



January 13, 2025

## Terrestrial Environmental Working Group (TEWG) Meeting

**Meeting ID:** T-13012025  
**Group / Organization:** TEWG Members and Observers, Baffinland and Consultants  
**Meeting Location:** Virtual – ZOOM  
**Meeting Chair:** Cortney Oliver

Organization Name	Participants
Member Organization	
Mittimatalik Hunters and Trappers Organization (MHTO)	Present – Charlie Inurak [CI], Phanuel Enooagak [PE] and Mathias Kaunak [MK]
Clyde River (Nangmautuaq) Hunters and Trappers Organization (NHTO)	Present – Nysana Qillaq [NQ]
Igloodik Hunters and Trappers Organization (IHTO)	Absent
Hall Beach (Sanirajak) Hunters and Trappers Organization (HB HTA)	Present – Laimiki Ullaoak [LU]
Arctic Bay (Ikajutit) Hunters and Trappers Organization (IHTA)	Present –
Baffinland Iron Mines Corporation (Baffinland)	Cortney Oliver [CO], Jesse Manufor [JM], Katie Babin, Tabitha Kasarnak and Lizzie Phillips [LP], Cathy Pikuyak
Environment and Climate Change Canada (ECCC)	Melissa Pinto [MP] and Jessica Kassar
Qikiqtani Inuit Association (QIA) and Consultants	Amoudla Kootoo [AK], Bruce Stewart [BS], Susan Leech (SL), Andrew Jaworenko (AJ), Jeff Higdon (JH), Richard Nestbit (RN), Sarah Kromberg SK)
Government of Nunavut (GN)	Jessica Waldinger [JW], Krista Shofstall [KS] Jonathan Pitseolak (JP)
Environmental Dynamics Incorporated (EDI)	Mike Settingington [MS], Patrick Audet [PA], Justine Benjamin [JB], Jay Brogan [JB], and Lyndsay Dotzel [KB]
Nunavut Impact Review Board (NIRB)	Absent
Natural Resources Canada (NRCan)	Clarrisa Fiset [CF],
Canadian Northern Economic Development Agency (CanNor)	Chantel E [CE], and Alexie Baillargeon [AB]
World Wildlife Fund (WWF)	Devin Holterman [DH]

AGENDA – JANUARY 13<sup>TH</sup>, 2025

Time	Agenda Item – Day 1	Lead	Materials	Purpose
10:00 – 10:30	Welcome and Roll Call	C. Oliver	N/A	N/A
10:30 – 11:15	Review Minutes and Action Items	J. Manufor	Minutes Action Log	For Approval For Information
11:15 – 12:15	Considerations for Pellet Based DNA Mark-Recapture for Caribou Abundance	M. Setterington	Technical Memo: Considerations for Pellet-Based DNA Mark-Recapture for Caribou Abundance shared on Oct 1 <sup>st</sup> .	For Discussion
12:15 – 1:15	Lunch Break			
1:15 – 2:00	Redefining Deflection	C. Oliver/All	Technical Memo: Revisiting the Definition of 'Deflection'	For Discussion
2:00 -2:15	<i>Health Break</i>			
2:15 – 3:15	<b>Caribou monitoring: Caribou collaring next steps and tissue sampling update</b> – QIA TEWG Member Recommendation.  <b>Tissue Sampling, Revised Term and Condition no 35.</b>	C. Oliver	N/A	For Discussion
3:15 – 3:30	<i>Summary of Actions and Wrap-Up</i>	C. Oliver	N/A	

