



Appendix D: Permit DV000083

CAPITAL REGIONAL DISTRICT

**DEVELOPMENT PERMIT WITH VARIANCE NO. DV000083**

1. This Development Permit with Variance is issued under the authority of Sections 490 and 498 of the *Local Government Act* and subject to compliance with all of the bylaws of the Regional District applicable thereto, except as specifically varied or supplemented by this Permit.
2. This Development Permit with Variance applies to and only to those lands within the Regional District described below (legal description), and any and all buildings, structures, and other development thereon:  
**PID: 024-152-846;**  
**Legal Description: Lot 9, Section 129, Sooke District, Plan VIP67208 (the "Land")**
3. This development permit authorizes a 2-lot fee-simple subdivision and 3-lot bareland strata subdivision and related services (the "development") on the Land, located within the development permit areas established under the East Sooke Official Community Plan, Bylaw No. 4000, 2018, Section 510 (Steep Slopes), Section 530 (Riparian), and Section 540 (Sensitive Ecosystems) in accordance with the plans submitted to the CRD and subject to the conditions set out in this Permit.
4. The conditions under which the development referred to in section 3 may be carried out are as follows:
  - a. That the components of the development occur in conformity with the Phase 1 and Phase 2 Subdivision Plans prepared by JE Anderson & Associates, dated August 30, 2021;
  - b. That the proposed development comply with the recommendations outlined in the report prepared by Shane Smith, P.Geo., EIT, and James Russell, M.Sc., P.Eng., dated August 5, 2021 (the "Geotechnical Report");
  - c. That the proposed development comply with the recommendations outlined in the report prepared by Craig Barlow, RP.Bio., dated May 3, 2021 (the "Environmental Assessment Report"); and
  - d. That any cut-slopes be reassessed to determine if further mitigative measures to decrease the risk of rockfall hazard are required;
  - e. That a report be submitted prior to registration of each of the 2-lot fee-simple subdivision and the 3-lot bareland strata subdivision from a qualified professional confirming that the recommendations outlined in the Geotechnical Report have been addressed and .
5. The Capital Regional District's Bylaw No. 2040, Part 2, Section 3.10(4), is varied under section 498 of the *Local Government Act* as follows:
  - a. That the the minimum frontage requirement of proposed Lot A be reduced from 10% to 8.49%;
  - b. That the the minimum frontage requirement of proposed Lot B be reduced from 10% to 6.4%.
6. Notice of this Permit shall be filed in the Land Title Office at Victoria as required by Section 503 of the *Local Government Act*, and the terms of this Permit (DV000083) or any amendment hereto shall be binding upon all persons who acquire an interest in the land affected by this Permit.
7. If the holder of a permit does not substantially start any construction permitted by this Permit within 2 years of the date it is issued, the permit lapses.
8. 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 which shall form a part hereof.



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9. The following plans and specifications are attached to and form part of this Permit:

Appendix A: Phase 1 and Phase 2 Subdivision Plans  
Appendix B: Geotechnical Report  
Appendix C: Environmental Assessment Report

10. This Permit is NOT a Building Permit.

11. In issuing this Development Permit, the CRD does not represent or warrant that the land can be safely developed and used for the use intended and is acting in reliance upon the conclusions of the Geotechnical Report regarding the conditions to be followed for the safe development of the land.

**RESOLUTION PASSED BY THE BOARD, THE \_\_\_\_ day of \_\_\_\_\_, 2021.**

**ISSUED** this \_\_\_\_ day of \_\_\_\_\_, 2021

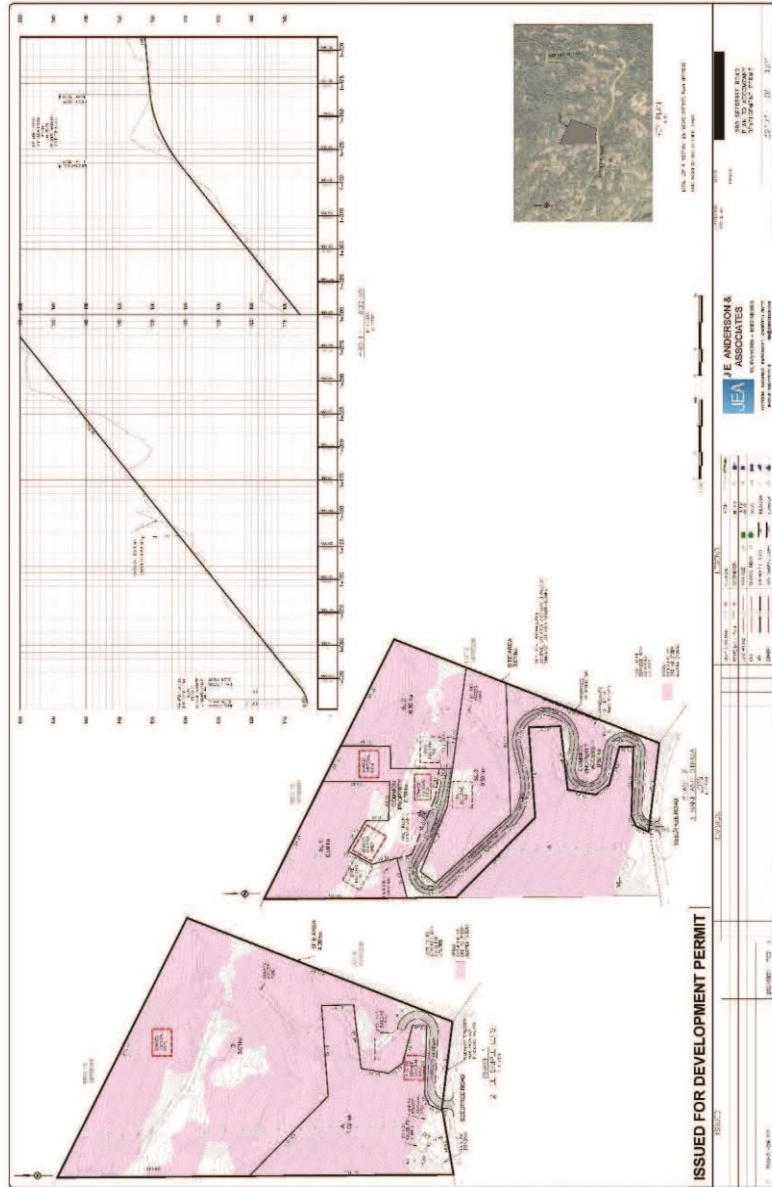
\_\_\_\_\_  
Kristen Morley  
Corporate Officer



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Appendix A: Phase 1 and Phase 2 Subdivision Plans





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Appendix B: Geotechnical Report



August 5, 2021  
File No: 10672-1

██████████  
c/o J.E. Anderson & Associates Ltd.  
4212 Glanford Avenue  
Victoria, BC  
V8Z 4B7

Attn: ██████████

Re: Proposed Lot Subdivision  
590 Seedtree Road – East Sooke, BC

As requested, we have completed an assessment of the geotechnical conditions at the reference site as such relates to the proposed 2-lot and subsequent 3-lot subdivision. The following is an update to our original report dated June 30, 2021, providing clarification for further potential sites/subdivision within the lot, subject to assessment, as described within our Geotechnical/Geohazard Assessment section. No other analysis has been completed and our original Appendix D: Landslide Assessment Assurance Statement and Appendix I: Flood Hazard and Risk Assurance Statement have not been changed from the June 30, 2021, report.

