Supporting Report: Land Use Re-districting Proposal

Relocation of Trinity Bible Church to 105 Harvie Heights Road

Pre-Application No. PL20210365

April 29, 2022

Submitted to: Town of Canmore
Prepared by McElhanney

Contact
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Our file: 2531-213-1500

Contents

List of Figures

Appendix

1. Proposal

The Trinity Bible Church was established in Canmore in 1988 and is currently operating at 1717 Bow Valley Trail. Since moving to the current location, the congregation has outgrown the facilities which also require continuing and increasing maintenance. It has become the desire of the congregation to locate to a new site and build a facility which will serve the organization into the future. The proposed facility may be up to approximately 6,000 to 7,000 square feet and provide sufficient space for approximately 200 people to congregate. Accessory uses within the new space would include offices, commercial kitchen, multi-purpose rooms, stage and classroom facilities.

The proposal will result in exceptional community benefits as follows:

SPIRITUAL / EMOTIONAL SUPPORT	COMMUNITY SUPPORT PROGRAMS
• Home to 100 + Canmore residents & families providing weekly spiritual encouragement and biblical training • Church home away from home to many visitors (both vacationers & short-term workers) • Kids, Youth, Adult, Senior & Family programs • Bereavement Support & Counseling through the GriefShare outreach • Summer kids programs • Meeting Centre for Bow Valley Churches • Canmore Ladies Christmas Banquet (13 years) • Support many international causes	• Multi-purpose venue to support mid-week programs (Drum Circle, Bow Valley Choral) • Young Mom's/ tot drop-in play time • Skiers Church at Sunshine Village • Providing volunteers for Food & Friends • Safe Park program • Benevolent offering cheques (i.e.: Canmore Food Bank & others) • Support for Steve Sellers with Athletes in Action working with the Canmore Eagles & Olympic Athletes • Support for Youth Unlimited: working with youth • Affordable childcare (future offering)

Across the Bow Valley and especially in Canmore, sites available for development of either commercial uses or religious assemblies remain very limited. The site located at 105 Harvie Heights has become available, and the desire is to re-district the site to accommodate this development.

The project design is sensitive to the surrounding environment being modest in scale and footprint. Please see Appendix A for Conceptual Rendering and Site Plan.

2. Location

The subject site, Plan 8610642, Lot A; 105 Harvie Heights Road. The site is 8,023 m2 and located north of the westerly interchange in the Town of Canmore. The site location is illustrated in Figure 1.

Figure 1: Site Location Map

3. Existing Policy Analysis

The existing Municipal Development Plan policy and Land Use Bylaw designation do not currently align with the vision and goals to relocate the congregation and facilities to 105 Harvie Heights Road. However, there are very practical solutions which Town Council may consider in providing this opportunity for Trinity Bible Church to relocate and expand.

The site is currently zoned for CW (Conservation of Wildlands) in the Canmore Land Use Bylaw. This land use designation is very restrictive and allows only for the current single detached residential unit to remain in place without future development potential.

3.1. LAND USE

The site is currently developed with a single detached residential unit with accessory building(s). This property and the one adjacent to the southeast are both rural residential in nature. The existing development pre-dates the inclusion of the area into the Town boundary. The site is currently Districted WC (Wildlands Conservation) with discretionary uses which allow for existing development or very limited expansion of those uses. The site was annexed by the Town from the ID 8 in 1991 and land use was changed to WC through an amendment to the Canmore Land Use Bylaw.

The current CW Conservation of Wildlands District allows for:

Permitted Uses
Wildlife Corridor
Wildlife Habitat Patch
Discretionary Uses
Accessory Building
Accessory uses to developments approved prior to third reading of Bylaw 09-99 [2020-17]
Existing developments on a specific site prior to third reading of Bylaw 09-99 [2020-17]
Pedestrian Pathway
Public Utility
Trail

The intent of the CW District is to designate areas for protection, conservation and enhancement of the environment including biological diversity, the protection or enhancement of natural or scenic or aesthetic values and where consistent with either of the above, for low impact, recreational, open-space or environmental education use.

The proposed site area has an existing building, accessory building and an open garden area featuring vacant land having shrubs to the front boundary, covered with grass and a few trees. Figure 2 shows an air photo of the proposed site showing the existing building footprint.

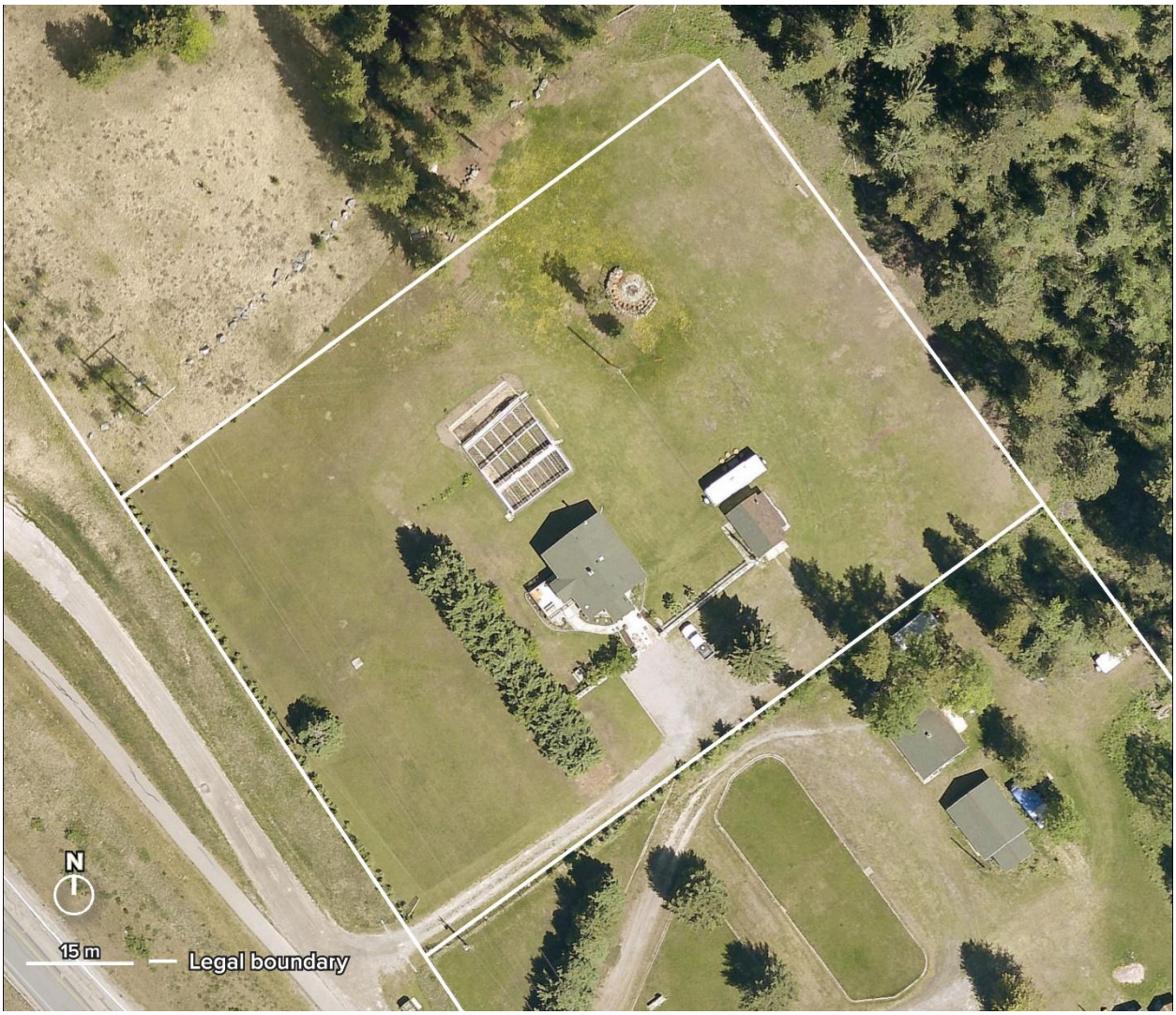

Figure 2: Existing Building Footprint

3.2. TOWN OF CANMORE MUNICIPAL DEVELOPMENT PLAN (MDP)

The current Municipal Development Plan for Canmore approved in 2016, designates the site as being outside of the Canmore growth boundary. At the September 13, 2016 Council meeting to approve the MDP, this site was removed from the growth area boundary. It is also designated for “Conservation” in the MDP, however the site is not designated as a wildlife corridor or habitat patch specifically. The MDP provides the following policy direction regarding existing development which is outside of the growth boundary and within areas designated for conservation within the MDP.

3.2.1. Growth Boundary

The Canmore MDP growth boundary is a planning tool to manage growth by encouraging it in certain areas and excluding it in others. This may be due to site servicing constraints, flooding, steep creek hazards, and undermining, or other policies in the MDP. Because the site is outside of the growth boundary the following policies apply.

	Policy
	Development Outside of the Growth Boundary
2.1.4	Development that is considered to be urban in nature will not be allowed outside of the Growth Boundary. Development proposals outside of the Growth Boundary that may be considered are those that conform to the Conservation land use policies in Section 4.1.
	Moving the Growth Boundary
2.1.5	The Growth Boundary should not be expanded beyond the area shown in Map 1, except where: a. a community benefit is achieved, and b. net positive fiscal or socio-economic impacts are achieved, and c. the proposed development can be connected to municipal infrastructure in a fiscally and environmentally responsible manner, and d. the proposed development does not result in unacceptable environmental impacts.
2.1.6	The submission of an Environmental Impact Statement (EIS) shall be required by the Town for a proposed expansion of the Growth Boundary. The EIS shall identify acceptable mitigation of any potential impacts

With regard to the Growth Boundary in the Municipal Development Plan, no change is proposed or required, as the land use will not require an extension of the sanitary sewer system or contemplation of future urban intensification of this site. To facilitate this conversation with the Town Administration, Trinity Bible Church has participated in a pre-application process for gaining a technical review of the proposal on October 19, 2021. This has provided valued feedback of what policies and bylaws are affected and where we will provide professional technical supporting work and rationale to allow Council to consider this proposal. Figure 2 illustrates the existing growth boundary.

Figure 3: MDP Policy Areas Map

3.2.2. Development in Conservation Areas

The MDP designates all land outside of existing approved area plans as Conservation. To bring development to these areas the MDP asks that community benefit be demonstrated. The Trinity Bible Church offers a significant social benefit as outlined in the table on page 1, with additional benefits which will be realized with the new expanded facility as summarized below. The proposed development therefore meets these policies in the MDP.

4.1.4 Changes in zoning for lands within Conservation areas that would allow new or additional development of those lands shall be discouraged unless exceptional community benefit can be demonstrated. Should an application for amendment be considered, an Environmental Impact Statement

(EIS) will be required to be prepared and potential impacts of the development are addressed and mitigated.

3.2.3. Development Within Wildlife Corridors and Habitat Patches

Some policies for consideration are included below:

Our interpretation of the MDP policies contained in 4.1 is that because of the exceptional community benefit provided with this proposal, no amendment to the MDP Conceptual Land Use Map (Map 2) is proposed.

Section	Policy	Rationale
4.1.2	Development in Conservation areas should be limited to recreational use, agricultural uses, infrastructure, and utilities, and will be subject to any additional restrictions on these activities contained in the MDP including Environmentally Sensitive Areas policies contained in Section 4.2.	The proposed development is anticipated under section 4.1.4 of the MDP which allows development, or re-development as in this case if, exceptional community benefits are demonstrated. These are listed under the benefits table on page 1. Further economic benefits to the Town exist through much greater tax revenue potential through re-development of the current site on the Bow Valley Trail.
4.1.4	Changes in zoning for lands within Conservation areas that would allow new or additional development of those lands shall be discouraged unless exceptional community benefit can be demonstrated. Should an application for amendment be considered, an EIS will be required to be prepared and potential impacts of the development are addressed and mitigated.	The proposed development will result in exceptional community benefits through community support programs as well as spiritual/emotional support such as meeting centre for Bow Valley Churches, summer kids programs, affordable childcare, safe park program, weekly spiritual encouragement and biblical training, etc. Decision on submission for an EIS is pending from the Town.
4.2.9	Existing development and uses accessory to the existing development in wildlife corridors and habitat patches will be allowed to continue, however, expansion of development footprint or intensification will be discouraged.	Proposed development does not fall under the Habitat Patch or the Wildlife Corridor as per Map 4, Wildlife Corridor and Habitat Patches of the MDP. The footprint of the proposed facility is not significantly larger than the already developed area of the current structure and concrete gardening area. The entire 0.80ha (2-acre) parcel has been altered/landscaped over the years. See Figure 4.

4.2.10	Where expansion of development footprint or intensification of an existing use within a wildlife corridor or habitat patch is considered, the Town will require an EIS to be prepared.	Our EIS consultant was put on hold by the Town about defining a Terms of Reference for an EIS. Once communication is received from the town, we will submit the EIS.

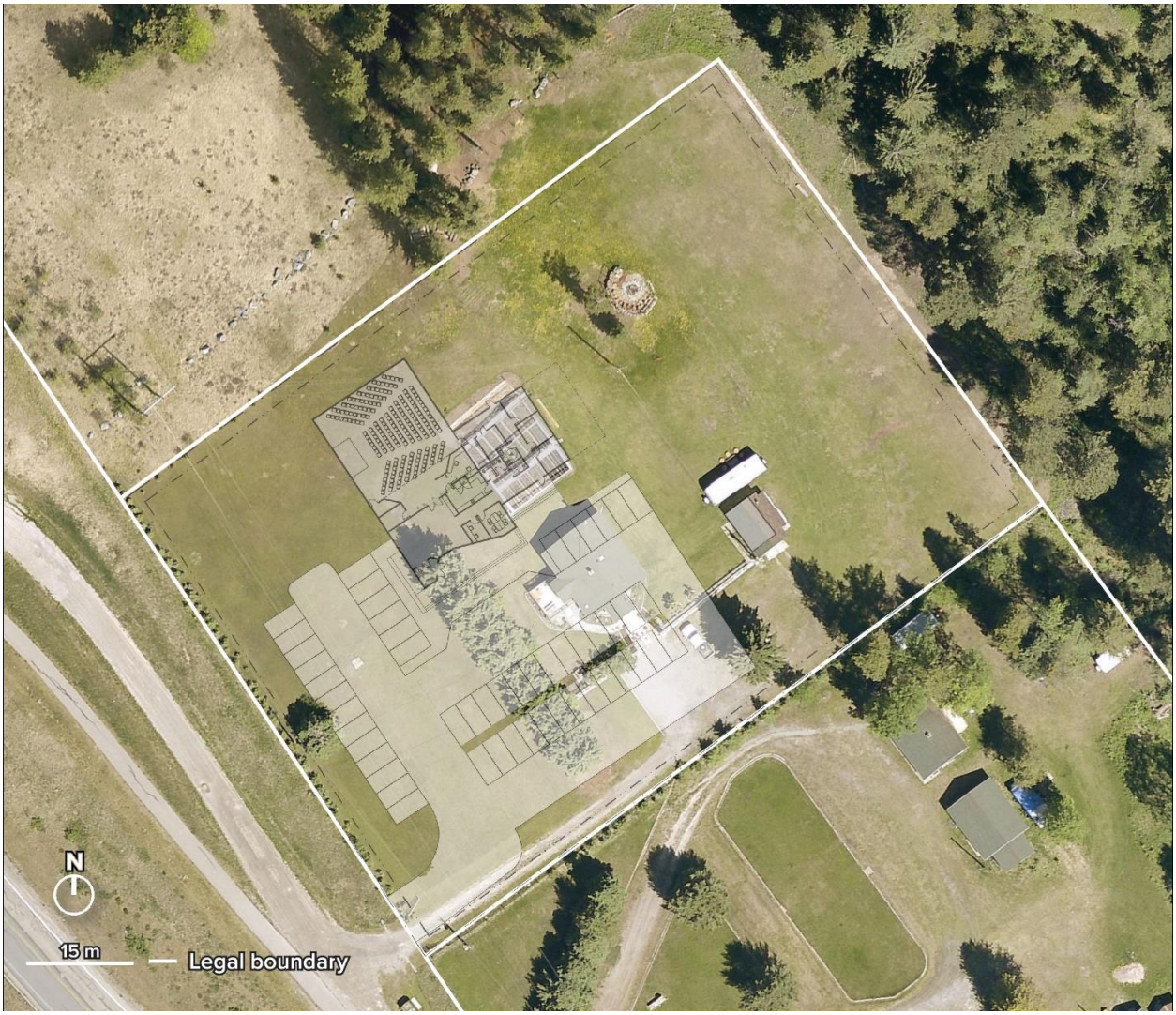

Figure 4: Overlay of Proposed Building Footprint and Parking Area on Existing Development

3.3. TOWN OF CANMORE SEWERAGE BYLAW 2015-18

Within the MDP as amended, and as reflected in the Town of Canmore Sewerage Bylaw 2015-18, it is required that all development be connected to the Town infrastructure for sanitary sewer, unless otherwise granted an exception by the Town CAO (Chief Administrative Officer). It is within the ability of

Town Council to direct this exception to the Bylaw and the MDP policy using the Direct Control District as a tool to limit the exception to the one site, and to provide site specific development regulation.

3.4. MDP ECONOMIC POLICIES

The goals for economic development under the MDP are to continue economic growth across targeted sectors, to support growth of the economy that is true to Canmore's identity, and builds upon existing assets. The existing church site falls under the Bow Valley Trail Area Redevelopment Plan Bylaw 11-2012. It describes the existing church site as one of the Town's primary visitor accommodation areas and an important commercial area that supports many sectors of Canmore. By availing the site for redevelopment, the proposal provides the opportunity to achieve the economic goals of MDP by creating a larger tax base building towards target sectors such as recreational tourism.

The Economic Development Tourism Strategy identifies three major physical barriers to Canmore's economic growth. First, the limited availability of developable land and second, supply and diversity of housing. The relocation of the church will help address both issues by providing land for commercial development ultimately resulting not just increase in tax base but also generating jobs and housing for employees.

Some policies for consideration are given below:

9.1.1	Through land use planning activities and strategic business planning, the Town will establish an environment that retains existing and attracts new businesses and investment.
9.1.3	Economic development strategies should support the Town Centre as the primary commercial focal point and cultural heart of the community.
9.1.10	The provision of essential commercial services shall be supported by the Town, with a focus on the Town Centre and mixed-use areas, to strengthen local retail opportunities, encouraging local retail purchases of products and services, while reducing leakage of local and visitor dollars into surrounding economies.

The existing land use of the site is Bow Valley Trail General Commercial District as per the Canmore Land Use Bylaw 2019-22. Vacating the site will provide the opportunity to build on BVT-G land use which promotes new business and investments.

4. Overview of Conceptual Site Design and Direct Control District

4.1. SERVICING

4.1.1.Water

The site has a water line which runs along the westerly frontage east of the Highway 1 corridor. This water main could be used to service this site for domestic use and/or fire protection.

The existing well on site has been evaluated and the report is provided in Appendix C.

4.1.2. Wastewater

The site has an onsite wastewater treatment system which will require updating to current code requirements if the proposed project is permitted to move forward.

An Onsite Wastewater Treatment System Proposal is submitted to explore viable options for soil-based treatment systems in Appendix D. Based upon preliminary projected flow volumes, the proposed treatment area appears to be sufficiently sized and achieve all required setback distances. The required soil investigation cannot be completed until frost is totally out of the ground. When the project moves forward, the first step will be to perform a soils investigation to confirm suitable types of onsite wastewater treatment.

In the unlikely case the soil is found unsuitable for a soil-based treatment system, the wastewater produced from the facility would have to be stored in a holding tank and disposed of off site at a registered receiving facility.

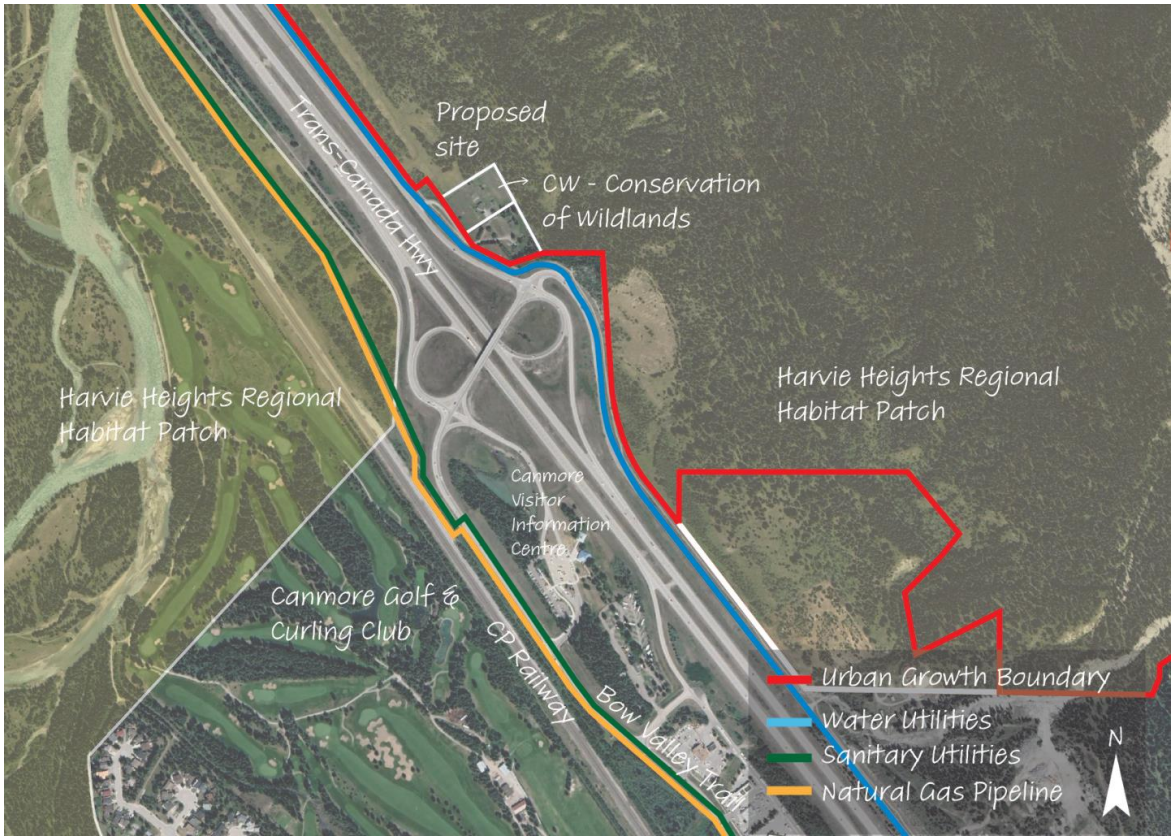

Figure 5: Site Servicing Map

The proposed development is planned to be serviced onsite for stormwater and wastewater. Specific water main upgrading or onsite upgrades required will meet domestic and fire protection required for the development.

4.2. DIRECT CONTROL DISTRICT

The proposed land use re-designation to Direct Control District will resolve the policy and Bylaw issues for the site, while achieving balance of social, economic, and environmental goals of the Town, and not creating any negative impacts to the community at large.

The Direct Control District will be prepared to regulate the development of a very site-specific cultural establishment (Trinity Bible Church) with limited outdoor or accessory uses to compliment this use. In addition, regulations to require an on-site, contained system for sanitary services will be included to accommodate the congregation, along with improved access, connections to the existing water service with allowance for fire protection, and any storm water run-off catchment facilities, as required. This Direct Control District as approved by Council would thereby also allow for the CAO to provide the exception to the Sewerage Bylaw 2015-18. The new District is attached under Appendix G.

5. Open House

The ad for an open house was posted in the Rocky Mountain Outlook on 24 March 2022 for a week. A total of 7 people joined the meeting virtually on teams. What we heard report is attached as Appendix E.

6. Closing

Having served the community of Canmore and the Bow Valley for over 33 years, the Trinity Bible Church endeavors to continue this important work, and to balance the goals of relocating to a new facility with what is in the best interest of the Town as a whole. In doing so, the planning tools available to us will ensure that balance of financial considerations where infrastructure is concerned, a no impact approach to conservation areas adjacent to the site, and no impact to the community at large, while also providing significant social benefit to our community in the Bow Valley at the same time.

We look forward to continuing this dialogue with Council and Administration to set the planning and policy framework for the site development.

Sincerely,

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McElhanney

CANADA BEST MANAGED COMPANIES

APPENDIX A

CONCEPTUAL SITE PLAN AND CONCEPTUAL FLOOR PLAN

FOR PRELIMINARY USE ONLY, NOT FOR CONSTRUCTION.
PARKING TO BE CONFIRMED WITH TOWN OF CANMORE AND PARKING STUDY.
SETBACKS TO BE CONFIRMED WITH NEW DIRECT CONTROL ZONING.

