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## ADVENTURE TOURISM COMMERCIAL RECREATION TENURE MANAGEMENT PLAN



**FILE #**

**LICENSE #**

**TRACKING # 100325390**

**DATE: October 16, 2020**

**ACCEPTED BY:**

SIGNED on behalf of HER MAJESTY THE QUEEN IN THE RIGHT OF THE **PROVINCE OF BRITISH COLUMBIA** by Crown land Adjudication, Ministry of Forests, Lands, Natural Resource Operations and Rural Development, authorized representative of the minister responsible for the *Land Act*.

The signature of the Province's authorized representative is solely for the purpose of acknowledging the Province's acceptance of this document as the Tenure Management Plan for the purposes of the Licenses and does not represent a certification by the Province or its signatory of any factual content of acceptance of professional responsibility by the Province's signatory for any advice or analysis contained in this document.

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*Authorized Signature*  
Crown Land Adjudication  
Ministry of Forests, Lands, Natural Resource Operations and Rural Development

\_\_\_\_\_  
*Print Name*

\_\_\_\_\_  
*Authorized Signature*  
Powder Renegade Lodge Inc

\_\_\_\_\_  
*Print Name*

*Contains 70 pages (including this page)*

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## 1.0 INTRODUCTION

### 1.1 Project Overview

This Tenure Management Plan has been prepared in support of Powder Renegade Lodge Inc's request for a winter, commercial recreation Adventure Tourism tenure for guided cat skiing and remote lodge. The tenure includes a Lease for an Intensive Use Site, License of Occupation for an Extensive Use Area, and a License of Occupation for Roadway, all for 30 year terms. The proposed tenure encompasses 8,847 ha of Crown land in the Midway Range of the Southern Monashee Mountains, between the Granby and Kettle rivers, 70 kms east of Kelowna, BC.

For the past several decades, the demand for back country skiing in British Columbia has been continuously increasing. BC is globally recognized as a leader of the heli-skiing, cat skiing and ski touring industries. Existing back country operators of similar nature have been unable to keep up with ever-increasing demand and popularity of their product, and most lodges have long waitlists. Consequently, the launch of a new backcountry cat skiing lodge is an excellent opportunity.

A snowcat (short for snow and caterpillar) is an enclosed-cab, truck-sized, fully tracked vehicle designed to move on snow. Their passenger cabins can hold up to 18 people. The snowcat travels along a road system of forestry roads and snow trails to the upper elevation points within the tenure area, where guests are dropped off. From there, they are guided down untracked powder runs to a predetermined pick up point. The snowcat travels to that point, picks up the guests and proceeds to another part of the tenure for another run, in essence acting as a ski lift for the guests. The lead guide decides on the daily program, based on avalanche stability and snow quality. Once a run has been skied, it is not skied again until fresh snow has filled in the tracks.

A typical cat skiing day provides 12-20,000 vertical feet of downhill skiing (about 10-15 ski runs). A typical ski day would have the group moving away from the lodge in the morning, and then working their way back toward the lodge in the afternoon. This strategy results in a large variety of terrain being experienced by the guests each day. The terrain varies from open bowls to perfectly spaced trees, steep powdery chutes, boulder gardens, uninterrupted fall lines and high peaks with glorious views.

The proposed operating area has close proximity to the Kelowna International Airport and regions including the Okanagan Valley, Big White Ski Resort, the Lower Mainland and the United States. This presents an exciting and unique competitive advantage in the remote lodge, multi day ski holiday industry.

In summary, this management plan outlines a great business opportunity and the minimal impact this operation will have on the land and wildlife values. The proponent is committed to conducting business in a manner that demonstrates high ethical standards and efforts to be a good corporate citizen. By working with First Nations, various government (federal, provincial and local) agencies, local economic development organization, other tourism operators and public recreation users, the company seeks to ensure that its operations are sustainable for the long term.

All maps included in this management plan are available in KML and digital spatial files upon request. A separate management plan for the License of Occupation for Roadway has been prepared and will form part of the tenure.

This management plan was developed and written by Cassandra and Kerry Penney. Nick Holmes-Smith is an active consultant and associate on this project, and will remain so over the course of application into business start up.

## **1.2 Proponent**

Powder Renegade Lodge Inc (PRL) is a BC incorporated company based out of Kelowna, BC. The founders are Cassandra Penney, Kerry Penney and Nick Holmes-Smith. They share an enormous passion for creating cat ski tenures and truly make an excellent team with their unique and diverse skills.

The Penney's are striving entrepreneurs and residents of Kelowna, BC. In October 2018, they had purchased an existing cat skiing tenure called Highland Powder Skiing (file #4403378, license #403047), which was based out of Meadow Creek, BC. This tenure had been previously replaced in 2010 for a further 30 year term, so the Penney's felt confident that the tenure had longevity. The Penney's extensively updated the management plan and became knowledgeable of the adventure tourism tenure application process.

As the application process transpired, GPS telemetry and other data shared by FLNRO indicated locations and movement of critical herd of Southern Mountain Caribou within this boundary. In December 2019, it was deemed that it was not in the public interest for a cat skiing operation to operate in this location based on the objective of this local population unit to reach self-sustainability. A tenure termination agreement was signed ending the license of occupation in March 2020.

The Penney's are committed to achieving their lifelong family dream of owning and operating a cat skiing operation with a remote lodge. This tenure is essentially the replacement for the cancellation of HPS. Cassandra and Kerry also have two young daughters who have both been skiing since the age of two.

Nick and his wife Ali-Holmes Smith have founded two cat skiing operations including Mustang Powder Lodge; which they currently own and operate, and Monashee Powder Snowcats prior to Mustang. They raised their daughters while operating their snowcat business, just as the Penney's wish to do. Nick has been working closely with the Penney's on the development of this business and tenure. His role as a consultant and mentor has provided extensive knowledge and experience when it comes to creating and maintaining a very successful remote lodge, multi day skiing product.

When timing is appropriate, PRL will become a regular member of the HeliCat Canada Association (HCC). PRL will ensure their lead guides will meet or exceed the HCC operation guidelines for snowcat skiing. The guides will be certified by the ACMG or CSGA and will have all the proper training for the level of responsibility they carry.

### 1.2.1 Corporate Summary

Incorporation # BC1255468

Business Address: 303-567 Yates Road, Kelowna, BC V1V 2V4

Corporate Officers: Cassandra Penney, President

Contact: Phone: (250)-423-1843

Email: [powderrenegade@gmail.com](mailto:powderrenegade@gmail.com)

Ownership & Management: Powder Renegade Lodge is owned and operated by Cassandra and Kerry Penney. Kerry is the creative director who will also oversee operations. Cassandra is the business director who oversees the company and business. Nick Holmes-Smith is a consultant and mentor on this project start up.

### 1.3 Historical Perspective

Cat skiing was invented by Alan and Brenda Drury of Selkirk Wilderness Lodge in the mid 1970's. Since then, Southern BC has continued to be the centre of cat skiing, particularly the remote lodge, multi-day ski holiday product. Currently, standard cat skiing holidays typically cost between \$1000-1500 a day in the high season, and all ascents are done by snowcat.

This proposed operating area is encompassed with a license of occupation (File #3409453) that is now suspended and due to expire in December 2021. This proponent known as Powder Outfitters offered heli-skiing, ski touring and snowshoeing tours out of this general location. This proponent is now insolvent and has not been actively using the terrain for over a decade. PRL has received express permission from the Cranbrook FLNRO office to apply for a license of occupation overlapping this tenure, see *Appendix 3.0*.

This area has been extensively logged and includes multiple cut blocks and expansive road networks that will greatly assist the start up and development of a cat skiing operation. PRL would propose to utilize this existing road system as an effective method of access terrain, without creating new disturbances to the natural land. PRL understands that permission to use the existing active roads are subject to use and maintenance agreements with the active forestry companies who hold respective licenses (Interfor Corporation & BC Timber Sales), and/or the Selkirk Forest District.

The PRL team has conducted research and development site visits to understand the terrain and determine a suitable and long term sustainable business model. The team has been able to identify comparable strengths and weaknesses to other operations, and truly understands the land from many perspectives including Google Earth, in person on snowmobile, in a plane over and around the area, and helicopter touch downs to lodge sites and various locations.

The team conducted ski touring and heli-skiing trial runs throughout locations within the proposed boundary to check snow quality and potential for run development coinciding with a road network for snowcat access. The conclusion was this terrain is very suitable for a cat skiing product and would be a strong rival to many of the existing operators providing a similar product.

PRL has also conducted inquiries to identify potential show stoppers with respect to wildlife values and concerns, closures, protected areas and overall potential red flags to assess if there were any major hurdles for this application prior to beginning intensive research and business development. The conclusion was interpreted that with appropriate and aligning mitigation and diligent use measures, this application has potential to receive approval.

#### **1.4 Aboriginal Interests Consideration**

PRL understands consultation with First Nations is an important part of land and resource decision-making. The Province of British Columbia has a legal obligation to consult and where required, accommodate First Nations when a Crown land activity and/or resource decisions that could impact their Aboriginal Interests. While the Province is responsible for ensuring adequate and appropriate consultation and accommodation, it may involve the proponent in the procedural aspects of consultation.

Proponents are encouraged to engage with First Nations as early as possible in the planning stages to build relationships and for information sharing purposes. PRL applied their proposed boundary into the First Nation Consultation Area Database (CAD) and identified eight groups who could have asserted or proven rights or title on the land base queried, and include the following:

- Penticton Indian Band
- Okanagan Nation Alliance
- Westbank First Nation
- Qwelminte Secwepemc
- Upper Nicola Band
- Lower Similkameen Indian Band
- Okanagan Indian Band
- Splots'in First Nation

PRL appreciates that their activities may impact existing First Nations rights, title, interests and values. They are keen to learn and explore how all parties interested can work together through a cooperative sense of sharing, and in a collectively beneficial manner. Through analysis of other similar business models that overlap First Nation Traditional Territory, it is evident that First Nation groups are interested in opportunities arising from tourism and recreation developments within their Traditional Territory. PRL remains open and willing to develop agreements that outline how potential opportunities can be offered and allocated in an effective and meaningful way.

##### *1.4.1 Archaeological Sites*

PRL has queried iMapBC and Natural Resources Sector Online Services and has been unable to identify any existing archaeological, cultural or heritage sites within their proposed tenure boundary. PRL recognizes the importance of archaeological sites within BC, and is committed to protect and conserve this rich but fragile legacy.

PRL acknowledges that in the event that a potential First Nations artifact or site is located, the location will be marked, left untouched and immediately reported to FLNRO and the appropriate First Nations group. If the appropriate First Nations group cannot be identified

through the site or artifact, all groups that have been identified through the CAD will be notified so ownership to this site or artifact can be claimed. PRL would cease use of any sites related to archaeological significance upon request by appropriate First Nations groups, and/or FLNRO.

## **2.0 LOCATION**

### **2.1 General Description**

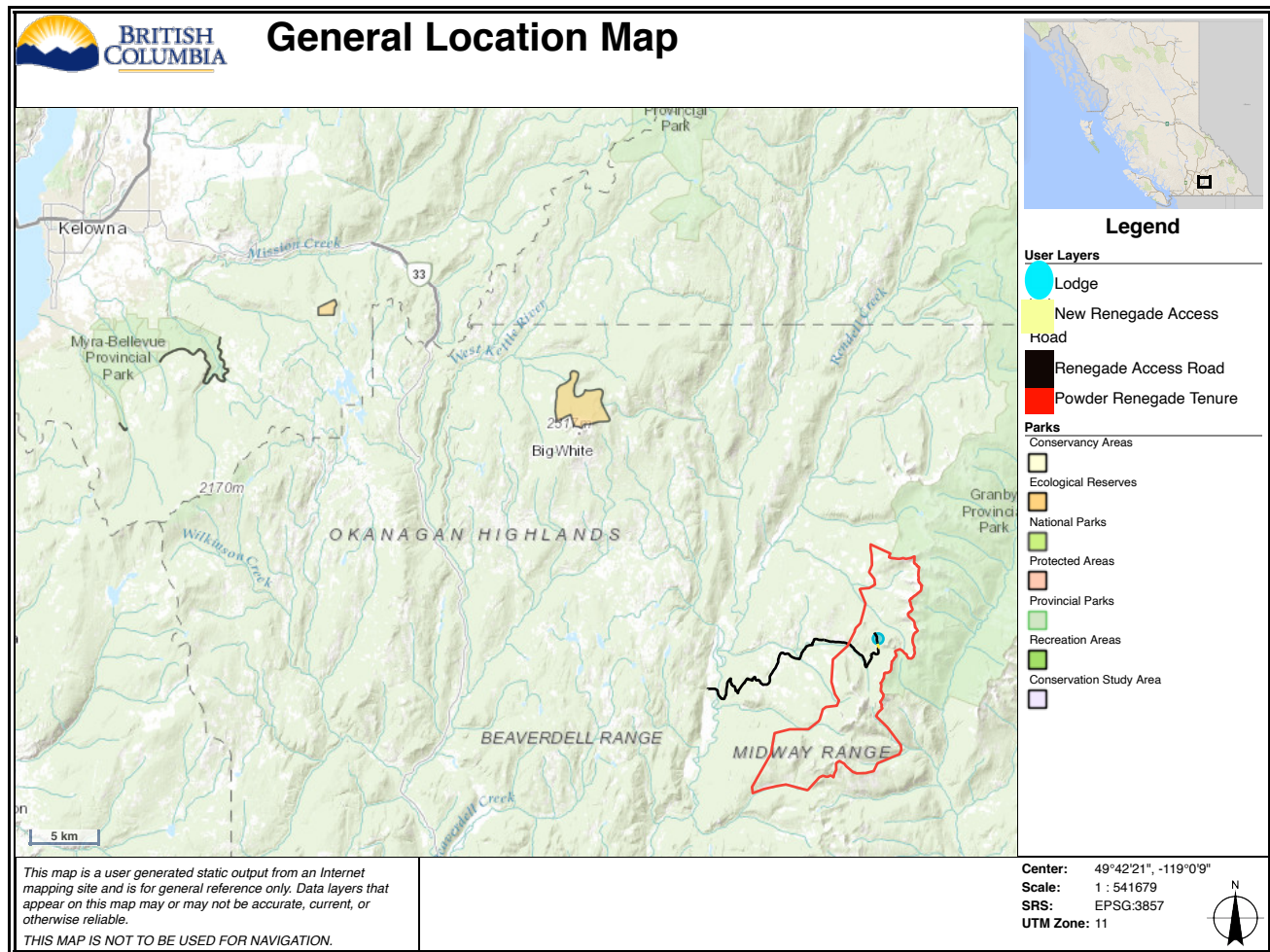
The proposed tenure boundary is 60 km northwest of Grand Forks and 70 km southeast of Kelowna in the Midway Range of the Monashee Mountains. It is adjacent to the south western border of Granby Provincial Park between the Kettle River and Granby River. East of the Christian Valley, south of Arthurs creek and north of Thone Creek with portions lying in Cochrane, Hellroarer and Grano Creeks. See *Figure 2-1, General Location Map*.

The operating area encompasses 8847 hectares with the majority of proposed ski terrain being between 1200 and 2400 meters elevation. This location has been extensively logged and has an excellent existing road network. There are also many existing cut blocks that present great skiing opportunities. These mountain ranges also have nicely spaced natural forests that allow for skiing during cloudy weather. The tree line within the operating area is generally at the 2200 metres elevation with above tree line being mainly open alpine meadows and rock.

The southern interior of British Columbia has more cat skiing operations than anywhere in the world. In addition to boasting large volumes of high quality powder snow and great tree skiing, the legacy of logging roads has been crucial in the creation of this industry. This location is a great example of how existing forestry roads can allow for the creation of a new, and long term sustainable operation using the same infrastructure.



Figure 2-1: General Location Map



## 2.2 Access

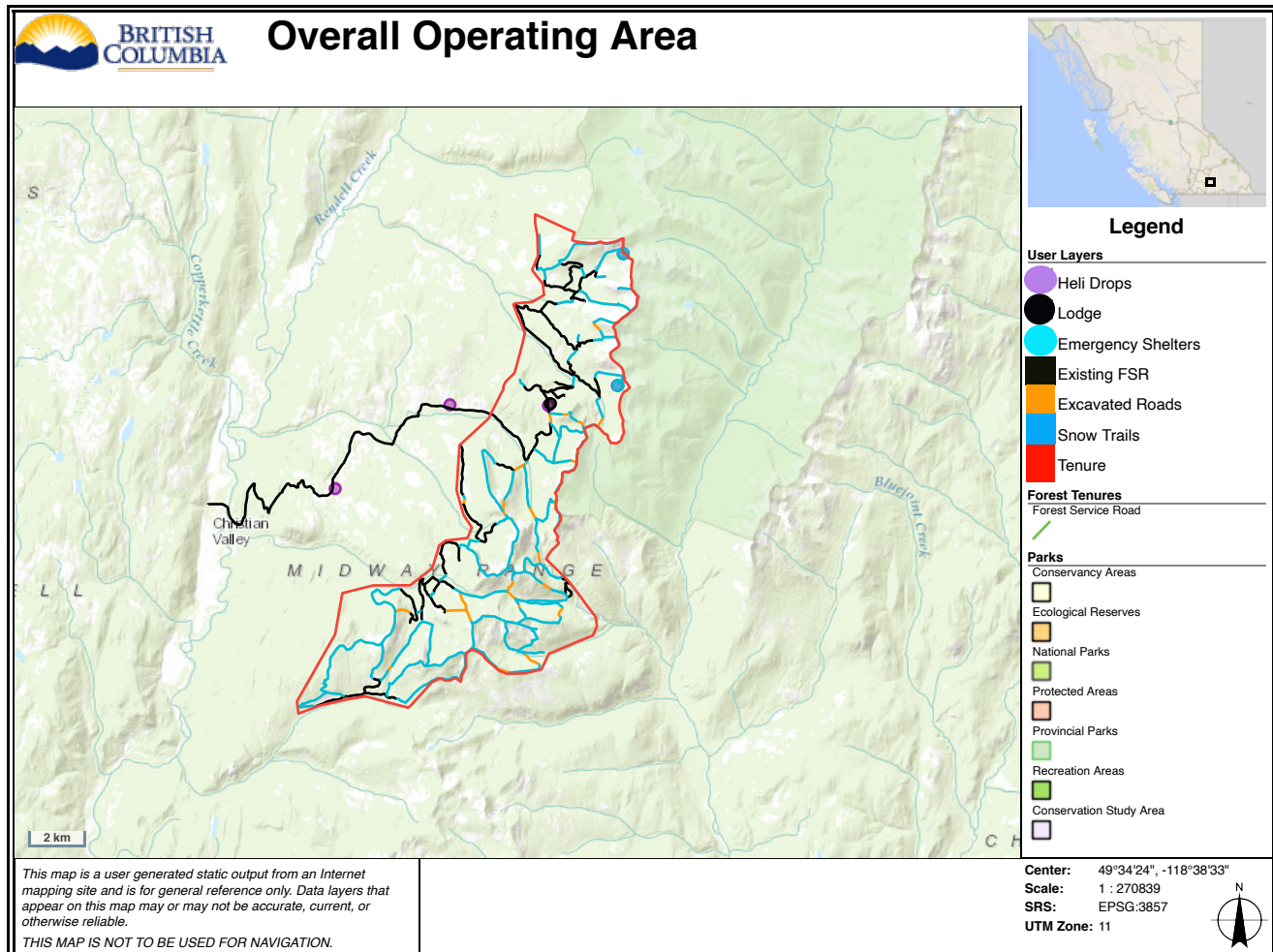
Ground access to the tenure is via the Grano Creek FSR. This FSR begins at the 51km marker off of the Christian Valley Road. There are multiple access points into the logging road system within the tenure from this FSR. To access the lodge site, follow the Grano Creek FSR for 14.2 kms, staying right onto Charlie Road FSR road for 1.1 kms, and then stay right onto Noren FSR for 4.3 kms, which climbs a southwest aspect hillside. Stay right again on Grano 14640 which continues climbing and ends at 1900m elevation. An excavated road 374m long is required to connect to Grano 22830, at 1960m elevation.

Fuel trucks, equipment, construction vehicles and suppliers will use this ground method by following the route direct to the lodge site in non-snowbound weather to service the lodge and equipment. On occasion, guests will also be transported by snowcat to the lodge site on this route (1.5-2 hour snowcat ride). PRL will establish an agreement with private land owners for a staging area, as most land surrounding the entrance of the Grano Creek FSR is private land.

For guest transport, primary lodge access will involve guests being flown by helicopter to the lodge site, from a designated area at the Kelowna International Airport (KIA). This flight takes approximately 30 minutes. It provides convenience, comfort and very fast access. This is possible 80% of the time throughout the operational months. Secondary guest access fly guests to one of the two heli drops along the entrance FSR system (see *Figure 2-2: Overall Operating Area*), approximately a 25 minute flight. They would then be loaded into a snowcat and transported to the lodge, a 1-1.5 hour snowcat ride.

Flight information was provided by Derek Robinson, owner of Eclipse Helicopters Ltd of Penticton, BC who has been flying this area of interest for 20 years. The PRL team flew with Derek twice over the area. Eclipse Helicopters will be the transportation provider for all helicopter services related to PRL and will remain an active consultant throughout the application process and business development.

