



**-COMMITTEE OF THE WHOLE MEETING AGENDA-**

Meeting #: 241  
Date: Tuesday, March 28, 2023, 1:00 pm  
Location: Council Chambers  
7400 Prospect Street

*This meeting is being recorded as authorized by the Video Recording & Broadcasting of Open Meetings Policy.*

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**Pages**

**1. CALL TO ORDER**

In honour of the Lil'wat7ul, the Village of Pemberton acknowledges that we are meeting within the unceded territory of the Lil'wat Nation

**2. APPROVAL OF AGENDA**

**Recommendation:**

**THAT** the agenda be approved as presented.

**3. ADOPTION OF MINUTES**

**3.1 Committee of the Whole Meeting No. 240, Tuesday, March 14, 2023**

**Recommendation:**

**THAT** the minutes of Committee of the Whole Meeting No. 240, held Tuesday, March 14, 2023, be adopted as circulated.

**4. BUDGET SESSION No. 3**

**4.1 2023 Draft Budget Information Review**

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**Recommendation:**

**THAT** the Committee of the Whole provide direction to Staff with respect to any changes to the 2023 Draft Budget as presented.

**5. REPORTS**

**5.1 Background Report on Hillside Trails Temporary Closures**

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**Recommendation:**

**THAT** Committee of the Whole receive the report for information.

**6. ADJOURNMENT**

**Recommendation:**

**THAT** the Committee of Whole meeting be adjourned.

**Date:** Tuesday, March 28, 2023  
**To:** Elizabeth Tracy, Chief Administrative Officer  
**From:** Thomas Sikora, Manager of Finance  
**Subject:** Budget Session No. 3: 2023 Draft Budget Information Review

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### **PURPOSE**

To present to the Committee of the Whole the draft 2023 Budget for review and comment. This session is to be treated as a working session with opportunity for Council feedback and direction, with a refined budget including tax implications to follow at the subsequent session.

### **BACKGROUND**

This is the third of four (4) budget sessions scheduled and will focus on reviewing drafts of the 2023 Operating Budgets, Capital, and Project Budgets. **It is important to note that 2022 Year End is still in progress and all figures are unaudited and subject to change.**

### **DISCUSSION & COMMENTS**

This is the first opportunity the Committee will have to review the **2023 Operating Budget** as prepared through consultation with the Village Department Managers. Capital is included in this session, incorporating feedback around capital priorities and service objectives previously presented to Council.

The following is a list of assumptions that may not immediately be apparent in the budget appendices:

- **Tax implications and recommendations will be presented at the next budget session, along with reserve implications and recommendations.** For the purposes of this working session, operational budgets are shown with zero tax increases and Non-Market Change of \$152,538. Again, implications will be discussed during the Tax Impact deliberations to follow;
- Taxes are shown with no increase for collections to Other Governments as taxes collected under the agreements for the Regional District, School District, Police, Sea to Sky Regional Hospital District, Municipal Finance Authority and BC Assessment Authority are not a part of the Village of Pemberton deliberations;
- Transit is budgeted using the BC Transit estimated Revenues and Expenses from the Annual Service Agreement;
- Administration Salaries are expensed to the General Fund and reclassified to the Water, Sewer, and Airport Funds as a proportionate share. The allocation to the Water Fund is 24%, the Sewer Fund is 22% and the Airport Fund is 3%. Public Works and Parks Salaries are not reclassified, they are allocated on a per hour basis for actual time spent;

- Salaries assumptions reflect recommendations provided by Western Compensation & Benefits Consultants. An estimate of market change for 2023 is included at 4%.
- 2023 salaries assumptions reflect full staffing levels.
  - One time CAO recruitment and associated expenses are not included in 2023 projections, and result in year over year savings.
- Salaries for Public Works Staff have been increased per terms of the Collective Agreement
- Salaries for Council have been increased by the Dec 2022 BC Consumer Price Index (CPI) in alignment with Council Remuneration Bylaw No. 704, 2012. "Council remuneration was reviewed by previous council in 2022 and direction received to maintain the current remuneration increase program.
- Capital Projects incorporate input from Council at the most recent budget session held on February 28, 2023. Updated funding assumptions are provided in **Appendix A**.
- Water and Sewer Capital Projects are fully funded by user fees, reserves, or grants and do not have additional tax implications.

The Budget is presented with Operating Expenses separate from the New Capital and Projects except for those currently in progress and funded by grants, surplus or reserves carried forward, some of which are shown below:

- Daycare Expansion
- Water Treatment Facility
- Fernwood Watermain and Pressure Reducing Valve Replacement
- McRae Rd Water Main Upsizing
- Industrial Park Generator
- Engine 10 Replacement
- EV Chargers
- Amenity Building at Den Duyf Park
- Park and Ride
- Operations and Parks Fleet Upgrades for end-of-life equipment

Reserves have been added to applicable departments to offset the taxes required for Future Capital Expenditures and to prepare for the breakdown of Capital Infrastructure for; General, Fire, Water and Sewer System upgrades. Additional reserve discussion will happen at the next session.

#### Operational Impacts:

The Operating Budget for 2023 is shown as a deficit of \$159,936; however, 2022 has an unaudited surplus carryover of \$275,529 which after capital and preliminary reserve adjustments results in a net \$21,094 overall surplus. **As noted above the 2022 Year End is still in progress and all figures are unaudited and will change.**

In 2021 the Village of Pemberton received a *COVID-19 Safe Restart Grant for Local Governments*. The grant aided local governments with COVID related shortfalls for; revenue losses, facility reopening and operating, emergency planning and response, bylaw and protective services, computer and technology costs and other related costs. Staff will bring back remaining balances for the COVID-19 Safe Restart Grant and other reserves at the April Committee of the Whole.

The future meetings tentatively scheduled,

<b>Tuesday, April 11, 2023</b>	<b>Committee of the Whole Meeting</b> <ul style="list-style-type: none"> <li>Budgeting Session if required</li> </ul>
Tuesday, April 18, 2023	Committee of the Whole – Save the Date <ul style="list-style-type: none"> <li>Budgeting Session – 2023 Final Budget with Tax Implications and 5 Year Financial Plan review prior to Bylaws coming forward for adoption.</li> </ul>
<b>Tuesday, May 9, 2023</b>	<b>Regular Council Meeting</b> <ul style="list-style-type: none"> <li>2023 - 2027 Five Year Financial Plan Bylaw 1st, 2<sup>nd</sup> and 3<sup>rd</sup> readings.</li> <li>2023 Tax Rates Bylaw 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> readings</li> </ul>
Thursday, May 11, 2023	Special Council Meeting <ul style="list-style-type: none"> <li>2023 – 2027 Five Year Financial Plan Bylaw – adoption (s. 165 CC)</li> <li>2023 Tax Rates Bylaw - adoption (s.197 CC)</li> </ul>

### **COMMUNICATIONS**

Residents will be able to participate in the budget process by submitting feedback to the Village at [budget@pemberton.ca](mailto:budget@pemberton.ca) which can be found on the Village website as a link before the next session.

Information has been included in the Village’s eNEWS, on the Village Website and Facebook page, and has been covered in the Pique.

### **LEGAL CONSIDERATIONS**

The development and review of the annual budget meets with the requirements as set out in legislation.

### **IMPACT ON BUDGET & STAFFING**

The development of the annual budget is a component of the day-to-day operations of the Finance Department and has been incorporated into the annual work plan.

### **INTERDEPARTMENTAL IMPACT & APPROVAL**

The Finance Department coordinates with Managers on each department budget and will move forward with the projects as approved by Council.

### **COMMUNITY CLIMATE ACTION PLAN**

Budget priorities have been considered to align with Community Climate Action Plan strategies.

**IMPACT ON THE REGION OR NEIGHBOURING JURISDICTIONS**

Development of the 2023 draft budget considered interaction with the region and neighboring jurisdictions at this time as it relates to funding and contractual obligations.

**ALTERNATIVE OPTIONS**

There are no alternative options for consideration.

**RECOMMENDATIONS**

**THAT** the Committee of the Whole provide direction to Staff with respect to any changes to the 2023 Draft Budget as presented.

**ATTACHMENTS:**

**Appendix A:** 2023 Draft Budget Worksheets

Prepared or Submitted by:	Thomas Sikora, Manager of Finance
Acting-CAO Approval by:	Tom Csimas, Manager of Operations and Projects

Village of Pemberton 2023 Budget As at March 15, 2023 Revenues, Transfers									
		2021 YTD Actual (Unaudited)	2021 Budget	2022 YTD Actual (Unaudited)	2022 Budget	2023 Budget	Variance over Budget (\$)	Variance over Budget (%)	Comments
<b>Revenues:</b>									
<b>Taxation:</b>									
01-1-005000-6501	Transfer to/from Surplus		(\$757,382)		(\$479,173)	(\$275,529)	203,644	-42%	
	Non-Market Change						0	#DIV/0!	
01-1-006000-1301	Residential (Class 1)	(\$1,115,185)	(\$1,111,385)	(\$1,466,494)	(\$1,140,990)	(\$1,435,047)	(294,057)	26%	
01-1-006000-1302	Utilities (Class 2)	(\$57,851)	(\$57,851)	(\$67,260)	(\$52,463)	(\$67,850)	(15,387)	29%	
01-1-006000-1305	Light Industry (Class 5)	(\$47,279)	(\$47,279)	(\$37,190)	(\$37,096)	(\$173,989)	(136,893)	369%	
01-1-006000-1306	Commercial (Class 6)	(\$386,315)	(\$383,887)	(\$477,111)	(\$370,328)	(\$528,019)	(157,691)	43%	
01-1-006000-1307	Frontage Collection	(\$312,591)	(\$312,048)	(\$312,891)	(\$312,048)	(\$312,025)	23	0%	
01-1-006000-1308	Recreation/Non-Profit (Class 8)	(\$4,535)	(\$4,535)	(\$5,108)	(\$3,984)	(\$5,243)	(1,259)	32%	
01-1-006000-1309	Farm (Class 9)	(\$399)	(\$399)	(\$469)	(\$366)	(\$355)	11	-3%	
01-1-006000-1310	Community Enhancement Levy	(\$7,499)	(\$7,500)	(\$7,451)	(\$7,500)	(\$7,451)	49	-1%	
01-1-006000-1311	Community Initiatives and Opportunities	\$0	\$0	\$0	\$0	\$0	0	#DIV/0!	
01-1-006000-1312	Community Centre Parcel Tax	\$0	\$0	\$0	\$0	\$0	0	#DIV/0!	
01-1-006000-1313	Tax Penalties	(\$56,535)	(\$70,000)	(\$90,083)	(\$70,000)	(\$70,000)	0	0%	
01-1-006000-1314	Tax Interest	(\$10,267)	(\$15,000)	(\$10,212)	(\$15,000)	(\$15,000)	0	0%	
01-1-006000-1315	Reserve Tax Collection	(\$347,226)	(\$347,258)	(\$404,258)	(\$445,253)	(\$323,326)	121,927	-27%	
01-1-006200-1350	GIL - BC Rail	\$0	(\$275)	(\$267)	(\$275)	(\$275)	0	0%	
01-1-006200-1351	GIL - BC Hydro	(\$19,315)	(\$26,000)	(\$17,771)	(\$26,000)	(\$26,000)	0	0%	
01-1-006200-1352	GIL - Federal Government	\$0	(\$6,300)	(\$6,158)	(\$6,300)	(\$6,300)	0	0%	
01-1-006300-1375	1% Revenue Grant - Telus	(\$6,685)	(\$6,685)	(\$6,517)	(\$6,685)	(\$6,685)	0	0%	
01-1-006300-1376	1% Revenue Grant - BC Hydro	(\$40,859)	(\$40,859)	(\$43,669)	(\$40,859)	(\$40,859)	(0)	0%	
01-1-006300-1377	1% Revenue Grant - Shaw	(\$3,730)	(\$3,730)	(\$2,456)	(\$3,730)	(\$2,456)	1,274	-34%	
01-1-006400-1400	Collections for School	(\$1,732,861)	(\$1,511,416)	(\$1,854,948)	(\$1,837,658)	(\$1,854,948)	(17,290)	1%	
01-1-006400-1401	Collections for Policing Costs	(\$272,388)	(\$246,171)	(\$288,447)	(\$289,271)	(\$288,447)	825	0%	
01-1-006400-1402	Collections for SLRD	(\$1,251,555)	(\$1,127,825)	(\$1,335,487)	(\$1,339,156)	(\$1,335,487)	3,669	0%	
01-1-006400-1404	Collections for STSRHD	(\$42,670)	(\$34,893)	(\$52,372)	(\$52,504)	(\$52,372)	132	0%	
01-1-006400-1405	Collections for MFA	(\$261)	(\$227)	(\$318)	(\$319)	(\$318)	0	0%	
01-1-006400-1406	Collections for BCAA	(\$60,164)	(\$51,097)	(\$63,786)	(\$63,864)	(\$63,786)	78	0%	
	<b>Taxation Revenues</b>	<b>(\$5,776,170)</b>	<b>(\$6,170,003)</b>	<b>(\$6,550,723)</b>	<b>(\$6,600,822)</b>	<b>(\$6,891,767)</b>	<b>(290,945)</b>	<b>4%</b>	
<b>General Revenues:</b>									
01-1-006600-1450	Investment Interest Income	(\$2,055)	(\$25,000)	(\$226,911)	(\$25,000)	(\$50,000)	(25,000)	100%	
01-1-006650-1450	Interest Revenue - Accounts Receivable	(\$2,175)	(\$7,500)	(\$2,246)	(\$7,500)	(\$7,500)	0	0%	
01-1-007000-1550	Sundry Revenue	(\$4,221)	(\$3,000)	(\$5,771)	(\$3,000)	(\$4,000)	(1,000)	33%	
01-1-007000-1551	Revenue - Tax Certificates	(\$6,495)	(\$5,000)	(\$4,359)	(\$5,000)	(\$5,000)	0	0%	
01-1-007000-1552	VOP Admin Fee - Fire Protection	(\$17,299)	(\$17,299)	(\$17,299)	(\$17,299)	(\$17,299)	0	0%	
01-1-007000-1553	VOP Admin Fee - Rescue Service	(\$5,454)	(\$5,454)	(\$5,454)	(\$5,454)	(\$5,454)	0	0%	
01-1-007100-1600	Rentals	(\$79,384)	(\$77,243)	(\$51,337)	(\$79,384)	(\$79,384)	(0)	0%	
	<b>Total General Revenues</b>	<b>(\$117,084)</b>	<b>(\$140,496)</b>	<b>(\$313,378)</b>	<b>(\$142,637)</b>	<b>(\$168,637)</b>	<b>(26,000)</b>	<b>18%</b>	
<b>Grant Revenues:</b>									
01-1-007200-1671	Grants - Provincial - SFC	(\$407,000)	(\$396,964)	(\$519,000)	(\$407,000)	(\$400,000)	7,000	-2%	
<b>Sales of Service:</b>									
01-1-007300-1555	SOS - Admin reclass	(\$14,000)		\$0					
01-1-007300-1556	SOS - Water Reclass	(\$422,371)	(\$412,389)	(\$470,694)	(\$495,640)	(\$464,780)	30,860	-6%	
01-1-007300-1557	SOS - Sewer Reclass	(\$387,173)	(\$378,160)	(\$431,469)	(\$454,340)	(\$426,052)	28,288	-6%	
01-1-007300-1558	SOS - Airport Reclass	(\$52,796)	(\$51,548)	(\$58,837)	(\$61,955)	(\$58,098)	3,857	-6%	
	<b>Total SOS</b>	<b>(\$876,341)</b>	<b>(\$842,097)</b>	<b>(\$961,000)</b>	<b>(\$1,011,935)</b>	<b>(\$948,929)</b>	<b>63,005</b>	<b>-6%</b>	
	<b>Total revenues</b>	<b>(\$7,176,595)</b>	<b>(\$7,549,560)</b>	<b>(\$8,344,101)</b>	<b>(\$8,162,394)</b>	<b>(\$8,409,334)</b>	<b>(246,940)</b>	<b>3%</b>	
<b>Transfers:</b>									
	Allocate Admin General Taxation	\$1,145,324	\$1,313,711	\$1,638,316	\$1,638,316	\$1,869,949	231,633	14%	
	Allocate Legislative General Taxation	\$101,621	\$108,273	\$121,363	\$121,363	\$123,295	1,932	2%	
	Allocate Fire General Taxation	\$383,171	\$419,182	\$409,211	\$409,211	\$494,344	85,133	21%	
	Allocate Development General Taxation	\$217,769	\$198,731	\$44,754	\$44,754	\$129,237	84,483	189%	
	Allocate Public Works/ Parks General Taxation	\$1,212,943	\$1,263,976	\$1,453,180	\$1,453,180	\$1,548,338	95,158	7%	
	Allocate Transit General Taxation	\$69,908	\$69,908	\$111,352	\$92,793	\$131,420	38,627	42%	
	Allocate Rec General Surplus	\$0	\$236,030	\$0	\$0	\$0	0	#DIV/0!	
	Allocate Water Surplus	\$0	\$284,493	\$0	\$0	\$0	0	#DIV/0!	
	Allocate Sewer Surplus	\$0	\$650	\$0	\$0	\$0	0	#DIV/0!	
	Allocate Airport General Taxation	\$23,108	\$23,671	\$29,701	\$29,701	\$41,953	12,252	41%	
01-2-008700-6475	Transfer - School Levy	\$1,732,925	\$1,511,416	\$1,854,948	\$1,837,658	\$1,854,948	17,290	1%	
01-2-008700-6476	Transfer - Police Tax	\$272,400	\$246,171	\$288,447	\$289,271	\$288,447	(825)	0%	
01-2-008700-6477	Transfer - SLRD	\$1,251,687	\$1,127,825	\$1,335,487	\$1,339,156	\$1,335,487	(3,669)	0%	
01-2-008700-6479	Transfer - STSRHD	\$42,672	\$34,893	\$52,372	\$52,504	\$52,372	(132)	0%	
01-2-008700-6480	Transfer - MFA	\$261	\$227	\$318	\$319	\$318	(0)	0%	
01-2-008700-6481	Transfer - BCAA	\$60,167	\$51,097	\$63,786	\$63,864	\$63,786	(78)	0%	
01-2-008800-6501	Reclass Frontage to Water Revenue Fund	\$99,985	\$99,985	\$99,985	\$99,985	\$99,985	0	0%	
01-2-008800-6502	Reclass Frontage to Sewer Revenue Fund	\$212,064	\$212,064	\$212,065	\$212,065	\$212,065	0	0%	
01-2-008800-6504	Transfer to General - Capital	\$0	\$0	\$0	\$0	\$0	0	#DIV/0!	
01-2-008800-6505	Transfer to Future Reserves - Capital	\$140,298	\$140,298	\$406,055	\$406,055	\$187,500	(218,555)	-54%	
01-2-008800-6509	Transfer to/from Future Reserves	\$78,844	\$206,960	\$39,198	\$39,198	\$135,826	96,628	247%	Operating Surplus
	<b>Total transfers</b>	<b>\$7,045,145</b>	<b>\$7,549,561</b>	<b>\$8,160,538</b>	<b>\$8,129,393</b>	<b>\$8,569,269</b>	<b>439,877</b>	<b>5%</b>	
	<b>(Surplus)/Deficit</b>	<b>(\$131,451)</b>	<b>(\$0)</b>	<b>(\$183,563)</b>	<b>(\$33,001)</b>	<b>\$159,936</b>	<b>192,937</b>		







Village of Pemberton 2023 Budget As at March 15, 2023									
Fire Services									
Service Mandate:									
1 Preservation of life and property within the Pemberton Area									
2 To promote fire safety, deliver educational programs, and invest in health, wellbeing and training of firefighters									
3 Effective Maintenance and Investing in Apparatus and Equipment									
		(Unaudited)							
		2021 YTD	2021	2022 YTD	2022	2023	Variance over	Variance over	Comments
		Actual	Budget	Actual (Unaudited)	Budget	Budget	Budget (\$)	Budget (%)	
<b>Revenues:</b>	<b>Allocate Fire General Taxation</b>	(\$383,171)	(\$383,171)	(\$409,211)	(\$409,211)	(\$494,344)	(\$85,133)	21%	
	<b>Surplus/Deficit Fire</b>	(\$27,017)	(\$27,017)			\$0	\$0	#DIV/0!	
	<b>Surplus/Deficit Rescue</b>	(\$8,994)	(\$8,994)			\$0	\$0	#DIV/0!	
01-1-206500-1425	SLRD Contributions - Fire Protection	(\$163,219)	(\$154,225)	(\$173,282)	(\$173,041)	(\$186,876)	(\$13,835)	8%	
01-1-206500-1425	SLRD Contributions - COVID Grant	(\$4,597)	(\$4,597)		(\$810)	\$0	\$810	-100%	
01-1-206500-1426	SLRD Contributions - Rescue Service	(\$89,018)	(\$93,012)	(\$96,361)	(\$96,361)	(\$221,091)	(\$124,730)	129%	
01-1-206510-1425	Li/Wat Contributions	(\$139,417)	(\$139,417)	(\$109,103)	(\$109,103)	(\$159,792)	(\$50,689)	46%	
01-1-207201-1671	Project - Provincial - FD	(\$72,506)	\$0	(\$249,540)	(\$144,757)	(\$170,833)	(\$26,076)	18%	FireSmart BC grants
	Rescue - Capital - Grants Other		\$0		\$0	\$0	\$0	#DIV/0!	
01-1-207201-1673	FD - Capital - Grants Other	(\$67,971)	\$0		\$0	(\$10,000)	(\$10,000)	#DIV/0!	
01-1-207300-1925	F/D - Other Revenue	(\$380,291)	(\$10,000)	(\$21,013)	(\$10,000)	(\$5,000)	\$5,000	-50%	Wildfire deploy., Incident Rec., Fireworks
01-1-207300-1930	F/D - Covid Recovery Funds	(\$13,298)	\$0	(\$914)	(\$1,000)	\$0	\$1,000	-100%	
01-1-207500-1990	F/D - MFA Proceeds	\$0	\$0	\$0	\$0	(\$150,000)	(\$150,000)	#DIV/0!	
01-1-207600-6500	Fire - Transfer from Reserves	(\$75,123)	(\$90,004)	(\$427,313)	(\$447,313)	\$0	\$447,313	-100%	Capital Items, WB Grant., wage allocation
01-1-207600-6500	Rescue - Transfer from Reserves	\$0	\$0	\$0	(\$2,500)	\$0	\$2,500	-100%	
<b>Total revenues</b>		<b>(\$1,424,622)</b>	<b>(\$910,437)</b>	<b>(\$1,486,737)</b>	<b>(\$1,394,096)</b>	<b>(\$1,397,936)</b>	<b>(\$3,840)</b>	<b>0%</b>	
<b>Operating Expenses:</b>									
01-2-208000-0000	F/D - Rescue Dept Expense	\$96,151	\$93,012	\$96,860	\$96,361	\$206,091	\$109,730	114%	FireSmart, Merit increase and CPI
01-2-208000-6001	F/D - Honorarium & Wages	\$525,311	\$281,607	\$470,102	\$433,801	\$367,179	(\$66,622)	-15%	Includes support for FireSmart Labour
01-2-208000-6002	F/D - Benefits	\$56,844	\$39,000	\$70,651	\$62,354	\$53,119	(\$9,234)	-15%	
01-2-208000-6003	F/D - Travel & Training	\$15,978	\$35,500	\$39,542	\$35,000	\$53,300	\$18,300	52%	
01-2-208000-6005	F/D - Advertising	\$733	\$600	\$138	\$622	\$1,200	\$578	93%	
01-2-208000-6006	F/D - Insurance	\$22,114	\$26,465	\$22,401	\$23,000	\$24,690	\$1,690	7%	
01-2-208000-6009	F/D - Fees & Supplies	\$17,948	\$17,500	\$24,127	\$17,500	\$14,500	(\$3,000)	-17%	
01-2-208000-6010	F/D - Sundry	\$1,502	\$7,000	\$2,791	\$2,000	\$6,750	\$4,750	238%	
01-2-208000-6011	F/D - Telephone	\$4,950	\$6,046	\$4,103	\$6,264	\$5,000	(\$1,264)	-20%	
01-2-208000-6012	F/D - Hydro	\$8,847	\$10,115	\$8,891	\$6,954	\$7,500	\$546	8%	
01-2-208000-6014	F/D - IT/Software	\$9,931	\$7,200	\$12,034	\$5,000	\$11,951	\$6,951	139%	
01-2-208000-6017	F/D - Rental Fees	\$25,735	\$25,735	\$25,735	\$25,735	\$25,735	\$0	0%	
01-2-208000-6019	F/D - Memberships and Professional Fees	\$1,721	\$1,625	\$1,773	\$1,800	\$2,031	\$231	13%	
01-2-208100-6101	F/D - Legal	\$0	\$500	\$0	\$500	\$500	\$0	0%	
01-2-208200-6125	F/D - Maintenance	\$35,275	\$35,000	\$29,557	\$35,000	\$38,000	\$3,000	9%	
01-2-208200-6126	F/D - Parts & Supplies	\$80,864	\$70,000	\$49,951	\$73,000	\$85,199	\$12,199	17%	
01-2-208200-6127	F/D - Hardware	\$2,914	\$0	\$2,917	\$0	\$2,500	\$2,500	#DIV/0!	
01-2-208200-6128	F/D - Fuel & Oil	\$11,652	\$10,000	\$16,144	\$12,000	\$14,104	\$2,104	18%	
01-2-208200-6129	F/D - Servicing	\$28,895	\$23,000	\$22,728	\$23,000	\$23,000	\$0	0%	
01-2-208600-6453	F/D - Public Relations	\$4,410	\$500	\$8,710	\$5,518	\$10,000	\$4,482	81%	Fireworks recovered through PDIF
01-2-208900-6525	Fire - Debt Servicing Interest Expense	\$11,447	\$11,452	\$256	\$11,447	\$15,000	\$3,553	31%	
01-2-208900-6527	Fire - Debt Servicing Principal	\$32,334	\$32,329	\$12,465	\$32,334	\$60,587	\$28,253	87%	
<b>Total Operating Expenses</b>		<b>\$995,556</b>	<b>\$734,186</b>	<b>\$921,876</b>	<b>\$909,190</b>	<b>\$1,027,937</b>	<b>\$118,747</b>	<b>13%</b>	
<b>Key Priorities:</b>									
	Firehall Design	\$0	\$20,000	\$164,452	\$20,000		(\$20,000)	-100%	GL Includes FireSmartExpense (Cabin Re
01-2-208400-6170	FireSmart Truck Lease Payments	\$9,636	\$0		\$0	\$18,341	\$18,341	#DIV/0!	Grant funding
<b>Total Key Priorities</b>		<b>\$9,636</b>	<b>\$20,000</b>	<b>\$164,452</b>	<b>\$20,000</b>	<b>\$18,341</b>	<b>(\$1,659)</b>	<b>-8%</b>	
<b>Capital Priorities:</b>									
	Commercial Bunker Gear Washer (Worksafe Compliance) 2 @ \$5,000	\$9,000	\$10,000		\$0		\$0	#DIV/0!	
	Commercial Bunker Gear Dryer (Worksafe Compliance)	\$3,647	\$3,850		\$0		\$0	#DIV/0!	
	Project - Cap. Mach & Equip. Exp - Fire	\$0	\$6,250		\$0	\$20,000	\$20,000	0%	
	Upgraded Gas detectors (worksafe compliance)	\$8,648	\$10,000		\$0		\$0	#DIV/0!	
	Truck Radio Upgrades (3 @ \$2,500)	\$7,500	\$7,500		\$0		\$0	#DIV/0!	
01-2-208400-6551	SCBA Tank Replacement	\$6,960	\$7,500	\$325,306	\$7,500		(\$7,500)	#DIV/0!	
	Mini Repeater for further reach down INShuk FST	\$0	\$2,500		\$2,500		(\$2,500)	#DIV/0!	
	Sprinkler Protection Unit Trailer & Truck	\$0	\$0		\$324,513	\$20,000	(\$304,513)	-1623%	Wildfire & WB Funding
	Structure Fire Bunker Gear				\$19,500			#DIV/0!	
	Hoses, Nozzles Adapters					\$20,000		-100%	
	Sprinkler Protection Unit Trailer and Truck							#DIV/0!	
	Engine 10 Truck Replacement					\$150,000		-100%	
	Water Tank and Fire Pump (Engine 11)					\$30,000		-100%	
	Rescue 1 Hydraulic Pump					\$15,000		-100%	
01-2-2084006555	New Security Fencing Training Ground	\$0	\$25,000	\$28,786	\$25,000		(\$25,000)	#DIV/0!	
	Training Ground Servicing					\$10,000	\$10,000	0%	
<b>Total Capital Priorities</b>		<b>\$28,255</b>	<b>\$72,600</b>	<b>\$354,092</b>	<b>\$379,013</b>	<b>\$265,000</b>	<b>(\$309,513)</b>	<b>-30%</b>	
<b>Total Expenses</b>		<b>\$1,033,447</b>	<b>\$826,786</b>	<b>\$1,440,421</b>	<b>\$1,308,203</b>	<b>\$1,311,278</b>	<b>(\$192,425)</b>	<b>0%</b>	
<b>Reserve Objectives:</b>									
01-2-208800-6507	Transfer to Future Reserves	\$130,703	\$83,650	\$90,971	\$85,894	\$86,659	\$2,244	3%	
	Wildfire Funds	\$244,786					\$0	#DIV/0!	
Removed this	SLRD COVID Recovery Overpayment	\$810					\$0	#DIV/0!	
	Mini Repeater for further reach down INShuk FST	\$2,500					\$0	#DIV/0!	
	Transfer to Surplus Carryforward						\$0	#DIV/0!	
<b>Total Reserve Objectives</b>		<b>\$378,799</b>	<b>\$83,650</b>	<b>\$90,971</b>	<b>\$85,894</b>	<b>\$86,659</b>	<b>\$2,244</b>	<b>1%</b>	
<b>(Surplus)/Deficit</b>		<b>(\$12,375)</b>	<b>\$0</b>	<b>\$44,656</b>	<b>\$0</b>	<b>\$0</b>	<b>(\$194,022)</b>		

<b>Village of Pemberton 2023 Budget As at March 15, 2023</b>									
<b>Development Services</b>									
<b>Service Mandate:</b>									
1 Effective Building Permit and Development Application Processing									
2 Meet Policy requirements around growth and development									
3 Enable open access to land use information for all users									
		(Unaudited)							
		2021 YTD	2021	2022 YTD	2022	2023	Variance over	Variance over	Comments
		Actual	Budget	Actual (Unaudited)	Budget	Budget	Budget (\$)	Budget (%)	
<b>Revenues:</b>									
	<i>Allocate to Development General Taxation Surplus Carryforward</i>	<i>(\$217,769)</i>	<i>(\$217,769)</i>	<i>(\$44,754)</i>	<i>(\$44,754)</i>	<i>(\$129,237)</i>	<i>(\$84,483)</i>	<b>189%</b>	Staff moved to PW
		\$19,038	\$19,038				\$0	#DIV/0!	
01-1-256900-1500	DS - Application Fees	(\$204,326)	(\$110,000)	(\$116,678)	(\$150,000)	(\$140,000)	\$10,000	-7%	
01-1-256900-1501	Licenses - Building Permits	(\$499,272)	(\$280,000)	(\$287,501)	(\$415,000)	(\$360,000)	\$55,000	-13%	
01-1-256900-1505	Permit - Water Sprinkling	(\$660)	\$0	(\$60)	(\$1,000)	\$0	\$1,000	-100%	
01-1-257300-1930	Covid Recovery Funds	(\$7,219)	(\$5,420)	(\$138,099)	(\$18,099)		\$18,099	-100%	Bang the Table, COVID recovery, plus \$12,680K revenue shortfall
01-1-257200-1671	Grant- Provincial Project- DS	(\$4,763)		(\$9,295)		(\$12,000)	(\$12,000)	#DIV/0!	Rural Economic Diversification and Infrastructure Grant for Employer
01-1-257200-1673	Grants - Other		\$0	\$0	(\$6,868)	(\$16,000)	(\$9,132)	133%	Canada Summer Jobs Grant assuming 50%-
01-1-257300-1920	DS - Recovery Revenue	(\$130,605)	(\$125,000)	(\$217,487)	(\$125,000)	(\$125,000)	\$0	0%	
01-1-257300-1925	DS - Other Revenue - Misc	(\$830)	(\$29,002)	(\$10,993)	(\$55,000)	\$0	\$55,000	-100%	Climate Action Plan, Pemberton Creek Bridge
01-1-257600-6500	Development - Transf from Reserve	\$0	\$0	\$0	\$0	\$0	\$0	#DIV/0!	
<b>Total revenues</b>		<b>(\$1,046,406)</b>	<b>(\$748,152)</b>	<b>(\$824,868)</b>	<b>(\$815,721)</b>	<b>(\$782,237)</b>	<b>\$33,484</b>	<b>-4%</b>	
<b>Operating Expenses:</b>									
01-2-258000-0000	DS - Admin	\$7,042	\$2,500	\$3,891	\$2,500	\$2,000	(\$500)	-20%	Builders Grant
01-2-258000-6000	DS - Salaries	\$325,504	\$389,603	\$333,739	\$364,076	\$284,196	(\$79,881)	-22%	
01-2-258000-6002	DS - Benefits	\$55,401	\$50,136	\$54,953	\$41,877	\$59,701	\$17,823	43%	
01-2-258000-6003	DS - Travel, Meals & Accommodation	\$63	\$3,000	\$1,732	\$3,117	\$6,000	\$2,883	92%	Public Engagment Food for OCP
01-2-258000-6005	DS - Advertising	\$5,157	\$3,000	\$1,902	\$3,117	\$2,081	(\$1,036)	-33%	6x ads plus public engagement
01-2-258000-6006	DS - Insurance			\$0	\$0		\$0	#DIV/0!	
01-2-258000-6011	DS - Telephone	\$2,417	\$2,100	\$1,555	\$2,182	\$1,600	(\$582)	-27%	
01-2-258000-6014	DS - IT/Software	\$14,670	\$14,600	\$23,043	\$15,169		(\$15,169)	-100%	Cloud Permit software and Adobe
01-2-258000-6019	DS - Memberships and Professional Fess	\$4,502	\$3,564	\$1,252	\$3,703	\$1,290	(\$2,414)	-65%	
01-2-258000-6020	DS - Training	\$2,278	\$6,000	\$6,734	\$6,234	\$8,000	\$1,766	28%	
01-2-258100-6101	DS - Legal	\$19,109	\$15,000	\$26,588	\$15,585	\$15,000	(\$585)	-4%	
01-2-258100-6102	DS - Engineering Consulting			\$0			\$0	#DIV/0!	
01-2-258100-6103	DS - Contractors & Consult.	\$41,568	\$101,650	\$202,858	\$201,082	\$265,250	\$64,168	32%	See DS Consultants Worksheet
01-2-258200-6125	DS - Maintenance			\$0	\$0	\$0	\$0	#DIV/0!	
01-2-258200-6126	DS - Parts & Supplies	\$766	\$1,500	\$1,558	\$1,559	\$1,600	\$42	3%	
01-2-258200-6127	DS - Hardware	\$2,723	\$0	\$1,857	\$0		\$0	#DIV/0!	COVID Recovery
01-2-258200-6128	DS - Fuel & Oil	\$714	\$500	\$511	\$520	\$520	\$1	0%	
01-2-258400-6173	Projects - Recoverable DS Expenses	\$134,943	\$125,000	\$217,487	\$125,000	\$125,000	\$0	0%	
<b>Total Operating Expenses</b>		<b>\$616,856</b>	<b>\$718,153</b>	<b>\$879,661</b>	<b>\$785,722</b>	<b>\$772,237</b>	<b>(\$13,484)</b>	<b>-2%</b>	
<b>Key Priorities:</b>									
01-2-258400-6170	<b>Project Dev.- Non Capital Exp</b> Climate Action Plan	\$0	\$30,000	\$9,295	\$30,000	\$10,000	(\$20,000)	-67%	Gas Tax Funds
<b>Total Key Priorities</b>		<b>\$0</b>	<b>\$30,000</b>	<b>\$9,295</b>	<b>\$30,000</b>	<b>\$10,000</b>	<b>(\$20,000)</b>	<b>0%</b>	
<b>Capital Priorities:</b>									
<b>Total Capital Priorities</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>0</b>	
<b>Total Expenses</b>		<b>616,856</b>	<b>748,153</b>	<b>888,956</b>	<b>815,722</b>	<b>782,237</b>	<b>(33,484)</b>	<b>9%</b>	
<b>Reserve Objectives:</b>									
<b>Total Reserve Objectives</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>0%</b>	
<b>(Surplus)/Deficit</b>		<b>(\$429,550)</b>	<b>\$0</b>	<b>\$64,087</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>		



