



Summary of Baffinland Commitments for the Phase 2 Expansion Project [current to January 22, 2020; DRAFT]							
ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Commitment Due Date	Notes
210	GN-TRC24	GN	Marine Environment	3 - Post September 2020 Technical Meetings	Section 10.3.2 of the Spill at Sea Response Plan will be updated to reflect a requirement for coordination with the Government of Nunavut’s Department of Environment and Emergency Management Office in the mobilization of emergency wildlife teams for the purpose of preventing wildlife contamination. Special consideration will be given to polar bear deterrence, which could be facilitated by helicopter or emergency response vessels. The feasibility of implementing catch and relocation as a deterrent for polar bear will be coordinated with the Department of Environment based on the circumstances of the spill.	NA	This commitment will be implemented post PC approval
209	DFO 3.6.8 NEW QIA-43 QIA-44 QIA-45	DFO QIA	Marine Environment	4 - Post September 2020 Technical Meetings	Updated commitment wording in relation to DFO 3.6.8 NEW: Baffinland continues to maintain that the identification of high-risk biological species or groupings of species of concern is the primary responsibility of DFO. Despite this, Baffinland is committed to supporting the development of a trigger list of high biological risk species or groupings of species of concern and associated response plans through the process outlined in response to DFO 3.6.9 and DFO 3.6.10 and to refining that list with DFO on an ongoing basis starting in 2021.	NA	This commitment will be implemented post PC approval
208	DFO 3.6.8 NEW QIA-43 QIA-44 QIA-45	DFO QIA	Marine Environment	4 - Post September 2020 Technical Meetings	Updated commitment wording in relation to DFO 3.6.7 NEW: Baffinland commits to updating the marine monitoring plan (MMP) in consultation with MEWG members and this will be completed prior to the start of the 2022 shipping season and prior to any Phase 2 shipping. The updated MMP will detail the revised MEEMP sampling design which includes greater seasonal and spatial coverage and increased sampling effort and sample sizes to address DFO concerns related to achieving sufficient statistical power for detection of project effects (≥0.8, as per recommendations in DFO 2020, pages 4-7).	NA	This commitment will be implemented post PC approval
207	QIA-43 QIA-44 QIA-45	QIA	Marine Environment	4 - Post September 2020 Technical Meetings	The risk-based methodology and associated ballast water compliance sampling plan to be developed in relation to DFO-3.6.5 will include a component for the monitoring of contaminants from each port and treatment type to assess potential chemical risks (e.g., from foreign ports or treatment residuals). Further risk-based assessment of contaminants will be conducted, using methodology and approaches developed in relation to DFO 3.6.5, in the event project vessels switch from exchange plus treatment to just treatment of ballast water.	NA	This commitment will be implemented post PC approval
206	DFO 3.6.8 NEW QIA-43 QIA-44 QIA-45	DFO QIA	Marine Environment	4 - Post September 2020 Technical Meetings	Updated commitment wording in relation to DFO 3.6.4 NEW: Baffinland will consider discontinuing exchange plus treatment requirements should treatment systems efficacy reach a point that makes the benefits of an exchange plus treatment system negligible. This decision will be made in consultation with TC and DFO and will be based on a consideration of factors outlined in DFO 2019 (i.e. if ballast water organism concentration or composition, environmental conditions, shipping patterns, proportion of voyages meeting the D-2 standard, or available data describing these conditions changes in the future, and updates to global research on ballast systems). In this event Baffinland will update ballast water dispersion modelling to more accurately reflect the spectrum of salinity, temperature, and discharge volumes that can be expected to be discharged at Milne Port under Phase 2 operations if prior exchange were to be discontinued. Baffinland will conduct a risk-based assessment of contaminants that could be released into Milne Inlet in the event project ore vessels switch from exchange plus treatment to just treatment of their ballast water.	NA	This commitment will be implemented post PC approval
205	DFO 3.6.8 NEW QIA-43 QIA-44 QIA-45	DFO QIA	Marine Environment	4 - Post September 2020 Technical Meetings	Updated commitment wording in relation to DFO 3.6.3 NEW: Baffinland will require all vessels calling on Milne Port that treat their ballast under the D2 Standard to also perform a ballast water exchange prior to treatment. By 2024, for ore carriers originating from Canadian waters (i.e., domestic trips) Baffinland will only charter vessels equipped with treatment systems, and will require those vessels to treat their ballast under the D2 Standard and to also perform a ballast water exchange prior to treatment. For ships unable to conduct exchange as specified in Canadian Ballast Water Regulations (e.g. ships on Canadian domestic trips), exchange is to be conducted as specified in revised ABWEZs for Eastern Arctic as per DFO CSAS advice (see DFO 2015, Stewart et al. 2015 and Goldsmit et al. 2019). This updated commitment will be reflected in the 2021 Standing Instructions to Masters.	NA	This commitment will be implemented post PC approval

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Commitment Due Date	Notes
204	DFO 3.6.8 NEW QIA-43 QIA-44 QIA-45		Marine Environment	4 - Post September 2020 Technical Meetings	Updated commitment wording in relation to DFO 3.6.2 NEW: Baffinland commits to record the Milne Port anchorage and associated coordinates where compliance testing and discharge occurs in the ballast water testing forms, completed by Baffinland's environmental monitors. Baffinland will also report the duration and volume that occurs at each discharge point concurrent with biological testing that will be conducted to support the risk based methodology under DFO 3.6.5, and for one additional year following commissioning of the second ore dock, if required. A dataset with discharge coordinates and the durations and volumes of discharges at each discharge point will be provided to MEWG members as part of annual reporting.	NA	This commitment will be implemented post PC approval
203	DFO 3.6.8 NEW QIA-43 QIA-44 QIA-45		Marine Environment	4 - Post September 2020 Technical Meetings	Updated commitment wording in relation to DFO 3.6.1 NEW: Project vessels are limited to releasing ballast water at one of the three anchorage locations at Milne Port, or while berthed at the ore dock. Further, prior to any ballast water discharge D-1 compliance testing must be completed. Instructions to not release ballast water prior to arrival at Milne Port and completion of ballast water testing is provided to all ship operators in Baffinland's Standing Instruction to Masters (SITM). This requirement will remain under Phase 2.	NA	This commitment will be implemented post PC approval
202	QIA-42	QIA	Freshwater Environment	4 - Post September 2020 Technical Meetings	In conjunction with project stakeholders, Baffinland will develop a Terms of Reference for a Freshwater Environment Working Group (FEWG). Respecting the heightened regulatory oversight in relation to the freshwater environment, the FEWG will meet on an as needed basis to discuss items to be agreed upon by members of the FEWG. In person meetings, if required, will be coordinated with the planning of Marine and Terrestrial Environment Working Group meetings, where possible.	NA	This commitment will be implemented post PC approval
201	QIA-42	QIA	Freshwater Environment	4 - Post September 2020 Technical Meetings	Baffinland collects and reports data on fish presence, catch per unit effort, and fork length from 30-60 crossing sites along the Tote Road annually. Baffinland commits to adding observations regarding physical condition of fish (e.g., lesions, injuries, activity level). Baffinland and QIA will determine an appropriate approach to analysis and development of a metric for monitoring fish health for the 2022 reporting period. The program will be evaluated every three (3) years to determine if monitoring locations may be reduced due to no observations of project related-impacts.	NA	This commitment will be implemented post PC approval
200	QIA-41	QIA	Freshwater Environment	4 - Post September 2020 Technical Meetings	Baffinland is prepared to adopt a more precautionary moderate risk threshold for lake sedimentation. The current moderate risk threshold for lake sedimentation is 1 mm, adopted from the FEIS. Baffinland will adopt the lake sedimentation rate predicted in the FEIS of 0.54mm, which is about half the current threshold, at the moderate risk level. Exceedance of the 0.54mm moderate risk level will trigger additional study to validate the thresholds relative to impacts on arctic char eggs. A low risk threshold of 0.15 mm will also be applied that will trigger corresponding low risk response actions. Data will be collected and reported in 2021 to characterize sediment grain size.	NA	This commitment will be implemented post PC approval
199	PCA-03	PCA	Marine Environment	4 - Post September 2020 Technical Meetings	See Commitments to DFO 3.6.6 NEW	NA	This commitment will be implemented post PC approval
198	DFO 3.7 NEW	DFO	Marine Environment	4 - Post September 2020 Technical Meetings	Baffinland recognizes that DFO disagrees with the determinations of the Combined Effects Assessment located in Table 22 of Baffinland's Marine Mammal Monitoring Technical Memorandum updated in May 2020 (document # 1663724-186-TM-Rev2-38000). DFO is concerned that the combined effects assessment does not adequately consider uncertainty and potential interactions between combined effects, nor does it consider combined effects outside of the Regional Study Area. To account for residual uncertainty in the effects assessment, Baffinland has made several commitments related to the strengthening of monitoring programs, as well as the implementation of pilot projects to better detect and monitor effects of the project on the marine environment. Implementation of these commitments will be developed in collaboration with DFO, Inuit, and relevant organizations to ensure that all recommendations and concerns are addressed and accounted for. If results of the monitoring programs indicate that there are significant or meaningful impacts to the marine environment, Baffinland commits to undertake investigations to determine the cause of the impact, and will identify any mitigations or other adaptive management strategies to address the impact for review and recommendations by Inuit and the MEWG. Recommendations from MEWG members will be treated consistent with the decision-making requirements as outlined in the forthcoming updated MEWG Terms of Reference.	NA	This commitment will be implemented post PC approval

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Commitment Due Date	Notes
197	DFO 3.6.6 NEW	DFO	Marine Environment	4 - Post September 2020 Technical Meetings	<p>BIM commits to ensuring that vessels arriving to Milne Port and Steensby Port are following IMO International Guidelines for Biofouling Management (and any associated updates to these Guidelines) by including adherence to these Guidelines as a requirement in vessel procurement contracts.</p> <ul style="list-style-type: none"> • Baffinland will include in its contracts with ship owners a requirement to follow IMO Guidelines for Biofouling Management • Baffinland will require each vessel to maintain a Biofouling Management Plan and Biofouling Record Book consistent with Appendix 1 and 2 of the IMO Guidelines • Baffinland will provide a copy of the management plans and record books for each vessel in its Annual Report to the MEWG. • Initiation of this commitment will begin in 2021. 	NA	This commitment will be implemented post PC approval
196	DFO 3.6.6 NEW	DFO	Marine Environment	4 - Post September 2020 Technical Meetings	<p>BIM will develop a robust monitoring program design with input from DFO and other relevant parties that describes its plan for conducting ROV surveys of vessels to evaluate the extent of biofouling on ship hulls arriving in Milne Port prior to the 2022 shipping season.</p> <p>The sampling design will include appropriate sampling effort (with respect to number of vessels and coverage of each vessel) to evaluate differences in extent of biofouling across vessels with different biofouling management measures and histories to provide data for risk assessments to guide future monitoring and management of high risk vessels. Targets for sampling efforts will be established in consultation with DFO and submitted for review and recommendations from Inuit and the MEWG. Recommendations from MEWG members will be treated consistent with the decision-making requirements as outlined in the forthcoming updated MEWG Terms of Reference.</p> <p>This monitoring program will also be applied to vessels calling at Steensby Port as soon as shipping commences for the southern route</p>	NA	This commitment will be implemented post PC approval
195	DFO 3.6.6 NEW	DFO	Marine Environment	4 - Post September 2020 Technical Meetings	<p>Based on new information gathered through vessel biofouling monitoring, a review of vessels Biofouling Management Plans and Record Books and, where known, a review of vessels sailing history relative to variables that could influence the extent of hull fouling and have already been well described in the literature (e.g., Coutts 1999; Coutts & Taylor 2004; Ruiz & Smith 2005), BIM will develop a risk assessment and establish a risk-based sampling plan to guide future monitoring and management of high risk vessels. This risk assessment and risk-based sampling plan will be developed in consultation with DFO, and submitted to the MEWG (of which DFO is a member) for review and recommendations. Recommendations from MEWG members will be treated consistent with the decision-making requirements as outlined in the forthcoming updated MEWG Terms of Reference</p>	NA	This commitment will be implemented post PC approval
194	DFO 3.6.6 NEW	DFO	Marine Environment	4 - Post September 2020 Technical Meetings	<p>Biological sampling (i.e., collection of genetic material, tissue samples, and/or whole organisms) of vessel biofouling would contribute to the identification and monitoring of aquatic invasive or non-indigenous species that have the potential to propagate in northern waters as a result of the Project's shipping activities. BIM will revisit the state of technology and methods used to assess and conduct biological sampling of vessel biofouling and submit a report, to the MEWG by the end of 2021, on options that exist to conduct this work. It is not expected that this report will consider diving as a means to conduct the biological sampling.</p> <ul style="list-style-type: none"> • Once a feasible and safe technology or method has been determined with the MEWG, a pilot program will be run during the next shipping season to determine if it is suitable. If it is not, the report will be revisited and a new technology or method will be selected for another pilot program to be implemented during the next shipping season. • Based on the results of the pilot program, it will be confirmed with the MEWG whether a technically and economically feasible technology or methods exist. If the MEWG agrees by consensus that the program stands to provide valuable data, BIM will update its MMP to include a biological sampling component for biofouling in advance of the next shipping season. The updated monitoring plan will be provided to the MEWG for review and comment before it is finalized. • BIM will revise and update its risk assessment and risk-based sampling plan (see 3, above) once a robust set of biological data has been collected. This will be reviewed by the MEWG prior to the next shipping season. Recommendations from MEWG members will be treated consistent with the decision-making requirements as outlined in the forthcoming updated MEWG Terms of Reference. <p>Any feasible technology or method for biological sampling applied at Milne Port will also be applied at Steensby Port.</p>	NA	This commitment will be implemented post PC approval
193	DFO 3.6.6 NEW	DFO	Marine Environment	4 - Post September 2020 Technical Meetings	<p>In the event that modifications to biofouling management practices are proposed, Baffinland will consult with DFO and other relevant parties to determine if updates to the risk assessment and risk-based sampling plan are required. Updates to the assessment and the sampling plan will be submitted to the MEWG for review and recommendations prior to implementation. Recommendations from MEWG members will be treated consistent with the decision-making requirements as outlined in the forthcoming updated MEWG Terms of Reference.</p>	NA	This commitment will be implemented post PC approval