ROBERT PASHUK ARCHITECTURE

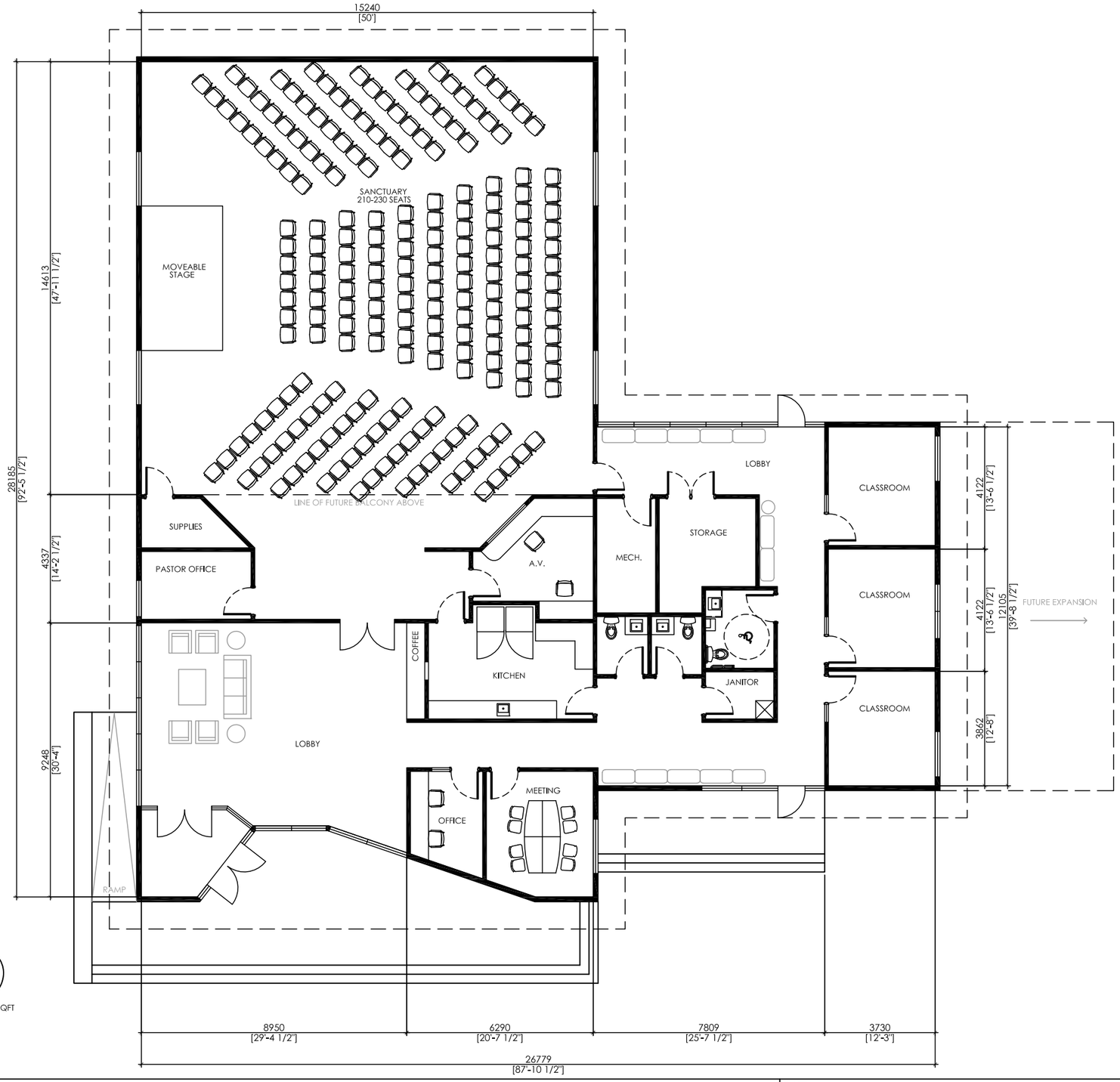
DRAWING TITLE:

TRINITY BIBLE CHURCH

CONCEPTUAL SITE PLAN

105 HARVIE HEIGHTS ROAD

DATE:	JOB #:	PAGE:
22.03.23	2102	P-1
SCALE: N.T.S.		
DESIGN BY: RPA	DRAWN BY: CM	



FOR PRELIMINARY USE ONLY, NOT FOR CONSTRUCTION.

ROBERT PASHUK ARCHITECTURE

DRAWING TITLE:

TRINITY BIBLE CHURCH

CONCEPTUAL FLOOR PLAN

105 HARVIE HEIGHTS ROAD

DATE: 22.03.23		JOB #: 2102	PAGE: P-2
SCALE: N.T.S.			
DESIGN BY: RPA	DRAWN BY: CM		

ROBERT PASHUK ARCHITECTURE

DRAWING TITLE:

TRINITY BIBLE CHURCH

CONCEPTUAL EXTERIOR RENDER

105 HARVIE HEIGHTS ROAD

DATE: 22.03.23		JOB #: 2102	PAGE: P-3
SCALE: N.T.S.			
DESIGN BY: RPA	DRAWN BY: CM		

APPENDIX B

TRAFFIC IMPACT STUDY

File No.: 25316010100

LETTER

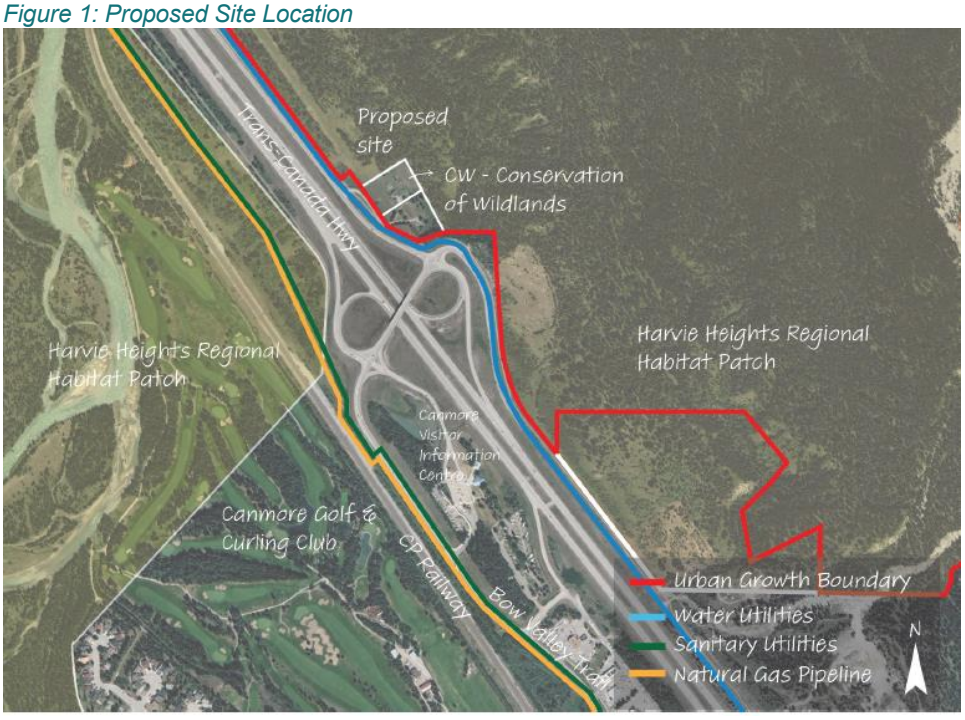
To	From
Trinity Bible Church	Laurel Flanagan, P.Eng., RSP1 Calgary - Transportation
Re	**Date**
Traffic Impact of Proposed Trinity Bible Church – 105 Harvie Heights Road, Canmore AB	April 11, 2022

1. Background

The Trinity Bible Church currently operates at 1717 Bow Valley Trail in the Town of Canmore and is looking to relocate to accommodate growth in the congregation and allow for the continuation and future expansion of various services and support programs.

A proposed site for relocation has been identified at 105 Harvie Heights Road, located northeast of the Highway 1/Bow Valley Trail/Palliser Trail interchange, as shown in Figure 1.

Figure 1: Proposed Site Location



The proposed site location is outside of the Town Urban Growth Boundary, and currently zoned as Conservation of Wildlands. Therefore, the Trinity Bible Church is in the process of obtaining amendments to the Municipal Development Plan (MDP) and Land Use Bylaw (LUB) to allow for development at this site.

The purpose of this letter is to identify the expected traffic volumes associated with the proposed church site and comment on the impacts to satisfy the requirements of Alberta Transportation (AT), due to the proximity of the site to the existing interchange.

2. Proposed Development

The proposed church facility is approximately 7,000 square feet, which includes space for up to 200 parishioners, offices, a kitchen, multi-purpose rooms, a stage, and classroom facilities to support the services offered.

While various community programs may be offered throughout the week, the peak traffic generation period for the church is expected to occur on Sundays for regular services. The existing Trinity Bible Church offers both in-person and online services. In-person services are currently offered at **9:15 a.m. and 11:00 a.m. on Sundays**. The service schedule at the proposed facility is anticipated to remain the same.

3. Existing Traffic Volumes

Existing and historical traffic data is available from AT for the Highway 1/Bow Valley Trail/Palliser Trail interchange. The annual average daily traffic (AADT) and peak hour volumes for each of the intersecting roadways from the 2021 turning movement summary diagram are summarized in Table 1.

Table 1: 2021 Traffic Volumes

Roadway	AADT	AM Peak Hour	PM Peak Hour
Highway 1	22,160	3,101	3,104
Bow Valley Trail	8,790	1,279	1,253
Palliser Trail	1,430	178	224

The most recent detailed traffic count data available for this interchange location is from 2018, which identifies the morning and afternoon peak hours to be 10:15 to 11:15 a.m. and 4:30 to 5:30 p.m. Since this count was completed on a Tuesday to capture the typical weekday peak hour periods, data from nearby automated traffic recorders (ATRs) was also reviewed. ATRs are permanent 24-hour data collection points that provide further insight to weekend traffic patterns.

ATR 50010050, west of the Banff National Park Gates, is the closest permanent data collection point on Highway 1. Data from ATR 67429980 on Highway 742 was also reviewed to further understand local

traffic patterns within the Canmore boundary on Sundays. The following table summarizes the peak average hourly volumes for Sundays in 2021.

Table 2: ATR Data – 2021 Peak Average Hourly Sunday Traffic Volumes

Roadway	Highest Hourly Time Period	Average Traffic Volume
Highway 1	4:00 to 5:00 p.m.	2,357
Highway 742	1:00 to 2:00 p.m.	389

Based on a review of the ATR data, the highest hourly volumes were observed during the mid to late afternoon on Sundays in 2021 on the highways nearby the proposed church site. Therefore, the church service will contribute to an increase in background traffic during the Sunday morning off-peak hours.

The Sunday morning background volumes coinciding with the church service times were estimated for Bow Valley Trail and Palliser Trail based on the 2021 interchange data and a calibration factor for Tuesday to Sunday morning volumes from the 2021 Highway 1 ATR data. The estimated Sunday morning volumes are provided in Table 3.

Table 3: Estimated Sunday AM Hourly Background Traffic Volumes

Roadway	Sunday AM Hourly Background
Bow Valley Trail	1,804
Palliser Trail	251

Since Canmore residents and families make up a significant proportion of the church congregation, it is anticipated that the majority of vehicle trips associated with Sunday services will utilize Bow Valley Trail and Palliser Trail.

4. Development Generated Traffic and Impacts

Traffic generated by the church development was estimated based on the Institute of Transportation Engineers (ITE) Trip Generation Manual. The ITE Land Use 560 corresponds to church operations and provides estimated hourly vehicle trips per 1,000 square feet of gross floor area.

Table 4 includes the trip generation rates and distribution of entering and exiting traffic for the Sunday and typical weekday peak hour periods.

Table 4: ITE Land Use 560 – Trip Generation and Distribution

Peak Hour Period	Trip Generation Rate[1]	Entering	Exiting
Sunday	9.99	48%	52%
Weekday AM	0.33	60%	40%
Weekday PM	0.49	45%	55%

[1] per 1,000 Sq Ft GFA

The total number of vehicle trips for the proposed church based on the estimated floor area of 7,000 square feet is summarized in Table 5.

Table 5: Total Estimated Peak Hour Vehicle Trips

Peak Hour Period	Total Trips	Entering	Exiting
Sunday	70	34	36
Weekday AM	2	1	1
Weekday PM	3	1	2

The church generated traffic during the weekday a.m. and p.m. peak hour periods is expected to be 2 to 3 vehicles per hour, therefore this will have a negligible impact on the adjacent interchange operations.

As indicated in Section 3.0, the adjacent roadway network peak hour on Sundays occurs during the afternoon. The estimated 70 trips during the peak hour for church services will contribute an increase to the Sunday morning background traffic observed at the interchange identified in Table 3 above. Table 6 provides the estimated combined (background plus church) Sunday morning traffic volumes on Bow Valley Trail and Palliser Trail.

Table 6: Combined Sunday AM Hourly Traffic Volumes

Roadway	Sunday AM Hourly Background	Sunday AM Combined Hourly
Bow Valley Trail	1,804	1,865
Palliser Trail	251	260

The combined traffic volumes in Table 6 indicate a 3% increase in traffic associated with the church. This is an insignificant increase in traffic volumes, that will occur during off peak hours and is not expected to impact traffic operations at the interchange.

Access to the proposed site currently exists on Harvie Heights Road, north of the interchange ramp terminal. The use of this access is expected to be adequate for the church facility operations based on the expected traffic generation and would not significantly impact the adjacent interchange peak hour operations or introduce capacity constraints.

5. Conclusion

Based on a review of existing traffic volumes at the Highway 1/Bow Valley Trail/Palliser Trail interchange and estimated peak hour development traffic, the proposed church site at 105 Harvey Heights Road is expected to have a negligible impact on operations of the interchange. The estimated Sunday peak hour traffic generation is anticipated to account for a 3% increase on the adjacent roadways and does not present capacity concerns for the interchange or the site access on Harvey Heights Road.

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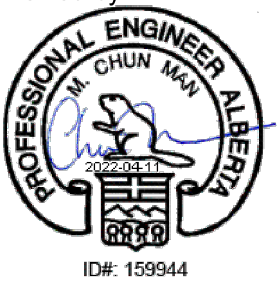
Reviewed by:



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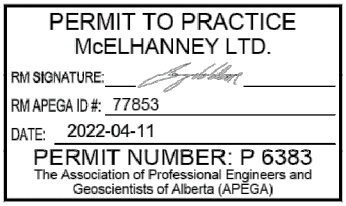

Cory Wilson, P.Eng., RSP1
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This report has been prepared by McElhanney Ltd. at the request of Trinity Bible Church. The information and data contained herein represent McElhanney's best professional judgment in light of the knowledge and information available to McElhanney at the time of preparation. Except as required by law, this memo and the information and data contained herein are to be treated as confidential and may be used and relied upon only by the client, its officers, and employees.

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APPENDIX C

WATER SYSTEM INSPECTION

Water Well Drilling, Rehabilitation & Abandonments
Pumps & Pressure Systems Maintenance & Installation
Water Filtration, Purification & Treatment
Shock Chlorination & Well Maintenance

(403)605-3323

Water System Inspection

Date April 1 2022
Well ID Unknown
LSD

Customer- Trinity Bible Church **Phone 403-760-7330**

Address- 105 Harvey Heights Canmore AB

Pumping System				Model	Voltage	HorsePower
Pump Type	Jet ■	Submersible ☐	Other ☐	SPLC-2H 1F98U	115V	1/2hp
Pump Performance	Gallons/Minute	5gpm		Amps Loaded	12.4 amps	
Motor Windings Y&B	N/A		Start Windings R&Y	N/A		

Notes- Pump and pressure system in crawl space under porch, pump working with short cycle and not allowing time to cool between cycles.

Pressure System	☐ Constant Pressure	■ Pressure Tank & Switch	☐ Other
Make		Pro Source	
Model		PSP-19T	
Tank Size/Pressure		26L/ water logged with low pressure	
Control Box Condition		N/A	
Switch/Sensor		integral on pump- points worn	

Notes- Brass and galvanied fittings, pressure tank is water logged causing pump to short cycle and heat up, system maintenance recommended with new pressure tank, remove and replace galvanized and ABS fittings. Single pole 115v breaker, pump connected with cord to outlet near pump.

Cistern	Type		Size		Location	

Notes N/A

Filtration & Treatment	Make	Model	Comments
Iron Filter			
Water Softener			
Reverse Osmosis			
Other			

Notes- N/A

Accessories	Location	Comments
Yard Hydrants		
Stock Waterers		
Other		

Notes

Additional Comments- Current home owners like the taste etc of the water. Overall lots of water available, pump system and pressure tank need serviced. Well construction not compliant with water license standards.

MyWater Drilling & Pump Services Ltd **Water Well Flow Test** **(403)605-3323**

	2 Hour			4 Hour		
	1 Hour Pumping	1 Hour Recovery		2 Hours Pumping	2 Hours Recovery	
Date	April 1 2022					
Client Name	Trinity Bible Church- Building Project Team		Phone Number	403-760-7330		
Address	105 Harvey Heights Canmore AB		GPS	N- 51.112560		
				W- 115.368930		
Well ID#	Unknown					
LSD			Owners Name			
				Depth During		
Minutes	Pumping	Recovery	Minutes	Pumping	Recovery	
0	5.08	5.09	75			
1	5.09	5.09	90			
2	5.09	5.08	105			
3	5.09	5.08	120			
4	5.09	5.08				
5	5.09		Total Drawdown			
6	5.09		Pumping Rate			
7	5.09		Measurement Units			
8	5.09		Well cap type and condition		Steel plate	
9	5.09		Grade to top of casing		in basement	
10	5.09		Casing Material	☐ Steel	☐ PVC	■ Other
12	5.09		Casing Size	30" galvanized		
14	5.09		Notes			
16	5.09		Bored well depth from top of casing 7.4m 30" Bored/dug well in basement of house with steel plate cover. Well production greater than 5 gpm.			
18	5.09					
20	5.09					
25	5.09					
30	5.09					
35	5.09					
40	5.09					
50	5.09					
60	5.09					
Total Drawdown		0.01m				
Pumping Rate		5 IGPM				
Measurement Units		meter / igpm				
Test Conducted By	AAM					

WSH Labs (1992) Ltd.

3851B – 21 Street NE • Calgary, Alberta, Canada • T2E 6T5

Phone: (403) 250-9164 • Fax: (403) 291-4597 • www.wshlabs.com

Mywater Drilling & Pump Services

Phone: (403) 605-3323 **Lab Number:** 92387
Fax:
Email: tony.mywater@gmail.com **PO Number:**

Sample Info: Chris Mink
TBC

Sampled By: AM
Date Sampled: 4/1/2022
Date Received: 4/2/2022
Date Reported: 4/5/2022

TEST REPORT

Analyte	Units	Result	CDW Guideline Maximum	Detection Limit
Calcium	mg/L	61.0	No Guideline	0.02
Iron	mg/L	<0.03	AO: 0.3	0.03
Magnesium	mg/L	20.9	No Guideline	0.02
Manganese	mg/L	<0.01	AO: 0.02, MAC: 0.12	0.01
Potassium	mg/L	0.6	No Guideline	0.02
Sodium	mg/L	4	AO: 200	0.02
Bicarbonates	mg/L	222	No Guideline	-
Bromides	mg/L	<0.2	No Guideline	0.2
Carbonates	mg/L	0	No Guideline	-
Chlorides	mg/L	4.0	AO: 250	0.1
Fluorides	mg/L	0.14	MAC: 1.5	0.02
Nitrates as N	mg/L	0.31	MAC: 10	0.04
Nitrites as N	mg/L	<0.05	MAC: 1	0.05
NO_3 + NO_2 as N	mg/L	0.31	No Guideline	0.04
Sulfates	mg/L	54	AO: 500	0.9

Parameter	Units	Result	CDW Guideline Maximum	Detection Limit
Electrical Conductivity (at 25°C)	µS/cm	446	No Guideline	0.2
pH	pH	8.03	7.0 - 10.5	-
Hardness (as $CaCO_3$)	mg/L	238	No Guideline	0.1
Total Alkalinity (as $CaCO_3$)	mg/L	182	No Guideline	3
P-Alkalinity (as $CaCO_3$)	mg/L	0	No Guideline	-
Hydroxide (as $CaCO_3$)	mg/L	0	No Guideline	-
Total Dissolved Solids (calculated)	mg/L	253	AO: 500	4

Microbiology	Units	Result	CDW Guideline Maximum
Total Coliform	CFU/100 mL	0	MAC: Zero / Absent
Escherichia Coliform	CFU/100 mL	0	MAC: Zero / Absent

WSH Labs (1992) Ltd. as per: KBW

Sum of Cations	4.94	TDS / EC Ratio	0.57
Sum of Anions	4.90	Sodium Adsorption Ratio	0.10
Ion Balance	1.01	Saturation Index	0.67

WSH Labs (1992) Ltd.

3851B – 21 Street NE • Calgary, Alberta, Canada • T2E 6T5

Phone: (403) 250-9164 • Fax: (403) 291-4597 • www.wshlabs.com

Legalities

Lab Number: 92387

(1) The results above are related only to the items analyzed.
(2) Results apply to the sample(s) as received.
(3) Analytical determinations were performed in Calgary, AB. 3851B - 21 Street NE.
(4) Condition of sample(s) upon receipt:
Acceptable
(5) External provider(s) of laboratory results:

References

(1) Accredited by CALA to ISO/IEC 17025 for specific tests.
(2) Guidelines for Canadian Drinking Water Quality are provided courtesy of Health Canada, September 2020.
https://www.canada.ca/content/dam/hc-sc/migration/hc-sc/ewh-semt/alt_formats/pdf/pubs/water-eau/sum_guide-res_recom/summary-table-EN-2020-02-11.pdf

Acronyms & Nomenclatures

< denotes less than detection limit
> denotes greater than
AO = Aesthetic Objective
CDW = Canadian Drinking Water
MAC = Maximum Acceptable Concentration
OG = Operational Guidance Value
TNTC = Too Numerous To Count (>80 colonies)

Standard Methods for the Examination of Water and Wastewater 23rd Edition (2017)

Alkalinity. 2320 B. Titration Method.
Ammonia Nitrogen. 4500-NH3 C. Titrimetric Method.
Anions. 4110 B. Ion Chromatography with Chemical Suppression of Eluent Conductivity.
Biochemical Oxygen Demand. 5210 B. 5-Day BOD Test.
Color. 2120 B. Visual Comparison Method.
Conductivity. 2510 B. Laboratory Method.
Fluoride. 4500-F^- C. Ion-Selective Electrode Method.
Hardness. 2340 B. Hardness by Calculation.
Metals. 3125 B. Inductively Coupled Plasma / Mass Spectrometry (ICP-MS) Method.
Organic Carbon. 5310 B. High-Temperature Combustion Method.
pH. 4500-H+ B. Electrometric Method.
Total Kjeldahl Nitrogen / Nitrogen (Organic). 4500-Norg B. Macro-Kjeldahl Method.
Total Suspended Solids. 2540 D. Total Suspended Solids Dried at 103-105°C.
Turbidity. 2130 B. Nephelometric Method.

Hach Methods

Chemical Oxygen Demand. Hach Method 8000.
Chlorine, Total & Free. As per Hach CN66 Test Kit Instructions.
Coliforms, Total and E. coli. (Membrane Filtration). Hach Method 10029.
Ortho-Phosphate. Hach Method 8048.
Sulfides. Hach Method 8131.
Tannin & Lignin. Hach Method 8193.
Total Phosphate. Hach Method 8190.

APPENDIX D

ONSITE WASTEWATER TREATMENT SYSTEM PROPOSAL

D&S Enterprises
Wastewater Design
403-652-0348

"Designs - It's a *Dirty* Secret"

www.dswastewaterdesign.com

dswastewaterdesign@gmail.com

Onsite Wastewater Treatment System Proposal for:

Trinity Bible Church

105 Harvie Heights Road

Canmore, Alberta

"Designs - It's our Dirty Secret"

D&S Enterprises Wastewater Design

Onsite Wastewater Treatment System Proposal (OWTS)
Trinity Bible Church – Building Committee
1717 Bow Valley Trail
Canmore, AB
T1W 1L7

Date: April 15, 2022

Address of Property: 105 Harvie Heights Road, Canmore, Alberta

To Whom It May Concern,

At the request of the Trinity Bible Church Building Committee this initial preliminary proposal has been prepared.