Figure 2-2: Overall Operating Area



*Figure 2-1: Aerial Image of Operating Area - Looking North at Mt. Tanner & Mt. Cochrane*



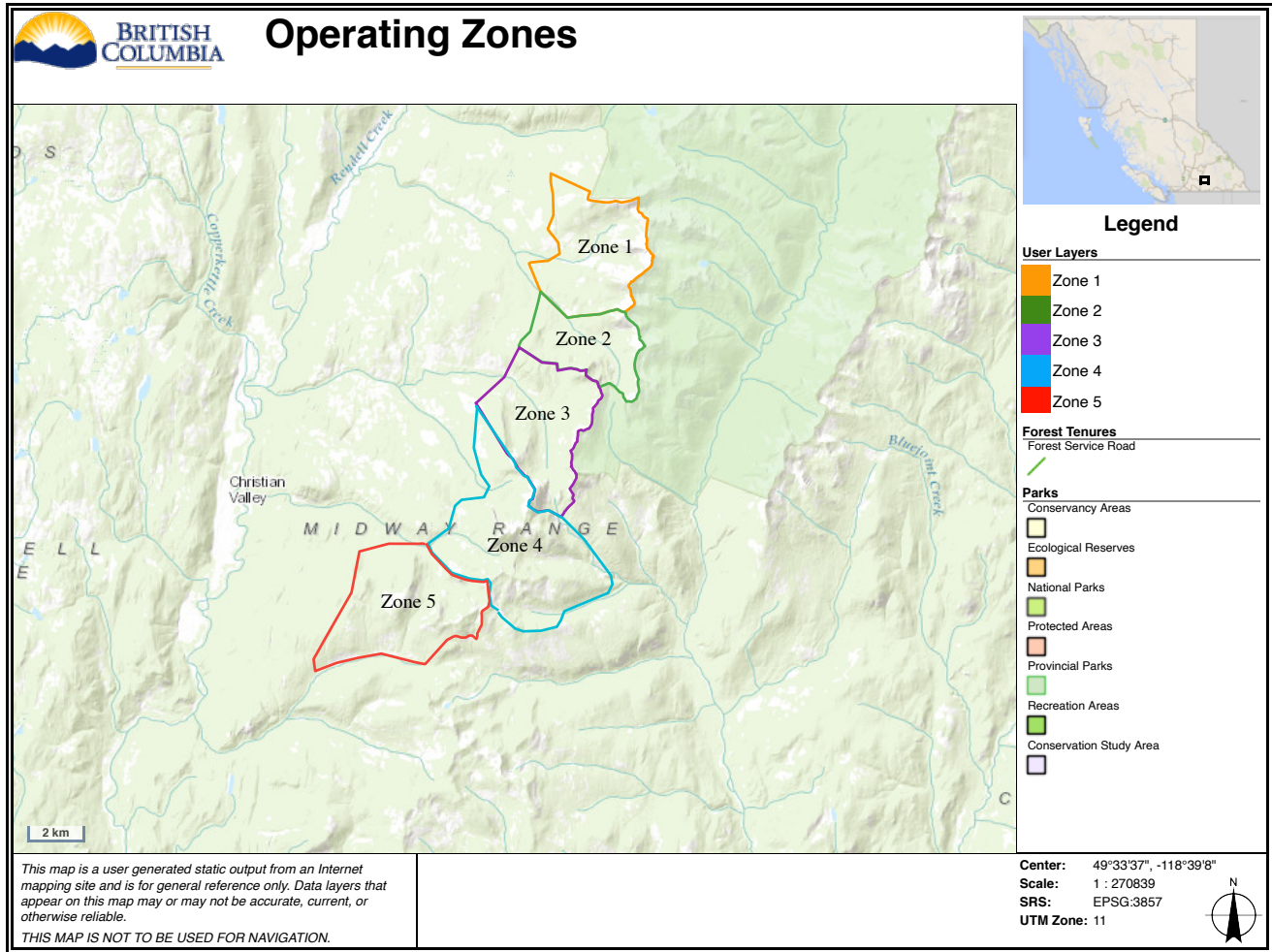
*Figure 2-2: Aerial Image of Operating Area - Looking east toward tenure*



### 2.3 Description of Operating Zones

The five ski zones within the PRL operating area have been determined using a combination of geographical features such as drainages or ridge tops and the operational approach of the business. Each ski zone contains areas which would be used more frequently than others - depending on terrain, snow conditions, weather, accessibility and client requirements.

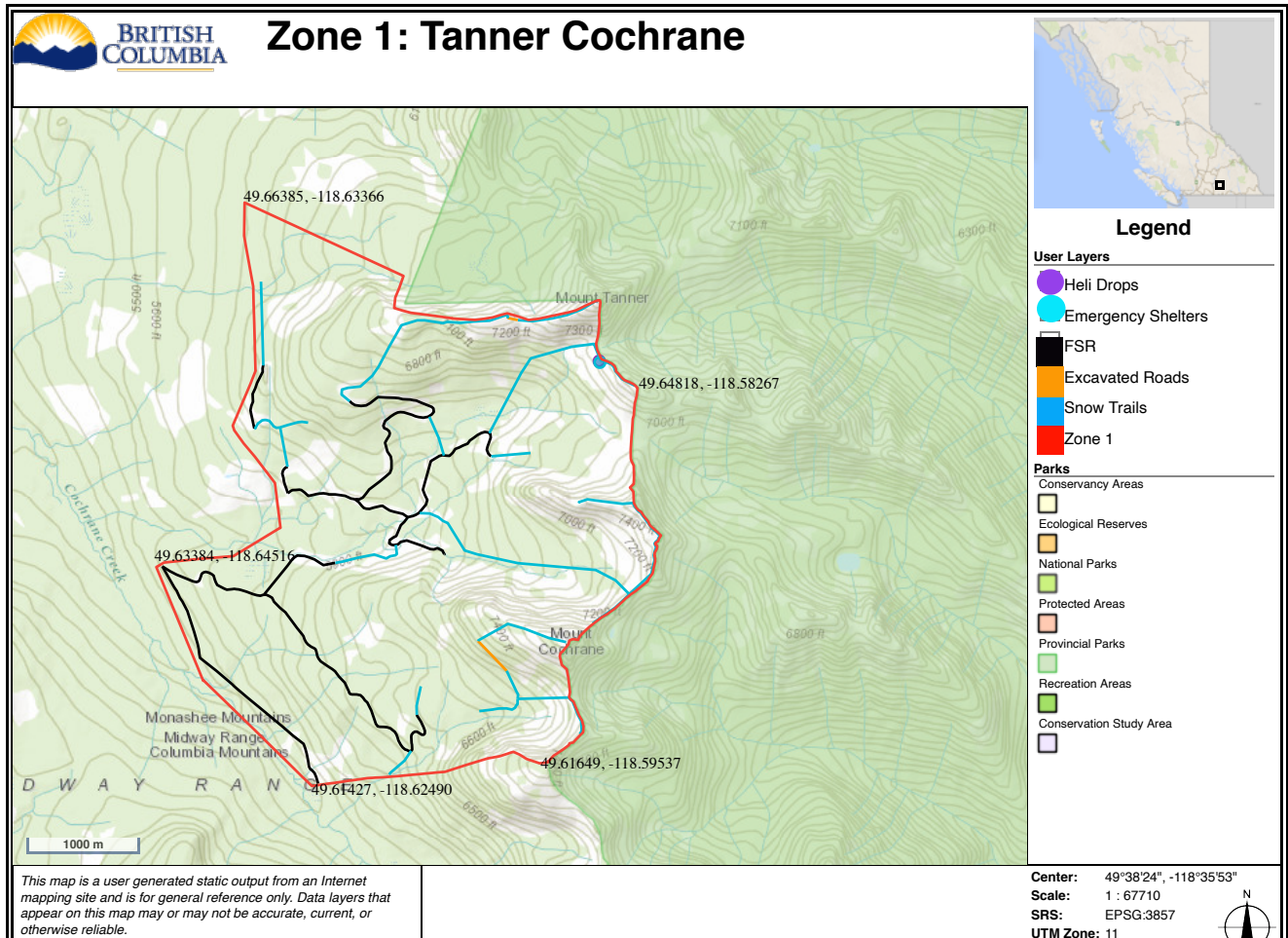
Figure 2-4: PRL Operating Area Zones



### 2.3.1 Zone 1 - Tanner-Cochrane (1721 ha)

The northern border of the Tanner Cochrane zone runs along the height of land on Mt. Tanner, and the southern border is the height of land south to the Cochrane drainage. This zone encompasses the Mt. Tanner and Mt. Cochrane drainages, and their spectacular peaks dominate the view. Several west aspect valleys are tucked between the peaks and there are many logging cut blocks that extend up to the 2000 meter elevation.

Figure 2-5: Map of Zone 1



*Figure 2-5: Aerial Image of Mt Tanner looking southeast*



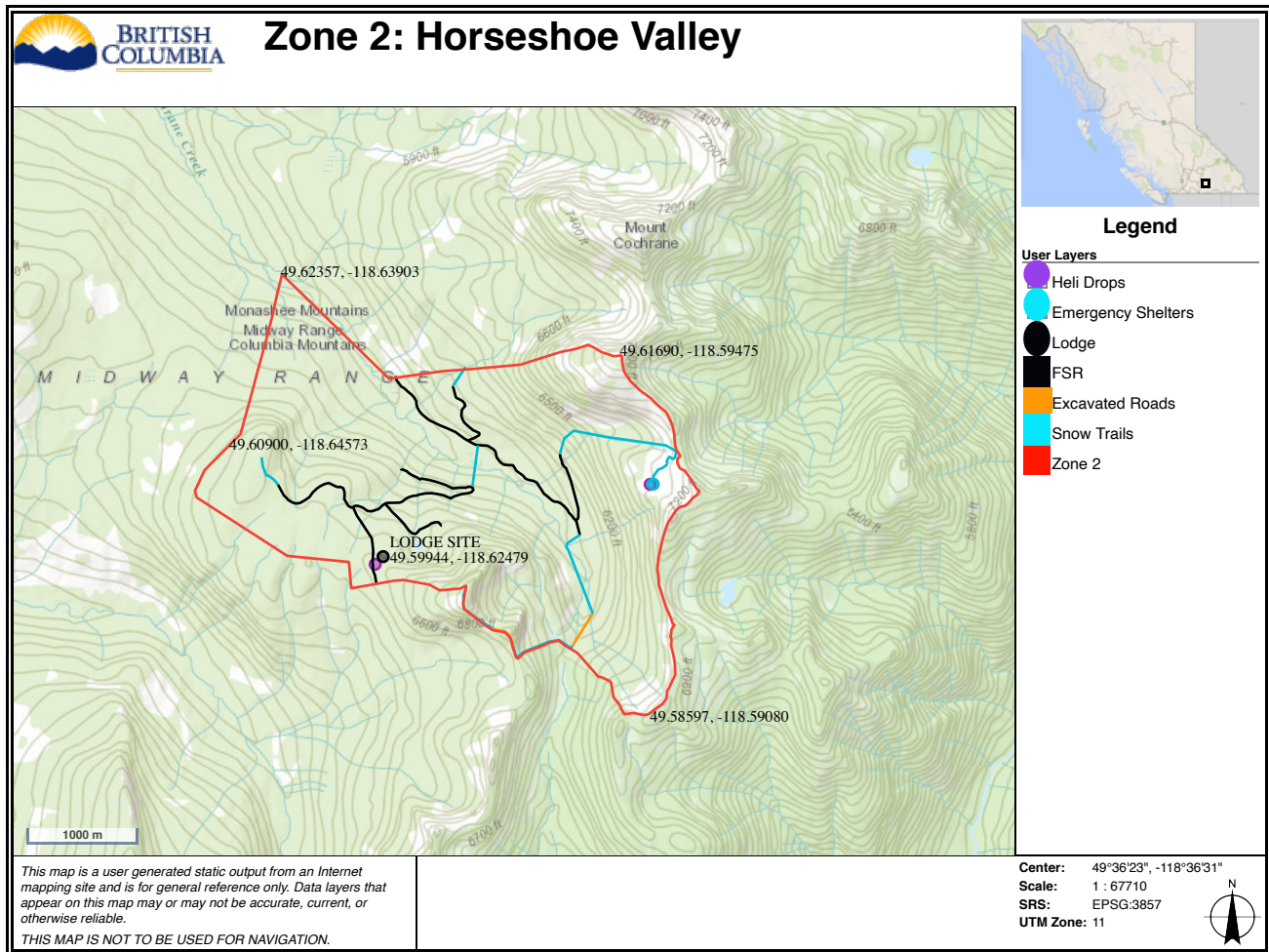
*Figure 2-6: Aerial Image of Mt. Cochrane looking southeast*



### 2.3.2 Zone 2 - Horseshoe Valley (993 ha)

Horseshoe Valley begins where Tanner Cochrane ends, and extends south to the height of land above the lodge on the mountain ridge line. It is the smallest zone in the tenure. The terrain is composed of north and west aspect tree skiing. Our proposed lodge would be located in this zone at the 1952 meter level on an unnamed mountain near a pond, between Mt. Cochrane and Mt. Noren. The lease area is within this zone.

Figure 2-7 : Map of Zone 2



*Figure 2-8: Aerial View of “Horseshoe Valley” looking Northeast.*



*Figure 2-9: Aerial Image of unnamed mountain that lodge will be on, facing southeast*

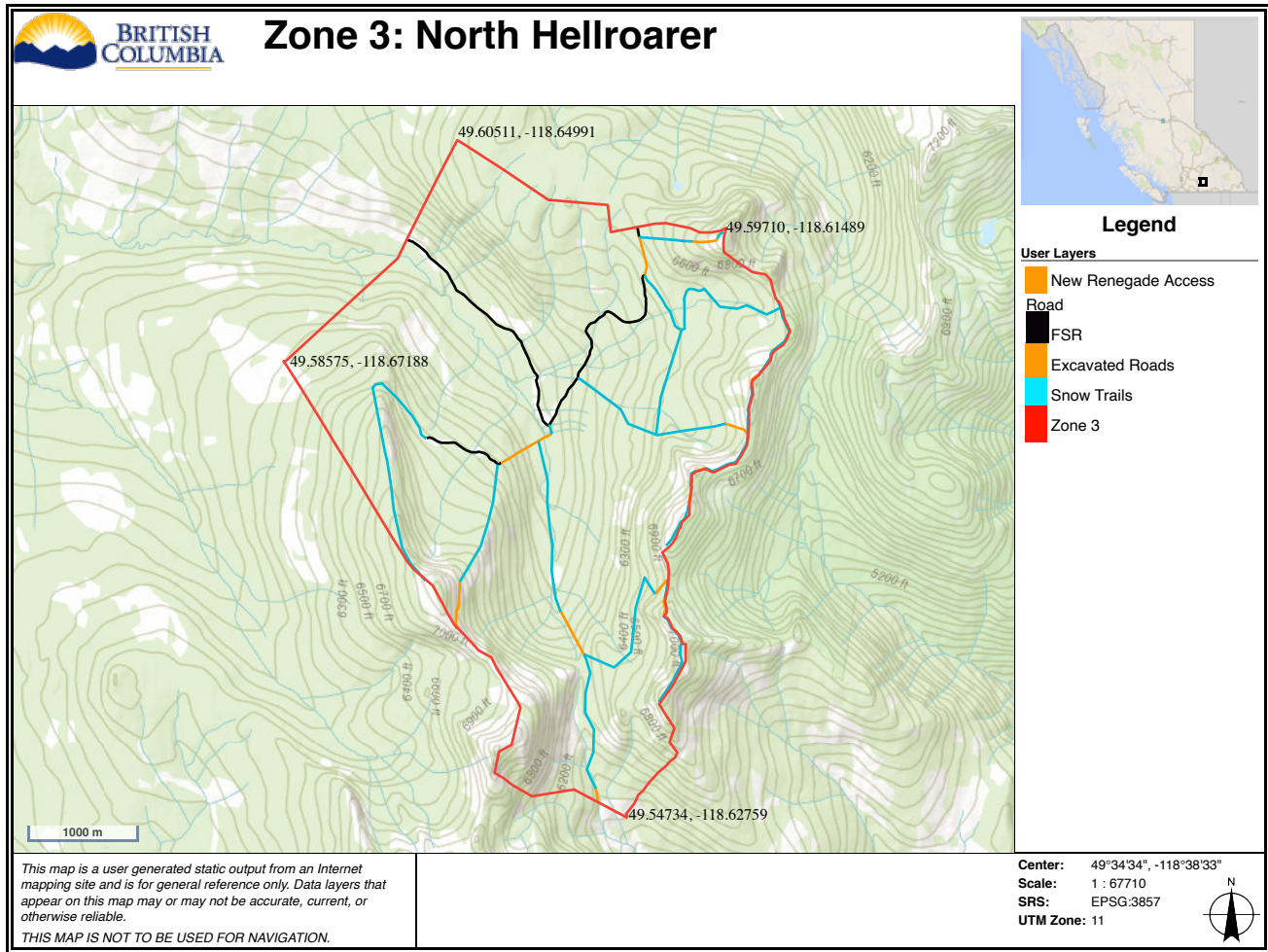




### 2.3.3 Zone 3 - North Hellroarer (1640 ha)

This zone has a lot of north and west aspect tree skiing and will be more of a bread and butter zone during the storm days and unstable weather. It extends south to the height of land on the north ridge of Mt. Noren. It is the southern most dominant peak in this zone and features cut blocks and logging roads on its western shoulder, which will be excellent ski terrain.

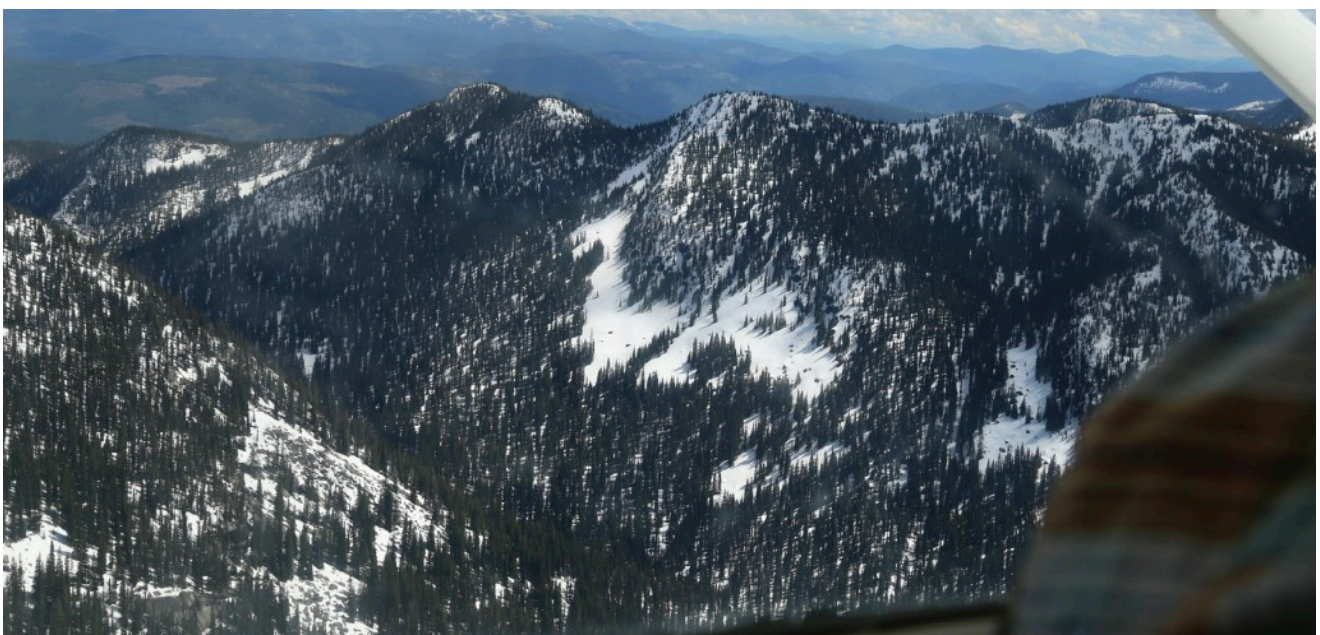
Figure 2-10: Map of Zone 3



*Figure 2- 11: Aerial Image of Mt. Noren looking Southeast.*



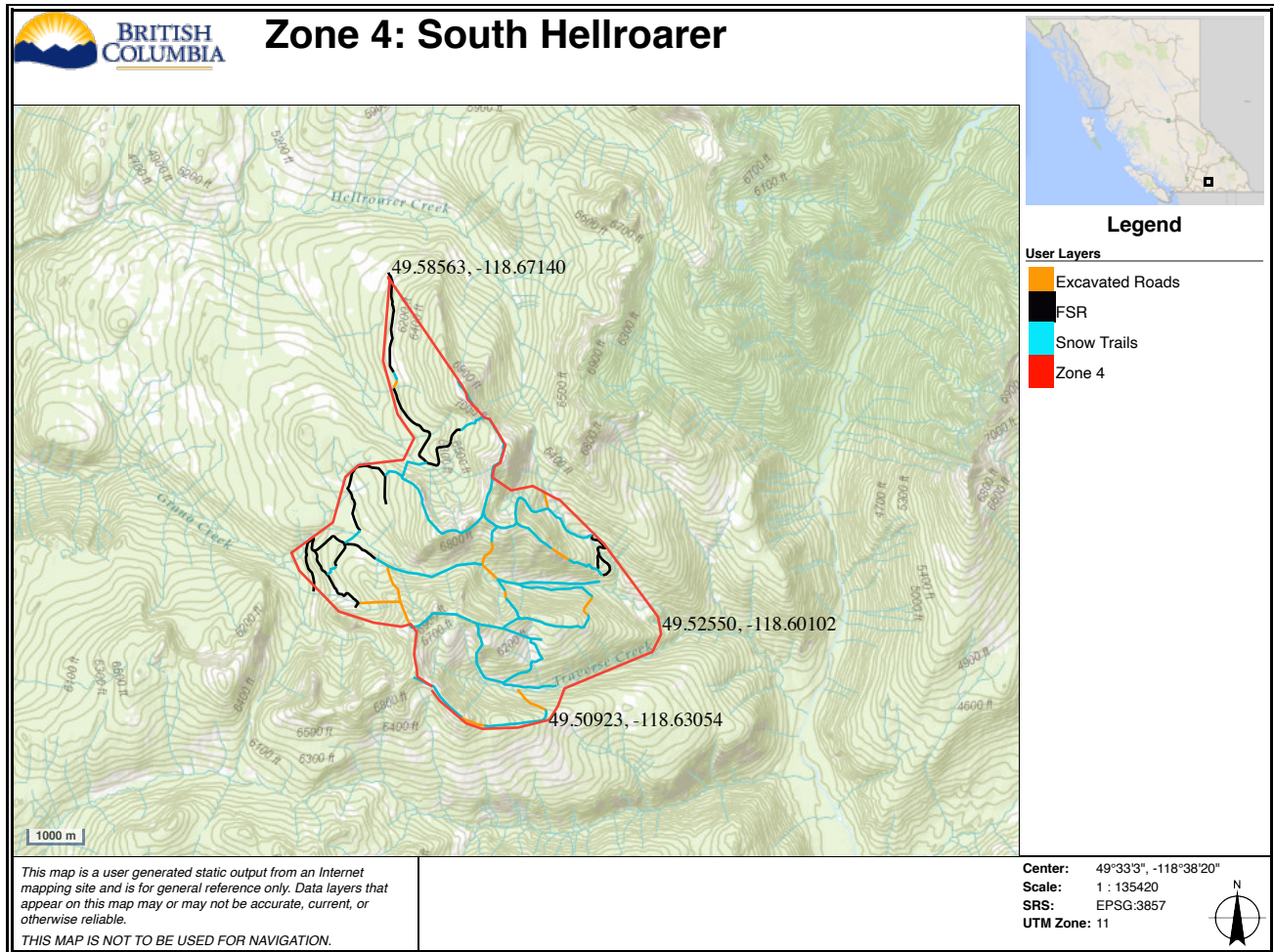
*Figure 2-12: Aerial Image of peaks and ridge lines between lodge site & Mt. Noren, looking east*



### 2.3.4 Zone 4 - South Hellroarer (2553 ha)

This is the largest zone, extending down to the eastern ridge of Gable Mountain. It encompasses three drainages that present a significant amount of north aspect ski terrain which is vital to our operation, and lacking in other zones. It is the most dynamic zone, featuring north and south aspect skiing, a burn, numerous cut blocks, and steep trees. This zone also features the most kilometres of excavated roads.