We understand that the property has been designated as being a part of East Sooke's Steep Slope Development Permit Area (DPA) in the East Sooke Official Community Plan (OCP) Bylaw No. 4000. We further understand that the Ministry of Transportation and Infrastructure (MOTI) has specified that an assessment of potential geohazard(s) be carried out by a qualified professional as a condition of the 2 lot conventional subdivision and the subsequent 3 lot bare land strata subdivision for a total of 4 lots. As per conditions of the MOTI requirements, landslide hazard and flood hazard assessments are to be completed, including Appendix D: Landslide Assessment Assurance Statement and Appendix I: Flood Hazard and Risk Assurance Statement. Accordingly, the results of our assessment and our associated observations, comments, and recommendation in this regard are summarized herein, in accordance with Engineers and Geoscientists BC (EGBC) Guidelines for Legislated Landslide Assessments for Proposed Residential Developments and Section 56 of the Community Charter. Our work in this regard has been carried out in accordance with our proposal, dated January 11, 2021.

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Ryzuk Geotechnical



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Proposed Lot Subdivision  
590 Seedtree Road – East Sooke, BC

August 5, 2021

#### PROPOSED DEVELOPMENT

The site is 4 hectares in size, bounded by Seedtree Road to the south, an undeveloped lot to the north, and similar single family residential lots to the east and west. Currently there is an existing single family residence located within the southwestern corner of the property (near the base of the slope), as well as an access gravel road to the northern portion of the site that enters from Seedtree Road.

The two attached site plans provided by J.E. Anderson & Associates, titled “Tentative Subdivision Plan of Lot 9, Section 129, Plan VIP67208, 590 Seedtree Road, 32171-01-T1” and “-T2”, dated June 17, 2020, display the proposed subdivisions of the property. The referenced property is proposed to be subdivided in 2 stages, initially a 2 lot split will divide the existing single family residence (lot A) from the remainder of the undeveloped site (lot B). Then the undeveloped lot B will be further subdivided into 3 lots (SL 1, SL 2, and SL 3) for a total of 4 lots. The subsequent 3 lot subdivision displays SL 1 in northwest, SL 2 in the northeast, and SL 3 centrally located. A proposed common property driveway will provide access from Seedtree Road to the 3 undeveloped lots.

The proposed shared driveway enters the site from Seedtree Road and follows existing road before several switch backs and then a cut across the site to the northwest. Substantial excavations and grade alterations from the existing topography are anticipated based on the road sections provided to us. We understand that the proposed driveway may be changed to decrease the extent of excavation/fill placement required.

#### SURFACE AND SUBSURFACE CONDITIONS

We attended the site on May 10, 2021, to visually assess the geotechnical conditions throughout the proposed development. As a part of the assessment, we completed a visual reconnaissance of the property, the path of the proposed driveway realignment, and the surrounding properties, to assess for geohazards and to determine safe building locations within lot B (and the 3 lots SL 1, SL 2, and SL 3).

The site is largely bedrock controlled with grass/shrubs/moss cover and intermittent mature coniferous and deciduous trees throughout. A single family residence is currently located in lot A, as displayed on the location plan (in the southeastern corner). The remainder of the site is unoccupied/undeveloped land with an existing road that switch backs along the eastern property boundary before turning west across a topographic plateau. Localized rock blasting was observed within several areas of the existing road as well as blast rock placement to create a level surface.



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590 Seedtree Road – East Sooke, BC

August 5, 2021

We observed test pits excavated throughout the site, which we understand were excavated to determine adequate soil coverage for sewage disposal areas. The test pits exposed up to 0.9 m of dense gravelly/silty sand (glacial till) beneath the surficial topsoil. We anticipate that the glacial till observed will be present locally beneath a surficial topsoil cover throughout much of the site. The bedrock observed was generally massive igneous rock consistent with the geological mapping of the Metchosin Volcanics Complex.

The majority of the site is moderately sloped at an approximate angle of 25 degrees from horizontal with steeper areas up to approximately 45 degrees from horizontal. Localized nearly vertical rock bluffs are also present, generally towards the north. The site flattens out to a gently sloped plateau within the area between 180 m to 200 m elevation before steeply rising to the north. The topographic relief across the entire site is on the order of 110 m. All elevation data is approximate and taken from the CRD Web Map.

No evidence of water bodies or centralized surficial water flows/creeks were observed throughout our site reconnaissance. The nearest centralized water course to the property is Seedtree Creek. The creek runs west to east with the beginning of the mapped creek southwest of the property, as displayed on the CRD Web Map.

#### GEOTECHNICAL/GEOHAZARD ASSESSMENT

Based on our visual assessment and review of the site, we did not observe any evidence of large scale slope instability that would preclude safe residential construction within Lot B (or the 3 lots SL 1, SL 2, and SL 3), provided such is undertaken in accordance with the recommendations below. The locations of safe construction are indicated on the attached Site Plan. This does not preclude further geotechnical investigation from determining additional safe construction sites within the property. Rather, the indicated locations are deemed suitable due to the natural leveling of topography and the currently proposed subdivision layout. Further geotechnical investigation and/or future modifications to the terrain may determine additional safe construction sites not addressed at the time of our investigation.

The Approving Authority (MOTI) has indicated that for the purposes of the Appendix D statement, the Province of British Columbia does not have an adopted level of landslide safety. However, as indicated in the MOTI Subdivision Preliminary Layout Review – Natural Hazard Risk document, hazard risk should be considered. For damaging events, a probability of occurrence of 1 in 475 years (10% probability in 50 years) should be considered. For landslide hazards and for life threatening catastrophic events, a probability of occurrence of 1 in 10,000 years (0.5% probability in 50 years) should be considered. In addition, the current BC Building Code (BCBC) requires new construction to be designed to accommodate a seismic event with a probability of occurrence of 1 in 2475 years (2% probability of exceedance in 50 years).



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The proposed indicated building sites are all located safely outside of the identified rockfall hazard areas which are identified below. Surficial layers of shallow soils (topsoil/glacial till) were present within moderately sloped areas (10 to 30 degree slopes), and largely minimal throughout the steeper sloped areas (over 30 degree slopes). The terrain throughout the site, did not visually display any indications of deep-seated instability through our site reconnaissance. The areas upslope of the indicated proposed building sites generally consisted of steeply sloped (20 to 45 degree) massive intact bedrock outcrops, with little to no topsoil/vegetation. We assessed the area north of the property as well and similar steeply sloped massive intact bedrock outcrops were observed before levelling out to a forested gently sloped plateau around geodetic elevation of approximately 230 m (CRD Web Map). Based on the probability of occurrences outlined above, and the fact that the safe building locations are generally located on a gently sloped areas or massive bedrock outcrops, geohazards such as steep slope, landslip or landslide have been determined to be negligible.

Localized small scale instabilities (rockfall hazards) within the immediate vicinity of future building areas may need to be addressed at the time of construction if the topography is altered for construction or for the driveway. Foundation preparations must be inspected and approved by a qualified professional to ensure adequate bearing support.

Several rockfall hazards were identified during our site visit and additional rockfall hazards are anticipated to be generated due to the shared driveway construction. The potential rockfall hazards are summarized below and locations indicated on the attached Site Plan.

1. The switchback that borders lot A had boulders present on the upslope side of the historical rock cut. The area was steeply inclined with an approximate slope of 45 degrees from horizontal with numerous boulders present along the slope as well as loose rock leaning against trees.
2. The proposed roadway alignment requires substantial rock excavation and road filling. Rock blasting of up to 8 m as well as fill slopes of up to 6 m are anticipated based on review of the provided road sections. Considerations will be required to ensure adequate rockfall catchment areas for any permanent rock slopes.
3. To the northeast of the proposed building site in SL 2, a large rock bluff is present that overhangs an area north of the existing roadway. The potential rockfall from this area is directed to the south or southeast and will not impact the proposed safe construction areas.
4. In the northwestern corner of the property (SL 1) the slope steepens to 50-60 degrees from horizontal with some indication of rockfall activity present (such as boulders and cobbles along the slope). The area slopes to the southwest (generally towards the neighbouring property) and will not impact the safe building area within SL 1.



