Real Ice

Winter 2025/26

Community Engagement and Permitting: Cambridge Bay, Nunavut

Introduction

Plans for field tests in the winter 2025/26

Real Ice has undertaken a series of small-scale sea ice thickening field studies beginning in January 2023 in Nome, Alaska (Real Ice project: T1), followed by subsequent campaigns in Cambridge Bay, Nunavut, on Canada's Victoria Island, in January 2024 (T2) and from December 2024 to July 2025 (T3). These studies have been designed to advance understanding in several key areas: the enthusiasm, interest and engagement of local communities with the research, the logistical and operational challenges of conducting research on the ice, the engineering feasibility of thickening sea ice through water pumping from beneath the ice surface, and the scientific dynamics associated with snow flooding in the winter and, more recently, melt pond drainage during the spring season.

Beginning in January 2026, Real Ice plans to resume work in Cambridge Bay, collaborating with the same local partners and within the same geographic area, while refining the study design in light of insights gained from the previous three winters of research. For this forthcoming season, the project will focus on thickening a single designated section equivalent to one quarter of the 1 km² area identified in collaboration with the local Hunters and Trappers Organisation, and employing more efficient pumping methods and improved measurement techniques. We expect to complete the core ice thickening operations by March 2026, then to monitor and measure the target area until the onset of the melt season (May to July 2026), when we will complete the observations and perform smaller-scale operations to test the effectiveness of melt pond drainage.

Research Protocol

Real Ice is dedicated to upholding the principle of Free, Prior, and Informed Consent (FPIC) in all research activities, placing particular emphasis on authentic and sustained engagement with local communities at the grassroots level. Recognising that much of the Arctic falls under the shared stewardship of Indigenous peoples, Real Ice acknowledges their central role in the governance and decision-making processes that affect their traditional lands and waters. Environmental preservation is a fundamental concern for these communities, who consistently advocate for the protection of the Arctic's fragile ecosystem.

The ability of Real Ice to conduct research in the region rests upon the willingness of local permitting authorities, civic organisations, and Indigenous hunting and trapping bodies to grant access and to collaborate in research design, implementation, and knowledge exchange. Such collaborations foster research that is respectful, inclusive, and attentive to community values while explicitly supporting the rights of Indigenous partners.

To guide these interactions, Real Ice follows the Inuit Circumpolar Council's Protocols for Equitable and Ethical Engagement (ICC EEE Protocols), hereafter referred to as "Protocols", which serve as a comprehensive framework for ethical research. These protocols require that Inuit be integrally involved in all decisions affecting them and that their knowledge systems are regarded as equally valid as Western scientific approaches. The protocols promote good governance through transparency, mutual accountability, and trust-building, and call for partnerships based on respect, shared data stewardship, and equitable distribution of any benefits arising from research activities within Inuit communities. Real Ice is committed to the thorough incorporation of these protocols in all aspects of its work.

A fundamental principle underpinning all of Real Ice's engagements and activities with local communities is the establishment of realistic expectations regarding the outcomes achievable through small-scale testing. We do not advocate for, promise, project, or discuss any potential deployment of the technology in Cambridge Bay or elsewhere; our focus remains firmly on the scientific and engineering insights derived from this limited research. Should questions arise about the ultimate aim of successful research, we may reference the longer-term aspiration of fostering an indigenous-owned industry capable of scaling up the technology. However, we emphasize that any actual deployment would be contingent upon overcoming numerous regulatory, security, economic, and technical challenges—most of which are beyond Real Ice's influence.

Summary of our technical and operational plans

Location

The winter 2026 research study location, selected with the collaboration of members of the local hunters and trappers organisation, is approximately 7km from the hamlet of Cambridge Bay on the sea ice. The water in this location is >20m deep.

Method

During the study, we will thicken a sea ice area of approximately 0.25 km^2 as part of the designated 1 km^2target area. The ice thickening operations will start in January 2026 when the ice is safe and stable, and continue until the end of March. Ice and snow thickness, temperatures and salinity measurements will be taken actively (drilling holes and collecting ice cores) and passively (through embedded ice thickness measurement devices) throughout the winter and melt season. In the spring, we will also perform melt pond drainage by making small holes in the ice. Aerial and satellite images will also be used to assess and record the conditions of the target area.