The site currently has an older home and various outbuildings. The current onsite wastewater treatment system will require updating to current code requirements if the proposed project is permitted to move forward. There also is a current water well on the property.

On Saturday March 26, 2022, at approximately 10:30 – 11:30 A.M. the site was visited by members of the Trinity Bible Church Building Committee, Chris Mink and Daniel Morris (D&S Enterprises). The existing tank was located and appears to be a leaching pit. This may have been compliant at the time of installation, however, would not meet the requirements of the current Alberta Private Sewage Systems Standard of Practice 2015. The new version of The Alberta Private Sewage Systems Standard of Practice 2021 has been released however, does not come into force until November 1, 2022.

The purpose of the site visit was to see the property and discuss placement of the proposed new building and potential areas for a soil-based treatment component. The code requirement for designing soil based onsite wastewater systems is to excavate and analyze a minimum of two soil profiles near the selected area of the proposed system. Soil samples from the limiting soil condition are to be obtained and sent to a certified laboratory for texture by hydrometer testing. Soil characterization can only be completed on soil profiles that are not frozen. The required investigation cannot be completed until frost is totally out of the ground. When the project moves forward, the first step will be to perform a soils investigation to confirm suitable types of onsite wastewater treatment systems for the property.

The preliminary site visit identified a suitable area on the property for a soil-based treatment component, provided the soil inventory supports a soil-based treatment component. The area appears to have undisturbed soils and currently appears to be a grassed area that has not had traffic on it other than a lawn tractor. Based upon preliminary projected flow volumes, the proposed treatment area appears to be sufficiently sized and achieve all required setback distances.

From previous site and soil investigations completed in the Bow Valley area, it is likely an onsite soil-based wastewater treatment system can be designed for the new proposed church building. Best case scenario would require a package treatment plant and a buried treatment field, provided there is approximately 1800 mm (6 feet) of suitable soil before encountering a restrictive condition.

Second soil-based scenario would be if there was ~900 mm (3 feet) of suitable soil before encountering a restrictive condition, then a package treatment plant and a sand treatment mound could be designed. Worst case scenario for the site would be unsuitable soils (less than 300 mm or 1 foot of suitable soils from ground surface downward) for a soil-based treatment system and the wastewater produced from the facility would have to be stored in a holding tank and disposed of off site at a registered receiving facility.

The projected flow volumes from the facility are anticipated to exceed 5.68 m^3 (1250 Imperial Gallons) per day, based upon projected values from the 2015 Alberta Private Sewage Systems Standard of Practice. This will require the design of the system to involve a professional wastewater Engineer. Depending upon final wastewater volumes determined for the site, there may also be the requirement to involve a hydrogeologist, to determine shallow groundwater flow, quality and direction of flow.

The well information has also been reviewed and it appears to be suitable for the proposed facility.

Total projected cost for the initial site and soil investigation and a preliminary design will be determined if the project proceeds. Design and cost will vary with complexity of the project and any additional requirements requested by the Authority Having Jurisdiction.

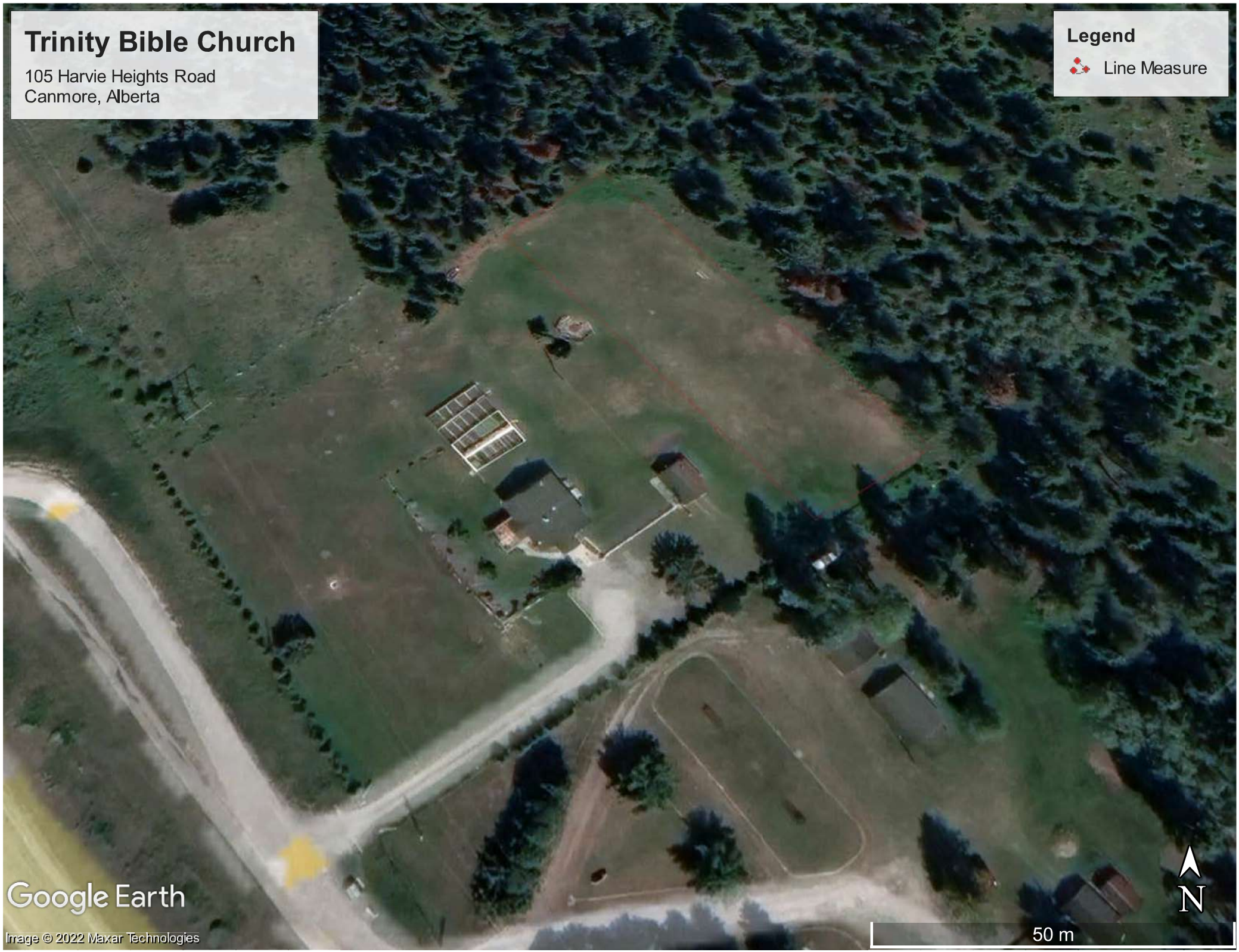
If you have any questions or concerns regarding this preliminary proposal, please contact us for clarification.

Daniel Morris

Digitally signed by Daniel A. Morris
DN: cn=Daniel A. Morris, o=D&S Enterprises, ou, email=dswastewaterdesign@gmail.com, c=CA
Date: 2022.04.16 17:03:52 -06'00'
Adobe Acrobat version: 2022.001.20117

Certified Designer and Installer within the province of Alberta
Private Sewage Working Group Member for 2009, 2015 and 2021 Alberta Private Sewage Systems Standard of Practice
Instructor for Alberta Onsite Wastewater Management Association (training body that delivers Alberta Municipal Affairs training course requirements for Private Sewage Installers within the province of Alberta) 2007 to current date
Instructor for Alberta Onsite Wastewater Management Association to deliver mandatory update training for installers for the 2015 and 2021 Alberta Private Sewage Systems Standard of Practice

D&S Enterprises, High River, AB
403-652-0348
dswastewaterdesign@gmail.com www.dswastewaterdesign.com


Trinity Bible Church
105 Harvie Heights Road
Canmore, Alberta
Legend
Line Measure
Google Earth
Image © 2022 Maxar Technologies
N
50 m


Trinity Bible Church
105 Harvie Heights Road
Canmore, Alberta
Legend
Line Measure
Proposed soil-based treatment area - PROVIDED soil profile investigation allows for a soil-based treatment component
Existing tank/ leaching pit to be removed and decommisioned
Google Earth
Image © 2022 Maxar Technologies
N
30 m


Date & Time: Sat, Mar 26, 2022, 11:06:25 MDT
Position: 051°06'47.47"N / 115°22'8.93"W (±8.0m)
Altitude: 1328m (±3.0m)
Datum: WGS-84
Azimuth/Bearing: 185° S05W 3289mils True (±13°)
Elevation Grade: -015%
Horizon Grade: +001%
Zoom: 1.0X
canmore


Date & Time: Sat, Mar 26, 2022, 11:06:19 MDT
Position: 051°06'47.46"N / 115°22'8.96"W (±6.0m)
Altitude: 1328m (±3.0m)
Datum: WGS-84
Azimuth/Bearing: 132° S48E 2347mils True (±13°)
Elevation Grade: -005%
Horizon Grade: -003%
Zoom: 1.0X
canmore


Date & Time: Sat, Mar 26, 2022, 10:54:36 MDT
Position: 051°06'44.90"N / 115°22'10.42"W (±16.0m)
Altitude: 1320m (±3.2m)
Datum: WGS-84
Azimuth/Bearing: 054° N54E 0960mils True (±23°)
Elevation Grade: -019%
Horizon Grade: +000%
Zoom: 1.0X
canmore
SOVEREIGN

APPENDIX E

WHAT WE HEARD REPORT

What We Heard Report

Pre-Application No. PL20210365

April 27, 2022

Submitted to: Town of Canmore
Prepared by McElhanney

Contact
Anil Yadav
Urban Planner
403 621 4055
ayadav@mcelhanney.com

McElhanney Ltd.
203 – 502 Bow Valley Trail,
Canmore AB Canada T1W 1N9

Our file: 2531-213-1500

Contents

1. Open House Schedule

Date: 6 April
Time: 5:30pm
Venue: Virtually on Teams

2. List of Participants registered and attended

1. Jan Guenther - Present
2. Clarence Rabuka - Present
3. Shawn Franklin - Present
4. Warren Lippitt - Present
5. Michelle Ouellette - Present
6. Anil Yadav - Present
7. Glenis Raffan - Regret

3. Feedback Received

- A concept of Church Garden in England was introduced and suggested to replicate at the new location. This will provide an opportunity for community events and bring attraction during the day as well as night time. Churches in England allow open land within the church property to be used for community gardens. These gardens are primarily utilized to grow food for food banks, church pantries, feeding programs and church suppers
- The proposed site has ample space to plant trees and shrubs. The church has seen increase in attendance of children and families from Banff
- Friendly green area without fences to allow barrier free wildlife movement
- A fully functional kitchen was suggested to be made available to accommodate future events

3.1. AD GRAPHIC

NOTICE

Virtual Open House

Trinity Bible Church
Land Use Bylaw Amendment
for 105 Harvie Heights Road

You are invited to learn more about the development of a new location for Trinity Bible Church.
As community members, we value your input and hope you will join us to view the proposal.

When: Wednesday, April 06 @ 5:30pm
Where: Online

Email ayadav@mcelhanney.com to register for the event.

If you are unable to attend, please email or call 403-621-4055 so we can forward information and a comment form to you.

3.2. AD IN ROCKY MOUNTAIN OUTLOOK

The ad was posted in the Rocky Mountain Outlook on 24 March 2022 for a week.

Bow Valley ballers fall at zones, optimistic for 2023

JORDAN SMALL

BOW VALLEY – Provincials are out of reach this year for local basketball teams, but there's growing confidence already for what's to come next season.

A different kind of March Madness got underway earlier in March as several local high schools competed at Alberta's south central zones.

The Canmore Wolverines 3A senior boys went 1-2, defeating the Bow Valley Bobcats 78-69 and losing to the No. 1 ranked Brooks Buffalos, 87-69, and to the George McDougall Mustangs, 78-71, in a back and forth game.

"Those were two gutsy performances against top teams in the province and we came at them and we made them nervous," said head coach Michael Langlois.

"When we had to turn it on, we could turn it on and compete with anybody in the province. We're not going to provincials this year, however, there are teams going we could beat, it's just that we just happen to be in the wrong zone."

Wolverines Jaxon Fisher, along with twin brother Ethan, are the team's biggest offensive threats.

The Grade 11 guard said the team was disappointed with zones, but overall pleased with the season.

With just three Grade 12's on the Wolverines roster, including only one in the starting line up, there's high expectations for next season for coaches and players alike.

"I think next year we'll do better than we did this year," said Fisher. "Next year, we'll be all seniors and Grade 12's."

The Our Lady of the Snows Avalanche's 2A boys was the No. 2 ranked squad at zones, and smashed Prairie Christian Academy in its opening game by nearly 30 points.

The Avalanche knocked off Drumheller in its second game to set up a game against the No. 1 ranked St. Joseph's Collegiate, who held two regular season victories against OLS.

"We felt confident in our chances to win and go to provincials," said head coach Steven Ples.

"It was a one or two possession game the entire game, we had the lead with less than four minutes left in the game. Unfortunately, we were not able to hold on and we lost by five points in the end. It was a heartbreaking loss, but St. Joseph's Collegiate was a great team and we battled well against them."

The Banff Bears 2A junior varsity girls went 1-2, with tight finishes only two points apart.

The Bears lost their first game 55-54 against Notre Dame, clawing back from a 22-point deficit.

"The girls almost did the impossible by putting up a 24 point fourth quarter to get back into the game," said head coach Marc Geestman. "Notre Dame lost by only two points to the team that won the championship, so we are very close to challenging for the banner."

Canmore Wolverines guard Jaxon Fisher drives the ball to the hoop against the Brooks Buffalos at the 2022 South Central Zones tournament. STEPHEN LEGAULT PHOTO

The Bears won its next game 38-36 against Hugh Sutherland. In the consolation final, the Bears were just barely edged out by one point against Sundre, losing 40-39 in a hotly contested game.

"This was one of the most fun games I've ever coached, and the girls had two other teams cheer for them, which created an amazing atmosphere," said Geestman.

"The entire weekend was a celebration of sports.

"This group is completely basketball crazy, and I couldn't be happier with their development. And they are a blast to coach. Next year we are going to go for the first BCHS girls basketball banner."

Contact
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403 621 4055
ayadav@mcelhanney.com

McElhanney

CANADA BEST MANAGED COMPANIES

APPENDIX F

SUSTAINABILITY SCREENING REPORT

McElhanney

BEST MANAGED COMPANIES

Relocation of Trinity Bible Church to 105 Harvie Heights Road

Sustainability Screening Report

Pre-Application No. PL20210365

April 29, 2022

Submitted to: Town of Canmore
Prepared by McElhanney

Contact
Anil Yadav
Urban Planner
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ayadav@mcelhanney.com

McElhanney Ltd.
203 – 502 Bow Valley Trail,
Canmore AB Canada T1W 1N9

Our file: 2531-213-1500

Contents

Appendix

1. Overview

The purpose of the Sustainability Screening Report is to demonstrate how the proposed Municipal Development Plan Amendment and Land Use Bylaw Amendment applications will provide a net benefit to the community and build on the Town's sustainability initiatives.

The Trinity Bible Church was established in Canmore in 1988 and is currently operating at 1717 Bow Valley Trail. Since moving to the current location, the congregation has outgrown the facilities which also require continuing and increasing maintenance. It has become the desire of the congregation to locate to a new site and build a facility which will serve the organization into the future. The proposed facility may be up to 6000 square feet and provide sufficient space for approximately 200 people to congregate. Accessory uses within the new space would include offices, commercial kitchen, multi-purpose rooms, stage and classroom facilities.

Across the Bow Valley and especially in Canmore, sites available for development of either commercial uses or religious assemblies remain very limited. The site located at 105 Harvie Heights has become available, and the desire is to re-district the site to accommodate this development.

The relocation of the Cultural Establishment to 105 Harvie Heights Road will not impact the environment and will create a positive net social & economic benefit for the Town of Canmore.

2. Sustainability Screening Analysis

2.1. BUILDING ECONOMIC SUSTAINABILITY

How does the project contribute to the priorities contained in the Economic Development and Tourism Strategy?

The Economic Development Strategy identifies three major physical barriers to Canmore's economic growth. First, the limited availability of developable land and second, supply and diversity of housing. The relocation of the church will help address both issues by providing land for commercial development ultimately resulting not just increase in tax base but also generating jobs and housing for employees.

The existing site falls under the Bow Valley Trail Area Redevelopment Plan Bylaw 11-2012. It describes the existing site as one of the Town's primary visitor accommodation areas and an important commercial area that supports many sectors of Canmore. Considering the location, the proposal provides the opportunity for the existing site to be developed as what is considered more favourable to achieve the

economic goals of the ARP. Availing the existing church site to redevelopment, economic goals are met in according to the ARP and the Economic Development and Tourism Strategy.

2.2. ENHANCING ENVIRONMENTAL STEWARDSHIP

What water saving measures does the project propose (demonstrable improvement over average)?

It is intended that high efficiency fixtures will be incorporated. These will be explored in greater detail during detailed design. The proposed septic system for the disposal of grey and black water will be managed within the site, thus not putting additional burden on town's sewerage system.

Does the project utilize a rainwater harvesting system or use 100% infiltration for storm water?

Opportunities to capture, retain, and/or re-use rainwater will be explored during detailed design. The benefits of these strategies would be to retain storm water on site and to encourage water infiltration directly into the ground instead of contributing to runoff.

What construction waste diversion rate will be achieved?

The percentage of diverted construction waste as a means of environmental stewardship and responsible development will be determined during detailed design of the project.

What long-term, operating waste diversion flows does the project propose?

Waste, recycling, and organics collection will comply with the requirements of the Town of Canmore's Engineering Design and Construction guidelines. Bear proof bins will be provided if needed. Locations will be coordinated with Town of Canmore's input during design.

Does the project encourage people to use bicycles or walking as a means of transportation?

The proposed development is well connected through the existing Palliser Pathway and the Rocky Mountain Legacy Trail. This encourages use of active transit without an additional cost. The number of bicycle parking stalls, location, and quality at the cultural establishment will be determined during design and will meet the minimum requirements of the Land Use Bylaw.

What is the average size of the dwelling or accommodation units?

The proposed development does not have dwelling or accommodation units. More details will be provided during the detailed design stage.

What level of green building initiatives does the project include?

It is anticipated that this project will be constructed to Built Green standards. The standard level pursued will be determined during detailed design.

What level of energy consumption does a residential building achieve?

The degree of EnerGuide scoring will be determined during detailed design.

Are there environmentally sensitive lands within or adjacent to the site?

The site is within the Conservation Area and outside of the Harvie Heights Regional Habitat Patch. To be determined.

2.3. STRENGTHENING THE SOCIAL FABRIC

Does the project increase the supply of truly affordable housing? (PAH)

No housing units are proposed.

Does the project exceed minimum municipal reserve requirements (including cash in lieu)? (What percent is above or below requirements)

More than 85% of the site is left undeveloped and will be used as green space for community events.

Does the projects public consultation program exceed statutory requirements?

An open house was held online, attended by seven members of the community.

3. Closing

The proposed development will bring outstanding community benefits (listed in table below) and economic growth opportunities for the Town. These benefits are encouraged and supported under the plans and policies of the Town.

SPIRITUAL / EMOTIONAL SUPPORT	COMMUNITY SUPPORT PROGRAMS
• Home to 100 + Canmore residents & families providing weekly spiritual encouragement and biblical training • Church home away from home to many visitors (both vacationers & short-term workers) • Kids, Youth, Adult, Senior & Family programs • Bereavement Support & Counseling through the GriefShare outreach • Summer kids programs • Meeting Centre for Bow Valley Churches • Canmore Ladies Christmas Banquet (13 years) • Support many international causes	• Multi-purpose venue to support mid-week programs (Drum Circle, Bow Valley Choral) • Young Mom's/ tot drop-in play time • Skiers Church at Sunshine Village • Providing volunteers for Food & Friends • Safe Park program • Benevolent offering cheques (i.e.: Canmore Food Bank & others) • Support for Steve Sellers with Athletes in Action working with the Canmore Eagles & Olympic Athletes • Support for Youth Unlimited: working with youth • Affordable childcare (future offering)

Contact
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McElhanney

CANADA BEST MANAGED COMPANIES

APPENDIX F-1

SSR MATRIX

Sustainability Screening Report Process
Impact - Offset Matrix

Summary Page

Overall Results	Impact	%	Offset	%
Economic Sustainability	0.00	0.00	0.00	0.00
Environmental Stewardship	-0.15	100.00	0.20	100.00
Social Fabric	0.00	0.00	0.00	0.00

Total Impact	Total Offset	Net Score
-0.15	0.20	0.05

Economic Sustainability	
Income and Wages	0.00
Non-Residential Tax Assessment	0.00

Economic Sustainability	
0.00	InfraCycle Assessment
0.00	Increasing commercial assessment
0.00	New employment above median salary
0.00	New employment outside of 4 significant sectors
0.00	Floor space for Economic Development & Tourism
0.00	Percentage of local construction labour value
0.00	Economic leadership or innovation

Environmental Stewardship	
Residential Water Consumption	0.00
Commercial Water Consumption	0.00
Residential Solid Waste Generation	0.00
Commercial Solid Waste Generation	0.00
All Building Energy use and GHG emissions	0.00
Transportation	0.00
Infrastructure (sanitary-gravity)	0.00
Infrastructure (sanitary-pressure)	0.00
Environmentally Sensitive Lands	0.00
Land Consumption	-0.15
Efficient Residential Land Use	0.00
Efficient Commercial Land Use	0.00
Efficient Industrial Land Use	0.00
Efficient Mixed Use Residential Land Use	0.00
Efficient Mixed Use Commercial Land Use	0.00
Metres of trails / capita	0.00
Metres of new roads to service development	0.00

Environmental Stewardship	
0.00	Residential / commercial mix of uses
0.00	Higher density than current levels
0.00	Access to community services from residences
0.00	Access to services from the commercial site
0.00	Water saving measures
0.00	Rain water harvesting system or infiltration
0.00	Construction waste diversion rate
0.00	Long-term, operating waste diversion
0.00	Parking stalls are un-assigned
0.00	Bike parking of adequate quality
0.00	Average size of the dwellings
0.00	LEED Certified
0.00	Built Green Certified
0.00	Other green building certification programs
0.00	Commercial energy consumption reduction
0.00	Residential energy consumption reduction
0.00	Environmentally sensitive land protection
0.00	Minimize density adjacent to sensitive lands
0.00	Reuse an existing contaminated site
0.00	Environmental leadership or innovation

Social Fabric	
Affordability of Market housing (in relation to median income)	0.00
PAH Housing	0.00
Seniors Housing	0.00
Employee Housing	0.00
Childcare spaces	0.00
Library	0.00
Food Bank Usage	0.00
Social Assistance Payments	0.00
Crimes Against Persons and Property	0.00

Social Fabric	
0.00	Units of perpetually affordable housing
0.00	Cash contribution towards PAH
0.00	Bedrooms of employee housing
0.00	Bedrooms for employees earning < median income
0.00	Cash contribution towards employee housing
0.00	Units of seniors housing
0.00	Percentage of the employees housed
0.00	Employees rental assistance 10% below market levels
0.00	Percentage of site ares for social interaction
0.00	Reuse an existing historic property or building
0.00	Exceed minimum municipal reserve requirements
0.00	Accessible recreation or cultural facilities or programs
0.00	Contribution to recreation facilities
0.00	Support school enrollment
0.00	Support for current childcare facilities
0.00	Support for cultural establishments
0.00	Support for other non-profit community organizations
0.00	Unique supports for community programming
0.00	Support for special events
0.00	Public art component
0.00	Public consultation program
0.00	Social leadership or innovation

APPENDIX G

TRINITY BIBLE CHURCH DIRECT CONTROL DISTRICT

3.32 TRINITY BIBLE CHURCH DIRECT CONTROL DISTRICT [Town to insert #]

3.32.1 Purpose

To provide for a cultural establishment and accessory dwelling unit (rectory).

3.32.2 Permitted Uses

Accessory Building
Cultural Establishment
Cultural Event
Day Care
Private Education Service
Athletic and Recreational Facility, Indoor
Athletic and Recreational Facility, Outdoor
Arts / Theatre

3.32.3 Regulations

3.32.3.1 The minimum lot area shall be 0.8 ha.

3.32.3.2 The minimum site width shall be 76.56 m.

3.32.3.3 The maximum site coverage for all buildings shall be 12%.

3.32.3.3 The maximum building height shall be 13 m.

3.32.3.4 Buildings and structures shall be set back a minimum distance of 15 m the front yard.

3.32.3.5 Rear yard setback shall be 7.5 m.

3.32.3.6 Side yard setback shall be 6 m.

3.32.3.7 Accessory Buildings

a. Up to two (2) Accessory Buildings shall be permitted on a lot.

