



111-2036 South Island Hwy  
Campbell River, BC V9W 0E8  
Phone: (250)-914-8485  
Fax: (250) 914-8490

23 December 2022

**City of Campbell River**

Development Services Department  
301 St. Ann's Road  
Campbell River, BC  
V9W 4C7

**RE: MAJOR DEVELOPMENT PERMIT WITH VARIANCE and MINOR DEVELOPMENT PERMIT (SPEA AND EAGLES NEST); 1650 GALERNO ROAD & 0 ALDER STREET**

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WestUrban Developments Ltd. is applying for 2 development permits:

- A. Major Form and Character Development Permit with variance to height; and
- B. Minor Development Permit for SPEA, Eagle's Nest, and Steep Slope.

**A. Major Form and Character Development Permit with variance to height**

WestUrban Developments Ltd. is proposing to develop the subject lands with 3 apartment buildings (proposed to be market rental units), totaling 200 units, with landscaping, an internal road, and the majority of parking to be underground (2 level underground parkade for each building – making use of density bonus provision 5.33.3 (a) which permits an additional 5 dwelling units per hectare where 80% or more of the required parking is underground).

Due to the significant environmental features on site, a large portion of the site is not developable, therefore, without compromising the density permitted under the Zoning, an additional storey on each building has been added and the development requires a height variance (from 10m to 16m) for Buildings A-C.

The Development Permit Guidelines state "Building height variances will be considered where the variance serves to enhance the overall architectural design of the building without negatively impacting key view corridors, sightlines or the pedestrian realm". WestUrban Developments Ltd. proposes this variance without compromising key view corridors, sightlines and the pedestrian realm. The additional height of each building allows for more compact, higher quality of design for the site. The RM-1 zoning permits ~3-storeys (10m) in height and the application proposes 4-storeys (16m) in height. A vegetated buffer is intended to remain at the rear of the development to provide buffering and screening for adjacent residential properties, as well the height has been stepped back at the rear of the building to mitigate the visual impacts of the massing of the building for the residential properties at the rear of the development.

The following items have been provided as part of the MJV application:

- i. Letter of intent (one letter for both the MJV and MIP)
- ii. Application form (one application for both the MJV and MIP)
- iii. Site Disclosure statement (2 – 1650 Galerno, 0 Alder St)
- iv. Completed checklists: CEED, MF DP Guidelines, General MF DP Guidelines
- v. Architectural plans



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- vi. Landscape plan
- vii. Landscape quote

**B. Minor Development Permit for SPEA, Eagle's Nest and Steep Slope**

The subject properties are within the Streamside, Eagle's Nest, and Steep Slope DP areas. A memo drafted by SNRC has been provided which confirms that an Eagle's nest has not been present in the tree since 2014. A RAPR report has been provided and submitted to the Province for review. All development proposed on the site is designed and intended to stay outside of the SPEA setback area and located on the northern portion of the site. A Geotechnical memo has been submitted with the application and states "the land may be used safely for the use intended" (Ryzuk Geotechnical, Slope Assessment, October 2022).

The following items have been provided as part of the MIP application:

- i. RAPR report
- ii. Cost estimate for RAPR report
- iii. Eagle's Nest memo
- iv. Geotechnical Slope Assessment

A zoning compliance table has been provided in Attachment #1.

Thank you for reviewing the discussed applications, should you have any questions please reach out to the undersigned at any point.

Regards,

**Meghan Norman, MCP, RPP, MCIP**  
**Development Manager**  
**WestUrban Developments Ltd.**  
111-2036 Island Hwy S  
Campbell River, BC Canada V9W 0E8  
C: (250) 201-8864  
[www.westurban.ca](http://www.westurban.ca)

### Attachment #1 – Zoning Compliance

Residential Multiple One (RM-1) Zone		
Existing	Proposed	Meet Bylaw?
Use: Apartment	Use: Apartment	Complies
Density: 25 uph; +5 uph for 80% underground parking	Density: 6.85 ha (1650 Galerno & 0 Alder St) 25 uph x 6.85 ha = 171 units 5 uph x 6.85 ha = 34 units (density bonus) 171 units + 34 units = 205 units permitted; 200 units proposed	Complies
Lot coverage: 50%	Lot coverage: well under 50%	Complies
Setbacks: Front – 7.5m Rear – 7.5m Side – 3.0m	Setbacks: Front – 7.5m Rear – 7.5m Side – 7.5m	Complies
Max. Height: 10m	Height proposed: 16.0m	Variance for height required.

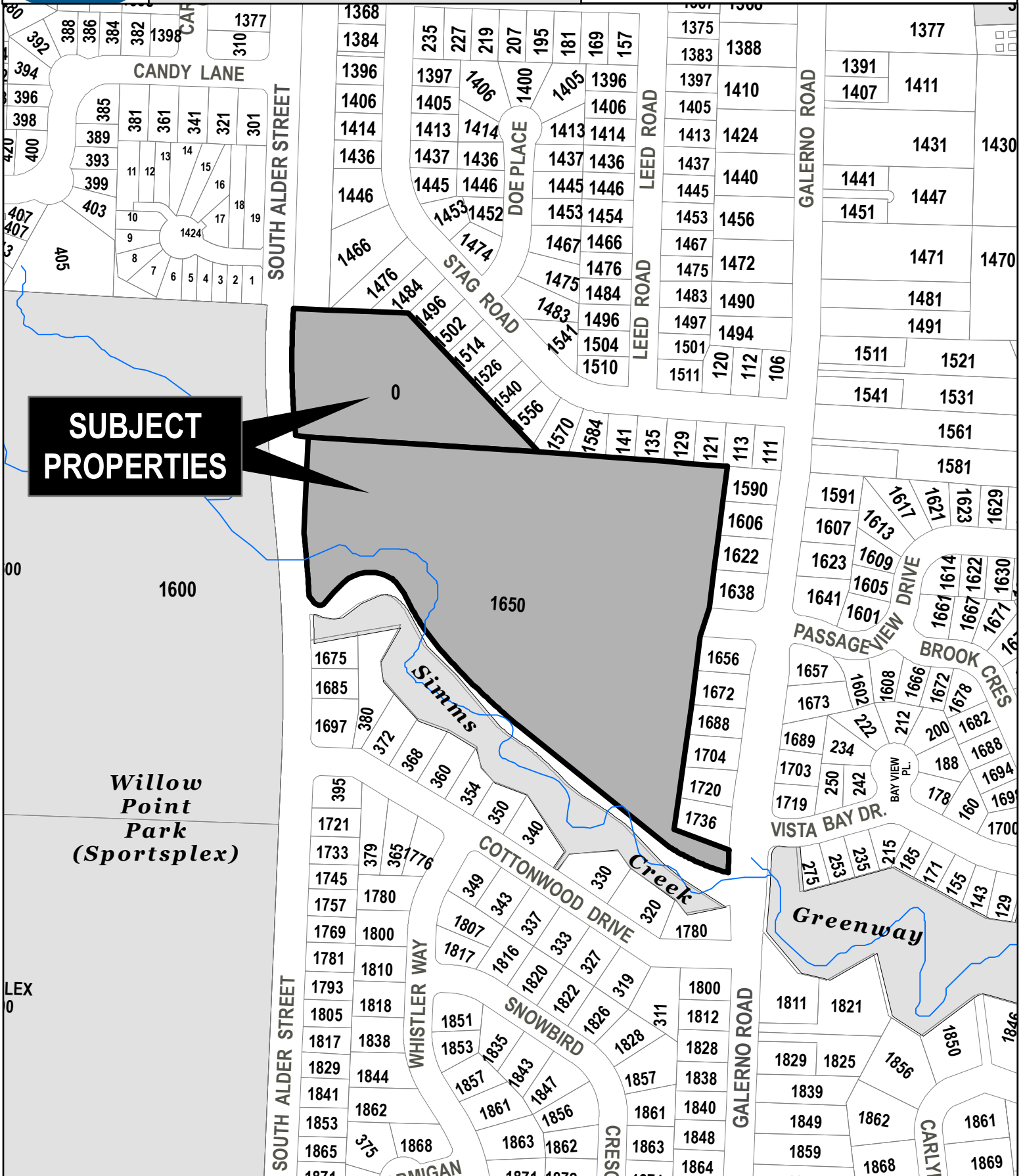


**CITY OF CAMPBELL RIVER**  
**DEVELOPMENT SERVICES**

**Subject Properties Map**  
**1650 Galerno Road**  
**'0' South Alder Street**  
**P2300002 MIP**



Scale - 1:3,500







## RYZUK GEOTECHNICAL

Engineering & Materials Testing

6-40 Cadillac Ave, Victoria, BC, V8Z 1T2 Tel: 250-475-3131 E-mail: mail@ryzuk.com www.ryzuk.com

October 21, 2022  
File No: 8298-15

WestUrban Developments Ltd.  
#111-2036 Island Hwy. S  
Campbell River, BC  
V9W 0E8

Attn: Meghan Norman, MCP, RPP, MCIP (By E-mail: mnorman@westurban.ca)

Re: Slope Assessment  
1650 Galerno Rd. – Campbell River, BC

As requested, we have assessed the geotechnical conditions as they relate to the safe use of the property and the construction of the proposed development. The site is designated as a Hazard Conditions Development Permit Area Steep Slopes (Bylaw# 3869, Section 11B), however, a permit exemption may be granted if the proposed work is professionally assessed to be within an area safe from geohazards. The following letter is an addendum to our initial geotechnical report dated, June 3, 2022. Our associated observations, comments, and recommendations in this regard are contained herein. Our work has been undertaken in accordance with the previously accepted Terms of Engagement.

The subject property is located on the east side of S Alder Street and is bounded by residential properties to the north and east, S Alder Street to the west and Simms Creek to the south. Currently, the site is undeveloped, and sits north of the Stream Protection and Enhancement Area (SPEA) associated with Simms Creek. The property is heavily vegetated with scrub/brush along with coniferous trees spread over the entire lot area. Subsurface soil conditions generally consisted of a very thin layer of surficial organic topsoil overlying native dense sand which transitions to a stiff brown clay layer extending approximately 3.6 m below ground surface and is then underlain by silty dense sand with some cobbles.

Topographically, the proposed development site slopes down to the south at an inclination of between 5 degrees to 18 degrees within the proposed building areas and becomes progressively steeper within the SPEA towards Simms Creek roughly 8 – 15 m below the slope crest. Based on the provided documentation, the existing environmental setback boundary is proposed to be modified which would allow for construction closer to the SPEA slope. Further, we note that a section along the northern property line, near the southern property limits of civic addresses 1496 to 1570 Stag Rd., is within Campbell River's Hazard Conditions Development Permit Area for Steep Slopes. Therefore, a detailed site-specific slope review has been carried out based on our observed site conditions and the topographic survey from McElhanney Associates, file 2222 02280 TOPO.

We understand it is proposed to construct a new strata development consisting of three residential buildings of three-storey's each above single levels of underground parking, a new strata road, and civil

infrastructure. The proposed building locations have been taken from WestUrban’s site plan drawing titled “Galerno Development”, dated February 25, 2022.

We completed a desktop review of the noted topographic information and analyzed slope stability models to determine the feasibility of the proposed development with respect to slope instability. In particular, we were interested in the steeper slope sections near the southern property limits of civic addresses 1502 and 1570 Stag Rd. Attached is a location site plan showing the sections used.

A computer-based assessment of slope sections near the southern property limits of civic addresses 1502 and 1570 Stag Rd were completed using the above noted site plan and topographic survey to replicate the slope geometry to estimate the potential of deep-seated instability impacting the proposed development location. The analysis was carried out using Slide2 software developed by Rocscience Inc., where static and seismic scenarios were analyzed by Limit Equilibrium (LE) method. Furthermore, our analysis took into consideration Bishop’s Simplified, Spencer, and GLE/Morgenstern-Price methods to compute a Factor of Safety (FOS) regarding slope stability.

Results indicated the proposed development area to be generally stable and we do not consider the proposed development location to be subject to deep-seated slope instability. The attached slope stability models show the results for a 2% probability of exceedance in 50 years seismic event in conformance with the pseudo static LE method outlined by EGBC Guidelines for Legislated Landslide Assessments, Appendix E. Based on the above, we consider construction of the proposed development in the location indicated on the Site Plan to be feasible without undue risk from a geotechnical perspective.