Village of Pemberton 2023 Budget As at March 15, 2023									
Water Services									
Service Mandate:									
1 Safe and Healthy Community: Safe Drinking Water and reliable capacity for Fire Protection Services									
2 Security and protection of existing source									
3 Sustainable supply: Investing into a new source									
			(Unaudited)						
		2021 YTD	2021	2022 YTD	2022	2023	Variance over	Variance over	Comments
		Actual	Budget	Actual (Unaudited)	Budget	Budget	Budget (\$)	Budget (%)	
<b>Revenues:</b>									
<i>Surplus Carryforward</i>									
		(\$284,493)	(\$284,493)	(\$88,779)	(\$88,779)		\$88,779	-100%	
03-1-406100-1325	Water - Village User Rates	(\$910,533)	(\$852,329)	(\$957,093)	(\$872,792)	(\$956,467)	(\$83,675)	10%	
03-1-406100-1326	Water - Frontage Taxes Reclassed	(\$99,985)	(\$99,985)	(\$328)	(\$99,985)	(\$99,895)	\$90	0%	
03-1-406100-1327	Water - Connection Fees	(\$40,590)	(\$20,000)	(\$15,000)	(\$20,000)	(\$20,000)	\$0	0%	
03-1-406100-1329	Water - Penalties	\$0	(\$15,000)	\$0	(\$15,000)	(\$15,000)	\$0	0%	
03-1-406100-1333	Water - OB User Rates	(\$23,944)	(\$26,297)	(\$32,326)	(\$26,297)	(\$24,746)	\$1,551	-6%	
03-1-406100-1334	Water - IP User Rates	(\$51,643)	(\$75,936)	(\$85,815)	(\$75,936)	(\$67,751)	\$8,186	-11%	
03-1-406100-1335	Water - PNID User Rates	(\$81,872)	(\$129,144)	(\$128,408)	(\$129,144)	(\$87,472)	\$41,672	-32%	
03-1-406600-1450	Water - Investment Income	\$0	(\$500)	\$0	(\$500)		\$500	-100%	
01-1-307201-1671	Project Works Capital - Provincial Grant	\$0	\$0	\$0	(\$190,000)	(\$1,050,000)	(\$860,000)	453%	Water Inv & Fernwood
03-1-407201-1675	Capital Projects - Contributions	\$0	\$0	\$0	\$0		\$0	#DIV/0!	
03-1-407300-1925	Water - Other Revenue	(\$337)	\$0	(\$143)	\$0		\$0	#DIV/0!	
03-1-407600-6500	Water - Transfer from Reserve	(\$344,432)	(\$285,265)	\$0	(\$218,000)	(\$278,000)	(\$60,000)	28%	Scada & Fernwood
<b>Total revenues</b>		<b>(\$1,837,829)</b>	<b>(\$1,788,950)</b>	<b>(\$1,307,891)</b>	<b>(\$1,736,434)</b>	<b>(\$2,599,331)</b>	<b>(\$862,898)</b>	<b>50%</b>	
<b>Operating Expenses:</b>									
03-2-408000-0000	Water - Administration	\$5,952	\$3,000	\$1,233	\$3,000	\$1,600	(\$1,400)	-47%	
03-2-408000-6000	Water - Salaries	\$499,485	\$536,798	\$565,188	576,138	\$614,316	\$38,177	7%	
03-2-408000-6002	Water - Benefits	\$10,975	\$10,512	\$12,945	10,109	\$13,592	\$3,483	34%	
03-2-408000-6003	Water - Travel & Training	\$0	\$800	\$0	\$800	\$750	(\$50)	-6%	
03-2-408000-6004	Water - Interest & Bank Charges	\$418	\$0	\$0	\$0	\$0	\$0	#DIV/0!	
03-2-408000-6005	Water - Advertising	\$1,437	\$1,200	\$367	\$1,200	\$1,221	\$21	2%	4x water restrictions ads and Water Communication
03-2-408000-6006	Water - Insurance	\$23,836	\$21,579	\$23,425	\$23,836	\$24,614	\$778	3%	
03-2-408000-6011	Water - Telephone	\$3,772	\$3,977	\$3,696	\$3,800	\$3,750	(\$50)	-1%	
03-2-408000-6012	Water - Hydro	\$66,064	\$64,614	\$63,422	\$65,000	\$64,000	(\$1,000)	-2%	
03-2-408000-6014	Water - IT/Software	\$2,463	\$2,520	\$4,693	\$3,500	\$10,000	\$6,500	186%	includes Scada Licence+computer
03-2-408000-6018	Water - Purchases	\$60,165	\$29,271	\$51,104	\$55,000	\$56,000	\$1,000	2%	
03-2-408000-6020	Water - Training	\$874	\$3,000	\$1,500	\$1,000	\$2,000	\$1,000	100%	
03-2-408000-6022	Water - Bad Debt Expense	\$0	\$0	\$0	\$0	\$0	\$0	#DIV/0!	
03-2-408000-6025	Water - Licenses & Permits	\$0	\$3,000	\$0	\$3,000	\$0	(\$3,000)	-100%	
03-2-408100-6101	Water - Legal	\$0	\$2,000	\$0	\$1,500	\$500	(\$1,000)	-67%	
03-2-408100-6102	Water - Engineering	\$0	\$0	\$0	\$0	\$0	\$0	#DIV/0!	
03-2-408100-6103	Water - Contractors & Consultants	\$7,077	\$20,000	\$13,475	\$22,000	\$15,000	(\$7,000)	-32%	Water Rates Study 20K
03-2-408200-6125	Water - Maintenance	\$106,203	\$71,125	\$123,049	\$97,500	\$145,000	\$47,500	49%	Includes Soda Ash/Chlorine
03-2-408200-6126	Water - Parts & Supplies	\$5,245	\$4,000	\$4,649	\$6,200	\$6,500	\$300	5%	
03-2-408200-6127	Water - Hardware	\$81	\$0	\$0	\$0	\$0	\$0	#DIV/0!	
03-2-408200-6128	Water - Fuel	\$11,052	\$16,387	\$4,245	\$21,551	\$6,000	(\$15,551)	-72%	
03-2-408250-6023	Amortization Expense - Water	\$0	\$0	\$0	\$0	\$0	\$0	#DIV/0!	
03-2-408900-6525	Water - Interest Expense	\$47,961	\$51,536	\$42,274	\$51,536	\$51,536	\$0	0%	
03-2-408900-6527	Water - Principal Payment	\$57,763	\$57,763	\$57,763	\$57,763	\$57,763	\$0	0%	
03-2-409100-6024	Water - Contingency	\$0	\$0	\$0	\$0	\$0	\$0	#DIV/0!	
<b>Total Operating Expenses</b>		<b>\$910,823</b>	<b>\$903,083</b>	<b>\$973,029</b>	<b>\$1,004,434</b>	<b>\$1,074,142</b>	<b>\$69,708</b>	<b>7%</b>	
<b>Key Priorities:</b>									
03-2-408400-6170	<b>Project - Non Capital Exp - Water</b>								
	Water Treatment Preliminary Investigation & Design	\$39,974	\$90,000	\$8,533	\$40,000		(\$40,000)	-100%	
	Water Treatment Final Design	\$0	\$0		\$50,000		(\$50,000)	-100%	
<b>Total Key Priorities</b>		<b>\$39,974</b>	<b>\$90,000</b>	<b>\$8,533</b>	<b>\$90,000</b>	<b>\$0</b>	<b>(\$90,000)</b>	<b>-100%</b>	
<b>Capital Priorities:</b>									
03-2-408400-6553	<b>Project - Cap. Village Core Exp - Water</b>								
	Winch	\$4,956	\$0		\$0		\$0	#DIV/0!	
	Genset	\$189,729	\$276,867	\$63,817	\$0		\$0	#DIV/0!	
	Scada Improvements	\$0	\$70,000		\$70,000	\$50,000	(\$20,000)	-29%	
	Water Truck	\$81,855	\$60,000		\$0		\$0	#DIV/0!	
	Chlorine Analyzer Eagle Drive	\$0	\$10,000		\$0		\$0	#DIV/0!	
	Flow Meter Replacement	\$0	\$15,000		\$0		\$0	#DIV/0!	
	Well #3 Pump head and Motor Replacement	\$32,874	\$40,000		\$0		\$0	#DIV/0!	
	Fernwood Watermain & PRV Replacement	\$0	\$0		\$200,000	\$280,000	\$80,000	40%	
	Leak Detection Device	\$0	\$0		\$18,000		(\$18,000)	-100%	
	Hatch Alarm	\$0	\$0		\$10,000	\$18,000	\$8,000	80%	
	Chlorine Pump Replacement	\$0	\$0		\$10,000		(\$10,000)	-100%	
	Reservoir mixer motor	\$0	\$0		\$10,000		(\$10,000)	-100%	
	Commercial Meters					\$30,000	\$30,000	#DIV/0!	
	Test Well Exploration					\$80,000	\$80,000	#DIV/0!	
	Water Treatment Facility					\$600,000	\$600,000	#DIV/0!	
	Water Feasibility/Water Source					\$0	\$0	#DIV/0!	
	Industrial Park Looping					\$0	\$0	#DIV/0!	
	McRae Rd Water Main Upsizing					\$270,000	\$270,000	#DIV/0!	
<b>Total Capital Priorities</b>		<b>\$309,414</b>	<b>\$471,867</b>	<b>\$63,817</b>	<b>\$318,000</b>	<b>\$1,328,000</b>	<b>\$1,010,000</b>	<b>318%</b>	
<b>Total Expenses</b>		<b>\$1,260,211</b>	<b>\$1,464,950</b>	<b>\$1,045,380</b>	<b>\$1,412,434</b>	<b>\$2,402,142</b>	<b>\$989,708</b>	<b>-4%</b>	
<b>Reserve Objectives:</b>									
03-2-408800-6505	Transfer to Reserves	\$324,000	\$324,000	\$0	\$324,000	\$324,000	\$0	0%	
03-2-408800-6509	Transfer to Surplus	\$253,618		\$0					
<b>Total Reserve Objectives</b>		<b>\$577,618</b>	<b>\$324,000</b>	<b>\$0</b>	<b>\$324,000</b>	<b>\$324,000</b>	<b>\$0</b>	<b>0%</b>	
<b>(Surplus)/Deficit</b>		<b>\$0</b>	<b>(\$0)</b>	<b>(\$262,512)</b>	<b>(\$0)</b>	<b>\$126,810</b>	<b>\$126,810</b>		

Village of Pemberton									
2023 Budget									
As at March 15, 2023									
Sewer Services									
Service Mandate:									
1 Safe and Healthy Community: Safe Wastewater Disposal									
2 Safe and Healthy Community: Safe Treatment and Environmental Disposal									
3 Reliable and trustworthy system									
Falls under Public Works and Parks Services									
(Unaudited)									
2021 YTD									
Actual									
2021 Budget									
2022 YTD									
Actual (Unaudited)									
2022 Budget									
2023 Budget									
Variance over Budget (\$)									
Variance over Budget (%)									
Comments									
<b>Revenues:</b>									
<b>Surplus Carryforward</b>									
05-1-456100-1325	Sewer - Village User Rates	(\$924,162)	(\$889,999)	(\$1,027,956)	(\$963,034)	(\$1,020,656)	(\$57,621)	6%	(\$61,745)
05-1-456100-1326	Sewer - Frontage Taxes Reclassed	(\$212,064)	(\$216,521)	(\$538)	(\$212,065)	(\$212,065)	\$0	0%	
05-1-456100-1327	Sewer - Connection Fees	(\$37,400)	(\$16,000)	(\$17,900)	(\$16,000)	(\$16,000)	\$0	0%	
05-1-456100-1329	Sewer - Penalties	\$0	(\$10,000)	\$0	(\$10,000)	(\$1,000)	\$9,000	-90%	
05-1-456100-1333	Sewer - OB User Rates	(\$3,470)	(\$5,444)	(\$4,228)	(\$3,569)	(\$3,360)	\$209	-6%	
05-1-456100-1334	Sewer - IP User Rate	(\$35,513)	(\$53,069)	(\$51,784)	(\$36,542)	(\$40,874)	(\$4,333)	12%	
05-1-456600-1450	Sewer - Investment Income	\$0	\$0	\$0	\$0	\$0	\$0	#DIV/0!	
05-1-457300-1925	Sewer - Other Revenue	\$0	\$0	\$0	\$0	\$0	\$0	#DIV/0!	
05-1-457300-1981	Sewer - LSA Annual Commuted Revenue	(\$2,229)	(\$2,229)	\$0	(\$2,229)	\$0	\$2,229	-100%	
05-1-457500-1990	Funding For Capital Expenditures	\$0	(\$100,000)	\$0	\$0	\$0	\$0	#DIV/0!	
05-1-457600-6500	Sewer - Transfer from Reserves	(\$32,774)	(\$21,439)	\$0	(\$260,000)	(\$772,000)	(\$512,000)	197%	
<b>Total revenues</b>		<b>(\$1,248,262)</b>	<b>(\$1,315,350)</b>	<b>(\$1,201,139)</b>	<b>(\$1,602,171)</b>	<b>(\$2,147,347)</b>	<b>(\$545,176)</b>	<b>22%</b>	
<b>Operating Expenses:</b>									
05-2-458000-0000	Sewer - Administration	\$3,086	\$5,000	\$3,609	\$3,500	\$3,600	\$100	3%	
05-2-458000-6000	Sewer - Salaries	\$497,100	\$575,115	\$556,752	547,957	\$583,203	\$35,246	6%	
05-2-458000-6002	Sewer - Benefits	\$13,356	\$24,658	\$13,651	10,492	\$14,334	\$3,842	37%	
05-2-458000-6003	Sewer - Travel & Conference	\$481	\$800	\$814	\$831	\$750	(\$81)	-10%	
05-2-458000-6005	Sewer - Advertising	\$0	\$600	\$0	\$623	\$430	(\$193)	-31%	
05-2-458000-6006	Sewer - Insurance	\$35,865	\$38,139	\$34,065	\$39,627	\$36,306	(\$3,320)	-8%	
05-2-458000-6011	Sewer - Telephone	\$2,901	\$3,000	\$2,613	\$3,117	\$2,700	(\$417)	-13%	
05-2-458000-6012	Sewer - Hydro	\$49,563	\$49,370	\$48,340	\$51,295	\$49,500	(\$1,795)	-3%	
05-2-458000-6014	Sewer - IT/Software	\$2,841	\$3,000	\$9,215	\$4,100	\$8,000	\$3,900	95%	
05-2-458000-6020	Sewer - Training	\$1,063	\$1,500	\$0	\$1,559	\$2,000	\$442	28%	
05-2-458100-6101	Sewer - Legal	\$2,343	\$1,500	\$0	\$1,559	\$1,250	(\$309)	-20%	
05-2-458100-6102	Sewer - Engineering	\$0	\$0	\$0	\$0	\$0	\$0	#DIV/0!	
05-2-458100-6103	Sewer - Contractors & Consultants	\$44,198	\$85,750	\$45,980	\$94,094	\$97,980	\$3,886	4%	
05-2-458200-6125	Sewer - Maintenance	\$149,954	\$135,626	\$140,069	\$161,851	\$156,500	(\$5,351)	-3%	
05-2-458200-6126	Sewer - Parts & Supplies	\$0	\$6,000	\$1,167	\$6,234	\$3,500	(\$2,734)	-44%	
05-2-458200-6127	Sewer - Hardware	\$0	\$0	\$495	\$0	\$0	\$0	#DIV/0!	
05-2-458200-6128	Sewer - Fuel	\$16	\$1,000	\$318	\$1,039	\$1,000	(\$39)	-4%	
05-2-458250-6023	Amortization Expense - Sewer	\$0	\$0	\$0	\$0	\$0	\$0	#DIV/0!	
05-2-458900-6525	Sewer - Interest Expense	\$55,322	\$74,542	\$50,887	\$74,542	\$74,542	\$0	0%	
05-2-458900-6527	Sewer - Principal Payment	\$136,703	\$139,751	\$136,703	\$139,751	\$139,751	\$0	0%	
<b>Total Operating Expenses</b>		<b>\$994,792</b>	<b>\$1,145,351</b>	<b>\$1,044,676</b>	<b>\$1,142,169</b>	<b>\$1,175,346</b>	<b>\$33,176</b>	<b>-97%</b>	
<b>Key Priorities:</b>									
05-2-458400-6170	Project - General Expense - Sewer PLC Upgrade					20,000			
<b>Total Key Priorities</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>0%</b>	
<b>Capital Priorities:</b>									
05-2-458400-6553	<b>Project - Cap. Village Core Exp - Sewer</b>								
	Winch	\$4,956	\$0	\$50,754	\$0	\$0	\$0	#DIV/0!	
	Surge Suppressor & Compressor	\$10,791	\$0	\$0	\$0	\$0	\$0	#DIV/0!	
	Village Wide Scada Upgrades	\$5,864	\$50,000	\$0	\$50,000	\$50,000	\$0	0%	
	Outfall Inline Flushing System	\$11,188	\$10,000	\$10,000	\$10,000	\$10,000	\$0	0%	
	2 Variable Frequency Drives	\$0	\$10,000	\$10,000	\$10,000	\$36,000	\$26,000	260%	
	Control Panel Repair/Replacement	\$4,931	\$0	\$0	\$0	\$0	\$0	#DIV/0!	
	Inflow/Infiltration Study	\$0	\$0	\$0	\$50,000	\$0	(\$50,000)	-100%	
	Walnut Lift Station Design	\$0	\$0	\$0	\$40,000	\$0	(\$40,000)	-100%	
	Walnut Lift Station Upgrade	\$0	\$0	\$0	\$0	\$556,000	\$556,000	#DIV/0!	
		\$0	\$0	\$0	\$0	\$0	\$0	#DIV/0!	
05-2-458400-6554	<b>Project - Cap. Ind Park Exp - Sewer</b>	\$0	\$0	\$0	\$0	\$0	\$0	#DIV/0!	
	Industrial Park Generator	\$0	\$100,000	\$0	\$100,000	\$100,000	\$0	0%	
	UV System Upgrade	\$0	\$0	\$0	\$0	\$20,000	\$20,000	#DIV/0!	
		\$0	\$0	\$0	\$0	\$0	\$0	#DIV/0!	
<b>Total Capital Priorities</b>		<b>\$37,730</b>	<b>\$170,000</b>	<b>\$50,754</b>	<b>\$260,000</b>	<b>\$772,000</b>	<b>\$512,000</b>	<b>197%</b>	
<b>Total Expenses</b>		<b>\$1,032,522</b>	<b>\$1,315,351</b>	<b>\$1,095,430</b>	<b>\$1,402,169</b>	<b>\$1,947,346</b>	<b>\$545,176</b>	<b>39%</b>	
<b>Reserve Objectives:</b>									
05-2-458800-6505	Transfer to Reserves	\$117,007	\$0	\$0	\$200,000	\$200,000	\$0	0%	Reserves used alloc to projects
05-2-458800-6509	Transfer to Surplus	\$98,732	\$0	\$0	\$0	\$0	\$0	#DIV/0!	
<b>Total Reserve Objectives</b>		<b>\$215,739</b>	<b>\$0</b>	<b>\$0</b>	<b>\$200,000</b>	<b>\$200,000</b>	<b>\$0</b>	<b>#DIV/0!</b>	
<b>(Surplus)/Deficit</b>		<b>\$0</b>	<b>\$0</b>	<b>(\$105,710)</b>	<b>(\$0)</b>	<b>\$0</b>	<b>\$0</b>		

Village of Pemberton									
2023 Budget									
As at March 15, 2023									
Transit									
Service Mandate:									
1 Deliver Safe and Reliable Transit Service									
2 Pursue Supplemental Funding to Increase Service, Accessibility and Support the Environment									
3 Work with Partners to More Effectively Serve our Communities									
		(Unaudited)							
		2021 YTD	2021	2022 YTD	2022	2023	Variance over	Variance over	Comments
		Actual	Budget	Actual (Unaudited)	Budget	Budget	Budget (\$)	Budget (%)	
<b>Revenues:</b>									
	<i>Allocate to Transit General Taxation</i>	(\$69,908)	(\$69,908)	(\$111,352)	(\$92,793)	(\$131,420)	(\$38,627)	42%	
	<i>Surplus Carryforward</i>	\$0			(\$0)	\$1	\$1	-914%	
01-1-507300-1925	Transit - Other Revenue	\$0	\$0	(\$20,000)	\$0		\$0	#DIV/0!	
01-1-507600-6500	Transit - Transfer from Reserve	(\$73,211)	(\$212,891)	\$0	(\$63,134)	(\$40,002)	\$23,132	-37%	
01-1-507700-1700	Adult Monthly Passes	(\$34,365)	(\$8,498)	(\$24,755)	(\$6,238)	(\$44,205)	(\$37,967)	609%	
01-1-507700-1701	Senior/Student Monthly Passes	(\$8,500)	(\$2,393)	(\$7,995)	(\$1,543)	(\$14,277)	(\$12,734)	825%	
01-1-507700-1702	Adult Commuter Tickets	(\$16,992)	(\$9,416)	(\$8,208)	(\$3,085)	(\$14,657)	(\$11,572)	375%	
01-1-507700-1703	Senior/Student Tickets	(\$3,030)	(\$560)	(\$2,430)	(\$550)	(\$4,339)	(\$3,789)	689%	
01-1-507700-1704	Local Adult Tickets	(\$9,720)	(\$2,007)	(\$5,240)	(\$1,765)	(\$9,357)	(\$7,592)	430%	
01-1-507700-1705	Local Senior/Student Tickets	(\$1,440)	(\$162)	(\$936)	(\$261)	(\$1,671)	(\$1,410)	540%	
01-1-507700-1706	Local Transit Farebox	(\$39,130)	(\$9,200)	(\$19,918)	(\$47,273)	(\$35,569)	\$11,704	-25%	
01-1-507700-1710	Greyhound Ticket Sales		\$0	\$0	\$0		\$0	#DIV/0!	
01-1-507700-1720	Whistler Transit Farebox Contribution	(\$36,634)	(\$12,479)	(\$24,542)	(\$40,000)	(\$40,000)	\$0	0%	
01-1-507700-1721	BC Bus Pass Programme	(\$10,679)	(\$13,204)	(\$8,039)	(\$13,305)	(\$13,305)	\$0	0%	
01-1-507700-1723	BCT Municipal Admin Charge Allowance	(\$10,056)	(\$8,706)		(\$8,881)	(\$9,058)	(\$177)	2%	
	Other Revenue			(\$12,130)	(\$47,273)		\$47,273	-100%	
01-1-507700-1724	Partner Contributions	(\$139,816)	(\$139,816)	(\$167,028)	(\$185,587)	(\$177,805)	\$7,782	-4%	
01-1-507700-1725	BCT Contributions	(\$390,544)	(\$292,676)	(\$298,616)	(\$449,966)	(\$474,378)	(\$24,412)	5%	
<b>Total revenues</b>		<b>(\$844,025)</b>	<b>(\$781,916)</b>	<b>(\$711,189)</b>	<b>(\$961,654)</b>	<b>(\$1,010,043)</b>	<b>(\$48,389)</b>	<b>5%</b>	
<b>Operating Expenses:</b>									
01-2-508000-7000	Transit - Admin Fee	\$0	\$8,706	(\$16,367)	\$0		\$0	#DIV/0!	
01-2-508000-7001	Transit - Operating Contract	\$843,624	\$772,459	\$665,595	\$924,146	\$974,283	\$50,137	5%	
01-2-508000-7002	Transit - Greyhound Ticket Purchases	\$0	\$0	\$0	\$0		\$0	#DIV/0!	
	Transit - Lease Fees	\$0	\$0	\$206	\$37,508	\$35,760	(\$1,748)	-5%	
01-2-508000-7005	Transit - Misc Expense	\$401	\$750	\$0	\$0		\$0	#DIV/0!	
	Transfer to Partner Surplus Carryforward	\$0	\$0	\$0	\$0		\$0	#DIV/0!	
01-2-508800-6509	Transfer to Partner Reserve (Restricted)	\$0	\$0	\$0	\$0		\$0	#DIV/0!	
<b>Total Operating Expenses</b>		<b>\$844,025</b>	<b>\$781,915</b>	<b>\$649,434</b>	<b>\$961,654</b>	<b>\$1,010,043</b>	<b>\$48,389</b>	<b>5%</b>	
<b>Key Priorities:</b>									
<b>Total Key Priorities</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>0%</b>	
<b>Capital Priorities:</b>									
<b>Total Capital Priorities</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>0%</b>	
<b>Total Expenses</b>		<b>\$844,025</b>	<b>\$781,915</b>	<b>\$649,434</b>	<b>\$961,654</b>	<b>\$1,010,043</b>	<b>\$48,389</b>	<b>5%</b>	
<b>Reserve Objectives:</b>									
<b>Total Reserve Objectives</b>		<b>\$0</b>	<b>\$0</b>	<b>\$61,754</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>0%</b>	
<b>(Surplus)/Deficit</b>		<b>(\$0)</b>	<b>(\$0)</b>	<b>\$1</b>	<b>(\$0)</b>	<b>(\$0)</b>	<b>(\$1)</b>		

<b>Village of Pemberton</b>										
<b>2023 Budget</b>										
As at March 15, 2023										
<b>Airport Services</b>										
<b>Service Mandate:</b>										
1. Maintaining a Safe and Secure Airport										
2. Periodic snow clearing and routine maintenance										
3. Legal reduction strategy and timely lease renewals										
4. Alternate revenue stream review										
			(Unaudited)							
			2021 YTD	2021	2022 YTD	2022	2023	Variance over	Variance over	
			Actual	Budget	Actual (Unaudited)	Budget	Budget	Budget (\$)	Budget (%)	
									Comments	
<b>Revenues:</b>										
			<i>Allocate to Airport General Taxation</i>	(\$23,108)	(\$23,108)	(\$29,701)	(\$29,701)	(\$41,953)	(\$12,252)	41%
			<i>Surplus Carryforward</i>	(\$863)	(\$563)			\$0		#DIV/0!
	07-1-557100-1602	Air - Lease & Maintenance Fees	(\$40,008)	(\$39,827)	(\$36,845)	(\$40,000)	(\$40,000)	\$0	\$0	0%
	07-1-557200-1671	Grant - Provincial Project - General	\$0	\$0		\$0	\$0	\$0	\$0	#DIV/0!
	01-1-57300-1920	Airport - Recovery Revenue	(\$6,216)	\$0	(\$2,894)	\$0	(\$4,000)	(\$4,000)		#DIV/0!
	07-1-557300-1925	Airport - Other Revenue	(\$556)	(\$5,000)	(\$1,677)	(\$5,000)	(\$2,000)	\$3,000		-60% Winter Training, Periodic Filming
	07-1-557300-1931	Airport - Tie Down Fees	(\$1,010)	(\$1,000)	(\$760)	(\$1,000)	(\$1,000)	\$0		0%
	07-1-557300-1932	Airport - Landing Fees	(\$820)	(\$600)	\$600	(\$820)	(\$820)	\$0		0%
<b>Total revenues</b>			<b>(\$72,580)</b>	<b>(\$70,098)</b>	<b>(\$71,277)</b>	<b>(\$76,521)</b>	<b>(\$89,773)</b>	<b>(\$13,252)</b>		<b>17%</b>
<b>Operating Expenses:</b>										
	07-2-558000-0000	Airport - Admin	\$75	\$500	\$77	\$75	\$50	(\$25)		-33%
	07-2-558000-6000	Airport - Salaries	\$55,079	\$57,692	\$61,640	61,248	\$65,645	\$4,397		7%
	07-2-558000-6005	Airport - Advertising	\$569	\$600	\$281	\$600	\$858	\$258		43%
	07-2-558000-6006	Airport - Insurance	\$4,756	\$5,355	\$4,866	\$5,355	\$4,919	(\$436)		-8%
	07-2-558000-6010	Airport - Sundry	\$0	\$200	\$64	\$200	200	\$0		0%
	07-2-558000-6012	Airport - Hydro	\$1,482	\$1,750	\$1,725	\$1,600	\$1,600	\$0		0% PAWS Society
	07-2-558000-6014	Airport- IT	\$0	\$0	\$0	\$0	\$0	\$0		#DIV/0!
	07-2-558100-6101	Airport - Legal	\$22,008	\$3,000	\$27,122	\$6,000	\$10,000	\$4,000		67%
	07-2-558100-6102	Airport - Engineering	\$0	\$0	\$0	\$0	\$0	\$0		#DIV/0!
	07-2-558100-6103	Airport - Contractors & Consultants	\$0	\$0	(\$1,500)	\$0	\$0	\$0		#DIV/0!
	07-2-558200-6125	Airport - Maintenance	\$503	\$500	\$0	\$943	\$2,000	\$1,057		112% East Taxiway Gate Replacement, C
	07-2-558200-6126	Airport - Parts & Supplies	\$0	\$500	\$0	\$500	\$500	\$0		0%
	07-2-558200-6176	Air - Roads	\$0	\$0	\$0	\$0	\$0	\$0		#DIV/0! Snow Clearing
	07-2-558250-6023	Amortization Expense - Airport	\$0	\$0	\$0	\$0	\$0	\$0		#DIV/0!
	07-2-558400-6173	Projects - Recoverable Airport Expenses	\$6,216	\$0	\$8,710	\$0	\$4,000	\$4,000		#DIV/0!
<b>Total Operating Expenses</b>			<b>\$90,687</b>	<b>\$70,097</b>	<b>\$102,988</b>	<b>\$76,521</b>	<b>\$89,773</b>	<b>\$13,251</b>		<b>17%</b>
<b>Key Priorities:</b>										
<b>Total Key Priorities</b>			<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>		<b>0%</b>
<b>Capital Priorities:</b>										
<b>Total Capital Priorities</b>			<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>		<b>0%</b>
<b>Total Expenses</b>			<b>\$90,687</b>	<b>\$70,097</b>	<b>\$102,988</b>	<b>\$76,521</b>	<b>\$89,773</b>	<b>\$13,251</b>		<b>9%</b>
<b>Reserve Objectives:</b>										
<b>Total Reserve Objectives</b>			<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>		<b>0%</b>
<b>(Surplus)/Deficit</b>			<b>\$18,107</b>	<b>\$0</b>	<b>\$31,711</b>	<b>\$0</b>	<b>(\$0)</b>	<b>(\$2)</b>		

Village of Pemberton - PVIS  
2022 Budget

As at March 15, 2022  
Provisions and Unaudited  
Recreation

- 1 Reach pre-pandemic levels of service
- 2 Meet expectations of community on service provision
- 3 Provide a higher level of customer service

2021 YTD 2022 2023 Budget 5 Budget %

Actual (Unaudited)	Budget	Budget	Budget 5	Budget %
<b>Community Centre - 60001</b>				
01-60000-0000	158,033	158,033	177,463	112.3%
01-60000-1074	(64,267)	(64,267)	(75,200)	-117.0%
01-60000-1075	(89,453)	(134,548)	(132,000)	-149.0%
01-60000-1076	-	-	-	-
01-60000-1077	-	-	-	-
01-60000-1078	-	-	-	-
01-60000-1079	-	-	-	-
01-60000-1080	(13,200)	(16,000)	(12,000)	-90.9%
01-60000-1081	(17,434)	(69,081)	(110,000)	-626.0%
01-60000-1082	(2,771)	(2,000)	(2,000)	-72.2%
01-60000-1083	-	-	-	-
01-60000-1084	(71,494)	(39,660)	(60,000)	-84.1%
01-60000-1085	(57,778)	(97,978)	(102,000)	-176.6%
01-60000-1086	(62,507)	(113,379)	(61,500)	-98.2%
01-60000-1087	-	-	-	-
01-60000-1088	(144,266)	(393,733)	(130,000)	-90.4%
<b>Total Revenue</b>	<b>(1,402,763)</b>	<b>(1,263,876)</b>	<b>(1,432,476)</b>	<b>-102.1%</b>