3.32.4 Additional Requirements

3.32.4.1 Private Servicing

The site shall be serviced with private on-site sanitary servicing. The regulations for this shall follow the Alberta Private Sewage Systems Standard of Practice 2015.

3.32.4.2 Water Main Upgrade

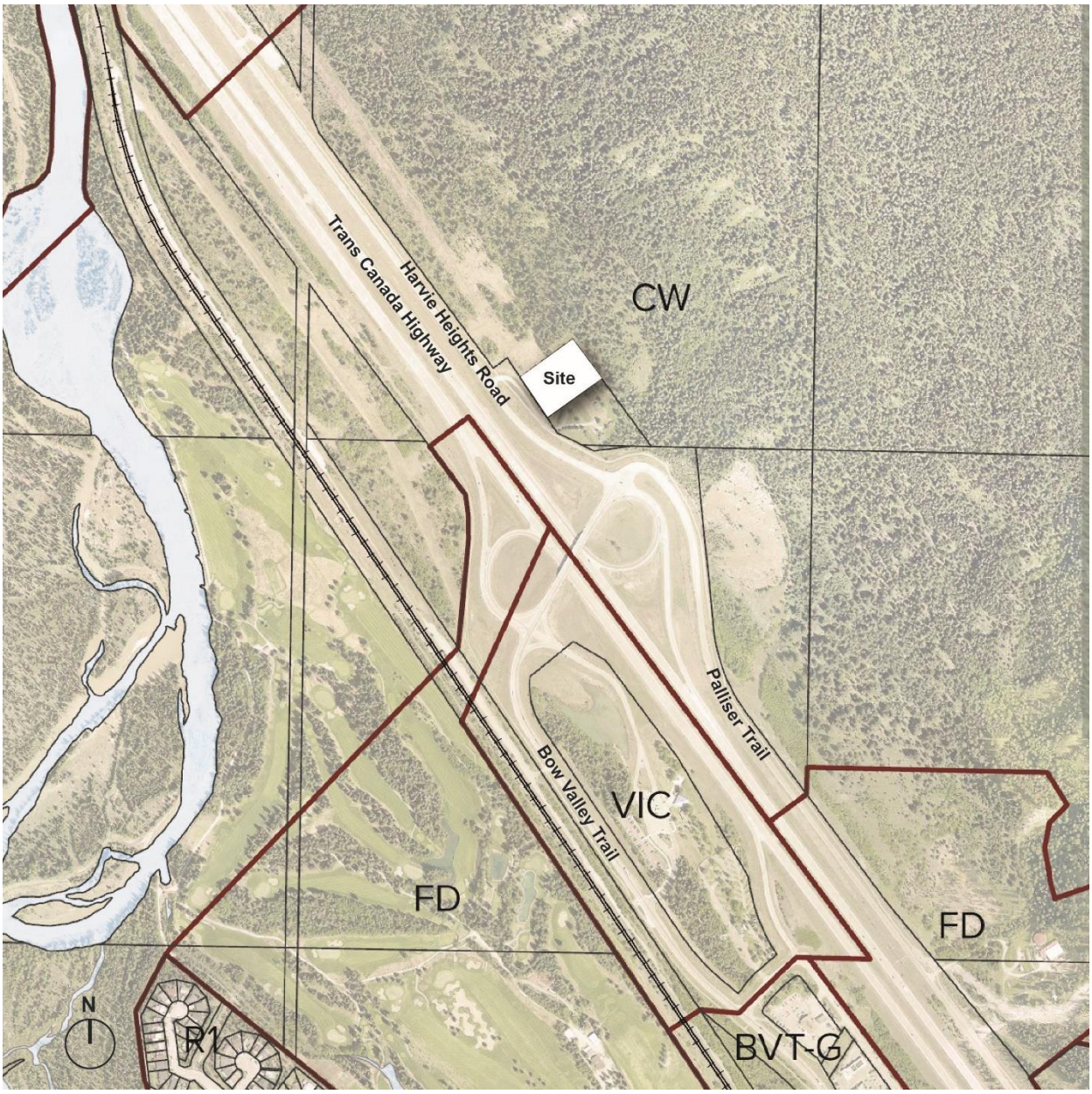
Water servicing to the site shall be provided to ensure adequate domestic water supply and be upgraded to accommodate fire protection.

3.32.4.3 Schedules

Schedule “A” shows the location of the District.

Schedule A: Trinity Bible Church Direct Control District

Legal Description: Plan 8610642, Lot A
Municipal Address: 105 Harvie Heights Road



ENVIRONMENTAL IMPACT STATEMENT

Trinity Bible Church Land Use Re-Districting Proposal

105 Harvie Heights, Canmore AB
Pre-Application #PL20210362
Version 3.0

JANUARY 2023

REVISIONS PAGE

105 Harvie Heights, Canmore AB

Pre-Application #PL20210362

Version 2.0

Client:	Engineer:
Trinity Bible Church Land Use Re-Districting Proposal	Associated Environmental Consultants Inc.

Revision/ Issue	Date	Description	Prepared by/ Reviewed by	Reviewer
1.0	2022-09-29	Draft EIS for client review	Keenan Rudichuk, R.P.Bio.	Michelle Ouellette, MBA, BSc, RPP, MCIP
1.1	2022-10-11	Draft EIS for Town of Canmore	Keenan Rudichuk, R.P.Bio.	Town of Canmore; MSES
2.0	2023-01-02	Revised Draft EIS for Town of Canmore	Keenan Rudichuk, R.P.Bio.	Town of Canmore; MSES
3.0	2023-01-31	Final EIS Submission	Keenan Rudichuk, R.P.Bio.	Town of Canmore

TABLE OF CONTENTS

Appendix D - Canmore Pathways and Trails

LIST OF TABLES

LIST OF FIGURES

1 INTRODUCTION

1.1 Background

Associated Environmental Consultants Ltd. (Associated) was retained to complete an environmental impact statement (EIS) for a proposed land use plan for a parcel of land located in Plan 8610642, Lot A, 105 Harvie Heights Road, in Canmore, Alberta (the property). An EIS is required by the Canmore Municipal Development Plan (TOC 2016) because the property is located adjacent to an area designated as a Conservation Area (such as a habitat patch) and is registered as Conservation Wildlands within the Land Use Bylaw. The property is adjacent to the Harvie Heights Regional Habitat Patch (HHRHP), and the development proposal includes a site-specific development district such that there is no extension or change to the Canmore growth boundary established in the Municipal Development Plan. The EIS is to be submitted to the decision-making authorities of the Town (Town of Canmore 2016) in support of the land use application.

The general contents to be provided in an EIS are outlined in the Canmore Environmental Impact Statement Policy (2018). The Town is responsible for preparing a Terms of Reference (ToR) that addresses the EIS policy and sets the specific requirements for what must be included in an EIS (Town of Canmore 2016). The Town contracted a qualified, independent, third-party reviewer that helped prepare the ToR and who will review the EIS.

The property is approximately 8,023 m^2 and is currently sited with a small home, an outbuilding, a small garden area, and a manicured lawn surrounded by a fence. The current fencing on the site is a 4-foot-high page wire fence on the east and south side of the site. This fencing will be left in place following construction. New fencing will be constructed along the west and north boundary of the parcel which will serve to keep humans inside the parcel while deterring wildlife from coming in. Informative signage will be installed in multiple places along the fence to educate patrons to the church about the sensitivity of the HHRHP and the importance of not encroaching into it.

It is expected that the 4-foot-high page wire fencing (that will include signage) will be effective at keeping humans out of the HHRHP while providing good sight lines and permeability for wildlife movement, if necessary. The fence design is expected to reduce unprovoked crossing by wildlife because it will not be the most cost-efficient movement path (i.e., wildlife will take the path of least resistance), yet if crossing is provoked, as in the case with ungulate prey needing to escape a predator, the fence will be low enough height to not restrict movement for the prey or predator species (i.e., the fence will be permeable to wildlife and will not result in cul-de-sac effects). The new fence will be designed to be the most cost efficient for the proponent while meeting the needs of the HHRHP. The new fence will tie into the existing fence and will also be 4 feet in height and constructed with page wire secured to a wooden post to maintain line-of-sight visibility on both sides of the fence (which will avoid a startled response if humans and wildlife encounter one another), and constructed to the satisfaction of the Town of Canmore and Alberta Environment and Parks. A conceptual project plan (Appendix A) has been developed for the property, which may be revised to a final land use plan following the EIS and land use amendment process.

The proposed project will result in the demolition of the existing farmhouse and the construction of a 570.9 m^2 building to accommodate approximately 200 parishioners. The new facility will include offices, a commercial kitchen, multi-purpose rooms, a stage, and classroom facilities.

1.2 Purpose of the Environmental Impact Statement

The purpose of the EIS is to provide information to the Town of Canmore Council to make an informed decision on the proposed land use plan. In summary, the EIS will:

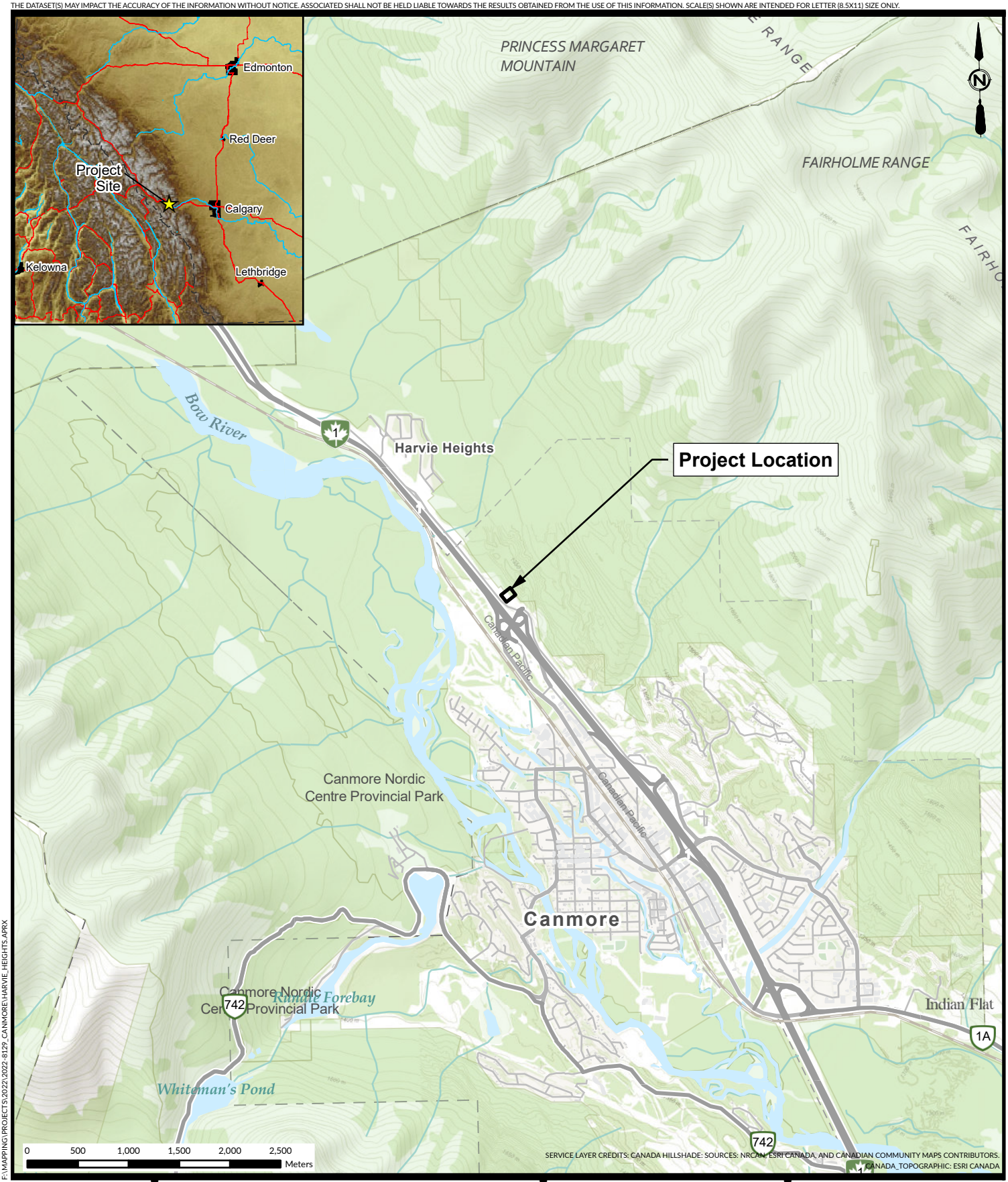
- Describe the proposed new land use;
- Describe the existing environmental conditions and features on and surrounding the property;
- Identify significant natural ecological features;
- Describe potential impacts of the project, prior to mitigation;
- Recommend measures to avoid or reduce these impacts and identify residual impacts and their significance after the implementation of proposed mitigation;
- Recommend whether any further studies or monitoring should be undertaken during mitigation implementation;
- Discuss cumulative effects in reference to existing, approved, and future developments in the area; and
- Identify additional mitigation measures to minimize any impacts on ecosystem components and cumulative effects.

1.3 Physical Setting

The property is located in the northern portion of the Town of Canmore, between the Highway 1/Highway 1A interchange and the HHRHP and Canmore benchlands area. The property has been heavily modified from its natural state. Vegetation clearing, terrain reshaping, building construction, and manicured lawns have been established and maintained on the property. A small garden space is currently located on the property, and for the purposes of this EIS, the garden space will be treated similarly to the manicured lawn, as a highly modified vegetated area. Immediately south of the property is a privately held parcel that has been similarly modified from its natural condition.

The Bow River is approximately 600 m west of the property, across Highway 1, Highway 1A, the Canmore Golf and Curling Club, and the Canadian Pacific (CP) Railway. The property is adjacent to the HHRHP, and the Town of Canmore core is located approximately 2.4 km south of the property (Figure 1-1).

The Bow River valley is an important movement corridor for wildlife in the region, and wildlife corridors and habitat patches have been identified for the areas surrounding the Town of Canmore (BCEAG 2012, Edwards 2013) (Figure 1-2).



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Associated Environmental

AE PROJECT NO.	2022-8129
SCALE	1:50,000
COORD. SYSTEM	NAD 1983 UTM ZONE 11N
DATE	2022-09-20
REV	00
DRAWN BY	BDJ
CHECKED BY	KR

FIGURE 1-1: PROJECT LOCATION

McElhanney Ltd. (Trinity Bible Church)

EIS - Trinity Bible Church
105 Harvie Heights, Canmore, AB

RGE.11 W5

RGE.10 W5

RGE.9 W5

RGE.8 W5

TWP.25

TWP.24

Harvie Heights and Georgetown-CNC Regional Habitat Patch are contiguous with Banff National Park

Project Area

Harvie Heights

Canmore

Grotto Mountain

Exshaw Mountain

Exshaw

Seebe

Dead Man's Flats

Pigeon Mountain

Mount McGillivray

Heart Mountain

Mount Baldy

The Three Sisters

Goat Pond

Whitemans Pond

Grotto Mtn Pond

Gap Lake

McGillivray Pond

Lac des Arcs

Lac Des Arcs

Chilver Lake

Barrier Lake

Stoney I.R. No.142,143,144

BANFF NATIONAL PARK

Corridor Disconnect to be resolved

The area between Bow Valley Provincial Park and the Bow Flats Regional Habitat Patch is currently under review to determine wildlife movement patterns

Wind Valley Regional Habitat Patch is contiguous with the Kananaskis Valley

Road
Rail
Hydrography
Banff National Park
First Nation Reserve

Wildlife Underpass
Wind Valley
Stewart Creek

Wildlife Crossing Structure
Rundle Canal

Regional Habitat Patch
1 Harvie Heights
2 Georgetown - CNC
3 Bow Flats
4 Wind Valley
5 Yamnuska
6 Bow Valley Provincial Park

CNC - Canmore Nordic Centre

Local Habitat Patch
7 Quarry Lake
8 South Canmore
9 Indian Flats

Wildlife Corridor
1 Upper Silvertip
2 Lower Silvertip
3 Georgetown - Quarry Lake
4 Tipple
5 Three Sisters Along Valley
6 Stewart Creek
7 Wind Valley
8 Dead Man's Flats
9 Pigeon

Conceptual Wildlife Corridor

Conservation Easements
A Palliser
B Eagle Terrace
C Canyon Ridge
D 2003 Easement
E 35m Easement

Prepared by: ASRD, Southern Rockies Area, RIU-Calgary.

SCALE
0 1 2 3 4
Kilometres

Government of Alberta

PROJECT: U:\workspace\Landuse\BCEAG\2012\ProjectFiles\TeraFig1_RvsdJan2012_utm11v3.mxd
PLOT: U:\workspace\Landuse\BCEAG\2012\PlotFiles\TeraFig1_Rvs8Jan2012_utm11v3.pdf

FIGURE 1
WILDLIFE CORRIDORS AND HABITAT PATCHES

WILDLIFE CORRIDOR AND HABITAT PATCH GUIDELINES FOR THE BOW VALLEY

2011

1.4 Proposed Land Use Description

The area of the property is approximately 8,023 m^2. Table 1-1 presents the maximum areas proposed in the conceptual project plan (Appendix A, Figure 1-3). Vegetation clearing required for the project will be limited to stripping the existing manicured lawn and removing up to five ornamental trees that were planted by the previous landowner. The proposed parking lot will be finished with gravel crush to maintain water permeability at the site.

The new church building will be 570.9 m^2 (0.057 ha) and will be sited along the northern boundary of the property. The existing outbuilding will not be disturbed for this project and will be maintained into the future. Functionally, the land use will change from 0.05 ha to 0.33 ha of disturbed area, of which 0.27 ha will be new gravel parking lot (Table 1-1). Following construction, the lawn area surrounding the new building and parking lot will continue to be mowed to reduce invasive plant growth and spread, and reduce wildlife attractants (e.g., forage). Invasive plant management will not include the use of herbicide. The remainder of the property will remain in its currently mowed state and may be used from time to time by patrons of the church for brief gatherings. No new infrastructure such as permanent picnic tables are planned for the project at this time; however, temporary tents may be erected for short durations (i.e., a number of hours) to provide shelter from sun or rain.

Based on recommendations from the BCEAG (2012) guidance document, the recommended setback from the edge of a habitat patch is between 20 m and 40 m, the latter being for local commercial activity which may be similar to the proposed project. The nearest active area of the proposed project (i.e., the parking lot) is over 60 m from the boundary of the HHRHP, and the proposed footprint is approximately 40 m from the boundary of the HHRHP.

Table 1-1
Area Summaries of the Project Area and the Conceptual Land Use Plan

Land Use Component	Application Case
Buildings	570.9 m^2
Existing Outbuilding	37.9 m^2
Driveways/Parking Lot	2,772.6 m^2
Vegetated (Manicured Lawn)	4,641.2 m^2
Total	**8,022.6 m^2**

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Associated Environmental

Project Area

AE PROJECT NO.	2022-8129
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COORD. SYSTEM	NAD 1983 UTM ZONE 11N
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DRAWN BY	BDJ
CHECKED BY	KR

FIGURE 1-3: CONCEPTUAL PROJECT PLAN

McElhanney Ltd. (Trinity Bible Church)

EIS - Trinity Bible Church
105 Harvie Heights, Canmore, AB

1.4.1 Community Benefit

The MDP identifies areas intended for "Conservation" which includes all land outside of the urban growth boundary. Development in the Conservation area is allowed where an exceptional community benefit is achieved (Section 4.1.4 Canmore MDP). The proposed cultural establishment and associated programs offered to the public add to a rich societal fabric in Canmore and the Bow Valley. The site is not identified in the MDP as a Habitat Patch or wildlife corridor. Town Council may decide to approve the application for the Direct Control District based on the MDP provision. Additional rationale is provided in the McElhanney cover report in support of the amendment to the Land Use Bylaw.

The proposed project will result in exceptional community benefit as follows:

SPIRITUAL / EMOTIONAL SUPPORT	COMMUNITY SUPPORT PROGRAMS
• Home to 100 + Canmore residents & families providing weekly spiritual encouragement and biblical training anchoring residents as a community • Church home away from home to many visitors (both vacationers & short-term workers) • Kids, Youth, Adult, Senior & Family programs • Bereavement Support & Counseling through the Grief-Share outreach • Summer kids programs • Meeting Centre for Bow Valley Churches • Canmore Ladies Christmas Banquet (ongoing for 13 years) • Marriage support workshops • Parenting workshops • Recovery support and ministry • Support many international causes	• Multi-purpose venue to support mid-week programs (Drum Circle, Bow Valley Choral) • Young Mom's/ tot drop-in play time • Skiers Church at Sunshine Village • Providing volunteers for Food & Friends • Safe Park program • Financially support a number of community programs such as the Canmore Food Bank, Bow Valley Christmas Spirit Campaign, Homeless Society of the Bow Valley, re-settling Ukrainian family, Food and Friends and other Food Stability Programs including Mountain Fire Foods meals • Support for Steve Sellers with Athletes in Action working with the Canmore Eagles & Olympic Athletes • Support for Youth Unlimited: working with youth • Affordable childcare (future offering)

Source: McElhanney 2022.

1.5 Legislation and Guidelines

The following guidelines and policy documents were reviewed as part of this EIS:

- Municipal Development Plan Bylaw 2016-03, Town of Canmore (TOC 2016), amended 2020.
- South Saskatchewan Regional Plan 2014–2024: An Alberta Land-use Framework Integrated Plan (GoA 2017).
- Human Use Management Review: Consultation Summary, Final Recommendations and Implementation Plan (Town of Canmore 2015).
- Town of Canmore Wildfire Mitigation Strategy Review. Montane Forest Management Ltd. (Montane 2018).
- Town of Canmore Community Standards Bylaw: Regulation of Noise (Town of Canmore 1997).
- Human-Wildlife Coexistence: Recommendations for Improving Human-Wildlife Coexistence in the Bow Valley. Town of Canmore, Town of Banff, Alberta Government (GoA 2018).
- Wildlife Corridor and Habitat Patch Guidelines for the Bow Valley. Bow Corridor Ecosystem Advisory Group (BCEAG 2012).

Table 1-2 summarizes the regulatory considerations that apply to the proposed project. For this project, approval or notification under the *Fisheries Act* and *Water Act* is not required because the proposed project will not involve activities within or near a waterbody. The project will occur on existing cleared land that is largely manicured lawn; therefore, historical resources that may be protected under the *Historical Resources Act* will not be affected because any that did exist are likely already disturbed but the current development. The *Migratory Birds Convention Act*, *1994* is not expected to be triggered because native nesting habitat does not exist within the project footprint.

Table 1-2
Regulatory Considerations

Legislation	Environmental Conditions and Restrictions
Wildlife Act	• The Act provides protection and conservation of wildlife in Alberta. • A person shall not willfully molest, disturb, or destroy a house, nest, or den of prescribed wildlife.
Weed Control Act	• The Act requires the management of noxious or invasive weeds. • Weed management will be a requirement in the project tender documents.

2 ASSESSMENT METHODS

2.1 Project Scope

A ToR for the project was developed by the Town and its independent third-party reviewer. The ToR outlines the scope of the EIS (Appendix B).

2.2 Spatial and Temporal Boundaries

To capture the variability of the effects of the project locally and regionally, the project was assessed at the following spatial scales (Figure 2-1):

- Project Area (i.e., the property); and
- Local Study Area (LSA).

Project Area

The Project Area is the property boundary as described in Section 1 and comprises approximately 0.8 ha of privately-owned land, as described in Section 1.4.