In summary, we consider that the land may be used safely for the use intended as described above, pursuant to Section 56 of the *Community Charter*, Section 488 (1) (b) of the *Local Government Act*, and *Campbell River’s Hazard Conditions Development Permit Area for Steep Slopes (Bylaw #3869, Section 11B)*. Enclosed is Appendix D: Landslide Assessment Assurance Statement. Ryzuk Geotechnical acknowledges that Campbell River may rely on this report for the issuance of a development permit and may be included in a restrictive covenant.

We trust the preceding is suitable for your purposes at present. Please do not hesitate to contact our office if we can be of further assistance.

Best regards,  
Ryzuk Geotechnical



Sean Gugay, EIT  
Junior Engineer

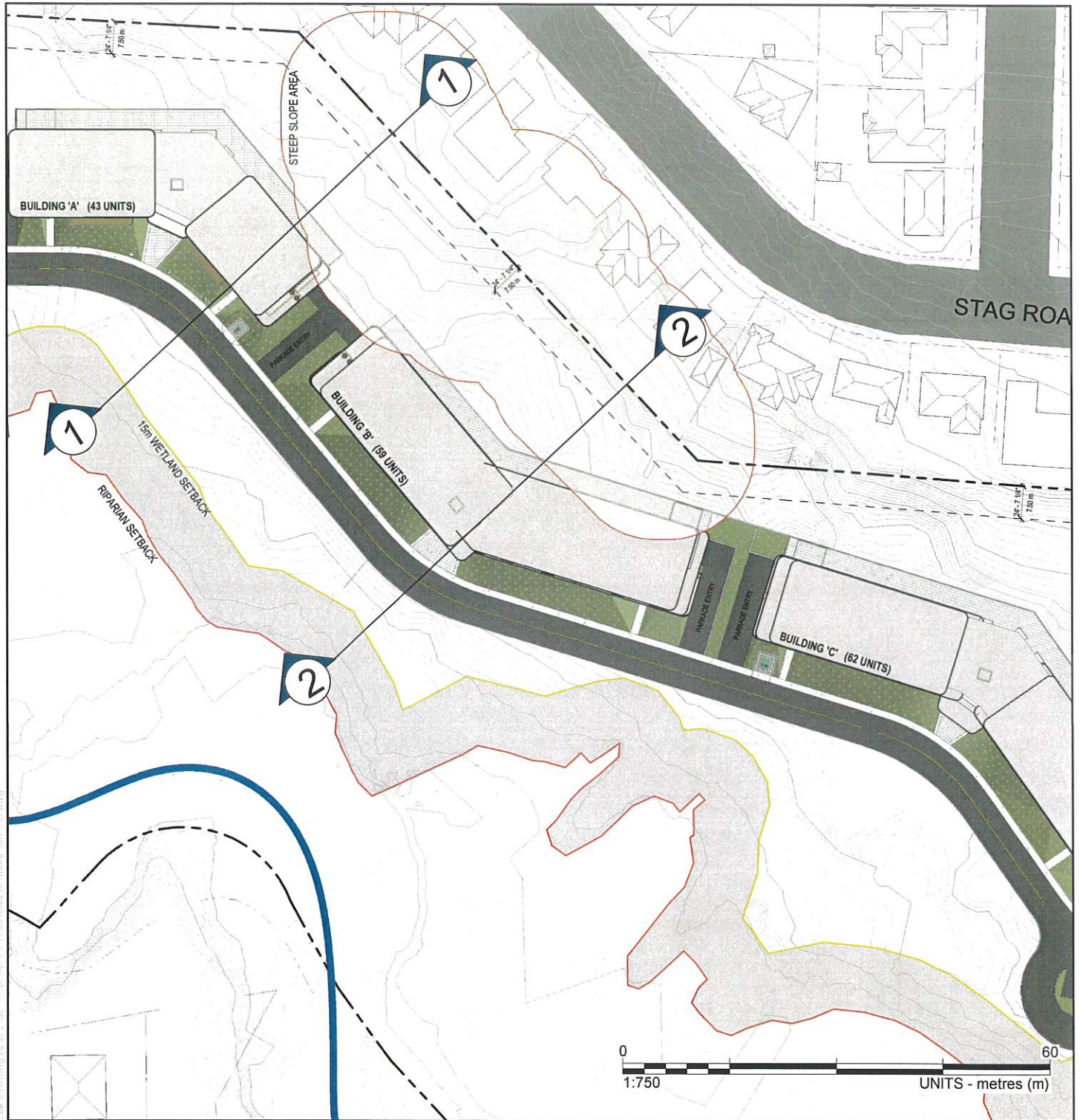


Cam Schellenberg, P.Eng.  
Intermediate Engineer

Attached

- Slope Section Locations
- Slope Model Results
- Appendix D: Landslide Assessment





**NOTES**

1. This drawing is for the intended use of the client for the specified project, and should not be used elsewhere without the express permission of the client and/or Ryzuk Geotechnical.
2. This drawing is scaled for 8.5x11 sheet and does not require further scaling to fit. Scales will differ if printed on different sheet size.
3. Drawing background taken from WestUrban site Plan dated 02/25/2022.



28 CREASE AVENUE - VICTORIA, BC V6Z 1S3  
TEL: 250-475-3131 FAX: 250-475-3611  
mail@ryzuk.com

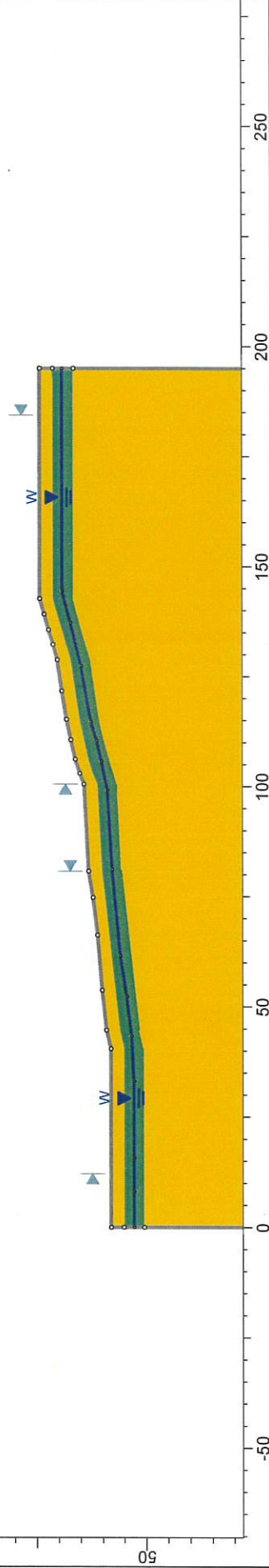
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DRAWN BY SG	CLIENT WestUrban Developments Ltd.
PROJECT MANAGER CPAS	PROJECT TITLE Geotechnical Assessment
REVIEW ARJ	PROJECT ADDRESS 1650 Galerno Road - Campbell River, BC
SCALE 1:750	DRAWING NAME <b>Slope Section Locations</b>
DATE 2022/10/13	PROJECT No. 8298-15
	SHEET No. 1 of 1
	REVISION 1 00



Method Name	Min FS
Bishop simplified	1.125
Spencer	1.150
GLE / Morgenstern-Price	1.159



<b>Project</b>		1650 Galerno Rd - Slope Stability Analysis	
<i>Group</i>	Section 1 (as per Section Location Plan)	<i>Scenario</i>	Full Seismic Scenario
<i>Drawn By</i>	SG	<i>Company</i>	Ryzuk Geotechnical
<i>Date</i>	2022-10-07, 3:55:52 PM	<i>File Name</i>	Slide.section1.slmd

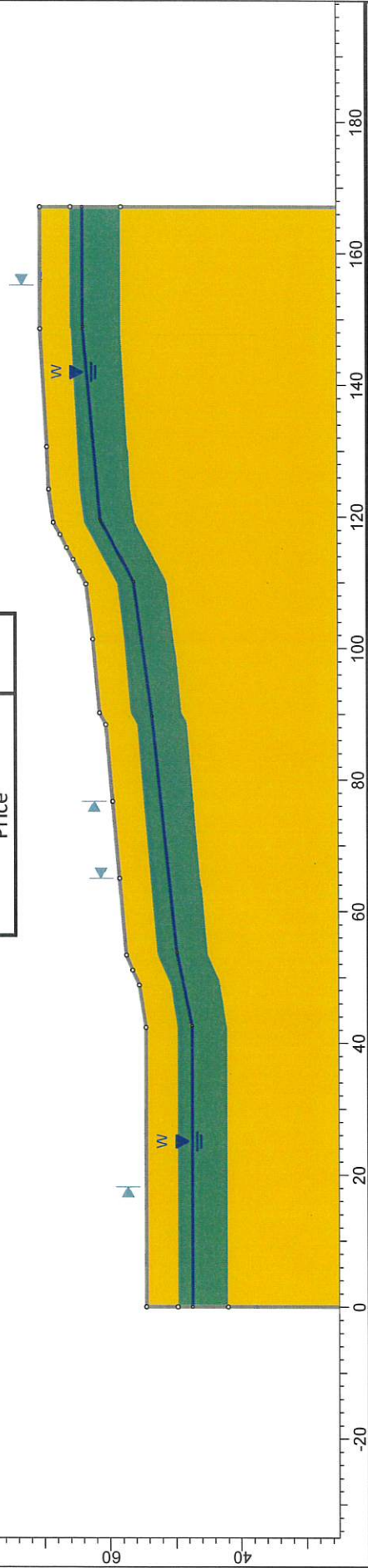




0.495



Method Name	Min FS
Bishop simplified	1.170
Spencer	1.204
GLE / Morgenstern-Price	1.208



### 1650 Galerno Rd - Slope Stability Analysis

<b>rocscience</b>		Project	
Group	Section 2 (as per Section Location Plan)	Scenario	Full Seismic Scenario
Drawn By	SG	Company	Ryzuk Geotechnical
Date	2022-10-07, 4:13:44 PM	File Name	Slide.section2.sifmd

## 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  
Campbell River

Date: 2022-10-21

301 St Ann's Rd, Campbell River, BC, V9W 4C7

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: **Parcel Number 002169011 Plan Number VIP20750**  
**1650 Galerno Rd. - Campbell River, BC**

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".

Cam Schellenberg, P. Eng.

2022-10-21

Name (print)

Date

Signature

<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".*



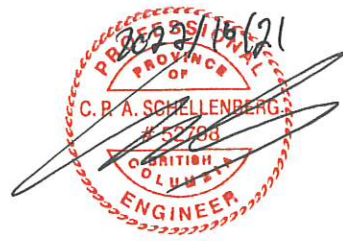
6-40 Cadillac Ave, Victoria, BC

Address

V8Z 1T2

250-475-3131

Telephone



(Affix Professional seal here)

PTON:1007996

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

I am a member of the firm Ryzuk Geotechnical  
and I sign this letter on behalf of the firm.