Past Community Engagement in Cambridge Bay

Formal Nunavut and Cambridge Bay Permissioning Timeline

The organisations that manage the permissions for research in Cambridge Bay, Nunavut, are as follows:

1. Nunavut Planning Commission (**NPC**) - a multi-year license may be granted
2. Nunavut Impact Review Board (**NIRB**) - required upfront and applies as long as the multi-year NPC agreement is in place
3. Nunavut Research Institute (**NRI**) - a multi-year license may be granted
4. Local Hunters and Trappers Organisations - in the case of Cambridge Bay, this is Ekaluktutiak Hunters and Trappers Organisation (**EHTO**) - annual approval
5. Research facility support from Polar Knowledge's Canadian High Arctic Research Station (**CHARS**) (if facilities are being used) - annual approval

Descriptions of each of the above organisations can be found in Appendix A

January 2024 (T2)

August 2023: EHTO initial briefing and operating permission request August 2023: NPC initial research license application
August 2023: CHARS research support application
September 2023 NIRB initial research license application
September 2023 NRI initial research license application
November 2023 NPC multi-year research license granted {2023 - 2026}
*November 2023 NIRB research approval granted**
November 2023 NRI multi-year research license granted {2023 - 2026}
November 2023 CHARS research support for T2 granted
November 2023 EHTO permission for T2 granted

December 2024-June 2025 (T3)

August 2024 : EHTO T2 briefing and operating permission for T3 request
October 2024 NPC 2nd year of the multi-year license confirmed
October 2024 EHTO permission for T3 granted
November 2024 NRI 2nd year of the multi-year license confirmed
November 2024 CHARS research support for T3 granted

** NIRB does not issue a new annual research license approval in the case of multi-year grants by NPC and NRI provided that the research has not changed substantially year to year.*

Community Engagement History

Real Ice's engagement in the Arctic is inspired by the principle of "Nothing About Us Without Us" (Protocol 1), ensuring that all research and operational decisions are made in close partnership with local communities and stakeholders. Initial engagement began in January 2022 with meetings in Iqaluit and subsequently in Nome, Alaska, where approval was received from Nome tribal and city authorities to conduct preliminary field tests.

Since 2023, collaboration with the Cambridge Bay Hunters and Trappers Organisation (EHTO) has been central to project planning, including the co-design of research methods, field site selection, research results briefings and annual securing of formal letters of support (Protocols 1,6 & 7). Members of EHTO have been involved in daily research activities, contributing their traditional knowledge and skills in crucial activities such as setting up and maintaining a safe camp out at sea, travelling on the sea ice in all weather conditions, performing key operations such as drilling through ice, securing, transporting and recovering equipment, measuring results, and actively making sure team members are safe from weather, environment and wildlife.

This deliberate, grassroots approach has established a foundation of mutual respect and shared interest in addressing sea ice loss (Protocol 2). The members of EHTO that contributed to the research studies over the last two winters will be named as contributors in a peer-reviewed paper from the University of Washington's Prof Edward Blanchard-Wrigglesworth, expected in pre-print in Q4 2025.

Active and ongoing dialogue with Cambridge Bay Elders is a core aspect of Real Ice's approach. Regular briefings at the Heritage Society, designed explicitly for Elders, reflect the project's commitment to recognising and integrating Indigenous knowledge (Protocol 2). Wider trust-building has been accomplished through open discussions with the Hamlet Council, Mayor, and other civic leaders. Additionally, hiring local Inuit guides and consultants and joining the Kitikmeot Chamber of Commerce have further invested in local capacity (Protocol 5).

Critical to Real Ice's effectiveness is sustained community presence in Cambridge Bay. Maintaining a multi-month base in the community each ice season enables formal and informal dialogue with hunters, trappers, guides, Elders, teachers, and other residents. Engagement activities include public Q&A sessions in community halls and CHARS, briefings at EHTO board and council meetings, and one-to-one meetings with local community members, Elders and leaders. This embedded approach facilitates EHTO team members' traditional knowledge sharing, fosters trust, ensures project transparency, and allows research operations to respond to local needs and feedback directly.

