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ID #	Subject	Party Concern	Party Recommendation	NCL Response
ECCC1	-	No comments at this time.	-	-
CIRNAC1	Fuel transfer and storage	The project proposal involves use of significant quantities of fuel and hazardous materials (diesel: 1,557,410 litres, gasoline: 500 litres, propane: 500 lbs, ANFO: 10,400 kgs, lubricants: 80,025 litres and lime: 91 ,OOO lbs). Although, the proponent included a spill contingency plan with the project proposal, the plan lacks the measures that should be followed in regards to preventing water pollution from refueliing and storing of fuel and other hazardous materials.	CIRNAC recommends NIRB to include the following additional terms and conditions, should the project proposal be approved to proceed: All fuel and other hazardous materials should be stored a minimum of 31 metres away from the high water mark of any water body and in such a manner as to prevent their release into the environment;Re-fueling of all equipment should occur a minimum of 31 metres away from the high water mark of any waterbody; Secondary containment or a surface liner should be used when storing fuel and chemicals at all locations;	Refueling and storage of materials such as fuel, ANFO and lubricants, is outside the scope of this application; these materials will be transported along the winter road and stored for use at the Lupin Mine. Refuelling will also occur at the Lupin Mine. Material storage and refueling at Lupin are permitted under 2AM-LUP1520.
CIRNAC2	Identification of effects	The Proponent's impact identification matrix indicates that certain project activities (e.g., camp use, and construction, operation and decommissioning of access road) will result in "Negative and non-mitigatable impacts" on ground stability, water quality and vegetation, but there is no explanation as to why these impacts are considered non. mitigatable.	CIRNAC recommends that the Proponent provides clarification in this regard.	An error was made when filling out the impact identification matrix. All fields designated with an N (negative and non-mitigable) should have been designated with an M, indicating that effects may be negative and mitigable. All potential negative effects associated with the project are considered to be mitigable. The Proponent apologizes for any confusion that this error may have caused.
GN1	Archaeological considerations	The proponent plans to build and operate a portion of the existing Tibbitt to Contwoyto Winter Road route from Tibbitt Lake in the Northwest Territories to the Lupin site, located at the northern end of Contwoyto Lake, Nunavut. In the context of ongoing	The Department of Culture and Heritage recommends that: • The proponent adheres strictly to the proposed transportation route/track,	The project footprint in Nunavut is almost entirely located on the surface of Contwoyto Lake, avoiding islands, so there will be limited potential to interact with archaeological sites. The route crosses one portage in Nunavut at the south end of the lake. The road will be built on the existing corridor along this portage and so it is expected

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		reclamation of the Lupin site, the road will be used to transport equipment and supplies. A search of the Nunavut Archaeological Site Database indicates that ten (10) sites are located in the vicinity of the Winter Access route, three of which are intersecting the Winter route. A cluster of sites is at the southern end of Contwoyto Lake and two sites are located on unnamed islands near the middle of the lake. CH also notes that the applicant will be mobilizing and demobilizing equipment and supplies along the road. This constitutes a concern as not only snow cover might mask unrecorded archaeological sites but the likelihood of vehicles impacting unidentified (unrecognized) protruding cultural features is high (i.e. inuksuit, caches, look-out, dwelling, etc.).	paying strict attention to the cluster of archaeological sites at the southern end of Contwoyto Lake and avoids traveling on islands where sites are reported. • The proponent works closely with the Territorial Archaeology Office to clearly identify and mark the locations of archaeological sites that might potentially be affected by development activities. • No activities be conducted in the vicinity (50 m buffer zone) of any archaeological sites. If archaeological sites or features are encountered during the project, activities should immediately be interrupted and moved away from this location. Each site encountered needs to be recorded and reported to the Department of Culture and Heritage. All archaeological and palaeontological sites in Nunavut are protected by law. The applicant must understand that it is their responsibility to ensure that no heritage resource sites are disturbed in the course of their activities. No person shall alter, or otherwise disturb an archaeological site, or remove any artifact from an archaeological site. Moreover, the building of inuksuit is not recommended.	that the potential to interact with the sites at the southern end of the lake is minimal as it is understood that the alignment has already been assessed. Regardless, the Proponent will work with the territorial archaeologist to ensure these sites are identified and avoided.
GN2	Spill Contingency Plan	Section 4.0 of the Spill Contingency Plan should be adapted to account for the high volume of petroleum and chemical products that will be carried on the road by bulk haul trucks (e.g. volume greater than	To prevent spills, each bulk haul trucks must have a double wall containment tank and this should be indicated in the Spill Contingency Plan.	Pickup trucks have Transport Canada- certified tidy tanks, and fuel trucks are highway legal with current DOT PIVK tank inspections and possess double-walled tanks. Bulk fuel carriers are highway legal tankers with current DOT PVIK tank inspections. All vehicles