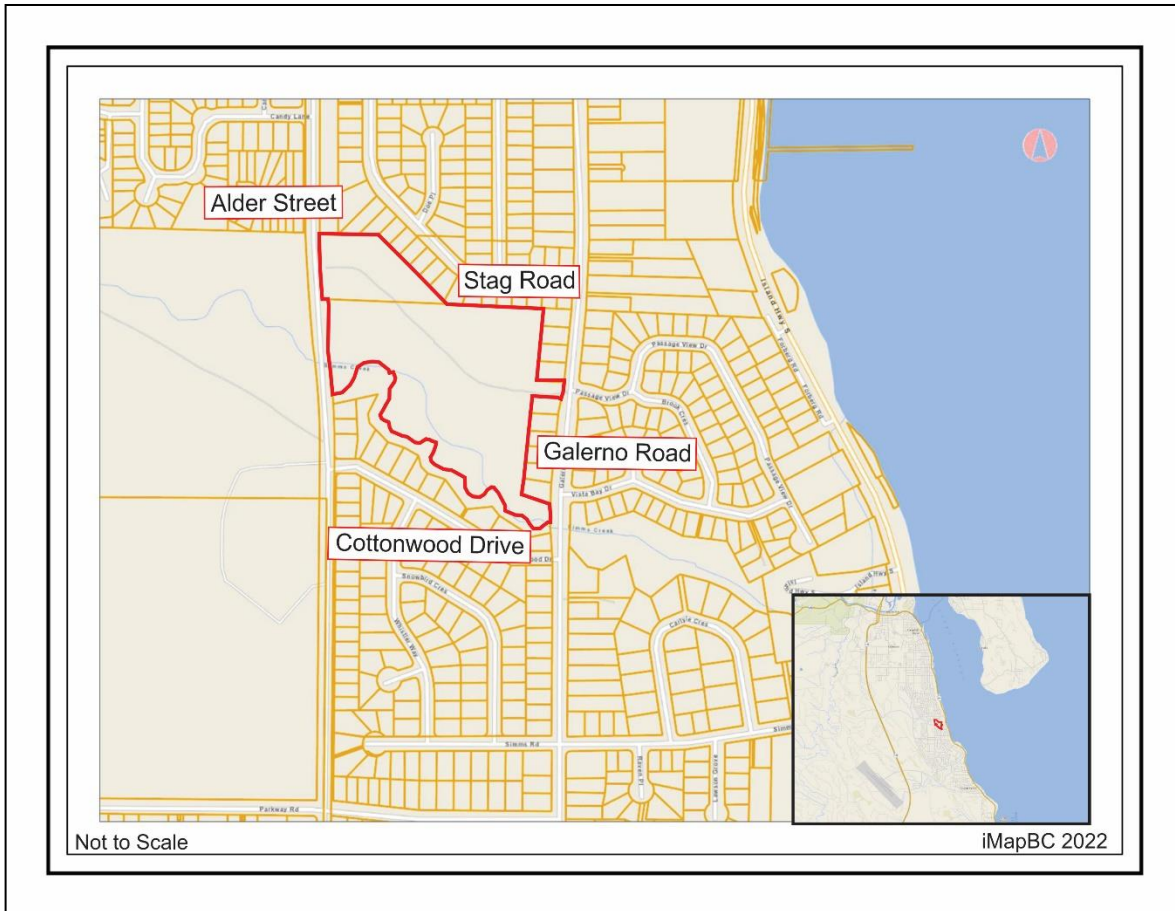
(Print name of firm)

**MEMO:****Date:** October 04, 2022**To:** WestUrban Developments Ltd.  
Attention: Cameron Salisbury  
via email: csalisbury@westurban.ca**From:** Cindy Hannah, RPBio and Mario Cottone, BIT  
Strategic Natural Resource Consultants Inc.  
321-1180 Ironwood Street  
Campbell River, BC V9W 5P7**RE:** **Assessment of one Bald Eagle nest near 1650 Galerno Road, Campbell River, BC****Background**

One Bald Eagle nest has been previously identified at 380 Cottonwood Drive, near the proposed development area at 1650 Galerno Road (Legal Description: LOT A DISTRICT LOT 210 COMOX LAND DISTRICT PLAN VIP20750 EXCEPT PLAN 21822 23524 23747 30669 & 33688 and SECTION 29 TOWNSHIP 1 COMOX LAND DISTRICT PLAN VIP552 PARCEL B, EXCEPT PLAN 31448 31938 32672 & 34335, OF PL 552), in Campbell River, BC (Figure 1).

The Bald Eagle has no direct protection in Canada and is currently yellow listed in BC. It is not a listed species under the Species at Risk Act (SARA) or the Identified Wildlife Management Strategy 2004 (IWMS) under the Forest and Range Practices Act (FRPA). The only provincial management implication of Bald Eagles relates to the *Wildlife Act* of British Columbia, Section 34(b) that states: “A person commits an offense if the person, except as provided by regulation, possesses, takes, injures, molests or destroys the nest of an eagle, peregrine falcon, gyrfalcon, osprey, heron or burrowing owl.” There exists a prohibition of import or export of eagles and eagle parts under the *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (CITES) convention, administered under the *Export and Import Permits Act*. Additionally, Bald Eagle nests/perching trees are managed under the Bald Eagle Nest Tree Development Permit Area under the City of Campbell Rivers Official Community Plan Bylaw 3475, 2012. Under the bylaw, a vegetated buffer of 60 m, measured as a radius from the base of the nest tree (includes trees that have a nest active or not, and includes a tree with a nest remnant and includes a tree where a nest is under construction) is required on all Bald Eagle nests. The nest buffer applies to nest trees where a nest is no longer present, until five breeding seasons have passed with no signs of nesting activity. In addition, a breeding season quiet buffer is applied to an additional area 100 m around the nest if the nest is determined to be active by a Registered Professional Biologist (RPBio). This breeding season quiet buffer only applies to active nests, as determined by a RPBio. The quiet season buffer will not apply if there is no nesting activity as of April 30<sup>th</sup>.

In consideration of a development permit for the subject property, Strategic Natural Resource Consultants was contracted by WestUrban, to assess the nest for occupancy or associated activities and to provide recommendations for future development.



**Figure 1: Overview map showing location of subject property (red) in relation to Campbell River (inset map).**

### **Methods**

Prior to commencing field work, desktop preparation was undertaken to research the area, review background documents, and add georeferenced nest locations previously identified and maps to an iPad. Relevant legislation and accepted methods for ground based surveys for raptors were also reviewed.

The nest tree and surrounding area was surveyed by foot on February 1, May 10, and August 30, 2022, by Mario Cottone, BIT of SNRC. The survey was conducted within and outside of the breeding season for Bald Eagles; signs of past occupation were searched for. Multiple viewpoints were used to view the nest tree from different angles to assess the nest condition and status (Figure 2).

### **Equipment**

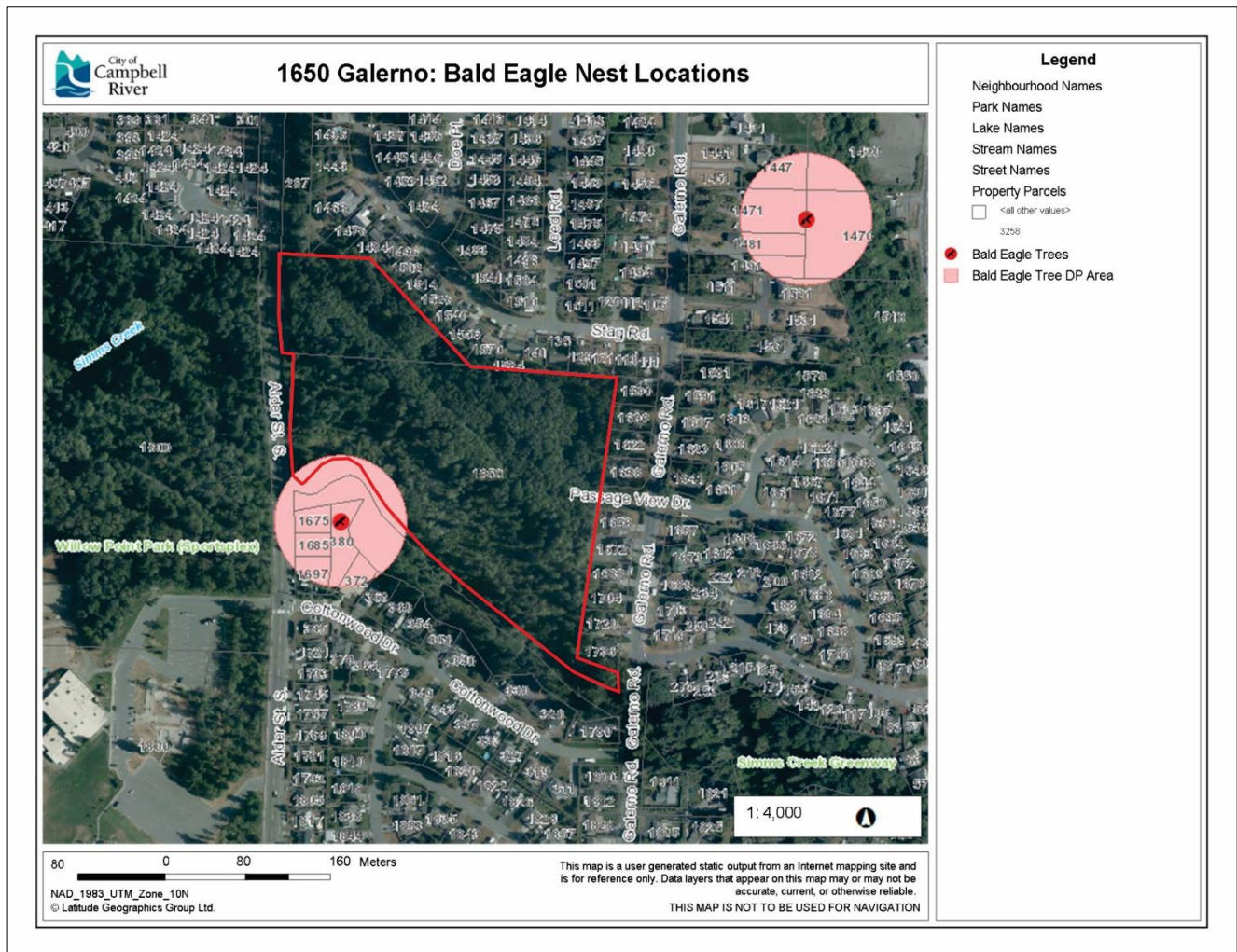
- Panasonic Lumix DMC-ZS60 digital camera, Leica 30x optical zoom
- iPad Mini
- Nikon Monarch 5 10x42 Binoculars
- TruPulse 200 Laser Rangefinder

### **Site Description**

The subject property is located in central Campbell River, and is located east of Alder Street, south of Stag Road, west of Galerno Road and north of Cottonwood Drive (Figure 1). The property is 7.3 ha in size and is located at an elevation between 15 m and 37 m above sea level. It is located within the Coastal Western Hemlock very dry moist maritime biogeoclimatic zone (CWHxm1). The topography is variable; Simms Creek is located in an incised

stream draw along the southern property boundary. There is a bench to the north of Simms Creek, followed by an old access road, and gently to steeply sloping ground. The property is undeveloped land, but has been previously harvested, and is vegetated in a second growth stand. The stand consists of sparse mature conifer trees at low densities (< 400 stems per hectare) with young red alder and deciduous vegetation.

The nest tree is located on an adjacent residential property (380 Cottonwood Drive), which is developed. The nest tree is located on the north end of the property, near the southern property boundary of the subject property.



**Figure 2: City of Campbell River mapping showing the eagle nests locations and surrounding development in relation to the subject property.**

**Nest Tree and Nest Description**

**Nest 1: BAEA-106-276 (Wildlife Tree Stewardship Atlas)**

Nest 1 was a previously discovered nest located at 380 Cottonwood Drive. Monitoring of the nest began in 2003 and ceased in 2007. During that time, one chick was successfully fledged in 2003, 2004 and 2007. It was occupied in 2005. There were no details for 2006. No monitoring occurred from 2007 to 2014, but in 2014 it was noted that the nest no longer existed. There is no information on the tree species, nest height, or condition within the Wildlife Tree Stewardship Atlas.



**Results**

The nest tree was observed on February 3 and 4th, May 10, and August 30, 2022. No bald eagle nest, or other stick nest remains in the suspected nest tree. See Figure 3 for a photograph of the suspected nest tree, without a nest. A pair of bald eagles were heard on the subject property in February, 2022, but were not observed in May or August, 2022. Whitewash and eagle feathers were found sporadically across the subject property, but were not concentrated in any one area. A sharp-shinned hawk (*Accipiter striatus*) was observed perched within the subject property on February 3<sup>rd</sup>, 2022; and multiple plucking posts were found throughout the subject property.



a



b



(August 30, 2022)

**Figure 3: View of the suspected Nest 1 nest tree from Cottonwood Drive looking north (a), on August 30, 2022. There is no nest within the tree, or any of the surrounding trees. See the close up views of trees within the area that could support a nest (b) and (c), with no nests currently in the trees.**

### **Conclusions and Recommendations**

The recommendations for Bald Eagles outlined in the City of Campbell River Official Community Plan are to;

- 1) Maintain a naturally vegetated “no disturbance” 60 m buffer, as measured as a radius from the base of the nest tree and,
- 2) Apply a breeding season ‘quiet buffer’ in which no development activities may take place within 100 m of an active eagle nest.

There are currently no bald eagle nests on the subject property, but there are trees with sufficient size and structure to support a bald eagle nest. The location of the previous eagle nest is adjacent to the southeastern property corner. No development activities are taking place within 160 m of the suspected nest tree. Despite no eagle nests being discovered on the subject property, a pair of bald eagles were observed on the subject property within the breeding season, and a precautionary approach should be taken. It is important to note that there is another bald eagle nest (BAEA-106-349) located approximately 261 m from the subject property, which has been active in recent years (last confirmed activity in 2019). It is possible that this nest contains the same breeding pair that previously used Nest 1.

