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DV000046

**REPORT TO THE JUAN DE FUCA LAND USE COMMITTEE  
MEETING OF TUESDAY, APRIL 19, 2016**

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**SUBJECT** Development Permit with Variance and Floodplain Exemption for Lot 3, Section 32, Otter District, Plan 25866

**ISSUE**

A request has been made for a development permit with variance and floodplain exemption to construct a single-family dwelling with attached studio within the steep slopes, foreshore and sensitive ecosystem development permit areas (DPAs), within the rear and side yard setbacks of the Rural Residential 2 (RR-2) zone, and within the floodplain setback requirement.

**BACKGROUND**

The 0.15 ha property is located on West Coast Road in Otter Point and is zoned Rural Residential 2 (RR-2) under the Juan de Fuca Land Use Bylaw, 1992, Bylaw No. 2040. The property is bounded by RR-2 zoned properties to the east and west, West Coast Road to the north, and the Strait of Juan de Fuca to the south (Appendix A).

The subject property was created by subdivision in 1972 and there is a small cottage on the property that pre-dates building permit records. The property is within the Kemp Lake Waterworks District and will be serviced by community water, on-site septic and hydro. There are no encumbrances registered on title of the land.

The applicants wish to construct a new single-family dwelling and connect the existing cottage by breezeway to create attached living space (Appendix B). Variances are requested for the existing cottage, which is located within the 6 m side yard setback to the east, and for the proposed covered deck, which would be constructed within the 10 m of the rear yard setback. The applicant is also requesting an exemption from the 15 m floodplain setback for the structures. Professional reports have been submitted to address the development permit guidelines and proposed floodplain exemption. As part of the building permit process for the new home, the applicant will be required to submit a structural engineer's certification to connect the existing cottage by breezeway.

**ALTERNATIVES**

That the Land Use Committee recommends to the CRD Board:

1. That Steep Slopes, Foreshore and Sensitive Ecosystem Development Permit with Variance and Floodplain Exemption DV000046, as specified in Appendix E, for Lot 3, Section 32, Otter District, Plan 25866, for the purpose of constructing a dwelling and attaching an existing cottage, be approved.
2. That the Development Permit with Variance and Floodplain Exemption be denied and require the structures to comply with land use requirements and that a Development Permit be obtained.
3. That the application be referred back to staff for more information.

## **LEGISLATIVE IMPLICATIONS**

The Otter Point Official Community Plan (OCP), Bylaw No. 3819, designates development permit areas for hazardous and environmentally sensitive areas. The subject property is within the steep slopes, foreshore and sensitive ecosystem DPAs; therefore, a development permit is required before the land is altered.

The Juan de Fuca Land Use Bylaw, Bylaw No. 2040, Schedule A, Part II, Section 6.07 establishes yard requirements for the RR-2 zone. A development variance permit is required in order to allow the proposed construction to be located within the side and rear yard requirements.

The Juan de Fuca Land Use Bylaw, Bylaw No. 2040, Schedule A, Part 5, designates floodplain specifications. Section 524 of the *Local Government Act* (*LGA*) permits local government to exempt a person from the bylaw in relation to a specific parcel of land or a use, building or other structure on the parcel of land if the local government considers it advisable and either considers that the exemption is consistent with the provincial guidelines or has received a report, certified by a Professional Engineer or geoscientist experienced in geotechnical engineering, that the land may be used safely for the use intended. The granting of an exemption may be made subject to terms and conditions the local government considers necessary or advisable, including the requiring that the applicant enter into a covenant under section 219 of the *Land Title Act*.

## **PUBLIC CONSULTATION IMPLICATIONS**

Pursuant to Section 499 of the *LGA*, if a local government is proposing to pass a resolution to issue a development variance permit, it must give notice to each resident/tenant within a given distance as specified by bylaw. Capital Regional District Bylaw No. 3110, Fees and Procedures Bylaw, states that the Board at any time may refer an application to an agency or organization for their comment. In addition, it states that a notice of intent must be mailed to adjacent property owners within a distance of not more than 500 m. Any responses received from the public will be presented at the April 19, 2016 Land Use Committee meeting. There is no requirement for public consultation if a local government is considering a development permit or floodplain exemption.