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		220 litres). Currently, the spill response is not adequate for the list of materials and volumes expected to be transported along the winter road.	The spill response should be modified to deal with larger spills, such as those greater than 220 litres. Excavators and haul trucks should be present on site and ready to remove contaminated soil or snow. The contaminated material should be sent to the appropriate facilities for proper remediation. The closest remediation site should be identified beforehand and listed in the Spill Response Plan. When transporting large amounts of flammable products, a Fire Suppression Plan is needed and the Spill Contingency Plan should be updated to include this plan. Vehicles carrying fuel tanks of more than 450 litres should be equipped with the appropriate spill kit. The Spill Contingency Plan should be kept in every vehicle and should contain the proper contact information for the responsible spill officer. The Spill Contingency Plan should also include information on the environment surrounding the potential development area and the plan should be adapted to account for a delay in response of professionals accessing the site in the event of a spill.	transiting the road will be highway and Tibbitt to Contwoyto Joint Venture Winter Road legal. There is an excavator and haul trucks on site that will be available to assist in a spill response, should it be required. In the unlikely event of a spill, contaminated material may be sent to KBL Environmental's facility in Yellowknife. KBL is a certified hazardous waste receiver. All equipment and vehicle transiting the road will have fire suppression systems including either 2-certified 20 lb ansul fire extinguishers for bulk fuel carriers, or 1certified - 20lb fire extinguisher for all other equipment. All vehicles will be equipped with a spill kit and will carry a copy of the *Spill Contingency Plan*. While the operation does not rely on adjacent facilities, should there be an emergency situation and a professional response be delayed, resources are available at the two adjacent operating mines (Diavik and Ekati) and the Lupin Mine, which is actively undergoing progressive reclamation. All mines will have personnel onsite during the winter road season and are accessible by the Tibbitt to Contwoyto Winter Road. The *Spill Contingency Plan* will be revised to reflect the above items and will be provided to the NIRB prior to commencing the land use.

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GN3	Road Construction and Snow Maintenance Details	The Abandonment and Restoration Plan does not provide a description of how the road will be constructed nor how it will be maintained during the winter. Dykes or berms resulting from excess snow from snow-clearing could act as a barrier for wildlife migration/movement. The information provided is insufficient to determine if the road will be built and maintained adequately to mitigate adverse impacts on the environment.	The Abandonment and Restoration Plan should be revised to include the following information: Width of the road and potential development area. The depth of snow that will be maintained within the Project. A minimum depth of 10-12 inches of snow should be maintained and graded in order to avoid damaging the underlying tundra. A Snow Removal Plan that specifies the anticipated height of the snow banks. This Plan should include: o A description of the intended method of snow removal/placement. The snow banks should be less than one meter high to allow unobstructed wildlife crossings.Type of equipment used for snow removal. A Challenger snow plow with a rubber track should be used to avoid damaging the tundra. Please also provide the expected number of snow plow trucks that will be available on site. The road should be built to be permeable, enabling caribou crossings at all times. Breaks in the snow bank every 500 meters should not be necessary as the height of the snow banks should be kept below one meter along the entire length of the road.	The Proponent wishes to advise parties that traffic management and road safety are the main objectives of this program scope. Proactive traffic management and road maintenance, including maintaining low angle snow banks, contribute to road safety and satisfactory project execution. An equipment list was provided with the application. Road width will be, on average, 50 m. A minimum depth of 10-12 inches of snow will be maintained when using portages. Snow management in consideration of wildlife is detailed in the *Wildlife Management Plan*. Snow removal will typically occur using a grader with a wing. This will throw snow away from the road surface, resulting in a snow bank that has a low angle of repose, and so providing for unobstructed access for wildlife and visibility for drivers. Depending on snow conditions, bank height may vary up to 1 m, however the intent is that the bank is not vertical, regardless of height. Due to variable conditions, breaks may also be employed where necessary. Using a minimum depth of snow cover, along with utilizing an existing road corridor, avoids damaging the tundra during snow removal. The *Abandonment and Restoration Plan* will be revised to include these operational aspects, and will be provided to the NIRB prior to commencing the land use.

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GN4	Vehicle Activity Information and Road Public Access	The Wildlife Protection Plan failed to disclose the level of vehicle activity anticipated on the road, and how the Proponent will maintain this activity to an acceptable level. The information provided is insufficient to determine if the mitigation measures are adequate to mitigate the impact of the road on wildlife.
		
		There is currently a moratorium on hunting the Bathurst caribou herd in the Northwest Territories and a limited harvest of 30 animals under a Total Allowable Harvest in Nunavut. The development of a winter road in this area can increase hunter access to this herd and consequently increase harvest rate (Ziemann, 2007).
			The Wildlife Protection Plan should be revised to include the following information:
			
			Anticipated vehicle types and quantities along the road during the Construction Phase.
			