A central aspect of our work is our collaboration with the Cambridge Bay Hunters and Trappers Organisation (EHTO), who are the primary holders of traditional knowledge about the ecosystem in the region. The community as a whole and this group in particular relies on hunting and fishing for sustenance. Our collaboration with EHTO is essential to ensuring that our research adopts a holistic approach that respects and acknowledges Traditional Inuit Knowledge. EHTO members, as active hunters, trappers and fishers who frequently operate on the sea ice during the hunting & fishing seasons, possess unmatched expertise in navigating and understanding the ecology of the region and how the ice behaves under varying conditions. They are, in many ways, on the front lines of climate change adaptation within their

communities. Each time we seek permission to conduct research, we engage in detailed discussions with EHTO representatives about our plans and share results from previous research periods. Their feedback is integral, and we work collaboratively to refine ideas and methodologies. This process has been followed consistently over the past two years in Cambridge Bay, and again in the current field season. EHTO has played a significant role in shaping experiment design—including in the selection of research sites—drawing on local ecological understanding, wildlife patterns, hunting routes, ice conditions and history and local geography. During our January 2024 field test, limited consultation with EHTO led to the selection of a site that proved too shallow and near the coast, compromising the success of the trial—an outcome that reinforced the value of their involvement. Site selection encompasses layers of local and traditional knowledge, from wildlife movement patterns, safety aspects, shipping routes, snowmobile pathways, availability of nearby land trails, hunting, fishing and other economic or recreational activities in the area. In-depth discussions with EHTO during the 2024 spring about our specific research requirements led to an improved site selection for the 2024/25 winter that incorporated aspects such as travel times for optimal daylight pumping time during the key research months, distance from shore for reduced boundary effects, minimum sea depth for more realistic water temperature patterns, and ability to fly an aerial drone from shore over the selected site during the melt season.

At the beginning of the 2024/25 ice thickening tests, we discovered that we didn't have enough of a key tool used for our pumping sessions to stop the backflow of water after pumping: the "cofferdams". After discussing the issue with a local EHTO member, the secondary school carpentry lab came to support our activities by producing a number of additional wooden cofferdams that allowed us to continue our operations as planned over the following months giving us the opportunity to interact with the next generation of hunters and trappers.

Several Inuit members of the Cambridge Bay EHTO are also acknowledged as named contributors to the Real Ice and University of Washington academic paper scheduled for pre-print publication in December 2025, as they actively contributed to research aspects such as setting up test areas, taking ice and snow measurements and running aerial drone surveys.

An evolving partnership with the Canadian High Arctic Research Station (CHARS) has led to opportunities for Real Ice to present at open community evenings and participate in knowledge exchange with elder hunters and trappers, reinforcing Indigenous expertise as essential to responsible research.

Youth engagement is also a growing priority: at Kiilinik High School, engineering demonstrations, collaboration on sled building for field tests, classroom visits, and joint presentations with Real Ice scientific collaborators and local partners have built student awareness of and interest in the research (Protocol 4).

The project's collaborative approach has drawn international attention, with media and documentary crews visiting Cambridge Bay to document the science and local reactions to climate-driven sea ice changes. This exposure has amplified Inuit voices in discussions about the region's environmental challenges and underscores the broader impact of meaningful, community-led research engagement: The Narwhal: July 2025

Engagement Diary

[A montage of photos showing Real Ice meeting community members and key stakeholders, which has been redacted. The image showed a timeline of engagement and meetings from 2022 to 2025].

Community Engagement Q&A

The following are questions that we have been asked during some of the engagement events we organised.

Stakeholder Group	Examples of Stakeholder Questions	Type of Engagement	Real Ice Responses
EHTO	*How long before this could be rolled out to help save the hunting routes - caribou are disappearing through the thin ice*	*Board meeting*	*We are only in research mode at the moment. We hope that positive research results may lead to a larger-scale test, but it would be years before any potential rollout that would help mitigate the effects of thinner ice between Victoria Island and the mainland, so that fewer caribou are lost.*
Mayor & The Council	*Do you intend to run your research for multiple years*	*Formal update at the council chamber*	*Yes, as part of the Climate Cooling program, we have a 3-year research plan, which we intend to carry on in Cambridge Bay, in collaboration with the local community*
Elders	*How thin is the ice this year?*	*Listening meeting at Heritage Society*	*We explained that we were seeing a maximum of 1.8m. They were shocked and explained that when they were younger, the ice was 9ft thick in the bay.*
Wider Community Members	*Is the new ice that you create strong?*	*Informal open community meeting at Elders Palace*	*The new ice from flooding is on the surface of the ice stack, and it was about 30cm thick last winter. This sits on top of the existing 1.5m of ice that was created naturally, from the bottom.* *We don't know whether the top stack is stronger or weaker than the ice at the bottom, but in principle, we want to test the idea that thicker ice should survive longer during the summer, which would hopefully benefit communities and wildlife.*