01-60000-0000	General Administration	503,745	250	340	67	4.0%	For Internal Meetings
01-60000-0001	Rec - Salaries	411,300	526,711	115,664	28.1%	Including 2.5 months of increased Sunday Service. Restoration to pre-covid levels considered	
01-60000-0002	Rec - Benefits	122,482	14,546	14,024	11.5%	Vacation pay on low net cost for CC	
01-60000-0003	Travel, Meals and Accommodation	464	1,721	3,000	1,729	74.3%	Travel for training, conferences, staff recognition
01-60000-0004	Interest & Bank Charges	13,545	63,133	33,000	2,967	28.8%	
01-60000-0005	Advertising	1,270	2,000	2,000	-	0.0%	this would be for programs and services
01-60000-0006	Insurance	5,232	2,750	5,000	95.6%	100.0%	100% of plus 50% portion of fire insurance (renewable)
01-60000-0007	Photocopying	6,008	6,173	6,600	327	5.2%	Photocopying and printing services contract
01-60000-0008	Postage	-	102	102	(102)	-100.0%	
01-60000-0009	Rec - Office Supplies	2,662	7,144	6,900	(244)	-3.4%	
01-60000-0010	Rec - Laundry	2,107	6,000	6,000	-	0.0%	27.5% Staff Supplies and Misc Meeting expenses more staff and increase in service levels
01-60000-0011	Telephone	9,486	13,000	13,000	-	0.0%	
01-60000-0012	Hydro	48,355	50,000	52,000	400	0.8%	
01-60000-0013	IT/Software	48,911	37,441	43,000	5,559	14.8%	Office 365/Adobe/Perfect Mind still need to actually build
01-60000-0014	Memberships & Professional Fees	1,298	1,179	1,179	-	0.0%	2022 more of the same as 2021
01-60000-0015	Training	1,159	6,500	12,277	4,777	73.5%	
01-60000-0016	Licenses & Permits	705	150	705	555	370.0%	
01-60000-0017	Rec - Debt Servicing Interest Expense	117	117	117	35	29.1%	484 Truck Loan
01-60000-0018	Legal	6,831	6,969	6,969	0	0.0%	
01-60000-0019	Contractors & Consultants	61,587	85,500	86,978	1,178	1.4%	Planning, MAZON, Alpin Lock new efft and the \$23,279 for building asset management
01-60000-0020	Maintenance/Security	97,392	121,895	107,000	(8,895)	-7.3%	Maintenance, landscaping, interest, elevators, etc. (2022 pre-pandemic)
01-60000-0021	Rec - Parts & Supplies	21,072	7,500	25,432	18,032	240.8%	Building supplies, LED, Globes, lights, medical supplies, staples etc
01-60000-0022	Hardware	5,888	500	500	-	0.0%	Hand Tools, 2 laptops
01-60000-0023	Fuel	841	900	1,000	500	100.0%	Increased mileage
01-60000-0024	Services	1,400	1,500	1,500	100	7.1%	Truck Maintenance
01-60000-0025	Projects - General	4,040	20,000	14,750	(5,250)	-26.3%	Shade installation, Christmas lights, Landscaping trees with daycare project
01-60000-0026	Projects - Capital Land Expense - Rec	-	-	-	-	-	
01-60000-0027	Operating Costs - Adult Programs	54,638	21,180	40,180	17,000	73.3%	
01-60000-0028	Operating Costs - Summer Camp	15,138	23,177	25,186	(8,441)	-36.4%	
01-60000-0029	Operating Costs - Special Events	26,627	33,531	28,830	(4,901)	-14.6%	
01-60000-0030	Operating Costs - Special Events	5,096	986	28,000	14,404	284.6%	Canada Day and Family Day expense
01-60000-0031	Operating Costs - Fitness Centre	37,195	37,744	37,750	6	0.0%	
01-60000-0032	Transfer to Reserve	75,000	75,000	75,000	-	0.0%	Reserve transferred
01-60000-0033	Transfer to Surplus Reserve	-	-	-	-	-	
01-60000-0034	Transfer to Capital Reserve	-	-	-	-	-	
01-60000-0035	Project - Cap. Mech & Equip. Exp - Rec	26,027	40,000	37,500	(2,500)	-6.3%	Fitnes Centre Equipment, photocopying
01-60000-0036	Project - Cap. Mech & Equip. Exp - Rec	62,586	74,548	15,000	(59,548)	-79.9%	Basketball Court plan/construct surfacing plus complete basketball court
01-60000-0037	Project - Cap. Mech & Equip. Exp - Rec	840	80,000	80,000	-	0.0%	To make more of the same as 2021 accessible and for next year to complement Library Accessibility project at youth entrance
<b>Total Expenses</b>	<b>1,277,371</b>	<b>1,263,876</b>	<b>1,432,476</b>	<b>166,600</b>	<b>13.2%</b>		
<b>Surplus/Deficit</b>	<b>(180,397)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0%</b>		

Meadows Fields - 60002							
2022 Budget	2023	2024	2025	%			
01-60000-1074	(7,818)	(11,818)	(11,818)	-151.2%			
01-60000-1075	(26,134)	(26,134)	(23,518)	-2,600	-10.0%		
01-60000-1076	-	-	-	-	-		
<b>Total Revenue</b>	<b>(33,952)</b>	<b>(37,952)</b>	<b>(35,336)</b>	<b>722</b>	<b>-2.1%</b>		
01-60000-0000	Rec - Salaries	1,822	2,000	178	9.8%		
01-60000-0001	Rec - Benefits	1,000	1,000	(900)	-90.0%		
01-60000-0002	Travel, Meals and Accommodation	-	-	-	-	-	
01-60000-0003	Interest & Bank Charges	11,233	5,000	-	-	0.0%	0.0% for 2 blue boxes
01-60000-0004	Advertising	7,917	20,000	20,000	-	0.0%	Board Landscaping/generator on SRD budget
01-60000-0005	Insurance	5,000	5,000	5,000	-	0.0%	
01-60000-0006	Photocopying	-	-	-	-	-	
01-60000-0007	Postage	-	-	-	-	-	
01-60000-0008	Rec - Office Supplies	-	-	-	-	-	
01-60000-0009	Rec - Laundry	-	-	-	-	-	
01-60000-0010	Telephone	-	-	-	-	-	
01-60000-0011	IT/Software	-	-	-	-	-	
01-60000-0012	Memberships & Professional Fees	-	-	-	-	-	
01-60000-0013	Training	-	-	-	-	-	
01-60000-0014	IT/Software	-	-	-	-	-	
01-60000-0015	Memberships & Professional Fees	-	-	-	-	-	
01-60000-0016	Training	-	-	-	-	-	
01-60000-0017	Licenses & Permits	-	-	-	-	-	
01-60000-0018	Rec - Debt Servicing Interest Expense	-	-	-	-	-	
01-60000-0019	Legal	-	-	-	-	-	
01-60000-0020	Contractors & Consultants	-	-	-	-	-	
01-60000-0021	Maintenance/Security	-	-	-	-	-	
01-60000-0022	Rec - Parts & Supplies	-	-	-	-	-	
01-60000-0023	Hardware	-	-	-	-	-	
01-60000-0024	Fuel	-	-	-	-	-	
01-60000-0025	Services	-	-	-	-	-	
01-60000-0026	Projects - General	-	-	-	-	-	
01-60000-0027	Projects - Capital Land Expense - Rec	-	-	-	-	-	
01-60000-0028	Operating Costs - Adult Programs	-	-	-	-	-	
01-60000-0029	Operating Costs - Summer Camp	-	-	-	-	-	
01-60000-0030	Operating Costs - Special Events	-	-	-	-	-	
01-60000-0031	Operating Costs - Special Events	-	-	-	-	-	
01-60000-0032	Transfer to Reserve	-	-	-	-	-	
01-60000-0033	Transfer to Surplus Reserve	-	-	-	-	-	
01-60000-0034	Transfer to Capital Reserve	-	-	-	-	-	
01-60000-0035	Project - Cap. Mech & Equip. Exp - Rec	-	-	-	-	-	
<b>Total Expenses</b>	<b>24,150</b>	<b>34,072</b>	<b>33,350</b>	<b>(722)</b>	<b>-2.1%</b>		
<b>Surplus/Deficit</b>	<b>(8,823)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0%</b>		

Youth Senior Centre - 60003							
2022 Budget	2023	2024	2025	%			
01-60000-1074	(81,321)	(81,321)	(81,308)	(81,311)	-100.0%		
01-60000-1075	-	-	-	-	-		
01-60000-1076	-	-	-	-	-		
01-60000-1077	-	-	-	-	-		
01-60000-1078	-	-	-	-	-		
01-60000-1079	-	-	-	-	-		
01-60000-1080	-	-	-	-	-		
01-60000-1081	-	-	-	-	-		
01-60000-1082	-	-	-	-	-		
01-60000-1083	-	-	-	-	-		
01-60000-1084	-	-	-	-	-		
01-60000-1085	-	-	-	-	-		
01-60000-1086	-	-	-	-	-		
01-60000-1087	-	-	-	-	-		
01-60000-1088	-	-	-	-	-		
01-60000-1089	-	-	-	-	-		
01-60000-1090	-	-	-	-	-		
01-60000-1091	-	-	-	-	-		
01-60000-1092	-	-	-	-	-		
01-60000-1093	-	-	-	-	-		
01-60000-1094	-	-	-	-	-		
01-60000-1095	-	-	-	-	-		
01-60000-1096	-	-	-	-	-		
01-60000-1097	-	-	-	-	-		
01-60000-1098	-	-	-	-	-		
01-60000-1099	-	-	-	-	-		
01-60000-1100	-	-	-	-	-		
01-60000-1101	-	-	-	-	-		
01-60000-1102	-	-	-	-	-		
01-60000-1103	-	-	-	-	-		
01-60000-1104	-	-	-	-	-		
01-60000-1105	-	-	-	-	-		
01-60000-1106	-	-	-	-	-		
01-60000-1107	-	-	-	-	-		
01-60000-1108	-	-	-	-	-		
01-60000-1109	-	-	-	-	-		
01-60000-1110	-	-	-	-	-		
01-60000-1111	-	-	-	-	-		
01-60000-1112	-	-	-	-	-		
01-60000-1113	-	-	-	-	-		
01-60000-1114	-	-	-	-	-		
01-60000-1115	-	-	-	-	-		
01-60000-1116	-	-	-	-	-		
01-60000-1117	-	-	-	-	-		
01-60000-1118	-	-	-	-	-		
01-60000-1119	-	-	-	-	-		
01-60000-1120	-	-	-	-	-		
01-60000-1121	-	-	-	-	-		
01-60000-1122	-	-	-	-	-		
01-60000-1123	-	-	-	-	-		
01-60000-1124	-	-	-	-	-		
01-60000-1125	-	-	-	-	-		
01-60000-1126	-	-	-	-	-		
01-60000-1127	-	-	-	-	-		
01-60000-1128	-	-	-	-	-		
01-60000-1129	-	-	-	-	-		
01-60000-1130	-	-	-	-	-		
<b>Total Revenue</b>	<b>(81,321)</b>	<b>(81,321)</b>	<b>(81,308)</b>	<b>(81,311)</b>	<b>-100.0%</b>		
01-60000-0000	General Administration	125	125	(125)	-100.0%	Internal Meetings	
01-60000-0001	Rec - Salaries	24,740	17,139	26,341	9,208	53.7%	needs to be 2042 hours for program staff and 676 hours to Maddy
01-60000-0002	Rec - Benefits	1,818	3,911	1,400	686.6%		
01-60000-0003	Travel, Meals and Accommodation	300	800	500	166.7%	Youth specific training is the city	
01-60000-0004	Interest & Bank Charges	-	-	-	-	-	
01-60000-0005	Advertising	250	250	250	-	0.0%	
01-60000-0006	Insurance	300	300	300	-	0.0%	
01-60000-0007	Photocopying	54	75	300	225	300.0%	
01-60000-0008	Postage	349	800	800	-	0.0%	
01-60000-0009	Rec - Office Supplies	-	-	-	-	-	
01-60000-0010	Rec - Laundry	-	-	-	-	-	
01-60000-0011	Telephone	-	-	-	-	-	
01-60000-0012	Hydro	3,240	4,000	4,000	-	0.0%	
01-60000-0013	IT/Software	200	200	2,140	1,740	870.0%	Office 365 x 3 staff, missing website hosting renewal
01-60000-0014	Memberships & Professional Fees	220	179	210	71	39.7%	Netflix, arena, gaming fee
01-60000-0015	Training	800	1,000	1,000	200	25.0%	2022 more of the same as 2021
01-60000-0016	IT/Software	-	-	-	-	-	
01-60000-0017	Memberships & Professional Fees	-	-	-	-	-	
01-60000-0018	Training	-	-	-	-	-	
01-60000-0019	Licenses & Permits	-	-	-	-	-	
01-60000-0020	Rec - Debt Servicing Interest Expense	-	-	-	-	-	
01-60000-0021	Legal	-	-	-	-	-	
01-60000-0022	Contractors & Consultants	-	-	-	-	-	
01-60000-0023	Maintenance/Security	-	-	-	-	-	
01-60000-0024	Rec - Parts & Supplies	-	-	-	-	-	
01-60000-0025	Hardware	-	-	-	-	-	
01-60000-0026	Fuel						



Capital Expenditures	2023												Notes	Funding
	Prov	Fed	Other	Other Govt	Prov	COVID	DCCs	Reserves	Debt/Financing	Other	Utility User Rates	Taxes		
<b>Admin Department</b>	<b>45,000</b>								45,000				-	
Bylaw Truck	45,000								45,000				-	
Daycare	1,600,000	1,600,000												
Deferred Daycare Expense from 2022	151,133	151,133												
	<b>45,000</b>	<b>1,751,133</b>							<b>45,000</b>				<b>1,796,133</b>	
<b>Fire Department</b>	<b>20,000</b>							20,000						
Project - Cap. Mach & Equip. Exp - Fire	20,000							20,000						
SCBA Tank Replacement 5 per year														
Mini Repeater for further signal reach down in Shuk FSR														
New Security Fencing Training Ground														
Structure Fire Bunker Gear														
Hoses, Nozzles Adapters	20,000							20,000						
Sprinkler Protection Unit Trailer and Truck	20,000							20,000						
Engine 10 Truck Replacement	150,000								150,000					Deferred to complete project
Ladder 1 Replacement														
Engine 11 Truck Replacement														
Rescue 1 Replacement														
Firehall Replacement														
Water Tank and Fire Pump (Engine 11)	30,000							30,000						
Training Ground Servicing	10,000							10,000						
Rescue 1 Hydraulic Pump	15,000							15,000						
	<b>265,000</b>							<b>115,000</b>	<b>150,000</b>				<b>265,000</b>	
<b>Public Works and Parks</b>	<b>49,000</b>				49,000									
Loader	49,000				49,000									
EV Charger (Sea to Sky Joint Project)	150,000	50,000	100,000											NRCan, Clean BC and Gas Tax Funds
EV Charger (Aster Street)	150,000	50,000	100,000											
Speed Reader	8,000			3,500								4,500		
Soccer Field and Amenity Building	3,025,611	2,218,771			370,000		315,540			121,300			(0)	
Park and Ride	200,000	200,000												
McKenzie Road Repair	198,023	158,418						39,605						Design in 2022 construction 2023
Pemberton Farm Road East Upgrade	306,000						217,000	89,000						Carried over from 2021
Friendship Trail (Pemberton Farm Road East)	414,000				92,000	161,000	161,000							Gas Tax and COVID restart funds; BC Active Transport Unsuccessful.
Signal Hill Sidewalk	76,000							76,000						Tryala Contribution
Bike Skills Park														Carried over from 2021
Snow Blower attachment for Loader														
Boardwalk Replacement	50,000							50,000						
Bucket Truck Replacement (used)	40,000							40,000						
Pickup Truck														
Electrified hand tool equipment	10,000			10,000										
Gravel Shed														
Loader Wing	30,000							30,000						
F550 w/ Plow & Sander	110,000								110,000					
F550 Flat Deck- Replacing Mitsubishi Flat Deck 2007														Deferred from 2021
F150 w/ 8' bed- Garbage Truck	40,000								40,000					Added Feb. 3, 2022
Kubota Skid Steer w/ Snow Blower														
Parks Trailer	30,000							30,000						Deferred from 2021
Den Dyuf Culvert														
	<b>4,736,634</b>	<b>2,627,190</b>	<b>100,000</b>	<b>13,500</b>	<b>462,000</b>	<b>210,000</b>	<b>161,000</b>	<b>532,540</b>	<b>354,605</b>	<b>150,000</b>	<b>121,300</b>	<b>4,500</b>	<b>4,736,634</b>	
<b>Water Projects</b>							2,998,190				4,732,134			
Genset														
Scada Improvements	50,000								50,000					
Water Truck														
Water Treatment Investigation and Preliminary Design														Subject to Grant or Gas Tax or Reserves
Water Treatment Investigation Final Design														Deferred to include in water tx facility
Chlorine Analyzer Eagle Drive														
Flow Meter Replacement														
Well #3 Pump head and Motor Replacement														Cost estimate end of January
Fernwood Watermain & PRV Replacement	280,000				180,000				100,000					
Leak Detection Device	18,000								18,000					Carryforward
Hatch Alarm														
Zone meters (additional)														
Test Well/Infiltration Gallery														Borrowing or grant funding
Water Treatment Facility														
Chlorine Pump Replacement														
Reservoir mixer motor														
Water Feasibility/Water Source														
Industrial Park Looping														
Commercial Meters	30,000								30,000					
Test Well Exploration	80,000								80,000					
Water Treatment Facility	600,000	600,000												
Water Feasibility/Water Source														
Industrial Park Looping														
McRae Rd Water Main Upsizing	270,000					270,000								
	<b>1,328,000</b>	<b>600,000</b>				<b>450,000</b>			<b>278,000</b>				<b>1,328,000</b>	
<b>Sewer Projects</b>	<b>50,000</b>								50,000					Carry over
Village Wide Scada Upgrades	50,000								50,000					
Outfall Inline Flushing System	10,000								10,000					Carry over
2 Variable Frequency Drives	36,000								36,000					Carry over
Industrial Park Generator	100,000								100,000					Carry over
Inflow/Infiltration Study														
Walnut LIFT Station Design														
Walnut LIFT Station Upgrade	556,000	200,000				250,000			106,000					
LIFT Station #1														
UV System Upgrade	20,000								20,000					
	<b>772,000</b>	<b>200,000</b>				<b>250,000</b>			<b>322,000</b>				<b>772,000</b>	
<b>Reserves</b>	<b>25,000</b>											25,000		Frontier Street/Other
Drainage Reserve	25,000											25,000		
Road Reserve	40,000											40,000		
Equipment Reserve	25,000											25,000		
	<b>90,000</b>											<b>90,000</b>	<b>90,000</b>	
<b>Total</b>	<b>7,236,634</b>	<b>5,178,323</b>				<b>910,000</b>	<b>161,000</b>	<b>532,540</b>	<b>1,069,605</b>	<b>345,000</b>	<b>121,300</b>		<b>94,500</b>	<b>8,987,767</b>

**Date:** Tuesday, March 28, 2023  
**To:** Elizabeth Tracy, Chief Administrative Officer  
**From:** Scott McRae, Manager of Development Services  
**Subject:** Background Report on Hillside Trails Temporary Closures

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### **PURPOSE**

The purpose of this report is to inform the Committee of the Whole on the background of the hillside development and its impact on trails in the area known as the Ridge and Sunstone.

### **BACKGROUND**

The Village received two letters addressed to Mayor and Council from community members regarding excavation work taking place near the Cream Puff trail. These letters were included on the agenda for Regular Council Meeting No. 1577, held on March 14, 2023. During the meeting, Council passed the following motion pertaining to the letters:

*Moved/Seconded*

***THAT*** information respecting development on the Hillside and impacts to the Cream Puff Trail and other Trails in the area be presented at a future Committee of the Whole Meeting.

**CARRIED**

The area known as the Ridge and Sunstone has been steadily developed since the original Official Community Plan (OCP) and Zoning Amendments in 2011. During those processes, the developer and Village discussed the impacts to trails and agreed on the concept of a “net gain” in trails. The area was established as the Hillside Special Planning Area and incorporated into the current version of the Official Community Plan in 2013 (Official Community Plan Amendment Bylaw No. 742, 2013). Development has progressed in a phased approach to align with economic fundamentals.

These lands partially overlap with a dense network of multi-use recreational trails known generally as The Mosquito Lake area. The network includes widely acclaimed routes such as Cream Puff, Grumpy Grouse, Ramble On, Moby Dick and Lower Dark Forest. Portions of these trails are on private land. While the overall percentage of recreational trails within the region on private land is low, many of these trails see intense use.

The Village’s OCP establishes Development Permit Areas (DPA) that inform and guide development in the Village. In the Hillside area, specific Development Permit areas apply including DPA No. 1 - Environmental Protection. This development permit area includes guidelines around the mitigation of impacts related to new development specifically related to site clearing and new construction, including “*identifying the re-routing of any pedestrian/trails and temporary construction and emergency service access.*”

Development Permit Area No. 2 – Land Constraints is another development permit area applicable to the subject lands which are primarily concerned with identifying and protecting people, structures, and development from natural hazards.

The Village of Pemberton's Development Procedures Bylaw 887, 2020 includes Section 12 which delegates to Staff the exercise of all powers, duties and functions related to the issuance of permits deemed Minor Development Permits. The definition of a Minor Development Permit includes minor amendments to Major Development Permits issued by Council as well as development permits required only for site clearing and grading or those under DPA No. 1 or DPA No. 2. If an application for a Development Permit also includes any variance to the Zoning Bylaw, the Sign Bylaw, or the Subdivision and Development Control Bylaw, it cannot be delegated and will be treated as a Major Development Permit for consideration by Council.

As part of the phased development of the Sunstone lands, the developer applied for a Development Permit to begin rough grading of the road for Phase 4. The Village processed the application as it related to the Development Permit Area Guidelines, specifically DPA No. 1 - Environmental Protection and DPA No. 2 – Land Constraints. The applicant met all relevant development area guidelines including the completion of an Environmental Review, Fire Mitigation Plan, and Geotechnical Assessment and as a result a Minor Development Permit was issued on September 14, 2021, in accordance with the Local Government's obligations under Section 490 of the *Local Government Act* [RSBC 2015]. The development permit is attached as **Appendix A**.

As a safety measure during construction, a section of the Creampuff trail has been closed temporarily as development activity authorized by the Minor Development Permit proceeds in the area. The developer intends to preserve the trail and has advised that consultation with user groups was conducted during the design process to reduce impacts where possible.

### **DISCUSSION & COMMENTS**

The developer of the Sunstone lands intends to establish a statutory right of way (SRW) in favour of the Village of Pemberton over the portion of Cream Puff located on their lands. The SRW will include buffer zones on either side to bolster the right of way and attempt to preserve the trail experience.

The development of the Sunstone lands has had the most significant impact on the trail known as Lower Dark Forest. Unfortunately, the entire 500m of trail was not able to be retained. The developer has established a new trail, See the Light, nearby and in a similar alignment as a replacement. The other trails on the parcel experienced more limited impacts. Grumpy Grouse will be marginally affected as the last 100m of trail no longer connects to Dark Forest; instead, it connects to See the Light. Moby Dick is going to be re-aligned and re-named Call me Ishmael. Ramble On is also temporarily closed as part of current construction work.

The developer has begun construction of a 4km trail from the valley floor to Mosquito Lake using the old Fotsch Road alignment. The trail will be graded as 'beginner – green' for all users and all abilities. The trail, targeted for completion in Spring 2023, is 2 meters wide and graveled offering an inclusive access to the lake and surrounding area. The developer also completed the section of the Friendship trail from Den Duyf Park to the Industrial Park and work is proceeding on preparing SRWs for public access.

The use of and access to recreational trails is greatly affected by the underlying land tenure. Private landowners have ultimate authority over recreational access to trails on their property. The Pemberton Valley Recreational Trails Master Plan, 2020 identifies approximately 13.5 km of recreational trails on private property, the majority of which are in the Mosquito Lake area. While 13.5 km represents a small percentage of the total length of trails, many of these trails see intense use. These trails can be categorized as follows:

- Existing Trespassing Trails - In most cases, informal pathways that have experienced a limited number of users, until the recent growth of Pemberton and popularity of the Pemberton trail network that brings visitors to the area. There are several instances where property owners have barricaded access points to limit public access, or where there are liability concerns.
- Existing Permitted Trails - Informal trails where the property owners have allowed (both legally and informally) use of the property for trail access, such as Naylor Way.
- Existing Trails on land later Designated Private Property. Several unauthorized trails existed in the Mosquito Lake area before the Crown land was acquired by Lílwat Nation in fee simple title (as privately held land). The trails continue to be used.

The provincial government recently transferred over 400 acres of Crown land in the Mosquito Lake area to the Lílwat Nation as compensation for land lost to the Sea to Sky Highway upgrades. The Mosquito Lake area contains a large portion of the Pemberton area mountain bike and walking trails. The Lílwat Nation and the Pemberton Valley Trails Association (PVTA) reached an agreement that establishes a framework for a long-term cooperation. In exchange for allowing recreation access the PVTA provides liability insurance to cover the Lílwat Nation on the trail use activities.

The Village has an opportunity to revisit its policy framework around trails as part of the OCP update project currently in progress. Since the adoption of the current OCP in 2011, multi-use recreational trails have exploded in popularity and use. Hikers, trail runners, dog walkers, mountain bikers, horseback riders, and motorized users currently all enjoy the extensive trail network and it acts to draw new residents and tourists to the area. An inclusive and well-managed trail network helps to foster the following community benefits:

- Environmental sustainability
- Respect for cultural values
- Community well-being
- Individual well-being
- Economic opportunity

Village Staff and the consulting team working on the OCP Update have not yet reached the project phase where policy statements around recreational trails have been considered. The draft of the Nkwúkwma Sub Area Plan, which will become a schedule of the OCP, has progressed sufficiently to a stage where policy related to recreational trails is in the process of being considered. Contemporary policy directions related to recreational trails include:

- To provide a range of trail experiences for different ages and abilities
- Relevant recreational user groups shall be consulted before any disruption to existing trails to ensure connectivity to off-site trail assets, when any on-site trail requires rerouting to accommodate development

- A net gain in recreational trails, equivalent to the trail typologies and experiences that may be disturbed, shall be provided as a part of development activities
- Any trails or trail connections over private or strata land shall be secured for public use as statutory rights-of-way
- Exemptions from development permit requirements for trail-builders to reduce the barriers to developing new trails for the community
- Consideration for use of main recreational trail corridors for wildland fire response in emergencies
- Creation and maintenance of a trail inventory as a tool to manage aspects of and issues related to recreational trails

Staff will consider the best approach to trail policy as the OCP update progresses to the appropriate phase. It is likely that the concepts listed above will be integrated, along with any others that align with the community's interest in trails. Ensuring permanent access to much-loved recreational trails is foreseen to be a major priority of OCP policy on this topic.

### **COMMUNICATIONS**

This report does not require a communications element.

### **LEGAL CONSIDERATIONS**

There are no legal, legislative or regulatory considerations at this time.

### **IMPACT ON BUDGET & STAFFING**

There are no impacts to the budget or staffing for consideration.

### **INTERDEPARTMENTAL IMPACT & APPROVAL**

This report will not impact the day-to-day operations of other departments.

### **COMMUNITY CLIMATE ACTION PLAN**

This matter has no impact on the Community Climate Action Plan strategies.

### **IMPACT ON THE REGION OR NEIGHBOURING JURISDICTIONS**

This update report has no impact on other jurisdictions.

### **ALTERNATIVE OPTIONS**

There are no alternative options for consideration.

### **RECOMMENDATIONS**

**THAT** Committee of the Whole receive the report for information.

**ATTACHMENTS:**

**Appendix A: Development Permit 119**

Submitted by:	Scott McRae, Manager of Development Services
Acting CAO Approval by:	Tom Csima, Manager of Operations and Projects

Committee of the Whole



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ca

**VILLAGE OF PEMBERTON**  
**Minor Development Permit No. 119**

Issued to: **Sunstone Ridge Development Ltd.**  
File No: **2021-DPm119**

(Registered owner according to Land Title Office, hereinafter referred to as the "Permittee")

Address: **Sunstone Ridge Developments Ltd.**

[Redacted address line]  
[Redacted address line]

This Development Permit applies to and only to those lands within the Village of Pemberton, Province of British Columbia, legally described as:

- Parcel Identifier: 030-329-612
- Legal Description: Lot 1, District Lot 211, Lillooet District, Plan EPP72101
- Civic Address: Not yet assigned

as shown in **Schedule A.**

This Development Permit No. DPm 119 is issued pursuant to the authority of the Village of Pemberton *Official Community Plan Bylaw No. 654, 2011*, as amended and, except as varied in this Permit, in conformity with all Village of Pemberton bylaws, as amended, and shall not be in any way varied except as so identified in this Permit.

**The Permit relates to Development Permit Area No. 1 – Environmental Protection and Development Permit Area No. 2 – Land Constraints.**

Whereas the applicant has made application to clear, grade and install utilities on portions of roadways identified as Roads G on the attached Schedule "A" the following terms and conditions of this Development Permit shall apply to said land:

- 1) Works and Construction Generally:
  - a) This Development Permit authorizes the clearing, stripping, and grading of portions of roadways proposed, but not yet approved, as

Road G as shown on Schedule "A": Sunstone Phase 4 – Clearing Plan.

- b) This Development Permit authorizes clearing and works on the Schedule "A": Sunstone Phase 4 – Clearing Plan only and does not constitute an approval, or tacit acceptance, of the proposed clearing area as a future roadway alignment, nor does it constitute an endorsement of proposed future land uses.
- c) All works constructed on the lands shall be in compliance with the recommendations in the following Schedules which are attached to and form part of this permit:
  - i) Schedule "A": Sunstone Phase 4 – Clearing Plan prepared by Gilby Engineering Services and dated May 20, 2021;
  - ii) Schedule "B": Initial Environmental Review Sunstone Phase 4 prepared by Cascade Environmental Resource Group and dated February 22, 2021.
  - iii) Schedule "C": Construction Management Plan for Phases 3 and 4 prepared by Gilbey Engineering Services and dated May 26, 2021.
  - iv) Schedule "D": Sunstone Ridge Development Ltd Fire Mitigation Plan, prepared by Lone Goat Contracting Ltd. and dated Summer 2021.
  - v) Schedule "E": Geotechnical Assessment – Phase 4, Sunstone Ridge Developments Ltd., prepared by Kontur Geotechnical Consultants, dated February 22, 2021;
  - vi) Schedule "F": Sunstone Subdivision – Phase 4, Compliance with Village of Pemberton Hillside Development Guidelines.
- d) This Development Permit does not constitute a permit for blasting or use of explosive or incendiary devices in land clearing. A separate Blasting Permit will be required should blasting be required.
- e) Environmental Assessment
  - i) All clearing and associated works on the lands shall be performed in accordance with the recommendations of Schedule "B".
  - ii) All clearing and associated works shall be performed in accordance with all applicable Provincial and Federal Acts and Regulations.
  - iii) All clearing and associated works shall be undertaken under the supervision of a Qualified Environmental Professional.
- f) Construction Management Plan
  - i) All clearing and associated works shall be undertaken in compliance with Schedule "C".
  - ii) All clearing and associated works shall be undertaken under the supervision of a Qualified Geotechnical Engineer.
  - iii) The Qualified Geotechnical Engineer shall submit monitoring reports to the Village of Pemberton during site clearing and construction.



- iv) The owner shall install and maintain access control and warning signage for the active construction areas to deter public access and advise of construction safety hazards.
- v) The owner shall notify Pemberton Valley Trails Association (PVTA), Pemberton Off-road Cycling Association (PORCA) and Pemberton Wildlife Association (PWA) of any works affecting or restricting access to existing trails.

g) Wildfire Interface

- i) The site clearing and associated works on the lands shall be performed generally in accordance with Schedule "D".
- ii) The owner will install and maintain suitable fire prevention and fire response equipment on site during construction, to the satisfaction of the Village of Pemberton Fire Rescue Department.
- iii) The owner will notify the Village of Pemberton Fire Rescue Department at the commencement of the works.
- iv) The owner will abide by any fire restrictions ordered by the Village of Pemberton Fire Rescue Department or other Provincial or Federal authority.

2) Geotechnical

- i) All site clearing and associated works on the lands will be performed in accordance with the recommendations of Schedule "E".
  - ii) All clearing and associated works on the lands will be inspected by a Qualified Geotechnical Engineer at intervals determined by the Qualified Engineer.
  - iii) The Qualified Geotechnical Engineer shall submit monitoring reports to the Village of Pemberton during site clearing and construction.
  - iv) Upon completion of the construction, the Qualified Geotechnical Engineer shall certify the works have been completed in accordance with the recommendations of the Geotechnical Report and the requirements of this Development Permit.
  - v) The owner and the Geotechnical Engineer shall report any slope failures or Geotechnical hazards not identified in the Geotechnical Report in writing to the Village of Pemberton immediately.
  - vi) The Permittee shall be responsible for maintaining all works in a safe condition.
- 3) The Permittee shall complete all works to the satisfaction of the Village of Pemberton within one (1) year from the date that the Permit has been issued. Extensions to the one (1) year time limit may be applied for in writing thirty (30) days prior to the expiry date.

- 4) This Permit is not a Building Permit, Blasting Permit, Subdivision Approval Servicing Agreement, or approval of the proposed land use or road alignment subject to the application. While development on the lands described in this Permit is subject to the conditions and requirements set out in this Permit, this Permit does not authorize development or any construction beyond the clearing and grading of roadways and associated works.
- 5) The land described herein shall be developed strictly in accordance with the terms and conditions and provisions of this Permit and any plans and specifications attached to this Permit shall form a part hereof.

Issued by the Village of Pemberton on the 14 th day of Sept., 2021.

[Redacted Signature]

Lisa Pedrini  
Manager of Development Services

#### STATEMENT OF INTENT

I, **Sunstone Ridge Development Ltd.** having read and understood the terms and conditions of this Development Permit, hereby agree to abide by such terms and conditions and to complete all of the works and services and all other requirements under this Development Permit and in accordance with the Village Bylaws.

[Redacted Signature]  
Sunstone Ridge Development Ltd.