## **LAND USE IMPLICATIONS**

The subject property is within the steep slopes, foreshore and sensitive ecosystem DPAs as designated in the Otter Point OCP, Bylaw No. 3819. The DPAs are designated for protection of the environment and for the protection of development from hazardous conditions. The applicant has retained a Registered Professional Biologist and a Professional Engineer to assess the impact of the proposed development in these areas. The reports outline recommendations to address the development permit guidelines and the Engineer's report provides justification for granting a floodplain exemption for the proposed dwelling and existing cottage. The reports are summarized below:

**Environmental Report:** An environmental assessment report was prepared by Applied Ecological Solutions on March 7, 2016, outlining considerations for the proposed development of the site (Appendix C). The report describes the property as having a marine foreshore frontage approximately 40 m in length, comprised largely of bedrock overlain with organic soil and native vegetation, including several veteran trees. The report advises that tree cutting should not occur between March 15 and July 31 to avoid negative impacts during the bird nesting season or, alternately, that a nesting survey be conducted to verify that no active nesting is occurring in trees identified for removal. Additional recommendations outlined in the report relate to implementation of sediment and erosion control measures, managing stormwater runoff, retaining veteran trees along the marine foreshore and erecting temporary fencing during construction.

**Geotechnical Report:** Ryzuk Geotechnical conducted a preliminary site assessment in November, 2015, and prepared a report on March 10, 2016, addressing the steep slope and foreshore DPAs and the floodplain specifications (Appendix D). The report described the site as sloping to the south with a 5-6 m high bedrock bluff along the shoreline. The bedrock foreshore was considered relatively resistant to erosion and instability due to wave action and, therefore, recession of the bluff crest would be minimal over the lifetime of any proposed structure. The existing cottage was found to be located 6-7 m back from the crest of the bluff. Based on this location, the Engineer confirmed that the cottage is in a safe position with respect to shoreline stability, and from a geotechnical perspective, may continue to be used indefinitely. The existing cottage is 8.46 m from the present natural boundary, as shown on the Site Plan (Appendix B), and within the floodplain setback requirement.

The report confirmed that the top of slab elevation for the new dwelling will be 4.1 m above the present natural boundary and comply with the 1.5 m flood construction level requirement. The proposed building would encroach to within 4.3 – 4.5 m of the crest of the bluff in the central area of the building site and to within 5.11 m of the present natural boundary at the closest point. The Engineer considered that the building site is geotechnically stable provided that all appropriate measures are incorporated into the design, including those specified by the report. The Engineer confirmed that the site may be safely used for the intended use provided that his recommendations are followed. The proposed dwelling is 5.11 m from the present natural boundary, as shown on the Site Plan (Appendix B), and within the floodplain setback requirement.

Since the existing cottage and proposed dwelling are located with the flood plain setback, the applicant has requested a floodplain exemption to reduce the setback from the natural boundary of the sea from 15 m to 8.46 m for the existing cottage and to 5.11 m for the proposed dwelling.

**Variances:** The applicant has requested variances to reduce the side and rear yard setbacks specified by the RR-2 zone for the proposed siting of the dwelling and the present location of the cottage (Appendix B). The 0.15 ha property has a limited building area and the owners have worked with an architect to incorporate a low-profile, 133 m<sup>2</sup> dwelling with the 23 m<sup>2</sup> existing building attached by a breezeway. The rear parcel boundary is defined as the natural boundary as shown on Plan 25866 from 1972, which extends into the foreshore beyond the present natural boundary. The proposed dwelling and exterior deck extend 0.45 m into rear yard; therefore, the owners have requested a variance to reduce the setback from 10 m to 9.53 m. As the owner's plan is to incorporate the existing non-conforming cottage into the design, they have requested a variance to reduce the eastern side yard setback from 6 m to 4.7 m. The existing building would be attached living space with no kitchen facilities. The 0.15 ha property does not permit a detached accessory suite and the owners do not wish to design it as a self-contained secondary suite.

A development permit with variance and floodplain exemption has been included in Appendix E for consideration. Recommendations from the professional reports have been incorporated as permit conditions. Staff recommends approval of the development permit with variance and floodplain exemption subject to the conditions of the attached environmental and geotechnical reports and subject to public notification.