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Commitment Due Date	Notes
192	DFO 3.5 NEW	DFO	Marine Environment	4 - Post September 2020 Technical Meetings	<p>Baffinland has indicated that it is only feasible to have Marine Wildlife Observer's present on the MSV Botnica. Noting that having MWO's present on ships may not be feasible at all times due to safety concerns, and that certain environmental conditions may limit visibility, Baffinland commits to develop a pilot project using remote technology to monitor for ship strikes along the shipping route within the Nunavut Settlement Area. The intent of the pilot project is to determine the efficacy of mitigation to prevent ship strikes and of monitoring to detect ship strikes and any near misses.</p> <p>To solicit early feedback from DFO in advance of developing and submitting the methodology and parameters for the monitoring program to the MEWG, DFO will provide reports from all comparable studies conducted by DFO 8 months in advance of the start of the program and will identify what aspects of these programs DFO is recommending Baffinland integrate into the program design. Where relevant, Baffinland will incorporate the guidance provided by DFO into the study design prior to distributing it to the MEWG for review. Methodology and parameters for the monitoring program will be submitted to the MEWG (of which DFO is a member) for review and recommendations. Recommendations from MEWG members will be treated consistent with the decision-making requirements as outlined in the forthcoming updated MEWG Terms of Reference.</p> <p>The monitoring program will run for three years, and will begin one year in advance of Phase 2 shipping operations, with a report submitted to DFO and MEWG members each year the program is implemented. The report will include the following information:</p> <ol style="list-style-type: none"> 1. The number of hours and ships on which the program ran 2. Types and size of vessels on which the program ran 3. Timing during the shipping season when the program was run 4. The number of vessels that were called to Milne Port relative to Project certificate limits 5. If distance of animals to the vessels can be calculated, a discussion of relative CPAs. 6. Relevant environmental conditions that may affect detection or increase potential likelihood of an encounter with marine mammals If the program is collecting information related to Project effects on the marine environment that is not otherwise being collected through other programs. 7. Discussion of cost/value of the Project. <p>After the third year, Baffinland will submit an overview report on the program, to the MEWG for review. This report will document and discuss the benefits of the project and any challenges faced.</p>	NA	This commitment will be implemented post PC approval
191	DFO 3.4.3 NEW	DFO	Marine Environment	4 - Post September 2020 Technical Meetings	<p>Baffinland commits to run an annual end of season clearance survey. The survey will occur within 7 days following the close of the shipping season. Determination on the need for the end of season surveys will be where ice conditions warrant the survey, and in collaboration with MHTO and DFO. Baffinland commits to provide GIS coordinates and a description of group size(s) of narwhal along the aerial survey tracks. In addition, Baffinland will document ice conditions along the aerial survey tracks in order to inform changes in ice conditions and/or areas of greater risk for entrapment. This data will be provided to DFO as part of the fall shoulder season shipping reports as committed to under DFO 3.2.1 (NEW).</p> <p>A reporting structure will be determined in collaboration with MHTO, DFO, and other relevant boards and organizations in the event an ice entrapment is observed during the annual end of season clearance survey, as will procedures for determining if the event is a natural or project-related event, and associated response actions. This reporting structure is essential to determine the best course of action should an ice entrapment occur. After five years of annual end of season clearance surveys once Phase 2 shipping is operational, Baffinland and DFO will collaborate to analyze the data acquired from these surveys to determine what has been learned about any potential ice entrapments, and if the annual surveys should continue to proceed.</p>	NA	This commitment will be implemented post PC approval
190	DFO 3.4.2 NEW	DFO	Marine Environment	4 - Post September 2020 Technical Meetings	Baffinland recognizes that DFO disagrees with the certainty assigned to the potential for ice entrapments of marine mammals in the Phase 2 FEIS Addendum. To address DFO's concerns about uncertainty, Baffinland has committed to run annual end of season clearance surveys (DFO 3.6.2) and develop a response plan for the potential event of an ice entrapment (DFO 3.4.3 NEW).	NA	This commitment will be implemented post PC approval

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Commitment Due Date	Notes
189	DFO 3.4.1 NEW	DFO	Marine Environment	4 - Post September 2020 Technical Meetings	<p>Baffinland commits to update the Marine Monitoring Plan (MMP) to include a specific section relevant to icebreaking and shoulder season shipping activities in advance of the 2021 shipping season. Through the ICA, Baffinland is also committed to the development initial Indicators for the MMP in collaboration with QIA by December 2020. These initial OITR's will then be subject to review by Inuit (through the Inuit Committee) and regulators (through the MEWG) before finalization (no later than August 30, 2021).</p> <p>In advance of the 2021 shipping season, BIM can also commit to providing an updated draft MMP that will include a placeholder for a dedicated section specific to icebreaking and shoulder season activities. A full update to the MMP will occur following receipt of a positive decision from the Minister. Updates to the MMP will be actively worked on with the MEWG in 2021 (following a decision). A final MMP would then be in place for the 2022 shipping season. Recommendations from MEWG members on survey methodologies and initial indicators will be treated consistent with the decision-making requirements as outlined in the <u>forthcoming updated MEWG Terms of Reference</u>.</p>	NA	This commitment will be implemented post PC approval
188	CIRNAC-01 NEW	CIRNAC	Freshwater Environment	3 - September 2020 - Technical Meetings	<p>CIRNAC requests that Baffinland commits to the providing the following information during the Water Licence Amendment process, subject to Nunavut Water Board requirements.</p> <p>i. Baffinland shall provide a heat balance and relationship of the heat generation associated with the exothermic reaction of PAG waste rock deposited and soluble sulphates and demonstrate that the current design of the waste rock facility will maintain permafrost conditions in the long term (closure and beyond).</p> <p>ii. Baffinland shall perform an oxygen balance of the waste rock facility and correlate it with soluble sulphates. This will provide understanding of the process of ARD generation and the performance of the waste rock facility.</p>	NA	This issue is resolved for environmental assessment purposes and will be further addressed during water license
187	CIRNAC-01a NEW	CIRNAC	Terrestrial Environment	3 - September 2020 - Technical Meetings	Baffinland shall develop a detailed site program to monitor the thaw consolidation and soil deformation under the structures/embankments constructed as part of the Phase 2 Project. The monitoring results shall be compared with the Final Environmental Impact Statement Addendum predictions and appropriate mitigation measures shall be identified and incorporated into the adaptive management approach.	NA	This commitment will be implemented post PC approval
186	CIRNAC-03 NEW	CIRNAC	Freshwater Environment	3 - September 2020 - Technical Meetings	<p>CIRNAC requests that Baffinland commits to the providing the following information during the Water Licence Amendment process, subject to Nunavut Water Board requirements.</p> <p>i. Baffinland shall develop reliable criteria for identification of PAG rock that clearly accounts for uncertainty in the 0.2% total sulphur threshold and the presence of acidic soluble sulphates upon projected life of mine tonnages of PAG and Non-Acid Generating (NAG) rock.</p> <p>ii. Baffinland shall incorporate these criteria, clearly stated ranges in projected life of mine PAG and NAG rock tonnages and the resultant necessary contingencies and methods of validation that need to be incorporated into engineering design, environmental monitoring and management strategies for the Waste Rock Management Plan and Interim Closure and Reclamation Plan. These documents are to be submitted for review during the Water Licence Amendment process, subject to Nunavut Water Board requirements.</p> <p>iii. Baffinland shall review the performance of these plans and provide evidence of the effectiveness of these plans by demonstrating compliance with the management measures and that the desired outcomes of mitigation are achieved on an annual basis.</p>	NA	This issue is resolved for environmental assessment purposes and will be further addressed during water license
185	DFO-3.6.4 DFO-3.6.6	DFO	Marine Environment	3 - September 2020 - Technical Meetings	Baffinland and DFO will provide an update on DFO Comment 3.6.4 and 3.6.6 following bilateral discussions	On or before October 16, 2020	Update will be provided during the Community Roundtable
184	ECCC-3 NEW ECCC-4 NEW ECCC-6 NEW	ECCC	Freshwater Environment	3 - September 2020 - Technical Meetings	Baffinland will address ECCC's outstanding concerns, as identified in their letter to the NIRB on September 4, 2020, through the Nunavut Water Board Water License amendment process for Phase 2	NA	This issue is resolved for environmental assessment purposes and will be further addressed during water license
183	HPI	HPI	Corporate Environment	3 - September 2020 - Technical Meetings	Baffinland will provide a list of participants to each Hamlet and HTO from the North Baffin impacted communities who were present in the North Baffin community meetings reported in the February 2020 community update submission to the NIRB.	On or before October 16, 2020	Update will be provided during the Community Roundtable
182	MHTO	MHTO	Marine Environment	3 - September 2020 - Technical Meetings	Baffinland will look into the feasibility of installing acoustic monitoring equipment at the floe edge.	Complete	Baffinland can install acoustic monitoring equipment at the floe edge. Baffinland has already committed to engage with DFO and Inuit prior to development of acoustic monitoring programs (DFO 3.3.3 NEW). No further commitment is required.

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Commitment Due Date	Notes
181	GN-TRC24	GN	Marine Environment	3 - September 2020 - Technical Meetings	Baffinland will support a revised Term and Condition 103 that reflects and incorporates the commitment made in relation to GN-TRC24. This commitment will be reflected in an updated commitment list. “Baffinland will provide maps with its Annual Reports that illustrate tracks taken by each Project-related ship within the RSA and Baffin Bay, relative to recorded ice coverage. (3) Every 3 years Baffinland will conduct an analysis of ship tracks through Baffin Bay in relation to sea ice to assess the extent of Project shipping’s interaction with sea ice in Baffin Bay. Results to be reported in the Annual Report.” (June commitment from Baffinland) (GN comment TRC 24)	NA	Replaced by updated commitment, line 210
180	QIA-08	QIA	Socio-economic Environment	3 - September 2020 - Technical Meetings	Baffinland and the QIA will work to provide more details on the CRLU Risk Community strategy (QIA 08), including a review of the commitment wording to ensure that it is clear that Baffinland will be working with Inuit on the development of this strategy.	On or before October 16, 2020	Update will be provided during the Community Roundtable
179	GN-TRC24	GN	Marine Environment	3 - September 2020 - Technical Meetings	Baffinland is committed to preparing a memo which includes a fuel spill risk assessment on polar bears, consistent with the risk assessment framework applied in Section 10 of the Phase 2 Addendum.	Complete	
178	IGW HB-HTO	IGW HB	Corporate Environment	3 - September 2020 - Technical Meetings	Baffinland will work with the communities of Igloolik and Sanijarak to establish monitoring programs in relation to the Southern Transportation Corridor to Steensby Inlet following a decision to move forward with that component of the Project	NA	This commitment will be implemented post PC approval
177	IWG	IWG	Atmospheric Environment	3 - September 2020 - Technical Meetings	Baffinland will integrate IQ into its analysis of satellite photo data, once available, of dust dispersion in relation to the Mary River Project	NA	Initiative under existing Project
176	IWG NrCan	IWG	Terrestrial Environment	3 - September 2020 - Technical Meetings	Baffinland will share the results of the Route 3 Geotechnical Program, currently planned to begin in October 2020, with the Igloolik Working Group and Natural Resources Canada	NA	Results will be shared as they become available
175	MHTO	MHTO	Corporate Environment	3 - September 2020 - Technical Meetings	For the duration of the Phase 2 Review Baffinland will prepare and provide public records of all engagement and consultation meetings with MHTO, which include the number of people in attendance, a record of questions comments and concerns raised, as well as copy of any materials provided by Baffinland or other parties as applicable.	NA	Ongoing for the remainder of the Phase 2 Review
174	MHTO	MHTO	Marine Environment	3 - September 2020 - Technical Meetings	Baffinland commits to reviewing proposed ecological triggers from the MHTO for the fall season if they can be provided with dates and corroborating data for IQ.	TBD	Contingent on submission of ecological triggers and rationale by MHTO
173	GN DFO	GN	Corporate Environment	3 - September 2020 - Technical Meetings	Baffinland will provide a technical memo providing additional details on Operational Flexibility.	On or before October 16, 2020	
172	MHTO	MHTO	Freshwater Environment	3 - September 2020 - Technical Meetings	Baffinland commits to work with the MHTO to achieve the objective of PC Term and Condition 48(a)	NA	Initiative under existing Project
171	MHTO	MHTO	Terrestrial Environment	3 - September 2020 - Technical Meetings	Baffinland will meet with the MHTO to discuss their specific objectives with respect to local caribou monitoring programs	TBD	Based on agreement to meet by MHTO
170	MHTO-6 GN-01	MHTO	Terrestrial Environment	3 - September 2020 - Technical Meetings	Baffinland is committed to an annual maximum of 6MT throughput during the construction period for Phase 2.	NA	This commitment will be implemented post PC approval
169	MHTO-4a	MHTO	Marine Environment	3 - September 2020 - Technical Meetings	Baffinland commits to working with MHTO to better understand any issues relating to sea ice use between October 15 and October 31.	TBD	Based on agreement to meet by MHTO
168	PCA-04b	PCA	Marine Environment	3 - September 2020 - Technical Meetings	Baffinland will update the definition of sea ice concentration at which regular shipping activities can proceed as 3/10 ice cover.	NA	This commitment will be implemented post PC approval Resolution is pending resolution of outstanding DFO issues
167	QIA-20 QIA-21	QIA	Atmospheric Environment	3 - September 2020 - Technical Meetings	Baffinland will consider rail car coverings as part of a suite of potential response actions through the development of adaptive management objectives, indicators, thresholds, and responses for rail operation and dust. These OITRs will be developed in consultation and with agreement from the QIA.	NA	This commitment will be implemented post PC approval
166	HPI	HPI	Corporate Environment	3 - September 2020 - Technical Meetings	Baffinland commits to provide the January EA Workshop to each Hamlet and HTO from the North Baffin communities who participated in, with the caveat that this summary report will be unverified by participants.	On or before October 16, 2020	
165	QIA-01 QIA-02	QIA	Terrestrial Environment	3 - September 2020 - Technical Meetings	Baffinland commits to compile all commitments related to caribou in a single document for review by relevant parties	Complete	This has been achieved through reorganization of this commitment list