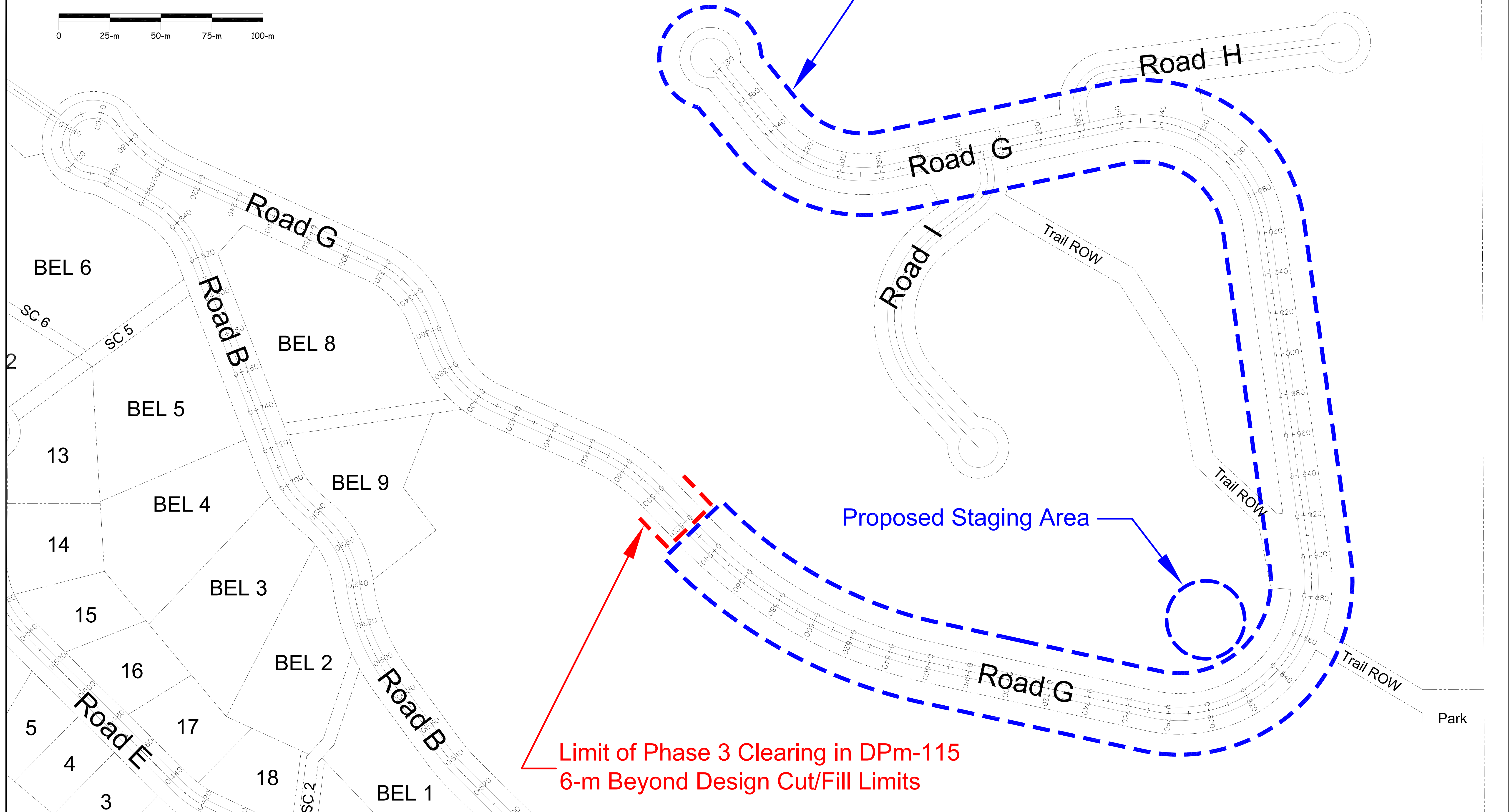
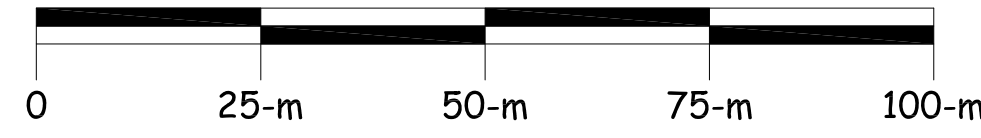
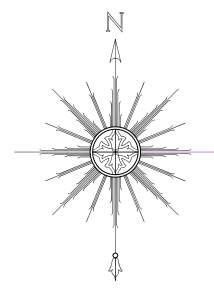
September 14, 2021

Attached: Schedules "A", "B", "C", "D", "E", "F", "G", "H".

# Sunstone Phase 4 - Clearing Plan

Parent Parcel  
Lot 1 Plan EPP72101 DL 211 LLD

Proposed Phase 4 Clearing  
Shown 10-m Beyond Future Road ROW  
To Be Refined to 6-m Beyond Design Cut/Fill Limits



Limit of Phase 3 Clearing in DPM-115  
6-m Beyond Design Cut/Fill Limits

No.	Date	Description
1		

**GILBEY ENGINEERING SERVICES**

Design By:  
Drawn By: GRC  
Scale: As shown

Client: Sunstone Ridge Developments Ltd.  
Project: Sunstone Ridge - Phase 4  
Drawing: Road G - Clearing Limits (20May21)

Drawing No.:  
Issue No.:  
Sheet No.:  
Village File #:

## Initial Environmental Review

Sunstone Phase 4 - Pemberton BC

## Cascade Environmental Review



**Prepared by:**

Cascade Environmental Resource Group Ltd.

[REDACTED]  
Whistler, BC

V0N 0H5

**Prepared for:**

Sunstone Ridge Developments Ltd

[REDACTED]  
**Project Number:** 584-02-13-01

**Date:** February 22, 2021



## Statement of Limitations

This Document was prepared by **Cascade Environmental Resource Group Ltd.** for **Sunstone Ridge Developments Ltd.** Should this report contain an error or omission then the liability, if any, of Cascade Environmental Resource Group Ltd. should be limited to the fee received by Cascade Environmental Resource Group Ltd. for the preparation of this Document. Recommendations contained in this report reflect Cascade Environmental Resource Group Ltd.'s judgment in light of information available at the time of study. The accuracy of information provided to Cascade Environmental Resource Group Ltd. is not guaranteed.

Neither all nor part of the contents of this report should be used by any party, other than the client, without the express written consent of Cascade Environmental Resource Group Ltd. This report was prepared for the client for the client's own information and may not be used or relied upon by any other person unless that person is specifically named by Cascade Environmental Resource Group Ltd. as a beneficiary of the report, in which case the report may be used by the additional beneficiary Cascade Environmental Resource Group Ltd. has named. If such consent is granted, a surcharge may be rendered. The client agrees to maintain the confidentiality of the report and reasonably protect the report from distribution to any other person. If the client directly or indirectly causes the report to be distributed to any other person, the client shall indemnify, defend and hold Cascade Environmental Resource Group Ltd. harmless if any third party brings a claim against Cascade Environmental Resource Group Ltd. relating to the report.

This Document should not be construed to be:

- A Phase 1 - Environmental Site Assessment
- A Stage 1 – Preliminary Site Investigation (as per the Contaminated Sites Regulations of the Waste Mgt. Act)
- An Environmental Impact Assessment



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## 1. Introduction

Cascade Environmental Resource Group Ltd. (Cascade) was retained by Sunstone Ridge Developments Ltd. to conduct an Initial Environmental Review (IER) of the Sunstone Phase 4 development area in Pemberton, BC. The IER will support the rezoning and development application to be submitted by Sunstone Ridge Developments Ltd. to the Village of Pemberton (VOP).

The subject site is currently undeveloped and is characterized by forest type vegetation. The subject site is currently zoned for residential and rural uses. The proposed development for the subject site consists of a new residential neighborhood that will include 60 residential lots and three parks.

The purpose of an IER is to assist VOP staff in the evaluation of rezoning and/or development permit applications, providing information to be included on the Environmental Impact Assessment Process (VOP, 2019). This report reviews and assesses the biophysical conditions, ecosystem integrity, habitat potential, species present (plant and animal), and aquatic features on or adjacent to the subject site. It includes a discussion of the environmental regulatory framework that may affect development activities and provide alternatives for mitigation or resolution. Potential constraints are identified and recommendations are provided to inform and facilitate the environmental review and approval process. This first report is based on the Vegetation Resource Index (VRI) data available and a preliminary site visit conducted on December 11, 2020. Site series were inferred from the VRI data and preliminary site visit, field investigation will confirm the site series once the ground is free of snow during spring 2021.

The desktop assessment was conducted by Adrien Baudouin, M.Sc., R.P. Bio., and Margot Webster, B.Sc., BIT. Mapping support was provided by Nicola Church, B.A., M.Sc. (G.I.S.). All project team members have extensive experience in conducting environmental inventories, reviews and assessments.

### 1.1. Location

The subject property is in the Sunstone neighborhood of Pemberton, BC (Map 1). The subject property is legally described as: Lot 1 District Lot 211 Lillooet District Plan EPP72101 PID: 030-329-612. The subject property covers an area of 37.4 ha.

### 1.2. VOP Bylaw Zoning

The site is currently zoned RR-1 (Residential, Rural) under the VOP zoning bylaw No. 832, 2018 (VOP, 2018). The intent of this zone is to provide the use of a building or structure for agricultural, residential, and accessory uses on land outside the Agricultural Land Reserve. The zoning allows the following principal and accessory uses:

#### Principal Uses:

- Agriculture
- Dwelling, detached
- Farm stands
- Resource Extraction
- Riding Academy





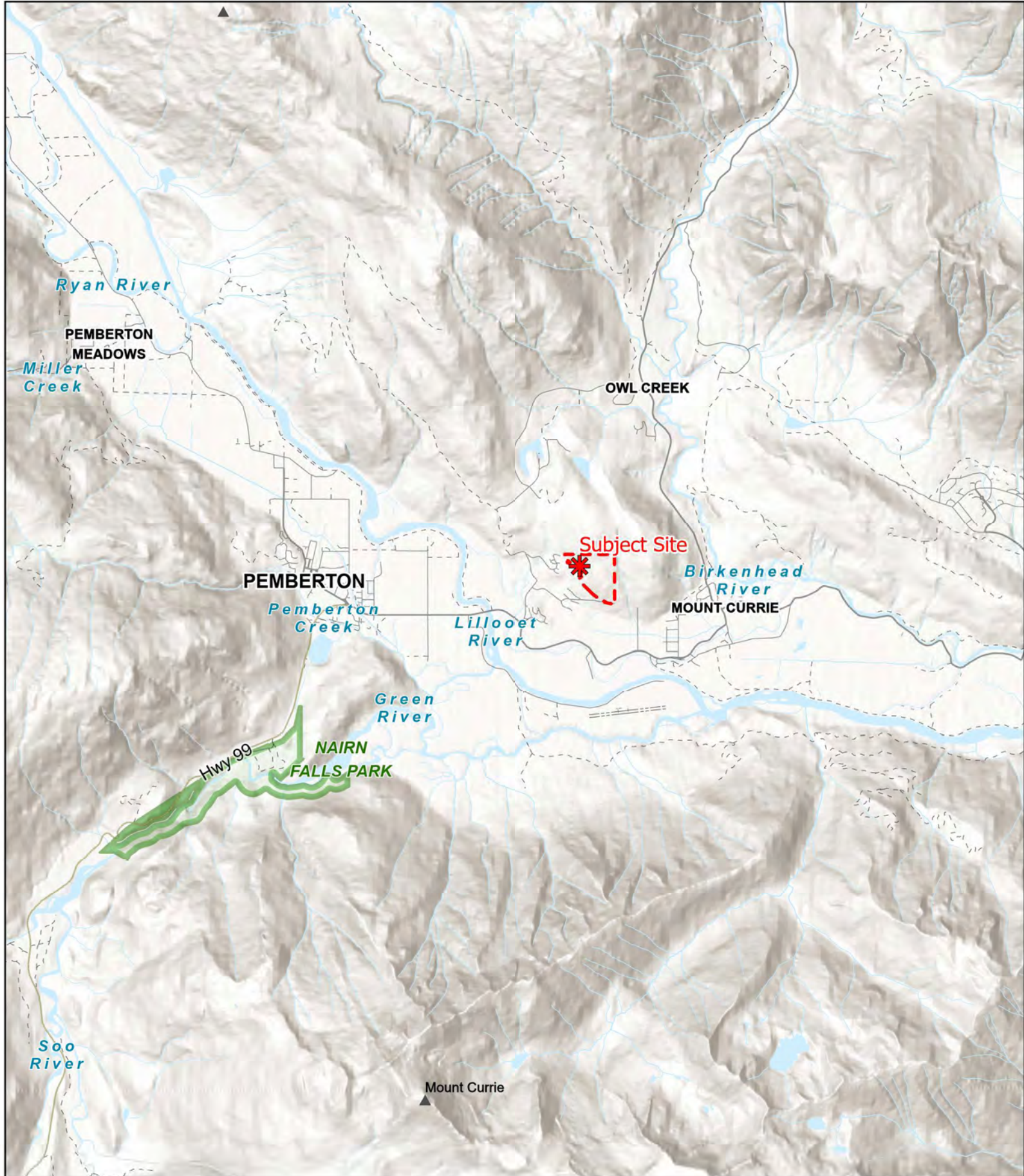
### **Accessory Uses:**

- Bed and breakfast
- Bed and breakfast inn
- Home occupation
- Secondary suite
- Storage, intermodal storage containers

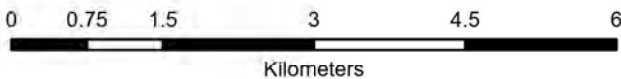
### **1.3. Methodology**

The ecosystem units present on the subject site were determined using the VRI data and the preliminary field visit conducted on December 11, 2020. Terrestrial Ecosystem Mapping (TEM) standards (RISC, 1998) were employed to identify and delineate the ecosystem units and define their distribution within the study area. TEM codes for the subject polygon are displayed in Map 2. The ecosystem units will be investigated in the field (ground-truthed) using ground inspection methods to confirm the site vegetation, soils, tree mensuration, and geomorphic features of the study area, once the ground is free of snow in the spring of 2021.

Potential wildlife for the area's habitats that were not observed during the site visit is described using the BC Conservation Data Centre (CDC), a centralized BC government database of information on species and ecological communities (BC MOE, 2019). Presence or absence of valued ecosystem components were inferred based the ecosystem unit.



GIS Cartographer: Nicola Church  
 Date: 2021-01-26  
 CERG File #: 584-02-13  
 Projection: NAD 1983 UTM Zone 10N



**Map 1 - Location**

Sunstone Ridge Development Ltd Phase 4,  
 Initial Environmental Review  
 Pemberton, BC, Canada  
 Page 34 of 110

## 2. Existing Environmental Conditions

### 2.1. Physical Environment

#### 2.1.1. Climate

The study area lies within the Eastern Pacific Ranges Ecosection, within the Coast Mountains Ecoprovince in southern British Columbia (Demarchi, 1996). This Ecosection is comprised of a rugged inland area that has a transitional climate, falling between the rain shadowed Southern Interior Ecoprovince to the east, and the high rainfall associated with the Southern Pacific Ranges Ecosection to the west (Demarchi, 1996). The climate is principally influenced by frontal systems moving in from the Pacific Ocean and over the Coast Mountains to the Interior (Green and Klinka 1994). No Environment Canada weather stations are located in the vicinity of the subject area. However, conditions at the subject area are expected to lie between the values for the Whistler weather station (approximately 25 km south of the subject area) and the Lillooet weather station (approximately 70 km northeast of the subject area).

The meteorological records from the Environment Canada Lillooet Seton BCHA weather station record an annual total precipitation of 349.0 mm, which mainly falls as rain. The total precipitation peaks in the month of November (44.4 mm average), and is least in the month of March (16.8 mm average). The mean annual temperature is recorded as 9.5°C. July is the warmest month, with a mean daily maximum temperature of 28.3°C, and a mean daily average temperature of 21.6°C. Conversely, January is the coolest month with a mean daily minimum temperature of -5.2°C, and a mean daily average temperature of -2.4°C (Environment Canada, 2021).

The meteorological records from the Whistler weather station record an average annual total precipitation of 1227.7 mm. The heaviest precipitation occurs in the month of November (192.1 mm average), while July is the driest month (44.7 mm average). Precipitation as snow can occur from October until May. The mean annual temperature is 6.7°C, with the highest mean monthly temperature occurring in August (16.5°C mean daily average; 24.0 mean daily maximum) and the lowest mean monthly temperature occurring in December (-2.8°C mean daily average; -5.4 mean daily minimum) (Environment Canada, 2021).

#### 2.1.2. Geology

The subject lands are located within the Southern Coast Mountains. This complex was formed during the Mesozoic – Lower Cretaceous era, composed of marine sedimentary and volcanic rocks. This complex consists of peninsula and brokenback hill formations and is made up of conglomerate, sandstone, shale, crystal and lapilli tuff, tuffaceous sandstone, volcanic conglomerate, volcanic breccia, and andesitic to dacitic flows (Shiarizza and Church, 1997).

#### 2.1.3. Geomorphology

The site is composed of bedrock terrace with variable mantle of morainal till and numerous bedrock outcroppings. Steep slopes are associated with the outcroppings and some colluvium is expected



(Cascade, 1999). The soil parent material is morainal material (till) deposited by glacial ice: a mixture of boulders, sand, silt, and clay (Government of Canada, 2013).

#### **2.1.4. Hydrology**

Hydrology of the site includes subsurface sheet flow on bedrock throughout much of the upper elevations of the property. The presence of watercourses will be determined during the spring field investigation.

### **2.2. Terrestrial Environment**

#### **2.2.1. Soils**

Soils on the property are mainly Orthic Eutric Brunisol (O.EB) and Orthic Dystric Brunisol (O.DYB) soils, with areas throughout of lithic bedrock (BC Gov, 2021). O.EB soils have no water table present and plant root growth is restricted by the fifth layer of compact till. Water is removed from soil readily but not rapidly, with an intermediate available water storage capacity (4-5 cm) within the control section, and are generally intermediate in texture and depth. Water source is precipitation. On slopes subsurface flow may occur for short durations, but additions are equaled by losses (BC Gov, 2021). O.DYB soils have organic surface horizons and brownish-colored, acid B horizons overlying acid C horizons (BC Gov, 2021).

Parent material is made up of till and Collister (CE) series. Morainal (till) is deposited by glacial ice, containing a mixture of boulders, sand, silt, and clay. Texture is mainly coarse skeletal and soil is weakly calcareous (Government of Canada, 2013). Collister soils are formed in shallow colluvial veneer deposits from intrusive bedrock. These soils range from gravelly sand to gravelly sandy loam in texture and are well to rapidly drained, moderately to rapidly pervious, very to exceedingly stony, and occur on a range of slopes. Roots are encountered to the depth of the profile (Kuurne, 1980).

### **2.3. Vegetation**

#### **2.3.1. Vegetation Associations**

During the preliminary ecological survey conducted on December 11, 2020, it was determined that the subject site is undeveloped. The existing native vegetation on the property consists of mature forest (Structural Stage 6). A description of the structural stages is provided in Table 1. Vegetation will be identified during the spring field verification.



**Table 1: Vegetation Age Class Descriptions**

Structural Stage Code	Interpretation
1 Sparse/Bryoid	<ul style="list-style-type: none"> <li>- Community is in initial stages of primary and secondary development</li> <li>- Bryophytes and lichens often dominant</li> <li>- Times since disturbance typically &lt;20 years but may be 50-100 + years in areas with little or no soil</li> <li>- Shrub and herb cover &lt;20 % of total area</li> <li>- Tree cover &lt; 10 % of total area</li> </ul>
2a/b/c/d Herb	<ul style="list-style-type: none"> <li>- Early successional stage or edaphic herb community</li> <li>- 2a forb dominated</li> <li>- 2b graminoid dominated, including grasses, sedges, reeds and rushes</li> <li>- 2c aquatic plant dominated, but not 2b plants</li> <li>- 2d dwarf shrub dominated, low growing woody shrubs</li> </ul>
3a/b Shrub	<ul style="list-style-type: none"> <li>- Shrub dominated communities maintained by environmental conditions or disturbance</li> <li>- 3a low shrub &lt; 2 metres tall</li> <li>- 3b tall shrub &lt; 10 metres tall</li> <li>- Tree cover &lt;10 %</li> </ul>
4 Pole/Sapling	<ul style="list-style-type: none"> <li>- Densely stocked trees</li> <li>- Self-thinning not yet evident</li> <li>- Time since disturbance usually &lt; 40 years</li> </ul>
5 Young Forest	<ul style="list-style-type: none"> <li>- Stocking density persists</li> <li>- Self-thinning not yet evident</li> <li>- Time since disturbance usually 40-80 years</li> </ul>
6 Mature Forest	<ul style="list-style-type: none"> <li>- Trees established after the last disturbance have matured</li> <li>- The second cycle of shade-tolerant trees may have become established</li> <li>- Time since disturbance generally 80–250 years</li> </ul>
7 Old Forest	<ul style="list-style-type: none"> <li>- Structurally complex stands composed mainly of shade-tolerant and regenerating tree species</li> <li>- Snags and coarse woody debris in all stages of decomposition typical</li> <li>- Time since disturbance &gt;250 years</li> </ul>
Modifiers: B – Broadleaf C – Coniferous M – Mixed	<ul style="list-style-type: none"> <li>- Broadleaf stands composed of &gt; 75 % broadleaf tree cover</li> <li>- Coniferous stands composed of &gt; 75 % coniferous tree cover</li> <li>- Mixed stands neither coniferous nor broadleaf compose &gt; 75 % of the total tree cover</li> </ul>



### Biogeoclimatic Zone Classification (IDFww)

The subject site is part of the Interior Douglas-fir (IDF) Wet Warm (ww) – IDFww – Variant (Green & Klinka 1994). The IDFww zone has limited distribution in the Vancouver Forest Region. It is more commonly distributed along southwest-facing slopes. The elevational limits range from approximately 100 to 1200m.

Within the ww subzone and variant, a number of different site series exist. The site series classification represents subtle changes in microclimate, soil conditions and associated vegetation. The different site series are further classified into Terrestrial Ecosystem Units based on the structural stage of the vegetation and the terrain of the site. Forests on zonal sites are dominated by Douglas-fir (*Pseudotsuga menziesii*) with a smaller amount of western hemlock (*Tsuga heterophylla*) and western redcedar (*Thuja plicata*). The understorey is characterized by a well-developed shrub layer featuring a diverse mixture of species, including falsebox (*Paxistima myrsinites*), saskatoon (*Amelanchier alnifolia*), tall and dull Oregon-grape (*Mahonia aquifolium*), prince's pine (*Chimaphila umbellata*), birch leaved spirea (*Spiraea betulifolia*), balhip rose (*Rosa gymnocarpa*), beaked hazelnut (*Corylus cornuta*) and western trumpeter honeysuckle (*Lonicera ciliosa*). The moss layer is dominated by *Hylocomium splendens* and *Rhytidiadelphus triquetrus* (Green & Klinka 1994).

### Terrestrial Ecosystem Mapping

Inferences were made to determine the site series based on the vegetation tables, edatopic grids, site series flowcharts, environment tables, and site series descriptions for the relevant biogeoclimatic subzone/variant in the literature (Lloyd et al., 1990a, 1990b). The site series and TEM code inferred from the VRI data are listed in Table 2 and shown on Map 2. A total of nine vegetated TEM polygons (Map 2) were identified.

**Table 2: VRI site series**

Polygon #	Decile	Site serie	Structural stage	Stand composition	Area (ha)
1	7	RO (Rocky outcrop)			13.5
	3	DF (Fd - Falsebox – Feathermoss)	6	C	
2	10	DH ( FdCw – Hazelnut)	6	C	4.3
3	10	DF (Fd - Falsebox – Feathermoss)	6	C	26.2
4	10	DH ( FdCw – Hazelnut)	6	C	97.0
5	10	DF (Fd - Falsebox – Feathermoss)	6	C	5.0
6	10	DF (Fd - Falsebox – Feathermoss)	6	C	117.8
7	7	RO (Rocky outcrop)			45.3
	3	DF (Fd - Falsebox – Feathermoss)	6	C	
8	10	DH ( FdCw – Hazelnut)	6	C	55.5



Polygon #	Decile	Site serie	Structural stage	Stand composition	Area (ha)
9	5	RO (Rocky outcrop)			9.4
	5	DF (Fd - Falsebox – Feathermoss)	6	C	

### 2.3.2. Rare and Endangered Plant Species and Ecological Communities

In BC, there are two governing bodies involved with the ranking of species and/or ecological communities at risk. At the national level, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) provides advice in regards to the *Species at Risk Act* (SARA), and at the provincial level, the Conservation Data Centre (CDC) manages the BC Status List.

The Canadian government created SARA in 2002 to complement the Accord for the Protection of Species at Risk (a national effort to identify and protect threatened and endangered wildlife and their associated habitats across the country). COSEWIC is the scientific body responsible for assigning the status of species at risk under SARA. This system uses the following terminology:

- Extinct (XX)
- Extirpated (XT)
- Endangered (E)
- Threatened (T)
- Special concern (SC)
- Not at risk (NAR)
- Data deficient (DD)

A species that is listed as Endangered, Extirpated or Threatened is included on the legal list under Schedule 1 of the SARA and is legally protected under the SARA with federal measures to protect and recover these species in effect.

The BC CDC designates provincial red or blue list status to animal and plant species, and ecological communities of concerns (BC MOE, 2020a). The red list includes indigenous species or subspecies considered to be endangered or threatened. Endangered species are facing imminent extirpation / extinction, whereas threatened groups or species are likely to become endangered if limiting factors are not reversed. The blue list includes taxa considered to be vulnerable because of characteristics that make them particularly sensitive to human activities or natural events. Although blue listed species are at risk, they are not considered endangered or threatened. Yellow listed species are all others not included on the red or blue lists and may include species which are declining, increasing, common, or uncommon. Table 3 to Table 6 below include the CDC listed (i.e. rare and threatened) species that have the potential to occur on the subject site; species designated as SARA Schedule 1 are also noted. Potentially occurring species are based on broad habitat preferences delineated by forest district and biogeoclimatic zone, and refined by habitat type available in the subject site. Forest and anthropogenic terrain were selected as habitat type to identify potential listed species for the purposes of this report.

Potential occurrences are then designated as unlikely or possible based upon species specific habitat requirements and an on-site assessment of those habitats. Note that a comprehensive evaluation of the



study area for each species was not possible due to time constraints, seasonal migration patterns, and the transient nature of some species.

The CDC iMap (BC MOE, 2021) does not list any rare and endangered plant species on the subject lot. A list of potentially occurring plant species at risk in the area of the subject site is provided below in Table 3. Four plant species at risk have the potential to occur in the area, based on the vegetation associations. However, none of these species has the potential to occur on site.

**Table 3: Plant species at risk potentially occurring on the site**

Common Name <i>Scientific name</i>	Status		Habitat Requirements	Potential Occurrence
	BC List	SARA Status		
Columbian carpet moss <i>Bryoerythrophyllum columbianum</i>	Blue	1-Special concern	On soil over rock; rock is usually acidic and soil is often sandy. Habitats include grassland steppe as well as ledges and bluffs near rivers. Often part of biological soil crusts. Occurs at moderate elevations. In British Columbia, grows in semi-arid steppe and grassland habitats of the bunchgrass zone, where common plants include bluebunch wheatgrass ( <i>Agropyron spicatum</i> ), needlegrass ( <i>Stipa comata</i> ), big sage ( <i>Artemisia tridentata</i> ), and, in some areas, antelope brush ( <i>Purshia tridentata</i> ); has been found on a variety of soil types, including compact silts, silt-loams, and sandy loams. Found at both disturbed and undisturbed sites.	<b>Unlikely-</b> No suitable habitat
whitebark pine <i>Pinus albicaulis</i>	Blue	1-Endangered	Within montane forests and on thin, rocky, cold soils at or near timberline. 1300 - 3700 m	<b>Unlikely-</b> Subject site elevation is below 600 m
elegant Jacob's-ladder <i>Polemonium elegans</i>	Red		Rock, cliff and talus	<b>Unlikely-</b> Nearest record in Skagit Valley Provincial Park
leafless wintergreen <i>Pyrola aphylla</i>	Blue		Occurs coastal BC and lower mainland.	<b>Unlikely-</b> Nearest record on Taxada Island

Source: BC Ecosystems Explorer, Ministry of Environment.

### 2.3.3. Rare and Endangered Ecological Communities

The term "ecological" is a direct reference to the integration of biological components with non-biological features such as soil, landforms, climate and disturbance factors. The term "community" reflects the interactions of living organisms (plants, animals, fungi, bacteria, etc.), and the relationships that exists between the living and non-living components of the community. Currently, the most common ecological communities that are known in BC are based on the Vegetation Classification component of the Ministry





of Forests and Range Biogeoclimatic Ecosystem Classification, which focuses on the terrestrial plant associations of BC's native plants.

Large tracts of undisturbed plant communities are considered ecologically more important than disturbed/fragmented or second growth communities. Vegetation on the subject site consists mostly of mature forest, as the subject lands have been disturbed by logging in the past century. There is one blue listed ecological community of concern that exists on site (Table 4), however the second growth units are not valued significantly due to their modified condition.

**Table 4: Ecological Communities at Risk Occurring on the Subject Site**

Site Series Name Common Name <i>Scientific name</i>	TEM Code	Status BC List	BCG Zone	Polygons	Structural stage	Size of polygon (ha)
Douglas-fir - western redcedar / beaked hazelnut <i>Pseudotsuga menziesii - Thuja plicata / Corylus cornuta</i>	DH	Blue	IDF <sub>ww</sub> /01	2,4,8 (Map 2)	6	15.68

## 2.4. Wildlife and Wildlife Habitats

Observation of wildlife and wildlife signs were recorded during the preliminary site visit on December 11, 2020. The subject site contains potential wildlife habitat due to the presence of:

- Mature forest
- Available forage (e.g. berries)
- Coarse woody debris
- Wildlife trees
- South facing rock terrain

### 2.4.1. Mammals

Black bear (*Ursus americanus*) are known to use the site for foraging and as a corridor between high and low elevation habitats. Other mammals that could potentially use the site include black-tailed deer (*Odocoileus hemionus columbianus*), Douglas squirrel (*Tamiasciurus douglasii*), northern flying squirrel (*Glaucomys sabrinus*), bushy-tailed woodrat (*Neotoma cinerea*), ermine (*Mustela erminea*), deer mouse (*Peromyscus maniculatus*), coyote (*Canis latrans*), wolf (*Canis lupus*), cougar (*Puma concolor*), bobcat (*Lynx rufus*), raccoon (*Procyon lotor*), little brown bat (*Myotis fugus*), western long-eared bat (*Myotis evotis*), hoary bat (*Lasiurus cinereus*), silver-haired bat (*Lasionycteris noctivagans*), snowshoe hare (*Lepus americanus*), pine marten (*Martes americana*), pika (*Ochotona princeps*), common shrew (*Sorex cinereus*), dusky shrew (*Sorex monticolus*), and yellow-pine chipmunk (*Tamias amoenus*).



### 2.4.2. Birds

The forested areas of the subject site could provide habitat for a number of avian species (Table 5).

**Table 5: Bird species potential occurring on the subject site.**

Common Name	Scientific Name
Cooper's hawk	<i>Accipiter cooperii</i>
Ruffed grouse	<i>Bonasa umbellus</i>
Goldern-crowned kinglet	<i>Regulus satrapa</i>
Black-capped chickadee	<i>Parus atricapillus</i>
Red-breasted nuthatch	<i>Sitta canadensis</i>
Red-breasted sapsucker	<i>Sphyrapicus ruber</i>
Hairy woodpecker	<i>Picoides villosus</i>
Downy woodpecker	<i>Picoides pubescens</i>
Northern flicker	<i>Colaptes auratus</i>
Pileated woodpecker	<i>Dryocopus pileatus</i>
Northern saw-whet owl	<i>Aegolius acadicus</i>
Barred owl	<i>Strix varia</i>
Cedar waxwing	<i>Bombycilla cedrorum</i>
Rufous hummingbird	<i>Selasphorus rufus</i>
Winter wren	<i>Troglodytes troglodytes</i>
Cassin's vireo	<i>Vireo solitarius</i>
Warbling vireo	<i>Vireo gilvus</i>
Black-throated gray warbler	<i>Dendroica nigrescens</i>
Townsend's warbler	<i>Dendroica townsendi</i>
Western tanager	<i>Piranga ludoviciana</i>
Swainson's thrush	<i>Catharus minimus</i>
American robin	<i>Turdus migratorius</i>
Varied thrush	<i>Ixoreus naevius</i>
Hammond's flycatcher	<i>Empidonax hammondii</i>
Pacific-slope flycatcher	<i>Empidonax difficilis</i>
Pine siskin	<i>Carduelis pinus</i>
Red crossbill	<i>Loxia curvirostra</i>
Brown-head cowbird	<i>Molothrus ater</i>
Dark-eyed junco	<i>Junco hyemalis</i>
Song sparrow	<i>Melospiza melodia</i>
Spotted towhee	<i>Pipilo maculatus</i>
Steller's jay	<i>Cyanocitta stelleri</i>
Northwestern crow	<i>Corvus caurinus</i>
Western screech owl	<i>Megascops kennicottii</i>
Common nighthawk	<i>Chordeiles minor</i>
Evening grosbeak	<i>Coccothraustes vespertinus</i>
Olive-sided flycatcher	<i>Contopus cooperi</i>
Band-tailed pigeon	<i>Patagioenas fasciata</i>

### 2.4.3. Amphibians and Reptiles

A record of sharp-tailed snakes (*Contia tenuis*) located on the subject property was present on CDC Imap (BC Gov, 2021). However, the record was removed due to the veracity of the identification. The sharp-



tailed snakes is known to occur on the MacKenzie Ridge (Environment and Climate Change Canada, 2017, Cascade, 2019) and is likely to occur on the subject property. The sharp-tailed snake is federally listed as endangered under the *Species at Risk Act* (SARA) and provincially Red Listed with the Conservation Data Centre. In Pemberton, the snake occurs on south-facing slopes of Mackenzie Ridge (Environment and Climate Change Canada, 2017; Cascade, 2019). In addition to warm areas for thermoregulation, denning and egg-laying, the species requires forest and moist areas for foraging, but this aspect of the habitat requirement of the species is poorly understood (COSEWIC, 2009, and Environment and Climate Change Canada, 2017). Due to the presence of suitable habitat on site, Cascade will conduct additional snake surveys during optimal weather in spring 2021.

Due to the dry soil conditions and abundance of exposed rock outcrops, few amphibian species are likely to occur on the subject site. Northern Pacific treefrog (*Hyla regilla*) and ensatina salamander (*Ensatina eschscholtzii*) may potentially occur on site.

The rocky, open, south-facing, coniferous forests of the subject site represent ideal breeding and overwintering habitat for the northern alligator lizard (*Elgaria coerulea*). In addition, two species of snake are likely to occur on site: the valley gartersnake (*Thamnophis sirtalis fitchi*) and the wandering gartersnake (*Thamnophis elegans vagrans*). The rubber boa (*Charina bottae*) also has the potential to occur on site.

#### 2.4.4. Wildlife Species at Risk

A search was conducted for potentially occurring wildlife species at-risk through the BC Conservation Data Centre based on the site's Biogeoclimatic zone and habitat requirements for each listed species. Potentially occurring wildlife species are provided in Table 5.