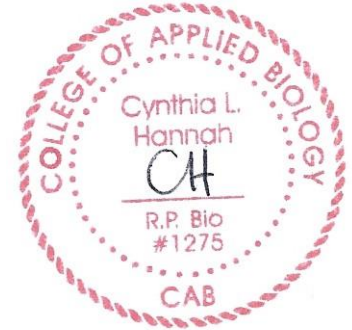
The breeding season is from January to September. The recommended survey period for detecting actively nesting birds within the breeding season is from late March to June 15, with the preferred survey period of May 15 to June 1, no later than June 15. Courtship and nest building activities begin in January/February. The recommended survey period for detecting nest building is from late February to late March.


Recommendations:

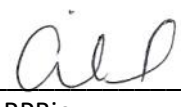
1. Conduct a nest search early in the 2023 breeding season to confirm no new nests have been established on the subject property prior to land clearing activities.
2. Work crews should be aware of bald eagle nesting behavior and signs, such as;
  - a. Nest building (carrying sticks)
  - b. Courtship (pair of eagles exhibiting courtship calls)

If any of the above behaviors are noted on the subject property, work shall stop, and a qualified registered biologist shall be retained to assess the activity and provide any other mitigation measures.

Should you have any question please call Cindy Hannah at 250.616-3758.



Written By:   
Mario Cottone, BIT  
Strategic Natural Resource Consultants

Reviewed By:   
Cindy Hannah, RPBio  
Strategic Natural Resource Consultants

Limitations

This report was prepared exclusively for WestUrban Ltd. by Strategic Natural Resource Consultants. The quality of information, conclusions and estimates contained herein is consistent with the level of effort expended and is based on: i) information available at the time of preparation; ii) data collected by the authors and/or supplied by outside sources; and iii) the assumptions, conditions and qualifications set forth in this report. Results are based upon an inspection of the property mentioned in this report and on the conditions observed February 3 and 4, May 10 and August 30, 2022. Results and observations in this report have been made in a manner consistent with the level of care and skill normally applied by environmental professionals practicing under similar conditions to those encountered at the time of the assessment. This report is intended to be used and distributed by WestUrban only, subject to the terms and conditions of its contract or understanding with Strategic Natural Resource Consultants. Other use or reliance on this report by any third party is at that party's sole risk.

**COPY**  
**Original signed and sealed on file**





SNRC Project #: 22-1595-20  
**Riparian Areas  
Protection Regulation Report**

**1650 Galerno Road**

Cindy Hannah, RPBio

October 19, 2022



PROFESSIONALLY RESOURCEFUL

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This report has been prepared by Strategic Natural Resource Consultants for the sole use and distribution of West Urban Developments Ltd. Results and observations in this report have been made in a manner consistent with the level of care and skill normally applied by environmental professionals practicing under similar conditions.

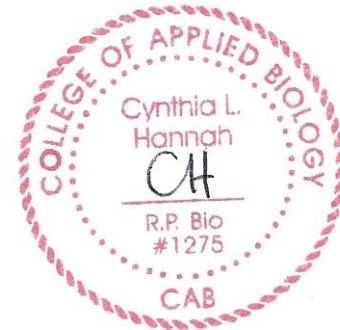
**Prepared For**  
**West Urban Developments Ltd.**

111-2036 Island Highway South  
Campbell River, BC, V9W 0E8

**Prepared By**



Strategic Natural Resource Consultants Inc.  
321-1180 Ironwood St.  
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A handwritten signature in black ink, appearing to read 'Cindy Hannah'.

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Cindy Hannah, BSc, RPBio  
Strategic Natural Resource Consultants

FORM 1

Riparian Areas Protection Regulation - Qualified Environmental Professional - Assessment Report

**Riparian Areas Protection Regulation: Assessment Report**

Please refer to submission instructions and assessment report guidelines when completing this report.

Date

**I. Primary QEP Information**

First Name	Cynthia	Middle Name	L
Last Name	Hannah		
Designation	RPBio	Company	Strategic Natural Resource Consultants Inc.
Registration #	1275	Email	channah@snrc.ca
Address	321-1180 Ironwood Street		
City	Campbell River	Postal/Zip	V9W 5P7
Prov/state	BC	Country	Canada
		Phone #	250-616-3758

**II. Secondary QEP Information (use Form 2 for other QEPs)**

First Name		Middle Name	
Last Name			
Designation		Company	
Registration #		Email	
Address			
City		Postal/Zip	
Prov/state		Country	
		Phone #	

**III. Developer Information**

First Name	Cameron	Middle Name	
Last Name	Salisbury		
Company	WestUrban Developments Ltd		
Phone #		Email	csalisbury@westurban.ca
Address	111-2036 Island Highway South		
City	Campbell River	Postal/Zip	V9W 0E8
Prov/state	BC	Country	Canada

**IV. Development Information**

Development Type	Subdivision Strata Development		
Area of Development (ha)	7.3	Riparian Length (m)	485
Lot Area (ha)	7.3	Nature of Development	New
Proposed Start Date	2023-04-01	Proposed End Date	2024-04-01

**V. Location of Proposed Development**

Street Address (or nearest town)	1650 Galerno Road		
Local Government	City of Campbell River	City	Campbell River
Stream Name	Simms Creek		
Legal Description (PID)	002-169-011 & 002-170-108	Region	1-Vancouver Island
Stream/River Type	stream	DFO Area	South Coast
Watershed Code	920-616300		
Latitude	49°	58'	43.6"
Longitude	125°	13'	48.1"

Completion of Database Information includes the Form 2 for the Additional QEPs, if needed. Insert that form immediately after this page.

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**Section 1. Description of Fisheries Resources Values and a Description of the Development proposal**

(Provide as a minimum: Species present, type of fish habitat present, description of current riparian vegetation condition, connectivity to downstream habitats, nature of development, specific activities proposed, timelines)

**Background**

Strategic Natural Resource Consultants (SNRC) were retained by Cameron Salisbury of WestUrban Developments to conduct a Riparian Areas Protection Regulation (RAPR) assessment to determine the setbacks required for development at 1650 Galerno Road in Campbell River BC.

A site visit was conducted by Mario Cottone, BIT and Iona Kearns, RBTech, of SNRC on February 1, 2022 to locate and map waterways or other identified environmental features on the subject property that would trigger a DP and the applicability of the Riparian Areas Regulation (RAR). A subsequent assessment was conducted on August 30, 2022 by Mario Cottone, BIT and Kat Bailey of SNRC, to confirm the locations of the features on site. One stream and one wetland complex were identified as triggering an RAPR assessment. One ditch was identified, but does not connect directly to fish bearing water.

**Site Description**

The subject property is located in central Campbell River, and is located east of Alder Street, south of Stag Road, west of Galerno Road and north of Cottonwood Drive (Figure 1). The property is 7.3 ha in size and is located at an elevation between 15 m and 37 m above sea level. It is located within the Coastal Western Hemlock very dry moist maritime biogeoclimatic zone (CWHxm1). The topography is variable; Simms Creek is located in an incised stream draw along the southern property boundary. There is a bench to the north of Simms Creek, followed by an old access road, and gently to steeply sloping ground (Figure 2). The property is undeveloped land.

Due to the topography, the catchment area of the property is limited and would mostly consist of surface runoff from rain events. Surface runoff flows south towards Simms Creek, and Simms Creek flows east towards the ocean. There are numerous perimeter drain outlets draining into the subject property from surrounding developments.

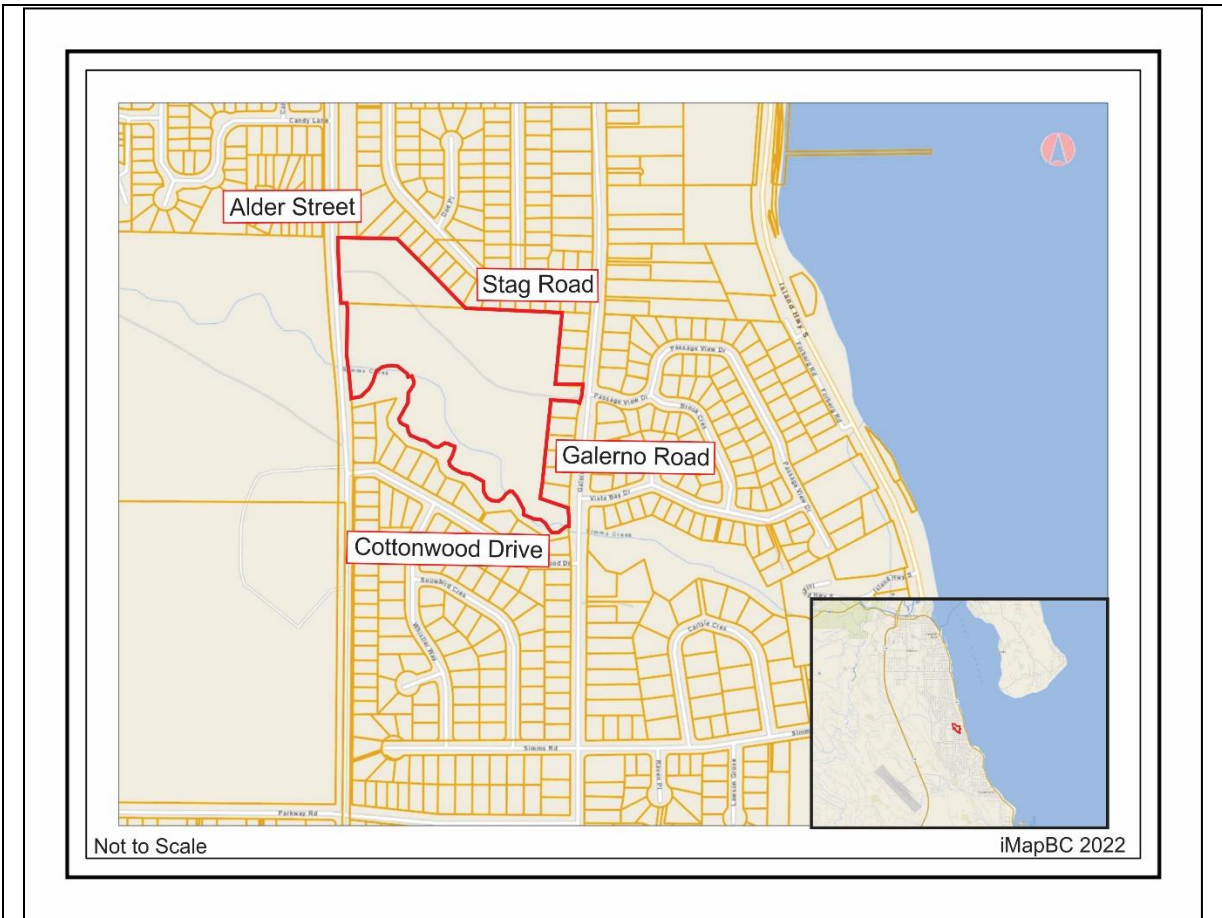


Figure 1, Overview map showing location of subject property (red) in relation to Campbell River (inset map).

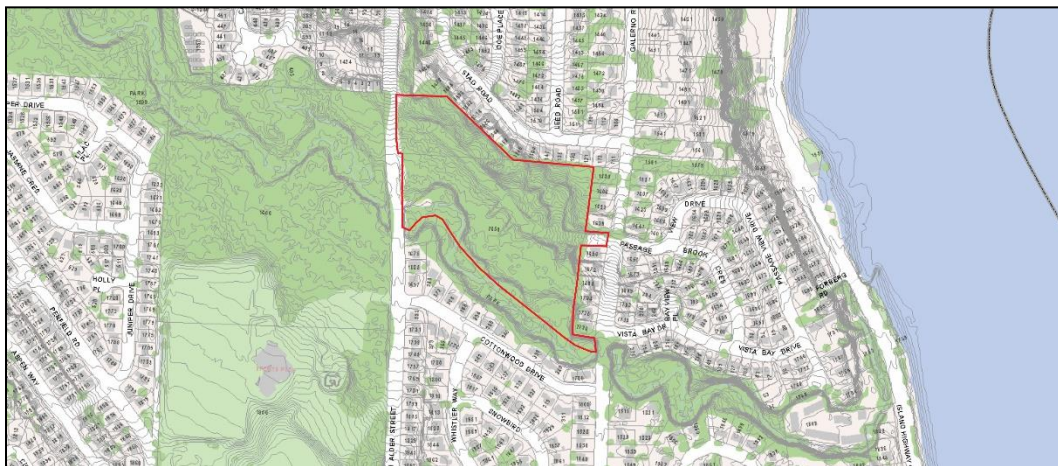


Figure 2, Image showing topography of subject property.