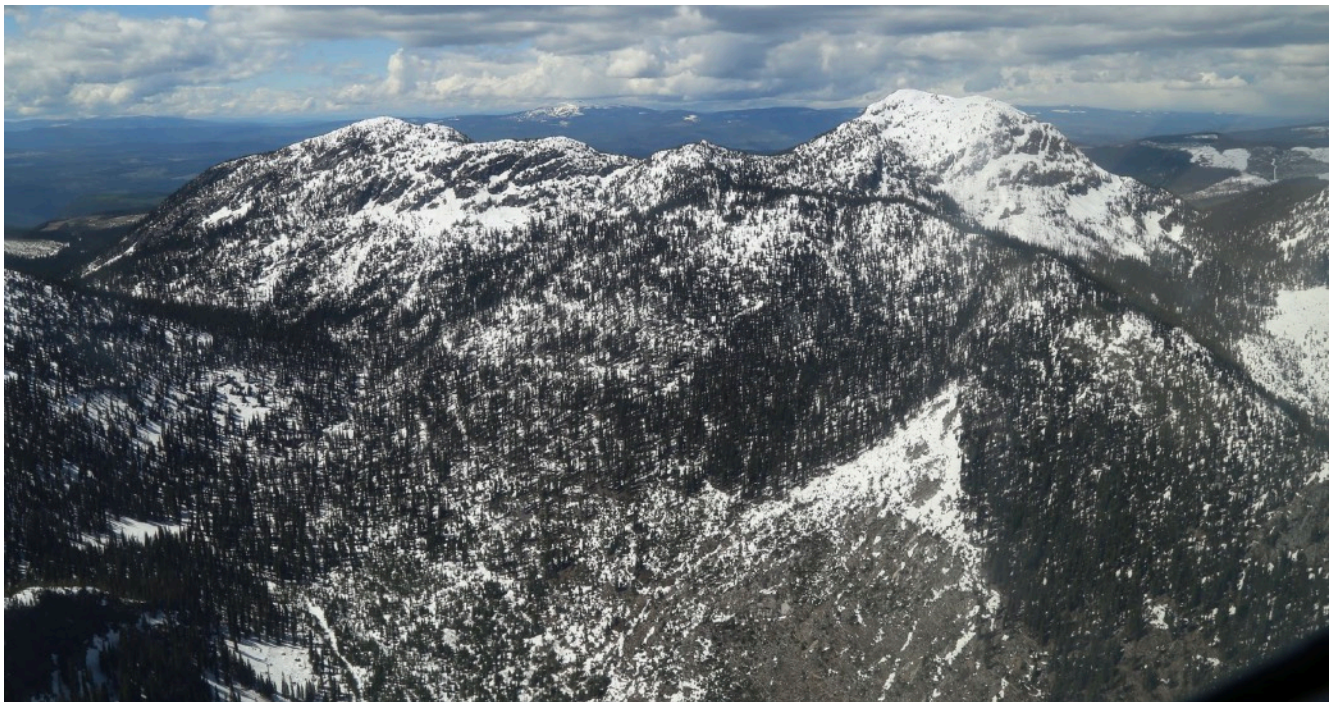
Figure 2-13: Map of Zone 4



*Figure 2-14: Aerial Image of drainage looking southeast*



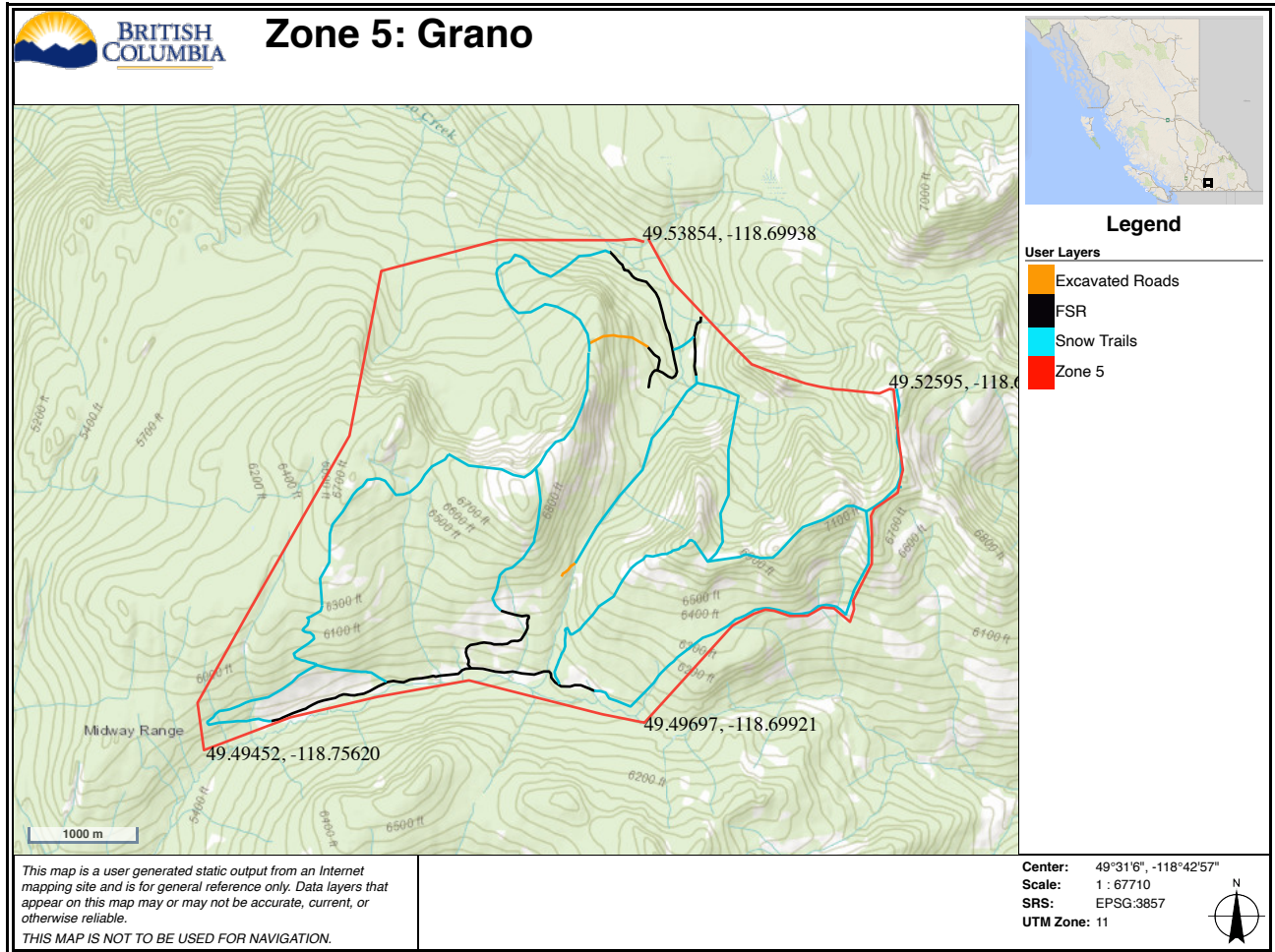
*Figure 2-15: Aerial Image of drainage looking Northwest showing an old burn*



2.3.5 Zone 5 - Grano (1940 ha)

The peaks and ridges are slightly lower elevation in this zone – with mostly ‘treeline’ and ‘below treeline’ ski runs. There are also many cut blocks. The Grano zone is the final and most southern zone, with the border stopping the tenure at the drainage on Mt. Gable’s south western corner.

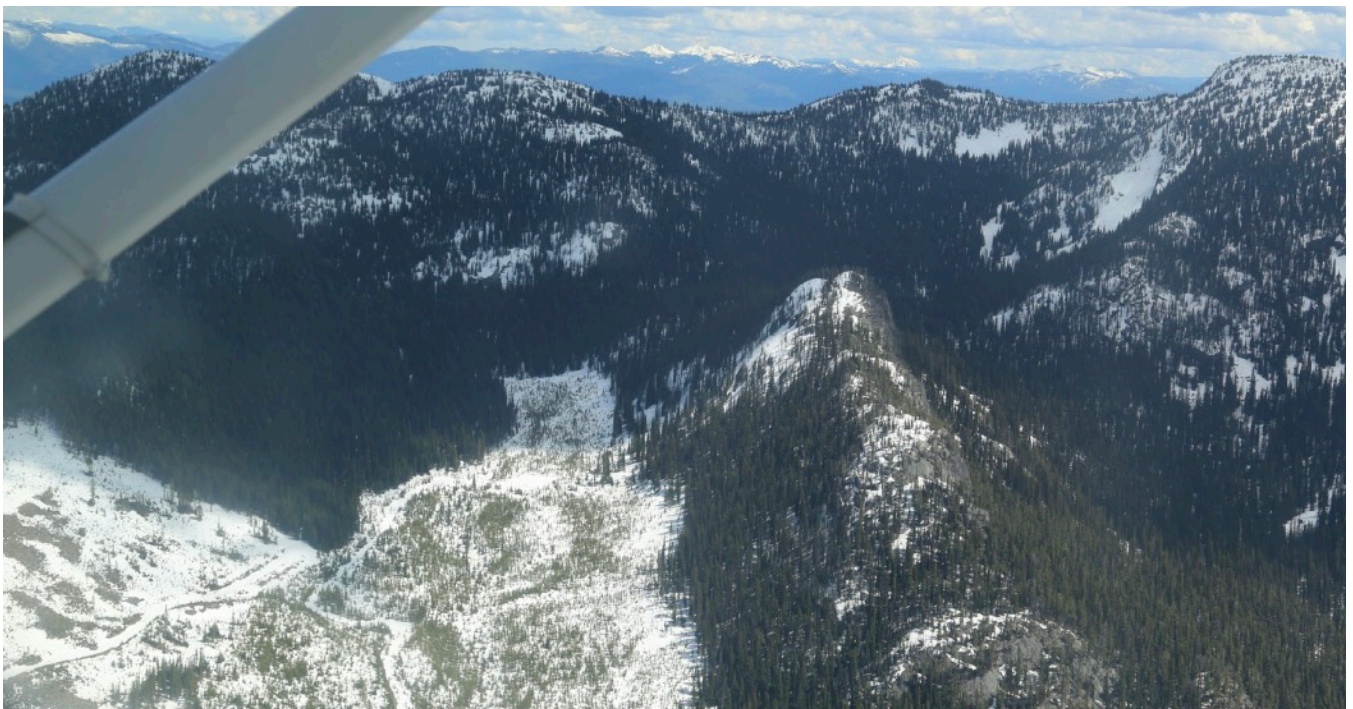
Figure 2-16: Map of Zone 5



*Figure 2-17 : Aerial Image Looking northeast*



*Figure 2-18: Aerial Image looking south, mid zone*



## 2.4 SEASONAL EXPECTATIONS OF USE

PRL's operational period would be from early December to early April, allowing for an approximate 120 day ski season. PRL is not requesting any summer activities, and will not be proposing any future applications for summer activities. The construction period for the lodge build is anticipated to be Summer/Fall 2021 into Summer 2022.

### 2.4.1 Levels of Use and Client Days

At the conclusion of each operating season, PRL will prepare an annual report reflecting the total number of skiers, or client days, taken to the operating area pursuant to the fee schedule requirement of the AT license agreement. This skier/day report will reflect diligent use of all ski zones.

The frequency and intensity of utilizing the operating area, zones and ski runs are dependent on several factors including safety, weather and snow conditions, skiing ability and quantity of guests, glading requirements/run development, proximity to lodge site, and wildlife avoidance. These variables can concentrate use or lack of use to specific zones and certain runs for long periods of time.

PRL's ability to complete glading projects prior to operation and throughout the years will play a big role in skiable terrain. Logistically, runs more centralized to the lodge site will be used more frequently based on access and getting guests skiing quickly upon leaving the lodge, and getting some runs in at the end of the day upon return.

Collectively and independently, the considerations described above contribute to a diverse and complex strategy that determines where skiing occurs within the operating area that will likely vary throughout the years.

PRL has prepared projected levels of use and client days within the operating area for the next 5 years based on existing industry trends and realistic growth rates for the company. PRL would begin as a one snowcat operation and add a second snowcat by year three. PRL has considered variable guest demand between low and high season to determine occupancy rates. Low season is from early December to mid January, then mid March to early April. High season is from mid January to mid March. Occupancy rates are considered 100% for high season, and 80-90% in low season initially, growing to 100% by year 5.

Occupancy rate projections may appear to be overly optimistic - and for most tourism industries that would be true. However, the heli-skiing, snowcat and ski touring industry occupancy rates for existing remote lodge, multi-day ski operations in British Columbia are at or near 100%. The PRL team has conducted extensive market research and discovered there is more demand than supply for cat skiing in this province.

Table 2-1: Levels of Use and Client Days

YEAR	# DAILY GUESTS - LOW SEASON	# DAILY GUESTS - HIGH SEASON	# SNOWCATS	PROJECTED CLIENT DAYS - 120 DAY SEASON
2022/23	10	13	1	1290
2022/24	11	13	1	1440
2022/25	22	24	2	2760
2022/26	22	24	2	2760
2022/27	24	24	2	2880

### 3.0 INFRASTRUCTURE

PRL is proposing improvements including a lodge, machine workshop, fuel cache, staging areas and communication sites/emergency shelters. They are also proposing to use existing forestry roads, along with building new excavated roads and snow trails for improved connectivity and terrain accessibility. Minor glading and spacing throughout the tenure is also requested, and PRL will apply for an OLTC upon approval of this tenure management plan following adherence to best practices in forestry and land development.

Intensive Use Sites (IU Sites) are small areas of Crown land that are integral to the AT tenure holder's operation and typically contain improvements. There are two kinds of IU Sites - Primary and Secondary, which are based on the nature and scope of the improvements on the land use.

Primary sites often involve substantial improvements and require services considerable administrative attention. Secondary sites are relatively minor or non-permanent improvements that only require minimal attention. Minimal Impact Sites refer to small areas of Crown land that are intermittently used for non-exclusive, low impact recreation within an Extensive Use Area license that contain minimal and temporary improvements only.

#### 3.1 Lease - Primary Intensive Use Sites

PRL is proposing a Primary Intensive Use Site for accommodation, fuel storage, and a machine workshop. Because substantial improvements are proposed, PRL is requesting a 15 hectare parcel of land surrounding the lodge and auxiliary structures to be registered as a 30 year lease. This would allow modification to the land, the construction of improvements, exclusive use and quiet enjoyment of the area. The proposed lease area is located on a nameless mountain between Mt. Cochrane and Mt. Noren (See *Figure 3-1 and Figure 3-2*).

Upon approval of this management plan, if required, PRL will retain a professional registered surveyor to define the tenured area and to accompany the registration of the lease as an interest under the Land Title Act.



Figure 3-1: PRL Lease Site Plan

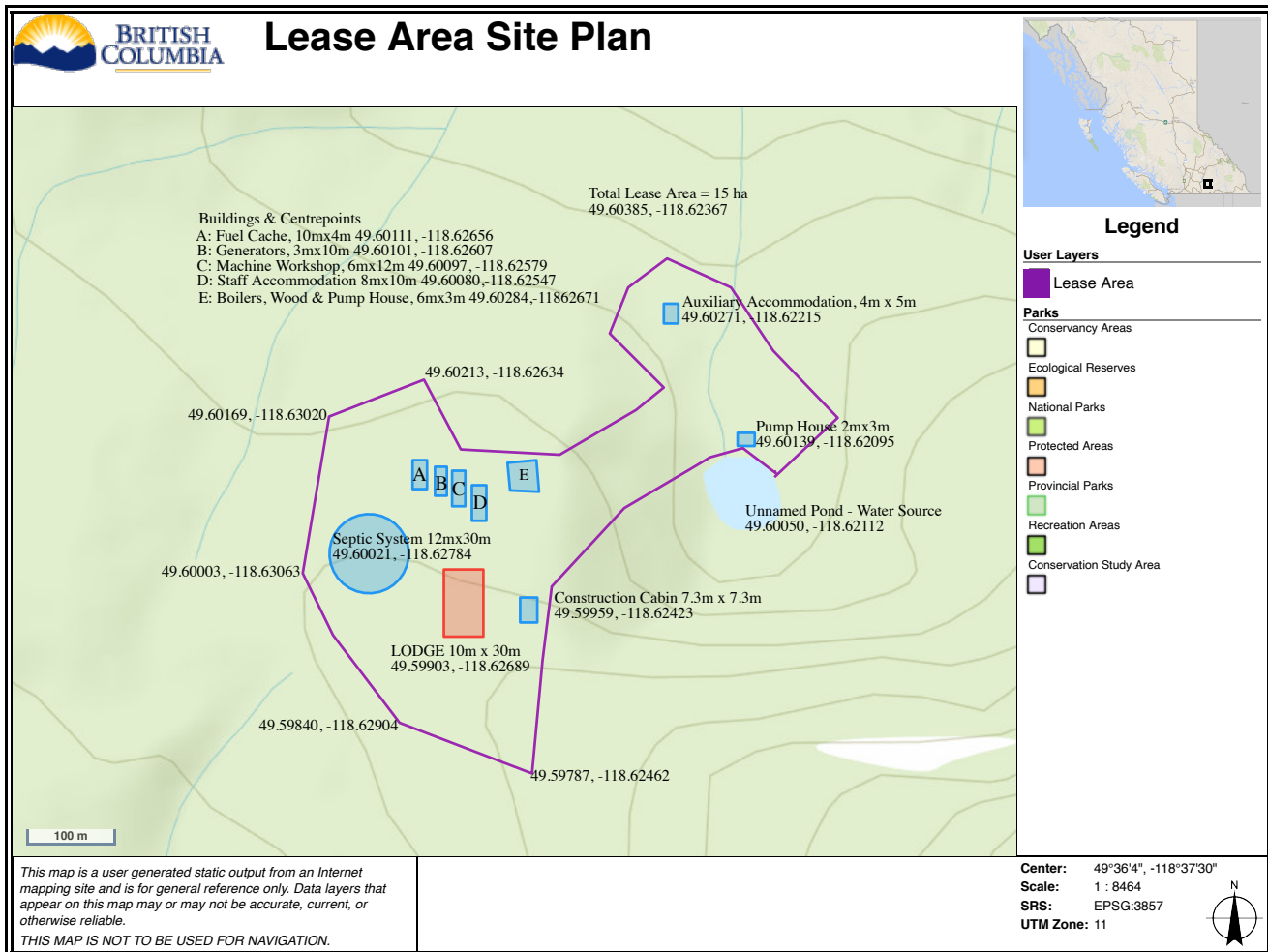


Figure 3-2: Aerial Image of Lease Area



### 3.1.1 Lodge Facility

PRL is proposing a lodge facility to be situated within a lease area that includes the lodge, staff accommodation, snowcat workshop, ancillary buildings and a fuel cache. The proposed building site for the lodge facility is relatively clear and flat, located at the 1952 metre elevation. Some grading and land work will be required to create a level base to construct the lodge. Some excavation and minor tree cutting will be necessary throughout the building process. It will be snowbound from October to July.

The construction materials for the lodge will be primarily wood. PRL is proposing a timber frame post and beam lodge on a concrete foundation for the footprint of 300 square metres, with dimensions of 10m x 30m. The exterior of the building will also have some stone features, but will mainly be constructed of timber. The interior will boast the large beam structure ceiling and have a great room with wall to ceiling windows for guests to take in the beautiful views.