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The above mentioned rockfall hazards can likely be mitigated through removing detached boulders or fragmented rocks when present. Additionally, at the base of rock slopes rockfall catchment areas are recommended and/or construction of retaining barriers. Boulders of fractured rock may mobilize during an earthquake event, or after years of weathering and mechanical destabilization from erosion/freeze/thaw cycles. The observed blasted rock faces were generally intact with some minor fractured-in-place fragments. We anticipate the future rock cuts should react similarly; however, such should be reassessed following blasting to determine if additional mitigative measures are required.

The boundary between lots SL 2 and SL 3 is proposed to be re-aligned as indicated on the Site Plan for the indicated safe building locations. If development plans are altered re-assessment of the site can be conducted by a qualified professional to assess further areas for safe construction, as required.

All construction must mitigate rockfall hazards which could potentially affect the downslope residence in Lot A. Any blasting conducted along the boundary between Lot A and the roadway or near property lines should mitigate over-break, provide a sufficient offset from the slope crest to the roadway, and provide adequate rockfall catchment areas. We understand that roadway alignment may change based on future development designs and we should be consulted to re-assess any potential modifications.

For flooding hazard, MOTI has indicated that a probability of occurrence of 1 in 200 years is the minimum standard. The site is located within a relatively small catchment area near the peak of a localized mountain slope. The majority of the site is moderately to steeply sloped with shallow bedrock present, and localized dense glacial till soils in shallower sloped areas. No evidence of water bodies or centralized surficial water flows/creeks were observed. Given the location, we do not consider the site to be at significant risk of flooding. The surface grading around the building should be finished to shed sheet flows (surficial runoff) away from the foundations. Sheet flows may occur during extreme precipitation events due to the shallow bedrock impedance layer and steep slopes.

#### CONCLUSION

Based on the above, we consider the proposed subdivision to be feasible from a geotechnical perspective. Our assessment has considered safe building sites to be free from hazard or have a low hazard of landslide and are considered safe from a damaging event with a 10% probability of exceedance in 50 years, as well as from seismically induced slope instability associated with a design event having a 2% probability of exceedance in 50 years. For flooding hazard, a probability of occurrence of 1 in 200 years has been considered as a minimum standard. In addition, we do not consider the site to be subject to risk of naturally occurring catastrophic life



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590 Seedtree Road – East Sooke, BC

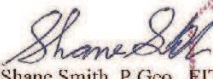
August 5, 2021

threatening hazardous events having a probability of occurrence with a 1 in 10,000 year return period.

This report does not exclude further subdivision/building sites from being confirmed/added at a later date, subject to additional assessment. Accordingly, provided the development is carried out as outlined within this report, it is our professional opinion that the land may be used safely for the use intended, that being residential construction undertaken in accordance with the current BC Building Code. This is pursuant to Section 56 of the Community Charter and East Sooke's OCP, Bylaw No. 4000. Our assessment is further provided in consideration of Section 86(d) of the Land Title Act and pursuant to the Guidelines for Legislated Landslide Assessments for Proposed Residential Developments in BC and Legislated Flood Assessments in a Changing Climate in BC (Appendix D: Landslide Assessment Assurance Statement and Appendix I: Flood Assurance Statement are attached).

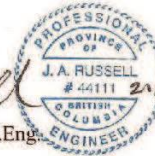
We hope the preceding is suitable for your purposes at present. Please do not hesitate to contact our office if we can be of further assistance.

Yours truly,  
Ryzuk Geotechnical

  
Shane Smith, P.Geo., EIT  
Intermediate Geoscientist



  
James Russell, M.Sc., P.Eng.  
Project Manager



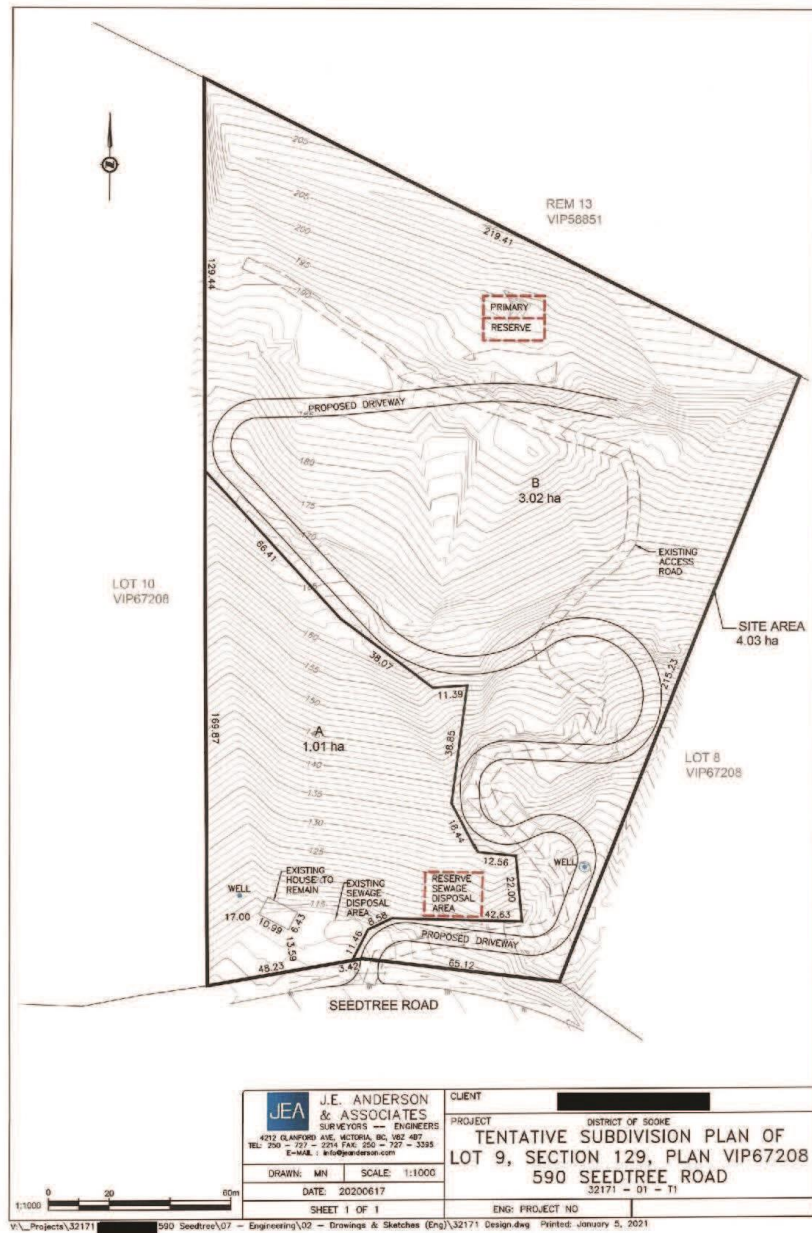
Attachments –  
Tentative 2-lot Subdivision Location Plan  
Tentative 3-lot Subdivision Location Plan  
Site Plan  
Appendix D: Landslide Assessment Assurance Statement  
Appendix I: Flood Assurance Statement