Local Study Area

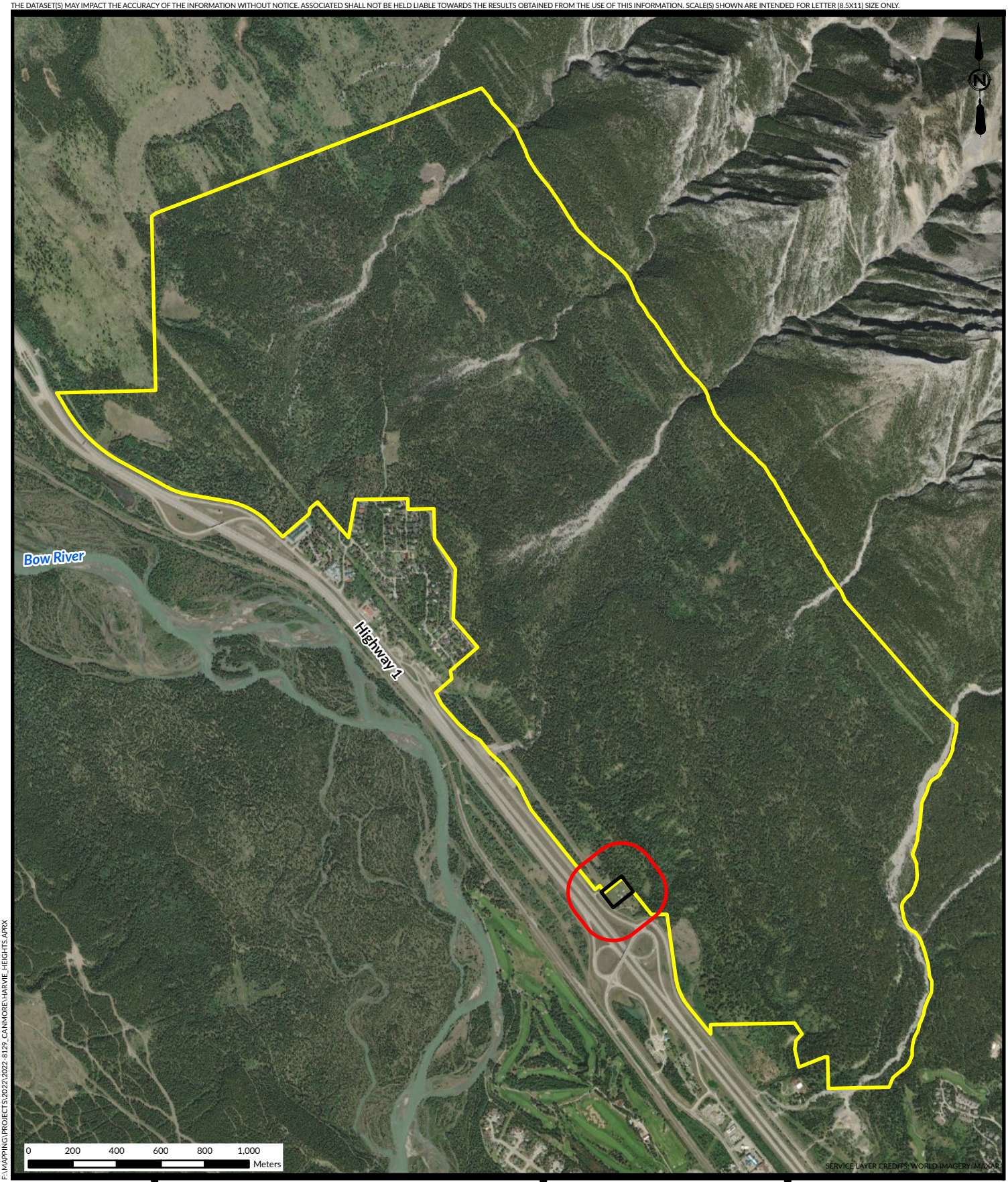
The LSA is the area where direct and indirect effects of the project may affect the environment. The LSA was selected based on the estimated range of sensory disturbance (e.g., noise and vibration) and potential physical impacts of the project. The LSA is a 150-m buffer around the property boundary whose purpose is to capture the direct and indirect project effects on selected environmental components. The total area of the LSA is 39.6 ha.

Harvie Heights Regional Habitat Patch

The EIS recognizes that the cumulative effects of human disturbance in the region have resulted in changes in habitat value for Bow Valley wildlife. To ensure the EIS considers the potential for additional cumulative effects on wildlife, effects of the project are discussed at the scale of the HHRHP to identify the project's potential interaction with wildlife habitat selection and movement in the HHRHP if the application is approved.

Temporal Boundaries

The project was assessed using two temporal boundaries, the construction and operation phases, to capture variation in project effects from the time of project approval to full build-out and operation. The construction phase includes all of the physical and sensory disturbance that may result from land clearing, site preparation, and building construction (i.e., short-term effects). The operation phase includes all sensory disturbance that may result during the normal operations of the new church building (i.e., long-term effects).



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Associated Environmental

- Project Area
- Local Study Area
- Harvie Heights Regional Habitat Patch

AE PROJECT NO.	2022-8129
SCALE	1:23,000
COORD. SYSTEM	NAD 1983 UTM ZONE 11N
DATE	2022-09-20
REV	00
DRAWN BY	BDJ
CHECKED BY	KR

FIGURE 2-1: PROJECT STUDY AREAS

McElhanney Ltd. (Trinity Bible Church)

EIS - Trinity Bible Church
105 Harvie Heights, Canmore, AB

2.3 Analysis of Alternatives

Alternatives included variations in the project's overall design, including:

- Orientation, scale, and siting of the proposed church;
- Using concrete or asphalt instead of maintaining water permeability with gravel for the proposed parking area;
- Investigating potential connections and feasibility to municipal utility infrastructure; and
- Investigating alternative development locations throughout the Bow Valley.

2.4 Baseline and Impact Assessment Methods

Included in this EIS are biophysical resources considered important by the applicant, public, scientists, and government agencies. Baseline conditions were determined following a comprehensive background review and a site visit to document the existing conditions in the LSA.

2.4.1 Background Review

A comprehensive background review of existing information was conducted to gather biophysical information related to the project. Interviews with Alberta Environment and Parks biologists familiar with the region were conducted, and air photographs and relevant spatial data layers were reviewed. The background review investigated known vegetation communities, aquatic resources, and wildlife habitat suitability. Provincial databases that describe the potential for sensitive or at-risk plants, plant communities, fish and wildlife, flood risk, and historical resource values known to occur or that have the potential to occur within the Project Area and the HHRHP were included in the review.

Documents and reports reviewed include those listed in Section 1.5 and the following:

- Spatio-temporal Patterns of Wildlife Distribution and Movement in Canmore's Benchlands Corridor (Miistakis 2010).
- Bow Valley Bear Hazard Assessment (Honeyman 2007).
- Cougar Occurrence Summary 2000–2018 (Alberta Government 2019).
- Home Ranges, Resource Selection, and Parasite Diversity of Urban Versus Rural Elk (*Cervus elaphus*) – master's thesis (Edwards 2013).
- Connectivity of Elk Migration in Southwestern Alberta – master's thesis (Paton 2012).
- Spatial and Temporal Dynamics of Wildlife Use of a Human-Dominated Landscape (Hojnowski 2017).
- Migration and distribution of hummingbirds in western North America (HHRHP only) (AEP 2022b).
- Fish and Wildlife Management Information System (FWMIS 2022).
- Alberta Conservation Information Management System (ACIMS) Data Request Search (AEP 2022a).
- Wildlife database inventory and surveys results in the HHRHP 1971–2018 (AEP 2022b).
- Camera-trap data for the HHRHP available between 2013 and 2018 (AEP 2022b).
- List of Elements in Alberta – Vascular Plants (AEP 2022c).
- Flood Hazard Map Application (AEP 2022d).
- Agricultural Regions of Alberta Soil Inventory Database (AARD 2015).
- Environmental Site Assessment Repository (GoA 2022).
- Google Earth ortho imagery (2022)

- Strava Global Heatmap (Strava 2022).
- Various additional reports and information related to the species of interest for the project.

Interviews with regional Alberta Environment and Parks (AEP) biologists responsible for the Bow-Crow District were conducted to gather information about wildlife habitat selection and occurrence in the HHRHP and ensure that the EIS includes all wildlife data that is publicly available. AEP provided camera-trap and aerial survey data for the HHRHP following the interviews.

The Strava online data tracking application was used to detect the public's use of the HHRHP. Strava is a tool used by serious recreationists (e.g., skiers, cyclists, or runners who want to track their distance over time) to collect and track their data and share it with a global community. Strava represents only a portion of the public—and is not a representative sample of the public—and it greatly underestimates the actual use of the area; however, it can be used to show the presence or non-detection of the public's use of the land.

2.4.2 Field Surveys

Associated completed a site visit to assess the biophysical condition of the LSA on August 16, 2022. The site visit included the Project Area, the LSA, and a meandering transect survey of the land within 500 m of the Project Area in the HHRHP to get a sense of wildlife use in the habitat patch.

Wildlife habitat sign, habitat suitability, and vegetation communities and plants observed were recorded during the meandering transect. Vegetation communities are described based on their dominant tree, shrub, and forb species. Representative photographs were taken throughout the LSA. Vascular plant species observed during the vegetation surveys were classified as native, non-native, or invasive species using the following reference manuals:

- Flora of Alberta (Moss 1996);
- Plants of the Western Boreal Forest and Aspen Parkland (Johnson et al. 1995); and
- Weeds of Canada and the Northern United States: A Guide for Identification (Royer and Dickinson 1999).

Figure 2-2 presents the GPS data collected during the meandering transect in relation to ecosystems mapped for the proposed project.

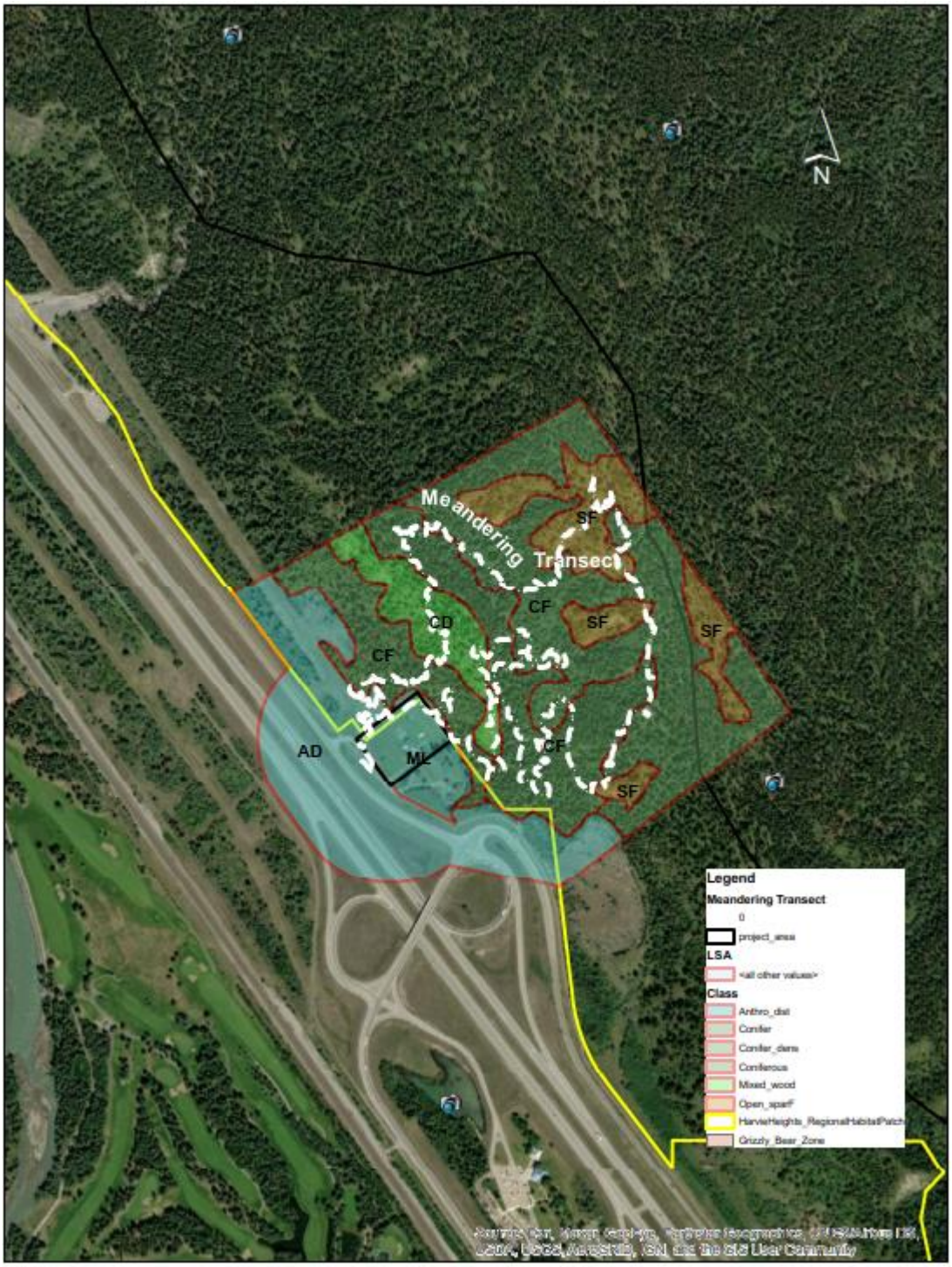

Figure 2-2
Meandering Transect Location

Rare and Sensitive Plants

A formal rare plant inventory was not completed during the site visit because the Project Area is already completely disturbed and there will be no new disturbance outside of it. The potential for rare plants to occur within the project footprint is low to nil, and no rare plant species have been reported to AEP within 500 m of the LSA.

Weed Species

Weed species were recorded during the survey to identify regulated (GoA 2017) and nuisance species that occur in the Project Area. Species listed as prohibited noxious or noxious weed species according to the *Weed Control Act* were identified if encountered.

2.4.3 Impact Assessment

Based on the background review, the results of the field visit completed for the project, and the ToR, the following biophysical resources are addressed in this EIS:

- Soils and terrain;
- Vegetation and ecosystems;
- Wildlife and wildlife habitat;
- Fish and fish habitat;
- Aquatic resources;
- Land and resource use;
- Air quality; and
- Cultural and heritage resources.

Potential direct effects of the project during construction and operation were evaluated with respect to:

- Wildlife and associated habitat;
- Vegetation (i.e., plant species and communities);
- Wildlife and plant species of concern;
- Wildlife corridor functionality;
- Aquatic resources; and
- Cumulative effects on wildlife movement and habitat use.

Potential indirect effects that could result in foreseeable short- and long-term effects on wildlife, wildlife habitat, and vegetation were evaluated for:

- Soils and terrain;
- Surface water and groundwater;
- Noise disturbance from project activities through construction and operations and the impacts on wildlife corridor functionality; and
- Air quality.

The cumulative effects analysis evaluated the current levels of physical disturbance in the HHRHP and the human use of it, based on existing and publicly available information (e.g. Strava, trail network maps). The analysis also includes a discussion of spatial and temporal patterns of disturbance that may impact wildlife use and movement.

3 BASELINE BIOPHYSICAL CONDITION

3.1 Soils and Terrain

The property is located at the bottom of the Bow River valley at approximately 1,300 m in elevation. The property is level with little to no slope, which may be a result of historic terrain reshaping when the existing farmhouse and surrounding property were developed. Based on a search of the Agricultural Regions of Alberta Soil Inventory Database, the soils most common on the property are orthic regosols that are undifferentiated and variable in texture.

The land upslope of the Project Area is benched and varies in gradient from 0% to 60% slope. East of the Project Area, the land rises steeply to a relatively level bench that begins from a terrain break located approximately 500 m east of the property boundary. Further east, the land elevates dramatically towards alpine environments that exceed 2,600 m in elevation. Collectively, this area east of the property is known as the Canmore benchlands.

The land down gradient of the Project Area, terrain is relatively level and includes Highway 1, Highway 1A, the CP Railway, the Town of Canmore, and the Bow River channel.

3.2 Vegetation and Ecosystems

3.2.1 Project Area

The Project Area is currently cleared of native vegetation and includes a farmhouse, a driveway, and a small outbuilding. The remaining areas consist primarily of manicured lawn and a small garden space that has been developed in the middle of the property (Figure 3-1). A single row of alternating sapling conifer trees and deciduous shrubs has been planted along the property fenceline facing Highway 1. Throughout the property, non-native ornamental trees have been sparsely planted.

The Town of Canmore requires that all developments adhere to their FireSmart guidelines (Montane 2018). Following the Montane (2018) Wildfire Behaviour scale, the property is rated as “Low”. The property has been classified as “Vegetated Non-Fuel” wildland fuel type, which is consistent with the existing manicured lawn condition. Because the property is already cleared of native vegetation, few trees exist, and the property is considered “Vegetated Non-Fuel”, FireSmart management activities will not be necessary for the project.

No rare plants were observed in the Project Area and none are expected to occur due to the degree of existing disturbance. No limber pine or whitebark pine were identified in the Project Area or adjacent areas.

3.2.2 Local Study Area

The LSA is a 150-m buffer on the Project Area (property boundary) plus an additional area that includes land upslope of the Project Area. The additional area was added to ensure a reasonable portion of the HHRHP was included in the field assessment to investigate sign of wildlife habitat use in the HHRHP. Land immediately adjacent to the property includes Highway 1 and an associated access road to the southwest, a powerline right-of-way that is regularly mowed and pruned (also southwest), and native, mature forest to the north, east, and southeast (Figure 3-1). The mature forest is entirely within the HHRHP boundary and is comprised of coniferous forest, mixedwood forest, and open sparsely forested ecosystems. Pockets of mature, standing dead and decaying trembling aspen trees occur in the LSA portion of the HHRHP. A small sedge wetland area was identified outside of the LSA during the meandering transect.

This sedge wetland had a small component of standing water at the time of the survey. The wetland is outside of the proposed area of disturbance (the Project Area) and is not expected to be directly or indirectly affected by the project during construction or operation.

Table 3-1 summarizes the ecosystems identified in the LSA during the site visit.

Ecosystem Type	Map Code
Coniferous Forest	CF
Coniferous Deciduous	CD
Open Sparsely Forested	SF
Manicured Lawn	ML
Anthropogenic Disturbance	AD

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Associated Environmental

Project Area

Ecosystem Code

AD

CD

CF

ML

SF

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SCALE	1:4,500
COORD. SYSTEM	NAD 1983 UTM ZONE 11N
DATE	2022-10-04
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CHECKED BY	KR

FIGURE 3-1: ECOSYSTEM MAP

McElhanney Ltd. (Trinity Bible Church)

EIS - Trinity Bible Church
105 Harvie Heights, Canmore, AB

Table 3-1 Ecosystems in the Local Study Area

Ecosystem Type	Description	Area (ha)
Coniferous Forest (CF)	Dry conifer forest typical for the region. Overstorey composed of mature Engelmann spruce (*Picea engelmannii*) and lodgepole pine (*Pinus contorta*). Shrubby understorey composed primarily of soopollalie (*Shepherdia canadensis*), snowberry (*Symphoricarpos alba*), rose sp. (*Rosa* sp.), kinnikinnick (*Arctostaphylos uva-ursi*), and common juniper (*Juniperus communis*). Common forb and graminoid species include pinegrass (*Calamagrostis rubescens*), wild strawberry (*Fragaria virginiana*), and showy aster (*Erybia conspicua*).	21.0
Coniferous Deciduous Forest (CD)	A mixed coniferous and deciduous forest common in the region. Overstorey composed equally of Engelmann spruce, lodgepole pine, and trembling aspen (*Populus tremuloides*). Shrubby understorey composed of soopollalie, snowberry, rose sp., and kinnikinnick. Forb and graminoid species include pinegrass, wild strawberry, and showy aster. A small wetland was observed upslope of the property during the meandering transect. Dominated by sedge spp. (*Carex* spp.), this wetland is approximately 250 m from the Project Area and was approximately 10 m by 5 m in size. The wetland had a small component of standing water and exposed organic soils during the site visit.	2.5
Open Sparsely Forested (SF)	Ecosystems associated with steeper slopes with dry site conditions and little to no forest cover. Vegetation typical in these ecosystems includes forbs and graminoids, such as showy aster and bunchgrass, and shrubs such as common juniper and soopollalie. These ecosystems are found along the terrain break north of the Project Area and are common in the Harvie Heights Regional Habitat Patch, where similar growing conditions exist.	4.5
Manicured Lawn (ML)	Areas within the LSA that have been revegetated with non-native grass species and are regularly maintained through mowing. Manicured lawn areas do not include the right-of-way along Highway 1 or the powerline.	1.9
Anthropogenic Disturbance (AD)	Areas where land clearing is evident are classified as anthropogenic disturbance and include regularly maintained or pruned sites, highway and road surface and shoulders. This area does not include the Manicured Lawn ecosystem type in the Project Area or the adjacent neighbour.	9.6
	Total Area	**39.6**

3.2.3 Existing Disturbance

The entire Project Area has been cleared, levelled, and revegetated with non-native grass species that have been regularly mowed. An existing powerline right-of-way located immediately adjacent to the property boundary and the trees along this right-of-way have been cleared and are being suppressed with regular pruning. Highway 1 is within 50 m of the property, and the Highway 1/Highway 1A interchange is located within 120 m of the property to the south. The right-of-way for Highway 1 is regularly maintained via mowing. A small access road and landing area have been cleared of trees north of the property.

Invasive plants were observed along the road verges of Highway 1, the powerline right-of-way, and at isolated locations throughout the LSA. Non-native species identified in the Project Area included dandelion (*Taraxacum officinale*), ox-eye daisy (*Leucanthemum vulgare*), alsike clover (*Trifolium hybridum*), timothy grass (*Phleum pratense*), quackgrass (*Elymus repens*), sulphur cinquefoil (*Potentilla recta*), and common plantain (*Plantago major*).

Evidence of human disturbance is common in the LSA and the HHRHP and includes small-scale salvage logging throughout the LSA (though it is not known how old the logging activities are), trail cutting and maintenance (e.g., tree limbing, downed woody debris cutting), and human use (cycling and foot paths). Old post-and-barbed-wire fencing exists in the HHRHP, and it was unclear what purpose it served. Section 3.6 provides further information on land use in the area.

3.3 Wildlife and Wildlife Habitat

3.3.1 Project Area

Wildlife habitat in the Project Area is limited and is highly disturbed from its natural condition. In its current state, the Project Area may provide potential perching or nesting sites for small passerine birds, in the ornamental or coniferous trees that occur sparsely on the property. No large trees exist that would serve as nesting sites for raptors or other large-bodied birds.

Habitat for large mammals such as deer, elk, or moose in the Project Area is limited to resting sites on the manicured lawn. Black bear or grizzly bear are not likely to occupy the Project Area because there is no clear attractant that would provide any long- or short-term habitat value, and the degree of existing human disturbance is likely to deter use (Wittington et al. 2022, Hojnowski 2017).

No permanent or seasonal waterbodies exist on the property that would provide important habitat for amphibians.

No rocky outcrops exist on the property that would provide potential important habitat for reptiles.

3.3.2 Local Study Area

The LSA includes a portion of the HHRHP and the Canmore benchlands corridor area, which has been described as an important movement corridor for large-bodied mammals such as grey wolf (*Canis lupus*), cougar (*Puma concolor*), lynx (*Lynx canadensis*), black bear (*Ursus americanus*), grizzly bear (*Ursus arctos*), elk (*Cervus elaphus*), moose (*Alces alces*), deer (*Odocoileus* sp.), and bighorn sheep (*Ovis canadensis*). Detection of these species through winter tracking and game cameras was most common upslope, at least 500 m from the Project Area (Miistakis 2010, AEP 2022a) (Figure 3-2, Table 3-2). In 2008, elk counts in winter for Wildlife Management Unit 410 within the LSA only had 1 record of elk observed. This aerial winter count likely underestimates the actual number of elk individuals using WMU 410, but also

indicates that the area is not highly selected by elk in the winter compared to other regions in the Bow Valley, especially along the river corridor (ASRD 2008). The portion of the LSA that is within the HHRHP provides suitable forage, cover, and thermal protection for the species listed above. Suitable denning habitat may exist upslope of the LSA for grizzly bear or black bear (Ciarnello et al 2005), but none were detected within the LSA during the site assessment.

The LSA is within close proximity to existing ongoing and constant anthropogenic disturbance (i.e., Highway 1, Highway 1A, CP Railway, and cleared land), which may result in behavioural avoidance of the area by large mammals and carnivore species (Wittington et al. 2022, Clevenger and Waltho 2000). In further support of this, Miistakis (2010) detected relatively less use of habitats selected by large mammals in the winter along the lower benchlands, and the LSA is within the Low ranking zone for cougar occurrence, as reported by AEP (Figure 3-3) (Alberta Government 2019).

Small-bodied mammals reported to occupy the benchlands that may also occupy the LSA include American marten (*Martes americana*) and coyote (*Canis latrans*) (AEP 2022a). Bats may use the cavities in mature or decaying trees in the HHRHP for roosting; however, no suitable overwintering habitat for bats, such as cliff features or large diameter trees, was observed during the site visit.

Amphibians, such as Canadian toad (*Bufo hemiophrys*), may use a small sedge wetland area identified in the LSA for breeding in the spring or hibernation in the winter. No amphibians were detected at the small sedge wetland area upslope of the property; however, no targeted amphibian surveys were conducted during the breeding season at this location. This wetland area is not near the Project Area and will not be disturbed directly or indirectly by the project.