**Observations**

One stream (Simms Creek), six wetlands, and one ditch were identified. Approximate locations of



the waterways are shown in Figure 3.

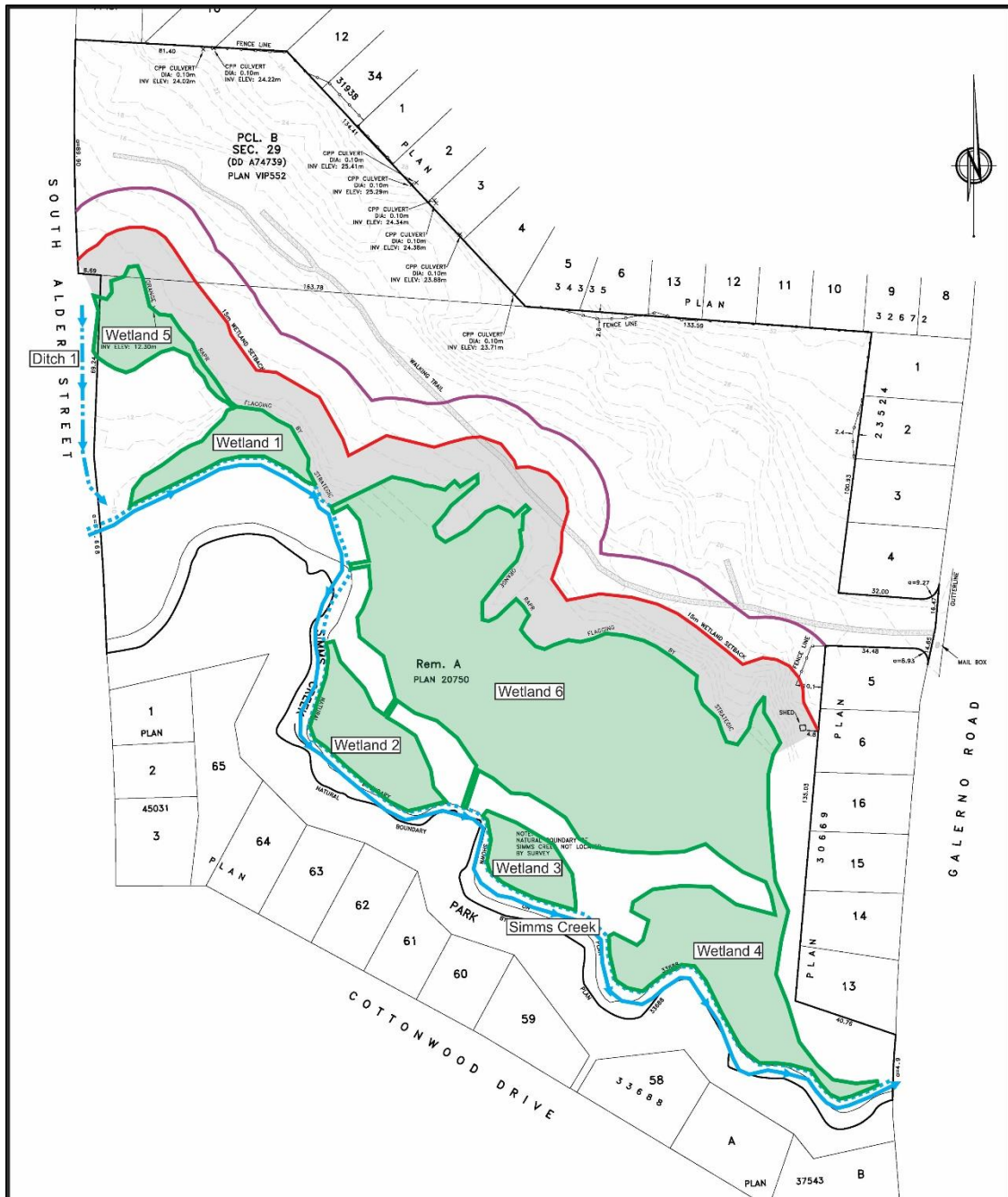


Figure 3, image showing approximate locations of waterways. Simms Creek is solid blue line and drains east. The dashed lines with two dots shows the ditch which does not connect directly to fish bearing water. Wetlands are shown in green.

Simms Creek

Simms Creek has a watershed area of 13.8 km<sup>2</sup>, and has been previously impacted by land use



changes and urban development<sup>1</sup>. The subject property is located within the lower portion of the watershed. Simms Creek is located along the southern property boundary of the subject property. It is located within an incised draw, but there is a significant floodplain located adjacent to the stream 10 to 50 m wide. Simms Creek averages 7.2 m wide with a mostly fines substrate, with sparse patches of gravel. The gradient is <2% and the stream has a predominantly run habitat with excellent rearing habitat for salmonids. Photo 1 and 2 are representative of Simms Creek. Data from the Fisheries Inventories Data Queries (FIDQ) indicates that Simms Creek is utilized by coho (*Oncorhynchus kisutch*), pink (*O. gorbuscha*), chum (*O. keta*) and Chinook (*O. tshawytscha*) salmon, rainbow (steelhead) (*O. mykiss*) and cutthroat (*O. clarkii*) trout, as well as by stickleback (*Gasterosteus aculeatus*), scuplin (Cottoidea) and Western pearlshell mussels (*Margaritifera falcata*). Fish were observed within the stream, and Western pearlshell mussels were noted (Photo 3). The portion of the stream adjacent to the subject property is located approximately 743 m from the confluence with the ocean, and anadromous access is assumed in the vicinity of the subject property.

The riparian area immediately adjacent to Simms Creek is degraded, and is lacking an overstory layer. The overstory is sparsely composed (<100 stems per hectare) of red alder (*Alnus rubra*), grand-fir (*Abies grandis*), and Sitka spruce (*Picea sitchensis*) with two coastal redwoods planted along the channel (*Sequoia sempervirens* [non-native]). The riparian area is a mosaic of two different types; invasive dominated areas and native species dominated areas. The invasive areas are dominated by Himalayan balsam (*Impatiens glandulifera* [invasive]), Himalayan blackberry (*Rubus armeniacus* [invasive]) and reed-canary grass (*Phalaris arundinacea*). These species form pure, dense stands, and are preventing the reestablishment of conifers adjacent to Simms Creek (Photo 4). Portions of these areas are also maintained by local residents and appear to be mowed to create recreation areas immediately along the stream edge (Photo 5). The native areas are dominated by red-osier dogwood (*Cornus stolonifera*) and salmonberry (*Rubus spectabilis*, with an understory of horsetails (*Equisetum* spp.).

#### Ditch 1

Ditch 1 is a shallow swale, along the east side of Alder Street (Photo 6). It flows south for 110 m, before being ditched into a large dug out pit adjacent to Simms Creek (Photo 7). There is a large berm around the pit, and there is no evidence that it is directly connected to Simms Creek. It appears as water sits in the pit and infiltrates into the ground. The riparian area is developed to the west (Alder Street) and undeveloped to the east. As this ditch does not directly connect to fish habitat, the RAPR does not apply.

#### Wetlands 1 to 4

Wetlands 1 to 4 are part of the Simms Creek floodplain. These areas are dominated by a mix of reed canary grass, Himalayan balsam, salmonberry, horsetail, skunk cabbage (*Lysichiton americanus*) and sedges (*Carex* spp.) (Photos 8 to 9). These areas are best classified as a disclimax community that established on a clear low-bench floodplain site. It is difficult to determine if these communities were a non-wetland type (such as flood associations like the red alder – salmonberry – horsetail community), or a type of swamp or marsh. Regardless, these areas flood annually in response to

<sup>1</sup> Status of Fish Habitat in East Coast Vancouver Island Watersheds. 1999. Available: <https://www.env.gov.bc.ca/wld/documents/ce21reidg.pdf>

large rain events and provide shelter and litterfall for salmonids.

#### Wetland 5

Wetland 5 is best described as a red alder – skunk cabbage swamp (Ws52) (Photo 10). It is a small wetland (0.1 ha in size) that is connected to Simms Creek by a small non-classified drainage like waterway (Photo 11). The NCD drains steeply into the Simms Creek draw, and fish access is unlikely. Open water of sufficient depth for fish habitat is non-existent, and this wetland primarily regulates flows in Simms Creek, while also providing litter and insect fall to Simms Creek. The overstory is sparse, and composed mostly of red alder snags, with some Western hemlock (*Tsuga heterophylla*) established on mounds. The herbaceous vegetation is dominated by swamp (*Equisetum fluviatile*) and giant horsetail (*E. telmateia*), and skunk cabbage, with a minor component of American brooklime (*Veronica americana*). Hummocks are vegetated in false-lily of the valley (*Maianthemum dilatatum*), twinberry (*Lonicera involucrata*), salmonberry and western bittercress (*Cardamine oligosperma*).

#### Wetland 6

Wetland 6 is a large (1.0 ha) wetland that is a mosaic of three different wetland types. The majority of the wetland is best described as either red alder – skunk cabbage (ws52) swamp or a Western redcedar – sword fern – skunk cabbage (Ws 53) swamp, though there is a small portion that is best described as a cattail marsh (Wm05). Refer to Photos 12 to 14 for a representative view of this wetland complex. This wetland is connected to Simms Creek by five NCD-like channels (Photo 15). These channels flow over the steep sidewalls of the draw Simms Creek is located within, and as such, are barriers to upslope fish access. While not fish accessible, this wetland complex provides the following values to Simms Creek; regulating flows in Simms Creek, filtering pollutants from upslope (e.g. residential development) sources, and litter and insect fall. The wetland has been degraded in certain areas, particularly the northern portion, where Himalayan blackberry has invaded and shaded out native wetland vegetation (Photo 16). In addition, there are a large number of mature conifer snags, suggesting that the hydrology of the site has been altered in the past, resulting in an increase in the water table.

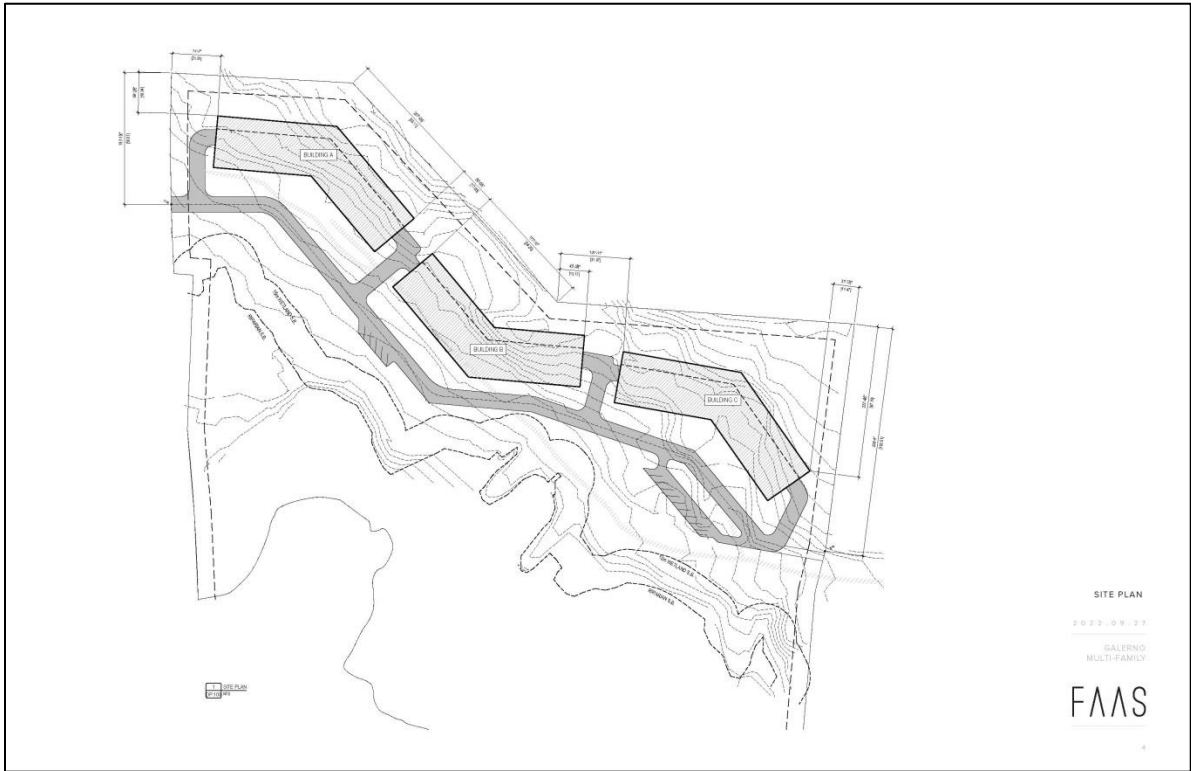
#### Current SPEA Condition

The condition of the SPEA varies across the site. Along the northern portion of the SPEA, along Wetland 5, the SPEA is in a healthy condition with a low number of non-native species. The stand is composed of mature bigleaf maple (*Acer macrophyllum*) and Western hemlock; up to 27-33 m tall, up to 60 cm DBH, 200-400 stems per hectare. The understory is open and composed of swordfern (*Polystichum munitum*), giant horsetail, salmonberry, and red elderberry (*Sambucus racemosa*) (Photo 17). Lungwort (*Lobaria pulmonaria*) is established within the canopy.