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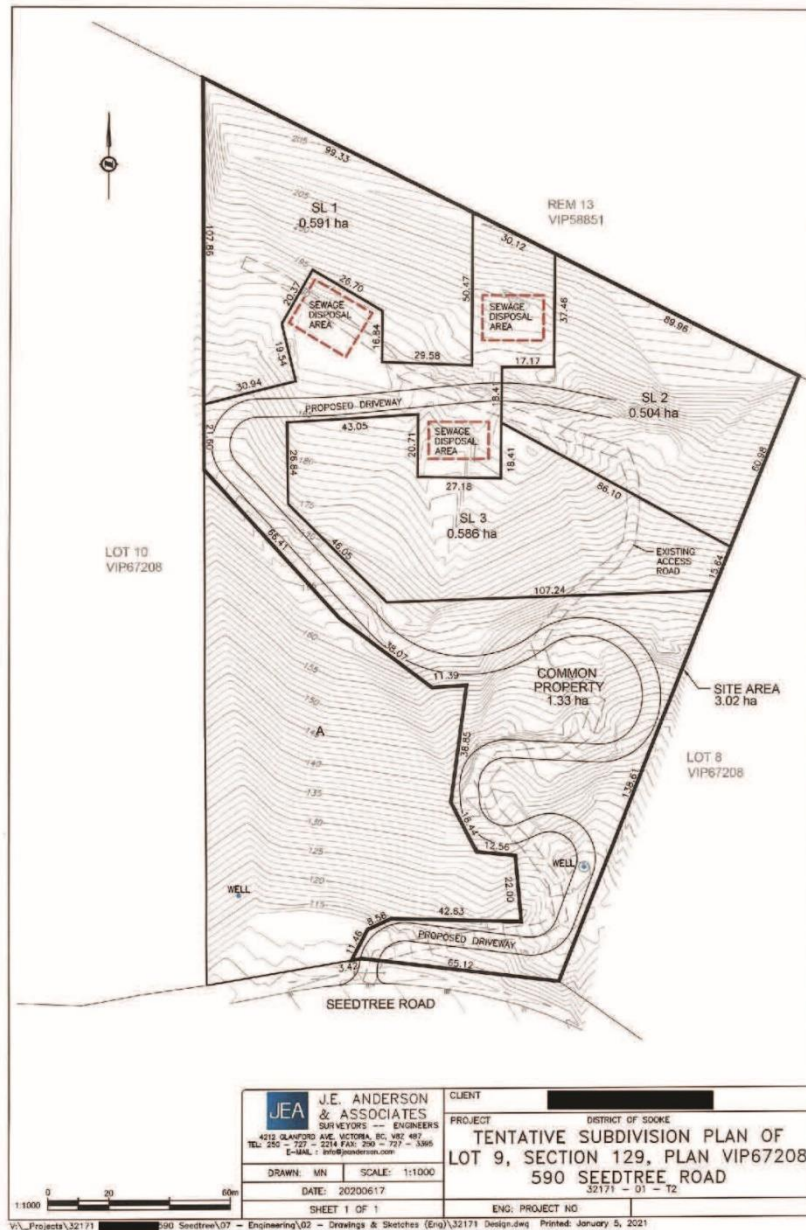


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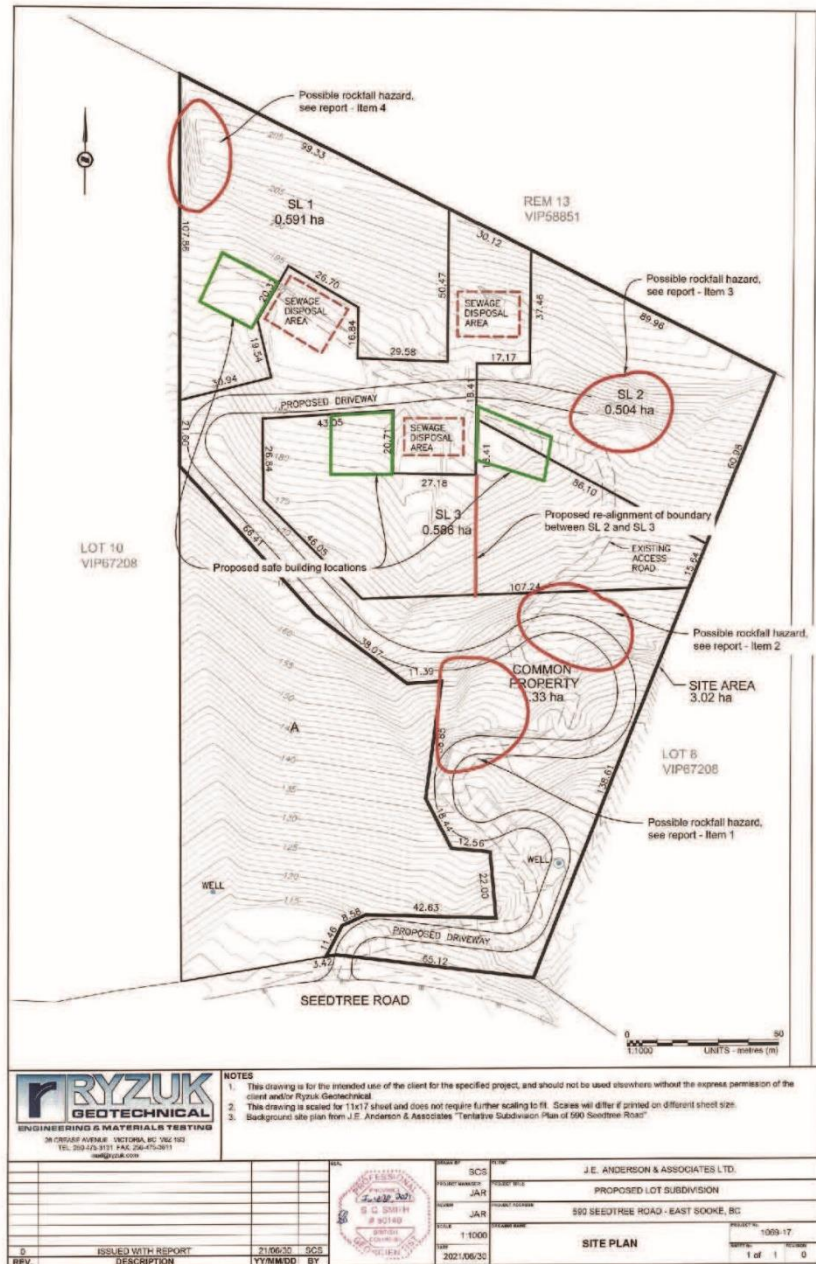


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## APPENDIX D: LANDSLIDE ASSESSMENT ASSURANCE STATEMENT

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  
Ministry of Transportation and Infrastructure, Search Area Office  
240-4450 Chatterton Way, Victoria, BC, V8X 5J2  
Jurisdiction and address

Date: June 30, 2021

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 9, Section 129, Plan VIP 67208, 590 Seedtree Road, PID 024152846  
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:



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- ☒ 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>111</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".

James Russell, M.Sc., P.Eng.

June 30, 2021

Name (print)

Date

Signature

<sup>111</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."



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6-40 Cadillac Ave, Victoria, BC

Address

V8Z 1T2

250-475-3131

Telephone



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)



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### FLOOD ASSURANCE STATEMENT

Note: This statement is to be read and completed in conjunction with the current Engineers and Geoscientists BC Professional Practice Guidelines – Legislated Flood Assessments in a Changing Climate in BC (the guidelines) and is to be provided for flood assessments for the purposes of the Land Title Act, Community Charter, or the Local Government Act. Defined terms are capitalized; see the Defined Terms section of the guidelines for definitions.