There are ten wildlife species at-risk with the potential to occur on site: Sharp-tailed snake (*Contia tenuis*), Northern rubber boa (*Charina bottae*), Common nighthawk (*Chordeiles minor*), Olive-sided flycatcher (*Contopus cooperi*), Evening grosbeak (*Coccothraustes vespertinus*), Townsend's big-eared bat (*Corynorhinus townsendii*), Western screech-owl subsp. (*Megascops kennicottii kennicottii*), Little brown myotis (*Myotis lucifugus*), Band-tailed pigeon (*Patagioenas fasciata*), and Grizzly bear (*Ursus arctos*).

**Table 6: Wildlife Species at Risk Potentially Occurring on the Subject Site**

Common Name Scientific name	Status		Habitat Requirements	Potential Occurrence
	BC List	SARA		
Northern goshawk <i>Accipiter gentilis atricapillus</i>	Blue	-	Breeds throughout most of mainland BC east of the Coast Ranges.	<b>Unlikely</b> – Site within coast mountains.
Northern goshawk <i>Accipiter gentilis laingi</i>	Red	Threatened	Coastal forests of BC, especially central and northern coastal islands. Closest known occurrence is the Gulf Islands	<b>Unlikely</b> – site is not on the coast.
Green sturgeon <i>Acipenser medirostris</i>	Blue	Special Concern	Found in estuaries, lower reaches of large rivers, and in salt or brackish water off river mouths.	<b>None</b> – No fish habitat on site.



Common Name Scientific name	Status		Habitat Requirements	Potential Occurrence
	BC List	SARA		
White sturgeon <i>Acipenser transmontanus</i>	-	Endangered	In British Columbia they are restricted to the Fraser, Columbia and Kootenay River systems and in Harrison and Pitt Lakes.	<b>None</b> – No fish habitat on site.
Western grebe <i>Aechmophorus occidentalis</i>	Red	Special Concern	Marshes, lakes, and bays; in migration and winter also sheltered seacoasts, less frequently along rivers (Subtropical and Temperate zones).	<b>Unlikely</b> – No suitable habitat on site.
White-throated swift <i>Aeronautes saxatalis</i>	Blue	-	Primarily mountainous country, especially near cliffs and canyons where breeding occurs; forages over forest and open situations in a variety of habitats (Subtropical and Temperate zones).	<b>Unlikely</b> – No cliffs or canyons on subject site.
Oregon forestsnail <i>Allogona townsendiana</i>	Red	Endangered	In low-elevation mixed-wood and deciduous forests, typically dominated by Bigleaf Maple; usually a dense cover of low herbaceous vegetation is present.	<b>Unlikely</b> – There are few bigleaf maples on site
Grasshopper sparrow <i>Ammodramus savannarum</i>	Red	-	Prefer grasslands of intermediate height and are often associated with clumped vegetation interspersed with patches of bare ground. No known occurrences near site.	<b>Unlikely</b> – Site is not considered grasslands.
Nelson's sparrow <i>Ammospiza nelsoni</i>	Red	-	Range in BC is from Dawson Creek and northwards.	<b>Unlikely</b> – Outside of range.
Western toad <i>Anaxyrus boreas</i>	Yellow	Special Concern	Various upland habitats around ponds, lakes, reservoirs, and slow-moving rivers and streams.	<b>Unlikely</b> - No suitable aquatic habitat on site.
Mountain beaver <i>Aplodontia rufa</i>	Yellow	Special Concern	Mountain Beaver is found in extreme southwestern British Columbia in the Cascade Mountains, and south of the Fraser River.	<b>Unlikely</b> – Site is not within range.
Mormon metalmark <i>Apodemia mormo</i>	Red	Endangered	The Mormon Metalmark is found in the southernmost part of the Southern Interior of BC and southern SK, south to Baja California and northern MEX.	<b>Unlikely</b> – Site is outside of species' range.
Great blue heron <i>Ardea herodias fannini</i>	Blue	Special Concern	Aquatic areas <0.5 m deep, fish bearing streams and rivers, undisturbed nesting in tall trees. Closest known occurrence is Lost Lake.	<b>Unlikely</b> - No suitable aquatic areas on site.



Common Name Scientific name	Status		Habitat Requirements	Potential Occurrence
	BC List	SARA		
Emma's dancer <i>Argia emma</i>	Blue	-	Along rivers, creeks and sometimes wave-washed lake beaches. In BC occurs from the Fraser Valley to the Shuswap and Kettle River regions.	<b>Unlikely</b> – Site is not within range.
Vivid dancer <i>Argia vivida</i>	Blue	Special Concern	Rare. Associated with cool or hot springs. Montane. Southern B.C. from the Coast Mountains to the Rockies.	<b>Unlikely</b> – No springs on site.
Coastal tailed frog <i>Ascaphus truei</i>	Yellow	Special Concern	Although they may be found in fish-bearing streams, tailed frogs typically occur in non-fish bearing, permanent, cold, fast flowing mountain streams that flow over rocky substrates.	<b>Unlikely</b> – No suitable aquatic habitat.
Short-eared owl <i>Asio flammeus</i>	Blue	Special Concern	In general, any area that is large enough, has low vegetation with some dry upland for nesting, and that supports suitable prey may be considered potential breeding habitat, although many will not have breeding short-eared owls. Nearby water is a requirement for nesting habitat.	<b>Unlikely</b> – No suitable grasslands or fields on site.
Burrowing owl <i>Athene cucularia</i>	Red	Endangered	Habitat includes open grasslands, especially prairie, plains, and savanna, sometimes other open areas such as vacant lots near human habitation or airports. This owl spends much time on the ground or on low perches such as fence posts or dirt mounds.	<b>Unlikely</b> – Site is not open grassland.
Upland sandpiper <i>Bartramia longicauda</i>	Red	-	Likely restricted to a few suitable areas within the Peace River lowlands near Ft. St. John and the Cariboo-Chilcotin grasslands near Riske Creek and at least one area in the East Kootenays north of Cranbrook.	<b>Unlikely</b> – Not within range.
American bittern <i>Botaurus lentiginosus</i>	Blue	-	Breeding occurs in lowland marshes in lakes, ponds, and rivers in south and central interior British Columbia and in the lower Fraser Valley.	<b>Unlikely</b> – No suitable aquatic habitat on site.
Marbled murrelet <i>Brachyramphus marmoratus</i>	Blue	Threatened	Coastal areas within 2 km of shore, occasionally on rivers and lakes within 20 km of the ocean in old growth forest. Closest known occurrence is Toba River.	<b>Unlikely</b> - No old growth forest.



Common Name Scientific name	Status		Habitat Requirements	Potential Occurrence
	BC List	SARA		
Brant <i>Branta bernicla</i>	Blue	-	Restricted to coastal B.C., mainly Vancouver Island, Queen Charlotte Islands, and the Fraser River delta.	<b>Unlikely</b> – Pemberton is not coastal.
Rough-legged hawk <i>Buteo lagopus</i>	Blue	-	Grasslands, field, marshes, sagebrush flats, and open cultivated areas; sometimes rat-infested garbage dumps. Nests on cliffs (typically) or in trees in arctic and subarctic, in tundra, mountain sides, forests with plenty of open ground. Winters in low valleys of southern BC.	<b>Unlikely</b> – Site does not contain fields or grasslands.
Green heron <i>Butorides virescens</i>	Blue	-	Aquatic areas, especially slow moving, shallow waters with good riparian cover. Known to occur in the Whistler area.*	<b>None</b> – No fish habitat on site.
Smith's longspur <i>Calcarius pictus</i>	Blue	-	BREEDING: Dry, grassy, and hummocky tundra (AOU 1983). NON-BREEDING: in migration and winter in grassy and weedy areas, fields, prairies and airports.	<b>Unlikely</b> – No suitable grass habitat on site.
Red knot <i>Calidris canutus</i>	Red	Threatened/ Endangered	Primarily seacoasts on tidal flats and beaches, less frequently in marshes and flooded fields. On sandy or pebbly beaches, especially at river mouths; feeds on mudflats, loafs and sleeps on salinas and salt-pond dikes. Nests on ground in barren or stony tundra and in well-vegetated moist tundra.	<b>Unlikely</b> – No suitable aquatic habitat on site.
Immaculate green hairstreak <i>Callophrys affinis</i>	Blue	-	The Immaculate Green Hairstreak ranges from the Southern Interior and West Kootenay of BC south through CA and NM to northern MEX.	<b>Unlikely</b> – Site not within range.
Western pine elfin subsp. <i>Callophrys eryphon sheltonensis</i>	Blue	-	There are fewer records and locations. Species uses pines as larval host plants; limited range on southern Vancouver Island (mostly eastern side and a few Gulf Islands) and a few sites in the drier parts of the coastal areas of lower mainland (e.g., Sunshine Coast, Squamish corridor).	<b>Unlikely</b> – Little to no pine trees on site.
Johnson's hairstreak <i>Callophrys johnsoni</i>	Red	-	Known from southeastern Vancouver Island and the lower Fraser Valley east to Hope.	<b>Unlikely</b> – Site is not within range.



Common Name Scientific name	Status		Habitat Requirements	Potential Occurrence
	BC List	SARA		
Canada warbler <i>Cardellina canadensis</i>	Blue	Threatened	Known to reside in Dawson Creek and northwards.	<b>Unlikely</b> – Site is not within range.
Western thorn <i>Carychium occidentale</i>	Blue	-	Found on the west side of the Coast and Cascade Mountains; from Vancouver Island and the adjacent mainland. Found in low elevation forests in rich, relatively undisturbed leaf litter; usually dominated by Bigleaf maple.	<b>Unlikely</b> – Forest habitat on site not dominated by bigleaf maple and site is not along west side of coast mountains.
Mountain sucker <i>Catostomus platyrhynchus</i>	Blue	Special Concern	It occurs in the Fraser River between Hope and Chilliwack, the North Thompson near Hefley, the Similkameen River near Keremeos and, perhaps, the Salmo River near its junction with the Pend d'Oreille River.	<b>None</b> – No fish habitat on site.
Salish sucker <i>Catostomus</i> sp. 4	Red	Threatened	Salish Sucker has a small, restricted range in the lower Fraser River Valley in southwest BC. This fish faces significant threats including severe hypoxia and habitat degradation.	<b>None</b> – No fish habitat on site.
Common wood-nymph subsp. <i>Cercyonis pegala incana</i>	Red	-	This species is restricted to southern Vancouver Island and the gulf islands, with scattered records in Sunshine Coast and lower mainland areas. Requires grasses, sedges and wildflowers.	<b>Unlikely</b> – Species restricted to coast.
Roosevelt elk <i>Cervus elaphus roosevelti</i>	Blue	-	Roosevelt Elk are restricted in British Columbia (and Canada) to Vancouver Island and portions of the southwestern mainland. A small remnant population of Roosevelt elk occur in the Phillips/Apple River area on the mainland coast.	<b>Unlikely</b> – Range restricted to mainland coast and Vancouver Island.
Northern rubber boa <i>Charina bottae</i>	Yellow	Special Concern	Rubber Boas are most often associated with low elevation mountainsides. Here they can take advantage of warm aspect slopes	<b>Likely</b> – Suitable south-facing low elevation mountainside within range.
Hoffman's Checkerspot <i>Chlosyne hoffmanni</i>	Red	-	In BC, Hoffman's Checkerspot is known only from the Cascade Mountains in Manning Provincial Park, but should occur east to near Keremeos.	<b>Unlikely</b> – Pemberton is not within species' range.



Common Name Scientific name	Status		Habitat Requirements	Potential Occurrence
	BC List	SARA		
Lark sparrow <i>Chondestes grammacus</i>	Blue	-	Breeding range extends from extreme southern British Columbia and eastern Washington. Thrives in grazed habitats, disturbed areas, and ecotones. Agriculture may increase edge habitat.	<b>Unlikely</b> – No agricultural or grassland habitat on site.
Common nighthawk <i>Chordeiles minor</i>	Yellow	Threatened	Mountains and plains in open coniferous forest, savanna, grassland and towns. Nesting occurs on the ground on a bare site in an open area.	<b>Possible</b> - Several observations in Pemberton Valley and suitable forest habitat on site.
Painted turtle <i>Chrysemys picta</i>	-	Endangered/ Special Concern	Ponds, marshes, small lakes, ditches and sluggish streams, usually with muddy bottoms and considerable growth of aquatic plants.	<b>Unlikely</b> – No suitable aquatic habitat on site.
Painted turtle (Rocky Mountain Population) <i>Chrysemys picta</i> pop. 2	Blue	Special Concern	The Rocky Mountain Population is confined to lower elevations and valley bottoms in the southeastern portion of the province, east of the Cascade Mountains and north to Williams Lake.	<b>Unlikely</b> – Outside of range.
Hairy-necked tiger Beetle <i>Cicindela hirticollis</i>	Blue	-	Associated with sand beaches*	<b>Unlikely</b> - No suitable beach habitat.
Evening grosbeak <i>Coccothraustes vespertinus</i>	Yellow	Special Concern	Coniferous (primarily spruce and fir) and mixed coniferous- deciduous woodland, second growth, and occasionally parks; in migration and winter in a variety of forest and woodland habitats, and around human habitation.	<b>Possible</b> – Many observations within Pemberton Valley. Suitable forest habitat.
Yellow-billed cuckoo <i>Coccyzus americanus</i>	Red	-	Associated with open, brushy deciduous woodlands, riparian groves, overgrown orchards, woodlots, parks, and abandoned farmland, coastal alder groves, forest edges, wooded suburbs, and orchards.	<b>Unlikely</b> – Not observed in Pemberton area and little deciduous forest on site.
North American racer <i>Coluber constrictor</i>	Blue	Special Concern	In the NW, North American Racers generally absent from dense forest/high mountains. Racers are restricted to the dry southern interior grasslands of the southern Columbia, Okanagan/Similkameen, Kettle, Thompson, Nicola and the middle Fraser drainages.	<b>Unlikely</b> – No suitable grassland habitat on site.





Common Name Scientific name	Status		Habitat Requirements	Potential Occurrence
	BC List	SARA		
Sharp-tailed snake <i>Contia tenuis</i>	Red	Endangered	In British Columbia, the Sharp-tailed Snake occurs in low-elevation woodland habitats dominated by Douglas-fir, arbutus and/or Garry oak. The snakes are often found in small openings on talus rocky outcrops and on warm hillsides	<b>Possible</b> – Known to occur on the MacKenzie Ridge (Environment and Climate Change Canada. 2017).
Olive-sided flycatcher <i>Contopus cooperi</i>	Blue	Threatened	Mixed coniferous-deciduous forest with old growth snags along forest edges. Known to occur in the Pemberton area.	<b>Possible</b> – Known to occur throughout Pemberton. Suitable forest habitat on site.
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	Blue	-	On the West Coast, Townsend's big-eared bats are found regularly in forested regions and buildings, and in areas with a mosaic of woodland, grassland, and/or shrubland. In BC, it inhabits Vancouver Island, the Gulf Islands and the Vancouver area; and in the interior, it has been found as far north as Williams Lake and east to Creston.	<b>Possible</b> – Suitable foraging habitat only.
Coastrange sculpin Cultus population <i>Cottus aleuticus</i> pop. 1	Red	Threatened	Cultus Pygmy Sculpin is restricted to a single lake in southwestern B.C., which makes it highly vulnerable to any ecological change.	<b>None</b> – No fish habitat on site.
Tundra swan <i>Cygnus columbianus</i>	Blue	-	Winter range is restricted to a few localities in southernmost British Columbia; migrants are widespread. Migrations along coast and Peace River country. Winter habitat along South Thompson River and Shuswap Lake.	<b>Unlikely</b> – Outside of range.
Black swift <i>Cypseloides niger</i>	Blue	Endangered	Nests behind or next to waterfalls and wet cliffs, on sea cliffs and in sea caves. Along BC coast, Vancouver Island, southern BC and interior.	<b>Unlikely</b> – No suitable nest habitat.
Monarch <i>Danaus plexippus</i>	Red	Special Concern	Element occurrence records for the Monarch are mainly from the southern interior regions of BC, although periodic occurrences from the coast are observed, including the lower Fraser Valley and Vancouver Island. In BC, they feed on showy milkweed ( <i>Asclepias speciosa</i> ).	<b>Unlikely</b> - No milkweed habitat on site.



Common Name Scientific name	Status		Habitat Requirements	Potential Occurrence
	BC List	SARA		
Coastal giant salamander <i>Dicamptodon tenebrosus</i>	Blue	Threatened	In BC, this species is found in southwestern B.C., extending from the west side of Vedder Mountain to the slopes east of Chilliwack Lake.	<b>Unlikely</b> – Site is outside of species' range.
Bobolink <i>Dolichonyx oryzivorus</i>	Blue	Threatened	Breeding is locally distributed in the main valley bottoms in the southern and central interior, east to Creston. This species generally selects habitat with moderate to tall vegetation, moderate to dense vegetation, and moderately deep litter, lacking woody vegetation.	<b>Unlikely</b> – No suitable grass or agriculture habitat.
Alkali bluet <i>Enallagma clausum</i>	Blue	-	Lakes / Pond / Open Water / Facultative - frequent use Other Unique Habitats / Alkali Ponds/Salt Flats / Facultative - frequent use.	<b>Unlikely</b> – No suitable aquatic habitat on site.
Silver-spotted skipper <i>Epargyreus clarus californicus</i>	Blue	-	Pretty much any place with lots of the major foodplants which are usually ROBINIA or AMORPHA whether wild or cultivated, native or not. Strays possible in any habitat.	<b>Unlikely</b> – No suitable habitat and outside of coastal and interior ranges.
Silver-spotted skipper subs. <i>Epargyreus clarus californicus clarus</i>	Blue	-	All records are from the southeastern BC including Cranbrook, Genelle, Pend-d'Oreille, Castlegar, Seven Mile Dam, Elko, Brilliant, Trail and Murphy Creek. Associated with black locust trees.	<b>Unlikely</b> – Not known to occur near the subject area.
Horned lark subsp. <i>Eremophila alpestris strigata</i>	Red	Endangered	"Streaked" Horned Larks had a very small range in British Columbia, formerly restricted to se. Vancouver Island and the lower Fraser Valley. Extirpated from Vancouver Island, the current range includes only the lower Fraser Valley where a few birds may persist.	<b>Unlikely</b> – Site is not within species' range.
Propertius duskywing <i>Erynnis propertius</i>	Red	-	Butterfly; Open oak or mixed woodlands with the foodplant oaks.	<b>Unlikely</b> - No oak habitat on site.
Western pondhawk <i>Erythemis collocata</i>	Blue	-	Occurs around ponds and marshy lakes, especially where floating plants occur. Restricted to lower mainland.	<b>Unlikely</b> – No suitable aquatic habitat.



Common Name Scientific name	Status		Habitat Requirements	Potential Occurrence
	BC List	SARA		
Rusty blackbird <i>Euphagus carolinus</i>	Blue	Special Concern	Breeds in habitats that are dominated by coniferous forest with wetlands nearby including bogs, marshes and beaver ponds. During the winter, it is found in wet woodlands, swamps, and pond edges and often forages in agricultural lands.	<b>Unlikely</b> – No suitable aquatic habitat on site.
Dun skipper <i>Euphyes vestris</i>	Blue	Threatened	Not nearly as strongly associated with wetlands as most EUPHYES and also strays a lot, so habitat is hard to characterize. Certainly does use low moist spots in fields, meadows, right of ways, etc. that would not qualify as palustrine. Known to occur in the Pemberton area.	<b>Unlikely</b> – No suitable low elevation, moist habitat on site.
Prairie falcon <i>Falco mexicanus</i>	Red	-	The provincial population was down to one known active nesting site south of Williams Lake. The species has been extirpated from its historic core area of the province, the Okanagan Valley, for almost a decade. Bred in cliff habitats.	<b>Unlikely</b> - Not known to occur in Pemberton area.
Peregrine falcon subsp. <i>Falco peregrinus anatum</i>	-	Special Concern	The Anatum ( <i>F.p. anatum</i> ) Peregrine Falcon occurs in the southern interior, and although taxonomy still is uncertain, it is thought to be the subspecies that inhabits the Fraser River valley and Gulf Islands. Anatum Peregrine Falcons typically nest on rock cliffs above lakes or river valleys where abundant prey is nearby.	<b>Unlikely</b> – No suitable cliff habitat on site.
Peregrine falcon <i>Falco peregrinus</i>	Red	Special Concern	Cliff edges near water, interior rivers and wetlands.	<b>Unlikely</b> – No suitable cliff habitat on site.
Gyrfalcon <i>Falco rusticolus</i>	Blue	-	Usually nests on cliff ledges, ideally beneath sheltering overhang; sometimes nests in trees or on man-made structures.	<b>Unlikely</b> – No cliff habitat on site.
Tufted puffin <i>Fratercula cirrhata</i>	Blue	-	Coastal sea bird.	<b>Unlikely</b> – Site not close to ocean.
Northern fulmar <i>Fulmarus glacialis</i>	Red	-	Coastal sea bird.	<b>Unlikely</b> – Site not close to ocean.



Common Name Scientific name	Status		Habitat Requirements	Potential Occurrence
	BC List	SARA		
Prairie fossaria <i>Galba bulimoides</i>	Blue	-	Physical barriers, particularly for flowing water, is presence of upland habitat between water connections. High waterfalls and anthropogenic barriers to water flow such as dams are barriers as they limit movement in an upstream direction.	<b>Unlikely</b> – No suitable aquatic habitat on site.
Dusky fossaria <i>Galba dalli</i>	Blue	-	Physical barriers, particularly for flowing water, is presence of upland habitat between water connections. High waterfalls and anthropogenic barriers to water flow such as dams are barriers as they limit movement in an upstream direction.	<b>Unlikely</b> – No suitable aquatic habitat on site.
Golden fossaria <i>Galba obrussa</i>	Blue	-	There are only 4 records for this species in the province, from Tudy Lake Provincial Park (north of Prince George) south to Skaha Lake (Okanagan).	<b>Unlikely</b> – Site is not within species' range.
Pygmy fossaria <i>Galba parva</i>	Blue	-	Found in mudflats, lakeshores, riverbanks, streams and marshes. Four known locations across BC.	<b>Unlikely</b> – Not known in Pemberton area and no suitable habitat on site.
Wolverine <i>Gulo gulo</i>	Blue	Special Concern	A range of habitat types from valley bottoms to alpine meadows, strongly associated with the presence of large ungulate prey.	<b>Unlikely</b> - Site close to human activity and development.
Wolverine subsp. <i>Gulo gulo luscus</i>	Blue	Special Concern	A range of habitat types from valley bottoms to alpine meadows, strongly associated with the presence of large ungulate prey.	<b>Unlikely</b> - Site close to human activity and development.
Star gyro <i>Gyraulus crista</i>	Blue	-	Habitat is freshwater.	<b>Unlikely</b> – No suitable habitat on site.
Northern abalone <i>Haliotis kamtschatkana</i>	Red	Endangered	Confined to coastal strip of marine areas.	<b>Unlikely</b> – Site is not near coast.
Pale jumping-slug <i>Hemphillia camelus</i>	Blue	-	In dry to moist coniferous forests, on and around mossy stumps, rocks and logs; also in leaf litter in Southeastern BC.	<b>Unlikely</b> – Site is outside of known range.



Common Name Scientific name	Status		Habitat Requirements	Potential Occurrence
	BC List	SARA		
Western branded skipper subsp. <i>Hesperia Colorado oregonia</i>	Red	Endangered	There are few occurrences within a limited range on Vancouver Island in Garry oak and coastal sand ecosystems.	<b>Unlikely</b> – Species' restricted to the island.
Nevada skipper <i>Hesperia nevada</i>	Blue	-	The Nevada Skipper is found in the Similkameen and Okanagan valleys of the Southern Interior. It is associated with very xeric ridgetops where the larval foodplant is found.	<b>Unlikely</b> – Site is not within range.
Barn swallow <i>Hirundo rustica</i>	Blue	Threatened	Open areas, fields, ponds with vertical nesting habitat, especially buildings. Known to occur throughout the Pemberton area.	<b>Unlikely</b> – No suitable habitat on site.
Brassy minnow – Pacific group <i>Hybognathus hankinsoni</i> – Pacific group	Blue	-	The brassy minnow is found has been found in Delta, Westham Island, Deer and Burnaby Lakes and Brunette River, and to a more limited extent, in the Sumas River and sloughs of Richmond.	<b>None</b> – No fish habitat on site.
Caspian tern <i>Hydroprogne caspia</i>	Blue	-	Seacoasts, bays, estuaries, lakes, marshes, and rivers.	<b>Unlikely</b> – No suitable habitat.
Yellow-breasted chat <i>Icteria virens</i>	Red	Endangered	The Yellow-breasted Chat breeds in the extreme southern portions of the province in the Okanagan and Similkameen valleys.	<b>Unlikely</b> – Not within species' range.
California gull <i>Larus californicus</i>	Blue	-	Seacoasts, bays, estuaries, mudflats, marshes, irrigated fields, lakes, ponds, dumps, cities, and agricultural lands.	<b>Unlikely</b> - No suitable habitat on site.
Snowshoe hare subsp. <i>Lepus americanus washingtonii</i>	Red	-	The <i>washingtonii</i> subspecies hare population occurs at Burnaby Lake Regional Park.	<b>Unlikely</b> – Site is not within range.
White-tailed jackrabbit <i>Lepus townsendii</i>	Red	-	Primarily Great Basin and northern Great Plains, from Sierra Nevada east to Mississippi River, and from south-central Canada (south-central British Columbia).	<b>Unlikely</b> – Site not within range.



Common Name Scientific name	Status		Habitat Requirements	Potential Occurrence
	BC List	SARA		
Viceroy <i>Limenitis archippus</i>	Red	-	Viceroy's formerly occurred across the Southern Interior of BC, with the northernmost record being from Lillooet. Found in moist open or shrubby areas such as lake and swamp edges.	<b>Unlikely</b> – No suitable habitat on site.
Short-billed dowitcher <i>Limnodromus griseus</i>	Blue	-	Mudflats, estuaries, shallow marshes, pools, ponds, flooded fields and sandy beaches. Prefers shallow salt water with soft muddy bottom, but visits various wetlands during migration.	<b>Unlikely</b> - No suitable aquatic habitat.
Hudsonian godwit <i>Limosa haemastica</i>	Red	Threatened	Nests on grassy tundra, near water. Bogs and marshes. Near coast or river. Nests on the ground in a sparsely lined depression, in or under edge of prostrate dwarf birch or on dry top of hummock in sedge marsh	<b>Unlikely</b> - No suitable aquatic habitat.
Western river cruiser <i>Macromia magnifica</i>	Blue	-	Montane. Fraser Valley and southern interior valleys south of 51°N; not recorded in the Columbia or Kootenay river valleys.	<b>Unlikely</b> – Does not occur in BC Coast Mountains.
Western screech-owl <i>Megascops kennicottii</i>	-	Threatened	Widespread distribution along most of the coast, much rarer in the southern interior. Population threatened in the long-term by large-scale forest harvesting at low elevations.	<b>Possible</b> – Known to occur near site. Suitable forest habitat on site.
Western screech-owl (subsp.) <i>Megascops kennicottii kennicotti</i>	Blue	Threatened	Likely restricted to mature lowland coniferous and mixed forests below 600 m elevation.	<b>Possible</b> – Known to occur near site. Suitable forest habitat on site.
Lewis's woodpecker <i>Melanerpes lewis</i>	Blue	Threatened	Breeds primarily in open forested areas at low elevations where an abundance of large snags provides suitable nesting sites and an open, grassy understory supports high populations of flying insects. Found east of coast mountains.	<b>Unlikely</b> – Not known within Coast Mountains.



Common Name Scientific name	Status		Habitat Requirements	Potential Occurrence
	BC List	SARA		
Black scoter <i>Melanitta americana</i>	Blue	-	Along coast from southern Vancouver Island and sw mainland coast, north to Queen Charlotte Islands, Prince Rupert, and Chatham sound region. Few records in interior: southern interior ecoprovince, 108 Mile House, Moose Lake (Mt. Robson), Spatsizi River, Fern Lake (Kwadacha Wilderness Park), Beatton Park.	<b>Unlikely</b> – Not known to occur in Pemberton area.
Surf scoter <i>Melanitta perspicillata</i>	Blue	-	Primarily marine littoral areas, less frequently in bays or on freshwater lakes and rivers	<b>Unlikely</b> - No suitable aquatic habitat.
Long-tailed weasel subsp. <i>Mustela frenata altifrontalis</i>	Red	-	Found in a wide variety of habitats, usually near water. Favored habitats include brushland and open woodlands, field edges, riparian grasslands, swamps, and marshes.	<b>Unlikely</b> – Unknown range throughout BC, limited water on site.
Southern red-backed vole subsp. <i>Myodes gapperi occidentalis</i>	Red	-	Prefers cool, mesic deciduous, coniferous, or mixed forests, especially areas with large amount of ground cover. Most of forested Canada (northern British Columbia to Labrador) south through the Rocky Mountains to central New Mexico.	<b>Unlikely</b> – Not known within coastal mountains.
Little brown myotis <i>Myotis lucifugus</i>	Yellow	Endangered	These bats use a wide range of habitats and often use human-made structures for resting and maternity sites; they also use caves and hollow trees. Foraging habitat requirements are generalized. Widespread across BC.	<b>Possible</b> – Suitable roosting habitat in coniferous forest.
Long-billed curlew <i>Numenius americanus</i>	Blue	Special Concern	Prairies and grassy meadows, generally near water	<b>Unlikely</b> – No suitable grass habitat on site.
Black-crowned Night-heron <i>Nycticorax nycticorax</i>	Red	-	Marshes, swamps, wooded streams, mangroves, shores of lakes, ponds, lagoons; salt water, brackish, and freshwater situations. Roosts by day in mangroves or swampy woodland.	<b>Unlikely</b> – No suitable habitat on site.
Grappletail <i>Octogomphus specularis</i>	Red	-	Habitat is riparian shrub and forest, wooded streams and draining lakes. In BC known to occur in lower mainland and lower Fraser River.	<b>Unlikely</b> – No suitable habitat and outside of range.



Common Name Scientific name	Status		Habitat Requirements	Potential Occurrence
	BC List	SARA		
Jutta arctic subsp. <i>Oeneis jutta chermocki</i>	Blue	-	Jutta Arctic occur across northern BC and in scattered locations through the Rockies and the Cariboo.	<b>Unlikely</b> – Site not within species range.
Audouin's night-stalking tiger beetle	Red	Threatened	Occurs near coast in lower mainland and southern Vancouver Island.	<b>Unlikely</b> – Site is not within range.
Cutthroat trout subsp. <i>Oncorhynchus clarkii clarkii</i>	Blue	-	Sea-run populations, freshwater-resident populations (lacustrine and fluvial) and headwater stream populations.	<b>None</b> – No fish habitat on site.
Sinuuous snaketail <i>Ophiogomphus occidentis</i>	Blue	-	Fly along clear streams and sandy lakeshores; uncommon in settled areas, at least partly because the burrowing larvae are sensitive to changes in water flow and siltation.	<b>Unlikely</b> – No suitable aquatic habitat on site.
Mountain goat <i>Oreamnos americanus</i>	Blue	-	Alpine and subalpine habitat; steep grassy talus slopes, grassy ledges of cliffs, or alpine meadows. Usually at timberline or above. In winter can move to lower elevations where snow is not as deep and more food is available.	<b>Unlikely</b> – Site is low elevation.
Sage thrasher <i>Oreoscoptes montanus</i>	Red	Endangered	Sagebrush plains, primarily in arid or semi-arid situations, rarely around towns. In BC only found in southern Okanagan.	<b>Unlikely</b> – No suitable habitat.
Olympia oyster <i>Ostrea lurida</i>	Blue	Special Concern	Ocean, intertidal marine habitat.	<b>Unlikely</b> – No suitable habitat.
Bighorn sheep <i>Ovis canadensis</i>	Blue	-	There is a natural absence of Bighorn Sheep from heavily forested and high snowfall ranges such as the Coast, Purcell and Selkirk mountains. Habitats include open grasslands, alpine, subalpine, shrub-steppe, rock outcrops, cliffs, meadows, moist draws, stream sides, talus slopes, plateaus, deciduous forest, clearcut or burned forest, and conifer forest, all on moderately steep to steep slopes.	<b>Unlikely</b> – Not found in area due to snow.
Blue dasher <i>Phachydiplax longipennis</i>	Blue	-	Southern. In B.C., only in the lowlands of the south coast and at the north end of Osoyoos Lake in the southern interior.	<b>Unlikely</b> – Subject area not within range.





Common Name Scientific name	Status		Habitat Requirements	Potential Occurrence
	BC List	SARA		
Indra swallowtail <i>Papilio indra</i>	Red	-	Indra Swallowtails are known in BC only from the subalpine areas of Gibson Pass and Allison Pass in Manning Provincial Park.	<b>Unlikely</b> – Subject area not within range.
Clodius Parnassian subsp. <i>Parnassius clodius claudianus</i>	Blue	-	Populations on the coast occur in moist riparian habitats along low-elevation streams. Wet subalpine meadows and subalpine riparian habitats are used at higher elevations. Found in low elevation streams, moist riparian habitat or subalpine meadows.	<b>Unlikely</b> – Site is not coastal.
Clodius Parnassian subsp. <i>Parnassius clodius pseudogallatinus</i>	Blue	-	Clodius Apollos occur from Vancouver Island across the southern Coast Range and northern Cascades to the southern Okanagan Valley, with a few populations in subalpine habitats of the southern Selkirk Mountains.	<b>Unlikely</b> – No suitable aquatic or riparian habitat on site.
Band-tailed pigeon <i>Patagioenas fasciata</i>	Blue	Special Concern	Coniferous and mixed deciduous lowland forests. Known to occur throughout the Pemberton area.	<b>Possible</b> – Known throughout Pemberton Valley.
American white pelican <i>Pelecanus erythrorhynchos</i>	Red	-	Habitat includes rivers, lakes, reservoirs, estuaries, bays, and open marshes, sometimes inshore marine habitats	<b>Unlikely</b> – No suitable aquatic habitat.
Double-crested cormorant <i>Phalacrocorax auritus</i>	Blue	-	Lakes, ponds, rivers, lagoons, swamps, coastal bays, marine islands, and seacoasts; usually within sight of land. Nests on the ground or in trees in freshwater situations, and on coastal cliffs.	<b>Unlikely</b> – No suitable habitat.
Red-necked phalarope <i>Phalaropus lobatus</i>	Blue	-	Primarily pelagic, sometimes occurring in migration on ponds, lakes, open marshes, estuaries, and bays.	<b>Unlikely</b> – no suitable habitat.
Common sootywing <i>Pholisora catullus</i>	Blue	-	In BC the Common Sootywing is known only from Lillooet, the lower Thompson River, the Okanagan, and Grand Forks, always in very xeric areas.	<b>Unlikely</b> – No suitable habitat on site.
Rocky mountain physa <i>Physella propinqua</i>	Blue	-	This species is found in permanent, cool water habitats, most often in lakes. Pools in medium rivers or shallow water of lakes (Clarke 1981, Frest and Johannes 2000).	<b>Unlikely</b> – no suitable aquatic habitat on site.