			Specify what maintenance equipment will be used (grader, snow plow truck, rubber track challengers, snow cat or snow blower).
			
			Operation:
			
			Number of hauling and work trucks anticipated (e.g. numbers of vehicles per hour, speed limit). Methods for monitoring.
			
			Number of visitors anticipated on the road and methods to regulate public traffic.
			
			Intended methods for monitoring road traffic. Include a proposed system to record and keep track of the road usage on an hourly and daily basis. The Wildlife Protection Plan should indicate how the level of vehicle activity will be maintained to an acceptable level (private and public) to mitigate the roads effect on the landscape
				The Proponent wishes to advise parties that traffic management and road safety are the main objectives of this program scope. Proactive traffic management and road maintenance, including responding to wildlife presence on the road in a timely manner, contribute to road safety and satisfactory project execution.
				
				During an in person meeting with GN-DOE in January 2019, road traffic was discussed and vehicle activity details were provided in a follow-up email. This information is also provided below.
				
				An equipment and materials list was provided with the application.
				
				In terms of traffic, there will be approximately 40 loads going both north and south each season. Timing of these loads will depend on weather and road conditions as well as caribou and other wildlife present along the road. It is reasonable to expect that traffic will occur over 6 weeks following construction.
				
				Traffic will adhere to he following speed limits, which are consistent with those in place for the Tibbitt to Contwoyto Winter Road:
				• All trucks
				  ○ Driving on Lakes:
				  ▪ Loaded 25 km/hr.
				  ▪ Empty 25 km/hr.
				  ○ Driving on portages;
				  ▪ All 30 km/hr.
				  ○ Travelling through flood zones 10 km/hr;
				  ○ Travelling on and off lakes;
				  ▪ Loaded 10 km/hr.
				  ▪ Empty 25 km/hr.
				  ○ Passing another truck 10 km/hr;
				• Pick up trucks only:
				  ○ Max speed is 80 km/hr.
				
				The Proponent will have a security team on the road 24 hours per day monitoring wildlife, safety and compliance.

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				The winter road is private and only Project-related traffic will be permitted to travel north beyond the Ekati turnoff. To the extent possible, landusers accessing the road by snow machine will be intercepted by the security team and asked to travel overland instead. Records of all traffic using the road are maintained by the Proponent, using GPS, radio and required check-ins and inspections. The *Abandonment and Restoration Plan* will be revised to include these operational aspects, and will be provided to the NIRB prior to commencing the land use. The mitigation measures in place, as outlined in the various management plans submitted with the application are considered appropriate for the scope of work, mitigating road effects on the landscape.
	Road Effects on Caribou	The Wildlife Protection Plan failed to explore the different caribou herds potentially interacting with the proposed Project's potential development area, especially during the winter, or early spring migration period. It is very important to illustrate how the road may intersect with caribou trails and water crossings, using both traditional knowledge and recent collar data (2013-2018). The Government of Northwest Territories manages data requests for the Bathurst, Bluenose East, and Beverley caribou herd.	The Wildlife Protection Plan should be revised to include the following information: Highlight road intersections with Bathurst, Bluenose-East, and Beverley Caribou migration paths, using both traditional knowledge and collar data. From recent collar data (2013-2018), map the winter distribution of BluenoseEast, Bathurst, and Beverly over the potential development area. This map should include a data range gathered between February, and May (2013-2018) to align with and buffer the Project's planned start and end dates (see Lupin Winter Access – Project Description (2018)). This analysis will also provide information on the number of collared caribou that are anticipated to be within the potential development area.	The *Wildlife Protection Plan* acknowledges that other herds may be present in the area, yet focusses on the Bathurst herd interaction as the Project is predominantly within the Bathurst herd range. The *Wildlife Protection Plan* will be revised to provide further details on Bluenose-East and Beverley herds in the project area. The revised plan will be provided to the NIRB prior to commencing the land use operation. While freshwater crossings, as defined and identified in the Draft Nunavut Land Use Plan (2012) do occur in the project area, it is understood that caribou use of these habitat features typically occurs during or fall migration when the water is ice-free. The proposed land use occurs in winter only and so it is expected that road use in these areas will not affect migration as the caribou can walk unimpeded across the ice surface. Bathurst caribou use of the area is well understood; based on Figure 1 and the timing of project activities (December-April), winter range use is negligible in the Project area, and spring migration use is low. Despite this, we understand that caribou are routinely observed in

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			Caribou group sizes likely to be interacting with the Project should be derived from previous surveys in order to develop mitigation response strategies (i.e. stoppages or other measures when a specified number of caribou are within a certain distance of the Project). A statement of intent to acquire active collar data in order to potentially inform caribou mobile protection measures. The proposed mitigation and management measures for caribou should be developed and adapted based on the population size of the Bathurst caribou herd.	the area in small and large groups throughout the winter, and so the mitigation measures proposed, being traffic management, are designed to be responsive to actual caribou presence. The Proponent acknowledges that active collar data will be helpful in managing traffic and mitigating effects, and intends to acquire this from the GNWT. The Proponent is also working with a local landuser residing in the area to obtain real time observations of caribou to inform traffic management. The Proponent does not consider herd-specific analysis of past collar data, or herd size analyses to be useful monitoring tools. Instead, implementation of the proposed mitigation measures, which allow for response to real time caribou presence or absence, are considered appropriate for the land use operation.