To: The Approving Authority

Date: June 30, 2021

Ministry of Transportation and Infrastructure, Search Area Office

240-4460 Chatterton Way, Victoria, BC, V8X 5J2

Jurisdiction and address

With reference to (CHECK ONE):

- ☒ Land Title Act (Section 86) – Subdivision Approval
- ☐ Local Government Act (Part 14, Division 7) – Development Permit
- ☐ Community Charter (Section 56) – Building Permit
- ☐ Local Government Act (Section 524) – Flood Plain Bylaw Variance
- ☐ Local Government Act (Section 524) – Flood Plain Bylaw Exemption

For the following property ('the Property'):

Lot 9, Section 129, Plan VIP 67208, 590 Seedtree Road, PID 024152846

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 who fulfils the education, training, and experience requirements as outlined in the guidelines.

I have signed, sealed, and dated, and thereby certified, the attached Flood Assessment Report on the Property in accordance with the guidelines. That report and this statement must be read in conjunction with each other. In preparing that Flood Assessment Report I have:

[CHECK TO THE LEFT OF APPLICABLE ITEMS]

- ☐ 1. Consulted with representatives of the following government organizations:  
\_\_\_\_\_
- ☒ 2. Collected and reviewed appropriate background information
- ☐ 3. Reviewed the Proposed Development on the Property
- ☐ 4. Investigated the presence of Covenants on the Property, and reported any relevant information
- ☒ 5. Conducted field work on and, if required, beyond the Property
- ☒ 6. Reported on the results of the field work on and, if required, beyond the Property
- ☒ 7. Considered any changed conditions on and, if required, beyond the Property
- 8. For a Flood Hazard analysis I have:
  - ☒ 8.1 Reviewed and characterized, if appropriate, Flood Hazard that may affect the Property
  - ☒ 8.2 Estimated the Flood Hazard on the Property
  - ☒ 8.3 Considered (if appropriate) the effects of climate change and land use change
  - ☐ 8.4 Relied on a previous Flood Hazard Assessment (FHA) by others
  - ☐ 8.5 Identified any potential hazards that are not addressed by the Flood Assessment Report
- 9. For a Flood Risk analysis I have:
  - ☒ 9.1 Estimated the Flood Risk on the Property
  - ☐ 9.2 Identified existing and anticipated future Elements at Risk on and, if required, beyond the Property
  - ☐ 9.3 Estimated the Consequences to those Elements at Risk

PROFESSIONAL PRACTICE GUIDELINES  
LEGISLATED FLOOD ASSESSMENTS IN A CHANGING CLIMATE IN BC

VERSION 3.1

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#### FLOOD ASSURANCE STATEMENT

10. In order to mitigate the estimated Flood Hazard for the Property, the following approach is taken:
- ☐ 10.1 A standard-based approach
  - ☐ 10.2 A Risk-based approach
  - ☐ 10.3 The approach outlined in the guidelines, Appendix F: Flood Assessment Considerations for Development Approvals
  - ☒ 10.4 No mitigation is required because the completed flood assessment determined that the site is not subject to a Flood Hazard
11. Where the Approving Authority has adopted a specific level of Flood Hazard or Flood Risk tolerance, I have:
- ☐ 11.1 Made a finding on the level of Flood Hazard or Flood Risk on the Property
  - ☐ 11.2 Compared the level of Flood Hazard or Flood Risk tolerance adopted by the Approving Authority with my findings
  - ☐ 11.3 Made recommendations to reduce the Flood Hazard or Flood Risk on the Property
12. Where the Approving Authority has not adopted a level of Flood Hazard or Flood Risk tolerance, I have:
- ☒ 12.1 Described the method of Flood Hazard analysis or Flood Risk analysis used
  - ☒ 12.2 Referred to an appropriate and identified provincial or national guideline for level of Flood Hazard or Flood Risk
  - ☐ 12.3 Made a finding on the level of Flood Hazard or Flood Risk tolerance on the Property
  - ☒ 12.4 Compared the guidelines with the findings of my flood assessment
  - ☐ 12.5 Made recommendations to reduce the Flood Hazard or Flood Risk
- ☒ 13. Considered the potential for transfer of Flood Risk and the potential impacts to adjacent properties
- ☒ 14. Reported on the requirements for implementation of the mitigation recommendations, including the need for subsequent professional certifications and future inspections.

Based on my comparison between:

[CHECK ONE]

- ☐ The findings from the flood assessment and the adopted level of Flood Hazard or Flood Risk tolerance (Item 11.2 above)
- ☒ The findings from the flood assessment and the appropriate and identified provincial or national guideline for level of Flood Hazard or Flood Risk tolerance (Item 12.4 above)

I hereby give my assurance that, based on the conditions contained in the attached Flood Assessment Report:

[CHECK ONE]

- ☒ For a 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* (Part 14, Division 7), my Flood Assessment Report will "assist the local government in determining what conditions or requirements it will impose under subsection (2) of this section [Section 491 (4)]".

- ☐ 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* and the *Amendment Section 3.5 and 3.6* associated with the *Local Government Act* (Section 524), "the development may occur safely".
- ☐ For flood plain bylaw exemption, as required by the *Local Government Act* (Section 524), "the land may be used safely for the use intended".

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LEGISLATED FLOOD ASSESSMENTS IN A CHANGING CLIMATE IN BC

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FLOOD ASSURANCE STATEMENT

I certify that I am a Qualified Professional as defined below.

June 30, 2021

Date

Shane Smith, P.Geo., EIT

Prepared by

Shane Smith, P.Geo., EIT

Name (print)

Signature

6-40 Cadillac Ave, Victoria BC

Address

V8Z 1T2

250-475-3131

Telephone

ssmith@ryzuk.com

Email

James Russell, M.Sc., P.Eng.

Reviewed by

James Russell, M.Sc., P.Eng.

Name (print)

Signature



(Affix PROFESSIONAL SEAL here)

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.

(Name of firm)

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VERSION 2.3

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Appendix C: Environmental Assessment Report

**Applied Ecological Solutions Corp.**

Fisheries • Land Use • Management



**ENVIRONMENTAL OVERVIEW ASSESSMENT REPORT**

PROJECT NAME	Property Subdivision: 590 Seedtree Road, East Sooke, BC
SUBJECT	Environmental Overview Assessment Report (Final REV 0)
PROPERTY OWNER / DEVELOPER	[REDACTED]
ENGINEERING	J.E. Anderson & Associates (JEA)
MAILING ADDRESS	4212 Glanford Avenue Victoria, B.C. V8Z 4B7
REPORT RECIPIENTS	[REDACTED] Lori Baxter, PEng (JEA) Phil Buchanan, PEng (JEA)
PREPARED BY	Craig Barlow, RPBio, QEP Applied Ecological Solutions Corp. (AESC)
DATE	May 3, 2021

**1. CONTEXT**

Project Initiation and Project Scope

AESC has been retained by JEA (on behalf of [REDACTED] property owner / developer) to complete an Environmental Overview Assessment of a proposed subdivision property at 590 Seedtree Road (subject property) in East Sooke, BC. The intent of the assessment is to review the following:

- Implications of the road frontage drainage with respect to triggering the Riparian Areas Protection Regulation (RAPR),
- Upslope areas to identify any sensitive ecosystems that may exist,
- Implications of the applicable CRD Development Permit Areas (DPAs) that may occur on the property as presented in the East Sooke Official Community Plan (ES-OCP)<sup>1</sup>,
- Identify any other potential environmental factors that may impact or constrain property subdivision.