The SPEA along Wetland 6 has been degraded by the construction of an access road (historic logging road and spurs) and introduction of non-native species. The stand is composed of red alder and bigleaf maple; up to 20 m tall, up to 28 cm DBH, 1100 SPH. The understory is composed of swordfern, trailing blackberry (*Rubus ursinus*), daphne (*Daphne laureola* [invasive]) vanilla leaf (*Achlys triphylla*), bleeding heart (*Dicentra formosa*), rough moss (*Claopodium crispifolium*) and various grasses (Photo 18). Other non-native/invasive species that were noted within the SPEA include woolly burdock (*Arctium tomentosum*), yellow archangel (*Lamium galeobdolon*), and English holly (*Ilex aquifolium*).

**Development Description**

The proposed development includes the construction of an access road, three apartment buildings with 202 units and associated infrastructure. The design of the development incorporated measures to maintain as many of the environmentally valuable features on the site, such as having the majority of parking (296 parking spaces) located within the buildings, as well as retaining as many mature trees on the property as feasible. In addition, the entire development lies outside of the SPEA. A conceptual plan is shown in Figure 4.



**Figure 4, Conceptual plan of the proposed development.**

**Section 2. Results of Riparian Assessment (SPEA width)**

Attach or insert the Form 3 or Form 4 assessment form(s). Use enough duplicates of the form to produce a complete riparian area assessment for the proposed development

Only Simms Creek and Wetlands 1-6 require a RAPR assessment. The identified ditch 1 does not connect directly to fish bearing water.

**2. Results of Detailed Riparian Assessment Simms Creek**

Refer to Section 3 of Technical Manual

Date: 2022-08-30

Description of Water bodies involved (number, type)

1 Stream, 6 Wetlands

Stream	X
Wetland	
Lake	
Ditch	
Number of reaches	1
Reach #	1

**Channel width and slope and Channel Type (use only if water body is a stream or a ditch, and only provide widths if a ditch)**

Channel Width(m)		Gradient (%)	
starting point	8.0	High	
upstream	8.3		
	6.3		2%
	7.7		
	8.0		
downstream	6.3	Low	
	7.1		
	4.7		2%
	6.3		
	7.8		
Total: minus high /low	7.4		
mean	64.9		
	7.2		
	R/P	C/P	S/P
Channel Type	X		

I, Cynthia Hannah, RPBio, hereby certify that:

a) I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*;

b) I am qualified to carry out this part of the assessment of the development proposal made by the developer WestUrban ;

c) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and

d) In carrying out my assessment of the development proposal, I have followed the technical manual to the Riparian Areas Protection Regulation.

**Site Potential Vegetation Type (SPVT)**

	Yes	No	
SPVT Polygons		X	Tick yes only if multiple polygons, if No then fill in one set of SPVT data boxes
			I, <u>Cynthia Hannah, RPBio</u> , hereby certify that: a) I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the <i>Riparian Areas Protection Act</i> ; b) I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>WestUrban</u> ; c) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and d) In carrying out my assessment of the development proposal, I have followed the technical manual to the Riparian Areas Protection Regulation.
Polygon No:	<span style="border: 1px solid black; padding: 2px;">1</span>		Method employed if other than TR

FORM 1

Riparian Areas Protection Regulation - Qualified Environmental Professional - Assessment Report

	LC	SH	TR
SPVT Type			X

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Polygon No:	
SPVT Type	LC SH TR

Method employed if other than TR
----------------------------------

Polygon No:	
SPVT Type	

Method employed if other than TR
----------------------------------

**Zone of Sensitivity (ZOS) and resultant SPEA**

Segment No:	1	If two sides of a stream involved, each side is a separate segment. For all water bodies multiple segments occur where there are multiple SPVT polygons				
LWD, Bank and Channel Stability ZOS (m)	21.6					
Litter fall and insect drop ZOS (m)	15.0					
Shade ZOS (m) max	21.6	South bank	Yes		No	X
Ditch	Justification description for classifying as a ditch (manmade, no significant headwaters or springs, seasonal flow)					
Ditch Fish Bearing	Yes		No		If non-fish bearing insert no fish bearing status report	
<b>SPEA maximum</b>	<b>21.6</b>	(For ditch use table3-7)				

I, Cynthia Hannah, RPBio, hereby certify that:

- I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*;
- I am qualified to carry out this part of the assessment of the development proposal made by the developer WestUrban ;
- I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and
- In carrying out my assessment of the development proposal, I have followed the technical manual to the Riparian Areas Protection Regulation.

**Comments**

Simms Creek will require a 21.6 m wide SPEA.

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**2. Results of Detailed Riparian Assessment Wetland 1-4**

Refer to Section 3 of Technical Manual

Date:

Description of Water bodies involved (number, type)

Stream	<input type="text"/>
Wetland	<input type="text" value="X"/>
Lake	<input type="text"/>
Ditch	<input type="text"/>
Number of reaches	<input type="text" value="1"/>
Reach #	<input type="text" value="1"/>

**Channel width and slope and Channel Type (use only if water body is a stream or a ditch, and only provide widths if a ditch)**

Channel Width(m)		Gradient (%)	
starting point	<input type="text"/>	<input type="text"/>	I, <u>Cynthia Hannah, RPBio</u> , hereby certify that: e) I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the <i>Riparian Areas Protection Act</i> ; f) I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>WestUrban</u> ; g) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and h) In carrying out my assessment of the development proposal, I have followed the technical manual to the Riparian Areas Protection Regulation.
upstream	<input type="text"/>	<input type="text"/>	
	<input type="text"/>	<input type="text"/>	
	<input type="text"/>	<input type="text"/>	
downstream	<input type="text"/>	<input type="text"/>	
	<input type="text"/>	<input type="text"/>	
	<input type="text"/>	<input type="text"/>	
	<input type="text"/>	<input type="text"/>	
Total: minus high /low mean	<input type="text"/>	<input type="text"/>	
	<input type="text"/>	<input type="text"/>	
	<input type="text"/>	<input type="text"/>	
Channel Type	<input type="text"/>	<input type="text"/>	<input type="text"/>

**Site Potential Vegetation Type (SPVT)**

	Yes	No	
SPVT Polygons	<input type="text"/>	<input checked="" type="text" value="X"/>	Tick yes only if multiple polygons, if No then fill in one set of SPVT data boxes  I, <u>Cynthia Hannah, RPBio</u> , hereby certify that: e) I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the <i>Riparian Areas Protection Act</i> ; f) I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>WestUrban</u> ; g) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and h) In carrying out my assessment of the development proposal, I have followed the technical manual to the Riparian Areas Protection Regulation.
Polygon No:	<input type="text" value="1"/>		Method employed if other than TR
SPVT Type	<input type="text" value="LC"/>	<input type="text" value="SH"/>	
Polygon No:	<input type="text"/>		Method employed if other than TR
SPVT Type	<input type="text" value="LC"/>	<input type="text" value="SH"/>	

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Polygon No:	<input type="text"/>	Method employed if other than TR
SPVT Type	<input type="text"/>	

**Zone of Sensitivity (ZOS) and resultant SPEA**

Segment No:	1	If two sides of a stream involved, each side is a separate segment. For all water bodies multiple segments occur where there are multiple SPVT polygons				
LWD, Bank and Channel Stability ZOS (m)	15					
Litter fall and insect drop ZOS (m)	15					
Shade ZOS (m) max	30	South bank	Yes	<input type="checkbox"/>	No	X <input checked="" type="checkbox"/>
Ditch	Justification description for classifying as a ditch (manmade, no significant headwaters or springs, seasonal flow)					
Ditch Fish Bearing	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	If non-fish bearing insert no fish bearing status report	
<b>SPEA maximum</b>	<b>15</b>	(For ditch use table3-7)				

I, Cynthia Hannah, RPBio, hereby certify that:

- e) I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*;
- f) I am qualified to carry out this part of the assessment of the development proposal made by the developer WestUrban ;
- g) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and
- h) In carrying out my assessment of the development proposal, I have followed the technical manual to the Riparian Areas Protection Regulation.

**Comments**

Wetlands 1-4 will require a 15 m SPEA.



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**2. Results of Detailed Riparian Assessment Wetland 5-6**

Refer to Section 3 of Technical Manual

Date: 2022-08-30

Description of Water bodies involved (number, type)

1 Stream, 6 Wetlands

Stream	
Wetland	X
Lake	
Ditch	
Number of reaches	1
Reach #	1

**Channel width and slope and Channel Type (use only if water body is a stream or a ditch, and only provide widths if a ditch)**

Channel Width(m)		Gradient (%)	
starting point			I, <u>Cynthia Hannah, RPBio</u> , hereby certify that: i) I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the <i>Riparian Areas Protection Act</i> ; j) I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>WestUrban</u> ; k) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and l) In carrying out my assessment of the development proposal, I have followed the technical manual to the Riparian Areas Protection Regulation.
upstream			
downstream			
Total: minus high /low mean			
	R/P	C/P	S/P
Channel Type			

**Site Potential Vegetation Type (SPVT)**

	Yes	No	
SPVT Polygons		X	Tick yes only if multiple polygons, if No then fill in one set of SPVT data boxes  I, <u>Cynthia Hannah, RPBio</u> , hereby certify that: i) I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the <i>Riparian Areas Protection Act</i> ; j) I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>WestUrban</u> ; k) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and l) In carrying out my assessment of the development proposal, I have followed the technical manual to the Riparian Areas Protection Regulation.
Polygon No:	<span style="border: 1px solid black; padding: 2px;">1</span>		Method employed if other than TR
SPVT Type	LC	SH	
			<span style="border: 1px solid black; padding: 2px;">1</span>
Polygon No:			Method employed if other than TR
SPVT Type	LC	SH	

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Polygon No:		Method employed if other than TR	
SPVT Type			

**Zone of Sensitivity (ZOS) and resultant SPEA**

Segment No:	1	If two sides of a stream involved, each side is a separate segment. For all water bodies multiple segments occur where there are multiple SPVT polygons			
LWD, Bank and Channel Stability ZOS (m)	15				
Litter fall and insect drop ZOS (m)	15				
Shade ZOS (m) max	30	South bank	Yes	No	X
Ditch	Justification description for classifying as a ditch (manmade, no significant headwaters or springs, seasonal flow)				
Ditch Fish Bearing	Yes	No	If non-fish bearing insert no fish bearing status report		
<b>SPEA maximum</b>	<b>15</b>	(For ditch use table3-7)			

I, Cynthia Hannah, RPBio, hereby certify that:

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- k) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and
- l) In carrying out my assessment of the development proposal, I have followed the technical manual to the Riparian Areas Protection Regulation.

**Comments**

Wetlands 5-6 will require a 15 m SPEA.