The lodge will have 24 bedrooms with a bathroom joining between 2 rooms as a jack and jill style (each guest has their own bedroom and shares a bathroom with 1 other guest). The staff members will be in a smaller staff accommodation building, for a total 17 staff members between the buildings at the completed business model of two snowcats. PRL will remain mindful of the long term goal of 24 guests and 17 staff when building the lodge and all services.

The staff building will be an 8m x 10m A-frame constructed of wood and stone. It will have loft style sleeping quarters with a common washroom and basic kitchen area. It will be located in close proximity to the main lodge.

A machine workshop will be necessary to conduct any repairs and maintenance for the snowcats. PRL is proposing the installation of a 6m x 12m weather haven that is heated with a portable generator. This structure is not considered a “permanent” structure and will not require any substantial changes to the land minus a small amount of tree cutting and levelling the ground. By year 5 PRL would possibly consider replacing this structure with a 9m x 25m permanent snowcat workshop.

Any hazardous waste resulting from servicing machines and equipment will be stored in a secure tank while on premises and will be removed at the conclusion of each ski season. This waste will be disposed of at an appropriate location that complies with MOE standards and regulations.

All buildings and developments will be constructed according to the BC Building Code standards following provincial and municipal guidelines. All permits will be pulled where necessary, and architectural/engineering requirements of the Kootenay-Boundary Regional District will be satisfied.

Winter access to the lodge site will be via snowmobile or snowcat. Food and goods will be transported via snowcat from the staging area to the lodge on a bi-weekly basis. PRL will ensure they have extra meats and pantry items stored at the lodge for any delays in bringing up these goods.

### *3.1.2 Utilities Requirements and Sources*

The lodge will utilize radiant floor heating as the main heat source, which will be directed from an outdoor wood burning furnace. PRL is proposing a 6m x 3m woodshed for the storage of fire wood and the furnace.

The main power source for the lodge and workshop will be electrical power provided by a 55kw diesel generator located in a shipping container (3m x 12m) by the snowcat workshop. Another 55kw generator will be for backup, and a 10kw will be available for the offseason. The diesel power will be converted into electricity and will supply electricity to the lodge.

The lodge will have internet/wifi and satellite phones through a company such as Xplornet. Also, all the western aspects of the proposed tenure get cell service from a tower at the Big White Ski Resort based on the close proximity.

### *3.1.3 Fuel Cache*

PRL is proposing the installation of a self contained 90,000 litre double walled Enviro tank for fuel storage. The tank will be divided into two compartments, one containing 85,000 litres of diesel for snowcats and generators and the other will contain 5,000 litres of gasoline for snowmobiles. Sealed metal lock boxes will house the pump and fueling gear. A 10m x 4m area is proposed for the fuel cache. The fuel cache will be filled up once a year by a fuel truck

hauling in the fuel. This will happen in the months before PRL opens for their season to ensure there is enough fuel to support the needs of the operation.

The fuel cache will be used on a daily basis throughout the operating season. PRL maintenance staff and cat drivers will inspect the tanks and fuelling area for any visual indication of leaks during each fuel up. Regular soil testing will take place near the fuel tank, which will be documented as well as any fuel spills or leaks. PRL will have commercial spill kits on site in case of the unlikely event of a fuel spill. All fuel spills will be reported to the PRL head office and Ministry of Environment if necessary. The fuel cache will be not be located in proximity to water bodies.

All fuel handling will be conducted in accordance with “A Field Guide to Fuel Handling, Transportation and Storage”, published by FLNRO (3rd Edition, 2002), and “Fuel Management Best Practices” as outlined in the HeliCat Canada Best Practices for Sustainability Document.

### *3.1.4 Water Supply*

The proposed lodge facility is in close proximity to a pond (see *Figure 3-2: PRL Lease Site Plan*) that would serve as the water source for the buildings. This water source is groundwater recharged and receives snow melt from the upper elevations. A pump is necessary to divert the water 212 metres up a cut block to a secondary pump that will pump the water to the purification system and service the lodge. PRL will install a 2m x 3m shelter over the pump adjacent to the pond, and the second pump will be located in the boiler building.

PRL has applied for a Water License for the use of this water body, as permission for its use is required under the Water Sustainability Act (WSA). The tracking number for this application is 100326061. PRL will also consult with Interior Health and local health authorities concerning filtration and purification requirements. PRL will ensure baseline monitoring activities will be conducted to ensure compliance with WSA regulations and conditions of use.

### *3.1.5 Waste Collection, Treatment and Disposal*

Industry trends and guest reviews have concluded that the more primitive business model of a rustic mountain lodge with an outhouse is not acceptable to cat skiing guests in the modern era. Throughout the evolution of the cat skiing business model, an industry standard has been set and is required to be attractive to guests, and competitive with other operators.

PRL is proposing the installation of septic system for sewage disposal. This system would be connected to the lodge, and staff A-frame. This system will be designed to handle the maximum capacity of 24 guests and 17 staff (41 people). The *approximate* land use for the septic system will be an area of 12m x 30m.

Other heli and cat skiing lodges at high elevations have successfully engineered septic systems that factor in the higher elevation and colder temperatures. PRL will retain a qualified professional to ensure the design and engineering considers potential impacts of these conditions respective of microbial activity and decomposition rates.

PRL will consult with the local health authority and follow the Waste Discharge Regulation Implementation Guide set out by the Ministry of Environment, Environmental Protection Division. PRL will retain professionals, authorizations and permits when necessary.

Garbage will be transported out of the lodge every two weeks via snowcat down the to the staging area on private land. The garbage will be stored in a locked garbage bin that will be emptied at the conclusion of each ski season.

### **3.2 License of Occupation - Secondary Intensive Use Sites**

#### *3.2.1 Communication Sites & Emergency Shelters*

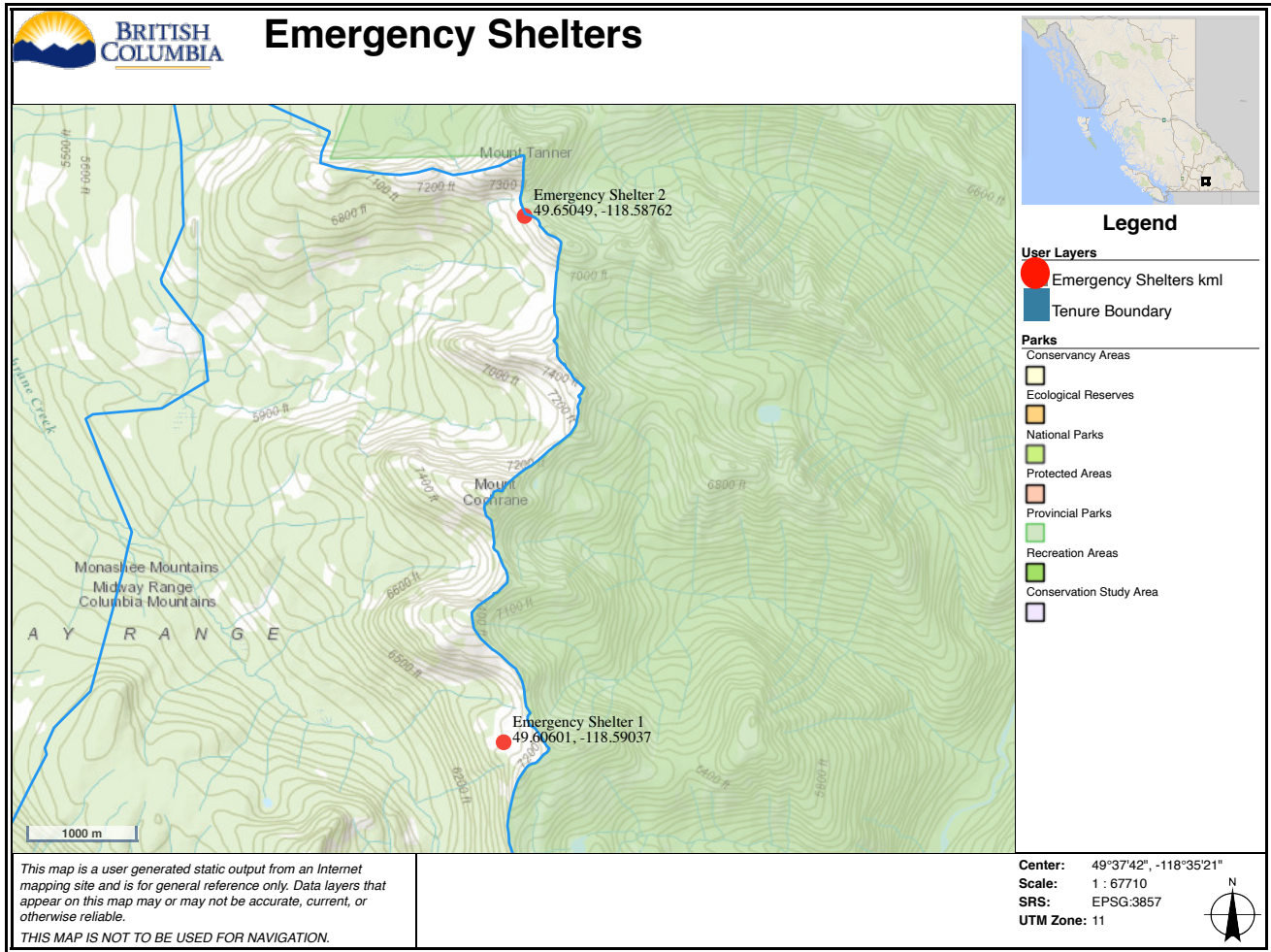
PRL is proposing the installation of a portable VHF radio repeater on the top of Cochrane peak. This repeater should allow the operation to have good radio communications throughout most of the operating area.

The lodge will be equipped with a two-way radio system to enable contact to the guides and snowcat drivers. Each guide will carry a portable two-way radio for contact with the snowcat and lodge. The lodge will keep a regular updated record of the locations of each skiing group. Communication will be made on a regular basis during the day between the cat driver and the base of operations. Failure to report to the lodge within a specified reporting time results in another snowcat dispatched to search the area of the last recorded location and surrounding sub area.

PRL is proposing the construction of two 6m x 6m cabins throughout the proposed tenure boundary to act as safety shelters (See Figure 3-3). They will not require septic systems or running water. These structures will serve as shelter for guests in case of emergency, and will also act as a place where we can take guests for lunch and/or a washroom break. PRL will utilize outhouse style bathrooms for these structures.

Building materials for the cabins will be delivered to the sites via snowcat in the snowbound months, as the existing logging roads do not reach these sites.

Figure 3-3 : Emergency Shelters



### 3.3 Minimal Impact Sites

#### 3.3.1 Construction Cabin & Auxiliary Accommodation

PRL is proposing two Minimal Impact Sites situated within the lease area. These structures will be installed and used before any other construction occurs, and will be used in accordance with the definition of a Minimal Impact Site as outlined in the AT Policy.

One will be a 7.3m x 7.3m A-frame cabin located in close proximity to the main lodge. This cabin will be used by contractors and trades throughout the construction period. During the construction phase PRL will use portable toilets, and once the septic system is installed, this cabin will be connected to the system and this building will serve as additional accommodation for guests and staff when PRL is operating.

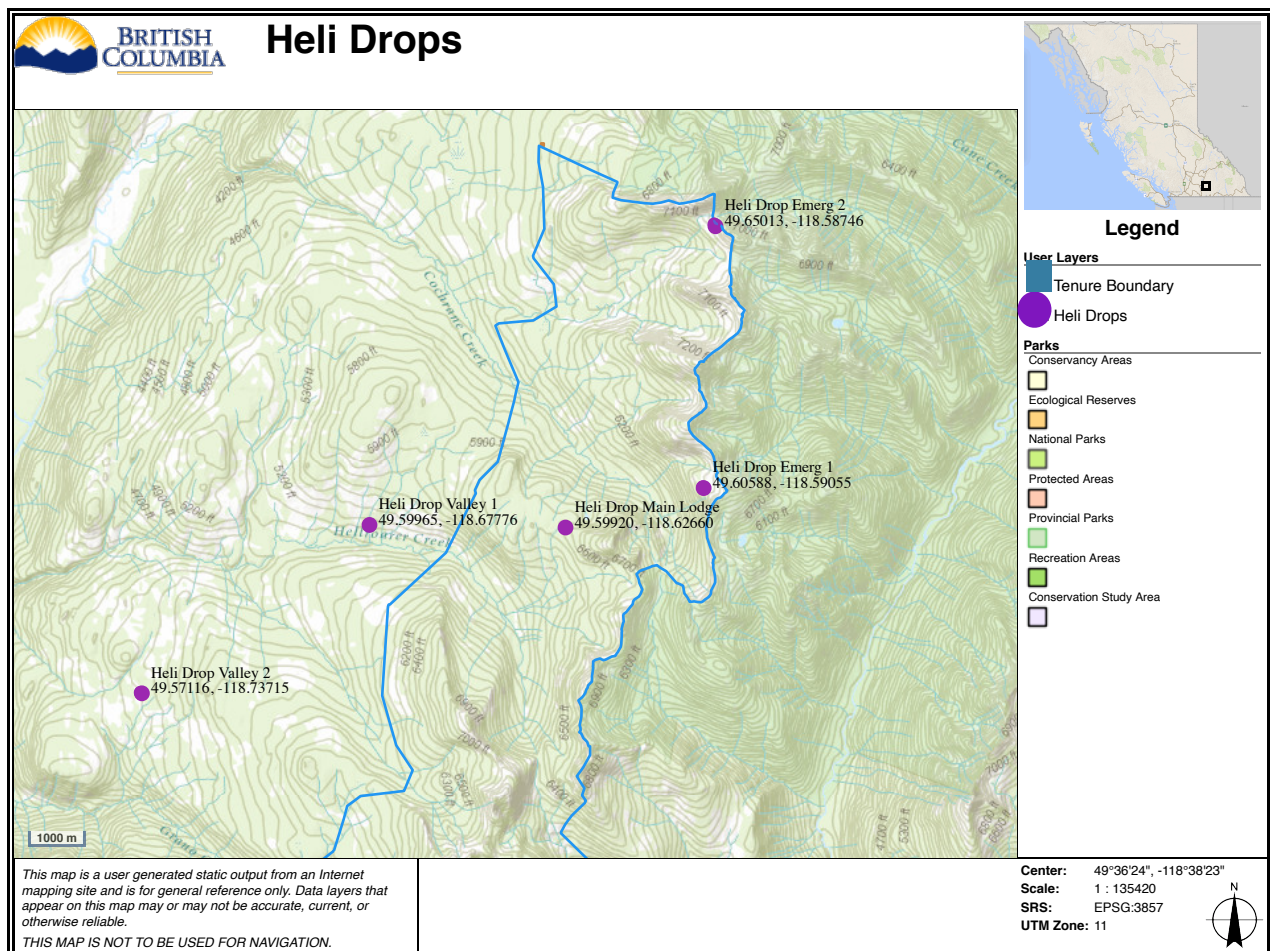
The second structure will be a 4m x 5m A-frame cabin. This will be a back up accommodation for building crews and staff during the construction process. Unlike the other minimal impact

site, this structure will permanently utilize an outhouse and non-permanent facilities. During operation, this cabin will primarily be used as an overflow building if additional people are staying at the tenure (ie, film crews).

### 3.3.2 Helicopter Landing Areas

PRL is proposing 2 helicopter landing areas along the FSR system entering the tenure. The purpose of these landing sites are for days the weather is not clear enough to fly guests directly to the lodge site. The helicopter will be able to drop guests off at these designated sites for our snowcat to pick them up and bring to the lodge. PRL is also proposing a helicopter landing area at the main lodge site, and at each emergency shelter for evacuation if an emergency situation occurs for extra guest safety.

Figure 3-4: Helicopter Landing Sites



### 3.4 Road System

The proposed boundary of PRL encompasses a vast, pre-existing logging road network providing connectivity within the ski terrain. Along with utilizing the existing forestry road network system, PRL is proposing two other types of roads to develop for use in their cat skiing operation, excavated roads and snow trails. PRL has prepared a Roadway License of Occupation management plan that outlines specific details for each proposed road, and forms part of this tenure.

PRL is proposing 95 kms of snow trails, 10.7 kms of excavated roads, and the use of 49 kms of existing FSR, totalling a road network of 154.7kms.

Snow trails are constructed using snow, and do not necessitate the removal or disturbance of soil. The overwhelming majority of access will be done using snow trails. The trails are constructed in locations that use the natural terrain features such as benches and ridges to facilitate easy travel. They will be, for the most part, in exactly the same location each winter.

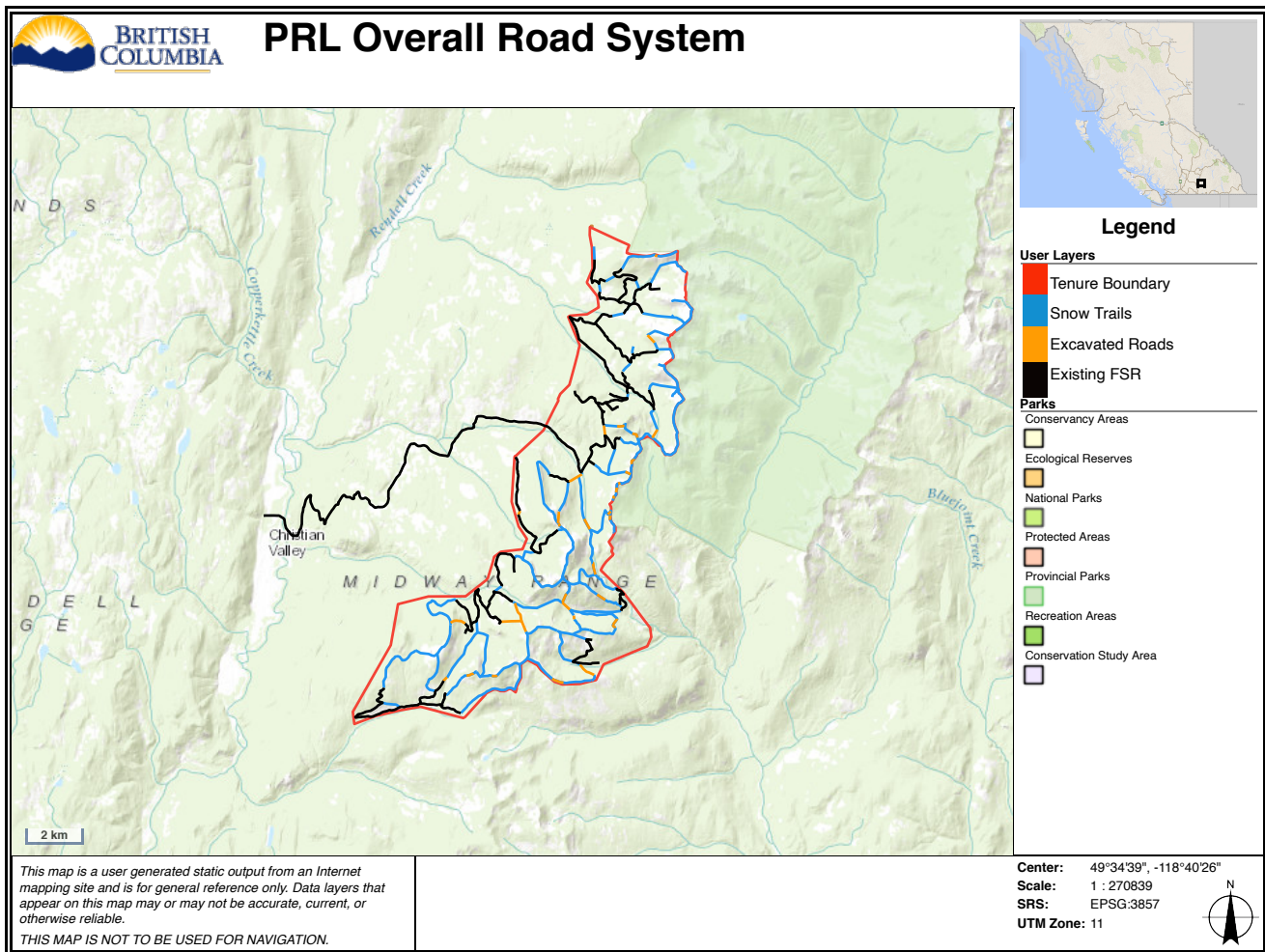
Once there is approximately 1.5 meters of snow settled on the ground, most areas intended for travel are passable simply by driving the snow cat over the snow. Most trails are created between a 12 and 18 degree (21 and 34 percent slope) incline to facilitate efficient upward movement yet not unduly strain the snow cat or cause need for an extensive road opening program. The snow trails completely melt by early summer with no impact to the underlying vegetation.

For use of the FSR's, PRL will apply for a road use permit from license holders and/or the Selkirk Forest District, and establish any necessary maintenance agreements to use these roads.

Please see the Roadway License of Occupation Management Plan for information about the excavated roads.



Figure 3-5: PRL Proposed Road Network



### 3.5 Glading, Spacing, and Trail Right-of-Ways

Glading is defined as removing select, natural timber (from a stand of timber that has not previously been harvested) to improve the spacing between the trees. Spacing is defined as removing (thinning) regeneration trees (previously planted by the forest licensee) in “free to grow” cut blocks. Cutting trees in an established forest in order to open up locations of tight trees greatly improves the quality of the skiing.

PRL will continue to work closely with the forestry licensees to ensure their obligations for certain stand density post-harvest is not being impacted.

In glading areas, PRL will be falling minimal merchantable trees and focusing efforts on removal of smaller, non-merchantable timber, to achieve the optimal spacing between trees for skiing activities. If merchantable timber is cut during the glading program, stumpage will be paid for volume of trees felled.