Field Review

The field reviews were completed on April 8 and 15, 2021. The April 8 site review focused on tracing the frontage ditch pathway to determine connectivity to Seedtree Creek. The April

<sup>1</sup> Schedule A – East Sooke Official Community Plan – Bylaw No. 4000. Prepared by the CRD. 2018. Available at: <https://www.crd.bc.ca/docs/default-source/crd-document-library/bylaws/land-use/official-community-plan-for-east-sooke-bylaw-no-1-2012B.pdf?sfvrsn=0>



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15 site review focused on upslope areas. This review included traversing the entire property on foot from Seedtree Road to the north property boundary.

Report intent

The intent of this report is to [1] document the findings of the field reviews, [2] confirm the applicability of the DPAs as they relate to proposed subdivision of the subject property, and [3] provide context and supporting environmental information for any potential CRD permitting.

Subject Property Location and Legal Description

The subject property is located at 590 Seedtree Road, in East Sooke (Appendix 1: Figure 1).

The subject property legal description is as follows:

Property ID	024 152 846
Lot No.	9
Plan No.	VIP 67208
Total Property Area	~4.1 hectares
Road frontage	~115m

**2. SITE OVERVIEW – FIELD REVIEW ENVIRONMENTAL FINDINGS**

Topography

The trapezoid-shaped subject property is generally steeply graded and undulating (Photo 1). Immediately on entering the property, the property rises in elevation. For example, based on review of contours available on the CRD Regional Map, the elevation at the driveway entrance at Seedtree Road is approximately 100 m. The elevation at the north property boundary (approximately 250 m from Seedtree Road) is approximately 215 m. This represents an average grade of approximately 25%.

A steep grade tote road has been constructed on the property (Photo 2).



**Photo 1** Subject property typical steep conditions (C. Barlow).



**Photo 2** Steep tote road constructed to the north end of the property (C. Barlow).

PREPARED FOR: [REDACTED]  
PREPARED BY: APPLIED ECOLOGICAL SOLUTIONS CORP.

MAY 3, 2021  
AESO PROJECT NO. 221-007-1



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The property is predominated by exposed bedrock faces, escarpments and outcroppings (Photos 3 & 4). Based on the prevalence of bedrock, it is anticipated that the topsoil horizon throughout most of the property is extremely shallow.



Photo 3 Typical rock outcropping (C. Barlow).



Photo 4 Typical rock outcropping (C. Barlow).

#### Drainage

There were no surface water runoff drainages observed on the property.

The road frontage ditch drains to Seedtree Creek, originating from runoff areas along the north side of Seedtree Road for a distance of approximately 140 m (Photo 5). This point demarcates the topographic transition such that drainage flows to the east.

Based on the predominance of exposed bedrock and the lack of areas for water storage, it is anticipated that stormwater runoff from this and adjacent properties is accelerated and rapidly diminishes as precipitation events subside.



Photo 5 Road frontage ditch at subject property (C. Barlow).

#### Vegetation

With the exception of the house location and the tote road constructed to the north end of the property, the subject property is generally intact forest. The forest ecosystem is classified as Coastal Western Hemlock Very Dry Maritime (CWHxm1)<sup>2</sup>. This zone occurs in elevations from sea level to 900m on windward slopes in the south and mid-coast.

Table 1 provides a summary of overstorey (canopy trees) and understorey (shrubs and ground cover) plant species observed on the subject property. This summary plant list is not exhaustive, nor is it intended to be an inventory.

<sup>2</sup> Biogeoclimatic Ecosystem Classification Subzone / Variant Map for the South Island Resource District, South Coast Region. Published by Ministry of Forests, Lands, Natural Resource Operations and Rural Development. August 2016.



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**Table 1** Summary of Plant Species Observed on the Subject Property

OVERSTOREY		UNDERSTOREY AND GROUND COVER	
Common Name	Species Name	Common Name	Species Name
Douglas-fir	<i>Pseudotsuga menziesii</i>	Salal	<i>Gaultheria shallon</i>
Grand fir	<i>Abies grandis</i>	Oceanspray	<i>Holodiscus discolor</i>
Sitka Spruce (uncommon)	<i>Picea sitchensis</i>	Dull Oregon-grape	<i>Mahonia nervosa</i>
Western White Pine (uncommon)	<i>Pinus monticola</i>	Baldhip Rose	<i>Rosa gymnocarpa</i>
Shore Pine	<i>Pinus contorta</i> var.	Trailing Blackberry	<i>Rubus ursinus</i>
Arbutus (Madrone)	<i>Arbutus menziesii</i>	Common Foxglove	<i>Digitalis purpurea</i>
Bigleaf Maple	<i>Acer macrophyllum</i>	Shooting Star	<i>Dodecatheon</i> spp.
NOTE: Garry Oak was not observed anywhere on the subject property.		Unidentified wildflowers	-
		Moss spp.	-
		Introduced and Invasive	
		European Holly (introduced, sporadic)	<i>Ilex aquifolium</i>
		Scotch Broom (introduced)	<i>Cytisus scoparius</i>

#### Seedtree Creek

Seedtree Creek is a first order stream<sup>3</sup> approximately 2,500 m long. Existing mapping reveals the upstream terminus of the stream is at 630 Seedtree Road, immediately west of the subject property. Field review verifies that flows to Seedtree Creek originate from a spring at 630 Seedtree Road adjacent to the road (Photo 6). There are no contributing groundwater springs contributing flows to the ditch at any other location to the east of this spring.

The stream alignment generally follows the Seedtree Road alignment, crossing by way of road culverts (Photo 7). Near the intersection with East Sooke Road, Seedtree Creek ultimately flows to two large (upper and lower) wetland complexes (~3 ha and ~4 ha, respectively), oriented parallel to East Sooke Road (Appendix 1: Figure 1).



**Photo 6** Spring-fed flows to headwaters of Seedtree Creek at 630 Seedtree Road (C. Barlow).



**Photo 7** Seedtree Road concrete culvert conveying Seedtree Creek (C. Barlow).

<sup>3</sup> A system of stream classification used to rank streams from the headwaters to river terminus, designating the relative position of a stream within a drainage basin. The smallest, unbranched tributaries terminating at an outer point are first-order streams.

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At East Sooke Road, the stream passes under East Sooke Road by way of a low gradient, elliptical pipe arch culvert approximately 2 m in diameter (Photo 8). Downstream of the road culvert, the low-gradient channel is generally unaltered. It exhibits natural stream development characteristics such as pool-riffle sequencing, sinuosity, bank development, large woody debris complexes, gravel aggradation, well-established riparian community, etc. (Photo 9). Seedtree Creek discharges to the marine environment at Murder Bay. However, private properties prevented access to the stream outlet to confirm if there are any hydraulic (vertical) barriers that could constrain access by anadromous fish species.

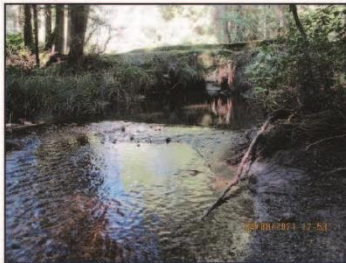


Photo 8 Seedtree Creek looking upstream to East Sooke Road elliptical culvert (C. Barlow).



Photo 9 Seedtree Creek typical low gradient channel conditions downstream of East Sooke Road (C. Barlow).

### 3. ECOSYSTEM MAPPING

#### British Columbia Conservation Data Centre (CDC)

The British Columbia Conservation Data Centre (CDC) online mapping<sup>4</sup> provides a registry of areas of ecological significance and / or are known to support listed fish, wildlife and plant species. An expansive area encompassing much of the Sooke Basin, Victoria and Saanich Peninsula, is identified as 'masked'. CDC information is secure and requires a specific query to the CDC.