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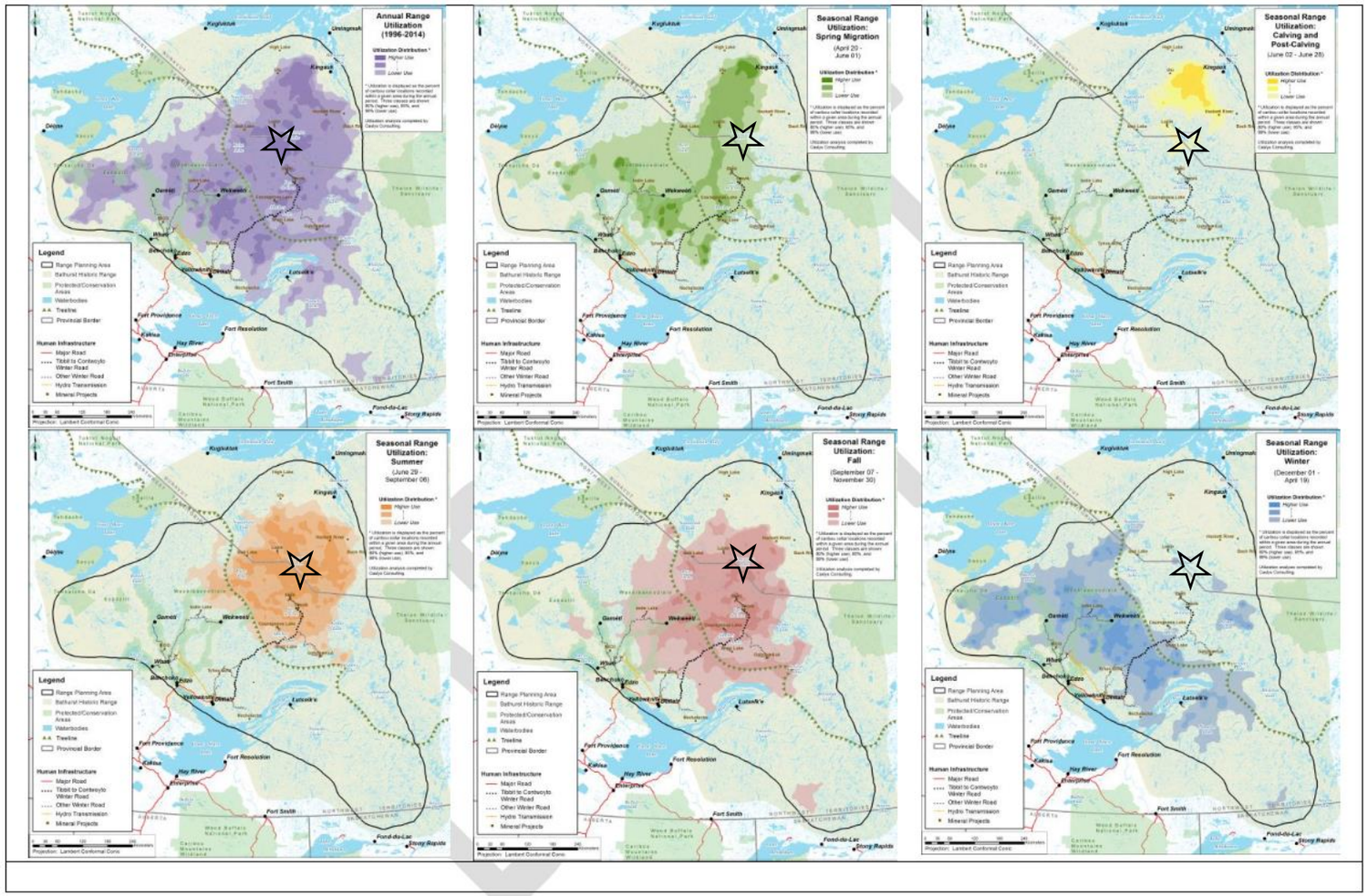

Figure 1. Annual and seasonal ranges of the Bathurst caribou herd as defined by satellite telemetry from 1996 to 2014 (Government of Northwest Territories 2018; star denotes approximate project location)