



# Application For Adventure Tourism Tenure

Kwoiek Mountain Lodge, Coast Mountains of British Columbia

ALPINE AIR ADVENTURES INC.

**Management Plan Prepared by Jeff Bullock**  
**For Alpine Air Adventures Inc.**

FILE#:

LICENSE#

DATE: April 23, 2018

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Authorized Signature

Crown Land Adjudication

Ministry of Forests, Lands and Natural Resource Operations

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## Executive Summary

This tenure application is being submitted on behalf of Alpine Air Adventures Inc., an independent guiding business operated out of Banff, Alberta, Canada. Specializing in mountaineering guided excursions; Alpine Air Adventures (AAA) is independently owned and operated by Jeff Bullock who is a fully certified Mountain Guide, with over sixteen years of professional guiding experience.

Alpine Air Adventures is proposing the development of a non-exclusive extensive area authorization for non-motorized winter and summer guided tourism activities. The operations would be located in the headwaters of the Kwoiek watershed, with a proposed operating area of approximately 12,600 hectares.

The proposed project also includes the construction of a backcountry mountain lodge and small staff chalet to be situated at the Kwoiek Creek headwaters. The intended purpose of the lodge and chalet is to provide guest and staff accommodations, while operational activities include; non-mechanized backcountry skiing, alpine hiking and rock climbing.

The intent of the proposed project is to offer outdoor enthusiasts, an alternative backcountry lodge experience situated in a stunning location in a region with exceptional winter skiing conditions. Backcountry skiing and climbing has become a very popular activity, and now more than ever, people are leaving the boundaries of official ski areas and entering backcountry terrain to find backcountry adventures. During the summer and fall season, Kwoiek Mountain Lodge would offer hiking and rock climbing enthusiasts, a pristine backdrop for breathtaking adventure; all while being guided to ensure safety and sustainability.

## 1. Description of Operations

### 1.1 Location of Base Operations

The area of the proposed tenure is located at the headwaters of the Kwoiek Creek directly west from the Fraser River valley at Kanaka Bar and Trans-Canada Highway, see Map #1. The tenure area encompasses the high-glaciated terrain on the south side of Kwoiek Creek encompassing approximately 126 square kilometers, or 12,600 hectares from Kwoiek Needle in the east, to the Rutledge Glacier area in the west.

The lodge and chalet location will be situated at 1750 meters on a secure granite bedrock bench south above Chochiwa Lake (zone 10U 0580307E 5548769N/50.08'58" – 121.87'74'). The out flowing river from the glacier lakes will provide micro hydro and water for the lodge. See Map #2 for the Extensive Use Area and Map #3 for the Intensive Use Area.

The skiing area will be local to the lodge site and will use the forested slopes below and adjacent to the lodge for bad weather skiing, and on the Chochiwa and Kwoiek glaciers and surrounding peaks when the weather is stable and avalanche conditions allow. Considering the coastal climate, traditional snowfall amounts support a deep stable snowpack; the approximate snowpack depth at the lodge site during March 2017 was around 3.5 meters settled. B.C. provincial Snow pillow data can be referenced for more detail.

### 1.2 Activities and Excursions Offered

The overall experience of Kwoiek Mountain Lodge will be an all-inclusive off the grid mountain vacation for guests looking for a small group wilderness experience. All trips will be fully guided and catered to offer a high end, safe and unforgettable backcountry experience for guests.

Operations will be seasonally starting December through April (winter), and June to October (summer) for a total of ten months of operations. Winter operations will include; ski touring, avalanche safety training and ski-mountaineering courses. Summer excursions include alpine hiking, rock climbing and mountaineering.

Trips will be helicopter access only and all-inclusive; this includes lodge flights both in and out, guide service, accommodation and food.

### 1.3 Access

Access for both summer and winter seasons is by helicopter only. It will be a flight path from the staging lot 4 at Kanak bar on the Trans-Canada Highway, and is approximately 23 kilometers to the lodge following Kwoiek Creek, see Map #5. There are maintained logging roads to an area just beyond the Kanaka Hydro Penstock Project to approximately 50 kilometers on the Kwoiek forestry service road, this is within a 15 kilometers of the lodge location. Beyond this

point, the forestry service road has been decommissioned and there are no maintained FSR or trails beyond this point.

## 1.4 Staff

Kwoiek Mountain Lodge (KML) will be owned and operated by Jeff Bullock/Alpine Air Adventures (AAA). Jeff holds the highest certification levels for national and international certifying bodies for professional guides. These certifications include, member of the Association of Canadian Mountain Guides (ACMG), the International Federation of Mountain Guides Associations (IFMGA), as well as a professional member of the Canadian Avalanche Association (CAA). Professionally guiding since 2002, Jeff also possesses four years of experience in the role of Assistant Operations Manager for a helicopter ski lodge located in northern British Columbia.