CHARS	*How long is it taking for the ponds to turn into hard new ice.*	*Part of daily operations discussion*	*We explained that in typical cases it takes 12-48 hours for the water to freeze, and this depends on weather conditions and the depth of the pond. As an example, with temperatures in the -30C range and ponds around 10-15cm deep (very typical in our experience), we usually see a full freeze in under 24 hours.* *We also explained an edge condition where, in early December 2024, when the sea ice was only around 40cm thick, we observed some bending of the sea ice layer under the weight of the pumped water. This created deeper ponds, which took around 48 hours to freeze completely.* *This opened up a conversation about how much later the freezing of the sea was observed over the last couple of years and how this delay had created issues at the start of our testing operations. For this reason, we have changed our plans for next winter to only start ice thickening in January.* *{please see section at the bottom of this table for tracker}*

Local secondary school	*If there are seal breathing holes in the area you are covering, will you block them?*	*Field demo to students*	*We don't believe so, because the water we pump would flow back into the sea if there was a hole in the ice, and it would not block it, but it is something we will keep in mind in our research. We constantly monitor our pumping activities and the test area, and we will check and consult with our guides if we observe any seal breathing holes. The test area was selected with the help of HTO in a place where seal activity in the winter hasn't been observed for many years. {please see section at the bottom of this table for tracker}*

Local secondary school	*Will you drain all the water of the bay if you keep pumping sea water on top of the ice?*	*Field demo to students*	*In the specific tests we are conducting we are covering a very small area and pumping a tiny amount of water, when compared with the sea water under the sea ice. If and when this method was scaled to larger areas, a way to think about this, is that we would pump enough water to recreate the ice thickness that already existed a few decades ago - in practice we would pump perhaps 1 or 2 ft of sea water on top of ice, where we have hundreds if not thousands of ft of sea water underneath.* *{please see section at the bottom of this table for tracker}*

Community hypotheses tracker for 2026 testing

The following are questions from stakeholders that Real Ice will actively track and report on to the community for additional feedback:

1. Does the thicker ice created by pumping last longer in the summer?
2. Is the new ice that we create strong?
3. How long does it take for ponds to freeze?
4. Are there seal holes in the bay? Are seals using the newly drilled holes?

Free, Prior and Informed Consent

In Nunavut, we engage fully with the formal annual renewal process through the Nunavut Planning Commission (NPC), the Nunavut Impact Review Board (NIRB), and the Nunavut Research Institute (NRI). This process ensures that our work in Cambridge Bay aligns with the regulatory frameworks respected by both local and territorial authorities, providing the community with confidence that our activities meet the appropriate Nunavut research standards.

Within the hamlet, community-level consent and support are expressed primarily through the elected leadership—namely, the Mayor, Council, HTO, and Elders. We maintain ongoing engagement with these representatives throughout the year, particularly in winter and spring, through regular formal and informal meetings and updates. These engagements allow us to explain research objectives, share results, answer questions, and listen to guidance or concerns.

Each year, as part of the formal approval and reporting cycle, the following federal, territorial, and local organisations receive copies of our NRI annual report and associated permits:

- NIRB Environmental Administrator
- NPC Senior Planner

- Kitikmeot Inuit Association (KitIA) Lands Department
- CIRNAC Lands Department (Crown-Indigenous Relations and Northern Affairs Canada)
- Mayor and Senior Administrative Officer, Cambridge Bay
- Chairperson, Cambridge Bay Hunters and Trappers Organisation (HTO)
- Nunavut Tunngavik Incorporated (NTI) Department of Research, Monitoring & Evaluation
- Nunavut Climate Change Centre

These bodies provide the foundational permissions for research activities conducted outdoors in and around Cambridge Bay.