## SUMMARY OF ACTION ITEMS

Action ID	Responsibility	Item Description	Due date	Status
		<b>TEWG Action Items</b>		
T-13012025-01	BIM/EDI	To continue to refine the definitions of deflection for the Mary River project in the next TEWG agenda.	Not stated	In progress
T-13012025-02	BIM/EDI	Baffinland / EDI also committed to reviewing how to differentiate between the terms 'deflect' and 'delay' when speaking to caribou movement	Not stated	In progress
T- 13012025 -03	BIM	To circulate QIA comments on deflection to the TEWG	As soon as possible	Completed.
T- 13012025 -04	BIM	To organise a bi-lateral meeting with QIA to discuss and plan a supplementary baseline caribou study that determines ZOI for Steensby.	Not stated	
T- 13012025 -04	GN	GN (Krista Shofstall) to provide Baffinland with the GN's opinions on the definition of <i>deflection</i> . If not, Baffinland will gather the GN's position based on the meeting minutes	Not stated	
T- 14012025 -01	BIM	To include in the Spring TEWG agenda to go over IR comments discussions on what was reported including rationale for the focus on source control over operational changes in BIM dust mitigation	Spring TEWG	
T- 14012025 -02	BIM	BIM to provide update on Tote road sediment trap pilot study when data is available.	When data is available	In progress
T- 14012025 -03	BIM	BIM to hold an information session on the ToR.	End of February or 2 <sup>nd</sup> week in March	In progress: Planning for this has started, this will hold on March 20 <sup>th</sup>
T-14012025 -04	NRCan	NRCan to follow up with the QIA on if there is a maximum wind speed of which beyond, the Pas-DDs can no longer effectively collect data.	Not Stated	
T-14012025 -03	BIM	BIM to submit ToR to NIRB	Jan 20th	Completed

## MEETING MINUTES

The meeting started after lunch, which is not as scheduled. This was as a result of issues with securing a translator/interpreter for the meeting.

CO (BIM) introduced the first agenda item, which was a recommendation from QIA to conduct a Pellets Survey. BIM had their consultants at EDI prepare a technical memo on the Pellets Survey, which they presented in this meeting.

### **Pellets Survey Memo Presentation – Jay Brogan (EDI)**

After the presentation, CI (MHTO) stated that aerial surveys are effective for assessing caribou abundance because they cover large areas. However, hunters have reported that the extensive survey transects flown by planes and helicopters impact caribou movement. Therefore, the MHTO recommended that aerial surveys be conducted with fewer overflights.

CO (BIM), while acknowledging that not everything was captured in translation, clarified that BIM will consider the feedback in future programs. She stated that collecting caribou pellets is not something BIM wishes to pursue.

CI (MHTO) asked if MHTO could be notified and consulted when helicopters are used for abundance surveys. CO (BIM) responded that the request was reasonable. She further informed MHTO that later in the meeting, other methods of caribou monitoring would be discussed. She asked if there were any comments on pellets from QIA or GN. No response was received, so the meeting moved to the next agenda item.

### **Redefining Deflection**

CO (BIM) provided background on the discussion. She stated that in the last meeting, there was a discussion with QIA and GN regarding the need for a clearer definition of deflection. Members were requested to provide written feedback, but only QIA submitted a response, which BIM received late last week and is currently reviewing. She asked if QIA would like to provide additional comments on their memo and informed the meeting that BIM is still working on the definition, which will be included in an updated management plan.

KS (GN) responded that while GN did not receive an email requesting written feedback, they have comments to provide on the definition. CO (BIM) clarified that the request was verbal in the last meeting. She invited GN to provide their comments now.

SL (QIA) reiterated that QIA only submitted their comments to BIM last Friday. She asked if other members wanted to review QIA's comments, stating they could be shared. She elaborated on QIA's feedback, explaining that QIA's main concern is to remove the requirement for a detected mechanism explaining the response. She stated that since there is currently no reliable way to monitor all reasons for deflection, references to a mechanistic explanation should be removed from the definition. Additionally, QIA wants deflection to be monitored not just near the infrastructure but also within a reasonable Zone of Influence (ZOI) around the mine site, as caribou may be avoiding infrastructure beyond the currently monitored areas, such as the Tote Road.

KS (GN) agreed with QIA's concerns, adding that the mechanistic response should be removed. She also requested clarification on how the ZOI is calculated and estimated, as well as how adjustments would be made if the ZOI turns out to be larger than anticipated.

CO (BIM) thanked SL (QIA) and KS (GN) and asked KS (GN) to submit the comments in writing. She acknowledged that BIM did not have time to review the comments before this meeting but assured members that the discussion would be included in a future TEWG agenda to finalize the definition.

KS (GN) then raised another concern regarding the terms **deflection** and **delay** in Table 1 of the memo. She questioned when a delay qualifies as deflection, given that caribou can delay movement for weeks or months. She confirmed that GN wants this issue reviewed as well. CO (BIM) stated that the group would continue this discussion once BIM receives further comments.