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Commitment Due Date	Notes
164	QIA-01 DFO-3.4 NEW PCA-02 WWF-FWS-03	QIA	Terrestrial Environment Marine Environment	3 - September 2020 - Technical Meetings	Baffinland will provide an updated draft revised terms of references for the marine and terrestrial working groups, including notes provided by other parties, by October 16.	On or before October 16, 2020	Initiative under existing Project
163	QIA-01 QIA-02	QIA	Terrestrial Environment	3 - September 2020 - Technical Meetings	Baffinland is committed to using Inuit input to finalize wildlife crossings, land user crossings (subject to Transport Canada regulations and acceptance), slope designs, and adaptive management (i.e. future rail improvements or mitigation measures).	NA	This commitment will be implemented post PC approval
162	QIA-01 QIA-02	QIA	Terrestrial Environment	3 - September 2020 - Technical Meetings	Baffinland is committed to coming to agreement on railway monitoring. A multi-dimensional approach to monitoring is proposed which would involve Inuit staff working under the Inuit Stewardship Plan monitoring according to Inuit interests as informed by the Inuit Committee, and, <u>QIA technical staff.</u>	NA	This commitment will be implemented post PC approval
161	QIA-01 QIA-02	QIA	Terrestrial Environment	3 - September 2020 - Technical Meetings	Baffinland is committed to evaluating the Railway Operation and Maintenance Plan against the Adaptive Management Plan and Checklist, and subsequent updates.	NA	This commitment will be implemented post PC approval
160	QIA-01 QIA-02	QIA	Terrestrial Environment	3 - September 2020 - Technical Meetings	Baffinland is committed to having QIA's approval of the Interim Closure and Reclamation Plan (ICRP) prior to the NWB Public Hearing for Phase 2 Water License Amendments.	NA	This issue is resolved for environmental assessment purposes and will be further <u>addressed during water license</u>
159	QIA-01 QIA-02	QIA	Terrestrial Environment	3 - September 2020 - Technical Meetings	Baffinland will be solely responsible for all railway and rail feature construction costs, and all associated maintenance, should Adaptive Management Plan measures be triggered and identify that a modification to the rail must be made in accordance with adaptive management principles.	NA	This commitment will be implemented post PC approval
158	QIA-02 GN-03	QIA	Terrestrial Environment	3 - September 2020 - Technical Meetings	Baffinland will provide the full cut and fill profile of the north rail in relation to the potential caribou movement corridors to the QIA and GN. The figures will be colour-coded to show cut and fill profiles categorized into <1 m, 1-2 m, and >2 m profiles.	On or before October 16, 2020	
157	QIA-08	QIA	Socio-economic Environment	3 - September 2020 - Technical Meetings	Baffinland commits to modify commitment wording to QIA-08 to make clear the Risk Communication Strategy will be developed with Inuit. Proposed wording: Baffinland commits to develop a risk communication strategy focused on the gathering and dissemination of information to Inuit related to the Baffinland Iron Ore Mines Project, and linkages between the Project and human health and ecological risk assessment topics. The strategy will focus on , <u>but not be limited to,</u> building capacity within community groups to understand the mining process, elements of the mining process and how substances produced from the mining process move in the environment. <u>Baffinland will work with communities to develop this program to ensure it is relevant to Inuit.</u>	NA	This commitment will be implemented post PC approval
156	QIA-09	QIA	Terrestrial Environment	3 - September 2020 - Technical Meetings	Baffinland commits to working with QIA and the North Baffin Communities to develop revegetation standards based on IQ for reclamation and revegetation including meeting standards for cultural use and addressing community concerns with respect to re-establishing use of critical areas	NA	This commitment will be implemented post PC approval
155	QIA-20 QIA-21	QIA	Freshwater Environment	3 - September 2020 - Technical Meetings	Baffinland has agreed to a process to work with QIA to consider waterbodies of heightened importance and a tiered approach to compensation in the Water Compensation Agreement Process.	NA	This issue is resolved for environmental assessment purposes and will be further <u>addressed during water license</u>
154	QIA-38	QIA	Socio-economic Environment	3 - September 2020 - Technical Meetings	Baffinland commits to providing Inuit employees with a childcare subsidy	NA	This commitment will be implemented post PC approval
153	QIA-38	QIA	Socio-economic Environment	3 - September 2020 - Technical Meetings	Baffinland commits to providing support to communities to ensure adequate childcare facilities become available	NA	This commitment will be implemented post PC approval
152	QIA-38	QIA	Socio-economic Environment	3 - September 2020 - Technical Meetings	Baffinland commits to working with QIA to develop quantiative measurable objectives that will provide greater insight into the mitigation of negative social impacts and the promotion of positive benefits	NA	This commitment will be implemented post PC approval
151	QIA-38	QIA	Socio-economic Environment	3 - September 2020 - Technical Meetings	Baffinland commits to funding QIA and the communities development of a social monitoring program to greater insight into the mitigation of negative social impacts and the promotion of positive benefits?	NA	This commitment will be implemented post PC approval
150	QIA-38	QIA	Socio-economic Environment	3 - September 2020 - Technical Meetings	Baffinland is committed to working with QIA and to allow QIA with approval of socioeconomic objectives, indicators, thresholds and responses as part of Baffinland's adaptive management principles.	NA	This commitment will be implemented post PC approval
149	QIA-40	QIA	Atmospheric Environment	3 - September 2020 - Technical Meetings	Baffinland will provide an update on the development of the Climate Change Strategy 15 days prior to a Public Hearing. A full draft is expected by December 31, 2020 and a final copy by June 30, 2021. Baffinland will endeavor to meet the requested timeline, but this should not be viewed as a barrier to moving forward with a Public Hearing as this is an ongoing operational commitment.	NA	Initiative under existing Project; Status update will be provided 15 days prior to a Public Hearing
148	QIA-41	QIA	Freshwater Environment	3 - September 2020 - Technical Meetings	Baffinland is prepared to adopt a more precautionary moderate risk threshold for lake sedimentation. The current moderate risk threshold for lake sedimentation is 1 mm, adopted from the FEIS. Baffinland will adopt the lake sedimentation rate predicted in the FEIS of 0.54mm, which is about half the current threshold. A low risk threshold of 0.15 mm will also be applied that will trigger corresponding low risk response actions.	NA	This commitment will be implemented post PC approval

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Commitment Due Date	Notes
147	QIA-42	QIA	Freshwater Environment	3 - September 2020 - Technical Meetings	The commitment made under QIA 42 will be amended to reflect the following: Metrics on fish health (fish presence, catch per unit effort, fish length and fork length) are collected from 60 crossing sites along the Tote Road and reported annually to DFO, as well as in the Annual Report for Operations to the QIA and NWB, as well as the Annual Report for the NIRB. Baffinland already monitors water quality and sediment quality as part of the Tote Road Monitoring Program, and we commit to add observations regarding physical condition of fish (e.g., lesions, injuries). Baffinland and QIA will determine an appropriate approach to analysis for the 2021 reporting period.	NA	This commitment will be implemented post PC approval
146	QIA-42	QIA	Freshwater Environment	3 - September 2020 - Technical Meetings	Baffinland commits to coordinating freshwater focused workshops to address specific freshwater issues. Baffinland does not support the implementation of a regular occurring freshwater working group.	NA	This issue is resolved for environmental assessment purposes and will be further addressed during water license
145	QIA-42 MHTO HPI	QIA	Freshwater Environment	3 - September 2020 - Technical Meetings	Baffinland commits to providing QIA, MHTO and HPI a copy of the comprehensive lessons learned report (for the Tote Road crossings) when it is sen to DFO as part of the Phase 2 FAA.	NA	This commitment will be implemented post PC approval
144	QIA-45	QIA	Marine Environment	3 - September 2020 - Technical Meetings	Details of the DFO led sampling program to be carried out at Milne Port in 2021 will be shared through the Marine Environment Working Group prior to the 2021 shipping season. Baffinland notes that QIA has requested the details to be shared prior to a Public Hearing. This is contingent on the completion of the initial draft by DFO, and preliminary review by Baffinland, before it can be released for public review. Baffinland and DFO will endeavor to meet the requested timeline, but this should not be viewed as a barrier to moving forward with a Public Hearing.	NA	Tentatively before the Final Hearing, not a requirement
143	QIA-47 QIA-48	QIA	Marine Environment	3 - September 2020 - Technical Meetings	Baffinland commit to working with community organizations and community members to address any issues arising with respect to sea ice use and potential inference from shipping activity	NA	This commitment will be implemented post PC approval
142	QIA-47 QIA-48	QIA	Marine Environment	3 - September 2020 - Technical Meetings	Baffinland commits to include a checklist of information with regard to Inuit use of sea ice in its various forms (not just use of the floe edge) in the start and close of shipping season determinants report committed to DFO in relation to DFO 3.2.1 NEW.	NA	This commitment will be implemented post PC approval
141	QIA-51	QIA	Marine Environment	3 - September 2020 - Technical Meetings	Baffinland commits to provide a supplementary submission that documents actual vessel noise signatures as recorded during PAM, a comparison with the modelled noise outputs used in the assessment, and a discussion on how any differences, if they exist, affect the impact assessment or inform opportunities for mitigation and adaptive management. Baffinland notes that QIA has requested the details to be shared prior to a Public Hearing. Baffinland will endeavor to meet the requested timeline, but this should not be viewed as a barrier to moving forward with a Public Hearing.	NA	Tentatively before the Final Hearing, not a requirement
140	WWF	WWF	Marine Environment	3 - September 2020 - Technical Meetings	WWF has proposed Baffinland restrict the dumping from ore carriers of treated and untreated sewage and greywater in the RSA and restricting the use of open loop scrubbers. Baffinland is evaluating the feasibility of this proposal for Phase 2 and will provide an update prior to a Public Hearing.	NA	This commitment will be implemented post PC approval
139	WWF-08	WWF	Atmospheric Environment	3 - September 2020 - Technical Meetings	Baffinland commits to tracking and reporting annually GHG emissions for its operations, and upon evaluation of existing data, subsequently pursue efforts to set multi-year energy use and GHG emissions targets, that aim to ensure continual performance improvements over time, and achieve alignment with industry best practice, in the next draft of the Climate Action Plan.	NA	This commitment will be implemented post PC approval
138	MHTO-5d WWF	MHTO	Corporate Environment	3 - September 2020 - Technical Meetings	Baffinland commits to integrating independent relevant community based monitoring into phase 2 adaptive management, and mitigation measures when available and shared with Baffinland for inclusion. This could be integrated under the Inuit Stewardship Plan or brought forward through other venues by community participants in the environmental and socio-economic working groups. Baffinland will incorporate results of relevant community based monitoring that have been brought forward to it in future environmental assessments should they be developed.	NA	This commitment will be implemented post PC approval
137	General	General	Corporate Environment	3 - September 2020 - Technical Meetings	Baffinland commits to including information on activities and modifications made to the Project resulting from input from the Inuit Committee, the Inuit Stewardship Plan, the Inuit Social Oversight Committee, and any Culture Resource and Land Use assessments and monitoring results in their Annual Report to NIRB.	NA	This commitment will be implemented post PC approval
136	QIA-08	QIA	Socio-economic Environment	3 - September 2020 - Technical Meetings	Baffinland is committed to fully resourcing an Inuit-led country food baseline study for Pond Inlet and integrating the results into Project management, monitoring and compensation systems, including reconsideration of mitigations and compensation programs proposed by Baffinland in relation to food security based on the results of the Pond Inlet Country Food Baseline Study. This work will be Inuit-led and administered by the QIA, and supported by Baffinland. This information will inform long-term project monitoring consistent with the vision and principles of the Inuit Stewardship Plan and the Adaptive Management Plan. This project may also provide a basis against which the Wildlife Compensation Fund and Baffinland's other food security initiatives can be assessed over time. Baffinland will fund this study to completion	NA	Implementation is ongoing, completion not required for environmental assessment purposes

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Commitment Due Date	Notes
135	QIA-01 QIA-02 QIA-04 QIA-07 QIA-11 QIA-38 QIA-46 QIA-49	QIA	Corporate Environment	3 - September 2020 - Technical Meetings	<p>Baffinland will work with the QIA to jointly develop and approve the Adaptive Management Plan and associated sub-plans for the Mary River Project. This process will also include the development of Inuit Objectives, Indicators, Thresholds, and Responses, which will involve the impacted communities through the Inuit Committee and Inuit Social Oversight Committee. The Inuit Social Oversight Committee will support decision making if additional responses are required due to the monitoring results.</p> <p>Key areas for which QIA, based on Inuit input, will have adaptive management approvals are, but not limited to, the marine, terrestrial and social environments. This process will ensure that both Inuit Qaujimagatuqangit and western science will be applied to project operations and management decisions. Baffinland will fund Inuit participation in this initiative as well as activities needed to implement Adaptive Management responses for the life of the Project.</p>	NA	Implementation is ongoing, completion not required for environmental assessment purposes
134	QIA0-2 QIA-03 QIA0-7 QIA-10 QIA-11 QIA-38	QIA0	Corporate Environment	3 - September 2020 - Technical Meetings	<p>Baffinland will support the development of an independent, Inuit-led Inuit Committee. The Inuit Committee will be administered by the QIA and shall be comprised of members nominated from the five Project impacted Communities.</p> <p>The Inuit Committee will direct the monitoring of the Inuit Stewardship Plan's Culture, Resource, and Land Use stream to capture the Inuit experience and will support decision making if additional responses are required due to the monitoring results. The Inuit Committee will also have a role in identifying Inuit objectives, indicators, thresholds and responses to be built into the Project's Adaptive Management Plan. Baffinland will fund the ISP and Inuit Committee for the life of the Project. QIA will administer the ISP for the life of the Project.</p>	NA	Implementation is ongoing, completion not required for environmental assessment purposes
133	QIA-02 QIA-09 QIA-11 QIA-38 QIA-46 QIA-49	QIA	Socio-economic Environment	3 - September 2020 - Technical Meetings	<p>Baffinland and QIA agree to complete an additional Inuit-driven CRLU Assessment in consultation with the impacted communities, prior to major construction activities related to Phase 2.</p> <p>It is expected that this work will result in modifications and additions to mitigation, monitoring, adaptive management, and compensation measures, to be reflected in the Adaptive Management Plan and associated Environmental Management Plans. This will include updating Objectives, Indicators, Thresholds and Responses used in Project monitoring and Management. Baffinland will fund this work to completion.</p>	NA	Implementation is ongoing, completion not required for environmental assessment purposes
132	QIA-22 QIA-30 QIA-53	QIA	Corporate Environment	3 - September 2020 - Technical Meetings	<p>Changes in project scope, which could reasonably require amendment of the Project Certificate would result in the following obligations being initiated prior to the filing of a formal proposal to amend the project certificate:</p> <p>(a) Baffinland commits to carry out a Culture Resource and Land Use assessment conducted with QIA and Impacted communities, prior to the submission of an FEIS or FEIS Addendum.</p> <p>(b) Baffinland commits to carry out a Cumulative Effects Assessment conducted with QIA and Impacted communities, prior to the submission of an FEIS or FEIS Addendum.</p> <p>(c) Baffinland commits to review and renegotiation of the IIBA consistent with IIBA Article 22.4.</p> <p>(d) Parties come to agreement on increases to IIBA Implementation Costs.</p>	NA	Implementation is ongoing, completion not required for environmental assessment purposes
131	QIA-03 QIA-04 QIA-05 QIA-09 QIA-10 QIA-38 QIA-46 QIA-49	QIA	Corporate Environment	3 - September 2020 - Technical Meetings	<p>Baffinland will support Inuit to conduct independent, proactive monitoring of the Project for the purpose of mitigating adverse impacts and enhancing beneficial outcomes in a manner that captures the direct experiences of Inuit. A project management plan (the Inuit Stewardship Plan) will be developed by QIA, with input from an Inuit Committee and an Inuit Social Oversight Committee made up of members from the five Project impacted Communities.</p> <p>The Inuit Stewardship Plan will have two separate but linked streams:</p> <ul style="list-style-type: none"> • Culture, Resource, and Land Use Stream • Social Stream <p>Each stream will include dedicated monitoring led by Inuit monitors:</p> <ul style="list-style-type: none"> • The Culture, Resources and Land Use Monitoring Program, with a focus on gathering data from impacted communities and through direct observations of changes on the land, waters, ice and wildlife • The Social Stream will see impacted community members trained to gather information about impacts on community well-being <p>Information from both monitoring streams, and input from the two Committees, will directly inform the Project management system.</p>	NA	Implementation is ongoing, completion not required for environmental assessment purposes
130	QIA-38	QIA	Socio-economic Environment	3 - September 2020 - Technical Meetings	<p>Baffinland will support the development of an independent, Inuit-led Inuit Social Oversight Committee (ISOC). The Inuit Social Oversight Committee will be overseen and administered by QIA and shall be comprised of members nominated from the impacted communities. The Inuit Social Oversight Committee will direct the monitoring of the ISP's social stream to capture the Inuit experience and will support decision making if additional responses are required due to the monitoring results.</p> <p>Baffinland will work with QIA and the impacted Inuit communities to develop an enhanced, Inuit-driven, social monitoring program related to the Project. This monitoring program focused on community wellbeing will address a known monitoring gap and complement other forms of monitoring related to the project. Baffinland will fund the ISP and ISOC for the life of Project.</p>	NA	Implementation is ongoing, completion not required for environmental assessment purposes
129	QIA-6 QIA-20	QIA	Terrestrial Environment	3 - September 2020 - Technical Meetings	<p>Baffinland commits to adopt Route 3 for the final rail alignment and is committed to bearing the costs of transitioning to this alternative route. Baffinland agrees that technical issues associated with Route 3 will be addressed at the cost and risk of Baffinland and will not be used as the basis for reverting to Route 1.</p>	NA	This commitment will be implemented post PC approval