## **CONCLUSION**

The applicant has requested a steep slopes, a foreshore and a sensitive ecosystem development permit with variances and floodplain exemption for the purpose of constructing a single-family dwelling on the 0.15 ha parcel. An existing non-conforming cottage is also incorporated into the design. Reports, prepared by a Registered Professional Biologist and a Geotechnical Engineer have been submitted addressing the DP guidelines and proposed floodplain setback exemption

from 15 m to 8.46 m for the cottage and 5.11 m for the proposed dwelling. The applicant has also requested a variance to reduce the 6 m eastern side yard setback to 4.7 m and to reduce the 10 m rear yard setback to 9.53 m for the purpose of constructing the proposed dwelling and attaching the existing cottage. Staff recommend approval of the development permit with variance and floodplain exemption subject to the conditions of the professional reports and subject to public notification.

**RECOMMENDATION**

That the Land Use Committee recommends to the CRD Board:

That Steep Slopes, Foreshore and Sensitive Ecosystem Development Permit with Variance and Floodplain Exemption, DV000046, as specified in Appendix E, for Lot 3, Section 32, Otter District, Plan 25866, for the purpose of constructing a dwelling and attaching an existing cottage, be approved.

Submitted by:	Emma Taylor, MCIP, RPP, Planner
Concurrence:	Iain Lawrence, Supervisor, Local Area Planning
Concurrence:	Kevin Lorette, P.Eng., MBA, Acting Chief Administrative Officer