Common Name Scientific name	Status		Habitat Requirements	Potential Occurrence
	BC List	SARA		
Sunset physa <i>Physella virginea</i>	Blue	-	The type locality of this species is Mountain Lake (Taylor 2003), but otherwise the habitat needs of this species are unknown.	<b>Unlikely</b> – no suitable aquatic habitat on site.
River peaclam <i>Pisidium fallax</i>	Blue	-	Freshwater. Shallow water.	<b>Unlikely</b> – no suitable aquatic habitat on site.
Gopher snake <i>Pituophis catenifer</i>	-	Extirpated / Threatened	Occurs within the arid interior of the province including the Okanagan, Similkameen, Kettle, Granby, Nicola, Thompson, and Fraser watersheds.	<b>Unlikely</b> – Site not within species' range.
Gopher snake subsp. <i>Pituophis catenifer deserticola</i>	Blue	Threatened	Occurs within the arid interior of the province including the Okanagan, Similkameen, Kettle, Granby, Nicola, Thompson, and Fraser watersheds.	<b>Unlikely</b> – Site not within species' range.
Meadow rams-horn <i>Planorbula campestris</i>	Blue	-	Habitat is vernal ponds, swamps and spring-time flooded portions of permanent water bodies.	<b>Unlikely</b> – no suitable aquatic habitat on site.
American golden-plover <i>Pluvialis dominica</i>	Blue	-	Short grasslands, pastures, golf courses, mudflats, sandy beaches, and flooded fields	<b>Unlikely</b> – No suitable habitat.
Eared grebe <i>Podiceps nigricollis</i>	Blue	-	Marshes, ponds and lakes; in migration and winter also salt lakes, bays, estuaries and seacoasts	<b>Unlikely</b> – No suitable habitat.
Sonora skipper <i>Polites sonora</i>	Blue	Special Concern	The Sonora Skipper reaches its extreme northern limit in the Hope Mountains, the only part of the Cascade/Sierra Mountains to extend into BC. It is found on dry grassy slopes along the Similkameen River drainage, especially near Keremeos.	<b>Unlikely</b> – Site not within species' range.
Northern tightcoil <i>Pristiloma arcticum</i>	Blue	-	Known in BC from the Skeena and Cascade Mountains. Subalpine forests, meadows, seeps and bogs in its range.	<b>Unlikely</b> – Site not within species' range.
Purple martin <i>Progne subis</i>	Blue	-	Found from Port Neville and Shoal Bay, south to the tip of Vancouver Island (Pedder Bay area), on the west coast of the island in Barkley Sound and east to Squamish, Brae Island and Colony Farm, Pitt River.	<b>Unlikely</b> – Site not within species' range.



Common Name Scientific name	Status		Habitat Requirements	Potential Occurrence
	BC List	SARA		
Cassin's auklet <i>Ptychoramphus aleuticus</i>	Red	Special Concern	Found along coast and islands.	<b>Unlikely</b> – Site not within species' range.
Northern red-legged frog <i>Rana aurora</i>	Blue	Special Concern	The range of the Northern Red-legged Frog extends from southwestern British Columbia, south along the Pacific coast, west of the Cascade Mountains, to northwestern California..	<b>Unlikely</b> – Site is not coastal.
Oregon spotted frog <i>Rana pretiosa</i>	Red	Endangered	Oregon Spotted Frog is found in extreme southwestern British Columbia, within the Fraser River Basin.	<b>Unlikely</b> – Site not within species' range.
American avocet <i>Recurvirostra americana</i>	Blue	-	Lowland marshes, mudflats, ponds, alkaline lakes, and estuaries.	<b>Unlikely</b> – No suitable habitat.
Nooksack dace <i>Rhinichthys cataractae</i> – <i>Chehalis lineage</i>	Red	Endangered	Limited to three adjacent streams (Bertrand, Pepin and Fishtrap creeks) all tributaries of the Nooksack River in Washington State.	<b>None</b> – No fish habitat on site.
Bull trout <i>Salvelinus confluentus</i>	Blue	-	The bottom of deep pools in cold rivers and large tributary streams, often in moderate to fast currents with temperatures of 45-50 F; also large coldwater lakes and reservoirs.	<b>None</b> – No fish habitat on site.
Bull trout <i>Salvelinus confluentus pop. 28</i>	Blue	Special Concern	The Southcoast British Columbia populations inhabit the Skagit, Squamish, Ryan, Lillooet, Pitt and Lower Fraser Rivers, the Pitt, Birkenhead, Chilliwack, and Chehalis Lakes, and Phelix and Ure Creeks (COSEWIC 2012).	<b>None</b> – No fish habitat on site.
California hairstreak <i>Satyrium californica</i>	Blue	-	It is known from Lillooet to Grand Forks. At least in the southern Okanogan Valley, it is found at willows surrounding water reservoirs and natural lakes and along meandering streams.	<b>Unlikely</b> – Site not within species' range.
Half-moon hairstreak <i>Satyrium semiluna</i>	Red	Endangered	In BC only known habitat in the Okanogan.	<b>Unlikely</b> – Site not within species' range.
Townsend's mole <i>Scapanus townsendii</i>	Red	Endangered	Restricted to a very small area of land in the central Fraser Valley (Abbotsford and Juntingdon).	<b>Unlikely</b> – Site not within species' range.



Common Name Scientific name	Status		Habitat Requirements	Potential Occurrence
	BC List	SARA		
Black-throated green warbler <i>Setophaga virens</i>	Blue	-	The northeastern corner of British Columbia is the western extent of this species' breeding range. The majority of records are from the Peace Lowland of the Boreal Plains.	<b>Unlikely</b> – Site not within species' range.
Pacific water shrew <i>Sorex bendirii</i>	Red	Endangered	Inhabits the coastal lowlands of northern California, Oregon, Washington and British Columbia, where it is restricted to the lower Fraser River valley.	<b>Unlikely</b> – Site not within Fraser River valley.
Olympic shrew <i>Sorex rohweri</i>	Red	-	Restricted to southwestern British Columbia in the Fraser Lowland and Northwestern Cascade Ranges Ecoregions.	<b>Unlikely</b> – Site not within species' range.
Trowbridge's shrew <i>Sorex trowbridgii</i>	Blue	-	Restricted to the Lower Mainland and Fraser River corridor north to about Boston Bar.	<b>Unlikely</b> – Site not within species' range.
Zerene fritillary subsp. <i>Speyeria zerene bremnerii</i>	Red	-	The species is known from the leeward side of Vancouver Island, with the majority of element occurrences in the south. The species is associated with mesic meadows in Douglas-fir habitat.	<b>Unlikely</b> – Site not within species' range.
Herrington fingernailclam <i>Sphaerium occidentale</i>	Blue	-	Vernal pools and ditches, among grass and leaves.	<b>Unlikely</b> - No pooled habitat.
Rocky mountain fingernailclam <i>Sphaerium patella</i>	Blue	-	Distribution along Columbia River drainage area. It seems to occur primarily on the flanks of the Cascades, but especially on the Oregonian side and only rarely near the Canadian border.	<b>Unlikely</b> – No suitable aquatic habitat.
Striated fingernailclam <i>Sphaerium striatinum</i>	Blue	-	Thrives in both lotic and lentic environments and on mud, sand, gravel and rock substrates and is most abundant at water depths of less than 2 m (Mackie 2007).	<b>Unlikely</b> – No suitable aquatic habitat.
Williamson's sapsucker <i>Sphyrapicus thyroideus</i>	Blue	Endangered	In BC, <i>thyroideus</i> breeds from Manning Provincial Park near the U.S.A. border, north to the Lytton, Cache Creek and Kamloops areas, through the Okanagan Highlands and east as far as Greenwood.	<b>Unlikely</b> – Does not occur in coast mountains.



Common Name Scientific name	Status		Habitat Requirements	Potential Occurrence
	BC List	SARA		
Williamson's sapsucker (subsp.) <i>Sphyrapicus thyroideus thyroideus</i>	-	Endangered	Occurs north of the U.S. border with the western limit of its range in Manning Park, and Botanie Creek (about 15 km north of Lytton); the northern limits of its range 35 km north of Cache Creek, and 50 km north of Kamloops; and the western limits of its range 10 km west of Grand Forks.	<b>Unlikely</b> – Does not occur in coast mountains.
Pygmy longfin smelt <i>Spiirinchus</i> sp. 1	Red	-	Restricted to two lakes in the lower mainland, Pitt Lake and Harrison Lake.	<b>Unlikely</b> – No suitable aquatic habitat and not within range.
Widelip pondsnaill <i>Stagnicola traski</i>	Blue	-	This species is found in relatively broad habitat types in south eastern BC.	<b>Unlikely</b> - No suitable aquatic habitat on site.
Forster's tern <i>Sterna forsteri</i>	Red	-	Freshwater and salt marshes, in migration and winter also seacoasts, bays, estuaries, rivers and lakes.	<b>Unlikely</b> - No suitable aquatic habitat.
Spotted owl <i>Strix occidentalis</i>	Red	Endangered	Dense forest and deep wooded canyons; generally in mature stands or old growth. Nests on broken tree top, cliff ledge, in natural tree cavity, or in tree on stick platform, often the abandoned nest of hawk or mammal; sometimes in cave.	<b>Unlikely</b> - Likely to be extirpated in BC (Brett, 2016)
Autumn meadowhawk <i>Sempetrum vicinum</i>	Blue	-	In ponds, slow streams and lakes with dense, emergent vegetation.	<b>Unlikely</b> – No suitable aquatic habitat on site.
Northern bog lemming subsp. <i>Synaptomys borealis artemisiae</i>	Blue	-	Habitat consists primarily of fens and bogs, may also occur in wet meadows, moist mixed and coniferous forests; alpine sedge meadows, krummholz spruce-fir forest with dense herbaceous and mossy understory, mossy streambanks.	<b>Unlikely</b> – No suitable aquatic habitat on site.
Ancient murrelet <i>Synthliboramphus antiquus</i>	Blue	Special Concern	Nineteen colonies are legally protected: 16 colonies are within Gwaii Haanas National Park Reserve, two (Reef and Limestone islands) are Provincial Wildlife Management Areas and one (Hippa Island) is an Ecological Reserve.	<b>Unlikely</b> – Site not within sea shore range.



Common Name Scientific name	Status		Habitat Requirements	Potential Occurrence
	BC List	SARA		
Black petaltail <i>Tanypteryx hageni</i>	Blue	-	Found in seepage areas and bogs, flat or on hillsides, often associated with streams and usually not under forest canopy in wet mountain ranges.	<b>Unlikely</b> - No suitable habitat.
American badger <i>Taxidea taxus</i>	Red	Endangered	Badgers are most commonly found in the Cariboo, Thompson, Okanagan, and East Kootenay regions of BC.	<b>Unlikely</b> – Not known in Coast Mountains.
Eulachon <i>Thaleichthys pacificus</i>	Blue	Endangered/ Threatened	Pacific Coast (E), Fraser River (E) and Nass/Skeena River (T) populations.	<b>None</b> – No fish habitat on site.
Wandering tattler <i>Tringa incana</i>	Blue	-	Breeding range is small, limited to the St. Elias Mountains in extreme northwestern British Columbia, but likely extends south to at least Gnat Pass near Dease Lake.	<b>Unlikely</b> – Not within range.
Barn Owl <i>Tyto alba</i>	Red	Threatened	Fields of dense grass. Open and partly open country (grassland, marsh, lightly grazed pasture, hayfields) in a wide variety of situations, often around human habitation.	<b>Unlikely</b> - No dense grass on site.
Common murre <i>Uria aalge</i>	Red	-	Pelagic and along rocky seacoasts.	<b>Unlikely</b> – Site is not coastal.
Grizzly bear <i>Ursus arctos</i>	Blue	Special Concern	Non-forested or partially forested sites with a wide range of foraging opportunities and choice of habitats.	<b>Possible</b> – Known habitat in Pemberton area. Forest habitat on site may be used as corridor between high and low elevation habitat.

All references from CDC explorer (BC CDC, 2021) and E-Fauna BC (UBC, 2020)

## 2.5. Valued Ecosystem Components

### 2.5.1. Wildlife Trees

Due to the presence of mature forest on the subject property, wildlife trees are likely to present. The presence of wildlife trees will be confirmed during the spring field investigation. Wildlife trees include significant standing snags, veteran trees, and trees with broken tops, holes or cavities. These trees are important for various reasons such as perching, foraging, and nesting sites for birds and mammals.



### 2.5.2. Coarse Woody Debris

Coarse Woody Debris (CWD) on the forest floor is an indicator of potential species richness in forested areas. Microhabitats, decay, and nutrient cycling provide a range of life-cycle opportunities for smaller ground-dwelling wildlife (e.g. squirrels, shrews, and voles) and vegetation. CWD was observed during the preliminary site visit in Polygon 6 (Photo 1). The presence of CWD in the other polygons will be determined during the spring field investigation.



Photo 1: View of the CWD in Polygon 6. December 11, 2020.

### 2.5.3. Wildlife Movement Corridor

Wildlife tend to use routes with particular features when moving across the landscape to forage for food, disperse, find mates, or locate breeding sites. These features can include such things as cover, shade, vegetation, water or surface characteristics.

Scale is also a significant factor in determining the suitability of a landscape; larger animals with home ranges covering hundreds of kilometres (e.g. grizzly bear) have far different movement corridor requirements than some reptiles (e.g. sharp-tailed snake or rubber boa), whose corridor requirements are measured in metres. The subject site is likely to be used by various wildlife species as corridor to move across the landscape.

### 2.5.4. Rock slope

Rock slopes were observed in Polygons 6,7 and 9. Based on the satellite imagery, all polygons are likely to contain rock slopes. Rock slopes provide specialized habitat for many species. Reptiles are likely to utilize the dry rocky habitat found throughout the study area. Snags within these exposed sites are ideal perch sites for raptors and potential roosting sites for some species of bat.



## **2.6. Aquatic Environment**

No aquatic habitat was observed on the subject site during the preliminary site visit. In addition, no watercourse were identified on the provincial layer (BC Gov, 2021). The absence of watercourses will be confirmed during the field investigation.

## **2.7. Socio-Economic Conditions**

### **2.7.1. Cultural and Heritage Resources**

The subject site is within the traditional territories of the St'át'imc Nation, as mapped within the St'át'imc Land Use Plan. Their territory extends north to Churn Creek and south to French Bar, north and east toward Hat Creek Valley; west to the headwaters of Lillooet River, Ryan River and Black Tusk. They have historical ties to the land that includes utilization of the natural resources of the Pemberton area (St'át'imc First Nation, 2004).

An archeological impact assessment was conducted by the Land and Resources Department and Arrostone Archeological Research and Consulting Ltd. (2010). The archeological site EbRq-15 was identified within the proposed park area of the subject property.

### **2.7.2. Other Undertakings in the Area**

#### **Mining**

No current coal, mineral and placer claims exist on the subject property (BC Gov, 2021). Several historic claims overlap with the property for the Site History IDs: 49850, 49851 and the Tenure History ID: 64996 (BC Gov, 2021).

#### **Recreation and Tourism**

Two mountain bike trails exist through the property (Cream Puff and Econoline Trail) (Photo 2). No other recreation or tourism activities were observed or found on the subject site (BC Gov, 2021).





Photo 2: View of the bike trail called “ Cream puff”. December 11,2020.

### **Forestry Management**

The site is within the following current Forest Development Units (FDU): Birkenhead and Railroad 752. These FDU have the following plans: Pebble Creek/Lil'wat Forestry Ventures Forest Stewardship Plan (Licenses A71487, A82250, A83925) which started December 16, 2020 and ended January 25, 2021. BCTS Squamish Forest Stewardship Plan and the BCTS DSQ Sea to Sky Natural Resource District FSP for the client TIMBER SALES MANAGER CHINOOK are on the property. The amendment of these plans were approved on May 7, 2018 and the plans end April 25, 2023. The SQMILLS HAL PCT WFP overlaps the property and has the FDU Name Railroad 752. This plan started December 2020 and ends March 21, 2024 (BC Gov, 2021).

### **Ground Water**

No groundwater, wells or aquifers have been recorded on the property (BC Gov, 2021).

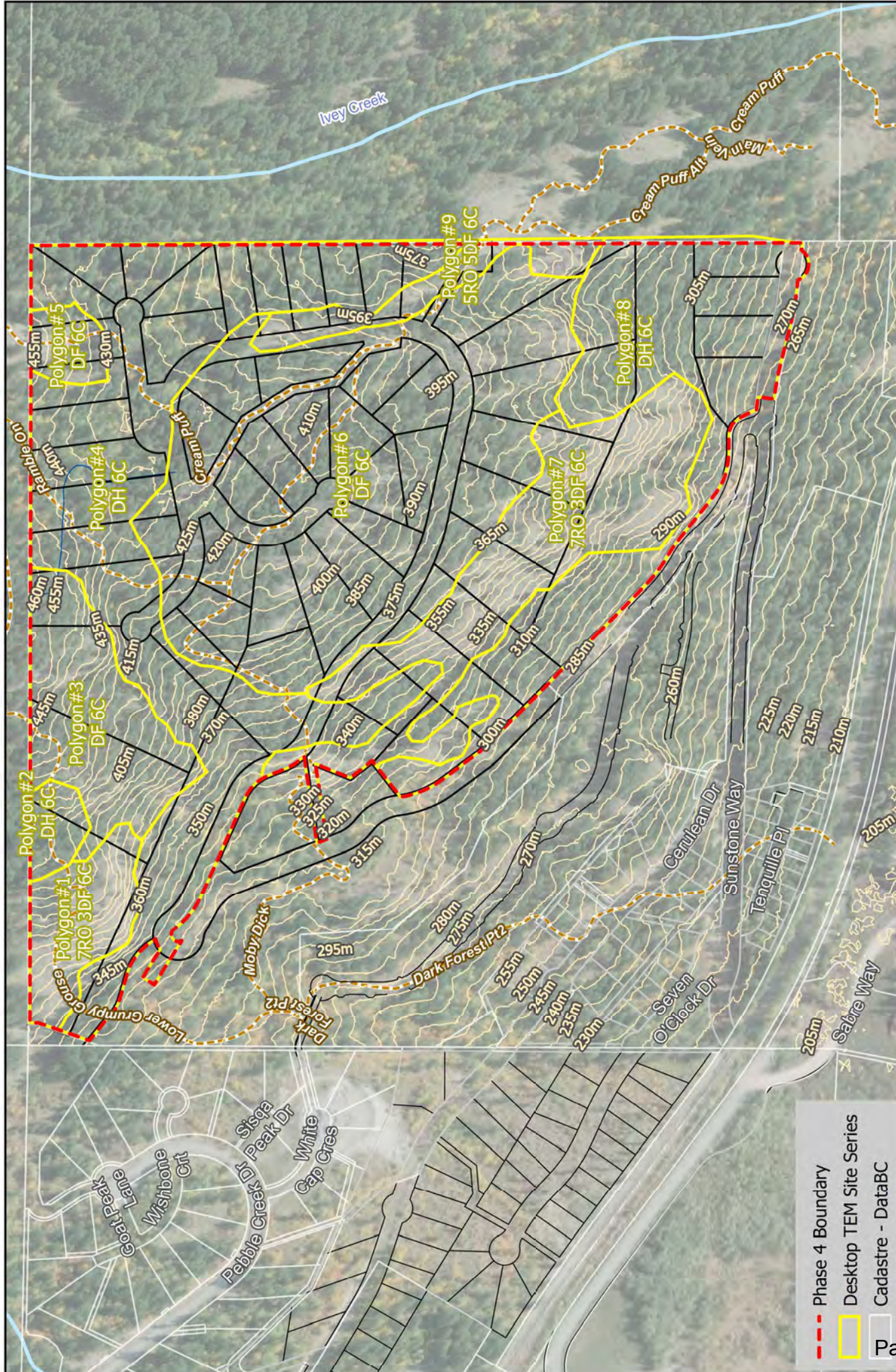
### **Anthropogenic Features**

No antropogneic feature, other than the biking trails mentioned aboved, were observed during the preliminary site visit.

### **Adjacent Land Use**

The subject site is located north of Highway 99 in Pemerton, BC with access via Pemberton Farm Rd E. The property is bounded by:

- Crown Provincial land along the north and east borders;
- Private lots and private subdivision land along the south and west borders.
- BC Rail tracks and right of way lie approximately 100 m south of the southern property boundary.



**Map 2 - Environmental Opportunities and Constraints**  
 Sunstone Ridge Development Ltd Phase 4,  
 Initial Environmental Review  
 Pemberton, BC, Canada



- - - Phase 4 Boundary
- Desktop TEM Site Series
- Cadastre - DataBC





### **3. Environmental Constraints**

#### **3.1. Physical Environment**

##### **3.1.1. Climate**

The climate in the study area has high levels of precipitation. The Stormwater Management Plan should include snow removal, snow storage and storm event recommendations. Climate change should not affect this property or its development.

##### **3.1.2. Geology**

A geotechnical report should be conducted by a qualified professional if development occurs near steep rock slopes.

##### **3.1.3. Geomorphology**

The geomorphology is limited to colluvial activity on the subject site and poses no obvious constraints to rezoning or development.

##### **3.1.4. Hydrology**

Hydrology of the site is very limited to subsurface sheet flow on bedrock and does not pose a constraint to rezoning or development of the site.

A stormwater plan should be developed for the subject site to encourage retention of stormwater within site design. The plan should also make recommendations for potential flood control within the property (BC MOE 2014).

#### **3.2. Terrestrial Environment**

##### **3.2.1. Soils**

An assessment of geological conditions of the site is outside the scope of this IER; soils on the subject site are limited and should be addressed under a separate geotechnical report, if required.

##### **3.2.2. Vegetation**

The vegetation on the subject property does not present any constraints or concerns for rezoning or development. Most of the property contains mature coniferous forest which has ecological value, and vegetation removal should be limited to the minimum necessary for development. Large lot configuration and low density should minimize impact.



## Rare and Endangered Plant Species

There are four plant species of concern that are known to occur within the geographical region of the property's forest district and biogeoclimatic zone. However, none of these four species are likely to occur on the subject site.

## Rare and Endangered Ecological Communities

The subject lot contains one blue listed ecological community of concern. However, with regards to ecological communities, large tracts of undisturbed plant communities are considered ecologically more important than disturbed / fragmented second growth communities. Therefore, the ecological community on the subject site does not pose a constraint to rezoning or development.

### 3.3. Wildlife and Wildlife Habitat

#### 3.3.1. Birds and Nests

All trees on the subject property provide potential nesting sites for a range of bird species. The BC *Wildlife Act* states:

*A person commits an offence if the person, except as provided by regulation, possesses, takes, injures, molests or destroys*

- (a) *A bird or its egg,*
- (b) *The nest of an eagle, peregrine falcon, gyrfalcon, osprey, heron or burrowing owl or,*
- (c) *The nest of a bird not referred to in paragraph (b) when the nest is occupied by a bird or its egg.*

Development on the subject property may be constrained by the *Wildlife Act* if tree removal occurs during the nesting bird season of April 1 to September 1, or if any raptor nests are found on the site. Should tree removal occur within the nesting bird season, a songbird nesting survey should be conducted by a Qualified Environmental Professional in the proposed clearing area to avoid contravention of the *Wildlife Act*.

#### 3.3.2. Rare and Endangered Wildlife Species

There are 163 at-risk wildlife species with the potential to occur within the geographic region and biogeoclimatic zone of the subject site. However only one of these species has been confirmed on site and nine other species have the potential to occur on the property:

- Sharp-tailed snake (red, 1-E).
- Northern rubber boa (yellow, 1-SC)
- Common nighthawk (yellow, 1-T)
- Olive-sided flycatcher (blue, 1-T)
- Evening grosbeak (yellow, 1-SC)
- Townsend's big-eared bat (blue)



- Western screech-owl subsp. (blue, 1-T)
- Little brown myotis (yellow, 1-E)
- Band-tailed pigeon (blue, 1-SC)
- Grizzly bear (blue, 1-SC).

A species that is listed as Endangered, Extirpated or Threatened within Schedule 1 of *Species At Risk Act* (SARA) is legally protected under the Act by certain prohibitions. A species that is listed within Schedule 1 of SARA with the classification of Special Concern will not receive protection under the SARA general prohibitions.

SARA contains prohibitions that make it an offence to:

- kill, harm, harass, capture, or take an individual of a species listed in Schedule 1 of SARA as endangered, threatened or extirpated;
- possess, collect, buy, sell or trade an individual of a species listed in Schedule 1 of SARA as endangered, threatened or extirpated;
- damage or destroy the residence (e.g. nest or den) of one or more individuals of a species listed in Schedule 1 of SARA as endangered, threatened or extirpated, if a recovery strategy has recommended the reintroduction of that extirpated species.

### **Sharp-tailed snake**

The sharp-tailed snake is small, slender, harmless snake endemic to western North America, with adult size reaching about 20 – 45 cm in total length. Body scales are smooth and unkeeled, and there is a thorn-like scale at the tip of the tail. The back and sides are red-brown, greyish toward the lower flanks, and the underside is banded with black and white bars. There is also often indistinct longitudinal striping. (COSEWIC, 2009, and Environment and Climate Change Canada, 2017).

The species' geographical range extends from southwestern British Columbia to central California. In BC, populations occur at scattered localities from the southern tip of Vancouver Island and on four Gulf Islands. The only known mainland site is in Pemberton (Environment and Climate Change Canada, 2017).

Habitat for sharp-tailed snake consists of woodlands and forest openings with an abundance of talus, coarse woody debris and rock fissures for shelter. In Pemberton, the snake occurs on the south-facing slopes of Mackenzie Ridge adjacent to the property. In addition to warm areas for thermoregulation, denning and egg-laying, the species requires forest and moist areas for foraging, but this aspect of the habitat requirement of the species is poorly understood (Environment and Climate Change Canada, 2017).

The sharp-tailed snake may be a constraint to development as the individuals of the species and their dens are protected. An extensive sharp-tailed snake survey will be conducted in the spring of 2021. The survey will identify the location of critical habitat and attempt to locate any potential denning sites. Additional mitigation measures will be provided as part of that report.



### **Northern rubber boa**

The rubber boa is a short but stocky snake, measuring up to 75 cm in length. In Pemberton it is chocolate-brown to greenish-brown on top and yellowish underneath; it has no blotches or stripes, but may have dark flecks along the sides of the belly. Its small and smooth scales give the species its rubbery aspect, which combined with a wrinkled appearance make it easily identifiable. This boa has a short, blunt tail resembling a second head, which it uses in self-defense (COSEWIC, 2003).

Its geographical range extends from central British Columbia (near Quesnel) south to California, and eastward as far as Montana, Wyoming and northwestern Colorado. In Canada, populations of rubber boa are patchily distributed within major river basins in the southern third of British Columbia (COSEWIC, 2003). It is relatively common in the Pemberton area at least as far west as Keyhole Falls on the Upper Lillooet.

The species is found in a wide variety of habitats including riparian, grassland, open-canopy montane forest and, occasionally, vacant lots or other places with plenty of its preferred food—small rodents. Rocky outcrops and an abundance of coarse woody debris to provide protective cover and aid in thermoregulation are major habitat requirements for the rubber boa. Primarily nocturnal, rubber boas spend considerable time underground in abandoned rodent burrows and rock crevices (COSEWIC, 2003). In Pemberton rubber boas den and breed on south-facing slopes like Mackenzie Ridge.

Similar to the sharp-tailed snake, the rubber boa may be a constraint to development as the individuals of the species and their dens are protected. An extensive survey will be conducted in the spring of 2021 as part of the sharp-tailed snake survey. The survey will identify the location of critical habitat and attempt to locate potential denning sites. Additional mitigation measures will be provided as part of that report.

### **Common Nighthawk**

Common Nighthawks require open ground or clearings for nesting. The species breeds in a wide range of open habitats including sandy areas (e.g., dunes, eskers, and beaches), open forests (e.g., mixedwood and coniferous stands, burns, and clearcuts), grasslands (e.g., short-grass prairies, pastures, and grassy plains), sagebrush, wetlands (e.g., bogs, marshes, lakeshores, and riverbanks), gravelly or rocky areas (e.g., outcrops, barrens, gravel roads, gravel rooftops, railway beds, mines, quarries, and bare mountain tops and ridges), and some cultivated or landscaped areas (e.g., parks, military bases, airports, blueberry fields, orchards, cultivated fields). The female lays the eggs directly on the soil or bare rock in sites with more open ground cover with low or no vegetation, adequate camouflage from predators, and nearby shade (Environment Canada, 2016a).

The subject site offers ground nesting habitat with open areas such as the rock slope. The site also offers potential foraging habitat. Vegetation retention should be considered in site design wherever possible to retain this foraging habitat. Should forest clearing occur for development within the breeding and nesting season, April to September, a bird nest survey must be conducted by a Qualified Environmental Professional (QEP).



### **Olive-sided Flycatcher**

The olive-sided flycatcher is most often associated with natural forest openings; forest edges near natural openings (such as wetlands) or open to semi-open forest stands and will use human-made openings (such as clear-cuts). The species will use early successional forest, although the presence of tall snags and residual live trees for foraging and nesting is essential (Environment Canada, 2016b).

It is recommended to retain wildlife trees where possible and keep vegetation removal to a minimum as potential habitat for the olive-sided flycatcher. Should forest clearing occur for development within the breeding and nesting season, April to September, a bird nest survey must be conducted by a Qualified Environmental Professional (QEP).

### **Evening grosbeak**

This large finch usually nests in dense foliage of deciduous tree or conifer, 2-21 m above the ground. Associated with various conifer forests, deciduous broadleaf forests, mixed forests and riparian forests, even around human habitation. Diet consists of buds and seeds as well as insects (BC CDC, 2021). Should forest clearing occur for development within the breeding and nesting season, April to September, a bird nest survey must be conducted by a Qualified Environmental Professional (QEP).

### **Townsend's big-eared bat**

This bat species begins mating in autumn through winter and litters are born late spring/ early summer. Individually may roost individually or within a colony. These bats are nonmigratory and forage at night. On the West Coast, Townsend's big-eared bats are found regularly in forested regions and buildings, and in areas with a mosaic of woodland, grassland, and/or shrubland. They are found to hunt primarily at forests' edge and are not common to grasslands.

Over-wintering habitat is unlikely to be present on site as it typically occurs in mines or caves which are unlikely to be on the subject property. It is recommended that wildlife trees and any significant older trees be retained where possible on the subject site, as potential roosting habitat. Should development require the removal of large diameter trees, a pre-clearing survey should be conducted to determine the potential presence a bat roost. The bat roost survey should be conducted between April and August.

### **Western screech-owl (*kennicotti* subsp.)**

The western screech-owl is associated with agricultural lands, anthropogenic areas, coniferous forests, mixed forests and riparian forests. Loss of forest habitat and development in the south has caused the barred owl to move northwards in its range. The western screech-owl suffers declines due to competition with the barred owl. Populations are also impacted by forestry operations that reduce dead trees and snags that provide roosting and nesting cavities. The western screech-owl occurs throughout western BC and is likely restricted to mature lowland coniferous and mixed forests below 600 m elevation (BC CDC, 2021).

Wildlife trees and snags should be retained where possible, as they provide valuable nesting habitat. A screech-owl nest survey should be conducted prior to vegetation clearing between mid-March to late May.



### **Little Brown Myotis**

The little brown myotis overwinters in cold and humid hibernacula typically in caves and mines. During the summer, females establish maternity colonies, often in buildings or large-diameter trees. Foraging occurs over water, along waterways, forest edges, and in gaps in the forest (COSEWIC, 2013).

Little brown myotis may potentially occur on the subject site. However the site is likely to only provide summer roosting habitat, which typically occurs in buildings or under the loose bark of large trees. Overwintering habitat is unlikely to be present on site as it typically occurs in mines or caves which are unlikely to be present on the subject property. Large diameter and wildlife trees should be retained where possible. Should development require the removal of large diameter trees, a pre-clearing survey should be conducted to determine the potential presence a bat roost. The bat roost survey should be conducted between May and August.

### **Band-tailed Pigeon**

Breeding and nesting habitat exists for the band-tailed pigeon on the subject site with the presence of coniferous forest. The species has been confirmed in the Pemberton area (UBC, 2020).

The band-tailed pigeon may breed in Pemberton and due to the presence of suitable nesting habitat on site, it may breed on the subject property. Should forest clearing occur for development within the breeding and nesting season, April to September, a bird nest survey must be conducted by a Qualified Environmental Professional (QEP).

### **Grizzly bear**

The grizzly bear is primarily found in mountain terrain, in forested areas and open slopes, and in mountain tundra. However, it is not as strongly associated with forested areas as the black bear and is more associated with open areas. Some grizzlies migrate to valley bottoms early in the season, moving up again as the season progresses, while others do not move down into the valleys (UBC, 2020).

There are currently 59 grizzly bears in the Squamish-Lillooet population. Populations are recovering to the north and west in Toba-Bute and the South Chilcotins, which now provide source populations that may extend to the Squamish-Lillooet and Garibaldi-Pitt grizzly populations that surround Pemberton (FLNRO, 2012).

The subject site contains forest and is located at the foot of the mountainside. This may provide a movement corridor between alpine grizzly habitat to low elevation habitat (i.e. the Lillooet River). It is recommended to minimize vegetation removal throughout development to help retain movement corridors. To avoid negative bear-human encounters, all development on site should be in accordance to the Village of Pemberton Bylaws.

Wildlife Attractants Bylaw No. 684, 2011 (Village of Pemberton) states that:

*3.1 After July 1, 2012, except as permitted in this bylaw, every owner or occupier must dispose of or store domestic garbage, waste, recyclable material or wildlife attractants in such a manner that it is not accessible to wildlife.*





3.7 No person shall throw, place or pile, or cause to be thrown, placed or piled on a highway, or parcel, domestic garbage, waste, hazardous waste, recyclable materials or wildlife attractants.

4.3 Every owner or occupier of a newly constructed commercial, industrial, institutional and tourist accommodation building shall provide a garbage storage site located inside a building or within a wildlife proof enclosure in accordance with the guidelines established in Schedule A. Existing commercial, industrial, institutional or tourist accommodation buildings that currently do not have an enclosure shall provide a locking wildlife proof container or alternatively build a wildlife proof enclosure if space on the property allows. In all zones other than RS-1 as defined in the zoning bylaw, developments must provide a garbage storage site located inside a building or within a wildlife proof enclosure.