#### Action Items:

- Distribute QIA's comments on deflection to the group.
- Add **Defining Deflection** to a future TEWG meeting agenda.
- EDI to differentiate between the terms "deflect" and "delay"
- GN to submit comments on definition of deflection

#### Recommendation on Collaring – Update on Caribou

CO (BIM) introduced the discussion, noting that it had been addressed at the last TEWG meeting. Since then, BIM has received feedback from HTOs indicating that they do not support collaring. She asked if there were any additional comments, as BIM has not engaged further beyond TEWG. While BIM remains interested in collaring, there are no plans to proceed with it in 2025. However, she mentioned that they have more time than initially expected to collect baseline data at Steensby. She asked QIA and GN whether collaring is something BIM should plan shared engagement on in 2025.

LU (HBHTA) asked how many caribou BIM planned to collar. CO (BIM) responded that from the 2023 aerial survey, there were enough groups to collar approximately 35. She clarified that BIM is not yet proceeding with collaring but is seeking support for the idea.

AK (QIA) suggested that BIM host a meeting specifically on survey methods. CO (BIM) agreed and stated that she is open to finding the best approach but prefers to coordinate efforts or integrate collaring discussions into other planned work. MHTO also emphasized the need for a dedicated meeting on caribou abundance, whether through collaring or surveys, ensuring that communities and MHTO needs are considered. They requested that BIM and other stakeholders send a memo in Inuktitut to the community before any visits.

CO (BIM) clarified that no plans have been finalized. BIM is seeking input on whom to engage with. If there is no support for collaring, BIM will pursue aerial surveys. She asked whether engagement should be community-wide or focused on MHTO and other HTOs. LU (HBHTA) responded that he would consult the Board of Sanirajak for their preference.

CO (BIM) noted that QIA plans to conduct targeted engagement with HTAs and stated that BIM will follow up on progress in the next meeting.

### **Commitment on Caribou Tissue Sample Collection**

CO (BIM) explained that BIM had invested effort in designing a tissue sampling program based on GN's program. However, after discussions with GN, BIM decided to pause their independent effort in favor of a potential collaboration. She assured the group that updates would be provided to TEWG as discussions progress, avoiding duplication of efforts.

MHTO agreed with the decision to avoid duplication and requested updates on the program. KS (GN) confirmed that if GN and BIM collaborate, GN will share the results with the community as they have done previously.

DH (WWF) acknowledged the ongoing discussions and asked if BIM or GN could provide insight into the potential collaboration. CO (BIM) responded that a conclusion had not yet been reached, but a collaborative approach would lead to a more efficient program for both parties. KS (GN) elaborated, emphasizing that avoiding duplication is a key consideration. She noted that with BIM's financial contribution, GN would be able to conduct more extensive testing on collected samples.

SL (QIA) asked when decisions would be made, as tissue sampling is an SOP commitment. CO (BIM) stated that more clarity would emerge in the coming months. SL (QIA) urged BIM to keep members updated on progress.

### **Other Business**

The MHTO noted that some communities are absent from Zoom meetings and suggested that physical meetings would be preferable.

At this point, SL (QIA) asked if BIM could provide an update on the overall terrestrial monitoring for 2025. CO (BIM) replied that this would be part of the agenda for the next TEWG meeting.

DH (WWF) inquired about the timeline for Steensby, given that BIM has indicated a longer timeframe for baseline monitoring. CO (BIM) stated that in the December TEWG meeting, a timeline for Steensby was discussed. However, as it is not a priority for 2025, the project is expected to begin sometime in 2026.

LS (QIA) followed up on DH's (WWF) question and asked about the factors influencing the Steensby construction timeline, ensuring enough time for baseline monitoring. She further asked how quickly BIM would proceed once funding was secured, emphasizing the urgency of discussing baseline monitoring. CO (BIM) explained that while BIM is actively seeking funding, there are logistical and permitting considerations, and the earliest sealift would be in 2026.

