



Re: Project Proposal – Co-evolution of Life and Environment Across the Ediacaran–Cambrian Boundary in Northeastern Ellesmere Island (NIRB File: 26YN017)

Dear Mr. Sim,

We thank Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) for their careful review of our application and for providing constructive comments. Below you will find our detailed responses to your comments and concerns below.

Item 1: Land Status and Required Authorizations

We can confirm that all proposed field activities will take place on Crown land, as identified in the original application. We acknowledge CIRNAC's recommendation regarding land access and occupancy authorizations and we have ensured to follow existing guidelines: <https://www.rcaan-cirnac.gc.ca/eng/1100100027931/1614020744855>. Our camps will fall well below any thresholds requiring Class A or B land use permits. Specifically, we have no explosives, no vehicles, no power driven machinery, camps will be less than 100 man days, no trails will be created and fuel storage will be well under 4000 litres. Therefore, to our knowledge we have satisfied all permitting requirements through our applications to the Nunavut Impact Review Board, Nunavut Planning Commission and Northern Research Institute.

Item 2: Temporary Camp Siting and Restoration

We appreciate the request for additional clarity regarding camp siting, operations, and restoration. The following measures have been planned to be implemented and we apologize if such details were lacking in the original application. Camps will be located on durable, low-impact surfaces (e.g., gravel or coarse sediment) to minimize disturbance. Camp locations will be selected to avoid sensitive ecological areas, including wildlife travel corridors and areas of concentrated activity. This was already performed with consultation of previous field parties in our proposed locations, but we acknowledge that due to the remoteness of our field locations that there is limited information regarding wildlife sightings and migration. However, our camp footprints will be minimized to essential operational requirements only. All food, waste, and attractants will be stored in secure, wildlife-resistant containers. Strict camp hygiene protocols will be enforced (e.g., immediate clean-up of food residues). Personnel will receive wildlife awareness training, including polar bear safety procedures. A wildlife encounter response plan will be in place, emphasizing avoidance and non-lethal deterrence methods. Much of this will be facilitated by our local wildlife monitor. All camp activities will follow a "leave no trace" framework, consistent with the stated zero-footprint objective. Fuel handling and storage will follow best practices to prevent spills and will be facilitated by PCSP. Upon demobilization, all equipment, waste, and materials will be removed from site. Any disturbed ground (e.g., minor rutting or surface disruption) will be restored to a stable condition to the extent practicable. Camps will be inspected prior to abandonment to ensure no residual impacts remain and we will document sites both during camp set up and take down. These measures collectively ensure that environmental disturbance is minimized and fully remediated.

Again, since our camps are temporary and low impact with no disturbance to the land surface and a zero foot print policy with no rutting or gouging, and less than 10 days each we have worked to incorporate a minimal impact in our planning of this field work.

Item 3: Greywater Management

We acknowledge that greywater management was not explicitly detailed in the initial submission and appreciate CIRNAC highlighting this gap. Greywater (e.g., from cooking and hand-washing) will be managed according to best practices appropriate for remote Arctic field conditions. Food particles will be removed from greywater to the extent practicable prior to disposal, but most meals will not require dishes or washing and will be eaten in freeze-dried packets. If greywater is generated, Where site conditions permit, greywater will be disposed of in small, dispersed sump areas located on permeable, stable ground, alternatively, greywater will be collected and packed out if site sensitivity or regulatory requirements necessitate this approach. If significant greywater is produced, disposal locations will be situated away from waterbodies, drainage pathways, and areas of ecological sensitivity. However, to reiterate our meal planning has been done with an effort to minimize and eliminate greywater when possible. These measures will ensure that greywater does not pose a contamination risk to local land or water systems.

We are committed to conducting this research in a manner that is environmentally responsible, compliant with all regulatory requirements, and respectful of the unique Arctic setting of Ellesmere Island. We appreciate CIRNAC's input and have incorporated these considerations into our operational planning.

Please do not hesitate to contact us should further clarification be required.

Sincerely yours,

Dr. Peter W. Crockford

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