On the mountains between existing logging roads and the treeless alpine, a right of way approximately 7 meters wide is required in order to allow snow roads/trails to be built each winter. There are sections throughout the proposed tenure where new roads and right of ways are required.

Upon approval of this tenure management plan, PRL will apply for an Occupant License to Cut (OLTC) and develop a five year cutting plan. This application will include a Management Plan and will abide by the Selkirk Guidelines for glading and spacing in the heli and cat skiing industry. The company will follow strict adherence to policies and guidelines pursuant to the plan.

#### **4.0 ENVIRONMENTAL**

PRL acknowledges that ecosystems and wildlife values are within their proposed tenure boundary. In response to these values, PRL has retained a Registered Professional Biologist to conduct an Environmental Impact Assessment which identifies management and mitigation strategies respective of PRL's proposed activities.

Upon the approval of their license of occupation, PRL will become a member of the HeliCat Canada Association, and will be supportive of the associations's best management practices for addressing wildlife disturbance concerns (BCHSSOA 2003). The company understands and will comply with the Wildlife Guidelines for Backcountry Tourism/Commercial Recreation in British Columbia (BCMOE 2006).

PRL will follow government regulations and guidelines with respect to land use providing backcountry adventure tourism/commercial recreation, and will also monitor and avoid disturbing wildlife values and habitat.

Refer to *Appendix 1.0*.

#### **5.0 IMPACTS ON OTHER USERS**

PRL appreciates that a AT license of occupation refers to non-exclusive use of Crown Land for dispersed and non-exclusive guided AT activities. With that being said, PRL is keen and focussed to work with other users of this land to build strong, positive and collaborative relationships that benefit all users collectively.

##### **5.1 Commercial Recreation Use and Access**

###### *5.1.1 Snowmobiling*

In the south east corner of the proposed PRL tenure is a location that has some use by the Boundary Snowmobile Club. They are based out of Grand Forks, BC and have approximately 60 members. Although the club does not have a tenure, PRL has gained support from the club for this cat skiing operation. PRL and Boundary Snowmobile Club flew the tenure together so that they could understand each others interest in the land and terrain. No conflicts were identified that would prevent each user from operating.

Other public recreational snowmobilers local to the Rock Creek, Christian Valley and Grand Forks tend to stay more north and south of PRL's location. There is a very small chance PRL will have encounters with public recreational snowmobilers in the proposed boundary.

#### *5.1.2 Powder Outfitters Commercial Recreation Tenure*

There is an existing commercial recreation tenure overlapping the proposed boundary of Powder Renegade Lodge, called Powder Outfitters (File #3409453). This proponent offered guided heli-skiing, ski touring and snowshoeing for guests with accommodation at the Rendell Creek Ranch, and had occasional use of the Kilback Cabin in Granby Provincial Park.

This tenure has not been actively used for over a decade, and the proponent's company has since become insolvent. This tenure has been suspended, and the license of occupation has been escheated to the government. This tenure is also set to expire in December 2021, so the overlap would not be a concern upon the expiration of this already unused tenure. The Province has provided express written consent for PRL to apply for a commercial recreation tenure overlapping the existing Powder Outfitters tenure (see *Appendix 3.0*).

#### *5.1.3 Public Users*

PRL understands that this area receives a small amount of use in summer months for hiking purposes. In winter months, there may be rare occurrences of public snowmobilers or ski tourers throughout the tenure area, however, this location is quite difficult for access in mid winter with a deep snow pack. PRL does not anticipate any conflict with public users.

### **5.2 Resource and Industrial Users**

#### *5.2.1 Timber Tenures and Forestry Management*

The company's operating area lies within the Selkirk Forestry District, specifically the Boundary Timber Supply Area. There are two active forest companies working within the proposed PRL tenure; BC Timber Sales and Interfor Corporation. PRL has been in communication with both companies to establish status of their logging roads, and to ensure that a cooperative relationship will be executed between the companies so that all parties can achieve their respective activities. These companies have expressed no fundamental opposition with this proposed operation, and have offered support and interest in learning about merchantable timber opportunities and potential for collaboration.

It will be necessary to know and understand their development plans for the future and how they will impact PRL. As well, there may be the requirement for removal or trees in order to develop snow roads or to allow skiers to ski through timber and restocked cut blocks. PRL will be completing a five year cutting plan upon approval and anticipates that this will be a cooperative arrangement with the forestry licensees.

PRL understands the importance of forest rehabilitation in this region and will follow operational best practices when proposing to use an area of reforestation. Immature trees can be skied over once they are sufficiently buried in the snow. When the tips of young trees in

plantations are sliced by ski edges, it can result in the tree being unusable when harvested. PRL pledges to brief their guests to be careful when skiing in planted cut blocks.

Due to physiological growth patterns of different species of trees it is important to be able to depict the species to determine skiing potential and possible mitigation measures. For example, if the tops of young trees are more than one metre below the snow surface it is possible to ski over them. Strategies for skiing each cut block over time will vary as species are planted and trees grow.

PRL will continue to maintain a professional and cooperative relationship with forest licensees, and will work proactively to ensure all companies can achieve their targets.

#### *5.2.2 Mineral and Energy Tenures*

There are no existing mineral or energy tenures within the proposed PRL tenure boundary based on queried searches through FLNRO programs. PRL acknowledges that future mineral tenures may be located in the PRL operating area and will cooperate to coordinate access and activities with tenure holders.

#### *5.2.3 Guide Outfitters and Trappers*

PRL is aware of one guide outfitter and two traplines within their tenure boundary.

Melvin Kilback (Guiding Certificate No 80222) of Kettle River Guides & Outfitters is the guide outfitter. PRL has reached out to the Kilback family discussing their plans for this cat skiing operation. The Kilback's did respond and did not raise any opposition or concern.

The traplines are listed as TR0814T011 and TR0815007. Traplines are located at or near the valley floor so minimal impacts or overlap will occur between the activities.

#### *5.2.4 Recreation Sites and Trails*

There are no existing designated recreation sites or trails within the proposed tenure area.

### **5.3 Local Government & Existing Land Use Plans**

PRL's proposed tenure lies within the Regional District of the Kootenay Boundary. In 1992, the B.C. government directed that a strategic land use plan be prepared to identify a comprehensive and integrated vision for land and resource use in the Kootenay Boundary region. In 1997, The Kootenay-Boundary Land Use Plan Implementation Strategy Plan (KBLUPISP) was completed, and is currently the governing land use plan for the region.

In 2001, the Kootenay Boundary Higher Level Plan Order was established for selected provisions in the strategy reflecting new resource management objectives to reflect the required balance of social, economic and environmental values. The majority of these objectives focus around forestry with respect to scenic areas and visual quality objectives.

Reference to commercial tourism within the KBLUPISP states planning and resource allocation decisions should regard commercial recreation as a valid and appropriate use of Crown land, subject to conformance with legislation and policy. Furthermore, plans should identify areas with substantial potential to support commercial recreation on Crown land.

The KBLUPISP discusses that alpine and sub-alpine areas should be managed to achieve a Recreation Opportunity System (ROS) classification of semi-primitive, non-motorized. However, there is specific reference that in winter months, these areas may be used by snowmobiles and snowcats, subject to lower level strategic planning, local agreements and not in conflict with sensitive wildlife species.

Commercial tourism and outdoor recreation opportunities will benefit from implementation of the Kootenay-Boundary Land Use Plan. An initiative intended to enhance tourism stays and take advantage of new protected areas includes the Commercial Backcountry Recreation (CBR). As part of the Economic Strategy outlined in the 1995 Land Use Plan, accelerating new applications for commercial backcountry recreation development in the Kootenay-Boundary region was given a high priority. Government continues its commitment to this sector's development and recognizes its importance to communities. BC Lands has committed to the CBR process by adding one additional staff to manage the approval process.

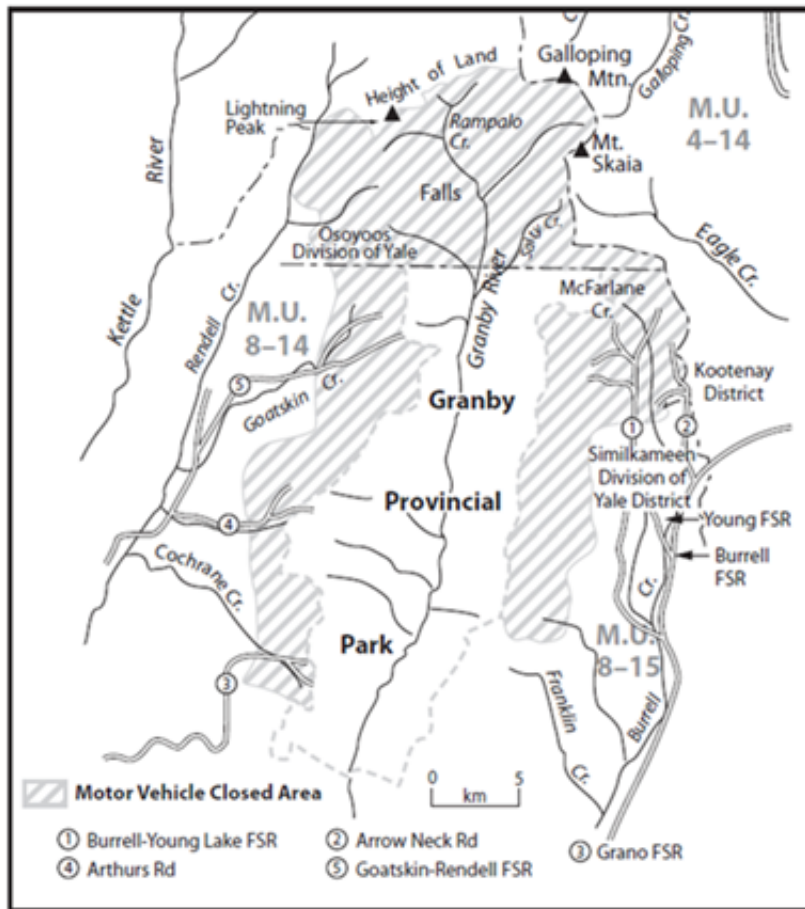
With specific reference to the Kettle-Granby area, the KBLUPISP references implementing a program of road and trail deactivation and rehabilitation, along with applying connectivity corridors for habitat linkage for Grizzly bears and the seasonal migration of ungulates. For the majority of use, road deactivation is not a concern as the company will be using this road network in the winter months and can fill water bars and culverts with snow to access terrain. PRL will conduct business in a manner that is complementary to these strategies, and where necessary will consult with the Selkirk Forest District.

In summary, PRL's activities are consistent with the overall intent and specific land use designations set out in the plan. PRL will operate in a manner that satisfies the overall objectives and strategies outlined in this land use plan.

### *5.3.1 Motor Vehicle Closed Area*

There is a Motor Vehicle Closure Act in place overlapping the northern portion of the proposed tenure. The Act defines in *Section 2, Motor Vehicle Closed Areas* - a person commits an offence if he or she uses or operates a motor vehicle in an area as described in Schedule 1 during the period specified in that schedule for each use.

Section 43 of this act is named "Granby", and references the PRL area of interest. *Closure is effective year round, in that portion of M.U.s 8-14 and 8-15 shown on the attached Map No. 1-43/05:*



Section 8 of this Act describes exemptions. The following exemptions apply to the proposed PRL tenure;

*8 (5) Section 2 does not apply to a person who uses or operates a snowmobile (a) in an area described in section 43 of Schedule 1 during the period November 1 to May 31 inclusive.*

PRL understands that because they are applying for seasonal use in this closure area during the period of November 1 - May 31, where *snowmobile* use is permitted during this time frame, that this application is in alignment with the principle of the closure.

A snowmobile is defined under the MVCA as “a vehicle designed primarily for travel on snow or ice, having one or more steering skis, self propelled and using one or more endless belts or tracks driven in contact with the ground.” A snowcat is designed primarily for travel on snow or ice, is self propelled using one or more endless steering belts (vs skis) and driven in contact with the ground. PRL’s operating season falls within the existing exemption period for the MVCA, and will operate a vehicle meeting the criteria for this exemption.

PRL also understands that this Motor Vehicle Closed Area was established to limit disturbance to Grizzly Bears in the GBPU (which is considered threatened). The closure has an ancillary

benefit of limiting disturbance for other ungulates and furbearers as well. As the closure is for grizzly bears, winter is less of a concern, and mitigations are in scope.

PRL has cross referenced the lodge location with other maps displaying the MVCA, and have concluded that the lodge site is outside of the MVCA.

### *5.3.2 Granby Provincial Park*

The proposed PRL tenure is adjacent to the southwest corner of Granby Provincial Park (GPP). PRL has reviewed the mandates set out in the Granby Provincial Park Management Plan. PRL will ensure business is conducted in a manner that upholds the integrity and of park values of conservation.

PRL acknowledges that their proposed tenure boundary is in close proximity to the border of GPP, and will not cross the park boundary via mechanized use. PRL understands that a separate park permit is required for park use and is not applying for any park use at this time. Furthermore, the views and vistas of GPP are visible from the proposed PRL tenure and increase the beauty of the surroundings.

## **6.0 RISK MANAGEMENT AND SAFETY**

The Heli and Cat industry has developed a set of Operational Safety Standards that are used by virtually all of the existing operators. Upon approval PRL of this application, PRL will retain a professional ski guide to create a Risk Management Plan that is comprehensive and addresses all known hazards of a remote lodge cat skiing company.

PRL will operate in a manner that is in accordance with its operating guidelines, as set out by the HeliCat Canada Association. PRL will adopt waivers, safety and rescue plans. These will be available upon request as well as the HeliCat Canada Operations Guidelines.

### **6.1 Insurance**

PRL understands that a Tenure holder is required to purchase, and is responsible for maintaining during the term of the Tenure, a minimum level of public liability insurance specified in the Tenure document. PRL recognizes that the Authorizing Agency may make changes to the insurance requirements and request copies of insurance policies at any time during the term of the Tenure (EG - proof of insurance attached to the Annual Diligent Use Report or Statutory Declaration for Rent).

PRL will purchase a minimum of \$2 million third part liability insurance policy upon approval of this application, as this minimum is required for most AT Tenures. PRL further understands that Tenure holders may also require other types of insurance depending on the nature and scope of their operation. PRL also understands that waivers will not be accepted by the Authorizing Agency in place of the above minimum insurance requirement.

## **6.2 Security of Performance Guarantee**

PRL understands that a security deposit or bond may be required to be posted by the Tenure holder where any Improvements on, or changes to the land are proposed. The security deposit is collected to ensure compliance and completion by the Tenure holder of all the obligations and requirements specified in the Tenure.

PRL will pay the amount requested by the Designated Decision Maker as per the Tenure Administration Procedure upon approval of this application.

## **6.3 Guides and Snow Science**

Professional guides hired by PRL will be fully certified and will operate by the well-established standards used in the heli and cat skiing industry in Canada. Each ski day will begin with a guide meeting. A snow technician will prepare for the guide's meeting by recording local weather and snow pack observations at the lodge study plot. They will also download, review and record the CAA Info-ex and Weather Forecast. Utilizing these information sources, the snow science technicians (ski guides) will prepare a preliminary hazard evaluation report to be discussed at the guides meeting.

The lead guide will facilitate and oversee the meeting. There will be a review of the previous day's observations along with current and forecasted weather and info-ex information to determine a hazard evaluation. Based on this information, group dynamics, logistical and operational parameters, guides will discuss possible runs to be skied during the day, based on a colour coded hazard rating.

Guides will meet again at the end of the day to discuss and analyze the day's events. They will then formulate a report to be submitted to the CAA – Infoex and PRL's avalanche forecasting system based on the current day's observations. A potential plan for the following day is also discussed.

## **6.4 Covid-19**

In light of the recent Covid-19 pandemic, PRL understands the need for new measures and protocols to be implemented to ensure guest safety. Clients can be of a global nature and typically have to travel through airports or cross borders. PRL will adopt safety measures and protocols as they are established throughout the industry, and will ensure strict adherence to these policies.

PRL is also preparing for an opening season of December 2022, which by then there should be a vaccine, and the tight restrictions for international travel should be lifted or lightened.

## **7.0 BUSINESS OVERVIEW**

### **7.1 Description of Operation**

Upon arrival at Powder Renegade Lodge, the ski holiday will begin with guests being welcomed into our lodge. PRL will review their safety program with guests in an easy to understand, detailed manner. The safety program outlines avalanche hazards, skiing safety,



environmental safety and snowcat safety. The first morning includes a hands-on lesson on the use of avalanche safety gear that all skiers must carry while skiing. Guests will commence each day with breakfast in the lodge. There will also be a variety of lunch items for guests to pack and bring with them as lunch will be eaten between runs.

The daily routine will start with a full breakfast between 7-7:45am. Between 8 and 9am, depending on time of year, skiers leave for skiing. Depending on weather, guest energy levels, ski conditions and time of year, return from skiing between 3:00 and 5:00 pm.

Après will be served in the lodge for approximately an hour while guests will have an opportunity to change and showered. Massages will also be offered throughout the evening. Dinner will be a four course gourmet meal. After dinner guests will be welcomed to relax in the lodge.

On the morning of the final ski day, guests will be asked to have their belongings packed so that when they return from skiing, they are ready to be taken to the designated staging area where they depart and the next group is received, repeating the cycle.

### *7.1.1 Staff*

Initially for the one snowcat start up business model, PRL would require two lead guides (one guiding guests and one doing snow science), one tail guide, one snowcat driver, one cook, one baker/breakfast cook, one dishwasher/kitchen helper, one housekeeper, one administrator, one bartender, one mechanic/handyman and one practicum student, which totals 12 seasonal staff members. As the business expands to the 2 snowcat model, one more lead and tail guide would be required, another snowcat driver, along with an extra cook helper and housekeeper which would bring the staff total to 17.

The lodge will also have a full time, year round caretaker. This staff member would oversee the general maintenance and repair any issues for the lodges. They would be a lead or communication liaison for any other backcountry users, or independent contractors/personnel coming to or from the tenure area.

## **7.2 Business Plan & Marketing Strategy**

PRL has conducted market research and analysis, along with construction parameters and projected cash flow to produce detailed financial and business projections. These documents are available upon request as supportive documentation respective to this business demonstrating long term sustainability.

PRL's marketing plan will primarily utilize digital and social media, primarily a facebook business page, instagram page and website. These outlets will assist in the acceleration of global knowledge of Powder Renegade Lodge.

The PRL website will have a link to request a booking, and if their desired dates are available they can proceed to booking at which time we will request a non-refundable deposit to secure their spot, and the balance will be paid in full before their ski holiday. Guests will also have the option to book a spot for the following year while they are staying at PRL, this will encourage pre-bookings and a repeat client basis, which is a strong concept utilized by this industry.

Other advertising would include ski magazines (digital and paper), including PRL in local directories and private advertising that is relevant. Our goal with potential clients is to leave them feeling that they have just found the newest, best secret in the ski industry. The cat and heli ski community is relatively small and close knit between operators, ski guides and long term guests, so word of mouth is another highly effective way to promote PRL.

PRL is projecting that the majority of client acquisition would come from guests who are currently on waiting lists with other on tenure operators, and clients that are currently skiing operations that have a commute to lodging or a valley bottom lodge. Our price will be competitive and inline with the existing model.

### **7.3 Economic Benefits**

The overall provincial economic benefits provided by Powder Renegade Lodge include stimulating the sectors of tourism, employment and construction. These sectors will experience stimulation during the build and operation of the company, creating perpetual continuity for the need of these services at a different threshold throughout the duration of the active business term. The local economies with respect to PRL is considered to be Grand Forks and Kelowna.

PRL is a part of the growing backcountry recreation industry that has the potential to bring global tourism to the province. Ski touring is experiencing a growth in demand for this activity, along with backcountry lodges. Clients will often fly into the Kelowna International Airport and find transportation to the staging area, so some clients may stay and sight see, ski at local hills prior to coming to our operation and utilize hotels and restaurants.

When PRL is operating they will employ between 10-15 full time positions, with one position as a caretaker on the off season that is year round. Whenever possible, PRL will hire from the local communities for these positions. The employment income paid out to these individuals would exceed \$350,000 annually.

During the construction of PRL construction materials, trades, crews and services will be sourced out as necessary to aid in the construction of the lodges. PRL will utilize local community sources whenever possible and practical for the business model. The need for maintenance and repairs on these developments, along with potential expansions of the structures will be a continual need of the business as well.

## APPENDIX 1.0 - ENVIRONMENTAL IMPACT ASSESSMENT

This Environmental Impact Assessment has been prepared by Karen Grainger, RPBio in support of the Powder Renegade Lodge application for a Commercial Recreation Adventure Tourism Tenure. The Wildlife Guidelines for Backcountry Tourism/Commercial Recreation in British Columbia (2006) require that wildlife and environmental values must be addressed in management plans that form part of the commercial recreation tenure document.

Lists of provincially red and blue listed, federally threatened and endangered vertebrates, invertebrates, plants and plan communities that have potential to occur within the proposed tenure boundary were generated from queries of BC Conservation Data Centre (CDC), BC Ecosystem Explorer, Wildlife Species Inventory (SPI Data System) and Sensitive Ecosystem Inventory (SEI) databases. Fish information was derived from Fish Information Summary System (FISS).



The following report has been prepared with intent to form part of the PRL Tenure Management Plan.

### 1.0 PROJECT OVERVIEW

This report is the final of several versions of this environmental assessment against the proposed PRL guided cat skiing and remote lodge operations. Locations of infrastructure have been moved or deleted based on environmental values resulting in this final version with least potential impact. This has been a desktop analysis only; the proposed land lease for the lodge site and the ski hut site will be followed-up with detailed field assessments to identify specific values for avoidance or mitigation.