In 2010, Jeff started Alpine Air Adventures and currently operates holding both provincial and national park commercial work permits. Excursions are primarily based out of Banff, Jasper National Park, Glacier National Park and the Bugaboos Provincial Park. AAA and guiding staff adhere to ACMG, CAA scope of practice and Interpretive Guides Association, and adhere to “Leave No Trace” best practices.

The lodge/house staff will be comprised of the following:

- 4 to 6 guides, all possessing ACMG/IFMGA/CAA certifications
- 2 to 3 chefs (on a rotation)
- 1 guest transfer logistics coordinator, possesses logistics and helicopter experience with local knowledge
- 1 Human Resources Professional, possessing business management, marketing and payroll experience

## 1.5 Improvements

The lodge will have a maximum capacity of sixteen guests and six house staff. The main lodge will be designed totaling 2500 sq. ft. with the smaller chalet at 700 sq. ft. In addition, there will also be a small outhouse and sauna building.

## 2. Location of Kwoiek Mountain Lodge

### 2.1 Intensive Land Use

The tenure application includes plans for a 2500 sq. ft. main lodge, 700 square foot guides chalet, a small sauna building approximately 350 sq. ft. and a two toilet-composting outhouse.

During the summer months of operation, there will be minimal trail establishment as the intent is to use the granite bedrock (as it is abundant) wherever possible.

One radio repeater will be located strategically on a high point for communications from more remote areas in the tenure, note repeater location Map #4.

Due to the abundance of granite bedrock, the lodge location is naturally sparse with very little alpine vegetation, thus requiring very little (if any) tree removal.

Table 1.2 Details of Intensive Use Sites						
Intensive Use Map Reference	Intended Use	Frequency of Use	Period of Use	Proposed Improvements	Environmentally Sensitive Area	Distance to Environmentally Sensitive Area
KML Intensive use map	Lodge (1) Buildings (2) Outhouse (1) Sauna (1) Helipad (1)	Daily, through seasonal operational months	Dec - April June - Oct	New Lodge, guides chalet, sauna building and outhouse building	Refer to Wildlife Management Plan	Environmental and wildlife mitigations are in place, refer to the EMP/WMP

## 2.2 Levels of Use

The Adventure Tourism Policy requires the operator to provide information on client usage days. Defined as each commercial recreation client who the tenured operator guides onto Crown land, in a particular day (up to 8 hours) and the time of year during which the activity takes place. These usage days and other data will be provided and outlined in KML's annual report to the province. This will be prepared at the end of each operating season and pursuant to the fee schedule requirement of the Adventure Tourism License Agreement.

The table below outlines the projected client usage days with a projected continuous annual increase due to the anticipated growth, starting with winter operation 2019 (pending approval).

Table 2.0

Year	Projected number of guests during winter (ski-touring)	Projected number of guests during summer (hiking, climbing)
2019	448	448
2020	1344	896
2021	1456	896
2022	1568	896



### 3. Lodge Management

#### 3.1 Water Supply

Water usage will be accessed from a glacier fed creek, which is located approximate to the lodge site. Water will be diverted via pipe for drinking and to create hydro for the lodge via a micro hydro system. The water system intake will be a small steel cage box to protect intake from rock debris and filtering. The water will then flow through a short distance of pipe into a micro hydro system at the lodge and diverted into the lodge plumbing as needed for in house uses. These systems have become standard at other commercial backcountry lodges throughout B.C.

#### 3.2 Electricity and Heating

Electricity will be produced from micro hydro with excess electricity dumped into electric heaters for the gear drying room in the lodge. The main heat source will be wood pellet burning stoves, which will be used for maximizing efficiency and low environmental impact.

#### 3.3 Propane Fuel

Propane will be used for heating of water with on demand heaters and cooking with. There will be a storage shed, which is being designed to be attached to the main lodge on the exterior side of the kitchen wall. The propane will be flown in and out in 100 lbs tanks, these are the most efficient storage tanks used for air transport and lodge use.

#### 3.4 Human Waste

All human waste and grey water will be managed in accordance with the British Columbia Ministry of Health and Manual of Composting toilet and Greywater Practice. Composting toilets will be used for human waste. The manual can be referenced by clicking on the link below.

<http://www2.gov.bc.ca/assets/gov/environment/waste-management/sewage/provincial-composting-toilet-manual.pdf>

#### 3.5 Garbage

All garbage will be kept indoors in the storage area in bins adjacent to the kitchen in the back of the lodge. Garbage will be flown out weekly and disposed of at the local landfill. Recyclable products will be separated from the disposable waste and will be flown out weekly with the waste and dispensed appropriately at the nearest recycle centre.