Process of Consent and Community Engagement
Our approach to FPIC in Cambridge Bay emphasises openness, accessibility, and continuous relationship-building rather than one-time written consent. We communicate our project plans and findings through in-person community meetings, both formal and informal. For example:

- Public forums and town hall-style discussions are held at the Elders Palace and the Canadian High Arctic Research Station (CHARS). Notices are posted in public spaces, such as at the two supermarkets and in community spaces, and shared on social media to ensure broad awareness.
- Engagement through traditional leadership—the Elders, Mayor, and HTO representatives—ensures that our activities are reviewed and discussed with those most trusted by the community to represent collective interests.
- Indicators of consent are evidenced through continued participation, verbal support during meetings, and community collaboration—for instance, sharing local knowledge, providing logistical support, attending our presentations, and inviting us to participate in community events.

Consent, in this context, functions as an ongoing relationship of trust. While formal approval is renewed annually through NRI and related bodies, community permission is reaffirmed through regular, transparent engagement and dialogue with experts in the community, particularly the hunters and trappers - who are the holders of traditional knowledge of the sea ice ecosystem and the community's adaptation to reduced/delayed/thinner sea ice. Should concerns arise, the hamlet leadership or HTO could communicate these directly to us or withdraw their endorsement through established local channels, at which point research would be paused pending further discussion and resolution.

Our approach was strongly informed by early experiences in Nome, Alaska, where community members emphasised the fatigue caused by extractive research practices. We are mindful of these lessons and strive to ensure that participation in Cambridge Bay is voluntary, respectful, and grounded in local priorities.

Sustainability and Renewal of Consent
Community consent is sustained through our commitment to returning each year, sharing results, and involving local hunters and Elders in the ongoing development of the ice-thickening research. The recurring invitation to continue our work, along with tangible support from residents—such as assistance during fieldwork and warm hospitality—indicates active, informed acceptance.

We are currently developing an internal process to formalise how withdrawn consent would be recognised and addressed, ensuring that both formal permit structures and community-derived permissions remain aligned and respected. Our goal is to ensure that research in Cambridge Bay continues to advance scientific understanding while strengthening mutual trust and

collaboration with the community.

Feedback Loops

Our sustained presence in Cambridge Bay—where we maintain a multi-month base each ice season—enables regular, often daily, formal and informal dialogue with hunters, trappers, guides, Elders, teachers, and other residents. This constant presence and the active involvement of community members in our operations help us remain responsive to the community's evolving insights and needs throughout each research season.

Community Interaction and Feedback Mechanisms
Engagement occurs through multiple channels designed to support a continuous feedback loop:

- Public forums and information sessions: We hold open Q&A sessions at community halls and the Canadian High Arctic Research Station (CHARS), where residents can discuss the research, raise concerns, or offer suggestions.
- Governance meetings: We participate in briefings with the Hunters and Trappers Organisation (EHTO) Board, the local Council, and other community leadership bodies to update them and formally collect their input on the design and execution of tests.
- Day-to-day informal exchanges: Because our researchers live within the community, we are readily available in everyday settings—at the café, shops, or local offices—which encourages casual conversations that often yield valuable feedback.
- School engagement: Our team and visiting scientists conduct demonstrations and presentations for students, creating an open space for younger community members and educators to ask questions and share perspectives.
- Active involvement of community members in our research: local guides, technical operators and a number of local companies take part in our operations, from managing the logistics (receiving, storing, fixing, transporting, lending our equipment), to actively enabling and participating in daily ice thickening and measurement operations, helping us build and deploy field equipment (e.g. cofferdams, sleds, measurement tools) and driving the safety and rescue operations within CHARS and EHTO.

This embedded, responsive structure fosters trust and ensures a transparent two-way communication flow, allowing feedback to immediately inform adjustments to our operations.

Community Collaboration in Research Design
The selection of the 2024/25 research site in Cambridge Bay was a collaborative effort between members of the EHTO and our field team. Together, they identified a location that balanced Real Ice's research objectives with community priorities by ensuring:

- No interference with hunters' regular transit routes,
- Reasonable proximity to the hamlet,
- Adequate water depth for research accuracy, and
- Maintain a distance from the coastline to minimise disruption during the spring melt.