There are no other ecologically significant species- or ecosystem-specific polygons identified within the subject property, such as Garry Oak.

#### CRD Regional Map and East Sooke Development Permit Areas Mapping

##### **CRD Regional Map**

The Regional Map<sup>5</sup> includes ecosystem layers throughout the CRD. These layers duplicate similar layers provided on the BC Sensitive Ecosystems Inventory (SEI) map<sup>6</sup>.

<sup>4</sup> <http://maps.gov.bc.ca/ess/hm/cdc/>

<sup>5</sup> <https://maps.crd.bc.ca/Html5Viewer/?viewer=public>

<sup>6</sup> Map Sheet 092B.032. Sensitive Ecosystems Inventory of East Vancouver Island and Gulf Islands – Disturbance Mapping and Re-evaluation of Major Riparian Corridors. Jointly prepared by: Environment Canada; Canadian Wildlife Service; BC Ministry of Sustainable Resource Management; BC Ministry of Water, Land and Air Protection; and, Habitat Conservation Trust Fund. March 2004.



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At this site, the one sensitive ecosystem is identified as 'older second growth' (Figure A). This classification is consistent with the classification shown in the SEI map. The SEI describes this ecosystem as an 'important ecosystem' and not a 'sensitive ecosystem', described as follows:

*"These forested ecosystems have a dominant age class of 60 - 100 years. While not as biologically rich as Older Forests, they can serve as important buffers around sensitive ecosystems and vital links between habitat patches. They often provide critical habitat for species that require both open and forested areas during their life-cycle. The biological diversity of forests generally increases with age. Where older forests are rare or absent, older second growth forests become more important as they gradually develop old forest characteristics."*

#### East Sooke Development Permit Areas

The East Sooke Development Permit Areas (DPAs) maps identify several DPAs within the East Sooke area that are near, or extend into, the subject property. These are the:

- Sensitive Ecosystem DPA,
- Steep Slopes DPA, and
- Shoreline Protection and Riparian DPA.

The Sensitive Ecosystem DPA occurs throughout the subject property, covering approximately 3.7 ha (90%) of the total area (Figure A; light brown shading).

The Steep Slopes DPA occurs throughout the property (Figure B; orange shading). Field review confirms that steep slope terrain commonly occurs.



**Figure A** Sensitive Ecosystem polygons at and near the subject property<sup>7</sup>.



**Figure B** Steep Slope DPA<sup>7</sup>.

<sup>7</sup> ES-OCP, Schedule C: Steep Slope Development Permit Area.



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The Shoreline Protection and Riparian DPA is associated with the occurrence of Seedtree Creek immediately adjacent to the subject property (Figure C; See also Section 2: Seedtree Creek, above, and Section 4: Riparian Areas Protection Regulation Trigger, below). There are no shoreline areas at or near the subject property.

#### Wildlife Tree Stewardship Atlas

The Wildlife Tree Stewardship Atlas<sup>8</sup> provides a database of known Bald Eagle and Osprey nests throughout BC. The nearest identified occurrence of a Bald Eagle nest (BAEA-102-017) is approximately 900 m northwest of the subject property (Figure D). A second Bald Eagle nest (BAEA-102-004) exists on an island near Beecher Bay Marina, approximately 2.5 km southeast of the subject property.

It is not known if either of these nests is active. There are no other registered nests within the vicinity of the subject property.



Figure C Riparian DPA and the mapped upstream terminus end of Seedtree Creek<sup>8</sup>.



Figure D Location of the nearest Bald Eagle nest to the subject property<sup>8</sup>.

## 4. SITE DEVELOPMENT TIMING CONSTRAINT CONSIDERATIONS

### Vegetation Clearing

For information during subsequent site development, the Province assigns a Reduced Risk Timing Window for breeding birds (Nesting Window). This Nesting Window applies to all bird species. The Nesting Window is the period when birds are actively breeding, including nesting, brooding eggs, and fledging of chicks. This period extends from March 15 to July

<sup>8</sup> [https://cmnmaps.ca/WITS\\_gomap/](https://cmnmaps.ca/WITS_gomap/)

<sup>9</sup> Map 3b – East Sooke OCP Foreshore, Wetland and Riparian Areas Development Permit Areas. Prepared by the CRD. 2008. **Note:** An updated version of Map 3b is provided in the 2018 ES-OCP as *Schedule D: Shoreline Protection and Riparian Development Permit Areas*. The riparian component of the DPA for Seedtree Creek presented in both figures is the same. For image clarity, the 2008 map was used.



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31 of any calendar year. Any contemplation to clear vegetation (trees and shrubs) within this Window period is likely to require the completion of at least two successive nesting surveys by a Qualified Environmental Professional to identify active nests. If nests are identified, removal of the vegetation within the immediate vicinity of the nest cannot proceed until the chicks have fledged and left the nest. If the outcome of the nesting survey does not identify active nests, then clearing should proceed immediately (i.e., within approximately 3-5 days of being notified of the all clear).

Vegetation clearing completed between August 1 and March 14 is not constrained by this Window.

#### Aquatic Timing Windows

There are no aquatic timing Windows (i.e., Reduced Risk Timing Window for fish) that apply to the subject property as the road frontage ditch extension of Seedtree Creek is not considered to be fish habitat.

### **5. RIPARIAN AREAS PROTECTION REGULATION TRIGGER**

The Riparian Areas Protection Regulation (RAPR) was enacted in 2004<sup>10</sup> as the Riparian Areas Regulation. The RAPR process was developed to ensure riparian zones around streams, lakes, wetlands, etc. are protected from encroachment associated with development and other activities (e.g., vegetation clearing), that can result in the degradation or loss of these zones. This includes defining and designating the protected area (Streamside Protection and Enhancement Area; SPEA) where no work can occur. The SPEA is measured perpendicular to the direction of flow, ranging from a minimum of 10 m from the high water mark to a maximum of 30 m. In this regard, local governments throughout much of southern BC have adopted the terms of the RAPR through their bylaw processes.

Under the RAPR, a stream is defined as a watercourse or waterbody that fits within the following criteria:

1. Supports fish during any life stage, regardless of duration, or
2. Is connected and drains into a watercourse that supports fish.

This can include ditches that fit into either of these categories. Using these criteria, a stream that may be non-fish bearing at the development site but flows to a stream that supports fish is captured under the RAPR. Also, streams that flow seasonally (i.e., ephemeral) that may be dry for much of the year can still provide habitat for seasonal fish use and / or food and nutrients to downstream fish habitat. As such, streams in this category are captured under the RAPR.

Ditch SPEAs are assigned based on fish bearing status. They are not 'natural' streams where several stream width measurements are required to determine the average channel width, and, therefore the SPEA. Ditches do not require stream measurements or other assessments to determine the SPEA. Fish bearing ditches have a 5 m SPEA (measured from the high water mark). Non-fish bearing ditches have a 2 m SPEA. At the subject property, the road frontage ditch is directly connected to the terminal end of Seedtree Creek, based on the occurrence of a spring water source at the adjacent property.

<sup>10</sup> Originally the Riparian Areas Regulation.



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At this site, the mapped upstream limit of Seedtree Creek ends at the road frontage corner pin property boundary between 630 Seedtree Road (Lot 10) and 590 Seedtree Road (Lot 9)<sup>11</sup> (Figure C; yellow arrow). As described above, field review has verified that the mapping is correct. The extension of the ditching system along the north side of Seedtree Road provides stormwater drainage during precipitation events. The connecting ditch was dry at the time of the field review.