KS (GN) raised a two-part question, asking when the earliest possible start date for the project would be, including ground-breaking. CO (BIM), while hesitant to provide a firm date, said that it depends on when BIM secures funding. KS (GN) reiterated that planning in the North takes a long time and noted that if equipment is brought in 2026, disturbances would already have begun, making preliminary data collection no longer viable. She stressed the importance of starting planning now.

LS (QIA) emphasized that QIA recommends collecting baseline data for at least one year before any earthwork begins. She also stated that a consensus on methodologies must be reached within the group.

She urged BIM to finalize detailed methodologies for aerial survey design and collaring methods for consideration by the TEWG.

CO (BIM) responded that the aerial survey would follow the same design as in 2023 and that GN is planning an aerial survey in March, and that information will be available. She acknowledged the importance of the TEWG discussions for guidance.

SL (QIA) added that the methodologies for the 2023 aerial surveys—including survey frequency and transect spacing—are critical and should be clarified. CO (BIM) stated that she was unaware of any issues with these methodologies. MS (EDI) joined the discussion, highlighting that seasonality is a factor if collaring is not pursued. He, like CO (BIM), did not recall concerns regarding transect spacing.

SL (QIA) suggested that the discussion continue offline, as understanding the impacts of different methods is crucial. CO (BIM) acknowledged that more flights lead to greater disturbance, which needs to be discussed with the HTOs.

MS (EDI) added that if collaring is not approved, an intensified aerial survey design would be necessary, involving tighter transects and more frequent flights to assess the Zone of Influence (ZOI). He emphasized that this discussion needs to take place within the group.

CO (BIM) concluded by stating that the TEWG will plan outreach to determine whether collaring is an option. Since two communities have expressed opposition to collaring, aerial surveys may be the alternative. She assured attendees that updates would be provided at the next meeting.

She thanked all participants and reminded everyone that tomorrow's meeting starts at 10:00 AM. The meeting was adjourned at **3:25 PM EST**.

Terrestrial Working Group Meeting (TEWG) Day 2

January 14<sup>th</sup>, 2025

**Meeting ID:** T-14012025  
**Group / Organization:** TEWG Members and Observers, Baffinland and Consultants  
**Meeting Location:** Virtual – ZOOM  
**Meeting Chair:** Cortney Oliver

Organization Name	Participants
<b>Member Organization</b>	
Mittimatalik Hunters and Trappers Organization (MHTO)	Present – Charlie Inurak (CI), Phanuel Enooagak (PE) and Peter Aglak (PA)
Clyde River (Nangmautuaq) Hunters and Trappers Organization (NHTO)	Nysana Qillaq [NQ]
Iglolik Hunters and Trappers Organization (IHTO)	Absent
Hall Beach (Sanirajak) Hunters and Trappers Organization (HB HTA)	Absent
Arctic Bay (Ikajutit) Hunters and Trappers Organization (IHTA)	Absent
Baffinland Iron Mines Corporation (Baffinland)	Cortney Oliver [CO], Jesse Manufor [JM], Katie Babin [KB], William Bowden [WB] Tabitha Kasarnak [TK] and Lizzie Phillips [LP], Cathy Pikuyak [CP]
Environment and Climate Change Canada (ECCC)	Melissa Pinto [MP], Robert Nissen [RN1] and Jessica Kassar
Qikiqtani Inuit Association (QIA) and Consultants	Bruce Stewart [BS], Susan Leech [SL], Andrew Jaworenko [AJ], Jeff Higdon [JH], Richard Nestbit [RN2], Sarah Kromberg [SR]
Government of Nunavut (GN)	Jessica Waldinger [JW], Krista Shofstall [KS] Jonathan Pitseolak [JP]
Environmental Dynamics Incorporated (EDI)	Mike Settingington [MS], Patrick Audet [PA], Justine Benjamin [JB], Jay Brogan [JB], and Lyndsay Dotzel [KB]
Nunavut Impact Review Board (NIRB)	Absent
Natural Resources Canada (NRCan)	Clarrisa Fiset [CF], Philippa Huntsman [PH], Harold Peter White [HPW], Amy Cleaver [AC]
Canadian Northern Economic Development Agency (CanNor)	Chantel E [CE], and Alexie Baillargeon [AB]
World Wildlife Fund (WWF)	Devin Holterman [DH]