Table 3-2
Game Camera Coordinates in HHRHP

Camera Count	UTM Zone	Easting	Northing
1	11	612524	5662761
2	11	612774	5663570
3	11	613132	5664562
4	11	613400	5664631
5	11	613401	5664633
6	11	613422	5664691
7	11	613865	5665510
8	11	613927	5665511

Camera Count	UTM Zone	Easting	Northing
9	11	614183	5665551
10	11	614539	5665639
11	11	614717	5665691
12	11	615258	5666177
13	11	615376	5666200
14	11	615396	5666526

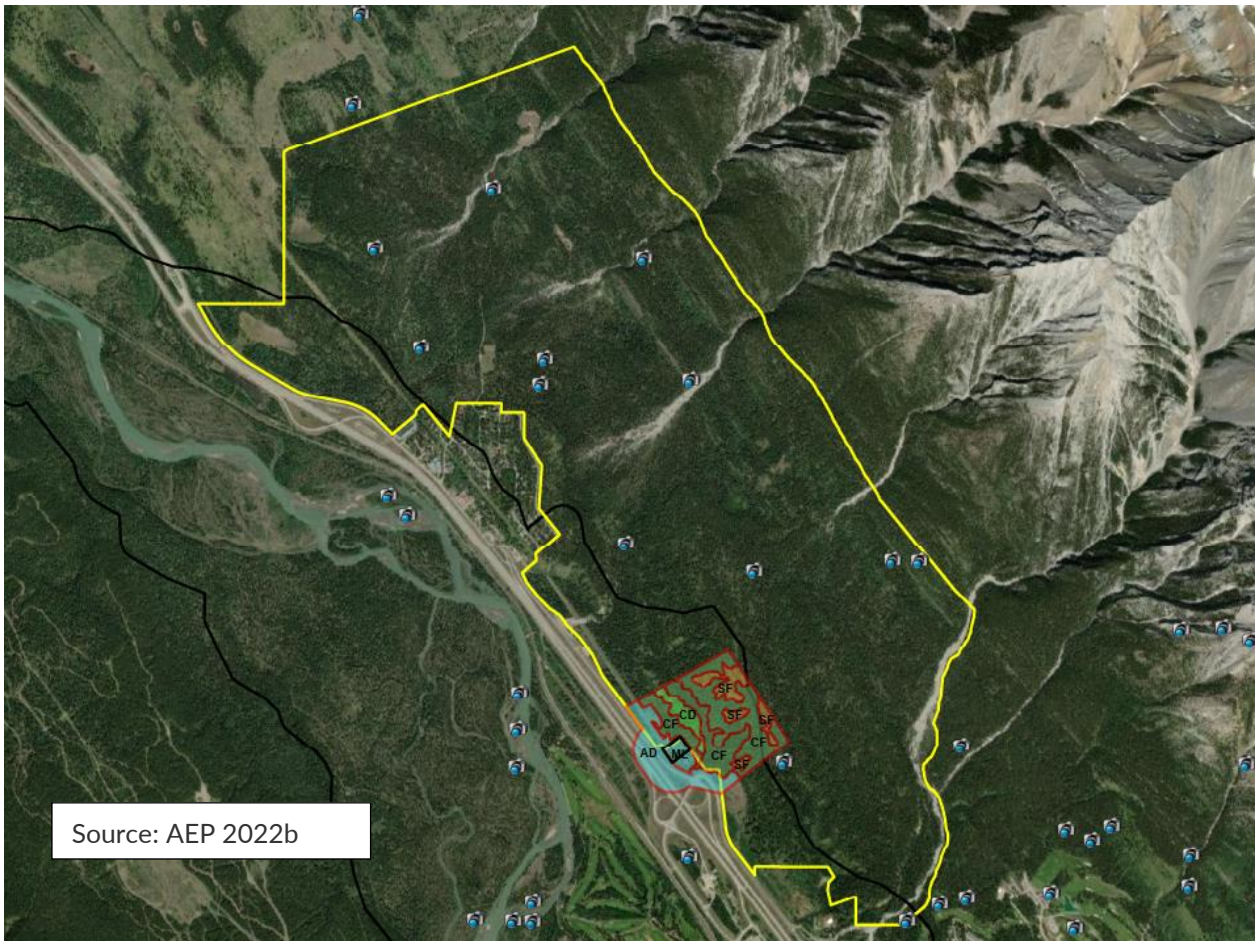

Figure 3-2
Game Camera Locations in HHRHP

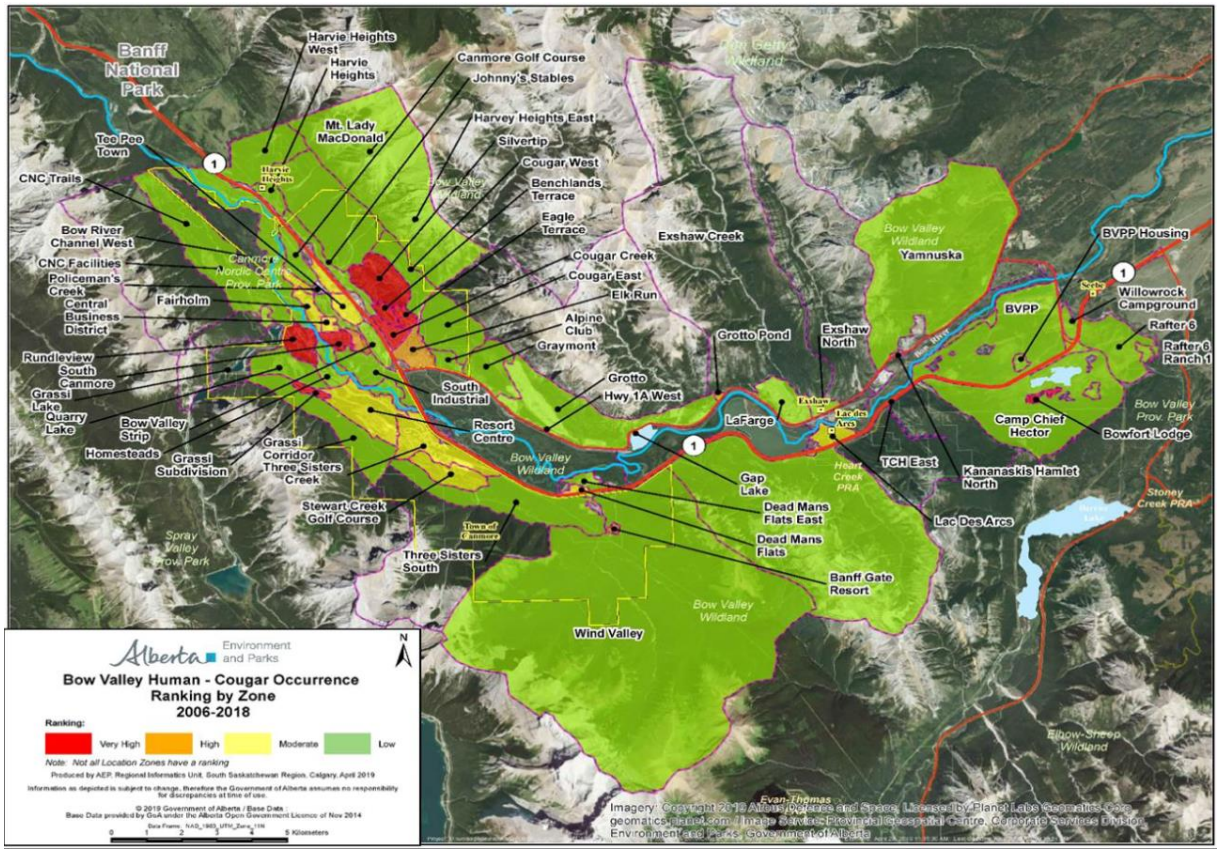

Figure 3-3
Bow Valley Human-Cougar Occurrence Ranking by Zone 2006-2018

Site Visit Wildlife Observations

Table 3-3 presents the list of wildlife species detected in the LSA during the site visit. The meandering transect completed during the site visit intersected numerous trails that varied from rough game trails to well-established trails that may be old cycling or hiking trails created by h umans. None of the trails observed appeared to be heading from or to the Project Area. If trails were heavily used by humans leaving the Project Area to enter the HHRHP, it would be expected that the trails were well established. Although a Ministerial order closed human trail use in the upper benchlands in 2005 (Miistakis 2010), it is clear that humans are still using many of the trails in the LSA portion of the HHRHP (Strava 2022). These existing trails provide good movement pathways for large-ranging wildlife and are oriented roughly north–south in the area assessed during the field visit. A major trail (as indicated by its width) was detected along the base of the bench upslope of the Project Area, and another along the crest of the bench upslope further to the east.

Table 3-3
Wildlife Species Detected in the LSA During Site Visit August 16, 2022

Common Name	Scientific Name	Type of Sign
Deer	*Odocoileus* sp.	Pellets (fresh and old), tracks, hair
Elk	*Cervus elaphus*	Pellets (fresh and old), tracks
Black bear	*Ursus americanus*	Scat, tracks, and claw marks on trees
Grey wolf	*Canis lupus*	Scat
Unknown ungulate	–	Beds, rubs, and scrapes
Cavity-nesting birds	–	Various cavities and feeding excavations
Horse	*Equus* sp.	Pellets

3.3.3 Harvie Heights Regional Habitat Patch

The BCEAG (2012) defines regional habitat patches as "large enough (>10 km^2) to contain adequate resources to sustain large carnivores for short periods of time. A regional habitat patch can accommodate the seasonal range of elk, deer or moose." With the exception of the total area caveat (Table 3-4), the HHRHP meets this definition.

The HHRHP was established in 2012 following a merger with the Benchlands Local Habitat Patch and minor boundary refinements to align with local topographical features and the Banff National Park boundary to the west (BCEAG 2012). According to the BCEAG (2012) report, the HHRHP is 796 ha in size and is linked to the Georgetown–Harvie Heights Regional Habitat Patch via conceptual wildlife corridors that are highway culverts or bridge underpasses. The majority (85.5%) of the HHRHP is identified as Coniferous Dense forest, with minor components of Tall Shrub (8.9%) and Grassland (3.4%) ecosystems. Linear feature (i.e., roads or trails) density amounts to 5.6 km/km^2, and as of 2012, anthropogenic disturbance accounted for approximately 1.3 ha (0.2%) of the HHRHP (Table 3-4) (BCEAG 2012). The frequency of these linear features results in the HHRHP having the highest density of non-designated recreational trails (3.9 km/km^2) compared to the other regional habitat patches (BCEAG 2012).

Table 3-4
Linear Features in the Harvie Heights Regional Habitat Patch

Area		Length of Linear Features (km)	Linear Density of All Linear Features (km/km^2)	Linear Density of Designated Trails (km/km^2)	Linear Density of Non-designated Trails (km/km^2)	Existing Development Footprint	
(km^2)	(ha)					(ha)	%
7.96	796	44.7	5.6	1.3	3.9	1.3	0.2

Source: BCEAG 2012.

Human Use of the HHRHP

The HHRHP is used in all seasons by residents of Canmore and visitors to the Town for dog walking, snowshoeing, hiking, and cycling (BCEAG 2012, Appendix D). Designated and non-designated trails exist in the HHRHP, and although some of the designated trails were closed to the public in 2005 (Miistakis 2010), there is evidence that public use of the trails remains high (Strava 2022). The Strava Global Heatmap is a spatial data tool used by serious recreationists (e.g., competitive skiers, cyclists, or runners who want to track their speed and distance over time) to collect and track their data and share it with a global community. Strava is a useful tool to show presence or non-detection of the public use of the land. Strava users represent only a small portion of the public, and the data results are limited to only those people who want to track their physical activities. The Strava heatmap likely underestimates the actual use of the land by the public because dog walkers or casual land users are less likely to use the Strava tool, and it is unknown what contingent of trail users are casual land users versus serious recreationists. Figure 3-4 shows a screen capture of the Strava heatmap[1] website that includes the HHRHP (blue arrow indicates the project location).

Winter track counts intended to capture ungulate and carnivore species were conducted in the HHRHP between 1996 and 2007 (Miistakis 2010). Data collected during this project included human use, and observations of human signs (23.6% of all detections) represented the second-highest activity levels observed, after deer (50.2% of all detections). Results of the winter track counts indicate that human use of the HHRHP was generally low to medium, with the exception of areas in close proximity to Harvie Heights and the Silvertip Resort and Golf Course, where human use was higher. Figure 3-4 indicates that this trend in human use has continued into 2022, with some of the primary trails continuing to be used for recreational activities. Based on the Strava heatmap, it appears that human use near the Project Area is noticeably lower (although greater than nil) than in the areas closer to Harvie Heights and the Silvertip Resort. Although some trails used by humans were observed during the site assessment and the Strava data indicates that trails in the HHRHP do get used by humans, none of the trails observed appeared to be heading from or to the Project Area, and most of the human use is concentrated far upslope (as indicated by brighter, thicker, orange/white lines in Figure 3-4) and correspond to the trail map provided by the Town of Canmore (Appendix D).

In general, the HHRHP has been highly used for various activities by humans in the past and continues to be a location where humans choose to recreate.

[1] Areas with higher use by Strava users are identified by wide, bright orange lines, and areas with low to nil use are indicated by thin, purple lines (Figure 3-4).

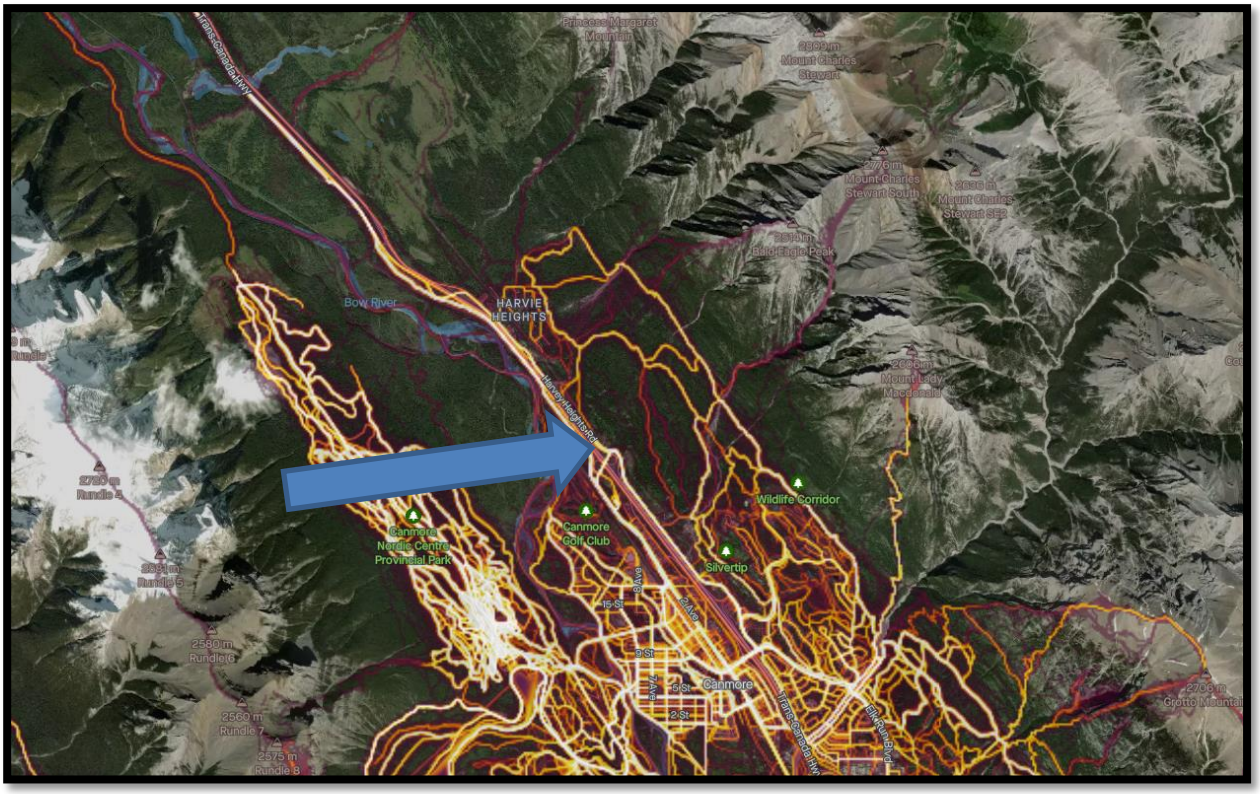

Figure 3-4
Strava Heatmap Showing Recent Human Use of HHRHP (blue arrow indicates LSA location)

Wildlife Use of the HHRHP

The property is within a mapped Key Biodiversity Zone and Mountain Goat and Sheep Sensitivity Zones (AEP 2022). Species listed in the wildlife inventory of the FWMIS database within the HHRHP include Columbia spotted frog, cougar, grizzly bear, harlequin duck, long-toed salamander, and pileated woodpecker. Known occurrence data shared by AEP contains wildlife observations from aerial surveys (2008) and remote camera traps (three projects spanning 2013–2018). Table 3-5 presents species documented during these studies and Appendix C summarizes total counts of species detected in the HHRHP.

Table 3-5
Species Documented by Alberta Environment and Parks During Wildlife Studies

Common Name	Scientific Name
Black bear	*Ursus americanus*
Bobcat	*Lynx rufus*
Bushy-tailed woodrat	*Neotoma cineria*

Common Name	Scientific Name
Common raven	*Corvus corax*
Cougar	*Puma concolor*
Coyote	*Canis latrans*
Grey wolf	*Canis lupus*
Grizzly bear	*Ursus arctos horribilis*
Marten	*Martes americana*
Moose	*Alces alces*
Mule deer	*Odocoileus hemionus*
Red fox	*Vulpes vulpes*
Red squirrel	*Tamiasciurus hudsonicus*
Snowshoe hare	*Lepus americanus*
Striped skunk	*Mephitis mephitis*
Wapiti (Elk)	*Cervus elaphus*
White-tailed deer	*Odocoileus virginianus*

The BCEAG (2012) report identifies the benchlands between Harvie Heights and Cougar Creek and the Wind Valley-Pigeon Mountain as important multi-species wildlife corridors. Miistakis (2010) found that deer were the most common species detected during winter track counts, and humans the second-most common users of the HHRHP. Other species recorded during the winter track counts included cougar (0.68% of detections), wolf (0.40% of detections), lynx (0.07% of detections), American marten (4.54% of detections), coyote (4.67% of detections), bighorn sheep (2.51% of detections), and elk (13.39% of detections). The majority of these observations occurred upslope of the Project Area, at least 500 m east of the property boundary.

Honeyman (2007) assessed bear hazards in the Bow Valley, including the HHRHP. According to Honeyman (2007), the HHRHP provides low value berry producing crops, a major attractant for both grizzly bear and black bear in the fall season. In addition, collared grizzly bear monitored during the study showed that grizzly bear do not select highly for habitats in the HHRHP during the berry producing season. Recognizing that the Honeyman 2007 report includes nearly 20-year-old data, it is not likely that ecological conditions have changed to result in an increase in berry producing shrubs, and very few berry producing shrubs were identified during the site visit in 2022. Therefore, the

HHRHP likely continues to be low in attracting bears due to the low productivity of berry producing shrubs in the fall season.

In 2022, Whittington et al. published a document that discusses the behaviour and resource selection of carnivores (i.e., wolves and grizzly bears) near towns in areas with high trail and road density. The study focused on the mountain towns of Banff and Canmore, Alberta. Banff National Park is contiguous along its eastern boundary with the HHRHP, and the HHRHP is within the Town of Canmore. The study used GPS collar data to evaluate behavioural and temporal responses as carnivores navigated habitats as they approached the towns in the valley. Results of the study concluded that carnivores increase their speed of travel (e.g., less foraging and resting) as they neared towns and areas of higher road networks and exhibited stronger avoidance of human development during the day than in the night. This behaviour is presumed to be a response to human disturbance and as an attempt to avoid areas occupied by humans. These results suggest that carnivores such as grizzly bear and wolves will likely spend little time in and around the Project Area due to its close proximity to the Highway 1/Highway 1A interchange, Silvertip Resort area, and Harvie Heights community.

Cougars have been reported in the HHRHP and may use habitats near the property. Cougars are habitat generalists and select their habitats in response to the availability of their primary prey species, deer, and opportunistically elk or moose. Deer, elk, and moose are known to use habitats in the HHRHP for forage, security, and rest, which may attract individual cougars into the HHRHP. Cougars are known to be cryptic, although recent research has shown that some individuals may occupy habitats near human development but avoid direct interactions with humans (Alberta Government 2019). Often, these occurrences near human development are associated with cougars being attracted to the area by small pets. The proposed new land use is not expected to increase the number of small pets, and the degree of human activity when the property is in use is expected to deter cougars from using habitats nearby. The Government of Alberta reported on cougar occurrence in the Bow River valley between 2000 and 2018 and ranked location zones within their study area based on the number and severity of cougar interactions with humans. Despite relatively robust cougar populations in the Bow River valley, rates of conflict between cougars and humans are relatively low (GoA 2018).

Based on information in Miistakis (2010), Whittington et al. (2022), BCEAG (2012), and topographical relief (including aspect and slope percent) in the HHRHP, and based on observations of game trail orientation during the site visit, large-ranging wildlife in the HHRHP are most likely to use the upper benchlands of the HHRHP and travel along-valley (east–west) corridors as they navigate the region. Incidental observations of large-ranging wildlife such as elk, moose, deer, or carnivores near the Project Area may occur from time to time; however, the most likely movement corridor for these wildlife species groups is away from human disturbance, across slope, and on low-angle terrain, which occurs abundantly at least 500 m upslope of the Project Area. In addition, the relatively high use of the HHRHP by humans for recreation may have resulted in some habituation by wildlife for individuals that occupy areas for long periods (e.g., elk, deer, or moose). Mitigation measures presented in Section 5 are expected to prevent or reduce potential effects on wildlife use of the HHRHP.

3.4 Fish and Fish Habitat

No waterbodies (streams, lakes, or ponds) exist on or near the Project Area that could provide fish habitat. The nearest mapped waterbody to the Project Area is an unnamed, ephemeral drainage that is approximately 600 m away. This unnamed waterbody is a drainage from an alpine basin upslope and is not likely to support fish due to the extreme gradient of the land.

A municipal drainage ditch (vegetated swale) exists along the front (western boundary) of the property and may ultimately lead to the Bow River, a known fish-bearing waterbody. Mitigation measures presented in Section 5 are expected to prevent or reduce effects on water quality in this drainage ditch that may ultimately disturb fish or fish habitat if this ditch connects to the Bow River.

3.5 Aquatic Resources

No streams, lakes, or ponds exist on or near the Project Area. The nearest mapped waterbody to the Project Area is an unnamed, ephemeral drainage that is approximately 600 m away; it originates in an alpine basin upslope and does not cross the property.

Within the LSA, a small sedge-dominated wetland exists upslope of the property, approximately 250 m from the boundary of the Project Area. During the site visit, the wetland was estimated to be approximately 10 m by 5 m in size. The wetland had a small component of standing water and exposed organic soils.

Canmore Springs, a naturally occurring spring that daylights alongside a road cut near the Highway 1/Highway 1A interchange, exists approximately 180 m from the southern property boundary (UTM 11U 614339, 5663504). Canmore Springs is a local aquatic resource that residents of Canmore use to collect naturally occurring mineral water (Warren Lippitt, personal communication, 2022).

The property is located upslope and over 570 m from the nearest mapped flood fringe polygon (AEP 2022d). Flooding is not expected to be a concern for this property.

A query of the Alberta Water Well Information Database identified 21 reports of drilling activities or baseline groundwater well occurrences within 500 m of the Project Area. Based on the results of the report, only one of those occurrences is located downgradient of the Project Area across Highway 1, and given that the property is already highly modified and the proposed land use will not differ greatly from existing conditions, the project is not expected to affect the quality or quantity of that well.

3.6 Land and Resource Use

Indigenous use of the land was not included as a component to be discussed in the Town of Canmore’s Terms of Reference for this EIS (Appendix B); however, the proponent understands the importance of the land to Indigenous peoples near Canmore and recognizes that the project is proposed to occur on the Treaty 7 Lands of the Tsuut’ina, Michif Piyii (Metis), Niitsítpiis-stahkoii ᖿᐟᒧᐧᐨᑯᐧ ᓴᐦᖾᐟ (Blackfoot), Îyãħé Nakón mąkóce (Stoney), and Ktunaxa ʔamakʔis Territories (Native-Land.ca). The proponent recognizes that the proponent’s understanding of the land use is limited to the knowledge available to the public and Indigenous knowledge of the land, wildlife, plants and people’s use of these is extensive, long in history, and often confidential to protect Indigenous interests.