## 4. Wildlife and Environmental Considerations

### 4.1 Mitigating Impact on Wildlife

A daily log completed by the guides will be documented noting all sightings and behaviours of any encountered wildlife. Well-communicated information presentations will be conducted each time there are new guests. This to ensure not only the safety of the guests, but also to mitigate potential stress and impact on wildlife and biodiversity in the area. KML will adhere and communicate all wildlife sightings in accordance to the Wildlife Guidelines for Backcountry Tourism/Commercial Recreation in British Columbia. An Environmental/Wildlife Management Plan has been created to support KML operations in order to mitigate impact of species in the area, please refer to Appendices.

During winter operations, there will be minimal to no wildlife concerns in the lodging area due to animal hibernation and migration. During summer operations, all guests will be educated about local wildlife protocol and bear awareness. All guides will carry a carnivore deterrent kit; this includes a distant encounter and close encounter deterrent consisting of a blast horn and bear spray. Also included in the kit are very high frequency radios (VHF) ensuring guides and guests are able to communicate back to the lodge.

All incoming guests will be required to participate in a wildlife and lodge safety protocol presentation upon arrival. During this presentation, guests will be briefed on the species of wildlife in the area as well as safety protocol should an encounter take place.

### 4.2 Wildlife Management Plan

The purpose of the Wildlife Management Plan (WMP) is to provide information on how to avoid and mitigate potential environmental effects identified and assessed by qualified environmental professionals. The WMP is intended to guide implementation of environmental protection measures, and adaptive management efforts.

The primary objectives are:

1. Protect environmental values and features within the proposed extensive use area and intensive use site; and
2. Avoid effects to environmental values.

Based on conversations with the Ministry of Forests, Lands, Natural Resource Operations and Rural Development, and a review of existing information from online and government databases and provincial guidelines, the following species or species groups of management concern and applicable life history stages were included as key concerns within the WMP:

- Fish and fish habitat
- Coastal tailed frog (*Ascaphus truei*)

- Grizzly bear (*Ursus arctos*) habitat and encounters
- Mountain goat (*Oreamnos americanus*) habitat and helicopter mitigation
- Wolverine, *luscus* subspecies (*Gulo gulo luscus*) denning
- Migratory bird nesting and vegetation clearing
- Whitebark pine (*Pinus albicaulis*) management

Mitigation measures outlined in the Wildlife Management Plan were designed in accordance with Provincial Best Management Practices and guidance documents for the protection of environmental values. Also included were mitigations specific to the species of management concern as described above.

### 4.3 Mitigating Impact on Environment

It has been identified there is an overlap with the Kwoiek recreational trail, Jeff Bullock has met with Tim Bennett, District Forest Recreation Officer from Merritt Ministry of Forests, lands and natural resources operations. In talks with Tim, there has been no maintenance and there are no plans at this time to maintain or develop the old Kwoiek recreational trail.

The Kwoiek forestry service road has been decommissioned west of the Kanaka penstock intake including the removal of bridges, noted from Blackcomb helicopters.

During the summer operational months, there will be minor trail establishment for hiking purposes. However, due to the abundance of granite bedrock, foot traffic will be redirected to the bedrock, wherever possible.

## 5. Avalanche Awareness

### 5.1 Avalanche Safety plan

An avalanche safety plan has been created in accordance to the Canadian Avalanche Association, Backcountry Lodges of British Columbia Associations and to meet any professional scope of practice requirements set forth by the Association of Canadian Mountain Guides and or the International Federation of Mountain Guides Associations.

Twice daily guides meetings will be held in winter and summer to meet the requirement of the above mentioned associations record keeping standards. In the winter months, ongoing snowpack analysis will be kept and monitored throughout the season to ensure the safest possible terrain selection given current conditions and group dynamics. Daily use of a snow study plot at the lodge will be used to obtain snowpack information along online weather web sites, and input to the industry information exchange (infoex) provided by the Canadian Avalanche Association.