ET:wm

Appendix A: Subject Property Map

Appendix B: Site Plan

Appendix C: Environmental Report

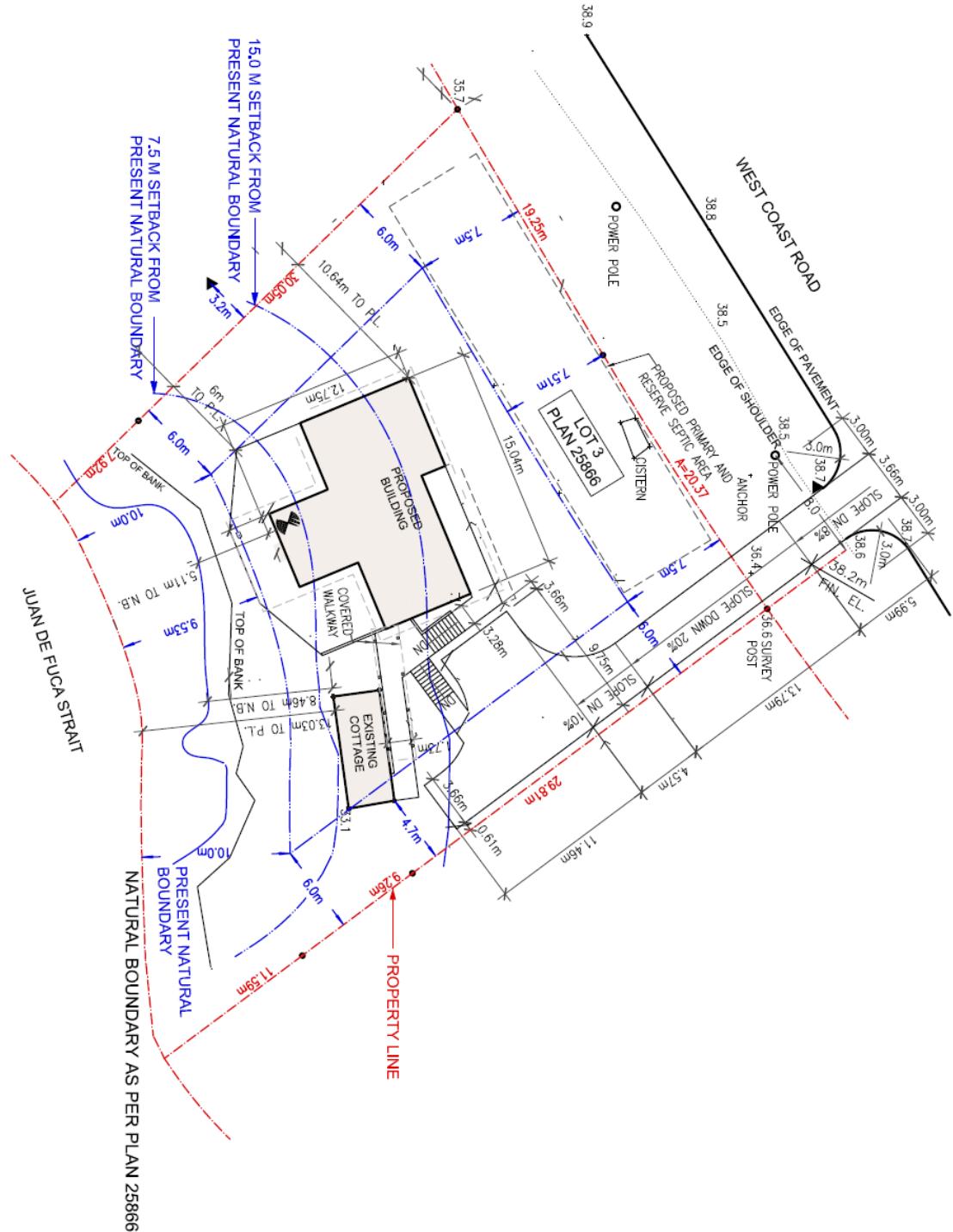
Appendix D: Geotechnical Report

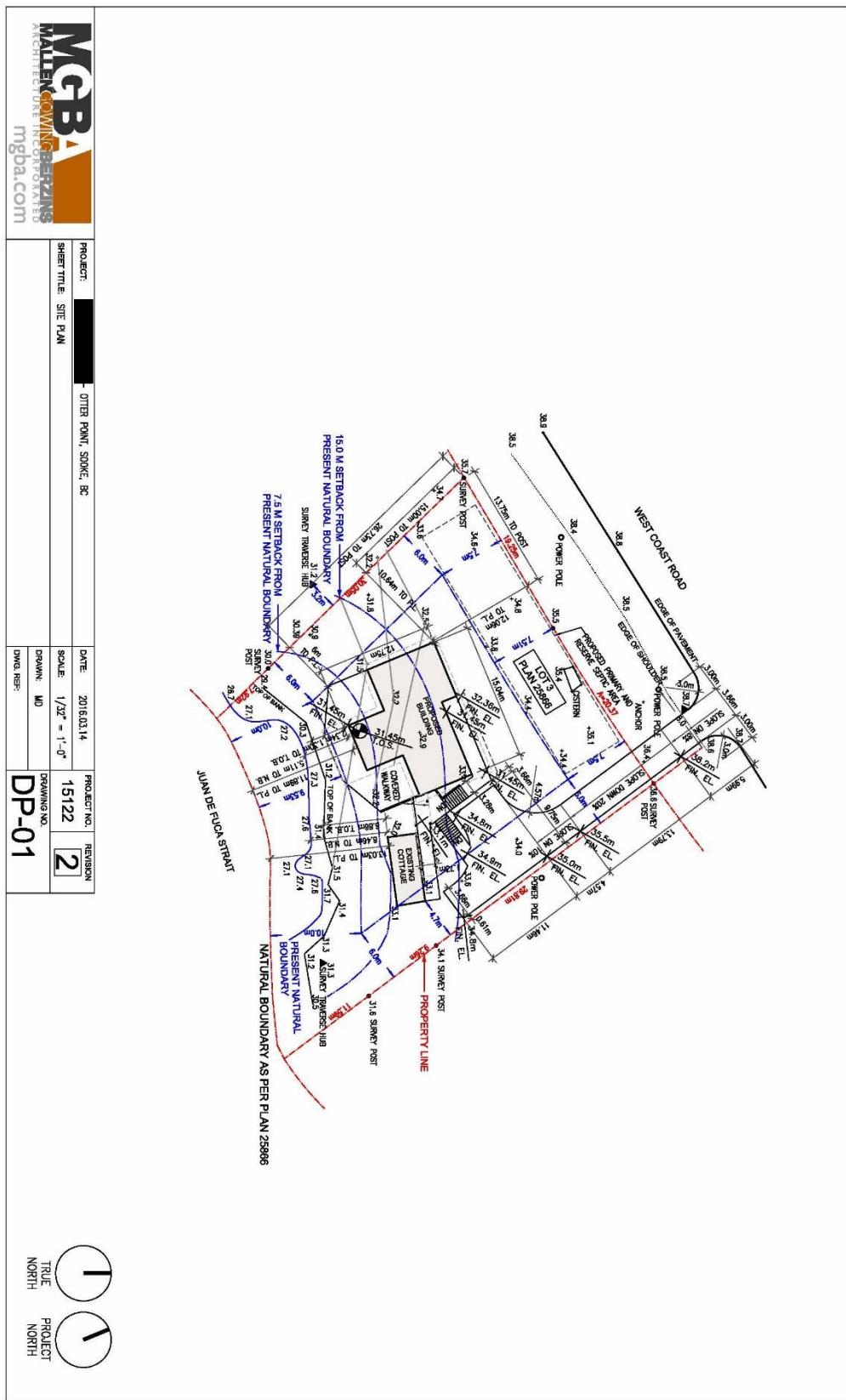
Appendix E: Permit DV000046

Appendix A: Subject Property Map



## Appendix B: Site Plan





**Appendix C: Environmental Report**

**Applied Ecological Solutions Corp.**

Fisheries • Land Use • Management



March 7, 2016  
AESC Project No.: 215-017-1

**Re: Environmental Overview Assessment  
Lot 3, Capital Regional District, BC**

Dear:

As requested, I have completed an overview environmental site review of the above referenced subject property.

The intent of this field assessment and letter report is to:

1. Ensure compliance with the Capital Regional District's (CRD) Otter Point Official Community Plan Bylaw No. 3819 – Schedule “A” – Sections 6.3 and 6.4, to ensure that environmental issues have been fully considered in the contemplation of the development of this property,
2. Provide advice on how to develop the property in consideration of general environmental protection.

This revised Final Report has been prepared and issued to address comments from the CRD Planner.

**SUBJECT PROPERTY LEGAL INFORMATION**

The subject property is legally described as follows:

*Parcel Identification – 000-653-250; Lot 3; Section 32; Otter District; Plan 25866*

**SUPPORTING INFORMATION AND DOCUMENTATION**

This letter report has been prepared in consideration of the following information:

1. Field review of the subject property on October 27, 2015,
2. Documentation provided by the landowner,
3. Review of the CRD Otter Point OCP Bylaw No. 3819 Sections 6.3, 6.4, 6.5 and 6.6,