Agenda – January 14, 2025



Time	Agenda Item – Day 2	Lead	Materials	Purpose
10:00 – 10:30	Welcome and Roll Call	C. Oliver	N/A	N/A
10:30 – 12:00	<b>Update on Baffinland Dust Mitigations</b>	K. Babin	Presentation	For Information
12:00 – 1:00	Lunch break			
1:00 – 2:00	<b>NRCan Update</b> 2024 passive dust monitoring trials	P. Huntsman	Presentation	For Discussion
2:00 – 2:45	<b>Update on the TOR</b>	C. Oliver	N/A	For Approval
2:45 – 3:00	Summary of Actions and Wrap Up	C. Oliver		

## MEETING MINUTES

At the end of the Day 1 meeting, SL noted that QIA is not interested in a pellet study. Their focus is on aerial or collaring studies, and they would like BIM to concentrate on these.

DH (WWF) started the Day 2 meeting by asking if BIM had conducted caribou studies before the commencement of Steensby construction. In response, CO (BIM) stated that BIM is waiting on several pieces of information. For instance, QIA is conducting a North Baffin caribou study, an engagement that will contribute to IQ, but BIM is unsure of the status of that work. This work may be discussed at the ISP meeting in Kingait today. The GN also has some plans; therefore, from BIM's perspective, they would prefer to avoid duplicating resources or overwhelming their HTO partners with engagements on the same project. BIM favors a coordinated approach. The purpose of this meeting is to narrow down the study focus, determine who should lead or coordinate engagements, and establish whether the TEWG will provide recommendations for BIM to conduct its engagements.

During Day 2 discussions, SL (QIA) informed the MEWG that after yesterday's meeting, she and Cortney had a discussion, which she wants to be captured as an action item. She reiterated that when CO (BIM) asked about the engagement QIA and GN had planned with the HTOs regarding different baseline data collection methods, QIA wants this engagement to occur through the TEWG. The reason is that baseline monitoring is a requirement for BIM, and although GN is conducting its own studies, it is crucial to understand baseline caribou activity and movement in the study area before Steensby construction begins.

As an action item, she requested BIM to prepare a full proposal for detecting the Zone of Influence (ZOI) using:

1. Collars
2. Aerial Surveys

3. A combination of both, with associated activities outlined as QIA is no longer interested in a pellets study.

She also requested BIM to plan a one-day meeting for the TEWG to make a decision regarding baseline data collection. The necessary materials should be provided in advance to allow the HTOs to make an informed decision. She proposed that this meeting be held no later than May to ensure readiness for next year's field season. She believes this will also allow GN sufficient time for procurement regarding the chosen approach.

Furthermore, SL (QIA) clarified that QIA wants to coordinate the work with GN as much as possible to minimize caribou disturbance. However, GN's survey will not assist in detecting the ZOI around the mine. While GN's work is crucial for understanding caribou population numbers, it does not provide insights into movement changes as construction and mining operations in the Steensby area commence. Therefore, it is essential to determine the appropriate survey design for ZOI detection.

In response, CO (BIM) did not agree to this as an action, stating that it should be considered a recommendation. She expressed that she does not believe the TEWG is the appropriate forum for securing community consent. Instead, she suggested proper coordination with the communities. She emphasized that this discussion could continue further.

SL (QIA) mentioned that an IQ study on caribou is underway through the ISP this week and that the project is on track. She will follow up with Amoudla and Connor regarding potential bilateral engagement with BIM. She believes the purpose of this meeting is to discuss the way forward before Steensby construction begins.

CO (BIM) noted that SL (QIA)'s proposal is prescriptive and should be framed as a recommendation rather than an action. She clarified that she is not dismissing the contribution but believes this is not the right forum, as the necessary individuals are not present. SL (QIA) agreed to follow up with Connor and Amoudla. At a minimum, the action should be to organize a meeting with BIM, QIA, and GN.

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### **Baffinland's Dust Mitigation – Katie Babin**

A presentation on BIM's dust mitigation strategies was given by Katie Babin.