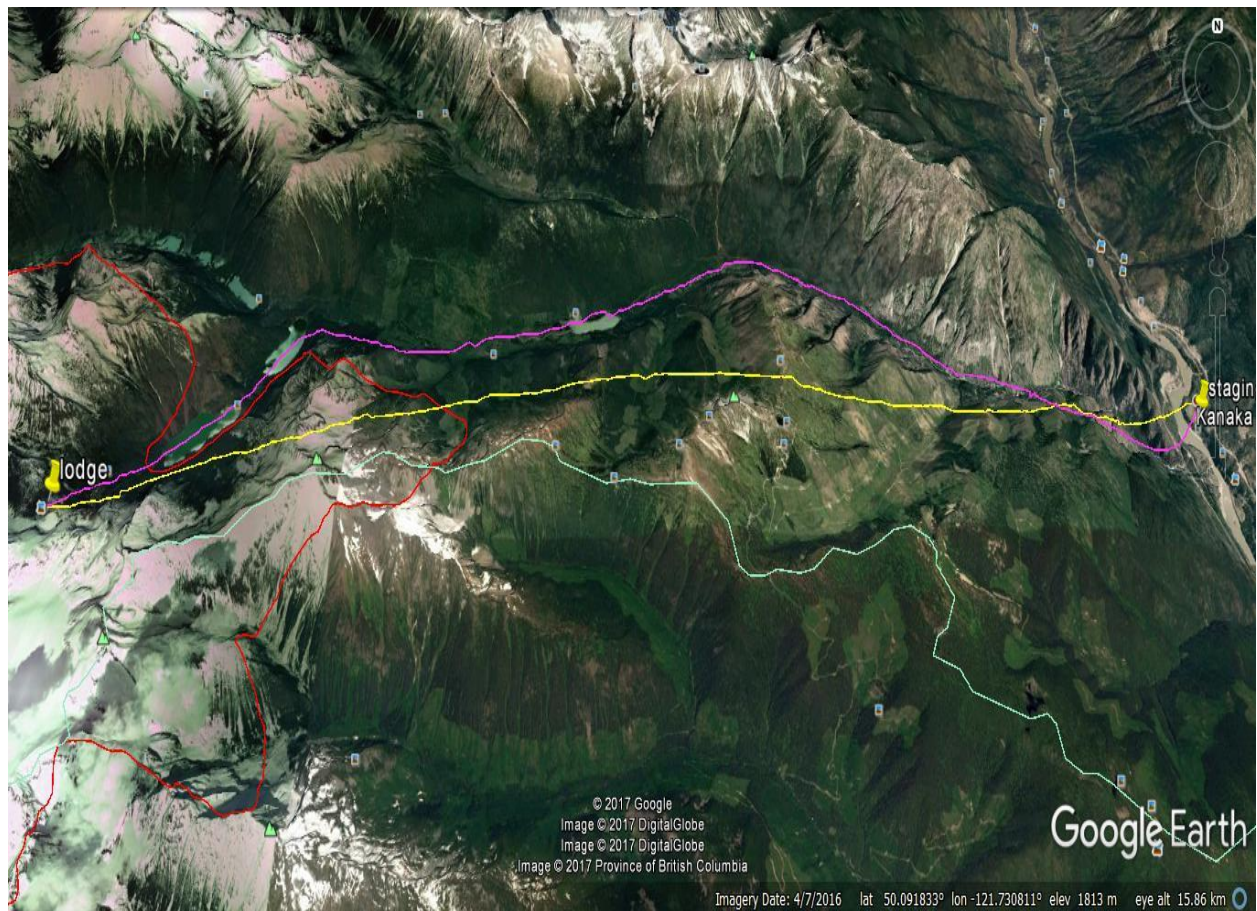
## 5.2 Accident Response Plan

An Accident Response Plan (ARP) has been created in accordance to the Canadian Avalanche Association, Backcountry Lodges of British Columbia Associations and to meet any professional scope of practice requirements set forth by the Association of Canadian Mountain Guides and or the International Federation of Mountain Guides Associations.

The ARP is structured for use by all lodge staff to help facilitate a safe and quick response to any type of accident. It is outlined in a tiered way depending on severity of the injuries and resources required to assist in the response.

A radio repeater will be established at approximately 2700 meters on Kumkan Peak at “10U 0576114E 5547415N 50.07’61”-121.93’63”. The repeater will be installed using a helicopter and will be maintained by the guides, see Map #4. One radio repeater will be located strategically on a high point for communications from more remote areas in the tenure, see Map #4 for repeater location. Refer to site plan Map #3 for the base buildings and other improvements layout.

KML flight paths - purple indicates bad weather route, yellow indicates good weather route.