4. CRD Natural Atlas<sup>1</sup>,
5. Wildlife Tree Stewardship Atlas<sup>2</sup>.

**OVERALL SITE CONTEXT**

The subject property is approximately 0.15 hectares (~0.37 acre).

Figure 1 provides an overview of the subject property location in Otter Point.

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<sup>1</sup> [http://maps.crd.bc.ca/imf/imf.jsp?site=public\\_crdviewer](http://maps.crd.bc.ca/imf/imf.jsp?site=public_crdviewer)

<sup>2</sup> [www.wildlifetree.ca/atlas.html](http://www.wildlifetree.ca/atlas.html)

ENVIRONMENTAL OVERVIEW ASSESSMENT – FINAL (REVISION 1)  
LOT 3  
CAPITAL REGIONAL DISTRICT

PAGE 2 OF 14



Figure 1 Orthophoto showing property location (yellow polygon; base ortho-image from CRD Natural Atlas).

The marine foreshore fringe consists of a vertical bedrock bluff approximately 3.5 m above the beach elevation for the entire width of the property and beyond (Photo 1). Adjacent developed properties immediately east and west of the subject property exhibit the same characteristics.



Photo 1 Panoramic view of bedrock bluff along the marine frontage of the subject property.

Based on the predominance of bedrock along the marine foreshore, it is assumed that this bedrock horizon extends upslope throughout the property and is overlain with an organic topsoil layer. However, no exposed bedrock was observed in the developable portion of the property. , comprised predominantly of bedrock overlain with organic soil. The property from the top of the bluff extending to West Coast Road is sloped at approximately 15%. A short, steep slope extends up to the elevation of West Coast Road.