### **3.4. Valued Ecosystem Components**

#### **3.4.1. Wildlife Trees**

Unless wildlife trees on the property contain nesting birds or nests of raptors, as described under the *Wildlife Act*, they are not considered a constraint to development. The wildlife trees identified provide wildlife value characteristics and they should be retained where possible during development.

#### **3.4.2. Coarse Woody Debris**

The CWD present should be retained where possible within the subject site during development while also mitigating any potential fire hazard.

#### **3.4.3. Wildlife Movement Corridor**

Rezoning and development in the subject site may impact sharp-tailed snake movement corridors. Vegetation retention should be considered to maintain small scale wildlife corridors and cover in and around adjacent developments, preserving the movement corridor on the site. In addition, Ecopassages with specialized drift fences should be installed at strategic locations under roadways. The ecopassages should allow sunlight through the top to make it more attractive for reptiles and amphibians (Photo 3). Being ectotherms (cold blooded), reptiles will be more likely to use the ecopassage if they don't have to go into a cold, dark place to move across the landscape (Parks Canada, 2021). Sharp-tailed snake habitat will be investigated during the spring of 2021 to determine location of critical habitat which will help to determine the best locations for the ecopassages.



Photo 3: View of a reptile ecopassage (Parks Canada, 2021)

### 3.5. Aquatic Environment

The subject site is unlikely to contain any watercourses, therefore the aquatic environment does not constitute a constraint to the proposed rezoning and development.

### 3.6. Socio-Economic Conditions

#### 3.6.1. Cultural and Heritage Resources

The archeological site EbRq-15 is protected under the *Heritage Conservation Act* and may be a constraint to development. If an archaeological site is encountered during any future development of the subject site, activities must be halted and the appropriate authorities consulted as archaeological sites are protected under the *Heritage Conservation Act*.

#### 3.6.2. Other Undertakings in the Area

##### Timber Harvesting

Timber harvesting presents no obvious constraints or concerns for the rezoning or development of the subject property.

##### Mining

Mining presents no obvious constraints or concerns for rezoning or development of the subject property.

##### Recreation and Tourism

Recreation and tourism presents no obvious constraints or concerns for rezoning or development of the subject property. However, the developer is engaging the local communities in order to preserve some of the bike trails present on the subject site.



## Anthropogenic Features

No anthropogenic features pose constraints to rezoning or development of the subject property.

## Adjacent Land Users

Adjacent land use does not restrict development or rezoning within the subject property.

## 4. Conclusions and Recommendations

This report details the baseline conditions and identifies potential environmental constraints for the development of the Sunstone Phase 4 in Pemberton, BC. Based on the conditions observed on the site and the information reviewed, the site appears to be suitable for the proposed development subject to the following recommendations:

1. A field investigation survey is to be conducted by a Qualified Environmental Professional (QEP) when the ground is free of snow to confirm the findings of this report.
2. Land clearing activities conducted during the nesting bird season of April 1 to September 1 must comply with Section 35 of the *Wildlife Act*, which forbids the destruction of nests occupied by a bird, its eggs, or its young. If vegetation clearing is to occur between April 1 and September 1, a song bird nesting survey of the trees to be cleared must be conducted by a QEP.

The survey will identify the location of any active bird nests including that of the common nighthawk, olive-sided flycatcher and band-tailed pigeon. These birds are species at risk identified as having the possibility of nesting on site. Any active birds' nests found during clearing must be adequately protected by a forested buffer as per Section 34 of the *Wildlife Act*. In addition, a screech owl nest survey should be conducted prior to vegetation clearing between mid-March to late May.

3. A pre-clearing bat roost survey should be conducted between April 1 and August 31 if clearing of large diameter trees or wildlife trees is proposed. Should roosting sites be observed, the clearing will be postponed to after August 31 when the bats are no longer using the roost.
4. A sharp-tailed snake and rubber boa habitat survey will be conducted during spring 2021. The survey will identify the location of critical habitat for both species and attempt to locate potential denning sites. Based on the results of the survey, recommendations to preserve reptile movement corridors and to install ecopassages will be made. In addition, development should follow the Snake Protection Compliance Management Plan (Cascade, 2016) (see attached) as previously submitted and accepted by the Village of Pemberton.
5. Vegetation should be retained wherever possible. Retention of vegetated areas will facilitate wildlife movement through the site and retain breeding and foraging areas.
6. Coarse woody debris, wildlife trees and snags on site should be retained where possible, while considering any danger tree and FireSmart objectives regarding the proposed site design.
7. Design and construction practices should minimize erosion and sedimentation in storm water runoff.
8. Landscape plans for the subject site should include native tree and shrub species that are not bear attractants.



9. Future development and construction on the property should follow guidelines and recommendations outlined in: *Develop with Care: Environmental Guidelines for Urban and Rural Land Development in British Columbia* (MOE, 2014) and *Land Development Guidelines for the Protection of Aquatic Habitat* (DFO, 1993). This includes best management recommendations for stormwater, pollution prevention and wildlife and ecosystem management.
10. Vegetation should be retained wherever possible. Retention of vegetated areas will facilitate wildlife movement through the site and retain breeding and foraging areas.
11. Avoid impacts to local bear populations by following recommended management plans and adhering to the Village of Pemberton Wildlife Attractants Bylaw (684, 2011).
12. Site preparation and construction works associated with any of the aforementioned mitigation measures should be monitored by a Qualified Environmental Professional (QEP).

## 5. References

- BC Government. 2021. iMap BC. <https://www2.gov.bc.ca/gov/content/data/geographic-data-services/web-based-mapping/imapbc> accessed on January 28 2021.
- BC Ministry of Environment, 2014. *Develop with Care 2014 Environmental Guidelines for Urban and Rural Development in British Columbia*.
- BC Ministry of Environment 2017, *Wildlife/Danger Tree Assessor's Course Workbook Parks and Recreation Sites Course Module*.
- Brett 2016. *Species and Ecosystems at Risk in the Resort Municipality of Whistler*. Prepared for the RMOW.  
[https://www.whistler.ca/sites/default/files/2017/Oct/related/22976/2016\\_species\\_at\\_risk\\_in\\_the\\_rmow\\_final.pdf](https://www.whistler.ca/sites/default/files/2017/Oct/related/22976/2016_species_at_risk_in_the_rmow_final.pdf). Accessed January 27, 2021.
- British Columbia, Province of. 1998. *Field Manual for Describing Terrestrial Ecosystems*. BC Min. Env. Land Prot., and BC Min. For. Land Manage. Handb. No. 25.
- B.C. Ministry of Environment (MOE). 2021, Conservation Data Centre. *BC Species and Ecosystems Explorer*. B.C. Ministry of Environment, Victoria B.C. <http://a100.gov.bc.ca/pub/eswp/>. Accessed January 26, 2021.
- Cascade Environmental Resources Group Ltd. 2019. *Sunstone Development- Rockfall Barrier Wildlife Survey*. Prepared for Sunstone Ridge Developments Ltd. C/O CATA Management. Dated April 12, 2019
- Committee on the Status of Endangered Wildlife in Canada (COSEWIC). 2003. *COSEWIC status report on the rubber boa Charina bottae in Canada, in COSEWIC assessment and status report on the rubber boa Charina bottae in Canada*. Committee on the Status of Endangered Wildlife in Canada. Ottawa. 14pp



- COSEWIC. 2009. Assessment and status report on the Sharp-tailed Snake *Contia tenuis* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 38 pp.
- COSEWIC. 2013. COSEWIC Assessment and Status Report on the Little Brown Myotis *Myotis lucifugus* Northern Myotis *Myotis septentrionalis* Tri-colored Bat *Perimyotis subflavus* in Canada.  
[https://www.registrelep-sararegistry.gc.ca/virtual\\_sara/files/cosewic/sr\\_Little%20Brown%20Myotis%26Northern%20Myotis%26Tri-colored%20Bat\\_2013\\_e.pdf](https://www.registrelep-sararegistry.gc.ca/virtual_sara/files/cosewic/sr_Little%20Brown%20Myotis%26Northern%20Myotis%26Tri-colored%20Bat_2013_e.pdf)
- Departement of Fisheries and Ocean Canada (DFO). 1993. Land Development Guidelines for the Protection of Aquatic Habitat.
- Demarchi, D.A. 1996. Ecoregions of British Columbia. Fourth Edition. British Columbia Wildlife Branch, Ministry of Environment, Lands and Parks, Victoria BC. Map (1:2,000,000).
- Environment Canada. (2016a). Recovery Strategy for the Common Nighthawk (*Chordeiles minor*) in Canada (p. vii + 49) [Species at Risk Act Recovery Strategy Series]. Environment Canada.
- Environment Canada. (2016b). Recovery Strategy for the Olive-sided Flycatcher (*Contopus cooperi*) in Canada (p. vii + 52) [Species at Risk Act Recovery Strategy Series]. Environment Canada.  
[http://www.registrelep-sararegistry.gc.ca/virtual\\_sara/files/plans/rs\\_olive-sided%20flycatcher\\_e\\_final.pdf](http://www.registrelep-sararegistry.gc.ca/virtual_sara/files/plans/rs_olive-sided%20flycatcher_e_final.pdf)
- Environment and Climate Change Canada. 2017. Recovery Strategy for the Sharp-tailed Snake (*Contia tenuis*) in Canada [Proposed]. Species at Risk Act Recovery Strategy Series. Environment and Climate Change Canada, Ottawa. 2 parts, 17 pp. + 42 pp.
- Environment Canada, 2021. Climate Normals 1981 – 2010. Website:  
[http://climate.weather.gc.ca/climate\\_normals/index\\_e.html](http://climate.weather.gc.ca/climate_normals/index_e.html). Accessed January 26, 2021.
- Green, R.N. and K. Klinka, 1994. Field guide to site identification and interpretation for the Vancouver Forest Region. Land management handbook number 28. BC Ministry of Forests, Victoria, BC.
- Government of BC. [Getting Started with Reserves - Province of British Columbia](#), Website Accessed on April 10, 2020.
- Government of Canada, 2017. RECOVERY STRATEGY FOR THE SHARP-TAILED SNAKE (*Contia tenuis*) IN CANADA. Species at Risk Act. [https://www.registrelep-sararegistry.gc.ca/virtual\\_sara/files/plans/rs\\_sharp\\_tailed\\_snake\\_e\\_proposed.pdf](https://www.registrelep-sararegistry.gc.ca/virtual_sara/files/plans/rs_sharp_tailed_snake_e_proposed.pdf). Accessed January 28, 2021.
- Government of Canada, 2013. Soil Information Service. Description of soil BCYVO~~~~N(YVONNE).  
<https://sis.agr.gc.ca/cansis/soils/bc/YVO/~~~~N/description.html>. Accessed January 26, 2021.
- Kuurne, R.L.B., 1980. Soil Survey of the Pemberton Valley, British Columbia. Province of British Columbia. Ministry of Environment.  
[http://www.env.gov.bc.ca/esd/distdata/ecosystems/Soils\\_Reports/bc62\\_report.pdf](http://www.env.gov.bc.ca/esd/distdata/ecosystems/Soils_Reports/bc62_report.pdf). Accessed January 26, 2021.

Land and Resources Department, Lil'wat Nation and Arrowstone Archaeological Research and Consulting Ltd. 2010. Archaeological Impact Assessment (AIA) of phase one of Sunstone Ridge Group's proposed development in Pemberton, B.C., final permit report.

MacKenzie and Moran. 2004. Wetlands of British Columbia: A guide to identification.

Ministry of Forests, Lands and Natural Resource Operations (FLNRO) 2012. British Columbia Grizzly Bear Population Estimate for 2012.  
[http://www.env.gov.bc.ca/fw/wildlife/docs/Grizzly\\_Bear\\_Pop\\_Est\\_Report\\_Final\\_2012.pdf](http://www.env.gov.bc.ca/fw/wildlife/docs/Grizzly_Bear_Pop_Est_Report_Final_2012.pdf). Accessed January 29, 2021.

Parks Canada, 2021. New ecopassages to help critters cross the road. Website: [New ecopassages to help critters cross the road - Bruce Peninsula National Park \(parks.canada.gc.ca\)](http://parks.canada.gc.ca/eng/activities/10141). Accessed on January 28, 2021

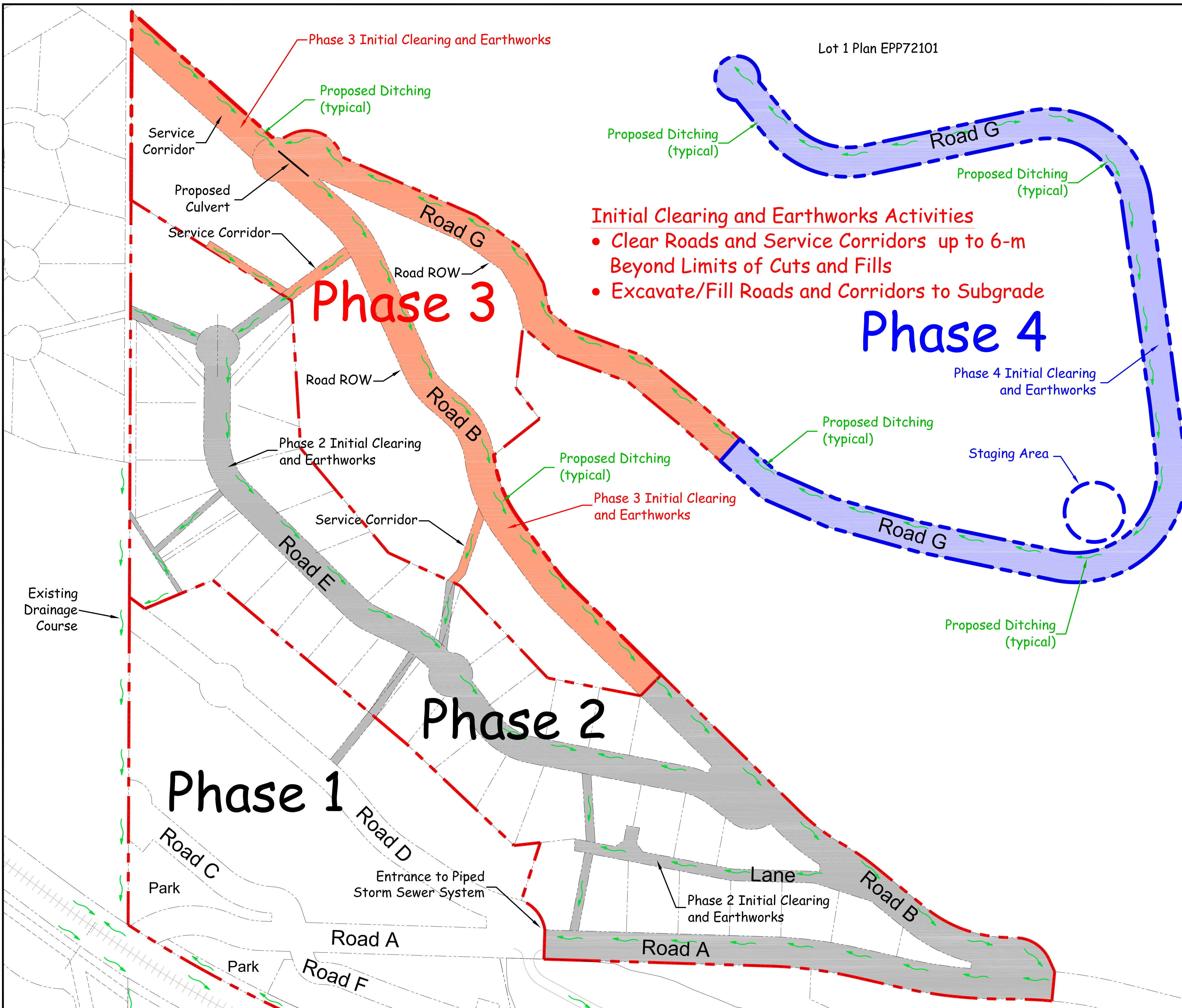
Shiarizza, P. and N. Church, 1997. The geology of the Thompson - Okanagan Mineral Assessment Region. BC Geological Survey Open File 1996-20.  
<https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/british-columbia-geological-survey/publications/openfiles-1999-1990>. Accessed January 26, 2021.

St'át'imc Preliminary Draft Land Use Plan 2004, Lillooet, BC. <http://www.firstnations.de/media/06-4-0-statimc.pdf>

University of British Columbia, 2020. E-Fauna BC: Electronic Atlas of the Fauna of British Columbia. Lab for Advanced Spatial Analysis, Department of Geography, University of British Columbia, Vancouver. [www.efauna.bc.ca](http://www.efauna.bc.ca). Accessed January 27, 2021.

Village of Pemberton, 2011. WILDLIFE ATTRACTANTS BYLAW No. 684, 2011.  
<https://www.pemberton.ca/public/download/documents/37266>. Accessed January 29, 2021.

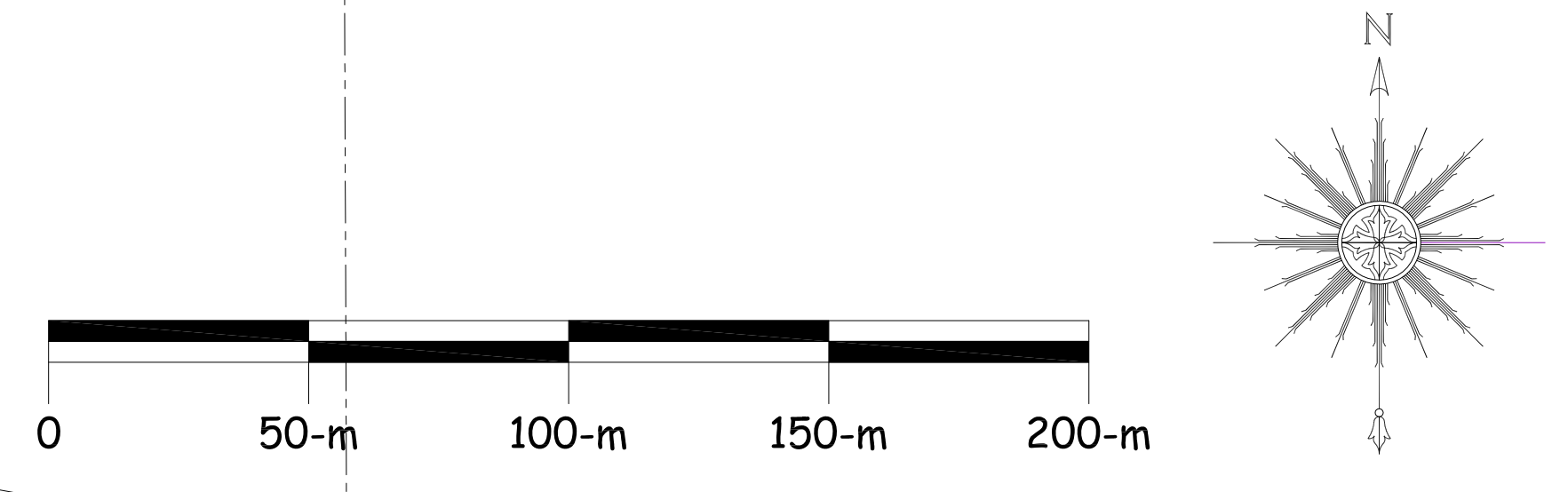
**Construction Management Plan for Phases 3 and 4  
Initial Clearing and Earthworks Activities**



**Initial Clearing and Earthworks Activities**

- Clear Roads and Service Corridors up to 6-m Beyond Limits of Cuts and Fills
- Excavate/Fill Roads and Corridors to Subgrade

- Erosion and Sediment Control** - Contractor is to control stormwater quality during construction to prevent silt and other stormwater contaminants from being discharged into the existing drainage system and natural drainage channels. This is to be achieved using the following:
  - provision of distinct drainage channels for control of surface water run-off during construction. The drainage channels are to direct flow to the existing drainage system or natural drainage channels. Where drainage channels cross roads, culverts are to be installed. Ditches are to be lined with rip-rap as needed where ditch grades exceed 6%.
  - sediment removal prior to discharge of surface water into existing drainage channels or piped storm sewer system. Removal method can be through use of hay bales, silt fences and settling ponds in the drainage channels.
- Tree and Vegetation Protection/Delineation** - Limits of clearing and earthworks are to be flagged. Clearing and earthworks activities are not to extend beyond approved limits.
- Emergency Spill Guidelines** - Spill kits are to be readily available onsite for all equipment. In the event of a spill, stop and contain the spill. Collect contaminated materials using appropriate protective equipment and supplies. Report spill to Emergency Management BC Coordination Centre - 1-800-663-3456. If hazard exists for contamination of fish bearing waters, notify DFO at (6 04) 666-3500. Contact environmental consultant to determine most appropriate method for remediation or disposal of any contaminated soils in accordance with Ministry of Environment requirements.
- Idle Reduction Strategies** - Reduce idling emissions by shutting down equipment during extended periods of idling, or by using idle-reduction technologies such as automatic shut down and start up systems.
- Construction Site Improvements** - Contractor is to store and maintain vehicles and equipment only in approved designated areas.
- Invasive Species Control** - Clean all earth-working equipment before arrival on-site to remove foreign and invasive plants and seeds.
- Existing Trail Rerouting and Signage** - Prior to construction activities, post signs where trails and roads enter the construction site. Signs are to advise that the site is closed to the public during construction, and that the public is to use alternate routes. When construction is complete, signs are to be removed.



**GILBEY ENGINEERING SERVICES**

Client: Sunstone Ridge Developments Ltd.  
 Project: Sunstone Ridge Development - Phases 3 and 4  
 Drawing: Construction Management Plan for Initial Clearing and Earthworks Activities (26 May 21)

**Construction Management Plan**

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## Sunstone Ridge Developments Ltd.

### *Fire Mitigation Plan*



Summer 2021



## Purpose:

The purpose of this document is to outline the steps taken by Sunstone Ridge Developments Ltd. in order to plan, prepare and practice fire safety. With a fuel management plan in place and adhering to the guidelines we can move forward with a significant wildfire risk reduction along with an increase in safety for our workers and community. The plan consists of 3 main parts; Planning & Prescription, Preparation and Work Procedures.



*Removing large windfall and scrub from Phase 3 lot reducing ground fuel levels. Oct 2020*

## Planning & Prescription:

Planning for fire mitigation is an ongoing process which is reviewed daily as conditions and circumstances evolve. Within this phase we have:

- Written prescriptions for fuel management
- Maps
- Emergency Response Plan
- Gear/equipment requirements

## Phase 4 Fuel Prescription:

Reducing fuel concentrations is one of the best ways we can minimize fire risk and behaviour. For this we consult the BC Wildfire Service Fuel Management Prescription Guide that prioritizes surface and ladder fuel reduction over canopy modification.

- Limiting potential for sustained ignition and crown fires by removing surface fuel load to reduce fire intensity to less than 2000 kilowatts per meter.
- Increase live crown height and removing ladder fuels to prevent crown fire ignition.
- Reduce crown closures and canopy bulk density to prevent aggressive candling by “spotting” (selective removal of key trees to create breaks in the canopy) And use existing roads and service corridors to generate fire breaks.

### Tree and Slope profile:

The forest consists primarily of Douglas Fir 80% (Fd- *Pseudotsuga menziesii*), Western Hemlock 5% (Hw- *Tsuga heterophylla*), Western Red Cedar 5% (Cw- *Thuja plicata*), Paper Birch (Pb- *Betula papyrifera*) and Big Leaf Maple 5% (Mb- *Acer macrophyllum*) with average tree to tree spacing of 2.5-3m. Very little presence of small leafy vegetation other than in narrow drainage corridors which consist mostly of Vine maple, Slide Alder and native berry species. (low fuel)

The only concerning feature over the next 500m of road is the slope which can aid in vertical spread of wildfires. Fire behaviour would likely climb quickly and as it burns dropping heavy material down the hill igniting lower slopes. Building road to full width creating a large catch area will maximize its ability as a fire break/guard. Ensuring complete removal of large woody debris during grubbing/initial road building is essential in removing ground/spot fires and underground spread. Trucking out woody debris and log decks as soon as possible is the best plan of action until road

building clears the steep slope areas from 0+400 to 1+000. Ground conditions level out after this reducing potential greatly.

Areas of Concern: (to be addressed ASAP)

Road G 0+150 to 0+400 needs to be run though on high side to reduce ground fuels after falling standing dead Douglas Firs. Plenty of space in crowns no additional treatment needed.

Road G 0+450 has small cluster of felled D-Fir on high side in need of clean up before proceeding to new ROW building.

Road G 0+500 to 1+000 has consistent wide tree spacing with little pockets of canopy overlap and short clusters of windfall and root rot. Very light presence of ladder fuels. Most fuel sources can be dealt with during initial falling & grubbing. Any areas of concern will be marked and reassessed.

Tree Falling:

Current Falling and bucking is complete up to 0+500 on Road G. Before work commences beyond this point crew must ensure.

- 1- 5Gallon backpack per faller (full)
- Enough 2” forestry fire hose and nozzle to reach 100’ beyond furthest work point away from water source.
- An additional fire pump to accommodate for pressure loss when working on steep slope areas. (if needed)
- 1- Belt mounted personal fire extinguisher per faller.
- 3000L of water in water tank to ensure 30mins of 1 forestry pump operating for half hour at 100Lpm.
- Truck parked facing exit equipped with shovel and pulaski.
- Well marked access along high side of work area (blue trail ribbon)

Any snags or trees with dieback will be felled down to where machinery can remove it. Buck windfalls to ensure easy extraction.

All work must be done within Village of Pemberton By-Law, WorkSafeBC and BC WildFire regulations. If at any point this can't be met work must stop and report to supervisor for instruction.

### Road Building/Grubbing/Blasting:

Right of way clearing and blasting completed to 0+500 Road G. Before work commences beyond this point crew must ensure.

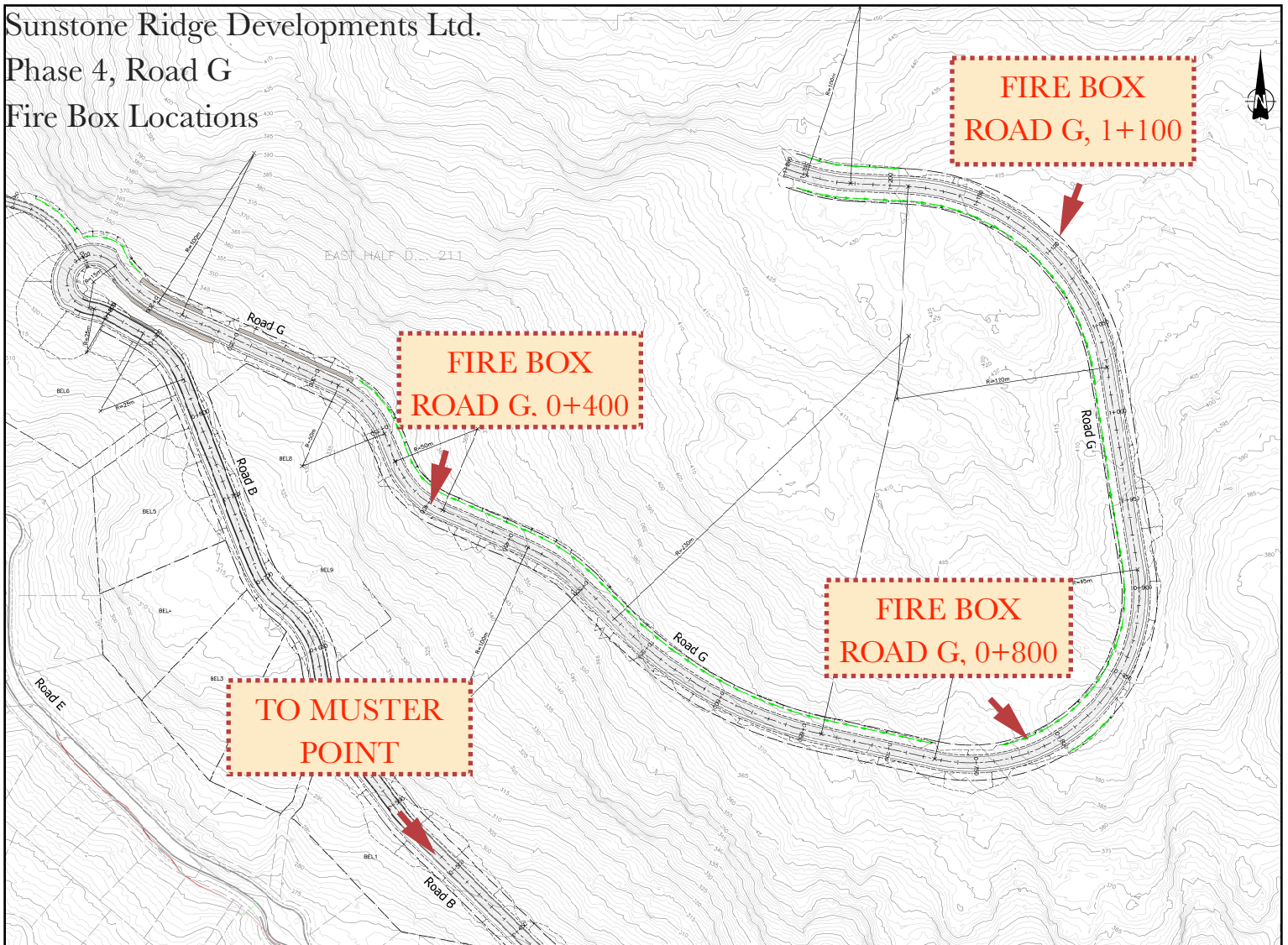
- 1- 5Gallon backpack per machine (full)
- Enough 2" forestry fire hose and nozzle to reach 100' beyond furthest work point away from water source.
- An additional fire pump to accommodate for pressure loss when working on steep slope areas. (if needed)
- 1- ABC Fire extinguisher per truck and equipment.
- 3000L of water in water tank to ensure 30mins of 1 forestry pump operating for half hour at 100Lpm.
- Truck parked facing exit equipped with shovel and pulaski.
- Well marked access along high side of work area (blue trail ribbon using faller access)

Review work restrictions and fire watch requirements everyday before work commences.

All work must be done within Village of Pemberton By-Law, WorkSafeBC and BC WildFire regulations. If at any point this can't be met work must stop and report to supervisor for instruction.

## Maps:

Knowing the terrain and proper orientation of workers is essential to Emergency response and general safety. Map below is a supplement to existing overall site map with Phase 1,2,3 & Elevate Fire Box locations.



## Emergency Response Plan:

Emergency Response Plans (ERP) are available on site covering First Aid coverage, Fire response, Electrical emergency (LOA) and other specific rescue scenarios such as tree climber rescue. These plans cover specific procedures and phone numbers to call in the event of an emergency. Ex. 911, \*5555 etc.

## Gear Requirements:

Gear requirements for Falling, excavations and blasting have already been reviewed in prescription. Beyond that, ensuring road conditions are conducive to travel for fire response is crucial.

This comes down to ensuring the “Rock Truck” water tanker or water trailer are in good working condition and can easily access the work zone. The water pump is in good condition, fuelled, and has all hoses and adapters on board. A back up pump needs to be available in case of primary pump failure.

Fire boxes are placed along right of ways as soon as possible as road building advances. They will not be moved without permission of supervisor and new location is marked on maps.

Each box contains:

- 1 Pulaski
- 1 Shovel
- 200’ of fire hose
- 1 nozzle
- 1 Back pack water pump

## Preparation and Work Procedures:

Being prepared is an everyday process which includes checking inventory of fire response gear, reviewing safety procedures with workers and most important of all, training and drills.

Combining our prescription, work plans and being prepared, the risk of having a fire will be greatly reduced and our ability to respond will increase. The ultimate goal is to never have a fire but be as prepared as possible in the event that it occurs.



*Fell and Buck Douglas fir during Road G clearing*

## Document Prepared by:

Darryl R Kernaghan  
Lone Goat Contracting Ltd.  
PO Box 351 Pemberton BC

V0N 2L0

### Credentials:

#### BC Forest Safety Council Fall & Buck Supervisor (QFBS)

- 5 years experience
- Supervision and evaluation of tree falling, bucking, arboriculture and slashing operations
- Developing ERP's, fire response plans and safety documentation.
- Working with RPF's to make written plans unify with the reality of the terrain to ensure maximum safety.

#### BC Forest Safety Council Certified Tree Faller (BCCTF)

- 9 years experience
- Harvesting timber, cutting right of ways and building Heli pads for logging companies, Ministry of Transport, BCHydro and INNERGEX Power.
- BC Wildfire working along side unit crews cutting fire breaks, trails, danger trees and removing ground fuel sources.
- S100,S100A Fire Safety/S185 Fire Entrapment Certified (yearly since 2002 -working with forestry/logging)
- BC Wildfire Helicopter Hover Exit Certified (CLIFFC)

#### ITABC Certified Utility Arborist (CUA)

- 4 years experience
- ROW maintenance, danger tree removals and tree assessments for BCHydro and INNERGEX Pwr. (CAT 4 electrical certified)



## Phase 4 Geotechnical Assessment

February 22, 2021  
Project No.: K-180334-00

Cam Mclvor  
Sunstone Ridge Developments Ltd.

[REDACTED]  
Pemberton, BC  
V0N 2L0

By email: [REDACTED]

**Attention: Mr. Cam Mclvor**

**RE: Geotechnical Assessment  
Phase 4, Sunstone Ridge Developments Ltd  
Pemberton, BC**

Dear Mr. Cam Mclvor,

### 1.0 INTRODUCTION

As requested, Kontur Geotechnical Consultants Inc. (Kontur) has completed a geotechnical assessment of the proposed Sunstone Phase 4 development, Pemberton, BC. The purpose of the assessment was to provide a characterization of observed naturally occurring geologic hazards, including locations of the potential hazard, opinions as to the nature of the hazards, possible consequences and influence areas of the identified potential hazards. Kontur's assessment of potential naturally occurring geologic hazard events follow generally accepted guidelines provided by the Engineers and Geoscientists of British Columbia (EGBC) "Guidelines of Legislated Landslide Assessments for Proposed Residential Developments in BC", dated May 2010.

As the Village of Pemberton does not provide a level of geologic hazard acceptability, Kontur has referenced the British Columbia Ministry of Transportation and Infrastructure (MOTI) guidance for acceptability of geologic hazard occurrence. The MOTI guidelines are:

- 1 in 475 years for damaging events related to landslides;
- 1 in 200 years for damaging events related to flooding;
- 1 in 300 years for damaging events related to snow avalanches;
- 1 in 10,000 years for life threatening events.