Structured and Responsive Feedback Loops

- EHTO Daily Collaboration: Hunters and guides from the EHTO work alongside our team each day, advising on weather, ice conditions, and local best practices. Their input

repeatedly shapes our day-to-day methods and data collection.
- EHTO Formal Meetings: In February 2025, our team was invited to present at an EHTO evening board meeting—an important sign of trust and community endorsement. We shared progress updates and fielded direct questions from board members. We will return in October 2025 to present our 2024/25 results and seek guidance and approval for the 2026 research season.
- Mayor and Council Engagement: Between February and June 2025, we held three direct meetings with the Mayor and Council, including a formal presentation in the council chamber. In these sessions, we shared interim findings, discussed long-term plans, and invited feedback. We will return in October 2025 to present the full results and collect any formal feedback or recommendations.

Ongoing Feedback and Responsive Action
Feedback operates as a circular and renewable process:

- Immediate comments or concerns raised during fieldwork or public meetings are addressed directly by the research leads in Cambridge Bay.
- Formal updates are provided at fixed intervals (winter, spring, and post-season) to all key bodies, including EHTO and the Hamlet Council.
- Adjustments to our research methods or sites are discussed publicly, ensuring transparency and reaffirming local consent.
- If substantial concerns were raised, the same local channels—EHTO, Mayor, or Council—would serve as the formal routes for dialogue and potential recalibration of our activities.

This multi-layered feedback loop—daily, seasonal, and annual—ensures that our work remains community-driven, inclusive, and adaptive to local perspectives.

Contributions to the local economy in Cambridge Bay

Employment
Real Ice contracted with EHTO for four Inuit research participants. These Inuit acted as guides and as collaborators/research participants for the daily operations out on the ice. During the melt season, these Inuit research participants assisted us with monitoring and measuring the ice thickness.

Equipment & Facilities: We rented vehicles for the extended periods of the winter and spring (trucks, snowmobiles and an ATV) from local outfitters. We rented a venue (The Elders Palace in Cambridge Bay) twice to host our community consultations. We used the local hardware shop (Kitikmeot Supplies) for equipment purchases.

Travel and Food: Over the course of winter & spring 2024/25, 23 individuals travelled to Cambridge Bay to participate in the Real Ice field study, including scientists from the University of Cambridge, the University of Washington, Arizona State University and the University of Oslo. In addition, 3 film crews and 2 journalists made the journey to Cambridge Bay to spend time

with the project and with the local community. We shopped in the local supermarkets and ate at the local cafe throughout our stays.

Economics Summary

In total, the Real Ice T2 & T3 projects have resulted in spending of over C$250,000 on services and supplies in Cambridge Bay, the majority of which was spent during the winter months when tourism and visitor numbers are at their lowest in the hamlet.

Progress with Community Engagement:

Winter 2025/26

Permissioning Status for research period Jan 2026 - Jul 2026 (T4)

Approvals required: 4
Approvals secured up to 20 November 2025: 4

15 August 2025 Nunavut Planning Commission
3rd year of the multi-year **license confirmed** {ends Dec 2026}
File # 150891, Associated NIRB File No.: 23YN044

27 August 2025 Nunavut Research Institute
3rd year of the multi-year **license confirmed** {ends Dec 2026}
License#: 04 001 26R-M

04 September 2025: Canadian High Arctic Research Station
3-year research support **agreement signed** {2026-2028}

6th November 2025: EHTO support letter **signed** covering the period (Jan-Jun 2026)

POLAR Knowledge/ CHARS research support & collaboration

In 2024 and 2025, Real Ice's research activities benefited from both in-kind and direct financial support from the Canadian High Arctic Research Station (CHARS), including accommodations, laboratory access, and fees for local guides. However, due to recent budget constraints within POLAR Knowledge Canada, CHARS will no longer be able to provide such support moving forward. Consequently, Real Ice will transition to covering costs independently, paying negotiated fees for CHARS accommodation and workshop access each winter, and engaging local guides through direct contracts with the Ekaluktutiak Hunters and Trappers Organisation (EHTO).

A three-year research support partnership, established through a negotiated agreement in September 2025 with POLAR/CHARS, now secures Real Ice access to CHARS facilities for the duration of the RASI field test program without the need to reapply annually. This agreement also promotes multi-year collaboration opportunities with other POLAR programs. It provides discounted rates for essential equipment, such as snowmobiles, further supporting the continuity and effectiveness of Real Ice's Arctic research operations.