### **PLANNED DEVELOPMENT**

The property is currently undeveloped. The proposed development is to construct a single family dwelling on the property that is accessible directly off West Coast Road.

Prepared by: Applied Ecological Solutions Corp.  
Project No.: 215-017-1

March 7, 2016

### **ECOLOGICAL FEATURES**

#### *Aquatic*

The subject property includes approximately 40 m of marine foreshore frontage. There are no other aquatic features on or adjacent to the property.

#### *Vegetation*

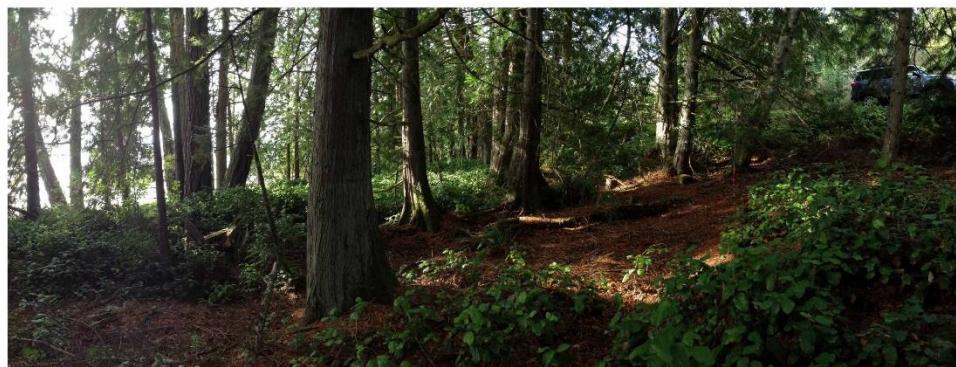
The property is within the 'Coastal Douglas-Fir zone, moist maritime subzone' as defined by the BC Ministry of Forests. Existing vegetation on the property includes (but is not limited to) the following plant species listed in Table 1.

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

Canopy (Tree) Species		Understorey (Shrub) Species	
Common Name	Scientific Name	Common Name	Scientific Name
Douglas Fir	<i>Pseudotsuga menziesii</i>	Salal	<i>Gaultheria shallon</i>
Western Redcedar	<i>Thuja plicata</i>	Sword Fern	<i>Polystichum munitum</i>
Red Alder	<i>Alnus rubra</i>	Bracken Fern	<i>Pteridium aquilum</i>
		Common Snowberry	<i>Symporicarpos albus</i>
		Oceanspray	<i>Holodiscus discolor</i>
		Nootka Rose	<i>Rosa nutkana</i>
		Willow	<i>Salix sp.</i>
		Scotch Broom*	<i>Cytisus scoparius</i>

\* Invasive plant species.

Salal represents the predominant ground cover shrub on the property (Photo 2). The occurrence of other plant species listed in Table 1 are extremely limited.



**Photo 2** Subject property typical condition.

Of the tree species observed, several are large diameter trees. The total number (in brackets) and diameter (m) of trees 0.6 m DBH<sup>3</sup> and greater are as follows:

Douglas Fir (7): 1.10, 0.85, 1.40, 0.70, 1.20, 1.10, 1.30

Western Redcedar (9): 1.10, 0.90, 0.70, 1.00, 0.60, 0.60, 0.85, 1.70\*, 1.05

\* Twin trunk

<sup>3</sup> Diameter at breast height. This is the standard point of measurement for all forestry inventory work. Diameter can be measured overbark or underbark. The international metric standard for DBH is overbark at a point 1.3 metres above the ground.

LETTER REPORT – ENVIRONMENTAL OVERVIEW ASSESSMENT – FINAL (REVISION 1)  
LOT 3  
CAPITAL REGIONAL DISTRICT

PAGE 4 OF 14

Wildlife

An review of the wildlife tree registry to identify any protected nests (i.e. Bald Eagle, Osprey, Great Blue Heron) was undertaken. This registry reveals there are no known Bald Eagle nests on the subject property. Three Bald Eagle nests occur near the subject property, two of which are directly north (nests BAEA-102-022, BAEA-102-023) and one that is directly west (nest BAEA-102-001). The nearest of these (nest BAEA-102-023) is approximately 450 m north of the subject property (Figure 2).