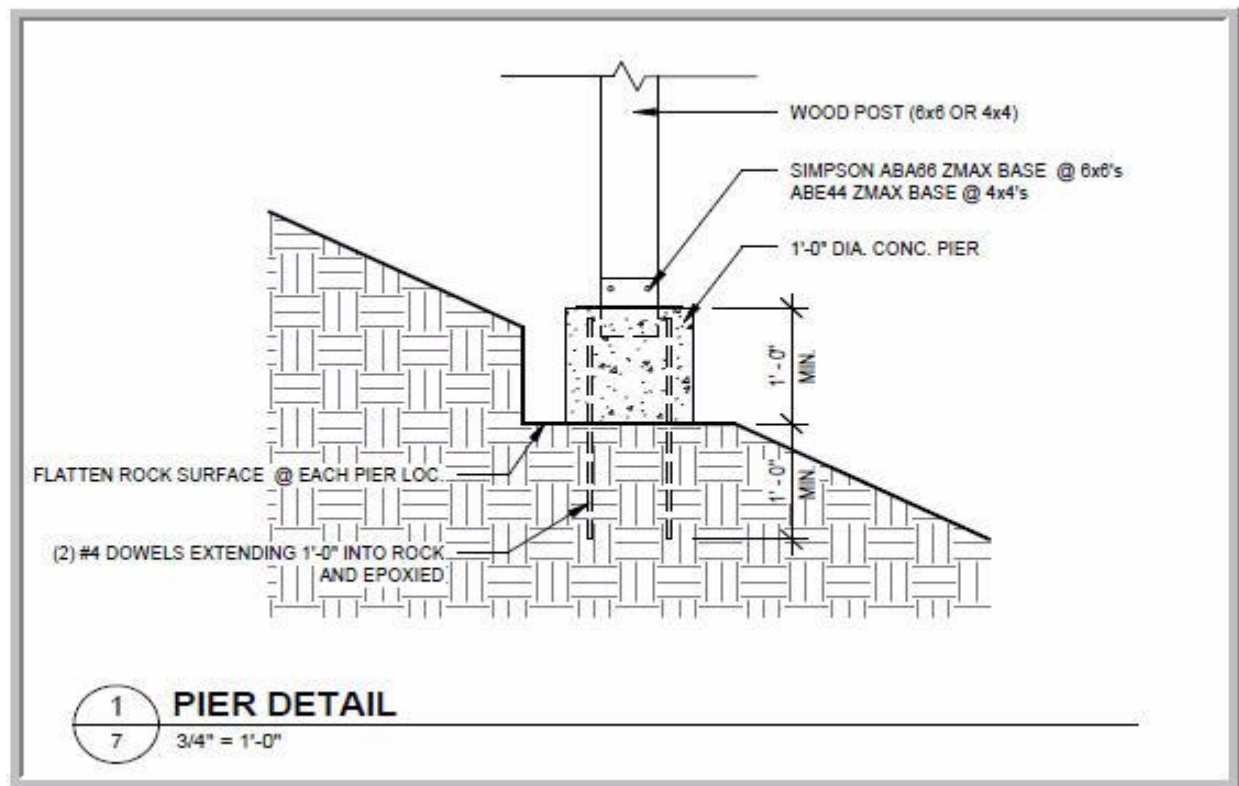


## Location of Kwoiek Mountain Lodge





Frontal view of lodge building, walk out level will be ground floor and is considered in drawings.