Community Engagement Plans Winter 2025/6

Building on the trust relationships developed with local hunters and trappers, Indigenous leaders, and Elders, Real Ice will prioritise several core components of community engagement in the coming year:

Recognition of Indigenous Knowledge (Protocol 2).
Traditional knowledge is fundamental to the preservation of sea ice ecosystems. Real Ice will collaborate closely with EHTO and other community members throughout the winter and spring, drawing on their expertise to both guide operations safely across the ice and actively participate in ice thickening research design & operations. By foregrounding the contributions of Indigenous knowledge holders, the research aims to deepen understanding of local ecological dynamics and ensure that the value of traditional perspectives is made explicit within project outcomes.

Continued Elder Engagement (Protocol 2)**.**
Regular briefings for Elders at the Heritage Centre will continue, reaffirming the project's commitment to inclusive participation and the transmission of knowledge across generations. These briefings, which have been very well received, provide an essential forum for sharing findings, gaining guidance, and honouring the perspectives of community Elders.

Communication with Intent (Protocol 4).
A series of public meetings will be held in Cambridge Bay's community spaces and with the hamlet's civil leadership to present findings from the previous year's study and to facilitate open discussion about ongoing research. These sessions will be documented to capture feedback, questions, and insights from community members and leaders, ensuring that the project remains transparent and responsive to local input. We will not collect data outside of the direct scope of the Real Ice project.

Building Meaningful Partnerships (Protocol 6).
Real Ice seeks to strengthen existing collaborations by contracting directly with EHTO as full research team members and guides for the coming winter. Through these embedded research team members from EHTO, we seek to enhance partnership both individually and collectively with those who serve as stewards of Inuit hunting traditions. Additionally, Real Ice has commissioned, from one of the members of EHTO, three custom sleds to be built for field operations this coming winter. These were co-designed with this team member. Further, the partnership with Kiilinik High School will be deepened through outreach activities such as an art competition, site visits, and presentations by visiting scientists.

Planned Activities

Real Ice has a track record of holding multiple community events in Cambridge Bay each winter & spring. **We are committed to holding a similar number of events in 2026.**

Project

Date	Individual/ Group	Real Ice contributors	Topic	Targeted Outcome	Protocol
Oct-Dec' 25	[Name redacted]	Arctic Operations	Sled design	Collaborative design for sleds for winter '26 research	1,2,6,8
Nov '25	EHTO	Simon Woods & remote support where feasible	Briefing Q&A on '24/'25 results	Provide copy of the results of last winter's testing. Respond to questions. Document Q&A **{Completed}**	1,2,6
Nov '25	EHTO	Simon Woods & remote support where feasible	Briefing & discussion on '26 plan	Solicit feedback on coming winter's technical and engagement plan. Document Q&A. **{Completed}** Discuss and agree terms for team participation of EHTO members **{Completed}**	1,2,3,6,8
Jan-Jun' 26	EHTO	On site team	Continuous learning	Daily collaboration out on the ice with EHTO members as fully participating team members bringing their traditional knowledge to the research, in addition to guiding the team across the ice.	1,2,3,4,5,6

Wider Community in Cambridge Bay

Date	Individual/ Group	Real Ice contributors	Topic	Targeted Outcome	Protocol
Nov '25	Mayor of Cambridge Bay	Simon Woods	Briefing on R&D and community engagement plans for '26	Solicit feedback on coming winter's engagement plans. Document Q&A **{Completed}**	1,2,3,4,5,6
Jan '26	Community at Large	On site teams	Community Feedback at Elders Palace	Present the project and its history in Cambridge Bay. Ask our indigenous partners to be part of those presentations. Solicit Q&A both in the meeting and in the informal gathering around tea & cake afterwards	1,2,3,4,5,7
Feb '26	School Students	On site teams	Youth understanding of the Real Ice research	Hold an art competition to portray the Real Ice research at the Secondary School with art supplies prizes for the school and the student.	1,4,6