**Section 3. Site Plan**

Insert jpg file below

**Site Plan**

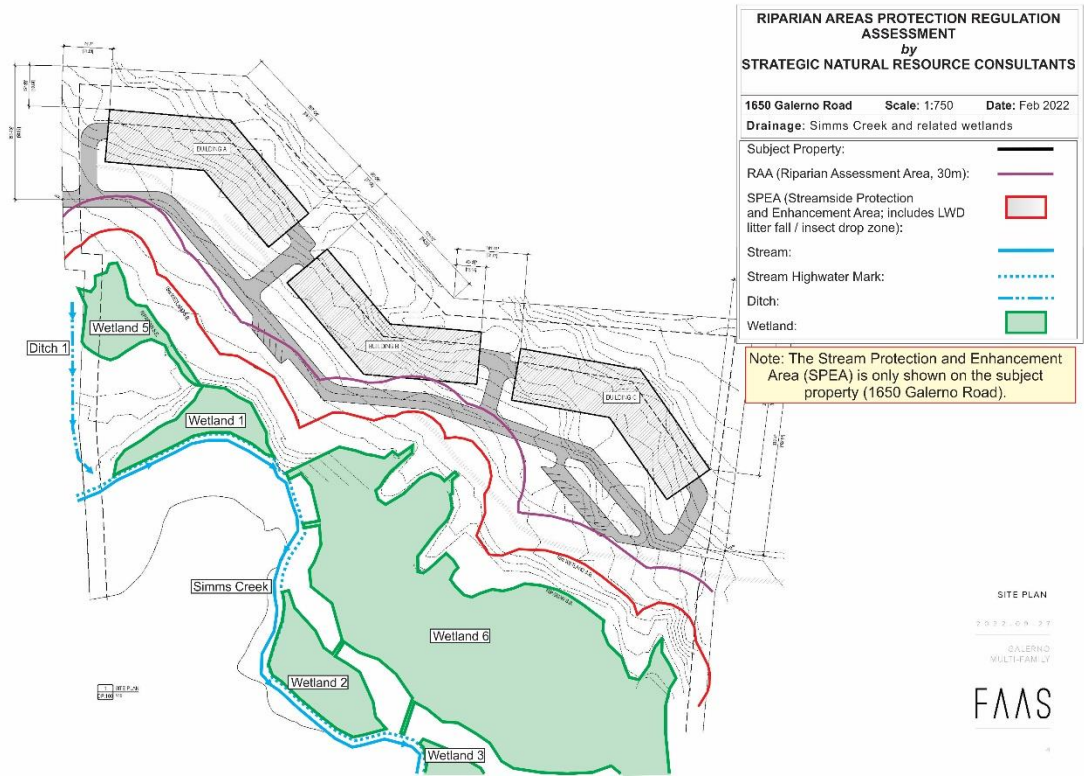
A site plan follows this page.

The unmarked full plan is included below showing the surveyed high water mark and 15 m wide SPEA. A second site plan is included below showing the surveyed high water mark, 15 m wide SPEA, RAA, and proposed development. A third site plan is included below showing the 15 m wide SPEA and some recommended measures.



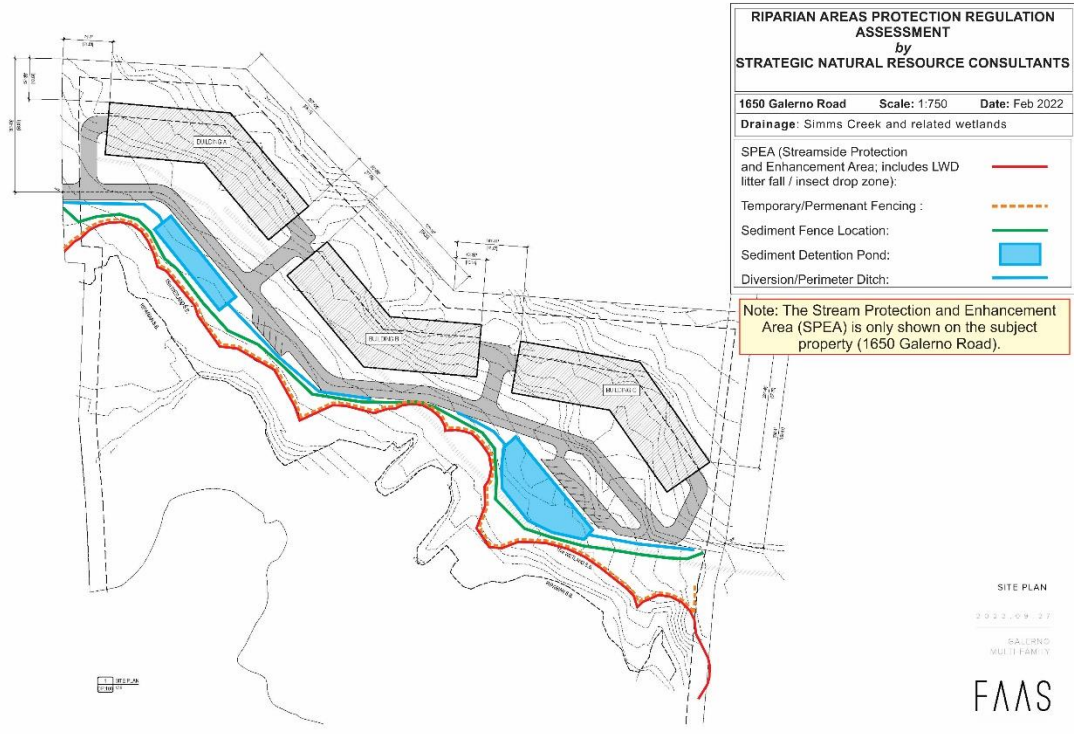
# FORM 1

## Riparian Areas Protection Regulation - Qualified Environmental Professional - Assessment Report



FORM 1

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**Section 4. Measures to Protect and Maintain the SPEA**

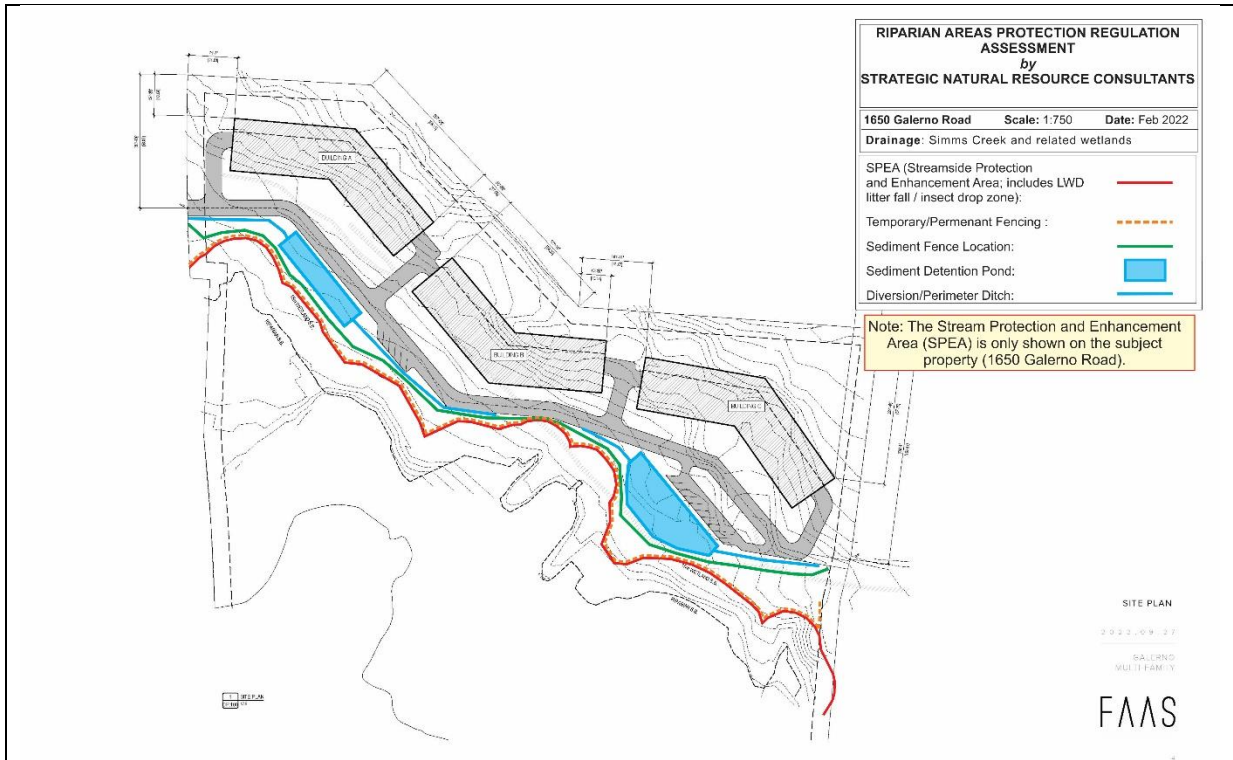
This section is required for detailed assessments. Attach text or document files, as need, for each element discussed in Part 4 of the RAPR. It is suggested that documents be converted to PDF *before* inserting into the assessment report. Use your “return” button on your keyboard after each line. You must address and sign off each measure. If a specific measure is not being recommended a justification must be provided.

1. Danger Trees	
<p>No specific danger trees were identified within the SPEA or wider Riparian Assessment Area. The entire development lies outside of the SPEA, and the majority of the development is located &gt;1.5 tree lengths from the SPEA. There are portions of the development (access road) that are located within a 1.5 tree length from the SPEA. The SPEA is composed of a young stand of trees that appear to be in good health. It is not anticipated that trees will need to be removed from the SPEA for human safety or property damage prevention. If there are any trees of concern in the future, a qualified environmental professional needs to be obtained to confirm that the tree(s) are a danger prior to any removal. Any removal of trees within the SPEA will have to be revegetated following applicable riparian area revegetation guidelines.</p>	
<p>I, <u>Cynthia Hannah, RPBio</u>, hereby certify that:</p> <ul style="list-style-type: none"> <li>m) I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the <i>Riparian Areas Protection Act</i>;</li> <li>n) I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>WestUrban</u>;</li> <li>o) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and in carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Minister’s technical manual to the Riparian Areas Protection Regulation.</li> </ul>	
2. Windthrow	
<p>While land clearing will be required by the proposed development, the risk of windthrow damage to the trees within the SPEA is considered to be small for the following reasons;</p> <ul style="list-style-type: none"> <li>1) The SPEA edge is located along the leeward edge of the opening, and as such, will not be impacted by the prevailing damaging winds in the winter months (southeast).</li> <li>2) The majority of the SPEA is vegetated with a young deciduous component, which is generally considered to be tolerant to wind damage.</li> <li>3) The conifers that exist within these areas are mature veteran overstory trees which were retained during the last harvest, and as such, have already been exposed to damaging winds and are assumed to be wind firmed.</li> <li>4) The wetland to the south of the SPEA edge currently has a low tree density and patchy distribution, which will act as natural feathering, and further reduce the likelihood of windthrow damage.</li> </ul>	
<p>I, <u>Cynthia Hannah, RPBio</u>, hereby certify that:</p> <ul style="list-style-type: none"> <li>a. I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the <i>Riparian Areas Protection Act</i>;</li> <li>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>WestUrban</u> ;</li> <li>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and in carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Minister’s technical manual to the Riparian Areas Protection Regulation.</li> </ul>	
3. Slope Stability	<p>Although there are steep sections of the property (&gt;30%), the design has been created in consultation with a geotechnical engineer. Simms Creek also lies &gt; 60 m away at the closest point to the development, and therefore there are no slope stability issues relating to Simms Creek from the development.</p>
<p>I, <u>Cynthia Hannah, RPBio</u>, hereby certify that:</p> <ul style="list-style-type: none"> <li>a. I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the <i>Riparian Areas Protection Act</i>;</li> <li>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>WestUrban</u> ;</li> </ul>	

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c.	I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and in carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Minister's technical manual to the Riparian Areas Protection Regulation.
<b>4. Protection of Trees</b>	
<p>While no construction is planned for within the SPEA, tree protection zones for trees located within the SPEA can extend outside of the SPEA. Any trees &gt;20 cm DBH located on the edge of the SPEA will require a TPZ that extends to the dripline of the SPEA tree. The SPEA will be flagged and fenced in advance of construction activities, and any SPEA tree with a TPZ that extends past the current SPEA, will have the SPEA fence extended as to protect the TPZ within the SPEA buffer. The TPZ shall be established by a certified arborist.</p>	
<p>The developer shall also be informed of a list of activities that must not take place near SPEA trees, unless approved by a certified arborist to confirm that the activities will not damage SPEA trees, and includes;</p>	
<ul style="list-style-type: none"> <li>• Storing construction materials around trees;</li> <li>• Changing the ground level around trees;</li> <li>• Moving or parking vehicles or excavation equipment around trees;</li> <li>• Allowing pollutants (e.g. fuel, concrete equipment wash-water) to contaminate soils around trees; and</li> <li>• Changing subsurface water flows.</li> </ul>	
<p>An Environmental Monitor will conduct routine inspections of the SPEA, TPZ and activities around the SPEA and TPZ to ensure that no activities will cause an adverse material effect to the SPEA tree health.</p>	
<p>I, <u>Cynthia Hannah, RPBio</u>, hereby certify that:</p>	
<p>a. I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the <i>Riparian Areas Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>WestUrban</u> ;</p> <p>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and in carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Minister's technical manual to the Riparian Areas Protection Regulation.</p>	
<b>5. Encroachment</b>	
<p>A temporary snow fence must be installed between the footprint of the work area (edge of road) and the SPEA to ensure that there is no encroachment and to separate the worksite from the adjacent retention areas. This fence must be installed prior to the commencement of construction activities, and monitored/maintained throughout the course of the project. See Figure 5 for the location of the temporary fencing (orange dashed line) in relation to the development.</p>	



**Figure 5: Site plan map showing the approximate location of the temporary/permanent fence location (orange dashed line).The location may be further north due to SPEA tree protection zones.**

A permanent fence must be installed following the completion of the project. There are numerous existing trails located within the SPEA, constructed by either local residents or by wildlife, which were further expanded by human use, which are accessed off of the existing road to the north of the SPEA. It is important to establish a fence to deter human entry, but to allow for the free movement of wildlife (e.g. split rail fence). This fence will be located in the same approximate location of the temporary fence, as shown in Figure 5.