Resultant environmental values that require avoidance or mitigation are:

1. Grizzly Bear occurrences and habitat
2. Migratory birds nesting activity and habitat
3. Riparian (no fish) ecosystems and habitat for several species
4. Mule Deer winter range (entrance of Grano Creek FSR)
5. Raptor and owl nesting potential
6. Whitebark Pine Federally-designated critical habitat (includes occurrences and regeneration/recovery zones)
7. Wolverine occurrences and habitat
8. Non-legal Old Growth Management Areas
9. Red- and blue-listed ecosystems

## 2.0 DESCRIPTION OF VALUES

Values to be assessed against are ecosystems, Whitebark pine, aquatic, ungulate winter range and rare/endangered wildlife. There are no red- or blue-listed ecosystems in the ESSFdc variants, but some site series have been identified as critical Grizzly Bear habitat (not to be confused with Federally-designated critical habitat which for this Project Area only exists for Whitebark Pine). The rare/endangered wildlife species that occur in the ESSF x the Arrow-Boundary Forest District in habitats and elevations of the Project Area are:

Scientific Name	English Name	COSEWIC	BC List	FRPA	MBCA	SARA
<i>Accipiter gentilis atricapillus</i>	Northern Goshawk, <i>atricapillus</i> ssp	NAR (May 1995)	Blue			
<i>Anaxyrus boreas (Bufo boreas)</i>	Western Toad (calling and non-calling)	SC (Nov 2012)	Yellow			1-SC (Jun 2018)
<i>Contopus cooperi</i>	Olive-sided Flycatcher	SC (May 2018)	Blue		Y	1-T (Feb 2010)
<i>Gulo gulo luscus</i>	Wolverine, <i>luscus</i> subspecies	SC (May 2014)	Blue	Y (May 2004)		1-SC (Jun 2018)
<i>Myotis lucifugus</i>	Little Brown Myotis	E (Nov 2013)	Yellow			1-E (Dec 2014)
<i>Oreamnos americanus</i>	Mountain Goat		Blue			
<i>Oreohelix subrudis</i>	Subalpine Mountainsnail		Blue			
<i>Taxidea taxus jeffersonii</i>	American Badger	E (Nov 2012)	Red	Y (May 2004)		1-E (Jun 2018)
<i>Ursus arctos</i>	Grizzly Bear	SC (May 2012)	Blue	Y (May 2004)		1-SC (Jun 2018)

## 2.1 Ecosystems

The Project Area is entirely within the ESSF (Englemann Spruce – Subalpine Fir) biogeoclimatic zone. The variants are ESSFmh (moist hot) at the lower elevations, ESSFdc1 (Okanagan dry cold) at mid-elevations and ESSFdcw/dcp (dry cold woodland/dry cold parkland) at the highest elevations. Red- (endangered, rare, threatened) and blue-listed (special concern) ecosystems within these variants are:

1. ESSFdc1/04 – Blue-listed – subalpine fir/white-flowered rhododendron/sitka valerian
2. ESSFdc1/Wf02 – Blue-listed – scrub birch / water sedge
3. ESSFdc1/Wf13 – Blue-listed – narrow-leaved cotton-grass – shore sedge
4. ESSFdc1/Wf11 – Blue-listed – tufted clubrush / golden-star moss
5. ESSFmh/Gg11 – Red-listed – Idaho fescue – bluebunch wheatgrass – silky lupine – junegrass

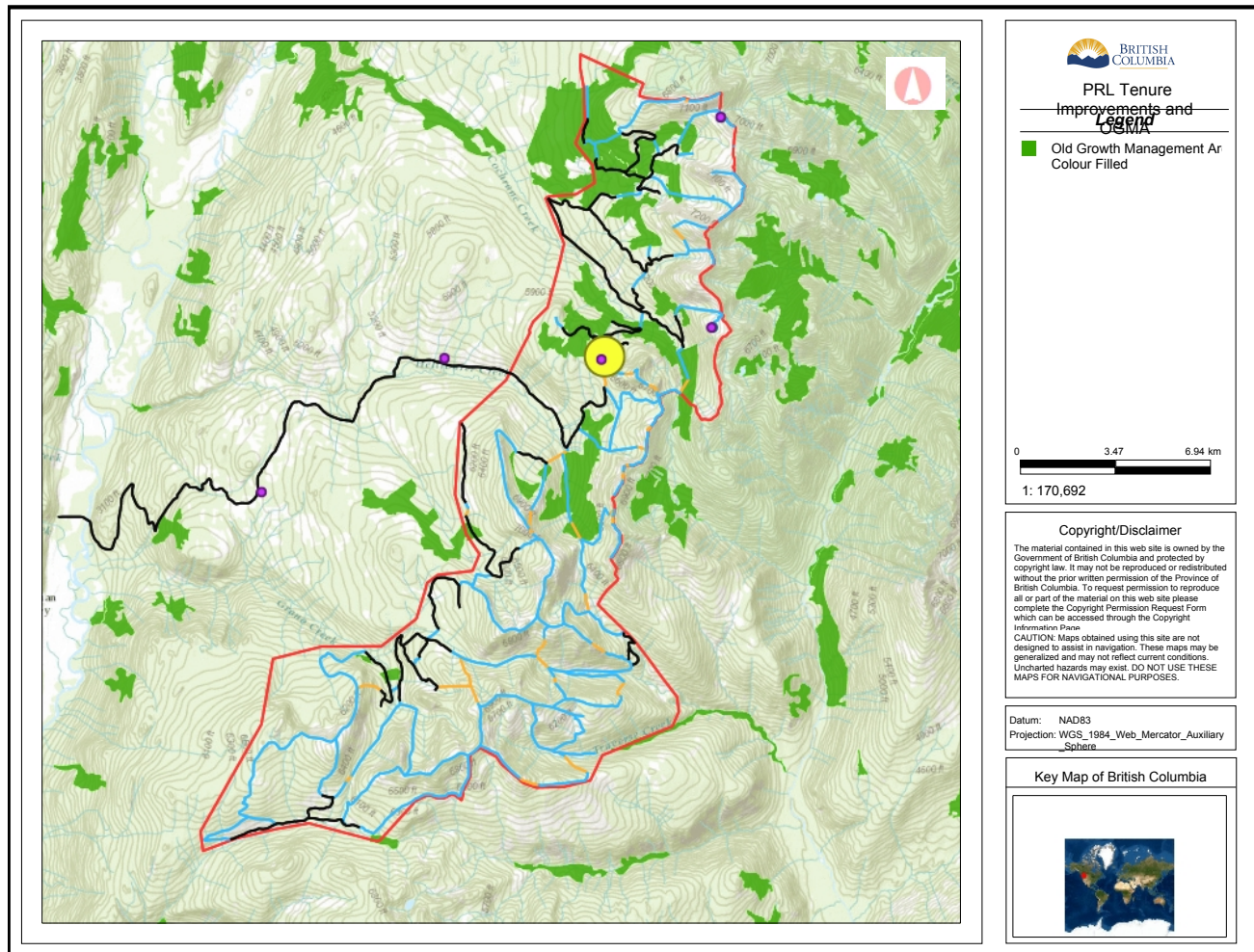
Descriptions of ESSF site series are available in the 2016 Temporary Supplement to Land Management Handbook 70. The Wf ecosystems are small patch wetlands with descriptions available in *Wetlands of BC: A Guide to Identification* (2004, Land Management Handbook No. 52). Additionally, ESSFdc1 site series 06 (subalpine fir/horsetails/leafy mosses) and 07 (water sedge/peat mosses) are identified in the Grizzly Bear Order 8-383 as requiring buffers and avoidance (see section 2.4 - Grizzly Bear).

Terrestrial Ecosystem Mapping (1:50,000 undated Kettle-Granby) is available on IMapBC for planning to avoid siting lodges/trails/cabins/roads within the site series of concern.

### 2.1.1 Old Growth Management Areas

There are non-legal Old Growth Management Areas designated in the Project Area. These areas have been designated during Landscape Unit planning to meet biodiversity objectives but in theory could be amended if tree removal was required. Where tree removal is proposed, PRL will seek approval from the Forest District (if required).

Figure 2-1: Non-legal OGMAs vs PRL Improvements



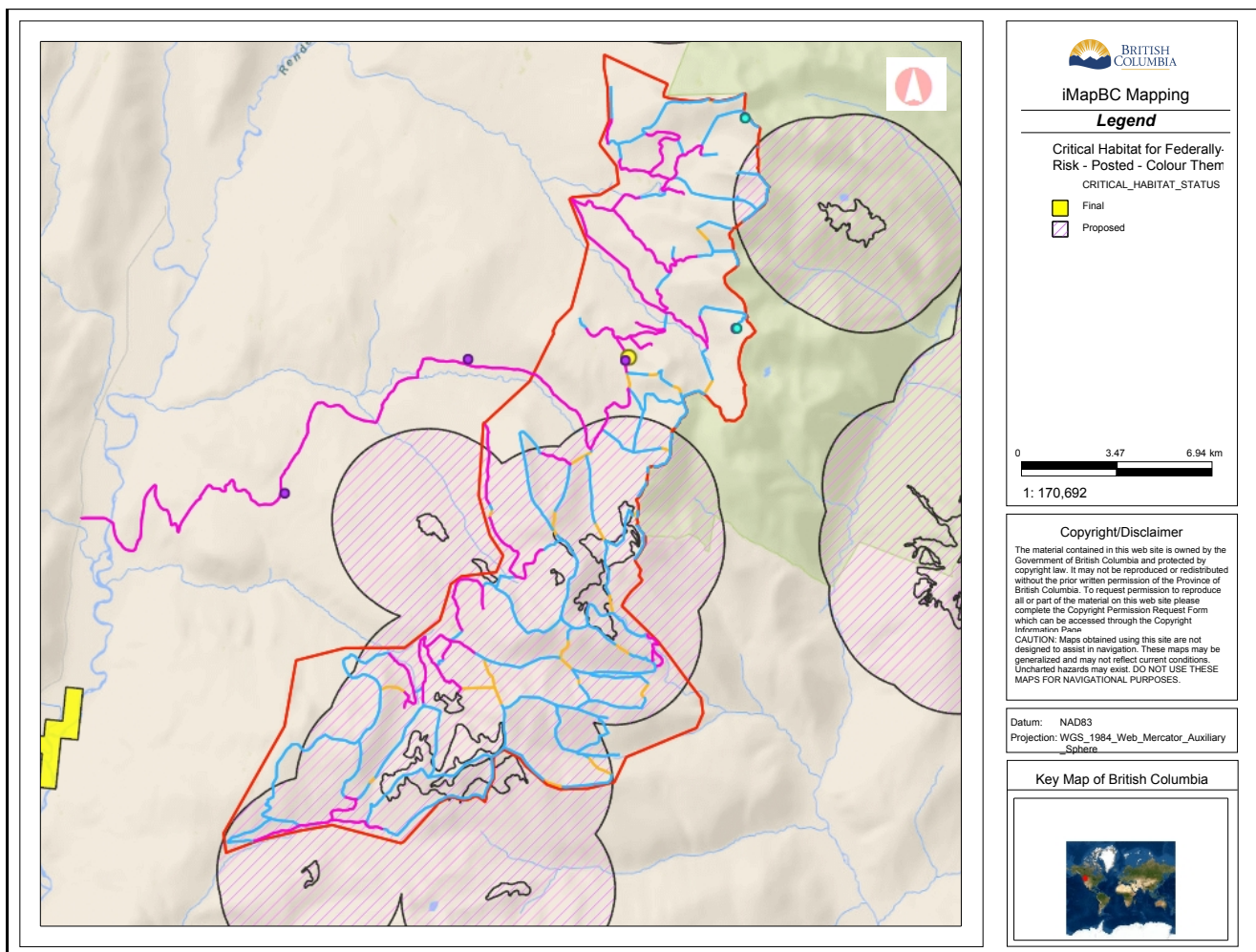
## 2.2 Whitebark Pine

The Whitebark Pine (*Pinus albicaulis*) is Provincially blue-listed, listed as Endangered by COSEWIC (2010) and a SARA Schedule 1 Endangered species (2012). The 2017 Recovery Strategy describes it as a high-elevation five-needled pine naturally limited by its reliance on the Clark’s Nutcracker for seed dispersal to reproduce. It has egg-shaped purple closed cones that generally remain on the tree unless removed by animals. It produces cones at irregular intervals of 3-5 years so some years have little or no cone production.

The Recovery Strategy for this species lists the white pine blister rust as the primary threat while rating cat-ski operations and recreational activities as having a negligible impact. Critical habitat is defined as high density occurrences and also a 2km regeneration and recovery zone (the median dispersal distance of Clark’s Nutcracker).

Within the Project Area, there is no proposed infrastructure within the high density occurrence areas (small black polygons), and any clearing for roads/trails in the 2km regeneration and recovery zones will be surveyed and any Whitebark Pine will be reserved.

Figure 2-2: Whitebark Pine Critical Habitat and 2km Recovery/Regeneration Zones (hatched)



## 2.3 Aquatic Values

The proposed area is entirely within the Kettle River watershed. There is existing information for all of the streams with confirmed no-fish presence in all of the area.

The streams that run through the proposed area to the west are tributaries to Rendell Creek (WSC 320-72800). These streams (from north to south) are:

1. **Cochrane Creek** (WSC 320-72800-14800): There is no known fish presence above the falls near the confluence with Rendell Creek at 11U 357305 5502968.
2. **Hellroarer Creek** (WSC 320-717900): No known fish presence above confluence with Rendell Creek where RB are known.
3. **Grano Creek** (WSC 320-698300): No fish presence based on 1998 inventory by Dwight Shanner for Pope and Talbot.

The proposed area also includes the upper reaches of Traverse Creek (WSC 320-235400-57200) which flows east into the Granby River. Existing information (Masse Environmental Consultants 2014) confirms a 20m high waterfall at 11U 385845 5486776 with no fish above (therefore no fish in the proposed area).

Aquatic areas provide habitat for the following target species:

1. Western Toad: Spring breeding in a variety of temporary and permanent ponds and shallow littoral zones of lakes (and ditches) with some fidelity to breeding sites. Approximate 2 week egg-laying period in late April/May with tadpoles remaining in water until emergence in late summer when mass movement of toadlets from waterbodies to terrestrial foraging areas. Hibernates in terrestrial habitats.
2. Dusky Fossaria and Golden Fossaria: freshwater pond snails
3. Sinuous Snaketail: dragonfly with active occurrences in BC from May to August.
4. Eared Grebe: lakes and large ponds only
5. Herrington and Striated Fingernail Clams
6. Widelip Pondsnaill

## 2.4 Grizzly Bear

The Grizzly Bear is a habitat generally occurring from sea level to high-elevation alpine environments. Grizzly Bears den in winter and enter hibernation for up to 7 months and an average of 2.3 cubs are born in the den in January or February and stay with the mother typically for 2 years. Granby grizzly bear prey is expected to include elk, mule deer, hoary marmots, mountain goats, black bear and grizzly bears. Habitat associations are strongly seasonal and typically reflect regional plant phenology, timing of spring ungulate calving and runs of migratory fish (where available).

The Project Area is entirely covered by Order #8-373 (Grizzly Bear Arrow-Boundary Forest District). The Order focuses on protection of spring habitat and protection from disturbance. Some of the General Wildlife Measures included in the order apply to this development (access trails, lodge sites, construction) and are directly copied into the Mitigation Section.

The Kettle Granby Grizzly Bear Population Unit Preliminary Habitat Analyses 2006 (Gyug and Hamilton) provides habitat capability mapping that can be used in conjunction with Terrestrial



Ecosystem Mapping (TEM) to determine lodge and cabin specific locations with the least impact (habitat-wise as well as least chances of encounters). The lodge site is not within high or moderate spring habitat (the time of most chance of overlap of operations).

### **2.5 Olive-sided Flycatcher**

The Olive-sided Flycatcher is a medium-sized forest songbird with a wide distribution (including all of BC as breeding range) but populations have declined by 80% from 1973-2009.

The 2016 Recovery Strategy described Olive-sided Flycatcher habitat as:

- Primarily montane and northern coniferous or mixed wood forest (Altman and Sallabanks 2012).
- Open to semi-open areas within forested regions, mostly in early seral (Altman and Sallabanks 2012) (including clearcuts) or mature to late-seral forest.
- Presence of tall snags and/or residual live trees for nests, singing, and foraging perches (Wright 1997, Altman and Sallabanks 2012).
- Near water or wetlands supporting a high abundance of aerial insects (Altman and Sallabanks 2012).
- Areas where fire, especially intense burns, has created clearings (Robertson and Hutto 2007).

Nests are generally placed toward the tip of coniferous branches (although other tree types have been used), are constructed of twigs, rootlets, and arboreal lichens, and may be lined with grasses and pine needles (Altman and Sallabanks 2012). After fledging, young often remain close to the nest (and each other) for several days and may remain as a family unit until fall migration (Altman and Sallabanks 2012). Olive-sided Flycatcher most often feed on Hymenoptera (bees, wasps, flying ants, etc.), but also prey on a variety of other insects including flies (Diptera), moths (Lepidoptera), grasshoppers (Orthoptera), beetles and dragonflies.

Olive-sided Flycatcher is a migratory species, expected in the Project Area from April through September.

### **2.6 Wolverine**

Wolverine use a variety of alpine and forested habitat that provide a year-round supply of food (rodents, snowshoe hare, ungulates). Females den under snow-covered rocks, logs or within snow tunnels where snow cover persists at least until April. Avalanche tracks and avalanche debris are important features. Disturbance of maternal den sites may lead to den relocation or litter abandonment. There is no wolverine trapping allowed in Region 8.

Potential denning sites are the only small-scale habitat attribute that can be identified. Ravines or avalanche tracks with downed trees or talus that can provide snow tunnels through late spring are preferred and would also be avoided by catskiing operations.

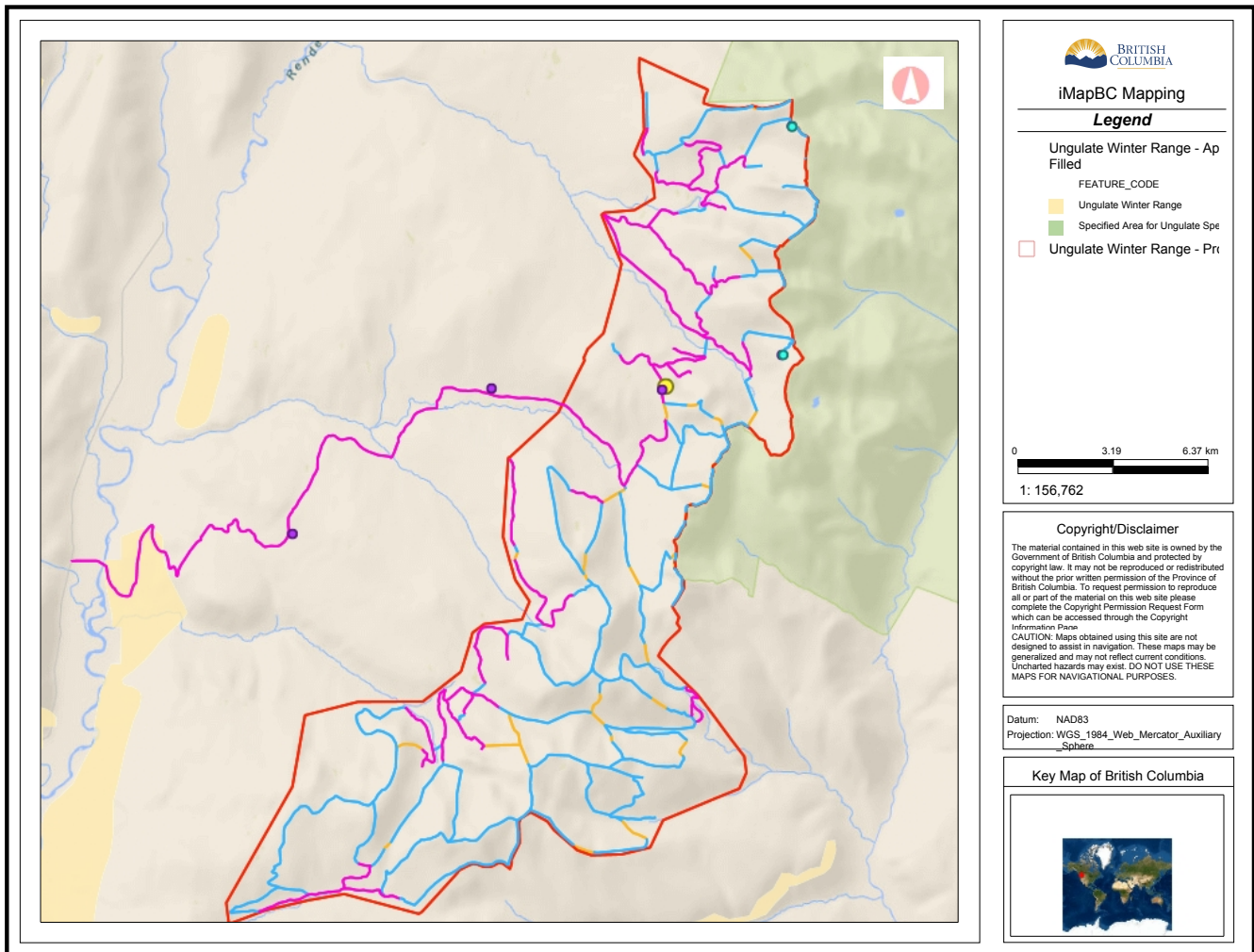
### **2.7 Mountain Goat**

Mountain Goats are a Provincially blue-listed species. There is no Mountain Goat hunting allowed in Region 8 (Okanagan). Polygons of Approved Ungulate Winter Range for Mountain Goat (U-8-009) are south of the proposed Project Area and along the east boundary of Granby Park (both well outside of the proposed area). Ungulate winter range; the polygons to the east

of Granby Park and southeast of the proposed area are Mountain Goat winter range. The BC Management Plan for the Mountain Goat (2010) describes critical habitat features:

1. Mountain Goats require escape terrain for predator avoidanc; generally steep rocky cliffs.
2. Foraging is within 500m of escape terrain.
3. Interior mountain goat wintering strategies are either on higher-elevation windswept slopes, or inhabiting rocky bluffs at and below treeline in areas of heavier snowfall.
4. Mineral licks are critical features and goats may have to travel to low elevation sites or areas distant from their usual home ranges to access them.

