



Keewaytinook Okimakanak (KO) Marine Fibre Optic Project Planning
 Summary of Engagement Activities to Date (July 28, 2023)

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Project Development Engagement Summary

Communication Date	Activity	Proponent Contact	Indigenous Contact	Purpose	Notes
April 2019 - January 2022	Meetings	Jesse Fiddler	Fort Severn Leadership	Project Planning	Proposal development and input with KNet and Fort Severn Leadership & Fort Severn IT Manager
17-Sep-19	Meetings	Jesse Fiddler	Fort Severn Leadership	Confirmation of Support	KO Chiefs Board presentation (including Fort Severn First Nation Chief) KO Chiefs Resolution confirming support
17-Oct-20	Meetings	Jesse Fiddler	Fort Severn Leadership	Confirmation of Support	KO Chiefs Resolution confirming support
October 22-29, 2022	In person field visit	Jesse Fiddler	Lyle T. Sam H.	Project Design – Routing Baylinks Networks	Baylinks Survey field visit to Fort Severn and Peawanuck First Nations to complete field surveys of routing options and community engagement on routing
5-Apr-23	Meeting	Jesse Fiddler Franz Seibel Cal Kenny	Lyle T. Sam H.	Engagement with contractors Arctic Research Foundation, International Telecom and Seaforth	Introduction to Arctic Research Foundation, International Telecom and Seaforth contractors, discussion of shore landing and routing, discussion of synergies with other First Nation led research

November 2022 - May 2023	<i>Meetings</i>	<i>Jesse Fiddler Franz Seibel Cal Kenny</i>	<i>Dan P., Kativik Regional Government (KRG)</i>	<i>Project Design - Landings</i>	Discussions with KRG regarding landings, access to the KRG network, and advice regarding local permits in Kuujjuarapik and Chisasibi
2-May-23	<i>Meeting</i>	<i>Jesse Fiddler Franz Seibel Cal Kenny</i>	<i>Dan P., KRG</i>	<i>Project Design - Landings</i>	Discussions and letter sent to KRG requesting use of existing Kuujjuarapik landing. KRG has advised that the marine fibre cable will land at the existing beach manhole and overland fibre will fit in the existing conduit to the existing cable landing station where one full rack is requested. KRG is providing liaison with the Kuujjuarapik government and IT department for access to the existing infrastructure. An application is being submitted to the Kuujjuarapik Landholding Corporation.
2-May-23	<i>Meeting</i>	<i>Jesse Fiddler Franz Seibel Cal Kenny Dan Duckert</i>	<i>Dan P., KRG</i>	<i>Project Design - Chisasibi Peering</i>	Chisasibi - A KNet router will be installed in an existing rack in Chisasibi in the KRG co-location shelter to link KRG - Tamani Networks with Eeyou Network. Otherwise, Chisasibi is a peering site along the existing marine fibre to Kuujjuarapik.
12-May-23	<i>Meeting</i>	<i>Jesse Fiddler Franz Seibel</i>	<i>Lyle T.</i>	<i>Project Design - Routing</i>	Discussion of marine and overland route, invitation to Fort Severn First Nations for community meetings and field survey July 8-14, 2023
23-May-23	<i>Meeting</i>	<i>Jesse Fiddler Franz Seibel</i>	<i>Sam H.</i>	<i>Project Design - Routing</i>	Discussion of marine and overland route, invitation to Peawanuck First Nation for community meetings and field survey July 8-14, 2023
30-May-23	<i>Email</i>	<i>Jesse Fiddler Franz Seibel</i>	<i>Sam H.</i>	<i>Confirmation of Project Approval</i>	Peawanuck Band Council Resolution (BCR) indicating project support, approval to proceed and land access
1-Jun-23	<i>Email</i>	<i>Jesse Fiddler Franz Seibel</i>	<i>Lyle T.</i>	<i>Confirmation of Project Approval</i>	Fort Severn BCR indicating project support, approval to proceed and land access
July 26, 2023	<i>Email</i>	<i>Jesse Fiddler Franz Seibel</i>	<i>Lyle T.</i>	<i>Shore Landing and Routing Updates</i>	Confirmation of shore landing and overland routing options preferred by Fort Severn First Nation

Fort Severn First Nation

Community Visit July 8-10, 2023

Community Meeting held at the school with youth, adults and Elders July 10, 2023.

Interviews with six community land users who provided valuable land use information.

Youth Event July 10, 2023: 8 Youth with who are working in the community as summer students. Lots of support for faster internet. Some concerns about trenching, if there will be structures on the land, breakages, and keeping the land safe for the future.

Open Community Meeting July 10, 2023: 21 Elders and Adults, including a good representation of the community families by 9 women Elders.