## 6. CONCLUSIONS AND PROFESSIONAL OPINION

### Conclusions

Based on the findings of this overview assessment, the author provides the following conclusions:

1. Overall, the property is characterized as steep sloped with areas of undulating ground, exposed bedrock escarpments and rock outcroppings.
2. The vegetation community is within the Coastal Western Hemlock Very Dry Maritime biogeoclimatic ecosystem zone. The predominant tree species is Douglas-fir. Other tree species occur infrequently or in lesser abundance.
3. The subject property is within Shoreline Protection and Riparian, Steep Slopes and Sensitive Ecosystem DPAs. Of these, the Shoreline Protection and Riparian DPA encompasses a negligible area at the upstream terminus of Seedtree Creek. The Steep Slopes DPA covers approximately 50% of the subject property in disconnected areas. The Sensitive Ecosystem DPA covers approximately 90% of the subject property.
4. Overall, the property is identified on the ES-OCP mapping as being within a Sensitive Ecosystem DPA. However, the same polygon shown on the SEI mapping describes this ecosystem as 'important'.
5. Specific sensitive ecosystems (e.g., Garry Oak) were not observed during the field review, nor are there ecosystem- or species-specific habitats identified in available online databases.
6. Review of the CDC database revealed that a vast area extending from Sooke Basin and encompassing much of Saanich Peninsula is identified as 'masked'. Access to information related to an area identified as 'masked' requires a specific query with the CDC. There were no other ecologically significant polygons identified within the subject property.
7. The subject property includes a road frontage ditch that flows to the upstream terminal end of Seedtree Creek.
8. Seedtree Creek originates from a groundwater spring at 630 Seedtree Road. This spring is located adjacent to the ditch and discharges low water volume to the roadside ditch. The creek discharges to the marine environment at Murder Bay by way of two large wetland areas.
9. No fish were observed in flowing habitat downstream of the subject property during the field reviews. There are no available records of fish bearing status for Seedtree Creek. However, there are no known barriers to access by anadromous fish species migrating

<sup>11</sup> Shown on Figure C as the lot boundary between Lot 9 (subject property) and Lot 10.



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from the marine environment. While the lower reaches of Seedtree Creek may potentially support seasonal fish use, this can only be verified through fish sampling and / or field observations.

Upstream fish access to the upper reaches in the vicinity of Seedtree Road is likely to be poor. Also, there is no functional fish habitat within the roadside ditch segment of the stream channel near the subject property.

10. While the RAPR process could be formally triggered, there is no biological reporting benefit to doing so since the SPEA setback on the road frontage ditch is 2 m.
11. Regardless of fish bearing capabilities throughout the Seedtree Creek watershed, the aquatic habitat at the subject property is low quality and provides negligible aquatic benefit to non-fish species such as amphibians. However, flows in Seedtree Creek provide important water contributions to downstream aquatic habitats, including the stream channel and the upper and lower wetland complexes.
12. The nearest registered Bald Eagle nest is approximately 900m northwest of the subject property. A second nest occurs approximately 2.5 km southeast of the subject property. It is not known if either of these nests is active.
13. Any site development vegetation clearing that may be undertaken during layout of the subdivision infrastructure, lots, etc. should be completed outside of the Nesting Window. If clearing within the Nesting Window is contemplated, it is recommended that the developer consult with a bird specialist. The author can provide contact information for a recognized expert in this area, if requested.

#### Professional Opinion

Based on the findings of this overview assessment and the conclusions derived from it, the author provides the following professional opinions:

1. There were no field observations that warranted specific environmental constraints on development.
2. There were no observed sensitive ecosystems, (e.g., Garry Oak), observed on the subject property that warrant special consideration.
3. As the property is within a Steep Slopes DPA, it is assumed that any engineering, geotechnical, or other related issues related to development can be mitigated and resolved through engineering practices. These issues are not within the domain of the author's expertise to resolve through adopting Environmental Best Practices.
4. While the upstream terminus of Seedtree Creek originates on the adjoining property, triggering the RAPR is not warranted since any site works and development are constrained by a 2 m SPEA setback (measured from the top of the ditch bank) along the road frontage ditch.
5. Given the southern aspect of the subject property relative to the location of nest BAEA-102-017, it is extremely unlikely that rock work (e.g., blasting) which may be required on the property will adversely impact Bald Eagle breeding activities.
6. By nature of the predominance of shallow soils and bedrock, it is possible that the subject property could experience accelerated and / or intense runoff during intense rainfall events. However, no evidence of this (such as wash areas, evidence of surface flows, etc.) were observed.

PREPARED FOR: [REDACTED]  
PREPARED BY: APPLIED ECOLOGICAL SOLUTIONS CORP.

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7. Regarding management of runoff and the generation of mobile sediments, any site works that have the potential of discharging sediment laden water to Seedtree Creek should be undertaken in compliance with a project-specific Erosion and Sediment Control Plan.

Please contact me if you have any questions about this report or any other aspect of the proposed development.

Sincerely,

Craig T. Barlow, RPBio, QEP  
Biologist

cb\



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PREPARED BY: APPLIED ECOLOGICAL SOLUTIONS CORP.

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# APPENDIX 1

## Figure

PREPARED FOR: [REDACTED]  
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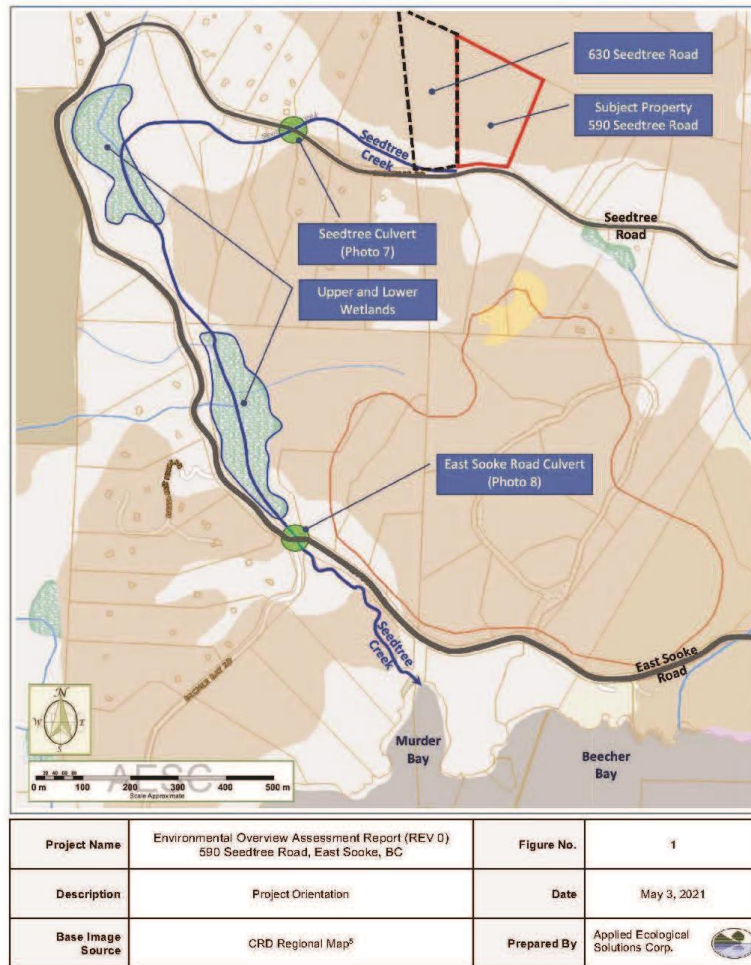
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