Figure 2-3: Approved Ungulate Winter Range



## 2.8 Northern Goshawk

Goshawks are interior forest raptors that build several stick nests within a nest area that covers approximately 40ha. They avoid edges and nests are generally >100m into contiguous forest cover. While nests are known within the ESSF, there are no known nests within the ESSFdc

variants but the Project Area is at least expected to overlap with Post-Fledgling Areas (PFA). Nesting activity can begin in February. There is some potential to encounter Northern Goshawks in the Project Area and best management practices are readily available (disturbance buffers and timing restrictions).

## **2.9 Western Toad**

Western Toads breed in a variety of temporary and permanent ponds, lakeshores and ditches, with some fidelity to breeding sites. Egg-laying occurs when daily temperatures reach 0°C daily average minimums and 10°C daily average maximums. Metamorphosed juveniles emerge to terrestrial habitats approximately 3 months later. Hibernation sites are terrestrial and usually communal, below the frost line in burrows, squirrel middens, cavities or pre-existing crevices. There is also potential for Columbia Spotted Frog, Pacific Chorus (Tree) Frog and Long-toed Salamander.

## **2.10 Badger**

Badger habitat requirements are dig-able soils and prey (preferred prey are ground-dwelling rodents but they are very opportunistic). Badgers do not hibernate but will have periods of reduced activity in winter. Burrows are dug for resting and for maternal denning. Most burrows are used only once by badgers (82% of burrows used one according to Weir, Davis and Hoodicoff, 2003), but can be used by other species as well (including snakes, mid-sized mammals). The biggest threat to badgers in BC is being killed on roads; they are unfortunately attracted to road fills that often have prey colonies and dig-gable soils.

Badgers also inhabit forested areas, but in association with roads and openings (including grasslands, cut blocks, wetlands) that support prey populations. Badgers are known in the access area to the west of the Project Area; there is potential for badger foraging into the subalpine areas during summer, but not during winter or spring.

## **2.11 Little Brown Myotis**

The Little Brown Myotis is the most widespread bat in Canada and can live up to 30 years. However, populations have declined and a further dramatic decline is expected due to white-nose syndrome, an often-fatal fungal infection and therefore the previously un-listed species had an emergency endangered listing and Recovery Strategy developed by the Federal government (2018). Habitat requirements of the Little Brown Myotis are:

1. Overwintering habitat: Hibernacula are subterranean features such as caves, abandoned mines, hand-dug wells, cellars, tunnels, rock crevices or tree root hollows where light and noise levels are low. Hibernacula typically contain sections that have relatively stable temperatures (2-10°C) and stable, high humidity levels (>80%).
2. Summer habitat that includes roosting habitat (for maternity roosts and males) and foraging habitat within commuting range of the roosts. Roosting habitat can include rock crevices, raised bark, foliage and tree cavities. Large dead trees near openings are particularly important. These features will be considered at lodge/cabin/new road sites.
3. Swarming habitat is used in the late summer and early fall for mating and socializing and is typically associated with hibernacula.

## 2.12 Subalpine Mountainsnail

This blue-listed land snail only has recorded occurrences in the Fernie/Cranbrook area but the BC Conservation Data Centre shows a 'confident or certain' rating for occurrence in the Arrow-Boundary Forest District. Habitat is described as 'under logs, rocks and vegetation in forests and subalpine meadows'. There is little information available but consideration of this gastropod will overlap habitat requirements for other non-listed snails and slugs.

## 2.13 Mule Deer Winter Range

The main access to the proposed area goes through Mule Deer winter range u-8-008. Objectives of this winter range is to maintain snow interception cover and minimize road building and use. The access road to the proposed area crosses mule deer winter range east of the Kettle River. This location is also encumbered by majority of private land and on an existing FSR.

## 3.0 LODGE SITE

Powder Renegade Lodge:

1. a 15-acre lease is proposed at 11U 382544 5495482 at 1940m asl that will include the lodge site.
2. The lease is within a 24.6ha cutblock logged in 2004.
3. TEM mapping shows this location within a polygon labeled ESSFdc1 80% site series 03 and 20% talus.
4. Site series 03 is a yellow-listed ecosystem (Subalpine fir / grouseberry / clad lichens) which is equivalent to the 2016 LMH supplement site series 104 (subalpine fir / rhododendron / grouseberry).
5. The lodge site and waterline location are not within an OGMA or within whitebark pine critical habitat.
6. A water line will be constructed from the pond approximately 200m away. The pond is on an unnamed tributary to Cochrane Creek (WSC 320-728000-14800-82000). Cochrane Creek is not fish-bearing due to falls just upstream of the confluence with the Kettle River.
7. The site does not overlap with Grizzly Bear important ecosystems.
8. The site is accessed by the Grano road system which has a motor vehicle closure in place at 22km.
9. The talus near the pond is expected to contain small mammal prey for wolverine and grizzly bear.
10. The strip of mature timber between the cutblock and the pond (with a cutblock on the other side of the pond is approximately 200m wide on average. This is considered too narrow to be part of a Northern Goshawk nest area.
11. Potential impacts of the lodge site on environmental values include:
  - a. construction during breeding bird nesting could result in disturbance or destruction of nests including Olive-sided Flycatcher,
  - b. construction of the water line will require tree removal and ground disturbance,
  - c. grizzly bear encounters/disturbance during construction, and
  - d. disturbance/destruction of aquatic habitat at the pond during water infrastructure activities (amphibians, invertebrates, water quality).

Figure 3-1: PRL Lease Area Site Plan

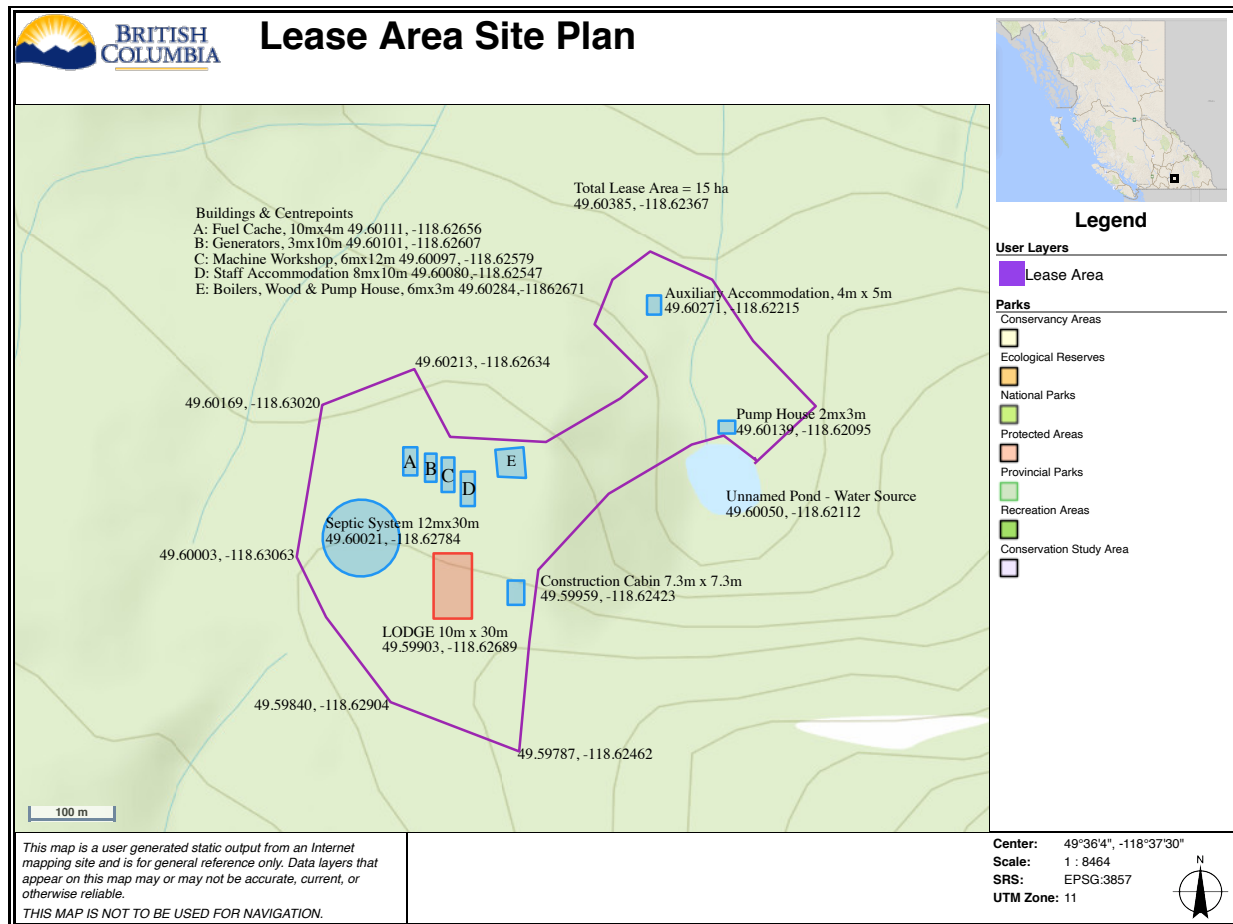


Figure 3-2 PRL Proposed Site in Cut Block with Water Line to Pond

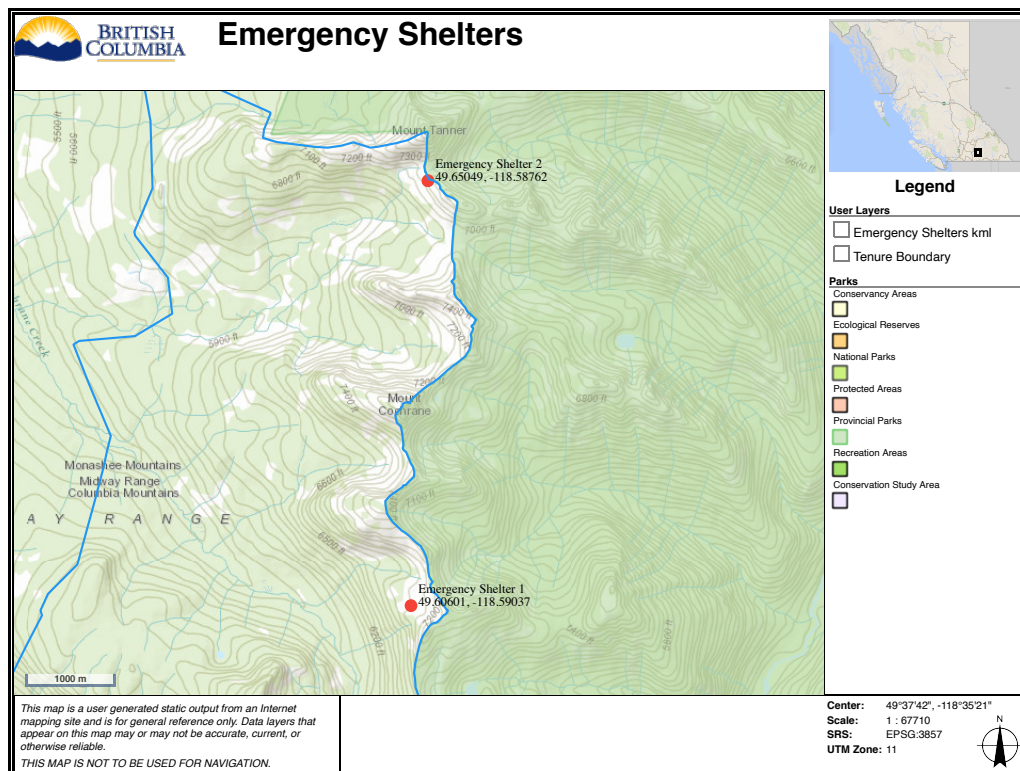


### 3.1 Emergency Shelters and Heli Landings

The proposed emergency shelters/ heli drop locations are:

1. In the ESSFdcp in a TEM polygon labeled 5FC6 5FV6 (50% balsam fir - Merten's cassiope and 50% balsam fir – sitka valerian); these ecosystems are not available for ranking on the BC CDC website.
2. In the ESSFdcp in a TEM polygon labeled 5FC6 5FV6 (50% balsam fir – Merten's cassiope and 50% Tree/vegetation removal during construction is expected to be minimal.
3. The sites are considered subalpine parkland meadow, identified as a Grizzly Bear spring habitat type. While snow-free spring habitat will not overlap with operations, encounters are possible during construction activities. Wolverine spring encounters are also possible.
4. The location is south/west facing while “Dens are usually on steep north-facing slopes, with soils suitable for digging and where vegetation will stabilize the roof of the den and snow will accumulate for insulation (Vroom et al. 1977). Wet or seepage areas and areas with shallow soils or many boulders are avoided. Bears seldom reuse an excavated den but will often come back to the same vicinity to dig their new den (Ciarniello et al. 2001)” (from IWMS 2004 Accounts and Measures). Winter dens sites are not likely near this location.
5. Wolverine dens are strongly associated with avalanche tracks and are not expected near this site.
6. Subalpine Mountainsnail may occur at this site and could be subject to disturbance / destruction during construction.

Figure 3-3: Heli Drops/Emergency Shelters



## 4.0 MITIGATION

Mitigation measures are grouped based on the following:

1. Sites requiring detailed assessment and CEMP's (Construction EMP's).
2. Avoidance areas including WHA's, OGMA's, Whitebark Pine critical habitat, mule deer winter range and site series critical for Grizzly Bear habitat.
3. Timing Restrictions including use of roads within Grizzly Bear Order area.
4. Construction practices for lodge, cabin, road and trail building including setbacks from riparian areas and active bird nests.
5. Operational Standard Operating Procedures including procedures for encounters with wildlife, discovery of wildlife habitat features and avoiding attracting wildlife.

### 4.1 Detailed Assessments

Infrastructure and new roads require detailed assessments. The assessment area of the lodge site will be approximately 500m in radius. Within that area, which includes the pond, wildlife habitat features and wildlife use sign will be documented. Findings could result in moving infrastructure locations or timing restrictions for construction activities that are could be disturbing to wildlife. Timing of the assessment will be best done in summer during nesting season, breeding season for amphibians (at the pond) and when vegetation is easiest to identify.

### 4.2 Avoidance Areas

1. Old Growth Management Areas (non-legal): no tree removal (trails, glading) is preferred. If any tree removal is proposed, approval from the Forest District may be required.
2. Ecosystems: avoid construction and operations within the red- and blue-listed ecosystems ESSFdc1/04, ESSFdc1/Wf02, ESSFdc1/Wf11, ESSFdc1/Wf13 and ESSFmh/Gg11.
3. Grizzly bear mitigation from Order #8-373:
  - a. Timing: avoiding highly disturbing activities from May 1 – June 20 on the entire Rendell Creek road system. The only allowed forestry activities during this time are road inspections and associated emergency works. The objective is to minimize disturbance including all vehicle traffic within 200m of spring habitat.
  - b. No roads or trails to be constructed within 50m (with exceptions of required stream crossings and 1 crossing of an avalanche track if unavoidable) of:
    - i. Avalanche tracks
    - ii. Hedysarum, glacier lily (Erythronium) and spring beauty complexes >0.5ha (preferably >0.2ha)
    - iii. Subalpine parkland meadows
    - iv. ESSFdc1 site series 06, 07 (1990) / 08, 09, 10 (2005).
  - c. Maintain Vaccinium spp productivity in ESSFdc1 site series 01, 04 (1990) / (01, 05, 07) (2005).
  - d. Retain non-merchantable vegetation, except where required for stream crossings to the extent practicable within 50m of wetlands >0.5ha (preferably >0.2ha) and in Riparian Management Areas where the contiguous canopy opening is >40ha.
4. From BC MOE Tourist Wildlife Guidelines: Grizzly Bear and Wolverine: protect den sites activities to remain at least 500m from known den sites. Potential den sites for wolverine are avalanche tracks or ravines with abundant woody debris or boulders that can provide

snow tunnels through the spring. These areas will be identified and avoided by 500m during field reconnaissance.

5. No vegetation removal within Whitebark pine critical habitat (high density occurrence areas); no removal of Whitebark pine during construction of roads/trails/lodge within the 2km critical habitat regeneration and recovery zone. Any vegetation removal within Whitebark Pine regeneration and recovery zones will require assessment by a QEP to avoid removal of whitebark pine as well as protecting root systems of individual trees.

#### **4.3 Timing Restriction**

1. Year-round closure area for motor vehicles on access routes will require authorization from the Province. Minimize trips and number of vehicles during construction. The proposed area covers the Granby Motor Vehicle Closed Area (see Hunting Synopsis, Region 8) which is closed year-round to motor vehicles except for snowmobiles from November 1 – May 31. The area of closure overlapping the Project Area is further defined as east of the 22km mark on the Grano FSR.
2. Migratory bird nesting – The nesting period for this zone (A2) is April 1 – August 15. No clearing (tree, shrub) removal should take place during this time without a pre-clearing nest survey. Active nests will have a temporary distance and timing buffer (unless the tree has a more permanent-type nest like a cavity or stick nest in which case it may be totally reserved) until the young have fledged. Nesting migratory birds are protected under the Migratory Birds Convention Act (1994).
3. No summer activities are proposed for operations. Any proposed activities outside of December-April will require a detailed assessment.
4. Construction activities are not allowed within 500m of spring bear habitat as defined in Order 8-373.

#### **4.4 Construction Practices**

Riparian setbacks for any vegetation clearing will follow the Provincial Riparian Areas Management Guidebook. No reserves are required on streams or the small lake near the lodge, but clearing will be minimized as there are 20m to 30m management zones.

1. A Construction EMP will be required for all structures. The CEMPs will include detailed assessments of the local areas, hazardous materials handling and restrictions, and erosion and sediment control plans.
2. Riparian setbacks for any vegetation clearing will follow the Provincial Riparian Areas Management Guidebook. No reserves are required on streams or the small lake near the lodge, but clearing will be minimized as there are 20m to 30m management zones.
3. During site prep/clearing for lodge and cabin sites, retain/replace CWD to extent possible as cover for invertebrates/amphibians of concern.
4. The Water Sustainability Act applies to all works in or around watercourses including stream crossings and water use. These works require notification or authorization. All new stream crossings will be constructed to forestry standards and will require construction mitigation including diversion during installation, and erosion and sediment control measures.



5. Avoidance of high value specific wildlife habitat features: large dead trees near lodges and cabin to be retained always, everywhere for bat roosts, owls, furbearers and cavity nesters.
6. All disturbed soils will be seeded with an erosion control grass seed mix to avoid colonization of invasive weeds.

#### 4.5 Operational SOP's

1. Containment of bear attractants (from Parks Canada guidelines): Avoiding wildlife interactions (habituation and food conditioning) of bears and wolves is a high priority for any activities in or near a Park.
  - a. All food, utensils, campstoves, scented items, garbage and visual attractants will be kept in bear-proof containers.
  - b. Wildlife attractants include (but are not limited to) BBQs, Hibachis or other cook stoves, coolers (full or empty), food and condiments, canned food (open or closed), garbage/wrapping/plastic bags, pet bowls, bottles/can (full or empty), toiletries/suntan lotion/insect spray, camp stoves/barbeques, food preparation or clean up times (pots, dishes, soap, dish clothes, table cloth, etc), used dish water (grey water) and plastic containers that may have contained food preparation or cleaning products. All minor attractants including generator, fuel and lubricants will be protected from wildlife with an electric fence when the camp is not occupied.
  - c. Report any wildlife observations or encounters with large carnivores (bears, cougars, wolves) to the Conservation Officer immediately. The reaction of the animal delivers important information about the level of habituation of the animal and thus informs any required management actions.
  - d. Report any injured animals or carcasses to the Conservation Officer immediately.
2. Encounters with Northern Goshawks during nesting season (February 15 – July 1 when chicks fledge) need to be followed up with a nest search. Activities expected from the operations are not considered to be high enough disturbance for avoidance buffers but known nest sites should be avoided as much as practical.
3. All waterbodies including seasonal ponds and water-filled ditches in the lodge areas must have natural hydrology maintained (ie., building sites and new roads cannot redirect flows) for potential amphibian breeding. Potential amphibian breeding sites within 100m of the lodges and new roads (grubbed down to exposed soil as opposed to new trails which are cleared vegetation only) will have buffers of 10m where no existing vegetation or cover (including woody debris) will be removed.
4. Storage of hazardous materials (eg. fuel) and spill preparedness will follow Provincial guidelines.
5. Mountain Goat: from MOE Tourist Wildlife Guidelines: for incidental encounters, stay at distances sufficient to prevent changes to the behaviour of animals (at least 500m in open areas).
6. Mountain Goat: from BC 2010 Management Plan for Mountain Goats: during occasional helicopter use, setbacks are to be 2000m and 400m vertical height above ground over areas known to support Mountain Goats (year-round).

7. Mountain Goat: from BC 2010 Management Plan for Mountain Goats: During critical periods (November 1 – April 30 and during kidding/early rearing May 1 – July 15), ground access should be restricted within 500m of mountain goat habitat by motorized vehicles (snowcats, snowmobiles, ATVs, etc) and by 100m by non-motorized activities (ski-touring, ice climbing, etc). This is only expected to occur incidentally as the identified winter range is well outside of the proposed area.