Figure 2 Location of Bald Eagle Nests within the vicinity of the subject property.

**SENSITIVE ECOSYSTEM MAPPING**

The Province of British Columbia has developed sensitive ecosystem inventory mapping for eastern Vancouver Island. This mapping provides users with valuable information regarding the occurrence of known sensitive ecosystem classes within the landscape, including wetlands, old growth forests and coastal bluff, among others. The extent of this mapping terminates just east of the subject property. There is no associated mapping for the ecosystems at and within the vicinity of the subject property.

**TREE CLEARING**

In advance of building construction, some tree clearing will be required. This clearing will be required to accommodate the house construction.

*Bird Breeding and Nesting 'Reduced Risk Timing Window'*

The landowner is advised that a Bird Breeding and Nesting 'Reduced Risk Timing Window' (Window) may apply to tree clearing. The Window has been established by the BC Ministry of Environment. It pertains primarily to nesting birds. The Window is the period between March 15 and July 31 of any calendar year when tree clearing is restricted to protect birds that are breeding, nesting, brooding on eggs or fledging chicks. It is intended that all tree and

LETTER REPORT – ENVIRONMENTAL OVERVIEW ASSESSMENT – FINAL (REVISION 1)  
LOT 3  
CAPITAL REGIONAL DISTRICT

PAGE 5 OF 14

understorey shrub clearing be completed outside of the Window (i.e. before March 15 and / or after July 31).

In the event tree removal is delayed to March 15 or later, a nesting survey by a QEP may be required to verify that no active nesting is occurring in trees identified for removal. On this verification, tree clearing can occur within the Window. For this reason, it is advised that felling of trees be completed prior to March 15.

This Window restriction is unrelated to any Tree Cutting Bylaws and any associated permitting requirements.

### **DISPOSAL OF WASTEWATER**

Disposal and dispersal of septic wastewater on the property has been evaluated by a Registered Professional. This evaluation confirmed that there is a primary reserve area suitable for a five bedroom home up to 295 m<sup>2</sup> (3,175 ft<sup>2</sup>) using accepted septic system design. A larger home can be accommodated with the use of a treatment plant.

### **COMPLIANCE WITH RELEVANT GUIDELINES OF OTTER POINT OCP – SCHEDULE 'A' – BYLAW NO. 3819**

#### **Part A. Bylaw Section 6.3 – Development Permit Area No. 1 – Steep Slopes**

The following addresses Bylaw No. 3819, Section 6.3 Guidelines relevant to environmental protection.

##### Section 6.3 Guideline 1

*No development, subdivision or sewage disposal system will be permitted in a "Steep Slopes DPA", as specified in the Justification above, except as allowed by a Development Permit or subject to a general exemption as outlined in Section 6.2 of this Plan.*

##### Guideline 1 Action

There are no alternate options to develop this site beyond what is currently contemplated. Septic and sewage management on the subject property has been evaluated by a Qualified Professional who has advised that the site can be developed as described above. No further action is recommended.

##### Section 6.3 Guideline 7

*An applicant may be required to provide a sediment and erosion plan with recommendations for implementation. Erosion control measures, during and after construction, may be specified in the permit.*

##### Guideline 7 Action

The small, single lot development does not warrant development of comprehensive erosion and sediment control planning. However, since the site is graded towards the marine foreshore the developer is advised to undertake site development in consideration of water management. This includes consideration of the following as appropriate:

Sediment and erosion control measures may include (but not be limited to) any combination of the following:

- Maintaining intact vegetation areas where potentially silt-laden water can be directed to provide mechanical treatment (i.e. settlement) and infiltration,
- Managing runoff water quality at the source using accepted erosion prevention and management practices and methodology,
- Stabilizing areas vulnerable to erosion using accepted means such as [1] covering with impervious material (e.g. tarpaulin or polyethylene sheeting), [2] spreading straw over exposed surfaces susceptible to erosion to ameliorate rill and gully erosion, and [3] seeding.