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Commitment Due Date	Notes
128	QIA-20 QIA-21	QIA	Freshwater Environment	03 - September 2020 - Technical Meetings	Baffinland is committed, within the next year, to support an Inuit-led IQ study on water values in the Project-affected area, and to integrate the results into a revised water compensation agreement that establishes a tiered approach to compensation for substantial effects on water that increases compensation for impacts on waterbodies deemed by Inuit to be of heightened importance. In addition, a finding of a waterbody of heightened importance will increase the amount of monitoring focus such waterbodies receive, where a project impact pathway can be established. Monitoring will be carried out either through Baffinland's scientific monitoring or the new Inuit-led Culture, Resources and Land Use Monitoring Program.	NA	Implementation is ongoing, completion not required for environmental assessment purposes
127	DFO 3.1.2 NEW	DFO	Marine Environment	02 - February 2020 Response to Updated Technical Comments	Baffinland can confirm that it will not surpass the number of vessels described and assessed in the Phase 2 FEIS Addendum to ship an additional 20% of ore over 12 Mtpa in the maximum operational flexibility scenario. For clarity, this is a limit of 176 ore carriers, 12 freight vessels and 12 fuel vessels.	NA	This commitment will be implemented post PC approval
126	DFO 3.10.1 NEW	DFO	Marine Environment	02 - February 2020 Response to Updated Technical Comments	Baffinland will provide a detailed water withdrawal plan that includes an in-depth risk analysis informed by site specific fish and fish habitat features for the waterbodies chosen for water withdrawal as supplemental information to water licensing and any DFO Request for Review submission.	NA	This commitment will be implemented post PC approval
125	DFO 3.10.2 NEW	DFO	Marine Environment	02 - February 2020 Response to Updated Technical Comments	Baffinland will conduct a thorough localized assessment on the waterbodies selected for water withdrawal in order to adequately assess the potential impacts on the fish habitat resulting from 20% of the 10-year dry unit runoff water withdrawal on fish-bearing watercourses and connecting waterbodies. This assessment will include an assessment of the effects to littoral/shore/riparian areas from the proposed water withdrawal, the specific withdrawal locations proposed for each waterbody including fish habitat in the area and updated rationale on how this level of withdrawal will be an environmentally protective threshold. This content will be included as supplemental information to water licensing and regulatory permit applications made to DFO.	NA	This commitment will be implemented post PC approval
124	DFO 3.10.3 NEW	DFO	Marine Environment	02 - February 2020 Response to Updated Technical Comments	Baffinland will provide additional rationale/ assessment to support the assertion that 40% of the 10-year dry unit runoff water withdrawal from non-fish-bearing streams will not negatively affect downstream fish-bearing waterbodies. This content will be included as supplemental information to water licensing and regulatory permit applications made to DFO.	NA	This commitment will be implemented post PC approval
123	DFO 3.2.1 NEW	DFO	Marine Environment	02 - February 2020 Response to Updated Technical Comments	Baffinland commits to provide a summary of the following information as part of its annual reporting requirements, and in preliminary field reports within 35 days of Spring shoulder season shipping activities commencing and 15 days of Fall shoulder season activities ending: i. marine monitoring programs, ii. determinants for opening and closing the shipping season, iii. ecological and cultural (or "Inuit use") factors that influence shipping activities iiii. other information, as requested by DFO and other regulators and key stakeholders, relevant to the marine environment The requirement for, and format of, these reports will be included in the final Marine Monitoring Plan, should Phase 2 be approved. Additional information requested after submission of the preliminary field report is to be provided by Baffinland as a memo within 35 days and will be included in Annual Reporting.	NA	This commitment will be implemented post PC approval
122	DFO 3.2.2 NEW	DFO	Marine Environment	02 - February 2020 Response to Updated Technical Comments	Baffinland commits to updating the Draft Early Shipping Season-Operational Guide, to better characterize considerations used in determining the nominal shipping season. See response to DFO 3.2.2 for the commitment to report on determinants of opening and closing the shipping season.	NA	This commitment will be implemented post PC approval
121	DFO 3.3.3 NEW	DFO	Marine Environment	02 - February 2020 Response to Updated Technical Comments	Baffinland commits to collecting acoustic data in the RSA using AMARs to characterize the degree of conservatism in the sound propagation modelling, at an appropriate frequency for the duration of the Phase 2 construction and operation periods. Baffinland will collaborate with Inuit and DFO on the development of the draft program prior to submission to the MEWG for additional advice and recommendations. Recommendations from MEWG members will be treated consistent with the consensus-based decision requirements of the final updated MEWG Terms of Reference. Baffinland commits to updating the marine monitoring plan (MMP) with this long-term monitoring plan, should Phase 2 be approved.	NA	This commitment will be implemented post PC approval
120	DFO 3.4.1 NEW	DFO	Marine Environment	02 - February 2020 Response to Updated Technical Comments	DFO and BIM are still working to update commitment wording from 3.4.1- DFO does not currently agree with the wording provided for 3.4.1- DFO continues to request that a specific monitoring plan for icebreaking/shoulder season be developed and will continue to work with BIM to find agreed upon wording for DFO 3.4.1 NEW- Baffinland has provided a draft Marine Monitoring Plan (MMP) as part of the Phase 2 review process. Should Phase 2 be approved, Baffinland will update this Plan to reflect all relevant commitments and terms and conditions.	NA	Replaced by new commitment

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Commitment Due Date	Notes
119	DFO 3.4.1 NEW	DFO	Marine Environment	02 - February 2020 Response to Updated Technical Comments	Rather than develop a separate, stand-alone monitoring plan specific to icebreaking as suggested by DFO, Baffinland will include a specific section relevant to icebreaking and shoulder season shipping activities in the MMP. Survey methodology and indicators (including rationale) will be determined in consultation with the MEWG, of which DFO is a member. Recommendations from MEWG members will be treated consistent with the consensus-based decision requirements of the final updated MEWG Terms of Reference.	NA	Replaced by new commitment
118	DFO 3.4.1 NEW	DFO	Marine Environment	02 - February 2020 Response to Updated Technical Comments	An updated draft MMP will be provided to the MEWG for comment and the NIRB within 180 days of issuance of an amended Project Certificate, should Phase 2 be approved. Baffinland commits to continue working with DFO and the MEWG to finalize the Plan.	NA	Replaced by new commitment
117	DFO 3.4.3 NEW	DFO	Marine Environment	02 - February 2020 Response to Updated Technical Comments	Baffinland commits to produce a response plan for the potential event of an ice entrapment, should this be observed during the annual end-of-season clearance surveys. This plan will include action level triggers and associated response actions. This plan will be developed in consultation with the MHTO and DFO, understanding that these two groups are ultimately responsible for determining the appropriate course of action should an entrapment event occur.	NA	Replaced by new commitment
116	DFO 3.5 NEW	DFO	Marine Environment	02 - February 2020 Response to Updated Technical Comments	Baffinland will prepare and submit to DFO a literature review of ship-based marine mammal remote monitoring systems. This literature review will include a summary of commercially available remote wildlife monitoring systems that could be installed on vessels to supplement existing marine mammal monitoring programs and enhance detection of ship strikes on marine mammals. The remote monitoring systems identified in this literature review will inform adaptive management, should the need be triggered. For clarity, in the event of a ship strike on a marine mammal, a single event, although unlikely based on present mitigations (i.e. speed restrictions), would trigger an adaptive management response.	Complete	Replaced by new commitment
115	DFO 3.5 NEW	DFO	Marine Environment	02 - February 2020 Response to Updated Technical Comments	Baffinland will implement an incidental marine mammal monitoring program with vessel operators calling on Milne Port, which will request incidental observations of marine mammals to be recorded and relayed to Baffinland. In support of this program, Baffinland will develop educational materials for vessel crew to assist in marine mammal identification and data recording. Baffinland will provide a draft of the materials and program for review by the MEWG before they are finalized.	NA	This commitment will be implemented post PC approval
114	DFO 3.6.1 NEW	DFO	Marine Environment	02 - February 2020 Response to Updated Technical Comments	Project vessels are limited to releasing ballast water at one of the three anchorage locations at Milne Port, or while berthed at the ore dock. Further, prior to any ballast water discharge D-1 compliance testing must be completed. Instructions to not release ballast water prior to arrival at Milne Port and completion of ballast water testing is provided to all ship operators in Baffinland's Standing Instruction to Masters (SITM). This requirement will remain under Phase 2.	NA	This commitment will be implemented post PC approval
113	DFO 3.6.10 NEW	DFO	Marine Environment	02 - February 2020 Response to Updated Technical Comments	Baffinland commits to work with the MEWG and DFO to establish species-specific Rapid Response Plans. Rapid Response Plans will be developed for species identified as high risk through ongoing NIS monitoring in the receiving environment, the ROV (or any other future) biofouling monitoring program, results yielded from the 2021 biological ballast water sampling pilot program (and any ongoing ballast monitoring), examination of existing invasive species databases and lists in key ecoregions where vessels calling originate from (as per Goldsmit et al., 2020 Global Change Biology), and based on ranking of potential risk using the Canadian Marine Invasive Screening Tool.	NA	This commitment will be implemented post PC approval
112	DFO 3.6.2 NEW	DFO	Marine Environment	02 - February 2020 Response to Updated Technical Comments	Baffinland commits to record the Milne Port anchorage and associated coordinates where compliance testing and discharge occurs in the ballast water testing forms, completed by Baffinland's environmental monitors. A dataset with discharge coordinates will be provided to MEWG members as part of annual reporting requirements.	NA	Replaced by new commitment wording incorporating input from QIA
111	DFO 3.6.3 NEW	DFO	Marine Environment	02 - February 2020 Response to Updated Technical Comments	Baffinland will require all vessels calling on Milne Port that treat their ballast under the D2 Standard to also perform a ballast water exchange prior to treatment. For ships unable to conduct exchange as specified in Canadian Ballast Water Regulations (e.g. ships on Canadian domestic trips), exchange is to be conducted as specified in revised ABWEZs for Eastern Arctic as per DFO CSAS advice (see DFO 2015, Stewart et al. 2015 and Goldsmit et al. 2019). This updated commitment will be reflected in the 2020 Standing Instructions to Masters.	NA	Replaced by new commitment wording incorporating input from QIA
110	DFO 3.6.4 NEW	DFO	Marine Environment	02 - February 2020 Response to Updated Technical Comments	Baffinland will consider discontinuing exchange plus treatment requirements should treatment systems efficacy reach a point that makes the benefits of an exchange plus treatment system negligible. This decision will be made in consultation with TC and DFO, and will be based on a consideration of factors outlined in DFO 2019 (i.e. if ballast water organism concentration or composition, environmental conditions, shipping patterns, proportion of voyages meeting the D-2 standard, or available data describing these conditions change in the future, and updates to global research on ballast systems). In this event Baffinland will update ballast water dispersion modelling to more accurately reflect the spectrum of salinity, temperature, and discharge volumes that can be expected to be discharged at Milne Port under Phase 2 operations if prior exchange were to be discontinued.	NA	Replaced by new commitment wording incorporating input from QIA