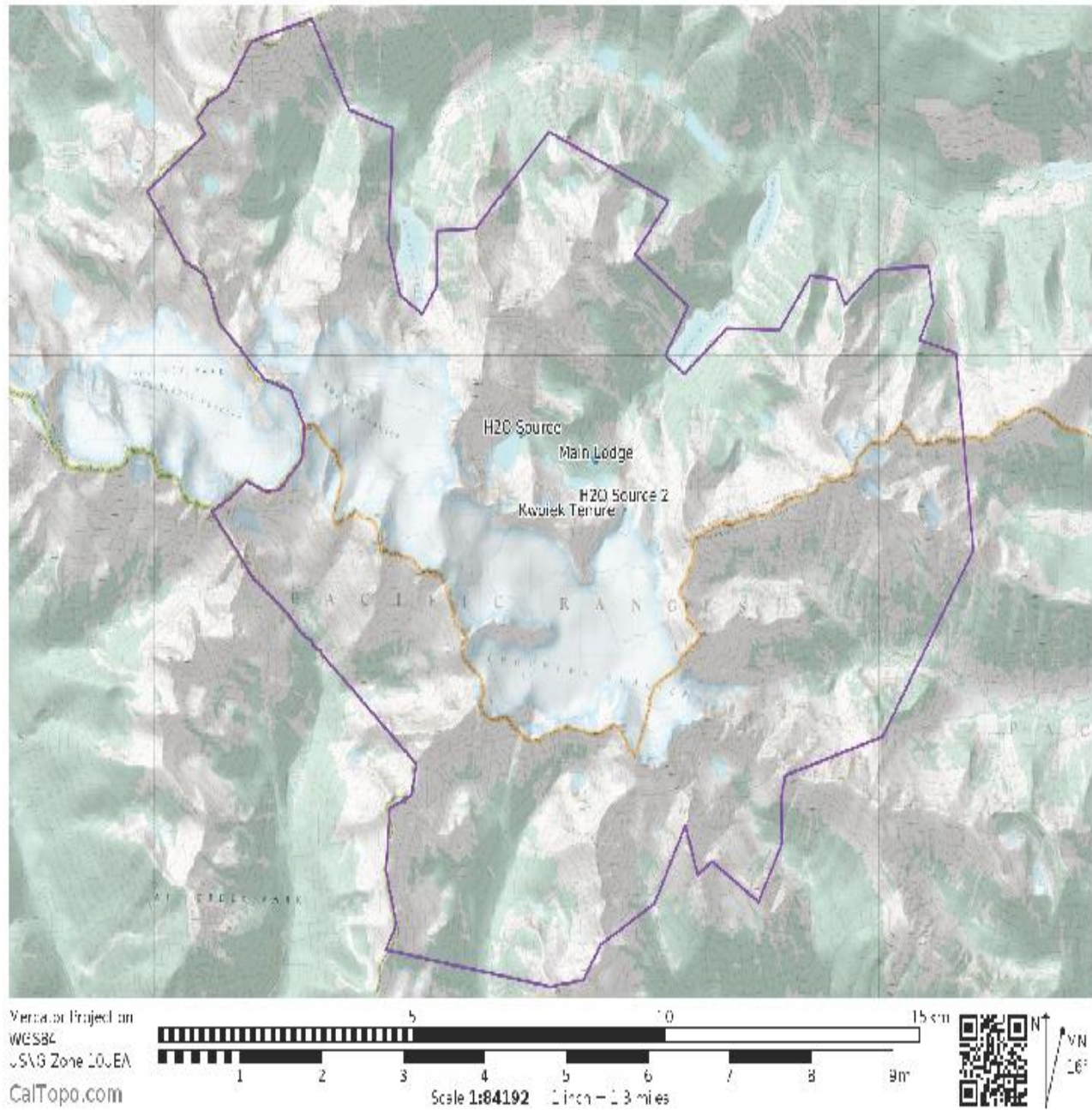


Foundation pier footing detail, which will be imbedded into granite slab with the use of re-bar.