It is important to note that there is currently encroachment on the SPEA from the south of the subject property; there are numerous trails, and a bridge, that lead from the residential development on Cottonwood Drive. As these trails and access points are located on adjacent private property and public parks, no actions can be taken by the developer. Local government should be informed of the encroachment.

I, Cynthia Hannah, RPBio, hereby certify that:

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- b. I am qualified to carry out this part of the assessment of the development proposal made by the developer WestUrban;
- c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and in carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Minister's technical manual to the Riparian Areas Protection Regulation.

**6. Sediment and Erosion Control**

A formal Erosion and Sediment Control Plan (ESCP) will be developed during future phases of the project when the infrastructure layout has been finalized. The purpose of the ESCP will be to prevent the transport of deleterious substances (i.e. sediment) to receiving environments (i.e. wetlands, Simms Creek and the City stormwater system). While Simms Creek lies > 60 m away from the

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development, and is separated from the development by wetlands, sediment laden water from the development may still impact Simms Creek, and mitigation measures must be in place to prevent this from occurring. At a minimum, sediment fencing should be established below the access road. See Figure 5 for locations of recommended mitigation measures, including sediment fence location, diversion/perimeter ditch locations, and sediment detention ponds. These measures may be adjusted as the project progresses to meet site conditions and ESC needs.

The ESCP will contain the following;

- Locations of recommended sediment fencing, as well as fence specifications (type, material, height, etc.) and installation instructions and figures;
- Locations of recommended sediment retention ponds as well as pond specifications, installation plan, and post-development remediation;
- Location of stabilized worksite entrances, as well as stabilized worksite entrance specifications, installation plan, and maintenance plan;
- Location of diversion ditches, check dams, as well as their specifications, installation plan, maintenance plan and post-development remediation;
- List of additional materials to be kept on site, such as polysheeting, straw, mulch, as well as equipment required, such as pumps, water trucks, etc.
- Environmental monitoring plan to ensure Contractor compliance with the ESCP.

This ESCP will be made available to the Contractor and shall be adhered to throughout the course of the project.

I, Cynthia Hannah, RPBio, hereby certify that:

- a. I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*;
- b. I am qualified to carry out this part of the assessment of the development proposal made by the developer WestUrban ;
- c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and in carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Minister's technical manual to the Riparian Areas Protection Regulation.

7. Stormwater Management

No formal stormwater management plan has been developed for the subject property by the developer. All stormwater onsite will be routed to the existing Alder Street stormwater system, with no additions to the wetland complex located below the development.

I, Cynthia Hannah, RPBio, hereby certify that:

- a. I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*;
- b. I am qualified to carry out this part of the assessment of the development proposal made by the developer WestUrban ;
- c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Minister's technical manual to the Riparian Areas Protection Regulation.

8. Floodplain Concerns (highly mobile channel)

Simms Creek has an active floodplain. This floodplain is located and contained within the bottom of a steep sided draw, and as such, the development will have no impact on the channel or its floodplain.

I, Cynthia Hannah, RPBio, hereby certify that:

- a. I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*;
- b. I am qualified to carry out this part of the assessment of the development proposal made by the developer WestUrban ;
- c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Minister's technical manual to the Riparian Areas Protection Regulation.

## **Section 5. Environmental Monitoring**

Attach text or document files explaining the monitoring regimen Use your "return" button on your keyboard after each line. It is suggested that all document be converted to PDF *before* inserting into the PDF version of the assessment report. Include actions required, monitoring schedule, communications plan, and requirement for a post development report.

A qualified environmental professional will be retained as a project environmental monitor (EM) by WestUrban Developments Ltd. The EM will be present on site following a pre-determined schedule to oversee the work and ensure the Contractor's compliance to the construction environmental management plan, erosion and sediment control plan, and all applicable regulatory requirements. The EM has the authority to order the Contractor to modify and/or halt any work activity if deemed necessary for the protection of the environment and observance of statutory requirements. During construction, appropriate meetings involving the crew and the EM (if applicable) will be held as required to ensure that environmental risks are addressed and mitigated in a proactive manner. Instances of non-conformance and environmental incidents and near misses will be brought to the attention of the Contract Administrator and/or Owner and the appropriate government agency.

The environmental monitor will be available throughout the course of the project. The environmental monitor will be experienced in sediment and erosion control and will have the authority to stop work if necessary to protect the SPEA. Site visits will include, at a minimum;

- Prior to site clearing, to ensure that the SPEAs and tree protection zones have been clearly demarcated with snow fencing and erosion and sediment control measures are in place.
- Monitoring onsite works as needed and in response to emergency incidents such as significant spills or release of deleterious materials to watercourses. The requirement for EM onsite presence is highly dependent on the performance of the Contractor and weather during construction;
- During the site grubbing and development phase; during invasive species removal within the SPEA (if applicable);
- Once all planting and required revegetation is complete (if applicable);
- At the conclusion of all development, including once the permanent fence is installed and once all potential sources of sediment are stabilized (i.e. revegetated).


A final post development report is required under the RAPR legislation, therefore once the property is developed, a post development report will be required to submit to the Riparian Areas Regulation Notification System.



**Section 6. Photos**

Provide a description of what the photo is depicting, and where it is in relation to the site plan.

**Photos**

Label	Photo 1, Simms Creek: View of Simms Creek from the mid-point, looking downstream.
	
Label	Photo 2, Ramparts Creek: Simms Creek: View of Simms Creek from the mid-point, looking upstream.
	

FORM 1

**Photos**

Label Photo 3, Simms Creek: Western pearlshell mussels (*Margaritifera falcate*) were observed within Simms Creek, located near the mid-point.



Label Photo 4, Simms Creek: View of the riparian area dominated by non-native species, such as Himalayan balsam (*Impatiens glandulifera*) and reed-canary grass (*Phalaris arundinacea*).





FORM 1

Label

Photo 5, Simms Creek: Portions of the riparian areas have also been maintained by local residents to create recreation areas immediately along the stream edge.



Label

Photo 6, Ditch 1: Ditch 1 is a shallow swale, along the east side of Alder Street.



FORM 1

**Photos**

Label Photo 7, Ditch 1: Ditch 1 is approximately 110 m long, and is ditched into a large dug out pit adjacent to Simms Creek. There is no direct connection to Simms Creek.



Label Photo 8, Wetland 1: View of Wetland 1. This area is dominated by a mix of reed canary grass, Himalayan balsam, salmonberry, horsetail, skunk cabbage and sedges.





**Photos**

Label Photo 9, Wetland 4: View of Wetland 4. This area is dominated by salmonberry, skunk cabbage and horsetail.



Label Photo 10, Wetland 5: View of Wetland 5, which is best described as a red alder – skunk cabbage swamp (Ws52).





**Photos**

Label Photo 11, Wetland 5: Wetland 1 is connected to Simms Creek by a small non-classified drainage like waterway.



Label Photo 12, Wetland 6: View of Wetland 6 from the approximate center. The wetland is dominated by red-osier dogwood and an understory of skunk cabbage.





FORM 1

**Photos**

Label Photo 13, Wetland 6: View of Wetland 6 near the northern edge. Here the wetland has a young red alder overstory, with a salmonberry and skunk cabbage understory.



Label Photo 14, Wetland 6: View of Wetland 6 near the eastern edge. There is a small cattail wetland located within the wetland complex where standing water exists for longer periods of time.





FORM 1

**Photos**

Label Photo 15, Wetland 6: View of a small seepage channel that connects Wetland 6 to Simms Creek. This is the southernmost connection, and is representative of the four other connections.



Label Photo 16, Wetland 6: View of the degraded portion of Wetland 6, where Himalayan blackberry has invaded and shaded out native wetland vegetation.





**Photos**

Label Photo 17, SPEA Condition: View of the SPEA along the northern portion of the subject property. The SPEA is composed of a mature forest type with a low number of non-native species.



Label Photo 18, SPEA Condition: View of the SPEA along the central and southern portions of the subject property. The SPEA is composed of a young stand type along an old logging road and spur roads.



**Section 7. Professional Opinion****Qualified Environmental Professional opinion on the development proposal's riparian assessment.**Date 1. I Cynthia Hannah, RPBio

hereby certify that:

- a) I am/We are qualified environmental professional(s), as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*;
- b) I am/We are qualified to carry out the assessment of the proposal made by the developer WestUrban, which proposal is described in section 3 of this Assessment Report (the "development proposal"),
- c) I have/We have carried out an assessment of the development proposal and my/our assessment is set out in this Assessment Report; and
- d) In carrying out my/our assessment of the development proposal, I have/We have followed the specifications of the Riparian Areas Protection Regulation and assessment methodology set out in the minister's manual; AND

2. As qualified environmental professional(s), I/we hereby provide my/our professional opinion that:

- a)  the site of the proposed development is subject to undue hardship, (**if applicable, indicate N/A otherwise**) and
- b)  the proposed development will meet the **riparian protection standard** if the development proceeds as proposed in the report and complies with the measures, if any, recommended in the report.

**[NOTE:** "qualified environmental professional" means

## Submission Instructions

### Riparian Areas Protection Regulation – Qualified Environmental Professional – Assessment Report RAR-QEP-AR

#### **Forms you will need to complete are**

- Form 1 which has the database information, the description of the fisheries resources, development site plan, measures to protect and maintain the SPEA, and environmental monitoring.
- Form 2, if more QEPs are part of the project team.
- Either Form 3 the detailed assessment form(s) or Form 4 simple assessment form(s) which is for the results of the riparian assessment (SPEA width). Use enough copies of the form to complete the assessment of the site.
- Form 5 is the photo form(s). Duplicate for additional photos.

NB: Refer to Part 4 of the RAPR and the Technical Manual for detailed instructions on the information required for completing the Assessment Report.

A complete Riparian Assessment Report based on the template forms must be converted to a *single* Portable Document Format PDF file prior to uploading onto the Notification System.

The Assessment Report must be submitted complete with all information specified and posted to the notification system to be reviewed by the province. Upon approval notification will be provided to the local government.

#### **Tips for working with MS Word Template Forms**

##### Using the forms

- Before beginning, print a hard copy of the form and the guidance files for reference
- Open the template
- Enter data into the shaded fields on the form
- Use TAB to move from one field to another; SHIFT-TAB to go in reverse
- Text and digital photos may be inserted from other applications
- The amount of text that can be entered in each box is limited and cannot be changed by the user; boxes with date information, for example, require input like: yyyy-mm-dd.

##### Saving the completed form

- Assign name to the completed form
- Save a word document (\*.doc file)
- Do not overwrite the Template (\*.dot file) with your completed form
- If you do overwrite the template, you can download a new copy from this web site