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Commitment Due Date	Notes
109	DFO 3.6.5 NEW TC-02 NEW	DFO 3.6.5 NEW TC	Marine Environment	02 - February 2020 Response to Updated Technical Comments	<p>Transport Canada appreciates the efforts by BIM to ensure current regulations are followed with respect to their plans for ballast water management. Given the learning curve associated with use of ballast water treatment systems, for Phase 2, Transport Canada (TC) in consultation with Fisheries and Oceans Canada (DFO), recommends, in conjunction with present sampling and testing protocols being proposed/adopted [NTD - will be summarized in complete package] by BIM, that BIM implement a ballast water compliance sampling plan based on a risk-based targeting methodology to be developed in consultation with DFO and TC.</p> <p>Such a risk-based methodology should be applied to evaluate the risk of all vessel ballast water management (D1, D2) with subsequent salinity and D-2 biological compliance sampling conducted on vessels identified as high or very high risk. The respective risk-based methodology and associated ballast water compliance sampling plan will be developed in consultation with DFO and TC following completion of DFO's Project-specific sampling conducted on a subset of vessels calling to Milne Port. The risk-based methodology and associated ballast water compliance sampling plan should include a consideration of other compliance initiatives or research being undertaken elsewhere by TC relative to implementation of the D-2 standard.</p> <p>Sampling conducted that supports building a body of knowledge for D-2 treatment systems, beyond biological compliance sampling conducted on high risk and very high risk tanks, should not compromise Baffinland's ability to transport annual ore quantities as approved under a modified Project Certificate No 005. Understanding that the rationale for this program is tied to a learning curve associated with the use of ballast water treatment systems, the compliance sampling program and risk based methodology will be adapted as deemed necessary based on the results of the</p>	NA	This commitment will be implemented post PC approval
108	DFO 3.6.6 NEW	DFO	Marine Environment	02 - February 2020 Response to Updated Technical Comments	Baffinland remains committed to conducting ship hull biofouling monitoring surveys using an ROV on ore carriers, with focused efforts on areas of the hull and niche areas where biofouling has the greatest potential to occur (e.g. chain lockers, stern tube, rope guard, bottom, rubber side, etc.). The projected number of ore carriers that will be sampled annually will be determined in consultation with the MEWG, of which DFO is a member. Recommendations from MEWG members will be treated consistent with the consensus based decision requirements of the final updated MEWG Terms of Reference.	NA	Replaced by new series of commitments to DFO
107	DFO 3.6.7 NEW	DFO	Marine Environment	02 - February 2020 Response to Updated Technical Comments	<p>Baffinland commits to updating the marine monitoring plan (MMP) in consultation with MEWG members and this will be completed prior to the start of the Phase 2 increased shipping season. The updated MMP will detail the revised MEEMP sampling design which includes greater seasonal and spatial coverage and increased sampling effort and sample sizes to address DFO concerns related to achieving sufficient statistical power for detection of project effects (≥0.8) (as per recommendations in DFO 2020, pages 4-7).</p> <p><u>Background</u></p> <p>The Aquatic Invasive Species (AIS) Monitoring Program is a biological screening program (species ID, presence/absence data); as such, it does not involve any statistical analysis. The updated MMP will include clear protocols for determining identity and status of species collected as part of this program (as per recommendations in DFO 2019 and DFO 2020 and comments on disposition table provided in June (DFO 3.8.1) and November (DFO 3.10.4). The sampling effort for the AIS Monitoring Program is currently very rigorous.</p>	NA	Replaced by new commitment wording incorporating input from QIA
106	DFO 3.6.8 NEW	DFO	Marine Environment	02 - February 2020 Response to Updated Technical Comments	Baffinland continues to maintain that the identification of high-risk biological species or groupings of species of concern is the primary responsibility of DFO. Despite this, Baffinland is committed to supporting the development of a trigger list of species and associated response plans through the process outlined in response to DFO 3.6.9 and 3.6.10, and to refining that list with DFO following Phase 2 approval.	NA	Replaced by new commitment wording incorporating input from QIA
105	DFO 3.6.9 NEW	DFO	Marine Environment	02 - February 2020 Response to Updated Technical Comments	Baffinland commits to follow the most updated version of DFO's AIS Rapid Response Framework in the event that a nonindigenous species is introduced and/or becomes established.	NA	This commitment will be implemented post PC approval
104	DFO 3.8 NEW	DFO	Marine Environment	02 - February 2020 Response to Updated Technical Comments	Baffinland will provide decision criteria and decision matrix for the selection of water crossing methods for fish bearing watercourses in support of any regulatory permit applications made to DFO.	NA	This commitment will be implemented post PC approval
103	DFO 3.9.1 NEW	DFO	Marine Environment	02 - February 2020 Response to Updated Technical Comments	Baffinland will analyze monitoring reports related to the Tote Road existing watercourses crossings and provide comprehensive lessons learned report (for the Tote Road crossings) that would include strategic analysis of what will be done differently to ensure the fish-passage issue will be mitigated, avoided and addressed. This report will be included as part of any regulatory applications made to DFO.	NA	This commitment will be implemented post PC approval
102	DFO 3.9.2 NEW	DFO	Marine Environment	02 - February 2020 Response to Updated Technical Comments	Baffinland will provide an updated hydrological assessment of proposed watercourses crossings that includes, but is not limited to, crossing selection and design criteria, flow rates, velocities and discharge, and fish passage. This content will be included as part of any regulatory permit applications made to DFO.	NA	This commitment will be implemented post PC approval

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Commitment Due Date	Notes
101	ECCC-1 NEW ECCC-FC4	ECCC	Atmospheric Environment	02 - February 2020 Response to Updated Technical Comments	Baffinland commits to investigate and implement black carbon reduction measures, where feasible, and provide a preliminary mitigation measure feasibility assessment 30 days prior to a Public Hearing, and a follow up report in the 2020 Annual Report (which wouldn't be until 2021). The feasibility assessment will consider the use of distillate fuels as a reduction measure for local black carbon emissions. Baffinland to provide the preliminary feasibility assessment 30 days prior to a Public Hearing, and a follow up report in the 2020 Annual Report (which wouldn't be until 2021)	On or before October 16, 2020	Updated commitment wording included here
100	CIRNAC-05	CIRNAC	Freshwater Environment	01 - November 2019 - Public Hearing	Baffinland shall complete thermal modeling of the Waste Rock Facility and include the results in the Waste Rock Management Plan prior to the conclusion of Water Licence Amendment process, subject to NWB requirements.	NA	This issue is resolved for environmental assessment purposes and will be further addressed during water license
99	CIRNAC-07	CIRNAC	Freshwater Environment	01 - November 2019 - Public Hearing	Baffinland shall confirm the origin of elevated concentrations of aluminum, mercury and copper in Shake Flask Extraction test results for rock materials sourced from quarry and borrow pits for road / railway construction, and develop and implement an appropriate water quality monitoring and management strategy for railway corridor rock quarries as part of water licensing. The monitoring results shall be compared with the FEIS Addendum predictions and appropriate mitigation measures shall be identified and implemented.	NA	This commitment will be implemented post PC approval; CIRNAC 2 NEW aligns with response to CIRNAC-07.
98	DFO 3.10.2 TC-02	DFO 3.10.2 TC	Marine- Environment	01 - November 2019 - Public Hearing	Baffinland will revise the Ballast Water Management Plan to include a requirement for all vessels to conduct ballast water exchanges (with or without D2 treatment systems) prior to calling on Milne Port, until such a time that ballast water treatment systems are compliant with the D2 standards set by the IMO. Should Baffinland wish to discontinue the practice of exchange plus treatment, Baffinland will provide updated ballast water modelling that reflects the range of salinity that may be present in the ballast water tanks where no exchange occurs.	NA	Replaced by DFO 3.6 NEW Commitments
97	DFO 3.10.5	DFO	Marine- Environment	01 - November 2019 - Public Hearing	Baffinland will update the AIS monitoring program to describe the process it follows for identifying high-risk biological species discovered through its sampling programs.	NA	Replaced by DFO 3.6 NEW Commitments
96	DFO 3.10.6	DFO	Marine- Environment	01 - November 2019 - Public Hearing	Baffinland will work with DFO to develop a management and response approach in the event a non-indigenous species is identified during monitoring. This response approach will be added as an attachment to the AIS monitoring program.	NA	Replaced by DFO 3.6 NEW Commitments
95	DFO 3.3	DFO	Marine Environment	01 - November 2019 - Public Hearing	Baffinland will implement the following requirement for vessels serving the Mary River Project: Once advised of the presence and location of bowhead whales, Masters of project ships operating within the RSA will be instructed to exercise due caution in order to minimize the likelihood of interaction with the mammals. In such events, Masters will be authorized to adjust speed or alter course within safe and prudent navigational constraints to avoid to the extent possible interaction with bowhead whales.	NA	Baffinland notes that the surveillance measures implemented in the Gulf of St Lawrence, as referenced by DFO, are to spot right whales and implement the 10 knot speed restriction. This additional mitigation measure is not required in the RSA as a blanket 9 knot speed limit is in place for the entire season. The only mitigation measure more restrictive than the speed limit is a 15 day shut down for non-tended fixed gear fisheries. Again, this is not applicable to Mary River operations. Baffinland strongly urges DFO to consider the commitment provided above and work with Baffinland to implement it.

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Commitment Due Date	Notes
94	DFO 3.4	DFO	Marine Environment	01 - November 2019 - Public Hearing	Environmental and ecological criteria for the opening of the shipping season is described in the Shoulder Season Shipping Operational Guide. The following clarifications will be added to the Shoulder Season Shipping Operational Guide to reflect the environmental and ecological conditions for closing the shipping season. <div> <div>Environmental - The formation of fastice along the shipping route will trigger the end of the shipping season.</div> <div>Ecological - There are no ecological triggers to close the shipping season, however, monitoring and adaptive management will be applied to ensure no significant impacts occur.</div> </div>	NA	Seals - During the Fall Season Seals are just beginning to establish breathing holes in the 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 general area of the 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. Shipping would not overlap with the denning period. Narwhal- The fall shoulder season will overlap with the outmigration of narwhal throughout October and November. Aerial surveys are planned each year to confirm no entrapment events have occurred, and to inform adaptive management, should it be required.
93	DFO 3.5.1.	DFO	Marine Environment	01 - November 2019 - Public Hearing	During Phase 2 Operations, Baffinland commits to using the walrus haul out buffer zone guidelines set by the US Fish and Wildlife Service (USFWS) and the US Federal Aviation Administration (FAA).	NA	This commitment will be implemented post PC approval
92	DFO 3.5.2	DFO	Marine Environment	01 - November 2019 - Public Hearing	Baffinland will not break ice in closed embayment's and inlets where landfast ice exists. Should other areas of high seal density be encountered along the shipping route during the shoulder season, the Ship Board Observer Program will record and report this for potential adaptive management actions. This may include notices to Masters of project ships operating within the RSA to exercise due caution in order to minimize the likelihood of interaction with the mammals. In such events, Masters will be authorized to adjust speed or alter course within safe and prudent navigational constraints to avoid to the extent possible interactions with high density seal areas. See other commitments related to the SBO Program in response to DFO 3.5.3 and 3.5.6.	NA	This commitment will be implemented post PC approval
91	DFO 3.5.3	DFO	Marine Environment	01 - November 2019 - Public Hearing	Baffinlands Ship Board Observer Program will confirm the current predictions that no seal strikes will occur as a result of project shipping. Should monitoring demonstrate that the predictions are incorrect, Baffinland will implement adaptive management measures in consultation with the MHTO and MEWG.	NA	Baffinland will not provide an updated estimate of ship strikes on seals based on a study that covers a period in time and location that are fundamentally different from what is proposed under Phase 2.
90	DFO 3.5.4	DFO	Marine Environment	01 - November 2019 - Public Hearing	Baffinland is not proposing to ship during sensitive lifecycle periods for seal, which typically occur in the months between March and May. No additional mitigation measure is necessary for the current Shoulder Season Shipping Guide.	NA	This commitment will be implemented post PC approval

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Commitment Due Date	Notes
89	DFO 3.5.5	DFO	Marine Environment	01 - November 2019 - Public Hearing	<p>☐ Before commencing shipping, Baffinland must receive written confirmation from the MHTO that the floe edge is no longer being used by community members. No transits to Milne Port will be permitted until confirmation is received.</p> <p>☐ Baffinland will not break ice during ringed seal denning, pupping, nursing or mating periods and will manage its vessel traffic during the Eclipse Sound narwhal summer stock spring migratory period.</p> <p>☐ Furthermore, Baffinland has established several precedent-setting mitigations to minimize potential effects on ringed seal as a result of ice breaking activities, including:</p> <p>☐ Restricting the number of transits during the early shoulder season where ice concentrations above 3/10 cannot be avoided.</p> <p>☐ Implementation of speed restrictions (9 knots) that are more conservative than Government of Canada guidelines for speed reduction to 10 knots.</p> <p>☐ Local Inuit Marine Wildlife Observers (MWOs) will be stationed on all icebreaker transits in the RSA and are responsible for alerting vessel Master and crew to observed potential risk of ship strikes on pinnipeds and other marine mammals, or record other signs of disturbance to marine wildlife.</p> <p>Implementation of a 40-km buffer zone around the floe edge at the entrance of the RSA to reduce interactions between Project vessels and marine mammals (vessels entering the RSA during the spring shoulder season must wait 40 km to the east of the RSA until clearance from the Port Captain is obtained).</p>	NA	This commitment will be implemented post PC approval
88	DFO 3.5.6	DFO	Marine Environment	01 - November 2019 - Public Hearing	Baffinland will updated the Marine Monitoring Program to make it clear what behavioral indicators are recorded during the Ship Board Observer Program. These indicators include breaching, flipper slapping, lob tailing, diving, fluking, blowing, resting, looking, feeding, hauled-out, milling, swimming, surfacing. Other recorded information includes initial distance from vessel, minimum distance from vessel (i.e. closest point of approach), and bearing from vessel and movement direction. These methods and indicators are currently described in annual Ship Board Observer Reports.	NA	This commitment will be implemented post PC approval
87	DFO 3.6.2 DFO 3.6.6	DFO	Marine Environment	01 - November 2019 - Public Hearing	<p>Baffinland is committed to undertaking an end-of-season aerial survey of the LSA for each year shoulder season shipping occurs, to confirm no narwhal entrapment events have occurred. Baffinland will work directly with the Mittimatilik HTO in implementation of this survey.</p> <p><u>Background</u></p> <p>Mitigation measures are limited, Baffinland has proposed having an icebreaker re-enter the RSA to create an exit pathway, assuming it is safe to do so. It is uncertain if this is a desirable action from the communities perspective. There is also an issue of identifying a natural event from a project affected one. Baffinland suggests the MEWG is an appropriate forum to investigate such an event occurs in the future, and development adaptive mitigation measures, should they be necessary. Baffinland's commitment to annual aerial surveys is for the life of the project.</p>	NA	This commitment will be implemented post PC approval
86	DFO 3.7.2	DFO	Marine Environment	01 - November 2019 - Public Hearing	Empirical data on ship noise levels have now been collected as part of JASCO's passive acoustic monitoring program for the Project. These data have been analyzed to calculate LRR for these additional areas in the RSA (Eclipse Sound, North Milne Inlet, Koluktoo Bay). Calculations of LRR associated with ship transits at these representative locations will be presented in a 'technical memorandum' or 'technical response', scheduled for delivery to DFO on February 17, 2020. The technical memorandum will include an analysis to estimate the LRR estimations for Phase 2 shipping operations based on the empirical results calculated for 2018 and 2019 shipping operations.	NA	This commitment will be implemented post PC approval
85	DFO 3.7.4	DFO	Marine Environment	01 - November 2019 - Public Hearing	An analyses will be conducted using data collected during the 2019 shipping season to characterize the degree of conservatism in the sound propagation modelling that has been conducted. Additional AMARs have been deployed and will collect data during the Fall 2019 and Spring 2020 seasons to further this analysis. See response to DFO 3.8.4 for commitment to long term acoustic monitoring.	NA	This commitment will be implemented post PC approval; See commitment to DFO 3.8.4 for long term acoustic monitoring.
84	DFO 3.8.4	DFO	Marine Environment	01 - November 2019 - Public Hearing	Baffinland will continue to undertake acoustic monitoring supportive of its operations in accordance with terms and conditions of the existing Project Certificate No. 005.	NA	This commitment will be implemented post PC approval
83	DFO 3.9.1	DFO	Marine Environment	01 - November 2019 - Public Hearing	Baffinland will implement an incidental marine mammal monitoring program with vessel operators calling on Milne Port, which will request incidental observations of marine mammals to be recorded and relayed to Baffinland. In support of this program, Baffinland will develop educational materials for vessel crew to assist in marine mammal identification and data recording. Baffinland will provide a draft of the materials and program for review by the MEWG before they are finalized.	NA	This commitment will be implemented post PC approval
82	DFO-3.10.3, DFO-3.10.4, TC-02, QIA-45, DFO-3.10.4, QIA-44	DFO	Marine Environment	01 - November 2019 - Public Hearing	Baffinland will implement a pilot ballast water biological monitoring program for ships calling on Milne Port. This program will be designed to reflect a more appropriately scoped form of a ballast water sampling protocol provided by DFO to Baffinland in 2017. This program will include sampling from one ballast tank on a total of five vessels per shipping season. Baffinland remains committed to continue conducting temperature and salinity test sampling of one randomly selected ballast water tank for all vessels calling to Milne Port, and biological sampling in the marine receiving environment to monitor for non-native species in Milne Port and at Ragged Island.	NA	Replaced by DFO 3.6 NEW Commitments
81	DFO-3.12	DFO	Freshwater Environment	01 - November 2019 - Public Hearing	Baffinland will include the requested information in the application for the Fisheries Act Authorization.	NA	This commitment will be implemented post PC approval