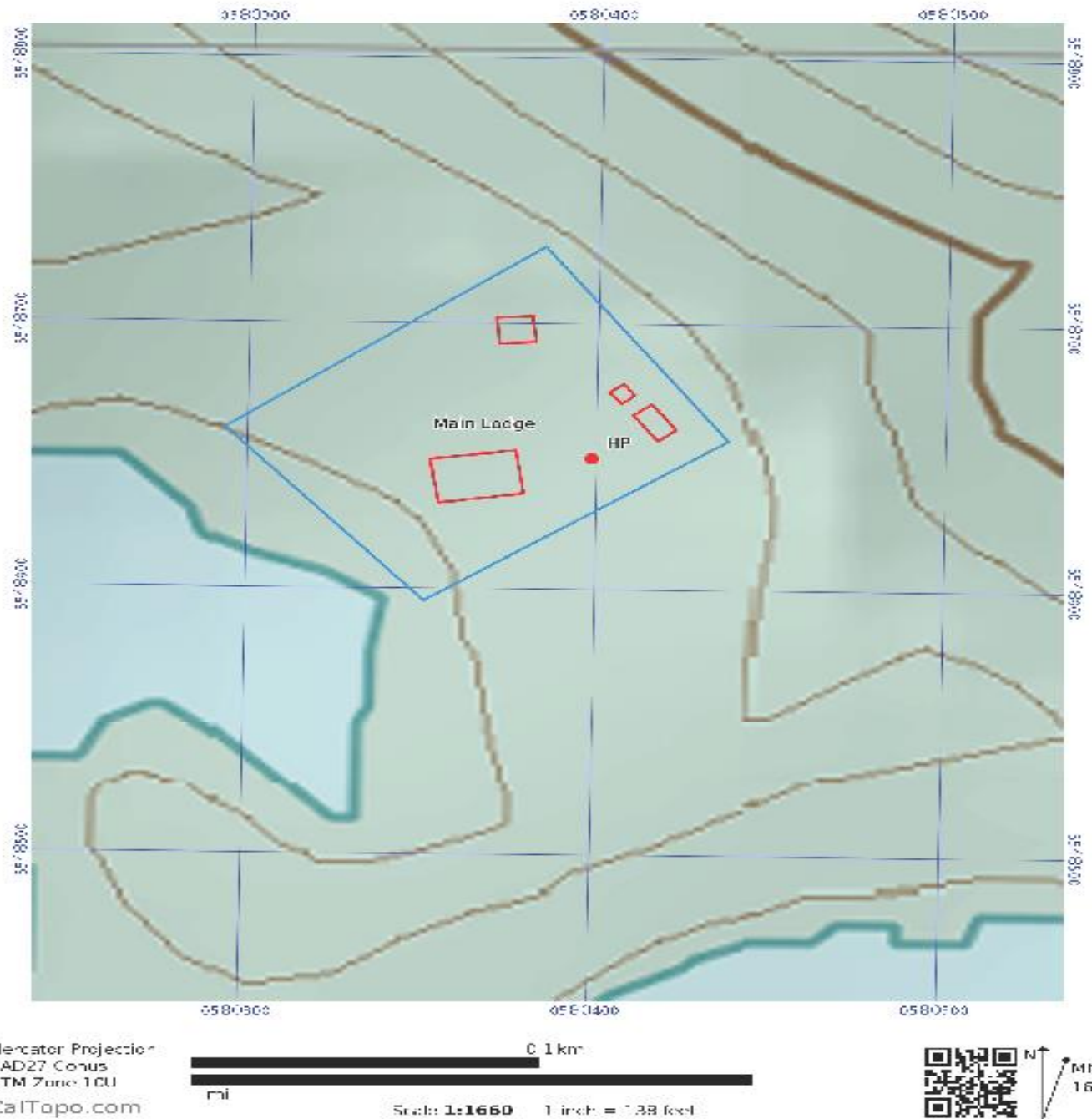


## Map #2 - Proposed Extensive Use Map

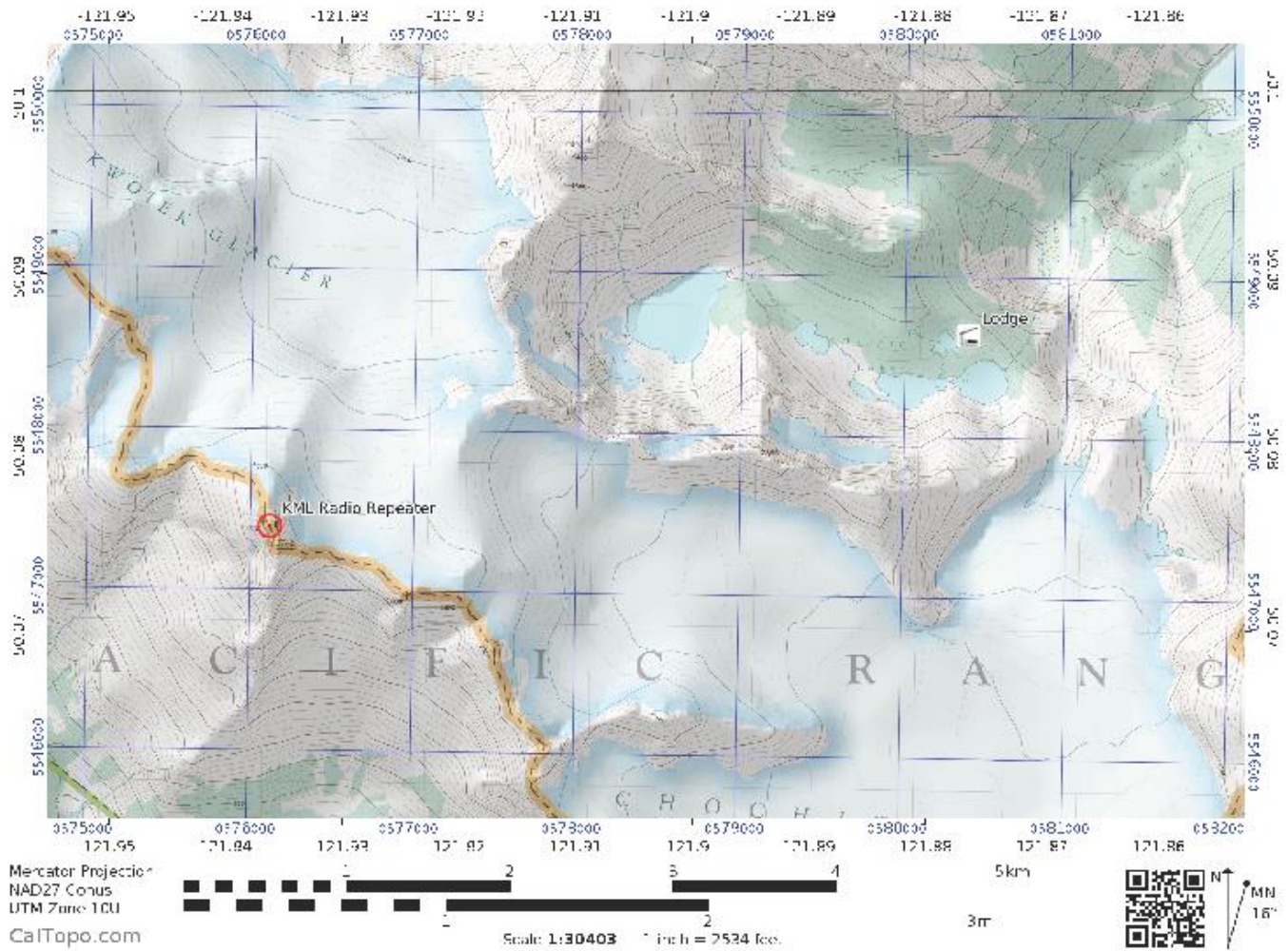




### Map #3 - Intensive Use Lodge Location

