuit Heritage Trust. All mitigation requests must be approved by GNDCH prior to any disturbance of cultural resources. GNDCH will then issue a permit to the qualified archaeologist prior to any site disturbance or data recovery program implementation.

The IIBA also requires Baffinland to respect the archaeological record of Nunavut and the requirements of the Nunavut Agreement.

The Adaptive Management Plan will also apply to this topic. Baffinland will use their adaptive management response framework to evaluate cultural resources. This system is designed to detect changes in the environment early enough to investigate before they present a more serious risk to the environment. Should it be determined that the changes is reasonably Project related, Baffinland can implement one or more actions already identified, or a new mitigation not previously considered.

#### ***D. Summary of Regulatory Application components which address this topic***

##### **Summary of FAA Application components which address this topic**

Specific details on archaeology are not included in the FAA applications, as this activity does not directly interact with fish and fish habitat. However, this Tour follow up document is being given to DFO, for context should DFO decision makers have interest in this topic.

##### **Summary of CTA Section 98 Application components which address this topic**

An overview of the 2024 archaeology activities is provided in the S.98 Application (SD-81). In 2024, Baffinland archaeologists conducted a 3-week archaeological survey program along the planned Steensby Railway and potential Winter Road routes. The aerial survey was conducted by flying low-level helicopter transects over planned development areas. Archaeologists landed and recorded 60 new archaeology sites. No artifacts were collected and no mitigation measures were enacted in 2024. Mitigative work, including installation of protective fencing or excavation of any new or existing archaeology sites will occur in 2026 or later, under subsequent Class II Permit(s).

Including the 60 new sites recorded in 2024, there are a total of 328 documented archaeological sites within the Mary River Project Area, including the Milne Port Site, the Mine Site, Steensby Port Site, and the two transportation corridors: the Northern Transportation Corridor (Tote Road) and the Southern Transportation Corridor (Steensby). The Southern Transportation Corridor contains 207 archaeology sites along the Steensby Railway and at the Port Site. Archaeologists have surveyed a 200m-wide corridor along the entire Steensby Railway and all associated construction and port infrastructure, although the potential always remains for new sites to be discovered accidentally or through modifications to construction plans.

Archaeological sites can be mitigated in three ways; Avoidance, Protection (fences), or Systematic Data Recovery (excavation). Of the 207 sites recorded along the Steensby Corridor and at Steensby Port, 41 have already been mitigated through Systematic Data Recovery. As Systematic Data Recovery is a destructive process, the Territorial Archaeology Office prioritizes Avoidance wherever possible, followed by Protection, and only where reasonably unavoidable, Systematic Data Recovery. Baffinland's goal is to avoid and protect as many archaeology sites as possible, however, some additional excavation will be required.

### ***E. Conclusion***

Baffinland acknowledges the statements made by Tour participants on the topic of archaeology and cultural sites, and appreciates the opportunity for all dialogue on topics of interest. This feedback has been considered in relation to the 2012 FEIS, the outcomes of the NIRB review, the Project Certificate requirements (including terms and conditions, commitments, monitoring programs and management plan updates), ongoing adjustments that have occurred through monitoring, mitigation, community feedback and adaptive management since the Project began, and the measures reflected in the current pending Federal applications. This is also a topic that is subject to robust federal and Nunavut legal requirements, including under the Nunavut Agreement.

Baffinland also recognizes that there are established community grievance feedback processes in place, and ongoing community consultation mechanisms led by Baffinland as well as NIRB and Inuit, which will continue to allow us to work closely with Inuit on addressing issues throughout the life of the Project.

Detailed responses to the specific comments on archaeology and cultural sites raised during the Tour are as follows:

- With respect to the specific topic of archaeological sites, all previously identified archaeological sites within Project boundaries will be avoided or protected with fencing. Where sites cannot be avoided or fenced, they will undergo mitigation through systematic data recovery (excavation) with all information reported and artifacts sent to the adequate facilities for preservation.

The Inuit Impact Benefit Agreement is a key mechanism that addresses this topic.

As summarized above, taking into account all of these mechanisms, Baffinland remains confident that there are robust measures in place to ensure that Steensby Component activities proceed in a manner that is protective of archaeology and cultural sites and of Inuit rights associated with these topics.