Land and resource use in the LSA is limited to major highway corridors (Highway 1 and Highway 1A), a powerline and its associated right-of-way, Canmore Springs, and rural residential developments. Although logging or firewood cutting may have historically occurred in the HHRHP, these activities are no longer permitted because of the conservation designation of the land.

Human disturbance in the form of hiking, cycling, and dog walking continues to occur in the HHRHP and is expected to occur into the future (Strava 2022).

No other industrial or residential land and resource uses exist in the Project Area, LSA, or the HHRHP.

3.7 Air Quality

Air quality near the Project Area is currently affected by emissions from vehicles travelling along the Trans-Canada Highway 1 and by exhaust emitted from train engines travelling along the CP Railway; both corridors are approximately 50 m from the Project Area. No other large sources of emissions (such as industrial sites) are located within 500 m of the Project Area that would affect air quality.

3.8 Cultural and Heritage Resources

A search of the province's online historical resource value database returned a rating of 5a for LSD 3&4-08-25-10. The 5a rating indicates that the area has potential for historic resources of archaeological value. The Project Area and all proposed project activities will occur within an already-heavily-modified parcel of land and no disturbance is expected to any cultural or heritage resource.

3.9 Hazards and Constraints

Given the existing level of disturbance in the Project Area, no hazards or constraints have been identified for project construction or operation. The land has been levelled and cleared of native vegetation, it is unlikely that rare plants exist on the already-disturbed property, there are no aquatic resources nearby, there will be no direct effect on important wildlife habitat, and any potential effects on biophysical resources can be mitigated by following the measures provided in Section 5.

4 IMPACT ASSESSMENT

Potential impacts of the proposed project on the biophysical environment was evaluated against potential impacts from the construction and operation of the project. Table 4-1 describes the criteria described used to assess potential impacts on ecological components and selected biophysical resources. The scope of this impact assessment was based on the requirements set out in the ToR provided by the Town of Canmore (Appendix B) and focuses on the direct effects of the project on some biophysical components and the indirect effects of the project on others (Sections 4.1 and 4.2).

For the purposes of this EIS, construction activities include:

- Staging and laydown
- Existing farmhouse demolition and removal
- Grubbing, excavation, grading, and soil compaction
- Building foundation installation
- Utilities installation
- Building construction (interior and exterior)
- Landscaping and restoration

For the purposes of this EIS, operational activities could include:

- Regularly scheduled gatherings for cultural and spiritual celebration
- Irregularly scheduled gatherings for events such as weddings, funerals, or otherwise

Table 4-1
Impact Assessment Criteria

Direction	Magnitude	Scale	Duration	Reversibility	Frequency	Confidence
Positive: Effects represent a real or potential increase in quantity, quality, or other attribute of the biophysical resource receptor.	**Negligible:** Measured or estimated effect results in no change to the biophysical resource (i.e., quantity, quality, or other attribute) compared to existing conditions.	**Project:** Effect occurs within the project building envelope.	**Short term:** Effect occurs only during construction.	**Short term:** Effect can be reversed after completion of construction.	**Isolated:** Effects occur for a limited or specific timeframe during construction.	**Predictable:** Effect on biophysical resource is well understood based on known knowledge and mitigation measures.
Negative: Effects represent a real or potential decrease in quantity, quality, or other attribute of the biophysical resource receptor.	**Low:** Measured or estimated effect results in no noticeable effects to the biophysical resource (i.e., quantity, quality, or other attribute) compared to existing conditions. Effects are within the understood range of natural variation.	**Local:** Effect occurs within the Local Study Area.	**Long term:** Effect persists beyond construction.	**Long term:** Effects persist into operations.	**Intermittent:** Effects occur periodically throughout construction.	**Uncertain:** Effect on biophysical resource is not well understood and/or effectiveness of mitigation measures are not known or uncertain.
Neutral: No observable effect in quantity, quality, or other attribute of the biophysical resource receptor.	**Moderate:** Measured or estimated effect results in a noticeable effect to the biophysical resource (i.e., quantity, quality, or other attribute) compared to existing conditions. Effects are within the understood range of natural variation and may require specialized mitigation.	**Regional:** Effect occurs within the HHRHP.			**Frequent:** Effects occur continuously for the duration of construction and persist into operations.	
	High: Measured or estimated effect results in an effect to the biophysical resource (i.e., quantity, quality, or other attribute) compared to existing conditions. Effects are beyond the understood range of natural variation and likely require specialized mitigation.					

4.1 Potential Effects of the Project

4.1.1 Vegetation and Ecosystems

Construction

Potential direct effects on vegetation and ecosystems from the proposed project include:

- Permanent loss of approximately 0.5 ha (5,729.22 m^2) of existing buildings and manicured lawn (Table 4-2).
- Removal of approximately five ornamental trees.
- Introduction or spread of non-native plant species.

All proposed disturbance will occur within existing disturbed areas that are currently either buildings, driveway/parking areas, or manicured lawn. No new disturbance is proposed outside of the Project Area. No plants of conservation concern will be disturbed by the project because the property is already disturbed and the potential for rare plants occurring in the Project Area is nil.

The Montane (2018) wildfire behaviour scale rates the Project Area as "Low". The property is classified as "Vegetated Non-Fuel" wildland fuel type. Because the fire risk in the Project Area is low, the wildland fuel type is non-fuel, and the HHRHP is public land, no vegetation will be disturbed outside the Project Area (2018).

Table 4-2 presents a summary of existing disturbance areas relative to the proposed new disturbance in the Project Area.

Table 4-2
Proposed Project Effects on the Project Area

Component	Existing Conditions (m^2)	Proposed Project (m^2)	Proposed New Disturbance (m^2)
Buildings	127.8	570.9	443.1
Outbuildings	37.9	37.9	–
Natural (Manicured Lawn)	7,506.2	4,641.2	2,865.0
Driveway/Parking Areas	351.0	2,772.5	2,421.5
		Total	**5,729.7 (0.5 ha)**

Five ornamental trees that have been planted and are currently growing on the property will be removed during construction.

Construction vehicles and crews may introduce non-native plant species into the Project Area, and they may spread into adjacent ecosystems, including the HHRHP. Invasive plants reduce the quality of natural ecosystems by outcompeting native vegetation and reducing the value of forage and habitat for wildlife species that depend on

native forage. The mitigation measures presented in Section 5 are anticipated to avoid or reduce the potential effects of invasive plants on vegetation and ecosystems.

Operation

Regular mowing is expected to continue on the manicured lawn that will remain following construction and throughout operation of the project. The regular mowing is expected to manage invasive plants growing on the property by removing seed heads before they can mature, set seed, and disperse. Herbicide will not be used as a method to control invasive plants on the property. Potential effects of dust generated from the gravel parking lot is not expected because the lot will be topped with coarse gravels that are not expected to produce dust. In any event, significant amounts of dust would be required to produce an effect on the growth and vigour of vegetation adjacent to the property and based on the larger particle size of material being planned for the parking lot, dust is not expected to be a source of disturbance to vegetation. No additional disturbance to vegetation, including dust deposition originating from the gravel parking lot, is planned or expected.

Effect Determination

The mitigation measures presented in Section 5 are expected to avoid the potential effects on vegetation and ecosystems throughout construction and operation. If these measures are implemented, the potential effects on vegetation and ecosystems are expected to be neutral in direction and low in magnitude, and the confidence is predictable (Table 4-3).

4.1.2 Wildlife and Wildlife Habitat

The potential effects on wildlife and wildlife habitat from the proposed project include:

- Sensory disturbance (including habitat avoidance) from human activities;
- Increased potential for human-wildlife interaction; and
- Increased mortality risk.

Construction

The project will result in approximately 0.5 ha (5,729.2 m^2) of new disturbance to vegetation that may be used by wildlife as resting habitat. Large ranging mammals such as elk or deer are unlikely to occupy any of the area proposed for disturbance for any significant amount of time due to the close proximity of the existing house and the existing disturbance from Highway 1. However, elk or deer may use areas of manicured lawn in the Project Area for resting or security. Because of the current and proposed future level of human disturbance in the area, it is unlikely that carnivores will use the Project Area as habitat as carnivores tend to avoid areas occupied by humans (Clevenger and Waltho 2000, Miistakis 2010). Because the project will not disturb land that is important to large ranging mammals, including carnivores, the habitats they depend on for important life processes are not likely to be directly affected by the project.

Small-bodied passerine birds may use the ornamental trees for nesting or perching. These trees will be removed during construction and will no longer be available for such birds. The adjacent powerline right-of-way provides similar habitat for these birds, and the HHRHP is an extensive land area that provides similar or better habitat for nesting or perching. In the Canmore region, birds conduct their annual breeding and nesting activities between April 15 and August 30, and mitigation measures will be in place to prevent or reduce the effects on birds that may nest on the property.

No habitat disturbance is planned outside the Project Area, including areas that may be recommended in Montane (2018); therefore, disturbance to wildlife habitat as a result of wildfire management will be nil.

Operation

The proposed project is expected to increase the human use of the land on Sundays and during scheduled events for the duration that patrons are using the parking lot. This may result in an increased potential for human-wildlife interaction, which may lead to injury or mortality of wildlife as a result. Elk and deer may use the manicured lawn for security in the spring when they have young-of-year at their heel. The young may attract large carnivores, such as grizzly bear or black bear, who often use lower-elevation habitats with early-season vegetation growth early in the spring (GoA 2018, Hojnowski 2017). Female elk may exhibit stronger than usual aggressive behaviour toward humans if they feel their young are threatened. The manicured lawn area does not provide important habitat for elk; however, they may occupy the area to avoid interactions with carnivorous species.

Permanently installed signage is proposed to educate users of the new facility, and additional temporary signage will be installed in the early spring and early summer, when interactions with large ranging mammals are most likely. The temporary signage will follow recommendations developed by the Human-Wildlife Coexistence Technical Working Group (GoA 2018). The purpose of the temporary signage is to ensure that visitors to the facility pay attention to changing wildlife behaviours throughout the seasons, as long-term signage can sometimes be ignored. It is expected that visitors to the facility will observe the signage and understand the purpose of the fencing, which will avoid human encroachment originating from the property into the HHRHP.

Effects Determination

The mitigation measures presented in Section 5 are expected to prevent the potential direct effects on wildlife and wildlife habitat. If mitigation measures presented in Section 5 are implemented, the project is expected to be neutral in direction, negligible in magnitude, and the confidence is predictable (Table 4-3).

4.1.3 Wildlife Corridor Functionality

Currently, the HHRHP is used regularly by casual and serious recreationists for hiking, biking, skiing, and dog walking (Strava 2022); as such, the potential for human-wildlife interactions is existing and ongoing and is unrelated to the proposed project. The new property managers will discourage incursions into the HHRHP and will install signage to educate patrons of the potential effects of human use on wildlife.

The construction and operation of the proposed project is not expected to affect the functionality of the HHRHP because:

- the project will occur on already disturbed land;
- the predominant movement corridors for wildlife within the HHRHP are upslope, away from the Project Area;
- the proposed construction activities are not expected to influence wildlife movement or habitat selection;
- the HHRHP will continue to accommodate the seasonal range of elk, deer, or moose; and
- the HHRHP will continue to contain adequate resources to sustain large carnivores for short periods of time.

Effects Determination
Mitigation measures presented in Section 5 are expected to avoid potential effects on wildlife corridor functionality. If these measures are implemented, the project is expected to be neutral in direction and negligible in magnitude, and the confidence is predictable (Table 4-3).

4.1.4 Aquatic Resources

The proposed project is not expected to interact with aquatic resources due to the lack of streams, ponds, or lakes on or near the Project Area. The municipal drainage ditch that exists along the frontage road along Highway 1 is a vegetated swale that likely conveys stormwater during periods of high precipitation.

The quantity or quality of water in mapped water wells within 500 m of the property are not expected to be affected by the project because they are either upgradient or more than 300 m from the Project Area, and the project will not significantly change the land use from its current condition.

Canmore Springs is a naturally occurring spring located south east of the property. Nearly all of the Trinity Bible Church congregation are long-term residents who are already aware of Canmore Springs; therefore, interest in the spring is not likely to increase as a result of the project. Management of Canmore Springs and the public's use of the springs are not within the jurisdiction of the Town of Canmore nor are they the responsibility of the proponent, and the proponent cannot be held responsible for actions of the public when they are not on the proponent's property. Even in this consideration, the project is not expected to increase the number of people entering into the HHRHP because of the springs because there are already designated locations to access the HHRHP on approved trails that do not come near the spring (Appendix D), and the purpose of visiting Canmore Springs is to collect spring water, not initiate a hike.

The project is not expected to affect the quality or quantity of water that flows at Canmore Springs because it will occur on already disturbed land, and the proposed land use will not differ significantly from the current use.

Effect Determination
The mitigation measures presented in Section 5 are expected to prevent the potential effects on aquatic resources. If these measures are implemented, the project is expected to be neutral in direction and negligible in magnitude, and the confidence is predictable (Table 4-3).

4.1.5 Cumulative Effects on Wildlife Movement and Habitat Use

Wildlife in the Bow corridor are experiencing the cumulative effects of historic and ongoing disturbance to their habitats and natural range across and along the valley, particularly the lower-gradient slopes of the valley bottom (Whittington et al. 2022). Evidence of wildlife use during the winter, the most sensitive season for most species, indicates that large-ranging wildlife use the higher-elevation slopes that remain low gradient to travel along-valley in the HHRHP (Miistakis 2010). This concentration of movement upslope may be a behavioural response to human disturbance along the valley bottom (Whittington et al. 2022, Clevenger and Waltho 2000), or it may be that wildlife that use the HHRHP in the winter prefer higher-elevation habitats to lower elevation habitats.

All of the project effects have been evaluated in this assessment as being neutral in direction and negligible in magnitude; therefore, the project is not expected to contribute to the cumulative effects already experienced by wildlife in the Bow River valley. The effects of highways have been shown to result in wildlife avoiding anthropogenic disturbance (Clevenger and Waltho 2000), and the Project Area and a large portion of the HHRHP are already within

an existing zone of influence created by Highway 1, Highway 1A, and the CP Railway. This existing zone of influence and its effect on wildlife habitat selection in the HHRHP may be reflected in the higher number of winter track counts observed by Miistakis (2010).

The proposed project will have no direct effect on wildlife or their habitats, and the incremental increase in indirect effects that may occur as a result of the project is not expected to be noticeable, considering the adjacent land use along the Highway 1 corridor.

Noise generated from the construction and operation of the project is expected to be the primary contributing cumulative effect related to wildlife movement and habitat use. Potential effects of noise originating from the project is discussed in Section 4.2.3.

Effects Determination
Mitigation measures to reduce the effects of noise on wildlife is presented in Section 5. If these measures are implemented, the project is expected to be neutral in direction and negligible in magnitude, and the confidence is predictable (Table 4-3).

4.2 Potential Indirect Effects of the Project

4.2.1 Soils and Terrain

Direct impacts to soil and terrain from the proposed project include:

- Handling, grubbing, excavation, mixing, and grading of soils;
- Wind and water erosion on areas of exposed soil, especially if soils are fine- to coarse-textured (e.g., silt, sand, and silty sand).
- Accidental spills as a result of hydraulic line breaks or fuel spills.
- Compaction of fine-textured (clay loam) soils.

Potential indirect effects of the project on soils and terrain are not anticipated. Approximately 0.5 ha (5,729 m^2) of soil will be disturbed to support the construction of the church building and new gravel parking lot. The construction will not alter the existing terrain or topography because the land has already been cleared and levelled during the existing farmhouse and land development. The remainder of the property will be untouched during construction.

Accidental spills as a result of hydraulic line breaks or fuel spills originating from equipment and vehicles may occur during construction or operation of the facility, resulting in contamination of soils within the area of the spilled material.

With the implementation of mitigation measures (Section 5), the project's effects on soils and terrain are predicted to be negative in direction and negligible in magnitude. Confidence in this prediction is predictable.

4.2.2 Surface Water and Groundwater

The project is not expected to affect surface or groundwater because no streams, lakes, or ponds are near the project area, suitable mitigation is proposed to avoid changes in water quality of the drainage ditch west of the Project Area, and the proposed land use will not differ greatly from the current land use.

Therefore, the effect determination on surface water and groundwater is predicted to be neutral in direction and negligible in magnitude as a result of the project. Confidence in this prediction is predictable.

4.2.3 Noise

The project will result in noise throughout the construction phase of the project. Noise generated from construction will be typical of regular building construction activities and will originate from the following sources:

- Equipment operation (e.g., excavators, generators, compressors, dump trucks);
- Construction tools (e.g., hammers, drills, air tools, compressors); and
- Vehicle operation (e.g., vehicles entering and exiting the site, reverse beepers).

Table 4-3 presents typical noise volumes for construction equipment and activities.

Table 4-3
Construction Equipment Noise Levels

Equipment Type	Noise Level Range (dBA)	Noise Level Average (dBA)*
Dump truck	84 – 88	86
Jackhammer	100 – 115	108
Excavator	80 – 93	87**
Compressor	-	81
Pickup truck	-	88
Crane	78 – 103	91
Backhoe	85 – 104	95
Dozer	89 – 103	96
Belt sander	93 – 104	99
Pneumatic nail gun	98 – 101	100
Concrete saw	97 – 103	100
Compactor	90 – 112	101
Grinder	106 – 110	108
Riveter; sandblasting nozzle	100 – 115	108

*Source: WorkSafe BC 2019.
**CPWR 2022.

The effect of noise on wildlife habitat use and selection may result in habitat avoidance or changes in movement behaviour (Clevenger and Waltho 2000, Whittington et al 2022). Noise generated during construction may deter large mammals from using habitats near the Project Area during construction; however, it is unclear to what extent the existing disturbance created by Highway 1, Highway 1A, and CP Railway already have on wildlife movement in the area. Wittington et al (2022) found that carnivores such as wolves and grizzly bears change their behaviour as they approach anthropogenic disturbance. In general, these species were shown to reduce movements associated with resting activities and increase movements associated foraging or hunting activities as they approached areas with extensive human disturbance, such as the Town of Canmore. These changes in behaviour are presumably in response to an increase in anthropogenic disturbance, including noise originating from vehicles on nearby highways and the CP Railway.

In 2003, the US Department of Transportation (DOT) published a discussion paper in Public Roads Magazine that describes the average noise level of highways and concluded that the range of noise within 15 m of a highway is between 70 and 80 decibels (US DOT 2003). Clevenger and Waltho (2000) found that large carnivores were less likely to use crossing structures in Banff National Park where human disturbance, including noise, was more common than not. Noise levels documented in Clevenger and Waltho (2000) ranged between 63.8 dBA and 70.1 dBA, both of which are below the range of noise described in the 2003 US DOT report, suggesting that if Highway 1 has a noise level greater than 80 dBA, it is likely that wildlife will avoid habitats nearby. Furthermore, noise was the second leading factor indicating avoidance of a crossing structure, and in six of the seven species included in the study (including ungulates and carnivores), the proximity to human disturbance had a negative correlation to use of a crossing structure by wildlife (Clevenger and Waltho 2000).

Given the proximity of the Project Area to existing ongoing and persistent sources of noise in the Bow River valley, such as Highway 1, Highway 1A, and the CP Railway, it is expected that the noise from construction will not noticeably add to the ongoing disturbance already occurring from existing anthropogenic disturbance in the area.

Noise generated through the operation phase is expected to be intermittent (on Sundays and during scheduled events) and temporary (for the duration that patrons are using the parking lot), and it is expected to be a negligible source of disturbance to wildlife given the current land use surrounding the Project Area.

A 20-year anthropogenic noise literature survey conducted by Shannon et al. (2016) documents noise levels that research has demonstrated elicits a biological response in wildlife defined by terrestrial and aquatic taxa. For example, research indicates traffic-related noise pollution may reduce acoustic communication in reptiles and amphibians at 72 dBA (Sun and Narins 2005, Lengagne 2008, Shannon et al. 2016). However, determining noise level thresholds where a significant response occurs can be problematic, particularly in developed urban landscapes where animals may employ mechanisms to adapt to anthropogenic noise or have become accustomed to or even select urban settings.

The property is situated in relatively loud transportation corridor within the zone of influence of Highway 1, CP Railway, Highway 1/1A interchange, and the Travel of Alberta Canmore Visitor Centre facilities, which have likely influenced the existing wildlife species using the area. Noise duration, frequency, and intensity are important considerations for assessing affects of anthropogenic noise on wildlife species. The church operational activities, in

comparison to traffic, industrial, and commercial activities, is relatively low frequency and limited to indoor services and events rather than continuous day-to-day activity. The noise generated will be limited to concentrated and shorter duration noise events associated with vehicles parking, gatherings of a larger group of people when arriving and departing the institution at specific times. Peak noise anticipated at the property generally does not coincide with critical activity periods such as dusk and dawn, which are important vocalization periods for amphibians in the breeding season.

The project will meet the Town of Canmore noise bylaws. Based on the Town of Canmore bylaws, residential and construction noise measured at the property line must not exceed 60 dBA from 10 pm to 7 am (i.e., overnight) from Monday to Saturday. On Sundays, construction noise is not permitted. By adhering to municipal bylaws, the proposed project will further limit noise impacts on wildlife. For context, a Halifax study measured noise levels at various sites in a residential area compared to sites in a mixed-use (residential/commercial/ institutional) area and the recorded mean noise level was 56.6 dBA for the mixed-use setting (King et al. 2012). Additionally, the church property is surrounded by forested area on all sides except the area facing Highway 1. Mennitt and Fristrup's (2016) research indicates, in developed settings, forested landscapes act as a buffer decreasing anthropogenic noise impacts. Mitigation measures are to adhere to the noise levels during the construction phase and operational activities as permitted by the Town of Canmore, which are predominately below the noise levels indicated by Shannon et al. (2016) that may elicit biological responses for the wildlife taxa terrestrial taxa (including reptiles and amphibians) reported to occur in the HHRHP.

Effects Determination
Similar to the effects determination for cumulative effects on wildlife movement (Section 4.1.5), wildlife corridor functionality (Section 4.1.3), and wildlife and wildlife habitat (Section 4.1.2), the effect determination on noise during construction and operation on wildlife use of the HHRHP is predicted to be neutral in direction and negligible in magnitude as a result of the proposed project. Confidence in this prediction is predictable.

4.2.4 Air Quality

The proposed project is not expected to affect air quality during construction or operation. Potential sources of reduced air quality will be limited to vehicle and equipment emissions or fugitive dust. All equipment used during construction will be required to be in good working order, and a no-idling policy will be implemented to reduce any potential effects that emissions may have on air quality. The mitigation measures to manage fugitive dust are described in Section 5 alongside additional measures intended to prevent unnecessary effects on air quality.

The effect determination on air quality during construction and operation is predicted to be neutral in direction and negligible in magnitude as a result of the proposed project (Table 4-3). Confidence in this prediction is predictable.

4.3 Analysis of Constraints

Given the results of this EIS and the findings of the effect determination, no ecological sensitivities or constraints exist that cannot be reasonably mitigated. The proposed land use type will change the land use from a rural residential setting, which may be characterized by regular use by few people, to a cultural centre that may be characterized by a rural setting with intermittent use by many people. Of all potential interactions that may result from the proposed project, only indirect disturbance to resting habitat for some large ranging mammals is expected. The mitigation measures presented in Section 5 (i.e., implement a construction management plan, install signage, do not harass wildlife) are expected to prevent or reduce this potential effect and improves protection of wildlife from what currently exists.

4.4 Summary of Predicted Effects

Table 4-4
Summary of Predicted Effects

Biophysical Resources	Direction	Magnitude	Scale	Duration	Reversibility	Frequency	Confidence
Vegetation and Ecosystems	Neutral	Low	Local	Short term	Long term	Isolated	Predictable
Wildlife and Wildlife Habitat	Neutral	Negligible	Local	Short term	Long term	Intermittent	Predictable
Wildlife Corridor Functionality	Neutral	Negligible	Local	Long term	Long term	Intermittent	Predictable
Aquatic Resources	Neutral	Negligible	Project	Short term	Short term	Isolated	Predictable
Soils and Terrain	Negative	Negligible	Project	Long term	Long term	Isolated	Predictable
Surface Water and Groundwater	Neutral	Negligible	Project	Long term	Long term	Isolated	Predictable
Noise	Neutral	Negligible	Local	Long term	Short term	Intermittent	Predictable
Air Quality	Neutral	Negligible	Local	Short term	Short term	Isolated	Predictable

5 MITIGATION MEASURES

Table 5-1 describes the mitigation measures to guide the construction and operation of the proposed project.