Record of Questions and Comments Received from Fort Severn First Nation

Commenter	Question / Comment	Response	Follow-up Action
Community Member 1	How fast will it be? The school has starlink and fibre to the ECentre. How much will it cost?	The router will be 100G with a minimum of 10G as the initial service for the community. Starlink is about 0.05G, the KNet dish is 0.1G for the whole community. The cost is determined by Fort Severn, but will be more, for the higher speed. 1G could be possible to the school.	
Youth 1	What happens if it breaks? How long will it take to fix? What is the backup?	We are planning to have available cable stored and a ship on standby with KRG. This may take a few days in the summer to weeks in poor weather and can only be repaired in ice-free season. The backup is starlink.	
Community Member 2	What is the route to the coast? Stay away from the river bank.	We travelled by ATV to check on options. One option is to follow the existing trail north. Deviations are included where the trail comes close to the eroding river bank.	
Community Member 3	Go behind the Miles goose camp along the tree line, not through the front yard	Noted. The Miles camp is near the river bank and the cable should be back behind the camp	
Elder 1	What is the cable made of? How does it work?	The cable is strong with rubber on the outside, steel rods inside, an optical glass with light. It is not an electric wire. Fibre optics are like nerves in your body, fast signal. The cable modelling shows that the system will work over the long distance.	Bring a piece of cable to have the Elders look at and hold

Elder 1	Will it affect the fish?	Marine fibre is used around the world beginning in the 1990s. EAUFON cable was installed in KRG in 2020. There have been many studies. Once installed, the cable does not affect marine wildlife. The construction period will cause some disturbance during jetting to bury the cable.	
Elder 1	Will the land trenching make a mess? What will it look like afterwards	The land trenching will be done in the winter to prevent rutting, and the cable will be buried at 1 meter. The trench will be filled and the plants will slowly grow on top of the trench. It will take longer to grow in the tundra.	
Elder 2	Will the cable be exposed or come to the surface? The trail is a highway with lots of ATVs. Will it be marked? The ditch floods in the spring, will it float to the surface?	The cable will be buried 1 meter and would not surface during heaving in spring and fall. It won't be affected by spring flooding as it will be buried. It can be marked if the community wants. We could also not mark, but anyone operating a machine along the route would know not to dig it up.	
Community Member 4	What will internet cost at home after?	Fort Severn makes their own business and could provide faster internet than starlink for cheaper if they want. The model is for KNet to sell the main 10G circuit, and the band to charge the school, clinic, police station, store, etc. and homes.	
Community Member 5	When did this project start? I haven't heard about this before.	Starting in 2017 the project was in the development phases with the council. In 2020, proposals were submitted. In 2021, conditional funding was secured. This is our first community meeting with the community, there will be more.	
Elder 3	I would like a copy of the map, it is nice. Can you give us all a map?	We can send maps to (Elder Liaison) for the Elders.	Send Elder Liaison maps once route is finalized for 8 Elders.
Elder 1	If the cable has a smell, the polar bears might dig it up. They are very curious and destructive	Based on other projects in the arctic, the cable doesn't emit a smell after construction, but we will confirm.	Ask INS for past experience on other projects.

Record of Questions and Comments Received from Fort Severn First Nation

Commenter	Question / Comment	Response	Follow-up Action
Land User, Knowledge Keeper, Youth Mentor	<p>I take the youth to the camps in the North and don't eat any meat from the store. I like the plans. The Pepwatin River is important for fish. A study was done with Land User 1, be careful there.</p> <p>The beach manhole will be tough to build. The permafrost shifts and sink houses. A pile could work.</p> <p>Ice builds up on the shore, but doesn't come up onto the ridge, that is a good spot.</p>	<p>Noted. We intend to have the shore landing east of the Pepwatin River.</p> <p>The beach manhole will likely be on the ridge and we will consider a pile anchor. The concrete isn't too heavy and may not be affected.</p>	
Former Chief of Fort Severn	<p>A study was done in 2022 by KGS that included Geotech on the northern road you're looking at. As the former Chief, the vision was for employment and economic opportunities. We need better internet to take advantage of distance jobs like a Cree call centre, tourism, a digital server farm, bring Fort Severn safely and better prepared into the future for the youth.</p>		<p>Asked KO for a copy of the report</p>
IT Manager	<p>A shelter or new Ecentre is needed. There is mold in the ECentre and the building is in disrepair. Long-term broadband is critical. Have you seen how slow the speeds are at the hotel? Now try doing that with an emergency at the clinic. We have had satellite providers come and go, starlink is no different. We need the fibre line.</p>	<p>A shelter is possible for the equipment. The office and work space may need to be in the new community centre.</p>	
Lands and Treaties, Guide	<p>There are a few wooden schooners and a metal steamboat on shore. There may be shipwrecks in the bay.</p> <p>The trail is very well used by everyone travelling north, it is like our highway. Trenching beside away from the river would be best.</p>		<p>Advise survey team</p>
Elder Support	<p>We will need to think of how to explain the concept of fibre optics to the Elders. They will be concerned about the cable in the water affecting the fish. How about nerves in the body for fibre optics?</p>	<p>Pictures will help, but having a piece of cable would be best.</p>	<p>Bring a piece of cable to have the Elders look at and hold</p>