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Commitment Due Date	Notes
80	DFO-3.13.1	DFO	Freshwater Environment	01 - November 2019 - Public Hearing	Baffinland will include the requested information in the application for the Fisheries Act Authorization.	NA	This commitment will be implemented post PC approval
79	DFO-3.13.2	DFO	Freshwater Environment	01 - November 2019 - Public Hearing	Baffinland will include the requested information in the application for the Fisheries Act Authorization.	NA	This commitment will be implemented post PC approval
78	DFO-3.14.1	DFO	Freshwater Environment	01 - November 2019 - Public Hearing	Baffinland will include the requested information in the application for the Fisheries Act Authorization.	NA	This commitment will be implemented post PC approval
77	DFO-3.14.2	DFO	Freshwater Environment	01 - November 2019 - Public Hearing	Baffinland will include the requested information in the application for the Fisheries Act Authorization.	NA	This commitment will be implemented post PC approval
76	DFO-3.14.3	DFO	Freshwater Environment	01 - November 2019 - Public Hearing	Baffinland will include the requested information in the application for the Fisheries Act Authorization.	NA	This commitment will be implemented post PC approval
75	ECCC-FC1 HC-FC-02	ECCC	Atmospheric Environment	01 - November 2019 - Public Hearing	<p>Final language to be developed with BIMC. Proposed by BIM:</p> <p>Baffinland will provide all quality assured measured air quality and meteorological data in an annual report and compare to applicable criteria as outlined in the revised Air Quality and Noise Abatement Plan (AQNAMP) for the project. The annual report will include all raw data, averages in graphical and tabular form as most relevant to the data set, comparison to relevant criteria and visual presentation including wind roses and comparisons to previous year's data. In relation to photography, if major dusting events are observed, they will be photographed and included in the annual report. Also, the available satellite imagery will be reviewed and included if considered relevant. The use of satellite imagery will be evaluated on an ongoing basis to confirm whether it adds value or provides any relevant context to the dust fall evaluations. As the revised AQNAMP will be updated to detail these reporting requirements specifically, additional requirements in the Terms and Conditions of the Project are not deemed necessary. As per recent discussions, the 2020 CAAQS would be used for comparison purposes only with the objective to "keep clean areas clean" with respect to ambient air quality while the Project Standards are based on Nunavut Standards where available, or otherwise the most stringent available from a Provincial or other Territorial Government.</p> <p>Appendix G includes memos describing dustfall management action triggers for the protection of human health and vegetation.</p> <p>Baffinland will reflect the commitment to annual reporting in the final AQNAMP for the Phase 2 Proposal and subsequently does not believe a new Term and Condition is required.</p> <p>Baffinland will reflect the commitments provided in its response in the Air Quality and Noise Abatement Management Plan following the issuance of an amended Project Certificate. In the interim these commitments will be captured in a commitment register, to be provided to the Board during the Public Hearings. Baffinland does not object to having relevant terms and conditions modified to reflect this commitment.</p>	NA	This commitment will be implemented post PC approval
74	ECCC-FC2	ECCC	Atmospheric Environment	01 - November 2019 - Public Hearing	Baffinland commits to investigate and implement NOX reductions measures, where feasible, and report on this in the 2020 annual air quality report (to be submitted by March 31, 2021).	NA	This commitment will be implemented post PC approval

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Commitment Due Date	Notes
73	ECCC-FC3 HC-FC-02	ECCC	Atmospheric Environment	01 - November 2019 - Public Hearing	<p>Final language to be developed with BIMC. Proposed by BIM:</p> <p>Baffinland is committed to updating the AQNAMP in consultation with ECCC and other interested interveners and has undertaken a number of discussions in relation to this commitment. The revised AQNAMP will include the following (which is consistent with ECCC's recommendations):</p> <ul style="list-style-type: none"> • Monitor PM2.5 and TSP using continuous monitors at: <ul style="list-style-type: none"> o The sites that already monitor NO² and SO² at both Milne Port and the Mine Site. o Seasonally at at least one new location on or close to the Project Boundary at both the Milne Port and Mine Site considering prevailing wind direction during the peak dust season and locations of sensitive receptors (camp locations). These will be seasonal as permanent power is not available near the boundaries thus the systems will run on solar power as feasible during the summer. <p>The revised AQNAMP will also include the following recommended items:</p> <ul style="list-style-type: none"> • Presentation of the predicted concentrations in the AQNAMP as a range of absolute concentrations. • Investigation of ways to mitigate the emissions from the stockpiles as warranted. • Include management actions for the stockpiles in Section 4 of the AQNAMP as well as Table 5-2, and Table 5-3. • Define the management action trigger levels for both the 24-hour and annual averaging periods for all species (Table 5-1, Table 5-2, and Table 5-3). • Define the frequency at which air quality and meteorological data is reviewed that allows for timely response for implementation of corrective actions in response to exceedances of triggers. • Include details on how the air quality data and meteorological data will be analyzed together during the investigation of exceedance of trigger levels and necessary management actions. • Confirm the trigger levels for dustfall and include corrective actions associated with collected dustfall data. • Include 24-hour and annual Total Suspended Particulate data in the dustfall management action trigger levels and describe how it will be used as a tool for determining potential causes of elevated dustfall. • Include the wind roses from onsite meteorological stations, maps showing where these potential monitoring stations are located, discussion on the rational for the site locations, and discussion on how emissions from the stockpiles would be captured by these monitoring stations. <p>The recommendations outlined above will be captured in a management plan update register, which Baffinland will use to track changes and additions to management plans committed to during the final review of the Phase 2 Proposal. Baffinland suggests that this register, submitted to the Board on the record before the close of the Public Hearing, is a more appropriate means of ensuring the requested updates to the AQNAMP are made, that an amendment to an existing Term and Condition.</p> <p>Baffinland will reflect the commitments provided in its response in the Air Quality and Noise Abatement Management Plan following consultation with the Board on the record before the close of the Public Hearing.</p>	NA	This commitment will be implemented post PC approval
72	ECCC-FC4	ECCC	Marine Environment	01 - November 2019 - Public Hearing	Baffinland commits to investigate and implement black carbon reduction measures, where feasible, and report on this in the 2020 annual air quality report (to be submitted by March 31, 2021). The investigation will consider the use of distillate fuels as a reduction measure for local black carbon emissions.	NA	Replaced by ECCC-01 NEW Commitment
71	ECCC-FC-5	ECCC	Marine Environment	01 - November 2019 - Public Hearing	Baffinland remains committed to updating the Phase 1 Waste Rock Management Plan and evaluating the appropriateness of the 0.2% cutoff for PAG classification, irrespective of the Phase 2 approvals process.	NA	This issue is resolved for environmental assessment purposes and will be further addressed during water license
70	ECCC-FC6 WWF-FWS 06	ECCC	Marine Environment	01 - November 2019 - Public Hearing	Baffinland commits to conduct additional Arctic diesel fuel spill modelling to account for shoulder season shipping and update the SSRP as necessary (Appendix G). This will occur prior to the 2021 shipping season.	NA	This commitment will be implemented post PC approval
69	GN-01	GN	Corporate Environment	01 - November 2019 - Public Hearing	Baffinland is no longer pursuing trucking of iron ore in excess of 6Mtpa during the Phase 2 construction period. This commitment will require modification.	NA	

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Commitment Due Date	Notes
68	GN-02 WWF-FWS 07 MHTO-03	GN	Terrestrial Environment	01 - November 2019 - Public Hearing	<p>Baffinland is committed to work with the GN to develop a mutually agreed upon research agreement (also referred to as the Research and Relationship Agreement) that includes the following aspects, which are based on GN's internal budgeting and community consultation schedules for its North Baffin Regional Monitoring Program:</p> <ul style="list-style-type: none">• By July 30 of each year, the GN to share a preliminary proposal with Baffinland (the "GN Preliminary Proposal") outlining the planned activities that may be carried out as part of its North Baffin Regional Monitoring Program for the twelve-month period commencing on January 1 of the following year, which would be subject to any future revisions arising as a result of consultation by the GN with communities and the Qikiqtani Inuit Association.• By October 1 of each year, the GN to share a final proposal with Baffinland (the "GN Final Proposal") based on the GN Preliminary Proposal and including any revisions as a result of consultation.• Baffinland would provide its total annual financial contribution to GN on or before November 30 of each year following review and acceptance by Baffinland of a GN Final Proposal. The financial contribution could include monetary and/or in-kind support.• Collaboration as possible regarding scientific peer-reviewed research into mitigative measures or potential disturbance effects, as related to the Mary River Project.• GN will provide Baffinland with reports on work carried out under its North Baffin Regional Monitoring Program.• GN-generated data needed to support Baffinland's assessment, monitoring and mitigation programs for the Mary River Project (which would remain Baffinland's sole responsibility) will be released upon request by GN to Baffinland, in accordance with the terms and conditions of the	NA	Baffinland and the Government of Nunavut commit to complete a caribou research agreement and data sharing agreement prior to the Public Hearing for Phase 2. Should this not be possible, an Agreement in Principle will be developed to identify a timeline for the anticipated completion of both agreements. The caribou research agreement is currently with BIM for review.
67	GN-03	GN	Terrestrial Environment	01 - November 2019 - Public Hearing	<p>Baffinland commits to build the North Railway with the general specifications for the purposes of increasing caribou permeability</p> <ul style="list-style-type: none">☐ Use of Type 8 over Type 12 fill material for the entire alignment☐ For embankment heights under 4 meters the slope ratio will be 1V:2H; for embankment heights over 4 meters the slope ratio will remain 1V:1.5H <p>Baffinland commits to a pilot program that will investigate the effectiveness of gentler slopes on caribou crossing. To evaluate this pilot program, Baffinland will support regional studies of caribou movements to assess caribou responses to the railway. The assessment of this pilot program's success shall be based on results from studies that have statistical power to detect Project effects exceeding those predicted in the FEIS addendum. The details of this program include:</p> <ul style="list-style-type: none">☐ The gentler slopes will be built with a slope ratio of 1V:3H☐ The total amount of fill required to build the North Railway will remain unchanged from currently proposed i.e. the fill material required to build sections with a slope of 1:3 will be acquired by reverting other areas previously allocated a 1V:2H slope (at an embankment height of 4m and below) back to a 1V:1.5H slope☐ The pilot program will include a minimum of 10km of 1V:3H slopes☐ Members of the Terrestrial Environment Working Group will be required to identify and agree on the areas to build the gentler (1V:3H) slopes, and where to revert back to the steeper (1V:1.5H) slopes.☐ The pilot program shall not prevent fish passage or cause serious harm to fish.☐ This program will be implemented prior to and during the North Railway's construction.	NA	This commitment will be implemented post PC approval
66	GN-04	GN	Terrestrial Environment	01 - November 2019 - Public Hearing	Baffinland will update the Additional Level Crossing Construction Decision Matrix to include advice from the Terrestrial Environment Working Group (TEWG).	NA	This commitment will be implemented post PC approval
65	GN-05	GN	Terrestrial Environment	01 - November 2019 - Public Hearing	BIMC will update the Terrestrial Environment Mitigation and Monitoring Plan to reflect that it will undertake research to estimate the Zone(s)-of-Influence (ZOI) and disturbance coefficients (DC) exerted by the Project on caribou, and shall provide to NIRB updated estimates of cumulative habitat losses for caribou, at least every 5 years.	NA	This commitment will be implemented post PC approval
64	GN-06	GN	Socio-economic Environment	01 - November 2019 - Public Hearing	<p>1. The Proponent shall work with the GN through their MOU to promote greater female employment at the Mary River Project, with the goals of a) employing and retaining more women with the Project including in more senior level positions, and b) attracting more women into the mining industry more generally.</p> <p>2. The Proponent will assess the ongoing implementation of current and proposed gender-specific initiatives, including their successes and challenges, in conjunction with monitoring female employment rates at the Project through its Socio-Economic Monitoring Plan. The Proponent will report to the QSEMC and SEMWG, as appropriate, on the effectiveness of these gender-specific initiatives.</p>	NA	This commitment will be implemented post PC approval
63	GN-07	GN	Socio-economic Environment	01 - November 2019 - Public Hearing	<p>1. The Proponent will update its Workplace Harassment Policy and Workplace Harassment and Violence Program and include a component on sexual harassment that addresses the unique nature of sexual harassment in the workplace and supports the specific needs of sexual harassment victims. The Government of Nunavut will be engaged in this process. This update will occur within 6 months of amended Project Certificate issuance.</p> <p>2. The Proponent will update its employee orientation program to reflect the revisions in the Workplace Harassment and Violence Program, including components related to sexual harassment in the workplace and bystander intervention. This update will occur within 6 months of amended Project Certificate issuance.</p> <p>3. The Proponent will work with the GN to establish a sub-committee through their MOU to review implementation of Company policies and initiatives regarding sexual harassment in the workplace, subject to all applicable privacy laws, and to explore potential new ways to address this issue at the Mary River Project. The proponent and GN will move forward on this issue through the MOU within 6 months of issuance of the Project Certificate. Baffinland Human Resource Staff will be available to specifically address this topic through the MOU subcommittee as and when required.</p>	NA	This commitment will be implemented post PC approval