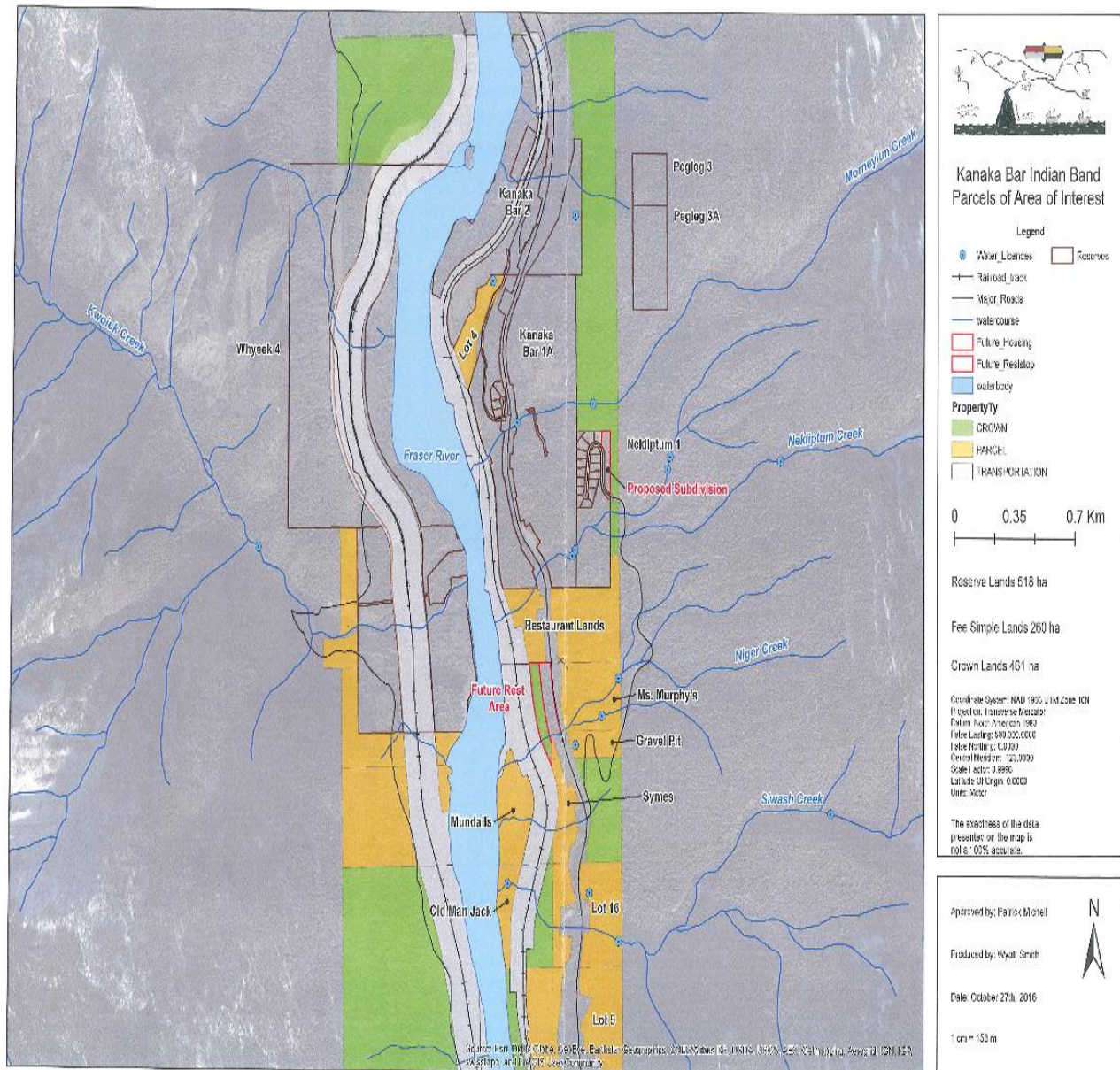


## Map #4 - Radio Repeater Location





## Map #5 - Lot 4 Helicopter Staging Area Kanaka Bar Indian Reserve



## Map #6 - Water Intake and Supply Line