#### *Questions from the Presentation*

RN1 (ECCC) inquired whether BIM has access to weather data, particularly wind speed and direction, given that public weather data is only available for the Pond Inlet area. He asked whether BIM could use water suppression proactively if a major windstorm is forecasted. KB (BIM) responded that BIM reviews forecasts and operates multiple weather stations on-site. However, rather than focusing solely on weather factors, BIM applies dust suppression as a general practice when needed. RN1 (ECCC) acknowledged the response but suggested that BIM use weather forecasts to apply dust suppressants proactively.

RN2 (QIA) asked whether BIM has conducted comparative studies on dust levels with and without dust suppressants, considering factors such as wind speed and humidity. KB (BIM) stated that BIM is currently collecting data at the source and in the receiving environment while reviewing factors like wind speed. RN2 (QIA) then asked when this information would be available for TEWG review. KB (BIM) replied that the data is included in various reports, including the annual report to NIRB, the QIA-NWB Type A report, and the dust audit committee (DAC) commitments.

RN2 (QIA) requested that BIM present this data at the next TEWG meeting, with justifications regarding the choice of source control over operational changes for dust mitigation. KB (BIM) confirmed that an update would be provided but noted that BIM is still analyzing the data.

RN2 (QIA) asked whether BIM could conduct rain event monitoring to better understand how dust is washed into the aquatic environment. KB (BIM) explained that BIM's monitoring approach is holistic and includes various locations sampled seasonally. RN2 (QIA) reiterated that event-based monitoring could provide valuable insights into rain-driven dust flushing. KB (BIM) stated that BIM cannot commit to this but clarified that existing programs evaluate cumulative environmental effects.

CO (BIM) summarized RN2 (QIA)'s request, which suggests that BIM pilot a storm event monitoring program. RN2 (QIA) clarified that he was referring to routine rain events, not major storms. CO (BIM) called for a lunch break at this point.

#### *Post-Lunch Discussion on Dust Mitigation*

After the lunch break, RN2 (QIA) asked for an update on the Phillips Creek pilot study along the Tote Road, which evaluates dust impacts on the aquatic environment. KB (BIM) confirmed that the study continued this year and that the lab is processing results. BIM committed to providing an update once results are available. RN2 (QIA) asked whether there were plans to continue or expand the study in 2025. KB (BIM) responded that this would depend on the results.

TK (NHTO) inquired whether BIM applies water to the ore on the B trains, similar to the Tote Road dust control measures. KB (BIM) responded that BIM applies dust suppressants at the crusher but does not apply water to the ore because it would freeze at the Milne Port stockpile.

#### **NRCan's Passive Dust Monitoring Studies – Philippa Huntsman**

NRCan presented an update on the 2024 passive dust monitoring program at Mary River Mine.

RN2 (QIA) inquired about operating limits for wind speed and humidity affecting the Pas-DD equipment. PH (NRCan) stated that the system was developed for oil sands monitoring and is currently being tested in Arctic conditions.

MHTO stated an interest in starting a monitoring program for animals in the mine area and plans to draft a proposal. NRCan looks forward to this during April visit.

RN2 (QIA) asked whether biofouling affects the Pas-DD samples. PH (NRCan) replied that while biofouling have not been observed, pollen grains have occasionally been seen, so weight changes are not relied upon. Instead, metal content on the foam discs is analyzed.

NRCan confirmed that sampling stations are all on land, near snow collection sites. Regarding snow sampling, the entire snow profile was collected, with targeted layers for mineralogy studies. Remote sensing comparisons involved surface snow sampling to correlate snowpack variability with satellite imagery. On satellite data and snow analysis, HPW (NRCan) explained that NRCan is studying how snow albedo is influenced by factors like dust, algae, and cloud shadows, using long-term data from satellites such as Sentinel and EnMapp.

#### **Update on Terms of Reference (ToR) – Cortney Oliver**

CO (BIM) informed the TEWG that BIM, QIA, and GoC have finalized the ToR and plan to submit it to NIRB soon. This will be circulated to TEWG members afterward and urged members to start nominating a Chair. JW (GN) raised concerns about the lack of broader review, but BIM clarified that finalization required consent only from BIM, QIA, and GoC. Further discussions can continue offline if needed.

The meeting concluded with appreciation for participation, and BIM committed to following up with actions and sharing the meeting summary.

Meeting adjourned by 2:50pm.