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Commitment Due Date	Notes
62	GN-08	GN	Socio-economic Environment	01 - November 2019 - Public Hearing	1. The Proponent shall work with the GN through their MOU to promote employment opportunities with the Mary River Project across all Qikiqtani communities, consistent with relevant provisions of the Mary River Inuit Impact and Benefit Agreement. Initiatives may include training opportunities in non-point of hire communities, posting employment and training opportunities in all Qikiqtani communities, communicating with unsuccessful job applicants, and continuing to provide travel for all Inuit Baffinland employees from across the Qikiqtani Region to a point of hire community.	NA	This commitment will be implemented post PC approval
61	GN-09	GN	Socio-economic Environment	01 - November 2019 - Public Hearing	1. Baffinland will submit to NIRB a Safety Protocol and a Communications Plan prior to construction of the North Railway or within 18 months of issuance of the Project Certificate; and a Safety Protocol and a Communications Plan prior to operation of the North Railway. The protocols and plans will include: Safety Protocol and Communications Plan – prior to railway construction or within 18 months of Project Certificate issuance: a. Complete a risk register prior to construction b. Address safety issues related to both the road and rail, during the construction period c. Be implemented by the Company, its contractors, and non-Project land users d. Integrate Baffinland’s existing Hunter and Visitor Site Access Procedure e. Communicate to land users the rules and procedures for using the Tote Road and other project roads, visiting the project site, and the risks associated with the road and the North Railway during the construction period f. Include Rules of the Road, such as speed limits, signs on the road, right of way protocols, safety restrictions regarding the discharge of firearms in proximity to the road and rail construction areas, etc. g. Identify potential hazards on the road such as mine traffic, snow drifts, steep hills, sharp corners, construction areas, and washouts h. Identify the location of safety features such as rail crossings, emergency shelters and safe access routes to the Mine Site and Milne Port i. Identify the location of safety features such as emergency shelters and safe access routes to the Mine Site and Milne Port, and construction shelters and accommodations j. Be developed in consultation with the North Baffin Communities, with a particular focus on the Communities of Pond Inlet and Igloolik k. Identify the means and frequency of communicating the safety protocol, and to whom the information will be communicated Safety Protocol and Communications Plan – prior to railway operation a. Complete a risk register prior to operation b. Address safety issues related to both the road and rail, during operations c. Be implemented by the Company, its contractors, and non-Project land users d. Integrate Baffinland’s existing Hunter and Visitor Site Access Procedure e. Communicate to land users the rules and procedures for using the Tote Road and other project roads, crossing the North Railway, visiting the project site, and the risks associated with the road and the North Railway f. Include Rules of the Road, such as speed limits, signs on the road, right of way protocols, safety restrictions regarding the discharge of firearms in proximity to the road and rail g. Identify potential hazards on the road such as mine traffic, snow drifts, steep hills, sharp corners, and washouts h. Identify potential hazards with the rail line such as train traffic, sharp corners, loading and unloading areas i. Identify the location of safety features such as rail crossings, emergency shelters and safe access routes to the Mine Site and Milne Port	NA	This commitment will be implemented post PC approval
60	HC-FC-01	HC	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland commits to investigate and implement NOX reductions measures, where feasible, and report on this in the 2020 annual air quality report (to be submitted by March 31, 2021). See commitment to ECCC FC2.	NA	This commitment will be implemented post PC approval
59	HC-FC-02	HC	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland will reflect the commitments provided in its response in the Air Quality and Noise Abatement Management Plan following the issuance of an amended Project Certificate. In the interim these commitments will be captured in a commitment register, to be provided to the Board during the Public Hearings. Baffinland does not object to having relevant terms and conditions modified to reflect this commitment. Baffinland commits to: • Submit all air quality and meteorological monitoring data as part of the annual reports and compare the monitoring data to the Canadian Ambient Air Quality Standards, where applicable. • Include any photos taken of dust on snow in the annual reports • Present the predicted concentrations in the annual reports as a range of absolute concentrations Baffinland will: • Complete the Air Quality and Noise Abatement Management Plan in consultation with HC and other interested interveners. • Monitor PM2.5 and Total Suspended Particulates using continuous monitors at both Milne Port and the Mine site where monitoring already : • The sites that already monitor NO2 and SO2 at both Milne Port and the Mine Site. • New locations on or close to the Project Boundary at both the Milne Port and Mine Site. • Update Air Quality and Noise Abatement Management Plan with the proposed changes. Baffinland will update the Air Quality and Noise Abatement Management Plan with the following text: "Use the existing continuous air quality monitors on site to validate the predictions of NO2 and other air quality contaminants in the EIS moving forward. Share results through reporting mechanisms, such as the annual report. Should exceedances occur beyond the EIS predictions, include an updated human health risk assessment in the annual report."	NA	This commitment will be implemented post PC approval

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Commitment Due Date	Notes
58	HC-FC-03	HC	Socio-economic Environment	01 - November 2019 - Public Hearing	<p>Baffinland will continue with monitoring of COPCs reported in the country foods risk assessment during all phases (including closure). If increases in a specific COPC are confirmed to be occurring outside or inside (in the closure phase) of the Potential Development Area (PDA) and if country foods could be influenced by those changes, Baffinland will update the human health risk assessment model with the new data. Decisions related to extending the monitoring program to any relevant country foods would be made based on consideration of risk assessment outcomes.</p> <p>Updated modelling would be triggered by changes from any of the monitoring stations where harvesting could occur. Any remodeling effort should also consider changes (or lack thereof) using a distance gradient approach from the edge of PDA: Near (0–100 m); Far (101 –1,000 m); and Control (>1,000 m) and more ecologically relevant distant stations (i.e., those stations located between 100 m and 1,000 m from the PDA boundary). Consideration of change at PDA (closure phase), near sites (0 – 100m) and far sites (100 – 1,000 m), relative to baseline data, and environmental quality guidelines, in conjunction with statistical analyses, would be used to identify the need for complementary risk assessment modelling.</p>	NA	This commitment will be implemented post PC approval
57	HPI	HPI	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland will undertake to encourage students and youth to consider possible careers with Baffinland.	NA	Implementation is ongoing, completion not required for environmental assessment purposes
56	HPI	HPI	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland will undertake to promote access to employment for Inuit women. Following the Technical Meeting held in Iqaluit April 8-10, 2019, Baffinland committed to working with the GN through the implementation of the MOU to promote female employment at Mary River.	NA	Implementation is ongoing, completion not required for environmental assessment purposes
55	HPI	HPI	Socio-economic Environment	01 - November 2019 - Public Hearing	As part of Baffinland’s early engagement in the planning stages for the Phase 2 Project, Mittimatalik raised concerns with respect to year round icebreaking resulting in Baffinland’s commitment not to ship in land fast ice	NA	Implementation is ongoing, completion not required for environmental assessment purposes
54	HPI	HPI	Socio-economic Environment	01 - November 2019 - Public Hearing	To further Baffinland’s goal of meaningful consultation and engagement it has committed to the development of community-specific engagement guidelines. The development of these guidelines will serve to improve the two-way dialogue between the Company and Inuit.	NA	This commitment will be implemented post PC approval
53	HPI	HPI	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland remains committed to ongoing engagement with Mittimatalik throughout the Project’s lifetime. As noted in Baffinland’s new IQ Management Framework (Baffinland, 2019a), the Company is in the process of developing community-specific consultation guidelines for the North Baffin communities; these will be developed in consultation with individual communities in the near future. As the guidelines are developed, they will be appended to Baffinland’s Community and Stakeholder Engagement Plan (TSD-28, Appendix Z).	NA	Implementation is ongoing, completion not required for environmental assessment purposes
52	HPI	HPI	Socio-economic Environment	01 - November 2019 - Public Hearing	Pending approval of the Phase 2 Proposal, Baffinland has committed to provide \$1.2 million/year to each of the five North Baffin communities for the life of the mine (\$6 million/year total). These amounts are intended to support socio-economic opportunities, cultural opportunities, and hunter support opportunities.	NA	Replaced by ICA Commitments
51	HPI-1	HPI	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland will conduct a review of internal procedures related to the conduct of community- focused research and identify areas for potential improvement. Baffinland will update its IQ Management Framework with information on research ethics and will provide clear direction on the procedures to be followed when applying for, securing, renewing, and reporting on research licensing. Baffinland will continue to engage the Nunavut Research Institute (NRI) in this process and will additionally provide NRI with annual IQ work plans for review and comment.	NA	This commitment will be implemented post PC approval
50	HPI-10	HPI	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland is committed to using best efforts to improve its Inuit employment record each year, whether the MIEG has been met or not.	NA	Implementation is ongoing, completion not required for environmental assessment purposes
49	HPI-11	HPI	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland commits to working with the Hamlet of Mittimatalik: a) to establish community-specific engagement guidelines, and b) to ensure the active participation and representation of Mittimatalik on the Inuit Advisory Panel.	NA	Replaced by ICA Commitments
48	MHTO-2a	MHTO	Terrestrial Environment	01 - November 2019 - Public Hearing	Baffinland will undertake geotechnical drilling to further establish technical feasibility for Route 3, but at this time based on a preliminary review Baffinland does not anticipate that such drilling will reveal any fundamental issues with the route. This work will be carried out prior to construction.	NA	Baffinland has selected Route 3 as its preferred deviation alignment. There are no Post PC Amendment conditions required to finalize selection, including the results of geotechnical drilling.
47	MHTO-2b	MHTO	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland has committed to the development of Community-specific engagement guidelines. Baffinland believes that the development and implementation of these guidelines will serve to improve the two-way dialogue between the Company and Inuit. These guidelines will be developed in consultation with the MHTO, as well as North Baffin community representatives. As the guidelines are developed, they will be appended to Baffinland’s Community and Stakeholder Engagement Plan.	NA	This commitment will be implemented post PC approval

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Commitment Due Date	Notes
46	MHTO-3	MHTO	Terrestrial Environment	01 - November 2019 - Public Hearing	Baffinland is committed to continual improvement of its terrestrial monitoring program design, data analysis, and integration of Inuit perspectives and IQ.	NA	Implementation is ongoing, completion not required for environmental assessment purposes
45	MHTO-4a	MHTO	Marine Environment	01 - November 2019 - Public Hearing	Baffinland confirms it is committed to consultation with the MHTO regarding shipping plans.	NA	Implementation is ongoing, completion not required for environmental assessment purposes
44	MHTO-5c	MHTO	Marine Environment	01 - November 2019 - Public Hearing	Baffinland is not proposing any additional shipping routes under the Phas 2 Proposal. This includes the use of Navy Board Inlet and the Northwest Passage.	NA	
43	MHTO-5e	MHTO	Marine Environment	01 - November 2019 - Public Hearing	Baffinland commits to continue to evaluate the feasibility of the development of a laboratory in Pond Inlet, in consultation with MHTO.	NA	This commitment will be implemented post PC approval See also DFO-3.10.3, QIA-44 (re pilot ballast water biological monitoring program)
42	MHTO-6	MHTO	Socio-economic Environment	01 - November 2019 - Public Hearing	With the discontinuation of ore haulage under Phase 2, it is possible for Baffinland to develop a policy that ensures the safety of all land users to travel the Tote Road with recreational vehicles, and that of Baffinland employees. Baffinland will look to engage the MHTO in the development of this policy, as well as the timeline for its implementation.	NA	This commitment will be implemented post PC approval
41	MHTO-7a	MHTO	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland is committed to incorporating Inuit knowledge into its identification of indicators and development of thresholds. One example where this is currently being done is at the MEWG, which the MHTO is a member of, which is currently working on the development of early warning indicators for marine mammals.	NA	This commitment will be implemented post PC approval
40	NRCan-01	NRCan	Terrestrial Environment	01 - November 2019 - Public Hearing	Baffinland commits to: <ul style="list-style-type: none"> ☐ Conducting the summer 2019 mapping program in areas where the railway corridor deviates from the Tote Road, including along the Route 1 deviation alignment. This summer mapping program was completed in summer 2019. ☐ Conducting the winter 2019/2020 drilling program along the deviation route, following the proposed Route 3 deviation alignment, and near the port terminus to obtain additional information on subsurface conditions to inform the final design. ☐ Conducting a pre-drilling program, to be completed by the railway contractor and supervised by BIM's Engineer during the construction period. Boreholes will be advanced into permafrost along the rail alignment prior to the railway earthworks. Boreholes will be used to delineate zones of ice-rich and ice-pore permafrost and to determine the required permafrost treatment prior to making cuts and placing fill for the embankments. ☐ Installing thermistors and other monitoring instruments along the rail alignment including along the Route 3 deviation during the pre-drilling programs to establish baseline conditions prior and during rail construction. 	NA	This commitment will be implemented post PC approval
39	NRCan-02	NRCan	Terrestrial Environment	01 - November 2019 - Public Hearing	Baffinland commits to: <ul style="list-style-type: none"> ☐ Implementing the recommendations to accommodate the 30-year design life provided in the project memorandum 'Analysis of Proposed Rail Line Cut Sections and Port Area Structures Considering a Mine Life of 30 Years' (Hatch, 2019) including those related to pile length embedment and number of piles required for foundations. ☐ Continue to refine the thermal, stability and creep analysis incorporating new data collected during geotechnical investigations and from instrumentation along the railway corridor, along the Route 3 deviation alignment as well the rail alignments outside the rail deviation, to support final design of embankments and bridges. ☐ Consider local factors (such as snow accumulation and presence of water bodies) in the 2D thermal modelling to support final design of embankments, cuts and bridges. ☐ Establish instrumentation along the rail alignment, including along the Route 3 deviation alignment, prior to and during construction to improve characterization of baseline ground conditions, support final design, evaluate impacts due to construction and railway performance, and to inform the implementation of mitigation /maintenance measures when triggers are reached. 	NA	This commitment will be implemented post PC approval
38	PCA-02	PCA	Marine Environment	01 - November 2019 - Public Hearing	Baffinland commits to amend the Terms of Reference for the MEWG in collaboration with MEWG Members.	NA	This commitment will be implemented post PC approval Resolution is pending resolution of outstanding DFO issues
37	PCA-04c	PCA	Marine Environment	01 - November 2019 - Public Hearing	Should Phase 2 be approved, Baffinland will continue to engage DFO and Parks Canada through the MEWG for the purposes of ensuring our proposed mitigation and monitoring programs are robust, effective, and responsive.	NA	This commitment will be implemented post PC approval Resolution is pending resolution of outstanding DFO issues