Feb ‘26	Mayor, council members and community at large	On site teams	Information on the research captured as audio	Audio interviews/discussion when members of the Council and the Mayor visit the Real Ice research site. Package up in podcast format. The Mayor has agreed to broadcast these materials on the local radio.	1,2,4,6
Mar ‘26	Community at Large	On site teams	Community Feedback at Elders Palace	Present the project with an update on progress for winter ‘26. Recap the history of the project in Cambridge Bay. Ask our indigenous partners to be part of those presentations. Solicit Q&A both in the meeting and in the informal gathering around tea & cake afterwards	1,2,3,4,5,7
Jan - Jun ‘26	Secondary School Students	On site teams	Presentations by visiting scientists	Scientists joining the Real Ice research present their areas of expertise/interest to classes at the Secondary School and answer questions from the children.	1,4,6

Unfunded But Potentially Impactful Additional Scope

Date	Individual/ Group	Real Ice contributors	Topic	Targeted Outcome	Protocol
Jan - Jun ‘26	Cambridge Bay Elders and EHTO	On site teams + professional videographers	Ice history	Continue to document the history of the sea ice in Cambridge Bay as told on video by the Elders, at the Heritage Center. The documentary to be owned by the community. Take additional footage of the Real Ice work in order to produce a short documentary explaining the research, the rationale behind the research and the collaboration with the local community that makes it possible.	1,2,6

Next Steps and Gaps

While Real Ice has demonstrated positive intent and compliance with Inuit engagement protocols, gaps remain in co-development, data sharing and ownership, Inuit-led governance, and long-term capacity-building.

We place the highest priority on adhering to formal permitting requirements together with consistent alignment of our engagement activities with the principles outlined in the Protocol. Our approach has been grounded in grassroots collaboration, built through direct dialogue with local communities, fostering partnerships, and conducting work jointly.

We commit to keeping the ARIA team updated on project level engagement planning, activities, inputs and feedback.

Looking ahead, we recognise the need to deepen engagement with senior levels of Inuit and Canadian national institutions to advance the broader guiding protocols for this type of research in Canada, which will become increasingly significant as we operate within the ARIA/RASi program framework. We request that ARIA engage with organisations such as ECCC, ICC and ITK through its British Government connections.

Additional resources would strengthen our capacity to employ Inuit advisors, translators, and trainers, while also providing essential support for governance structures and monitoring mechanisms. ARIA's facilitation with both national and supra-national Inuit organisations would further enable alignment with all eight protocols, ensuring that future work is genuinely Inuit-led and co-developed.

APPENDIX A

Research Permitting Organisations for Cambridge Bay, Nunavut

- **Nunavut Planning Commission (NPC)**
  The NPC is responsible for the development, implementation and monitoring of land use plans that guide and direct resource use and development in the Nunavut Settlement Area.
- **Nunavut Impact Review Board (NIRB)**
  The Nunavut Impact Review Board (NIRB) is an institution of public government created by the Nunavut Agreement (NA) to assess the potential impacts of proposed development in the Nunavut Settlement Area prior to approval of the required project authorisations. Using both traditional knowledge and recognised scientific methods, the NIRB assesses the potential biophysical and socio-economic impact of proposals and will make recommendations and decisions about which projects may proceed. The Board may also establish monitoring programs for projects that have been assessed and approved to proceed.
- **Nunavut Research Institute (NRI)**
  The Nunavut Research Institute is a Division of Nunavut Arctic College (NAC) and is responsible for administering the Scientists Act, which applies across the entire territory of Nunavut. The Act requires that anyone conducting research in the health, social sciences, or natural/physical sciences disciplines must first obtain a license from the NRI.
- **Ekaluktutiak Hunters and Trappers Organisation (EHTO)**
  The EHTO manages sustainable harvesting, oversees wildlife management, and creates economic development opportunities. It primarily focuses on regulating hunting and trapping practices to ensure the long-term health of wildlife and benefit the local Cambridge Bay Inuit community. HTOs are non-government organisations that play a crucial role in representing Nunavut Inuit residents in these areas.
- **Polar Knowledge, Canadian High Arctic Research Station (CHARS)** A state-of-the-art research facility located in the vibrant Canadian Arctic community of Cambridge Bay, Nunavut. The Canadian High Arctic Research Station (CHARS) operated by Polar Knowledge Canada, has been designed and built to optimise innovation in Arctic science and technology, to welcome visitors, and to provide researchers with the accommodation and technical services they need. It's an innovative facility that can support a wide range of research needs – from ecosystem monitoring to DNA analysis – and where Indigenous Knowledge is recognised as fundamentally necessary to the co-creation of new knowledge.