Heavy Equipment Operator, Land User	I built the road to the North with an excavator. I turned back the top layer and piled the soil. There isn't too much sand or gravel, but it is along a higher point and the road has lasted over 10 years so far. Trenching on the side away from the river would work well. Another idea is to trench further away from the river along the tree line in a straighter line.	Trenching will be done in the winter, so across the open area to the west of the road would work technically. We are trying to avoid a new disturbance. There will be splices along the way that might be helpful to access. Away from the road would avoid a breakage from a machine digging. The winter road realignment could disturb the route if it is too close to the existing road.	
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Weenusk First Nation

Community Visit July 10-14, 2023

Community Meeting held at the youth centre July 12, 2023 with youth, adults and Elders.

Interviews with Land Users and the Public Works Manager

Open Community Meeting July 12, 2023: 25 Elders and Adults, including several representatives of the families who have camps near the coast and use the land (3 Elders). One Elder did most of the talking, she said she is OK with it if the younger people support it, it is up to them. Youth were supportive, preferred west route.

Youth Event July 13, 2023: 10 Youth with who are working in the community as summer students. Lots of support for faster internet. Some concerns about fish and outages, they use internet for everything (communication, games, education, health, future). Starlink has changed a lot, but is still slow. One youth has 3 Starlink and is a gamer. Starlink at the camps has made it more engaging to bring youth.

Record of Questions and Comments Received from Weenusk First Nation

Commenter	Question / Comment	Response	Follow-up Action
Community Member 1	Why fibre? We have had satellites on the house every 5 years. What make this any	The router will be 100G with a minimum of 10G as the initial service for the community. Starlink is about 0.05G, the KNet dish is 0.1G for the whole community. Fibre is used around	

	different? Will it last, will it be fast enough? How fast will it be?	the world including KRG as a long-term solution. The reliability, scalability and future technology will be fibre. We agree that starlink will also become over subscribed and costly as well.	
Elder 1	What is the route? Where does it go under water? There are families with camps along both sides of the Winisk river.	More detailed review of map and options provided during the presentation including shore landing options. We travelled with two community members to review the shore landing options. We are asking the community which option you would prefer as we consider options for the survey.	Send updated maps to (title)
Community Member 2	How long will it take to build? Will people get jobs during construction?	With specialized equipment and jobs on the vessel, there won't be any opportunities there. For land work, it would be best to hire local equipment and operators who know the land. The overland construction work will likely be 4-6 months in the winter of 2025.	Request list of available heavy equipment
Youth 1	How long will the line last?	Generally 40 years is the approximate lifetime of a fibre line in the north of Canada, but it could last longer.	
Youth 2	Right now, it takes so long to download files using StarLink. We need faster internet. What will it cost?	KNet will continue to sell the main circuit to the band and your band owned IT business can choose what to charge people at home. This has always been KNet's model with all First Nations. We are guessing it will be the same speed as starlink for cheaper at home. The band can order more internet for it to be faster.	
Youth 1	What about the Provincial Park? They are always a problem when we want to get things done in the community.	The park will be given the proposed routes and asked for permitting. The proposed routes have some of them in the park boundary. The park management plan has some consideration for infrastructure that benefits the community. With your support, we will work together through this process with Ontario Ministry of Natural Resources and Ontario Parks.	
Elder 1	Make sure nothing happens to the fish.	Noted. We would not like to enter any rivers and the preferred shore landing is away west of the Winisk river. The east route has a Winisk river crossing that could be aerial. The west route option has a small tributary crossing that could also be aerial. We can complete a baseline study with	Review Weenusk existing baseline and determine a monitoring plan for the Winisk river

		the community and continue monitoring to make sure nothing happens to the fish. The community has the equipment to do the monitoring.	and the health of the fish before and after construction.
Community Member 3	Will there be any structures above the ground? We don't want solar powered structures at the coast.	The cable is planned to be buried and the shore landing is a box in the ground with a lid at grade. The river crossings will need to be two aerial structures to stay out of the river. Solar panels were an early plan, but we have figured out how to run the cable the whole way to the community without needing solar power at the coast.	
Community Member 4	Can we get fibre connection at the camps along the route?	The fibre optic line will be a main pipe like a large water pipe. To bring fibre to the camps, it would have to be connected to the main servers in the community, then a second line would have to be layed in the trench going back to the camps. Power and a server building would have to be constructed at the camps to get fibre internet back out to the camps.	