The lack of comprehensive historical records spanning the time periods noted in the MOTI guidelines with respect to natural occurring geologic hazards within or adjacent to the subject property limits the ability of Kontur to complete a quantitative assessment of specifically identified hazards. Therefore, Kontur is providing a qualitative assessment based on Kontur's experience and interpretations of existing site conditions. It should be noted that MOTI does not provide acceptability limits for hazard risk associated with residential development and the approving authority (Village of Pemberton) must determine risk acceptability for development approval.



Specifically, this assessment focused on the following naturally occurring geologic hazard events:

- Slope instabilities;
- Rockfall;
- Snow avalanche;
- Debris flows/ torrents;

Attached to this report are a Site Plan, Site Photos and an Appendix D from the Guidelines for Legislated Landslide Assessment for Proposed Residential Developments in BC”.

## **2.0 SOURCES OF INFORMATION**

This geotechnical assessment is based on the following information:

- Historic aerial photographs obtained from the Geographic Information Centre;
- Report titled “Proposed Sunstone Ridge Subdivision, Pemberton, BC – Geotechnical Assessment” prepared by EXP Services Inc, dated May 14, 2012.
- Subdivision Plan, topographic information, slope inclination plan and road profiles provided by Gilbey Engineering Services;
- Previous experience by Kontur personnel in the vicinity of the proposed development during development of Phases 1, 1B and 2; and,
- Site reconnaissance by senior Kontur personnel to observe, record and photograph features of geotechnical significance.

## **3.0 UNDERSTANDING OF PROJECT**

The subject property consists of the southern portion of the property with legal description Lot 1, District Lot 211, Lillooet District Plan EPP72101.

Based on a review of provided “*Layout Concept with Contours*” the proposed development generally consists of the development of fifty-four (54) single family residential lots with three (3) park areas. Access to the proposed residential lots is via a proposed road extending from the end of a proposed roadway within proposed Phase 3 of the Sunstone Development. The main road (Road G) is about 1250m with two branches, Roads H and I, with lengths of about 150m and 175m, respectively. The development includes associated servicing for the lots.

## **4.0 SITE DESCRIPTION**

### **4.1 General**

The subject property was located northeast of Phases 1, 2 and 3 of the Sunstone Development, Pemberton, BC. The subject property has the shape of a rectangle with a triangle cut from the southwest corner with the southwestern boundary being defined by Road B and the proposed Sunstone Development Phase 3. The northern boundary was oriented in an east-west direction and the eastern and remaining western boundaries being oriented in a north-south direction.



The subject property had a north-south dimension ranging from about 780m in the northern portion of the property coming to a point at the southeastern corner of the property. The property had a north-south dimension a northeast-southwest dimension ranging from about 65m at the southeast corner to about 205m at the centre portion to about 110m at the northwest corner. A gravel access road part way into the proposed development had cut slopes up to about 3m in height at inclinations of about 1.5H: 1V (Horizontal: Vertical). Observations of slopes during site reconnaissance indicated the slope generally had relatively smooth surfaces.

The subject area was located on the southwest side of a bedrock ridge with crest elevation of about 420m. Elevations within the subject area ranged from about 280m at the southwestern boundary to about 350m at the northeastern boundary. Topography in the southwestern portion of the proposed development generally consisted moderately to steeply inclined southwest-facing slopes with inclinations ranging from about 2H: 1V to about 2.3H: 1V in soil covered areas and bedrock slopes being as steep as 1.5H: 1V with localized steeper areas and near vertical bedrock bluffs up to about 3m in height. Topography in the western and northern portions of the property generally consisted of south facing bedrock-controlled slopes with inclinations ranging from about 2.5H: 1V to about 4H: 1V. Localized steeper slopes with inclinations as steep as about 1.3H:1V were noted in the southwestern portion of the property.

A gully about 10m wide oriented in a north-south direction was noted in the eastern portion of the property and about 10m wide. The western bank of the gully was up to about 10m in height and the eastern bank about 5m in height. The gully banks generally consisted of bedrock outcrops.

An area of colluvial veneer on the eastern property boundary was inclined at about 3H:1V.

Vegetation within the subject area generally consisted of straight trunked small evergreen trees and thick underbrush.

#### **4.2 Surficial and Subsurface Soil Conditions**

Based on a review of surficial geology plan Open File 5324, "Surficial Geology and Landslide Inventory of the Upper Seat to Sky Corridor" obtained from the Geologic Survey of Canada the majority of the subject property is underlain by bedrock including in places till veneer, drift and colluvium. The surficial geology map indicated an area in the eastern portion of the property was underlain by Colluvial Veneer consisting of rock fragments in a matrix of boulders, gravel, sand, silt, usually less than 3m thick, formed by bedrock weathering. In general, the surficial and subsurface conditions were consistent with the surficial geology map.

Cut slopes within the subject area generally exposed compact to dense sand with trace to some silt, some gravel and occasional cobbles. The steeper northern and southern portions of the property consisted of exposed bedrock. Bedrock surfaces appeared generally massive and glaciated. Occasional boulders were noted on some bedrock outcrops; however, the source of the rocks was not apparent, and they were considered to have been deposited by previous glaciation. Localized small talus slopes and/ or loose rock was noted at the toes of some bedrock bluffs, particularly in the western half of the property. An area of loose rock about extending for about 30m below a bedrock bluff about 15m high was noted in the area of the proposed park in the northwestern part of the property.



Localized loose rock was noted at the toe of the western bank of the gully noted in the eastern portion of the property (WP31 to 33).

No seepage or watercourse were noted during site reconnaissance; however, localized areas with small deposits of sand were noted on the downslope side of the access road.

### **4.3 Aerial Photography Review**

A review of Aerial Photographs dated from 1946, 1951, 1958, 1962, 1967, 1971, 1977, 1981, 1986, 1990, 1994, 2005 and 2016 was conducted.

Aerial photographs indicated that prior to 1967 there was no development. Logging roads were noted in aerial photographs from 1962 onward, with Old Pemberton Farm Road being noted in the 1967 aerial photograph. Clearing in the area of the Ridge development was noted in the 2005 aerial photograph.

No significant indications of landslide, snow avalanche or debris flows were noted.

## **5.0 COMMENTS AND RECOMMENDATIONS**

### **5.1 General**

The proposed development area is located within an area of gently inclined bedrock-controlled slopes. Bedrock is either exposed or covered with a layer of dense to very dense native granular soils. It is considered that the bedrock or overlying granular soils are generally suitable for construction of residential buildings with adequate bearing capacity and settlements within typical tolerances for such buildings.

The sections below provide comments and recommendations with regards to potential naturally occurring geologic hazards within and adjacent to the subject area that could influence the development.

### **5.2 Geologic Hazards**

As previously discussed, the subject property is located in mountainous terrain; therefore, the potential for such naturally occurring events as snow avalanche, rockfall and slope stability to influence the proposed development should be considered.

Based on observations and interpretations during site reconnaissance and historical aerial photograph review, Kontur has developed a geotechnical characterization of the subject property, mountain slopes and drainage basins within and adjacent to the proposed development. This characterization forms the basis from which Kontur's opinions are provided regarding the likelihood of naturally occurring geologic events influencing the proposed development.

#### **5.2.1 Slope Stability**

As discussed above the slopes within the subject property are bedrock controlled. Based on previous experience within the Sunstone Developments (Phases 1, 1B and 2) and site reconnaissance it is considered that soil slopes generally consist of a relatively thin veneer of soil overlying bedrock. Based on



this soil profile the slopes within the subject area are considered to be globally stable at the inclinations noted. The hazard present by slope instabilities is considered to be very low.

### **5.2.2 Rockfall**

The observed bedrock slopes were generally massive and glaciated with limited sources for rockfall. However, in localized areas bedrock bluffs up to about 5m in height (except for a higher bluff in the western portion of the property north of the proposed park area) were noted to have areas of loose rock or talus the toe of the bluff. The areas of talus/ loose rock were generally confined to an area about 5m from the toe of the bluffs. The rockfall hazard within the subject property was generally considered to be very low; however, localized areas were considered to have a rockfall hazard of moderate. The area of moderate rockfall hazard area limited in extents and there are areas within each property with sufficient area for a single-family residential building outside of the rockfall hazard area. A geotechnical engineer should be engaged to assess the lot with regards to rockfall and provide recommendations for locating the proposed building in an area free of rockfall hazards or for suitable rockfall mitigation measures to achieve a rockfall hazard of very low.

### **5.2.3 Snow Avalanche**

In general, historic snow avalanches are generally identifiable from an abrupt change in the age and type of trees. Snow avalanche paths can be identified by vegetation consisting of deciduous trees such as aspen or cottonwoods, grouped together and separated from the surrounding coniferous trees. No area fitting this description was noted during site reconnaissance or aerial photograph review. The probability of snow avalanches influencing the property is considered to be very low.

### **5.2.4 Debris Flows/ Floods**

No significant watercourses or debris type deposits were noted within the subject area and the hazard presented by debris flows/ floods is considered to be very low.

## **6.0 CLOSURE**

The above noted and attached information presents Kontur's understating of the proposed development, interpretations of site conditions and opinions as to the existence of naturally occurring geologic hazards, within and adjacent to the proposed development, and the influence areas of those hazards that could affect the proposed development. The lack of comprehensive historical records with respect to naturally occurring geologic hazards within or adjacent to the proposed development limits the ability of Kontur to complete a quantitative assessment of specifically identified hazards. Therefore, Kontur has provided a qualitative assessment based on Kontur's experience and interpretations of existing site conditions. Some understanding of terminology and associated ranges of annual probability of occurrence connected with this approach is provided in a reference prepared by the Resource Inventory Committee, Government of British Columbia, Slope Stability Task Force (1996) as shown in Table A below.



**TABLE A**  
**Relative Terms and Ranges of Annual Probability of Hazard Occurrence**  
**(Resource Inventory Committee, 1996)**

Relative Term of Probability	Range of Annual Probability of Occurrence (Pa)	Comments
Very High	>1/20	Indicates the hazard is imminent and well within the lifetime of a person or typical structure. Events occurring with a return interval of 1/20 or less generally have clear and relatively fresh signs of disturbance.
High	1/100 to 1/20	Indicates that the hazard can happen within the approximate lifetime of a person or typical structure. Events are clearly identifiable by deposits and vegetation but may not appear fresh.
Moderate	1/500 to 1/100	Indicates that the hazard, within a given lifetime, is not likely but possible. Signs of previous events, such as vegetation damage may not be easily identified.
Low	1/2500 to 1/500	Indicates the hazard is of uncertain significance.
Very Low	<1/2500	

Provided the recommendations of this report are implemented the property is considered to be safe for the intended use, that being the development of the property for residential purposes. The term “safe” specifically refers to the ability of the subsurface soils to provide adequate bearing to support a building within typical settlement tolerances, global slope stability is adequate, and the subject property is free of hazards with a return period less than that indicated in Section 1.0; however, the approving authority must determine risk acceptability for development approval.

The comments and recommendations presented in this report are based on the referenced information and Kontur’s understanding of the project as described herein. If site conditions or project parameters differ from those described in this report, Kontur should be notified promptly to review geotechnical aspects of the project and provide additional or modified comments and recommendations, as deemed appropriate. Contractors should make their own assessments of subsurface conditions at this site and select the construction means and methods that are most appropriate for encountered site conditions.

This report has been prepared for the exclusive use of the Sunstone Ridge Developments Ltd., Village of Pemberton and/or their designated agents or consultants. Any use of the information contained in this letter for other than its intended purpose or by any other party must first be verified in writing by Kontur. Kontur does not accept any responsibility or damages because of any other party relying on or using the



information, interpretations, opinions, comments, and/or recommendations that are contained in this report.

Kontur trusts that the information described above meets your current requirements. If you should have any concerns or questions, please do not hesitate to contact the undersigned.

Sincerely,


**Kontur Geotechnical Consultants Inc.**


Per:

Reviewed by:



Evan Sykes, P.Eng.  
Principal | Geotechnical Engineer

  
Matthew Yip, P.Eng., M.Eng.  
Principal | Geotechnical Engineer

**Attachments:** Interpretation and Use of Study and Report Document  
Layout Concept with Contours, Waypoints and Colluvial Veneer Area  
Photos  
Appendix D: Landslide Assessment Assurance Statement 



## INTERPRETATION AND USE OF STUDY AND REPORT DOCUMENT

### 1. STANDARD OF CARE

This study and Report have been prepared in accordance with generally accepted engineering consulting practices in this area. No other warranty, expressed or implied, is made. Engineering studies and reports do not include environmental engineering or consulting.

### 2. COMPLETE REPORT

All documents, records, data and files, whether electronic or otherwise, generated as part of this assignment are a part of the Report which is of a summary nature and is not intended to stand alone without reference to the instructions given to us by the Client, communications between us and the Client, and to any other reports, writings, proposals or documents prepared by us for the Client relative to the specific site described herein, all of which constitute the Report.

IN ORDER TO PROPERLY UNDERSTAND THE SUGGESTIONS, RECOMMENDATIONS AND OPINIONS EXPRESSED HEREIN, REFERENCE MUST BE MADE TO THE WHOLE OF THE REPORT. WE CANNOT BE RESPONSIBLE FOR USE BY ANY PARTY OF PORTIONS OF THE REPORT WITHOUT REFERENCE TO THE WHOLE REPORT.

### 3. BASIS OF THE REPORT

The Report has been prepared for the specific site, development, building, design or building assessment objectives and purpose that were described to us by the Client. The applicability and reliability of any of the findings, recommendations, suggestions, or opinions expressed in the document are only valid to the extent that there has been no material alteration to or variation from any of the said descriptions provided to us unless we are specifically requested by the Client to review and revise the Report in light of such alteration or variation.

### 4. USE OF THE REPORT

The information and opinions expressed in the Report, or any document forming the Report, are for the sole benefit of the Client. NO OTHER PARTY MAY USE OR RELY UPON THE REPORT OR ANY PORTION THEREOF WITHOUT OUR WRITTEN CONSENT. WE WILL CONSENT TO ANY REASONABLE REQUEST BY THE CLIENT TO APPROVE THE USE OF THIS REPORT BY OTHER PARTIES AS "APPROVED USERS". The contents of the Report remain our copyright property and we authorise only the Client and Approved Users to make copies of the Report only in such quantities as are reasonably necessary for the use of the Report by those parties. The Client and Approved Users may not give, lend, sell or otherwise make the Report, or any portion thereof, available to any party without our written permission. Any use which a third party makes of the Report, or any portion of the Report, are the sole responsibility of such third parties. We accept no responsibility for damages suffered by any third party resulting from unauthorised use of the Report.

### 5. INTERPRETATION OF THE REPORT

Nature and Exactness of Descriptions: Classification and identification of soils, rocks, geological units, contaminant materials, building envelopment assessments, and engineering estimates have been based on investigations performed in accordance with the standards set out in Paragraph 1. Classification and identification of these factors are judgmental in nature and even comprehensive sampling and testing programs, implemented with the appropriate equipment by experienced personnel, may fail to locate some conditions. All investigations, or building envelope descriptions, utilizing the standards of Paragraph 1 will involve an inherent risk that some conditions will not be detected and all documents or records summarising such investigations will be based on assumptions of what exists between the actual points sampled. Actual conditions may vary significantly between the points investigated and all persons making use of such documents or records should be aware of, and accept, this risk. Some conditions are subject to change over time and those making use of the Report should be aware of this possibility and understand that the Report only presents the conditions at the sampled points at the time of sampling. Where special concerns exist, or the Client has special considerations or requirements, the Client should disclose them so that additional or special investigations may be undertaken which would not otherwise be within the scope of investigations made for the purposes of the Report.

Reliance on Provided information: The evaluation and conclusions contained in the Report have been prepared on the basis of conditions in evidence at the time of site inspections and on the basis of information provided to us. We have relied in good faith upon representations, information and instructions provided by the Client and others concerning the site. Accordingly, we cannot accept responsibility for any deficiency, misstatement or inaccuracy contained in the report as a result of misstatements, omissions, misrepresentations or fraudulent acts of persons providing information.

To avoid misunderstandings, KONTUR should be retained to work with the other design professionals to explain relevant engineering findings and to review their plans, drawings, and specifications relative to engineering issues pertaining to consulting services provided by KONTUR. Further, KONTUR should be retained to provide field reviews during the construction, consistent with building codes guidelines and generally accepted practices. Where applicable, the field services recommended for the project are the minimum necessary to ascertain that the Contractor's work is being carried out in general conformity with KONTUR's recommendations. Any reduction from the level of services normally recommended will result in KONTUR providing qualified opinions regarding adequacy of the work.

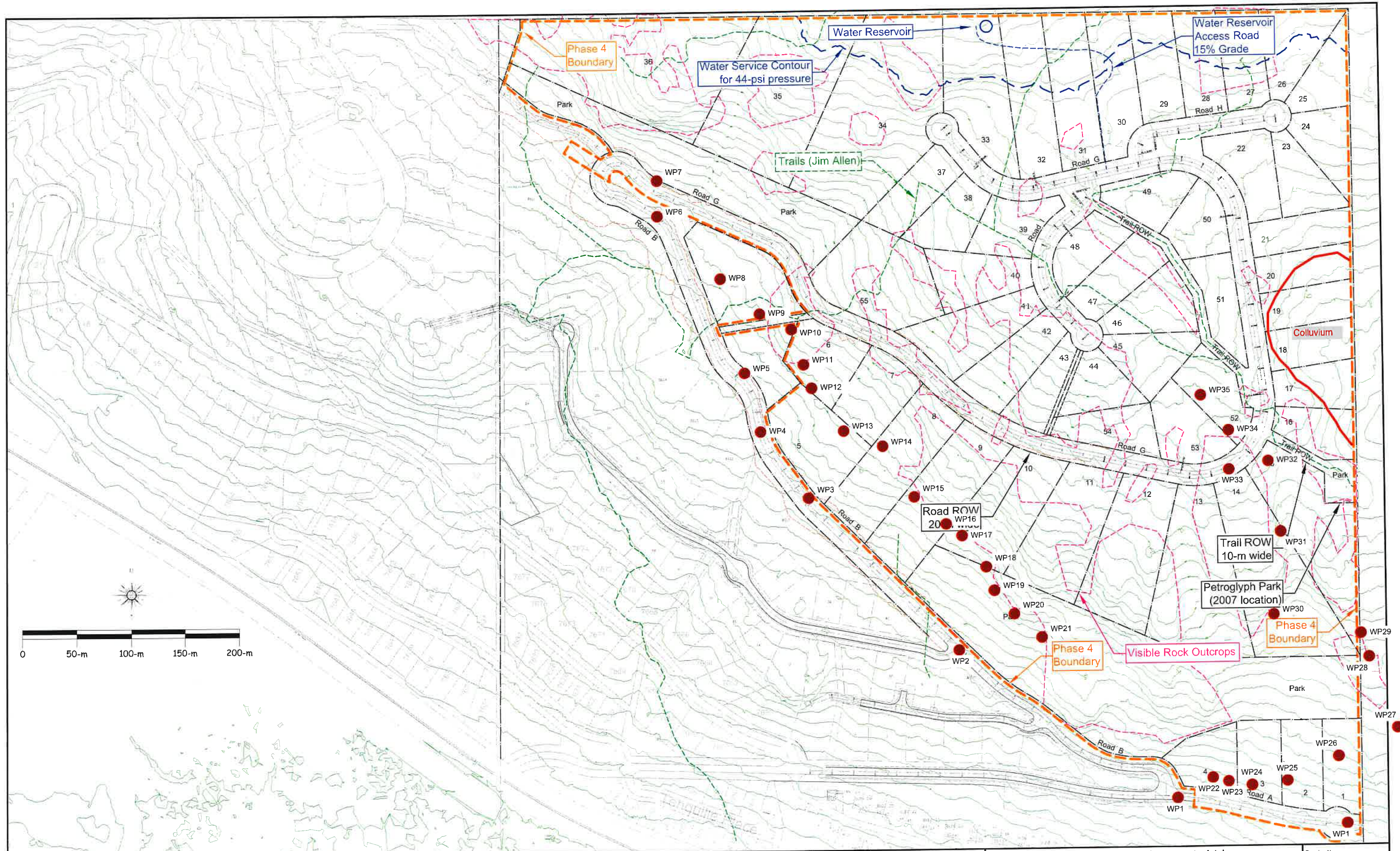
### 6. ALTERNATE REPORT FORMAT

When KONTUR submits both electronic file and hard copies of reports, drawings and other documents and deliverables (KONTUR's instruments of professional service), the Client agrees that only the signed and sealed hard copy versions shall be considered final and legally binding. The hard copy versions submitted by KONTUR shall be the original documents for record and working purposes, and, in the event of a dispute or discrepancy, the hard copy versions shall govern over the electronic versions. Furthermore, the Client agrees and waives all future right of dispute that the original hard copy signed version archived by KONTUR shall be deemed to be the overall original for the Project.

The Client agrees that both electronic file and hard copy versions of KONTUR's instruments of professional service shall not, under any circumstances, no matter who owns or uses them, be altered by any party except KONTUR. The Client warrants that KONTUR's instruments of professional service will be used only and exactly as submitted by KONTUR.

The Client recognizes and agrees that electronic files submitted by KONTUR have been prepared and submitted using specific software and hardware systems. KONTUR makes no representation about the compatibility of these files with the Client's current or future software and hardware systems.





No	Date	Description
1		

**GILBEY ENGINEERING SERVICES**

Design By:  
 Drawn By: GRC  
 Scale: As Shown

Client: Sunstone Ridge Developments Ltd.  
 Project: Sunstone Phase 4  
 Drawing: Layout Concept with Contours (25Nov20)

Drawing No.:  
 Issue No.:  
 Sheet No.:  
 Village File #:



**Photo 1** – Bedrock Cut Slopes along Road B (WP1)



**Photo 2** – Soil Cut Slopes along Road B (WP2)



**Photo 3** – Bedrock Outcrops above Road B (WP3)



**Photo 4** – Soil Cut Slopes Bedrock Outcrops above (WP4)



**Photo 5** – Small Drainage  
Crosses Road B (WP5)



**Photo 6** – Rockfall Source Area (WP6)



**Photo 7** – Bottom Rockfall  
Runout (WP7)



**Photo 8** – Large, Isolated  
Rounded Boulders (WP8)



**Photo 9 -- Small Drainage (WP10)**



**Photo 10 -- Toe Bedrock Slope, Glaciated (WP11)**



**Photo 11 -- Large Rounded Rock on Bedrock Slope (WP13)**



**Photo 12 -- Bedrock with Some Loose Rock (WP15)**



**Photo 13** – Moss Covered Rockfall Originating from 10m High Bluff (WP15)



**Photo 15** – Moss Covered Talus 10m Wide Zone (WP17)



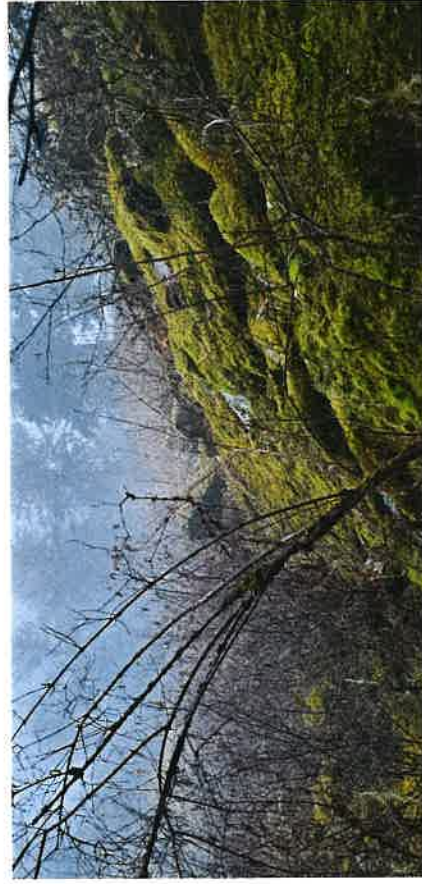
**Photo 14** – Toe Bedrock Bluff – No Rockfall (WP16)



**Photo 16 – Toe Glaciated Bedrock Slope (WP18)**



**Photo 17 – Toe Glaciated Bedrock Slope Loose Rocks (WP18)**



**Photo 18 – Mossy Talus up to 450mm Diameter (WP21)**



**Photo 19** – Cut Slopes Road B (WP1)



**Photo 20** – Moderately inclined Soil Slope (WP22)



**Photo 21** – Isolated Scarp 1m depth, 5m length (WP24)



**Photo 22** – Upturned Tree Exposing Broken Rock and sand with some gravel and silt (WP25)



**Photo 23 – Gentle Slope (About 6H:1V) (WP28)**



**Photo 24 – Bedrock Ridge (WP29)**



**Photo 25 – West Side Gully up to About 12m Height (WP30)**



**Photo 26 – East Side Gully up to About 5m Height (WP30)**





**Photo 28** – Bedrock Slope West Side of Gully (WP32)



**Photo 30** – Crest of Bedrock Slope West Side Gully (WP34)



**Photo 27** – End Bedrock Slope East Side Gully (WP31)



**Photo 29** – Bedrock Slope Glaciated (WP33)



**Photo 31 - Isolated Wetland Area, Surrounded by Bedrock (WP35)**



**Photo 32 - Access Road (WP36)**

# APPENDIX D: LANDSLIDE ASSESSMENT ASSURANCE STATEMENT

Note: This Statement is to be read and completed in conjunction with the "APEGBC Guidelines for Legislated Landslide Assessments for Proposed Residential Development in British Columbia", March 2006/Revised September 2008 ("APEGBC Guidelines") and the "2006 BC Building Code (BCBC 2006)" and is to be provided for *landslide assessments* (not floods or flood controls) for the purposes of the Land Title Act, Community Charter or the Local Government Act. Italicized words are defined in the APEGBC Guidelines.

To: The Approving Authority  
Village of Pemberton

Date: February 20, 2021

Box 100, 7400 Prospect St, Pemberton, BC V0N 2L0

Jurisdiction and address

With reference to (check one):

- Land Title Act (Section 86) – Subdivision Approval
- Local Government Act (Sections 919.1 and 920) – Development Permit
- Community Charter (Section 56) – Building Permit
- Local Government Act (Section 910) – Flood Plain Bylaw Variance
- Local Government Act (Section 910) – Flood Plain Bylaw Exemption
- British Columbia Building Code 2006 sentences 4.1.8.16 (8) and 9.4 4.4.(2) (Refer to BC Building and Safety Policy Branch Information Bulletin B10-01 issued January 18, 2010)

For the Property: Lot 1, District Lot 211, Lillooet District Plan EPP72101

Legal description and civic address of the Property

The undersigned hereby gives assurance that he/she is a *Qualified Professional* and is a *Professional Engineer or Professional Geoscientist*.

I have signed, sealed and dated, and thereby certified, the attached *landslide assessment* report on the Property in accordance with the *APEGBC Guidelines*. That report must be read in conjunction with this Statement. In preparing that report I have:

Check to the left of applicable items

- 1. Collected and reviewed appropriate background information
- 2. Reviewed the proposed *residential development* on the Property
- 3. Conducted field work on and, if required, beyond the Property
- 4. Reported on the results of the field work on and, if required, beyond the Property
- 5. Considered any changed conditions on and, if required, beyond the Property
- 6. For a *landslide hazard analysis* or *landslide risk analysis* I have:
  - 6.1 reviewed and characterized, if appropriate, any *landslide* that may affect the Property
  - 6.2 estimated the *landslide hazard*
  - 6.3 identified existing and anticipated future *elements at risk* on and, if required, beyond the Property
  - 6.4 estimated the potential *consequences* to those *elements at risk*
- 7. Where the *Approving Authority* has adopted a *level of landslide safety* I have:
  - 7.1 compared the *level of landslide safety* adopted by the *Approving Authority* with the findings of my investigation
  - 7.2 made a finding on the *level of landslide safety* on the Property based on the comparison
  - 7.3 made recommendations to reduce *landslide hazards* and/or *landslide risks*
- 8. Where the *Approving Authority* has **not** adopted a *level of landslide safety* I have:

- 8.1 described the method of *landslide hazard analysis* or *landslide risk analysis* used
- 8.2 referred to an appropriate and identified provincial, national or international guideline for *level of landslide safety*
- 8.3 compared this guideline with the findings of my investigation
- 8.4 made a finding on the *level of landslide safety* on the Property based on the comparison
- 8.5 made recommendations to reduce *landslide hazards* and/or *landslide risks*
- 9. Reported on the requirements for future inspections of the Property and recommended who should conduct those inspections.

Based on my comparison between

Check one

- the findings from the investigation and the adopted *level of landslide safety* (item 7.2 above)
- the appropriate and identified provincial, national or international guideline for *level of landslide safety* (item 8.4 above)

I hereby give my assurance that, based on the conditions<sup>[1]</sup> contained in the attached *landslide assessment* report,

Check one

- for subdivision approval, as required by the Land Title Act (Section 86), "that the land may be used safely for the use intended"

Check one

- with one or more recommended registered covenants.
- without any registered covenant.

- for a development permit, as required by the Local Government Act (Sections 919.1 and 920), my report will "assist the local government in determining what conditions or requirements under [Section 920] subsection (7.1) it will impose in the permit".

- for a building permit, as required by the Community Charter (Section 56), "the land may be used safely for the use intended"

Check one

- with one or more recommended registered covenants.
- without any registered covenant.

- for flood plain bylaw variance, as required by the "Flood Hazard Area Land Use Management Guidelines" associated with the Local Government Act (Section 910), "the development may occur safely".

- for flood plain bylaw exemption, as required by the Local Government Act (Section 910), "the land may be used safely for the use intended".

Evan Sykes, P.Eng.

N

S

February 20, 2021

Date

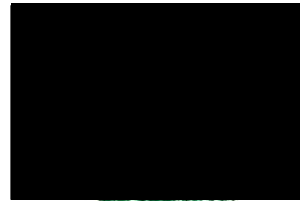
<sup>[1]</sup> When seismic slope stability assessments are involved, *level of landslide safety* is considered to be a "life safety" criteria as described in the National Building Code of Canada (NBCC 2005), Commentary on Design for Seismic Effects in the User's Guide, Structural Commentaries, Part 4 of Division B. This states:

*"The primary objective of seismic design is to provide an acceptable level of safety for building occupants and the general public as the building responds to strong ground motion; in other words, to minimize loss of life. This implies that, although there will likely be extensive structural and non-structural damage, during the DGM (design ground motion), there is a reasonable degree of confidence that the building will not collapse nor will its attachments break off and fall on people near the building. This performance level is termed 'extensive damage' because, although the structure may be heavily damaged and may have lost a substantial amount of its initial strength and stiffness, it retains some margin of resistance against collapse".*



Address

Port Coquitlam, BC, V3C 6G5



May 22, 2021

(Affix Professional seal here)

If the *Qualified Professional* is a member of a firm, complete the following.

I am a member of the firm Kontur Geotechnical Consultants Inc.  
and I sign this letter on behalf of the firm. (Print name of firm)

# Schedule F

<b>Sunstone Subdivision – Phase 4</b>	
<b>Compliance with Village of Pemberton Hillside Development Guidelines</b>	
<b>Criterion</b>	<b>How Proposed Subdivision will be Consistent with Village Objectives</b>
<b>Site and Subdivision Design</b>	
Visual Impact	<ul style="list-style-type: none"> <li>▪ native trees and vegetation will be retained and structures will be screened through natural vegetation buffers provided on each property</li> <li>▪ buildings will not dominate the landscape due to the large size of the lots</li> <li>▪ dark-sky street lighting standards will be incorporated so as to protect night-time views</li> <li>▪ the natural hillside slope will maintain view corridors from within the development</li> <li>▪ ground disturbed during servicing construction will be re-vegetated</li> </ul>
Housing Diversity and Design	<ul style="list-style-type: none"> <li>▪ a statutory building scheme will be registered on each property to encourage articulated buildings, stepped buildings, varied roof lines, terraced yards and maintenance of up-slope views</li> <li>▪ coach houses as a permitted accessory use in the zoning will create additional rental options for the housing needs of the community</li> </ul>
Buildings and Structures Massing and Setbacks	<ul style="list-style-type: none"> <li>▪ to reduce excessive cuts and fills, it is proposed to zone the property to provide a minimum 5-m front-yard set-back for buildings instead of the 6-m set-back on typical residential properties</li> <li>▪ to respond to the natural slope of the hillside, the statutory building scheme registered on each lot will encourage stepped foundations to help integrate the building with the natural landform</li> <li>▪ the large size of the lots will result in increased spacing between structures on adjacent properties and will reduce overall development massing</li> </ul>
Streetscape	<ul style="list-style-type: none"> <li>▪ the main roadway will have a paved 2.1-m wide walkway for pedestrians and cyclists so that they feel safe using the roadway</li> <li>▪ a network of trails and walkways is provided within the Sunstone Subdivision that connects to trails, walkways and parks on adjacent properties</li> </ul>
Grading and Retaining	<ul style="list-style-type: none"> <li>▪ road design follows the natural terrain as best as possible so as to minimize cuts and fills</li> <li>▪ retaining structures will be used to avoid excessive cut and fill slopes adjacent to roadways</li> <li>▪ the statutory building scheme registered on each lot will encourage site development to conform to the natural slope of the hillside, including driveways that follow the natural terrain and retaining structures that integrate well with the onsite architectural character</li> </ul>
Geotechnical and Hydro-geological	<ul style="list-style-type: none"> <li>▪ all roadworks structures and retaining structures will be designed and inspected by a professional geotechnical consultant</li> <li>▪ post-development stormwater runoff is controlled so as not to exceed pre-development levels</li> </ul>
<b>Natural Environment</b>	
Landscape Vegetation	<ul style="list-style-type: none"> <li>▪ the large lot size and natural vegetation buffers will promote retention of native trees and natural vegetation</li> <li>▪ ground disturbed during servicing construction will be re-vegetated</li> </ul>
Wildfire Mitigation	<ul style="list-style-type: none"> <li>▪ a Fire Risk Management Strategy will be developed to minimize the community's interface fire risk</li> </ul>
<b>Works and Services</b>	
Municipal Services and Utilities	<ul style="list-style-type: none"> <li>▪ municipal services will be provided in accordance with the Village of Pemberton Subdivision and Development Bylaw, and professional consultants will be retained for the design, inspection and certification of the municipal services</li> <li>▪ retaining structures will be used on roadways to minimize environmental and visual impact</li> <li>▪ a custom curb/gutter design will be used that is better suited for snow-clearing operations, and snow-dump areas will be incorporated into the design</li> <li>▪ power/telephone/cablevision services will be buried to minimize visual impact, and installation of these services in a common corridor under the paved walkway will be done to reduce effective right-of-way width</li> </ul>