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Commitment Due Date	Notes
36	QIA-01	QIA	Terrestrial Environment	01 - November 2019 - Public Hearing	Baffinland commits to support a harvester's survey as described by QIA in QIA-01, however, such a study must be led by harvesters, not Baffinland.	NA	This commitment will be implemented post PC approval; BIM and QIA to determine integration with Inuit Stewardship Plan
35	QIA-01, QIA-03, QIA-05, QIA-08, QIA-10, QIA-11	QIA	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland and QIA will jointly develop a culturally appropriate component of the Culture, Resources and Land-Use ("CRLU") monitoring program that addresses harvest surveys. Adaptive management measures will be informed by the results of the surveys and the CRLU monitoring program. This development will be completed within 12 months of the issuance of the amendment to the Project Certificate implementing Baffinland's Phase 2 proposal to align with the development and implementation of the CRLU monitoring program.	NA	Replaced by ICA Commitments
34	QIA-01 QIA-02	QIA	Terrestrial Environment	01 - November 2019 - Public Hearing	Baffinland will continue to comply with the existing QIA caribou protection measures and will work with relevant IPG's as well as the TEWG and Inuit Advisors to develop a Caribou Protection Map and project protection zones, if and where appropriate to enhance caribou protection. Development of any Caribou Protection Map or project protection zones will take into account all relevant available IQ and scientific information, including results of an IQ study of caribou use with HTOs and QIA to be carried out through the CRLU Monitoring Program;	NA	This commitment will be implemented post PC approval
33	QIA-02	QIA	Terrestrial Environment	01 - November 2019 - Public Hearing	Based on input provided during the Crossing Selection Workshop from HTO participants representing Pond Inlet, Igloodik, as well as QIA and GN, the following modifications have been proposed for the design of the North Railway to aid in caribou crossing: <ul style="list-style-type: none"> • 30 level crossings to be installed at locations identified by community representatives during the workshop (subject to Transport Canada and Community Acceptance). • A smoother fill material (Type 8 - 6 inches or less in size) will be used along the entire railway embankment (change from Type 12 - 24 inches or less). • A gentler slope (1:2 ratio) will be used for all portions of the railway embankment between 2 and 4 meters (change from 1:1.5). • A gentler slope will be created at the edges of crossings to assure approach from any angle is safe. • 4 additional plate arch culverts will be installed in areas where the railway embankment is high enough to allow an underpass (10 plate arch culverts were already proposed at fish bearing water crossings, which may also serve to allow passage for terrestrial wildlife throughout the year). 	NA	This commitment will be implemented post PC approval
32	QIA-02	QIA	Terrestrial Environment	01 - November 2019 - Public Hearing	Baffinland commits to the following mitigation measures with respect to the operation of the railway to reduce interference with caribou: <ul style="list-style-type: none"> ☐ Temporary speed restrictions may be implemented in areas where caribou have been observed over the previous 24hrs. ☐ Permanent speed restrictions of 30km/hr will be applied to sections with steep hills for train safety. ☐ If large groups of migratory caribou are moving through the area, rail operations will be temporarily suspended to allow caribou to cross the rail line. ☐ In white out conditions, train crews will be required to travel at a speed suitable to stop before hitting an object based on sight distance, i.e. if you can see 50m ahead you need to be able to stop in 25m. 	NA	This commitment will be implemented post PC approval
31	QIA-03	QIA	Socio-economic Environment	01 - November 2019 - Public Hearing	☐ Baffinland will carry out engagement with the 5 North Baffin communities during 2020 in order to identify, together with Inuit and in consultation with QIA, the specific metrics that Inuit identify should be monitored as part of the CRLU program, and to identify, together with Inuit and in consultation with QIA, thresholds for change that should trigger adaptive management by the company. ☐ Baffinland would report on changes and trends in monitoring, based on previous reports. Baffinland will consider adaptive management actions and consult with the community on the best path forward in relation to any changes to CRLU identified through the CRLU monitoring program. For clarity, Baffinland would not only consider adaptive management in the event that effects exceed the FEIS addendum estimations but instead would have regard to triggers for action identified through consultation with the community.	NA	Replaced by ICA Commitments
30	QIA-04	QIA	Marine Environment	01 - November 2019 - Public Hearing	Baffinland commits to developing a ringed seal monitoring plan that incorporates Inuit perspectives into the design, planning and implementation phases.	NA	This commitment will be implemented post PC approval
29	QIA-07	QIA	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland commits to integrating IQ into the objectives of its terrestrial and marine environmental management plans. Reporting will focus on the topics as outlined in the QIA's original technical comment: 1- Show respect to animals; 2- Leave animals alone unless hunting them; 3- Animals are to be used, not wasted; 4- Each animal has its own habitat; and 5- Protect animal habitat.	NA	Replaced by ICA Commitments
28	QIA-08	QIA	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland commits to develop a risk communication strategy focused on gathering and dissemination of information to Inuit related to the Baffinland Iron Ore Mines Project, and linkages between the Project and human health and ecological risk assessment topics. The strategy will focus on building capacity within community groups to understand the mining process, elements of the mining process and how substances produced from the mining process move in the environment.	NA	BIM and QIA to determine integration with Inuit Stewardship Plan

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Commitment Due Date	Notes
27	QIA-21	QIA	Freshwater Environment	01 - November 2019 - Public Hearing	Implementation of the Water Compensation Agreement, particularly with respect to the integration of IQ, will require a collaborative effort between Baffinland and the QIA to which Baffinland remains fully committed. As a Water Compensation Agreement is required under Section 63 of the Nunavut Waters and Surface Rights Tribunal Act and Article 20 (Part 3) of the Nunavut Land Claims Agreement, Baffinland maintains that a process to establish compensation in respect of Inuit Water Rights exists and will be adhered to outside of the Project Certificate amendment process.	NA	Replaced by ICA Commitments
26	QIA-22	QIA	Corporate Environment	01 - November 2019 - Public Hearing	Unless otherwise approved by the NIRB, in any given day, the total number of ore haul truck transits along the Milne Inlet Tote Road should not exceed 280 for the duration of the Phase 2 construction period.	NA	This commitment will be implemented post PC approval
25	QIA-24 QIA-26	QIA	Corporate Environment	01 - November 2019 - Public Hearing	The final monitoring plan for the operations phase of the railway will be finalized following completion of the construction monitoring phase, when data collected has been analyzed and final recommendations can be provided. Adaptive management will be incorporated into the rail geotechnical monitoring program, to the extent practical.	NA	This commitment will be implemented post PC approval
24	QIA-31	QIA	Corporate Environment	01 - November 2019 - Public Hearing	Regarding the North Railway, Baffinland is committed to providing a construction plan that indicates specific monitoring locations and site-specific conditions that would lead to additional monitoring locations, and what construction monitoring results would trigger additional monitoring during operations which will be provided through the water licensing and Commercial Lease. These monitoring programs are currently being incorporated into an update to the Surface Water and Aquatic Ecosystems Management Plan that will be provided to the Nunavut Water Board in advance of the NWB technical meeting on November 12-13, 2019.	NA	This commitment will be implemented post PC approval
23	QIA-33 QIA-34 QIA-35 QIA-36	QIA	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland will work with QIA to develop an updated Inuit Training Plan that covers the period between Phase 2 construction and the first three years of operations. This plan will provide updates on programs that will be offered and how Baffinland intends to maximize Inuit engagement with the Project. This updated plan will be developed within six months of issuance of the amended Project Certificate.	NA	This commitment will be implemented post PC approval
22	QIA-37 QIA-39	QIA	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland commits to continue to work with QIA to mitigate negative impacts and enhance positive Project opportunities and benefits through the Mary River IIBA.	NA	Implementation is ongoing, completion not required for environmental assessment purposes
21	QIA-38	QIA	Socio-economic Environment	01 - November 2019 - Public Hearing	Baffinland commits to the development of socio-economic monitoring thresholds and actions, in consultation with the Mary River Socio-Economic Monitoring Working Group (SEMWG). Once finalized, these will be reflected in an updated Socio-Economic Monitoring Plan.	NA	Replaced by ICA Commitments
20	QIA-41	QIA	Freshwater Environment	01 - November 2019 - Public Hearing	The Tote Road Monitoring Program will be expanded to include the future railway development, both in proximity to the existing Tote Road Monitoring Program locations and along the rail route deviation from the Tote Road. Baffinland has committed to long-term monitoring of water quality within the Northern Transportation Corridor with the Tote Road Monitoring Program to assess the potential for project-related effects on water quality. Until monitoring of water quality indicates the potential for the Project to have an effect on water quality, the expansion of monitoring to include sediment quality and biota in Phillips Creek is not necessary. Should impacts to Arctic char populations be identified through the AEMP studies, the source of these effects will be evaluated through review of all potential variables including sedimentation. Baffinland will continue to utilize the 1mm threshold for sedimentation effects.	NA	This commitment will be implemented post PC approval
19	QIA-42	QIA	Freshwater Environment	01 - November 2019 - Public Hearing	Baffinland has committed to continue to address existing fish passage issues on the Tote Road, and to address fish passage issues on the railway during the design phase, with verification monitoring post-construction. Baffinland will evaluate fish passage along the alternative rail line but this may not be done before the November NWB technical meetings. This is mainly an issue for the Fisheries Act authorization.	NA	This commitment will be implemented post PC approval
18	QIA-43	QIA	Terrestrial Environment	01 - November 2019 - Public Hearing	Baffinland has committed to conducting a desktop review of available data to evaluate the hydrological, geomorphological and sediment transport regime at the Project site.	NA	This commitment will be implemented post PC approval
17	QIA-45	QIA	Marine Environment	01 - November 2019 - Public Hearing	Baffinland has committed to implementing a pilot ballast water biological monitoring program for ships currently only subject to the D1 standard (open water exchange). This program has been designed to reflect a more appropriately scoped form of a ballast water sampling protocol provided by DFO to Baffinland in 2017 and will include sampling from one ballast tank on a total of five vessels per shipping season. Baffinland remains committed to continue conducting temperature and salinity test sampling of one randomly selected ballast water tank for all vessels calling to Milne Port, and biological sampling in the marine receiving environment to monitor for non-native species in Milne Port and at Ragged Island.	NA	Replaced by DFO 3.6 NEW Commitments
16	QIA-46	QIA	Marine Environment	01 - November 2019 - Public Hearing	Baffinland will continue to work with members of the MEWG on the selection of appropriate Early Warning Indicators (EWIs) for noise impacts on marine mammals, for implementation prior to the start of Phase 2 shipping.	NA	Implementation is ongoing, completion not required for environmental assessment purposes
15	QIA-47	QIA	Marine Environment	01 - November 2019 - Public Hearing	Baffinland provided a detailed Draft Communication Protocol as part of the Phase 2 submission. The communication protocol is considered a live document, and will be updated on an annual basis, as needed, based on feedback about the effectiveness of the communication system received by MHTO during annual pre- and end-of-season shipping meetings. Additional communication tools or frequencies may also be adjusted ad hoc throughout the shipping season to address real-time concerns, which would again be captured in annual updates to the protocol as needed.	NA	Implementation is ongoing, completion not required for environmental assessment purposes

ID#	FWS ID#	Intervener	Topic	Review Phase	Commitment	Commitment Due Date	Notes
14	QIA-48, TC-04	QIA	Marine Environment	01 - November 2019 - Public Hearing	Baffinland will ensure there is a consistent description of ice conditions amongst its relevant management plans and standards of practice and that these terms are translated to Inuktitut for use more generally. Baffinland commits to providing dates and information on the conditions under which the shipping season was opened and closed each season in its Annual Report to NIRB.	NA	Implementation is ongoing, completion not required for environmental assessment purposes
13	QIA-50	QIA	Marine Environment	01 - November 2019 - Public Hearing	Baffinland formally commits to not having vessels go into the North Water Polynya (Pikialasorsuaq), subject to vessel safety. This commitment will be recognized in the Shipping and Marine Wildlife Management Plan and the Standing Instructions to Masters.	NA	This commitment will be implemented post PC approval
12	QIA-53	QIA	Marine Environment	01 - November 2019 - Public Hearing	BIM does recognize that there may be interactions between its vessels and other activity outside the RSA and agrees to participate as a key stakeholder in regional federal government initiatives and programs including federal initiatives aimed at evaluating regional cumulative effects in the Eastern Canadian Arctic.	NA	This commitment will be implemented post PC approval
11	TC-01	TC	Corporate Environment	01 - November 2019 - Public Hearing	Baffinland will contact Transport Canada's NPP Office prior to the submittal of any information to confirm regulatory requirements under the CNWA, should the project be approved to proceed.	NA	This commitment will be implemented post PC approval
10	TC-02 DFO 3.6.5	TC	Marine Environment	01 - November 2019 - Public Hearing	<p>Transport Canada appreciates the efforts by BIM to ensure current regulations are followed with respect to their plans for ballast water management. Given the learning curve associated with use of ballast water treatment systems, for Phase 2, Transport Canada (TC) in consultation with Fisheries and Oceans Canada (DFO), recommends, in conjunction with present sampling and testing protocols being proposed/adopted [NTD - will be summarized in complete package] by BIM, that BIM implement a ballast water compliance sampling plan based on a risk-based targeting methodology to be developed in consultation with DFO and TC.</p> <p>Such a risk-based methodology should be applied to evaluate the risk of all vessel ballast water management (D1, D2) with subsequent salinity and D-2 biological compliance sampling conducted on vessels identified as high or very high risk. The respective risk-based methodology and associated ballast water compliance sampling plan will be developed in consultation with DFO and TC following completion of DFO's Project-specific sampling conducted on a subset of vessels calling to Milne Port. The risk-based methodology and associated ballast water compliance sampling plan should include a consideration of other compliance initiatives or research being undertaken elsewhere by TC relative to implementation of the D-2 standard.</p> <p>Sampling conducted that supports building a body of knowledge for D-2 treatment systems, beyond biological compliance sampling conducted on high risk and very high risk tanks, should not compromise Baffinland's ability to transport annual ore quantities as approved under a modified Project Certificate No 005. Understanding that the rationale for this program is tied to a learning curve associated with the use of ballast water treatment systems, the compliance sampling program and risk based methodology will be adapted as deemed</p>	NA	This commitment will be implemented post PC approval
9	TC-04	TC	Corporate Environment	01 - November 2019 - Public Hearing	For the purposes of shoulder season vessel traffic management, Baffinland considers uninterrupted transits through ice concentrations of 3/10 or less as the open water shipping season. This will be considered in any relevant management plans or operating procedures.	NA	This commitment will be implemented post PC approval
8	TC-05	TC	Marine Environment	01 - November 2019 - Public Hearing	Baffinland will make the recommended change from TC-05 to the Spill at Sea Response Plan (SSRP).	NA	This commitment will be implemented post PC approval
7	TC-06	TC	Marine Environment	01 - November 2019 - Public Hearing	Baffinland will update the SSRP to designate additional Tier 2 response equipment at Milne Port to enable a dual response as proposed by Transport Canada.	NA	This commitment will be implemented post PC approval
6	TC-07	TC	Marine Environment	01 - November 2019 - Public Hearing	Baffinland agrees that the use of lifeboats should be avoided and will be removed as part of the spill response equipment on pages 88 and 103 of the SSRP.	NA	This commitment will be implemented post PC approval
5	TC-08	TC	Marine Environment	01 - November 2019 - Public Hearing	Baffinland will update the SSRP to make it clear no oil discharge is permitted in Arctic waters per the ASSPPR.	NA	This commitment will be implemented post PC approval
4	WWF-FWS 01	WWF	Marine Environment	01 - November 2019 - Public Hearing	<p>Baffinland is committed to the development of Early Warning Indicators but must reiterate this is not a conventional undertaking and all members of the MEWG are expected to provide meaningful input.</p> <p>As Phase 2 levels of shipping are not expected to occur before 2024 Baffinland is confident that Early Warning Indicators will be developed by that time based on a rigorous investigation of IQ and Inuit perspectives, scientific literature, and the expert opinions of MEWG members.</p>	NA	This commitment will be implemented post PC approval
3	WWF-FWS 02	WWF	Corporate Environment	01 - November 2019 - Public Hearing	The NIRB has already initiated the development of the Mary River Monitoring Framework for attachment to Project Certificate 005, circulating a draft Appendix A Framework for public comment in 2017. Baffinland supports this initiative and will continue to participate in the development process following the completion of the Phase 2 reconsideration process.	NA	This commitment will be implemented post PC approval
2	WWF-FWS 04	WWF	Marine Environment	01 - November 2019 - Public Hearing	Baffinland commits to take part in a Marine Spatial Planning exercise, should an appropriate regional body lead the initiative.	NA	This commitment will be implemented post PC approval
1	WWF-FWS 08	WWF	Atmospheric Environment	01 - November 2019 - Public Hearing	Baffinland is committed to developing a comprehensive Climate Change Strategy. A critical component of this strategy will relate to the marine environment, where important developments are occurring at the international level that our world class fleet of vessels and ship contractors are poised to comply with, including the 2020 Sulphur Cap and a potential ban on Heavy Fuel Oil in the Arctic.	NA	This commitment will be implemented post PC approval