Table 5-1
Recommended Mitigation Measures

Environmental Component	Potential Effect	Mitigation Measures
Soils and Terrain	• Soil stripping • Erosion and sedimentation resulting from surface disturbance • Fugitive dust • Spills resulting in soil contamination	• Develop and implement a construction management plan that includes a spill prevention and response plan. The spill plan should include requirements for operationally sound equipment to be used on site and must include a detailed spill response program outlining detection and rapid remediation of any spill. • Develop and implement mitigation measures and controls provided in an erosion and sediment control plan before any soil disturbance occurs. The plan will address risks associated with soil and terrain, including erosion, fugitive dust, and stockpiling requirements, and it will remain in place during construction and until soils have revegetated. • Retain a qualified environmental monitor during construction. Implementation and authority for mitigation related to soils and terrain will be at the discretion of an environmental monitor who will adhere to a construction environmental management plan that will be in place prior to construction. • Salvage topsoil and stockpile for use in restoration following construction. The environmental monitor will inspect any soil piles present in the Project Area for regulated weeds. An invasive species management plan will be implemented if necessary. • Restrict topsoil stripping to the construction envelope (i.e., only the area necessary to safely construct), and topsoil handling and rehandling should be minimized. • Prevent the loss of soil during wind or rain events. Stockpiles of any soils required to be brought onto the property should not exceed the volume necessary for construction. If stockpiles are to be kept for longer than one construction season, they will be vegetated with native grass seed to reduce erosion or invasive plant encroachment potential. Short-term stockpiles should be covered with tarps or wetted if dust plumes are observed leaving the property.
Vegetation and Ecosystems	• Spread and establishment of weedy species	• Develop and implement a construction environmental management plan to address management practices that prevent or reduce effects on vegetation. • Implement restoration activities that use native plants in areas where construction is complete to meet objectives set out in the Town of Canmore land use bylaws and prevent wind erosion. • Post signage to educate construction personnel and other individuals who may access the Project Area about the importance of not moving invasive vegetation on or off the site. Signage should include information about the risk of invasive plant spread into the HHRHP. • Manage non-native and regulated weed species by hand-pulling, bagging, and disposing at an approved facility within the Project Area prior to initiating construction to prevent the spread of these species. Plant species native to the local area should be used preferentially in any planting to occur on the property.
Wildlife and Wildlife Habitat	• Sensory disturbance (including habitat avoidance) • Increased potential for human-wildlife interaction • Increased mortality risk	• Limit the area of land clearing and vegetation disturbance to only the area necessary for construction and personnel safety. • Fence off open excavations during construction to prevent wildlife entrapment, and remove fencing following construction. • Implement a construction management plan to be approved by the Town to mitigate construction activities that could pose a hazard to humans and wildlife. • Follow the Town of Canmore's Noise Regulation to reduce the effects of noise on wildlife, including work starting after dawn and ceasing before dusk. • Design outdoor lighting to screen and prevent illumination into the HHRHP. • Use dark-sky lighting in designing the buildings to minimize light disturbance at night. • Develop and implement a wildlife management plan during construction to keep the site clean of food waste and other attractants that could attract wildlife, particularly bears. The plan should include adaptive management strategies if wildlife are encountered during construction or if wildlife mortalities are reported.

Environmental Component	Potential Effect	Mitigation Measures
		• Remove the ornamental trees and shrubs designated for clearing before or after the migratory breeding season for this region (i.e., do not disturb vegetation between April 15 and August 20), to minimize breeding bird mortality. Inspect vegetation for nests before it is felled, limbed, or removed as an additional measure. • Do not harass, feed, or interact with wildlife. • Install signage along new fence construction to educate patrons about the sensitivity of wildlife using the HHRHP to human disturbance. • Dispose of waste appropriately, making sure to follow the Town's bylaws related to bear-proof waste storage. • Report project-related wildlife injury or mortality to the Town of Canmore and AEP. • Following construction, continue to manage the Project Area in accordance with WildSmart guidelines by not planting trees or shrubs that bear fruit that may attract wildlife. • During operation, install educational signage that identifies sensitive seasons for wildlife by species, and communicates the importance of avoiding interactions with wildlife. Signage should include a permanent sign and a seasonally erected sign in the spring when elk may exhibit aggressive behaviour if young are present.
Noise	Noise may originate from: • Equipment operation (e.g., excavators, generators, compressors, dump trucks) • Construction tools (e.g., hammers, drills, air tools, compressors) • Vehicle operation (e.g., vehicles entering and exiting the site, reverse beepers)	• Fit all vehicles, equipment, and tools with mufflers typical for the equipment being used to reduce noise during construction. • Schedule all construction work during reasonable work hours typical of construction projects in the Town. Adhere to any municipal guidelines that address noise during construction. • Install educational signage that describes the importance of not disturbing wildlife if they are observed on the property. The signage should address all potential species, including carnivores and ungulates, and should remind patrons that interacting with wildlife is not safe. • Follow the Town of Canmore Noise Bylaws to reduce the effect of noise disturbance on wildlife in the HHRHP.
Land and Resource Use	• Additional vehicle traffic and parking • Increased residents and human activity in the area • Ornamental landscaping	• Install informative signage to educate the public about restricting access to the HHRHP, which would benefit wildlife, wildlife habitat, and the vegetation and ecosystems. The signage should discuss the importance of not disturbing wildlife and avoiding the introduction or spread of invasive plants.
Air Quality	• Reduced air quality from vehicle emissions	• Ensure all vehicles, equipment, and tools used during construction are in good working order and adhere to provincially accepted standards for reducing vehicle emissions. • Implement and enforce a no-idling policy for all vehicles, equipment, and tools used in the demolition and construction phases of the project. Install signage that informs the public of the no-idling policy during the operation phase of the building.

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APPENDIX A – CONCEPTUAL LAND USE PLAN

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Associated Environmental

Project Area

AE PROJECT NO.	2022-8129
SCALE	1:1,000
COORD. SYSTEM	NAD 1983 UTM ZONE 11N
DATE	2022-09-20
REV	00
DRAWN BY	BDJ
CHECKED BY	KR

FIGURE 1-3: CONCEPTUAL PROJECT PLAN

McElhanney Ltd. (Trinity Bible Church)

EIS - Trinity Bible Church
105 Harvie Heights, Canmore, AB

APPENDIX B – TERMS OF REFERENCE

Terms of Reference

Environmental Impact Statement (EIS) for the Development of a New Trinity Bible Church at 105 Harvie Heights Road

1.0 Introduction

1.1 Project Description

The Town of Canmore has received a proposal to build a new Trinity Bible Church at 105 Harvie Heights Road (Plan 8610642, Lot A). The proposed site for the new church facilities is located north of the interchange on the TransCanada Highway between the Town of Canmore and Harvie Heights (See Attachment 1 below). Currently the 8,023 m^2 site is occupied by a single detached residential unit, accessory building and an open garden. The site is currently zoned CW (Conservation of Wildlands), which are areas designated for protection, conservation and enhancement of the environment, and generally limits future development potential beyond the residence currently occupying the site. The site is outside of the Canmore growth area boundary and adjacent to the Harvie Heights Regional Habitat Patch.

The purpose of this Terms of Reference is to define the scope of the Environmental Impact Statement (EIS) to assess the impacts of constructing and operating a 6-7,000 square foot building to accommodate approximately 200 parishioners. The new facility will include offices, commercial kitchen, multi-purpose rooms, stage and classroom facilities.

The Terms of Reference was developed by the Town's third-party reviewer and reviewed by the Town's Administration. It focuses on issues relevant to the proposed project such as concerns associated with potential impacts of increased human activity at the site on wildlife use of the adjacent habitat patch . The EIS will focus on evaluating existing conditions with consideration of the established land use plans for the area and scale of development that might lead to impacts from the construction and operation of new Trinity Bible Church including associated mitigations. Guidelines for the preparation of an EIS is outlined in the Town's Environmental Impact Statement Policy (2016a).

1.2 Requirement for an EIS

The proposed site for the new Trinity Bible Church at 105 Harvie Heights Road is adjacent to the Harvie Heights Regional Habitat Patch, a part of the Bow Valley Wildlife Corridor Network that is designed to allow wildlife movement around and through Canmore. A habitat patch is defined as an area meant to meet the food, rest and water needs of animals for a short period while they negotiate a corridor network towards a larger, regional habitat patch at its end. Habitat patches need to provide sufficient habitat in their interior for an animal to rest or feed with security from human disturbance (BCEAG

2012). Although the proposed development does not occur directly within the Habitat Patch or Wildlife Corridor boundaries as per Canmore's Municipal Development Plan (2016b, amended 2018), the proposed development could have impacts to the adjacent Habitat Patch that we recommend be evaluated. Furthermore, as per the MDP (2016b, amended 2018), an EIS is required for proposed projects that require rezoning lands within areas designated for Conservation, such as Habitat Patches, but that are outside of the Growth Boundary, or for the expansion or intensification of an existing use. Below we highlight clauses from the MDP that may be applicable to this project:

Development in Conservation Areas

4.1.2 *Development in Conservation areas should be limited to recreational use, agricultural uses, infrastructure and utilities, and will be subject to any additional restrictions on these activities contained in the MDP including Environmentally Sensitive Areas policies contained in Section 4.2.*

4.1.4 *Changes in zoning for lands within Conservation areas that would allow new or additional development of those lands shall be discouraged unless exceptional community benefit can be demonstrated. Should an application for amendment be considered, an EIS will be required to be prepared and potential impacts of the development addressed and mitigated.*

New Development Within or Adjacent to Wildlife Corridors and Habitat Patches

4.2.13 *Development proposals within or adjacent to a wildlife corridor or habitat patch shall have regard for the BCEAG Wildlife Corridor and Habitat Patch Guidelines for the Bow Valley (2012) and most recent principles of wildlife conservation to ensure the values and function of the corridor or habitat patch are not compromised.*

Wildlife Sensitive Design

4.2.16 *Developments should be designed to minimize impacts on any adjacent wildlife habitat patch or corridor. Design elements that should be addressed include, but are not limited to, placement of buildings, lighting, landscaping and fencing, educational signage and location of trails and trail heads.*

2.0 Purpose of the EIS

The purpose of the EIS is to provide sufficient information to Council and Town staff in order to make an informed decision on the application to build a new Trinity Bible Church a 105 Harvie Heights Road. The EIS will outline existing conditions, identify significant natural and ecological features, determine the nature and scale of the potential impacts generated by the proposal, provide recommendations for how to best avoid or mitigate those impacts, and identify residual impacts and their significance.

3.0 Scope of the EIS

The EIS will be based on available information and accumulated data on environmental resources from the surrounding environments and identified linkages to the proposed

development. The accumulated data and most recent scientific thought will form the basis of the EIS.

3.1 Proposal Overview

- A description of the proposal.
- Mapping of the proposal in relation to regional and existing site conditions and constraints.
- Identification of federal or provincial requirements or restrictions relevant to the study, and how the proposal will meet the intent or legislative requirements.
- An overview of the municipal planning policy context, including statutory documents and zoning.
- Site visit, including survey of portions of the Harvie Heights Habitat Patch in the Local Study Area for signs of animal use or movement pathways.

3.2 Defining EIS Study Boundaries

- Two spatial study areas should be considered in the EIS:
    - Project Study Area boundary that includes the project footprint.
    - Local Study Area (LSA) should include the project footprint and portions of the adjacent areas of native vegetation and wildlife corridors that meaningfully reflect the effects of the proposed project (i.e., wildlife zone of influence).
- Temporal boundaries should extend from the time of project approval to full build-out of the facility.

3.3 Existing Site Conditions

- Identification of previous relevant literature/studies, if publicly available
- A description of existing environmental conditions, including:
    i. Site location map,
    ii. Soils, landforms and surficial geology,
    iii. Hydrological or hydrogeological (desktop assessment only) resources including wetlands,
    iv. A biophysical inventory and analysis of terrestrial and aquatic communities, and the relationship to the larger local and regional ecosystem,
    v. A summary description of the natural features and components, and the proposed criteria to be applied for evaluation of their significance, and
    vi. Hazards and constraints resulting from existing site conditions.

3.4 Analysis of Impacts

- Analysis and criteria for evaluation of the foreseeable short (i.e., during construction and long term (i.e. during operations) positive and negative impacts of the proposal with respect to:
    i. Wildlife and associated habitat,
    ii. Vegetation (i.e., plant species and communities),
    iii. Wildlife and plant species of concern,
    iv. Wildlife corridor functionality,
    v. Aquatic ecology, including water quality, if wetlands and permanent waterbodies are present in the study area,
    vi. Cumulative effects on wildlife movement and habitat use.

- Analysis and evaluation of how the impacts of the proposed project on the following components may indirectly result in foreseeable short- and long-term positive and negative impacts on wildlife and associated habitat, and vegetation:
    i. Soils and terrain,
    ii. Surface and ground water,
    iii. Noise, including the quantitative analysis of noise disturbance from project activities, through construction and future operations and the impacts on wildlife corridor functionality, and,
    iv. Air quality.

- Analysis of the human use impacts on adjacent wildlife corridor resulting from the proposal, including mitigations for minimizing human-wildlife interactions. If fencing is proposed, then a discussion as to the efficacy of the proposed type of fencing in reducing human-wildlife conflict should be included in the EIS.
- Discuss impacts from the wildfire strategy that may be required for development, including changes to vegetation, wildlife habitat and effects on wildlife.
- Analysis of alternatives and modifications to the proposal to limit or remove impacts.
- An evaluation of whether the form of the development/proposal can be accommodated given any identified ecological sensitivities or constraints, including land use type and intensity of the proposed development.
- The cumulative effects analysis should include:
    - A discussion of current levels of physical disturbance in and human use of the Harvey Heights Habitat Patch based on existing and publicly available information (e.g. Strava, trail network maps). Including a discussion of any spatial or

temporal patterns of disturbance that may impact wildlife use and movement.

- A discussion of wildlife use and movement patterns in the Harvie Heights Habitat Patch based on existing and publicly available information
- Figures, as required, showing the distribution of physical disturbances in and immediately adjacent to the habitat patch; the distribution of human use and access into the habitat patch; patterns of wildlife use in the habitat patch

3.5 Mitigations, Recommendations & Conclusions

- Provide recommendations for how to reduce, avoid or mitigate negative impacts, including on how to mitigate long term impacts of increased human use of the site on wildlife and their habitat.
- Identification of residual impacts and criteria proposed to evaluate their significance.

Wildlife habitat patches are a valid municipal planning issue, and the EIS will need to consider how this development may impact wildlife and human use of the adjacent Harvie Heights Regional Habitat Patch, including proposed mitigations, as necessary, to minimize potential impacts of project construction and operations on wildlife habitat use and movement.

4.0 EIS Report

The report will contain all information required by this Terms of Reference. The format of the report will include mapping, tables and supporting text. The Town will require a digital copy of the document.

5.0 Review of the EIS

The EIS Policy requires that this EIS Terms of Reference and the resulting EIS are reviewed by an independent, qualified third party that reports directly to the Town. The EIS Policy also requires that the third-party reviewer be involved from the beginning of the process. The Town and its third-party reviewer will work with the applicant's consultant to update and revise the EIS as may be necessary through the review process. Where significant changes are proposed to the EIS, the project or recommended mitigation strategies through the EIS review process, the applicant's consultant will produce an updated EIS that reflects these changes.

The EIS must be submitted and reviewed by the Town's third-party reviewer prior to First Reading by Council.

The Town may also refer the EIS to other agencies or committees for comment, including but not limited to the Province of Alberta and Canmore's Environmental Advisory Review Committee (EARC).

6.0 Relevant and Available Documents

- Whittington, J., Hebblewhite, M., Baron, R.W., Ford, A.T. and J. Paczkowski. 2022. Towns and trails drive carnivore movement behaviour, resource selection, and connectivity. Movement Ecology 10:17.
- Recommendations for Trails and Management of Recreational Use for the Town of Canmore: South Canmore and West Palliser (TERA Environmental Consultants, 2012)
- Grizzly Bear Movement and Conflict Risk in the Bow Valley: A Cumulative Effects Model. (Matt Carlson, Integral Ecology Group and Y2Y, 2022)
- BCEAG (Bow Corridor Ecosystem Advisory Group). 1999. Wildlife corridor and habitat patch guidelines for the Bow Valley. 34pp.
- BCEAG. 2001. Wildlife and Human Use Monitoring Recommendations for the Bow Valley.
- BCEAG. 2012 (DRAFT). Wildlife corridor and habitat patch guidelines for the Bow Valley: Updated 2011. 29pp, plus appendices.
- MSES Inc. 2019. EIS Addendum WMC Expansion Project.
- MSES Inc. 2020. Lower Silvertip Wildlife Corridor Study. Prepared for the Town of Canmore. 53 pg.
- Summit Environmental. 2013. Environmental Impact Statement. Proposed WTS and MRF Relocation.
- Town of Canmore Fire Smart Mitigation (2010)
- Town of Canmore. 2016a. *Environmental Impact Statement (EIS) Policy*. 5 pp
- Town of Canmore. 2016b. *Canmore Municipal Development Plan (Amended 2018)*.
- Town of Canmore. 2019. Human - Wildlife Coexistence in the Bow Valley.
- Flood risk mapping – available here

Attachment 1

Area overview and project location

(Source: Supporting Report: Land Use Re-districting Proposal: Relocation of Trinity Bible Church to 105 Harvie Heights Road (McElhanney, 2022)

APPENDIX C – SPECIES SUMMARY REPORTED IN THE HARVIE HEIGHTS REGIONAL HABITAT PATCH

Species Group	Species Common Name	Scientific Name	Count of Detections
Amphibian	Boreal toad	*Bufo hemiophrys*	5
Amphibian	Columbia spotted frog	*Rana luteiventris*	2
Amphibian	Long-toed salamander	*Ambystoma macrodactylum*	4
Amphibian	Wood frog	*Lithobates sylvaticus*	8
Bird	Black-billed magpie	*Pica hudsonia*	1
Bird	Black-capped chickadee	*Poecile atricapillus*	1
Bird	Calliope hummingbird	*Selasphorus calliope*	3
Bird	Chipping sparrow	*Spizella passerine*	1
Bird	Clay-coloured sparrow	*Spizella pallida*	1
Bird	Common raven	*Corvus corvus*	2
Bird	Harlequin duck	*Histrionicus histrionicus*	30
Bird	Pileated woodpecker	*Dryocopus pileatus*	1
Bird	Ruby-throated hummingbird	*Archilochus colubris*	1
Bird	Rufous hummingbird	*Selasphorus rufus*	10
Bird	Tree swallow	*Tachycineta bicolor*	1
Bird	Vesper sparrow	*Pooecetes gramineus*	1
Bird	White-crowned sparrow	*Zonotrichia leucophrys*	2
Bird	White-throated sparrow	*Zonotrichia albicollis*	1
Mammal	Bighorn sheep	*Ovis canadensis*	314
Mammal	Black bear	*Ursus americanus*	131
Mammal	Bobcat	*Lynx rufus*	1
Mammal	Bushy-tailed woodrat	*Neotoma cinerea*	2
Mammal	Cougar	*Puma concolor*	91
Mammal	Coyote	*Canis latrans*	246
Mammal	Grey wolf	*Canis lupus*	21
Mammal	Grizzly bear	*Ursus arctos*	29
Mammal	Marten	*Martes americana*	180
Mammal	Moose	*Alces alces*	2
Mammal	Mule deer	*Odocoileus hemionus*	1,177
Mammal	Red fox	*Vulpes vulpes*	303
Mammal	Red squirrel	*Tamiasciurus hudsonicus*	241
Mammal	Snowshoe hare	*Lepus americanus*	151
Mammal	Striped skunk	*Mephitis mephitis*	2
Mammal	Wapiti/elk	*Cervus elaphus*	204
Mammal	White-tailed deer	*Odocoileus virginianus*	834
Total Count			**4,009**

Canmore Pathways & Trails

BOW VALLEY EAST SIDE Flip over for Bow Valley West Side

This map produced in 2017.

Town of CANMORE

Information
Washrooms
Parking
Roadway
Paved Path — Maintained by Town of Canmore
Gravel/Dirt Trail — Maintained by Town of Canmore
Gravel/Dirt Trail — Maintained by Province of Alberta
Gravel/Dirt Trail — Unmaintained

0 0.5 1 kilometres

Map source: Alberta Tourism, Parks and Recreation, Town of Canmore

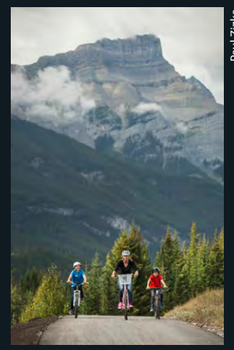
Summit Trail: steep climb, hazardous sections
HELICOPTER PAD
MOUNT LADY MACDONALD
Mount Lady Macdonald Trail
No bikes permitted
Cougar Creek Trail
Summit Trail: steep climb, hazardous sections
GROTTO MOUNTAIN
Grotto Mountain Trail
BOW VALLEY WILDLAND PROVINCIAL PARK
Montane Traverse Trail
Montane Traverse Trail
Silvertip Golf Course
Stoneworks Creek
Tibits Quarry Trail
Meander Trail
Ridge Traverse
Johnny's Trail
Silvertip Footpath
Silvertip Trail
Douglas Fir Trail
Closed Dec.1 - Jun.15
STEEP HILL
HOODOOS
Mountain Bike Skills Park
Cougar Creek
Horseshoe Loop
"G8 Loop" Closed Dec.1 - May15
Horses on trails in this area
Numerous unmaintained and unsigned trails exist in this area that are not shown on this map.
Alpine Club of Canada Clubhouse
Cougar Creek Trailhead
Elk Run Boulevard
Benchlands Trail
Off Leash Dog Park
RCMP
HARVIE HEIGHTS
Access Trailhead from Harvie Heights Rd.
Palliser Pathway
TRANS CANADA HIGHWAY
To Banff
Rocky Mountain Legacy Trail
BOW RIVER
Travel Alberta Visitor Information Centre
Canmore Golf & Curling Club
Canmore Recreation Centre
Bow Valley Trail
Canmore Hospital
Benchlands Trail Overpass
Highway underpass
Elevation Place
Railway Ave.
17 St.
To Bow River
Main St.
Boardwalk
BRIDGE
TRANS CANADA HIGHWAY
Bow Valley Trail
BOW RIVER
To Calgary
BOW VALLEY WILDLAND PROVINCIAL PARK

Emergencies: call 911

Please Note:
For legibility purposes many local access and unmaintained trails are not shown on this map.

1 Rocky Mountain Legacy Trail

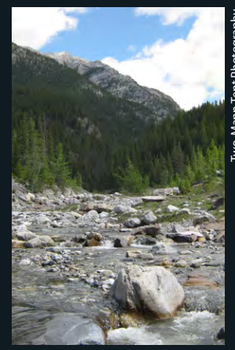
Multi-use recreational paved pathway between Canmore and Banff. The scenic trail has a minimal elevation change as it follows the Bow River and offers spectacular views of the valley. It's official trailhead is located at the Travel Alberta Visitor Information Centre. However users can travel between the two town centres on different pathways, cycling lanes or sidewalks, for a total of 23km (one way).


Paul Zizka

2 Cougar Creek

This rocky hiking trail crosses Cougar Creek several times on its way to a narrow canyon popular with local rock climbers.

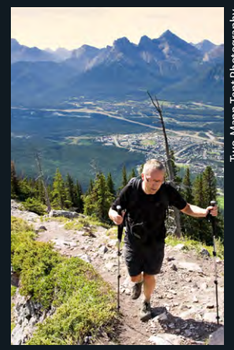
Total distance:
3.5km round trip from the Cougar Creek Trailhead to the canyon.


Two-Mann Tent Photography

3 Mount Lady Macdonald Trail

A steep hiking trail ascends the south ridge of this mountain named for the wife of Canada's first Prime Minister. Views from the helicopter pad are spectacular but the route beyond to the mountain's actual summit is very steep and exposed.

Total distance:
8km round trip from the Cougar Creek Trailhead to the helicopter pad.


Two-Mann Tent Photography

4 Montane Traverse Trail

Equally popular with mountain bikers and hikers, this undulating trail offers fine views of the Bow Valley.

Total distance:
Loops of 2-10+ km can be created by combining the Montane Trail with other area trails and/or the Palliser Pathway.


Two-Mann Tent Photography

Wildlife:

- Bears and cougars frequent the Canmore area
- All wildlife is unpredictable and should never be approached
- It is advisable to travel in groups, make noise and carry bear spray
- To report a bear or cougar sighting, please call: 403-591-7755

Dogs:

- Dogs must be kept on-leash and under control at all times
- Use the waste bags provided to pick up after your dog