8. Encounters with Grizzly Bear, Wolverine or Mountain Goat: During operations, any encounters with these species or dens will result in an "avoid when seen" strategy. All activities will be ceased and appropriate no disturbance distances adhered to (a minimum 500 m buffer distance from the occurrence). Ski runs where bears or dens have been encountered will be avoided, location marked, and not be skied

9. Guides, snowcat operators and other field staff will be trained annually on the applicable components of the Wildlife Guidelines for Backcountry/Commercial Recreation Tourism in BC (2006), MOU and HCC training module materials, other applicable guidelines and practices (e.g., BCHSSOA, bear-aware C program and reducing bear-human conflicts, wildlife encounters practices and records, sensitive species in my area, etc.), the distribution, ecology and in-the-field identification of wildlife species, plants and plant communities most likely to occur within the tenure area, PRL procedures and best management practices to avoid disturbance to wildlife, recording sightings of wildlife, wildlife encounters, actions taken, animal response; and, annual staff review of previous years' management practices and monitoring results - discussion on successes and failures and suggested improvement.

10. Practical Monitoring will be undertaken in accordance with the Backcountry Wildlife Guidelines and/or as needed to evaluate the threat of risk of an activity to the sensitivity of the values, desired behaviours, indicators and limits identified.

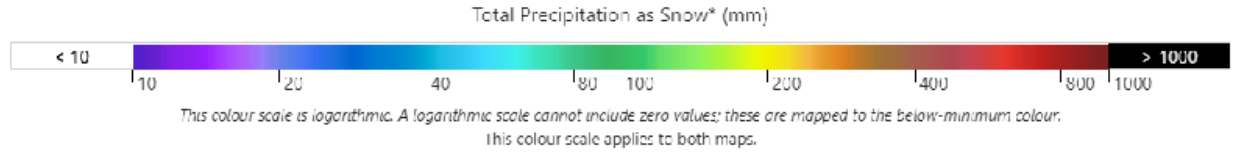
11. PRL will become a member of HeliCat Canada and will comply with the best management practices for addressing wildlife disturbance concerns (BCHSSOA 2003). PRL is familiar and will comply with Wildlife Guidelines for Backcountry Tourism/Commercial Recreation in British Columbia (BCMOE 2006) PRL's primary objectives relative to wildlife values and habitat, are strict adherence to government regulations and guidelines, and to monitor and avoid disturbing wildlife values and habitat, wherever and whenever possible.

## **5.0 CLIMATE**

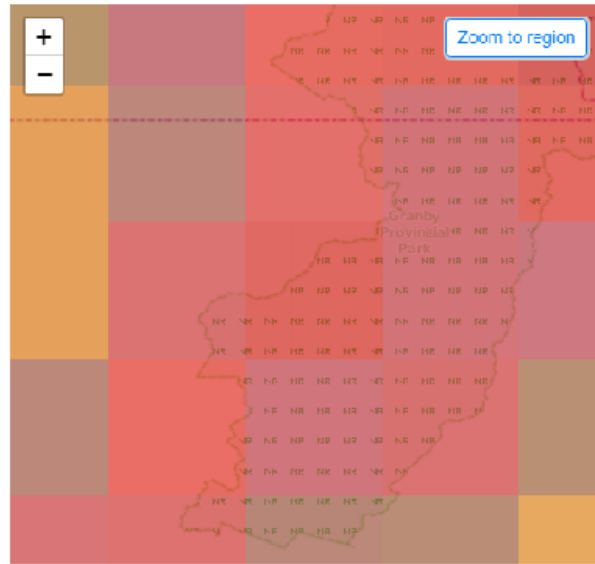
The Pacific Climate Impacts Consortium Plan2Adapt modelling tool shows an expect loss of approximately 1m of snow within 20 to 49 years. This may result in changes in timing of wildlife movement (for example emergence from hibernation), but will also result in cat skiing operations ending earlier in the spring in future decades.

*Figure 5-1: Climate Modelling Comparison* represents historical and projected total snow in Granby Park and Project Area according to Plan2Adapt modelling (<https://www.pacificclimate.org/analysis-tools/plan2adapt>).

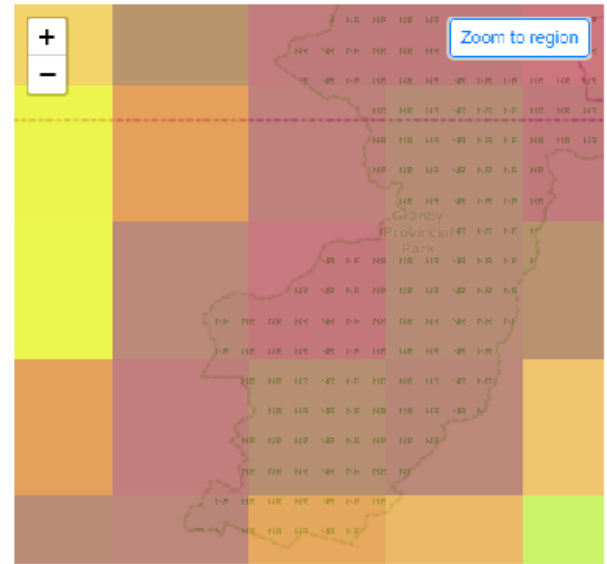
*Figure 5-1: Climate Modelling Comparison*



Historical: 1961-1990



Projected: 2040-2069



## 5.0 MONITORING

1. Detailed assessments are described above for construction of the lodge site and new roads.
2. High use areas (eg., access trails, glading areas) with potential as wildlife movement corridors will be monitored with trail cameras or track counts during one winter prior to clearing, construction or use.
3. Records of sightings of all wildlife species will be kept by the Proponent and submitted for review to a QEP on an annual basis.
4. Due to the rapidly changing information available on rare and endangered species (eg., Recovery Strategies for the species considered are within the last 5 years), a review will be required every 5 years to determine if additional mitigation is required.

## 6.0 FIELD VISIT

Prior to finalizing construction plans for the lodge, new road sections, ski huts and helicopter landing spots, these areas require a field visit by a QEP to assess the areas of disturbance for point features requiring avoidance or mitigation. These point features can include:

1. Whitebark pine
2. Grizzly Bear habitat complexes and other site series to be avoided
3. Vernal pool/ aquatic potential amphibian breeding habitat
4. Olive-sided Flycatcher and other songbird nesting activity (if during nesting season)
5. Cavity or stick nests (persistent nests), dens, mineral licks
6. Red- or blue-listed ecosystems
7. Wildlife trails (especially Grizzly Bear)
8. Potential Wolverine denning areas.

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#### **APPENDIX: DETERMINATION OF TARGET SPECIES**

The BC CDC was searched using ESSF BEC zone and the Arrow Boundary Forest District. Listed species were then further considered based on range, habitat (eg., elevation) and/or known occurrences resulting in the **exclusion** of:

1. White-throated Swift
2. Immaculate Green Hairstreak
3. Hairy Necked Tiger Beetle
4. Alkali Bluet
5. Prairie Falcon
6. Fisher (not within BC Fisher Habitat Zones)
7. Viceroy
8. Lilac-bordered Copper
9. Magnum Mantleslug
10. Common Sootywing
11. Checkered Skipper
12. California Hairstreak
13. Caribou
14. Bull Trout
15. Sheathed Slug
16. California Bighorn Sheep – there was a transplant project in the 1980's to the Granby (Pass Creek) and Gilpin areas; the Gilpin herd persists but the Granby herd was not successful. Bighorn may have been considered for impacts along the access routes at lower elevations.
17. Rusty Blackbird – The BC Breeding Bird Atlas account for Rusty Blackbird shows no occurrences in surveyed units in the Kootenays.
18. Coeur d'Alene Oregonian – this riparian forest snail has no known occurrences in the Kettle/Granby area according to E-fauna records. Its habitat would be accommodated as aquatic values.

*This concludes the Environmental Impact Assessment*

## APPENDIX 2.0 - TABLE OF COMMITMENTS

The following table identifies all direct, indirect or perceived commitments that PRL has made in the Tenure Management Plan and the Environmental Impact Assessment.

#	PAGE	SECTION	TOPIC	COMMITMENT
<b>Tenure Management Plan</b>				
1	7	1.4 Aboriginal Interests Consideration	Communication and Opportunity	PRL will be diligent with establishing positive relationships with First Nation groups who establish interest in the project. PRL will work to find opportunities that can be implemented in an effective and meaningful way.
2		1.4 Aboriginal Interests and Consideration	Archaeological Sites	PRL acknowledges that in the event that a potential First Nations artifact or site is located, the location will be marked, left untouched and immediately reported to FLNRO and the appropriate First Nations group.
3	12	2.2 Access	Transportation	PRL will make agreements to fly from the Kelowna International Airport with their flight operator with respect to guest transport and staging areas. PRL will have back up ground transportation shall weather preclude helicopter transport, and will make arrangements with private land owners to rent land for their staging area.
4		2.4 Seasonal Expectations of Use	Use and Reporting	PRL is requesting winter activities only, with the exception of lodge construction. PRL will complete diligent use reporting as per requirements of the Adventure Tourism Policy guidelines.
5		3.0 Infrastructure	Intensive Use Sites	PRL will obtain permits where necessary. Municipal and provincial guidelines will be followed for all components of excavation, construction and installation of lodge facilities and components.
6		3.0 Infrastructure	Water Supply	PRL will apply for a water license through the Water Sustainability Act, supplementary to this tenure management plan. PRL will also consult with Interior Health for filtration requirements for this water system.
7		3.0 Infrastructure	Waste Collection, Treatment & Disposal	PRL will consult with proper authorities to develop a septic system that aligns with appropriate standards for a commercial remote lodge. PRL will obtain a permit from Interior Health for septic disposal.
8		3.0 Infrastructure	Emergency Cabins & Minimal Impact Sites	These cabins will not require services, and will be semi-permanent or non-permanent structures.

9	3.0 Infrastructure	Fuel Cache	PRL's fuel storage and handling procedures will be in compliance with the Ministry of Environment's A Field Guide to Fuel Handling, Transportation and Storage. PRL will have commercial spill kits on site and will report all spills to the PRL head office and MOE if necessary.
10	3.0 Infrastructure	Main Access Road	The main access road is currently being maintained by Interfor. PRL will apply for a road use permit and share the maintenance responsibilities with the forestry licensee, and eventually assume the road shall Interfor's license or interest cease.
11	3.0 Infrastructure	FSR Network	The proposed PRL tenure has a vast existing FSR road network. PRL will utilize this network in such a way to minimize impacts and to avoid re-creating new excavated roads.
12	3.0 Infrastructure	Snow Roads	Machinery will access the area via an existing snow road and only do dirt work on the required section thus eliminating a road being created connecting existing FSR's with the alpine.
13	3.0 Infrastructure	Glading, Spacing & Trail Right of Ways, OLTC	Upon approval of this tenure management plan, PRL will apply for an Occupant License to Cut (OLTC). If merchantable timber is cut during the glading program, stumpage is paid for volume of trees felled.
14	5.0 Impacts on Other Users	Snowmobiling	PRL has communicated with the local snowmobile club and has solidified an understanding of joint use for a small portion of the proposed operating area. PRL will continue working with the club to ensure a positive relationship that allows for benefit to both parties.
15	5.0 Impacts on Other Users	Timber Tenures & Forestry Management	PRL has communicated with both of the timber licensees overlapping the proposed PRL tenure. PRL will obtain road use permits when necessary, assume road maintenance where necessary and continue working in a positive manner with the companies.
16	5.0 Impacts on Other Users	Local Government & Existing Land Use Plans	PRL's proposed activities are consistent with the overall intent and specific land use strategies as set out in the Kootenay Boundary Land Use Plan Implementation Strategy.
17	5.0 Impacts on Other Users	Motor Vehicle Closed Areas	PRL's proposed operation takes place during the exemption period of the closure area. PRL will not propose activities that conflict with this closure.



18	6.0 Risk Management & Safety	Safety and Rescue Plans	PRL will operate in a manner that is in accordance with operating guidelines set out by HeliCat Canada. PRL will adopt waivers, safety and rescue plans.
19	6.0 Risk Management & Safety	Worksafe BC	PRL will register with WorkSafe BC and its operation will compliance with WorkSafe BC regulations.
20	6.0 Risk Management & Safety	Insurance	PRL will obtain a minimum of \$2 million liability insurance policy, and other insurance as necessary, upon approval of this application.
21	6.0 Risk Management & Safety	Security of Performance Bond	PRL will deposit the requested amount for a Security of Performance Bond upon approval of this application.
22	6.0 Risk Management & Safety	Guides & Snow Science	PRL will only hire fully certified ski guides and will operate by the well-established standards used in the heli and cat skiing industry in Canada. Guides will conduct snow checks, identify hazards and evaluate other variables to achieve a daily ski program that is satisfactory for overall guest safety.
23	7.0 Business Overview	Business Model	The business model PRL will implement is a proven concept in the remote lodge, multi-day ski holiday industry. The PRL team is committed to achieving successful business practice that will propel the company into a long term, sustainable arrangement. PRL will conduct business in a manner that demonstrates high ethical standards and efforts to be a good corporate citizen.
24	7.0 Business Overview	Economic Benefits	PRL will buy local goods and services wherever possible, hire and train individuals from local communities and promote complementary local businesses and services.

**Environmental Impact Assessment**

1	2.0 Description of Values	Discovery	Values to be assessed against have been determined through the BC Ecosystem Explorer and are a reflection of current values.
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2	2.1 Ecosystems	Biodiversity and Sensitive Species	<p>PRL will review Terrestrial Ecosystem Mapping (1:50,000 undated Kettle-Granby) for planning to avoid siting lodges/trails/cabins/roads within site series of concern.</p> <p>PRL will comply or exceed Vegetation Communities Best Practices and Forest Harvesting and Trail Construction Best Practices in BCHSSOA Stewardship of Mountain Ecosystems Best Practices for Sustainability (2003).</p> <p>PRL will use existing roads and trails in low snow conditions to protect vegetative cover and root systems</p> <p>Staff will be familiar with the section titled "What are the Sensitive Species and Habitats in My Area?" (p.52) and other applicable practices from the Wildlife Guidelines for Backcountry Tourism/Commercial Recreation in BC.</p> <p>Biodiversity habitat elements will be considerations when planning ski run, pick-up/drop-off - sites, maintenance, other developments and/or expansion activities in forest ecosystems and habitats</p>
3	2.1 Ecosystems	OGMAs	<p>Non-legal OGMA's are within the PRL boundary. PRL will remain educated regarding existing and proposed OGMA's within the tenure area.</p>
3	2.3 Aquatic Values	Fish Values and Sensitive Streams	<p>There is confirmed no-fish presence in the watersheds and streams within the PRL tenure. PRL will act in compliance with the Fisheries and Watershed Best Practices in BCHSSOA Stewardship of Mountain Ecosystems Best Practices for Sustainability (2003) for conservation of these water bodies.</p>
4	2.3 Aquatic Values	Amphibians & Reptiles	<p>Six species have been identified in the PRL tenure that could potentially seek habitat in watersheds within the boundary. PRL will adhere to guidelines and best management practices as outlined in the Guidelines for Amphibian and Reptile Conservation during Urban and Rural Land Development in British Columbia (2014).</p>
5	4.1 Avoidance Areas	OGMA	<p>PRL will avoid tree removal in the non-legal OGMA within their proposed tenure, and understands approval from the Forest District may be required.</p>
6	4.1 Avoidance Areas	Ecosystems	<p>PRL will avoid construction and operations within the red and blue listed ecosystems ESSFdc1/04, ESSFdc1/Wf02, ESSFdc/Wf11, EDDFdc1/Wf13 and ESSFmh/Gg11</p>

7	4.1 Avoidance Areas	Grizzly Bear	PRL commits to following measures outlined in Order #8-373 to protect the spring habitat of Grizzly Bears.
8	4.1 Avoidance Areas	Whitebark Pine	PRL will not remove vegetation within the Whitebark Pine critical habitat (high density occurrence areas), or remove Whitebark Pine itself during construction of roads/trails/lodge within the 2km critical habitat regeneration and recovery zone.
9	4.2 Timing Restriction	Motor Vehicle Closed Areas	The operational period of PRL is closed to motor vehicles year round with the exception of November 1 - May 31 for snowmobiling. PRL will request authorization from the Province where necessary.
10	4.2 Timing Restriction	Migratory Bird Nesting	No clearing activities will take place from April 1 - August 15 without completing a pre-clearing nest survey. Active nests will have a temporary distance and timing buffer until the young have fledged.
11	4.3 Construction Practices	Riparian Setbacks	Riparian setbacks for any vegetation clearing will follow the Provincial Riparian Areas Management Guidebook. During site prep/clearing for lodge and cabin sites, retain/replace CWD to extent possible as cover for invertebrates/amphibians of concern. Avoid high value wildlife features.
12	4.3 Construction Practices	Water Sustainability Act	PRL understands the Water Sustainability Act applies to all works in or around watercourses including stream crossings and water use. PRL will apply for a license under this act in conjunction with this application.
13	4.4 Operational SOP's	Park Proximity	PRL understands avoiding wildlife interactions of bears and wolves is a high priority for any activities in or near a Park. PRL will imply best management practices to contain attractants and report sightings to a Conservation Officer when necessary.
14	4.4 Operational SOP's	Northern Goshawk	Encounters with Northern Goshawks during nesting season (Feb 15 - July 1) will follow up with a nest search, and known nest sites will be avoided.
15	4.4 Operational SOP's	Waterbodies	Potential amphibian breeding sites within 100m of the lodges and new roads will have buffers of 10m where no existing vegetation or cover will be removed.

16	4.4 Operational SOP's	Mountain Goat	<p>The winter range is well outside the PRL tenure - however for Incidental encounters, PRL will remain at least 500m distance and will adopt an "avoid when seen" strategy when goats are encountered, and will adhere to specific distance guidelines for mountain goats in the Tourism Wildlife Guidelines (2006)</p> <p>No activity will take place within a goat occupied area for a minimum 24 hours and until follow-up inspections confirm the absence of the goats.</p>
17	4.4 Operational SOP's	Den Sites and Encounters	<p>PRL will adopt an "avoid when seen" strategy when grizzly bears, wolverines or dens for these mammals are encountered.</p> <p>All activities will be ceased and appropriate no disturbance distances adhered to (a minimum 500 m buffer distance).</p> <p>Ski runs where bears or dens have been encountered will be avoided, location marked, and not be skied</p>
19	4.4 Operational SOP's	Staff & Training	<p>Guides, snow- cat operators and other field staff will be trained annually on:</p> <ul style="list-style-type: none"> <li>- the applicable components of the Wildlife Guidelines for Backcountry/Commercial Recreation Tourism in BC (2006);</li> <li>- MOU and HCC training module materials;</li> <li>- other applicable guidelines and practices (e.g., BCHSSOA, bear-aware C program and reducing bear-human conflicts, wildlife encounters practices and records, sensitive species in my area, etc.);</li> <li>- the distribution, ecology and in-the-field identification of wildlife species, plants and plant communities most likely to occur within the tenure area;</li> <li>- PRL procedures and best management practices to avoid disturbance to wildlife;</li> <li>- recording sightings of wildlife, wildlife encounters, actions taken, animal response; and,</li> <li>- annual staff review of previous years' management practices and monitoring results</li> </ul> <p>- discussion on successes and failures and suggested improvement.</p>
20	4.4 Operational SOP's	Practical Monitoring	<p>Practical monitoring will be undertaken in accordance with the Backcountry Wildlife Guidelines and/or as needed to evaluate the threat of risk of an activity to the sensitivity of the values, desired behaviours, indicators and limits identified.</p>

21		4.4 Operational SOP's	Recognized Guidelines	<p>PRL will become a member of HeliCat Canada and will comply with the best management practices for addressing wildlife disturbance concerns (BCHSSOA 2003).</p> <p>PRL is familiar and will comply with Wildlife Guidelines for Backcountry Tourism/Commercial Recreation in British Columbia (BCMOE 2006)</p> <p>PRL's primary objectives relative to wildlife values and habitat, are strict adherence to government regulations and guidelines, and to monitor and avoid disturbing wildlife values and habitat, wherever and whenever possible.</p>
		5.0 Field Visit	Field Visit	<p>PRL recognizes that prior to finalizing construction plans for infrastructure, a field visit will be necessary be a QEP.</p>

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**APPENDIX 3.0 - PERMISSION TO APPLY (POWDER OUTFITTERS)**

**From:** Kalischuk, Andrea FLNR:EX Andrea.Kalischuk@gov.bc.ca   
**Subject:** permission to submit winter AT application over existing tenure  
**Date:** February 20, 2020 at 3:35 PM  
**To:** Kerry and Cassandra Penney northcountrysnowcats@gmail.com  
**Cc:** Baker, Gena FLNR:EX Gena.Baker@gov.bc.ca, Krebs, John A FLNR:EX John.Krebs@gov.bc.ca

AK

Hi Cassandra and Kerry,

Thank you for your patience.

I provide my permission for you to submit a winter adventure tourism tenure application over the existing Powder Outfitters tenure.

I sought some preliminary information in terms of wildlife and habitat concerns. Note, this information should not be considered as complete. And, your application will still have to go through a full review, referral and consultation process. As you suggested, Whitebark Pine is in the area and I will try to send you additional information soon as per your request. Grizzly bears are also of concern in the area and there is a Government Action Regulation (GAR) in place. I've attached an information document on bears. Goats may also be a consideration.

If you require further information, please let us know.

Best,  
Andrea

Andrea Kalischuk  
Director of Resource Authorizations  
Kootenay Boundary Region  
Ministry of Forests, Lands, Natural Resource Operations & Rural Development  
1902 Theatre Road, Cranbrook, BC V1C 7G1  
Tel: (250) 426-1725  
Cell: (250) 421-0539



EN120 Grizzly  
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