LETTER REPORT – ENVIRONMENTAL OVERVIEW ASSESSMENT – FINAL (REVISION 1)  
LOT 3  
CAPITAL REGIONAL DISTRICT

PAGE 6 OF 14

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**Section 6.3 Guideline 8**

Any development must be designed to avoid storm water runoff that could destabilize the slope or cause damage to neighbouring properties. An applicant may be required to provide a drainage plan with recommendations for implementation.

**Guideline 8 Action**

The small, single lot development does not warrant development of comprehensive stormwater runoff management from waters originating within the subject property. Runoff from West Coast Road may discharge down the embankment slope and contribute to other water within the property.

This may require some management that includes, but is not limited to, directing West Coast Road runoff to a location from which it can be managed. The configuration of the subject property suggests that there is no likelihood that works on the subject property will impact neighbouring properties. The downslope limit of the property at the marine foreshore is defined by a 3.5 m high bedrock bluff. The likelihood of destabilization along the foreshore is remote (see Guideline 9 Action, below).

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**Section 6.3 Guideline 9**

*Removal of vegetation should be minimized to allow only for building sites, sewage disposal systems, driveways, landscaping and other permitted land uses.*

**Guideline 9 Action**

The Marine Shoreline DPA stipulates a 15 m setback from the foreshore. However, in consultation with the CRD, the developer has previously proposed the setback be reduced to 7.5 m. CRD acceptance of this setback reduction is contingent on confirmation by a Qualified Professional that any reduced setback will not result in a geotechnical risk. Ryzuk Geotechnical Engineering (Ryzuk) has been retained by the developer to complete this assessment. The findings of this assessment will be reported separately.

Assuming the reduced setback is accepted by the CRD, veteran trees (i.e. those with a trunk diameter greater than 0.6 m DBH) within the 7.5 m setback from the high water mark as required within the Marine Shoreline Area will be retained unless the findings of a Qualified Professional (i.e. arborist) conclude that specifically identified trees should be removed because of degraded tree health, potential for root damage from excavation and other site activities, improved viewscape, etc.

Some trees outside of the 7.5 m setback and within the development site may also be retained as desired by the developer. Those to be retained can be selected in consideration of desired viewscapes, risk and where the no underlying tree roots will be damaged by any site works, including excavation, etc. Where tree retention is contemplated, additional advice from a Qualified Professional (i.e. arborist) is recommended to ensure that the tree is sufficiently healthy that it does not present a future risk of toppling, rotting, etc.

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**Section 6.3 Guideline 10 & 12**

*Where the Qualified Professional recommends re-vegetation or remediation works, a landscaping plan and security deposit may be required.*

**Guidelines 10 & 12 Action**

Site re-vegetation is not advised at this time. Further, remedial works can only be identified on the completion of site works and as such, no remedial works are recommended. A re-vegetation or landscape plan is not recommended or warranted at this site.

LETTER REPORT – ENVIRONMENTAL OVERVIEW ASSESSMENT – FINAL (REVISION 1)  
LOT 3  
CAPITAL REGIONAL DISTRICT

PAGE 7 OF 14

**Part B. Bylaw Section 6.4 – Development Permit Area No. 2 – Marine Shoreline Areas**

The following addresses Bylaw No. 3819, Section 6.4 Guidelines relevant to environmental protection.

Section 6.4 Guideline 1

*No development, subdivision or sewage disposal system will be permitted in a “Marine Shoreline DPA”, as specified in the Justification above, except as allowed by a Development Permit or subject to a general exemption as outlined in Section 6.2 of this Plan.*

See Part A, Guideline 1 Action, above.

Section 6.4 Guideline 2

*Avoid intrusion of development into Development Permit Areas and minimize the impact of any activity in these areas. Development shall generally only be supported where the applicant provides compelling reasons supported by a Qualified Environmental Professional’s recommendations for mitigation to support the request or if there are no alternate building locations. Variances from other applicable regulations, including height, setback and location regulations may be considered in order to minimize encroachment into the Development Permit Area.*

Guideline 2 Action

There are no alternate options to develop this site beyond what is currently contemplated. No further action is recommended.

Section 6.4 Guideline 3

*Development or subdivision of land should be designed to comply with the Marine Policies in Section 4.3.1 of this Plan.*

Guideline 3 Action

The Marine Policies primarily address items that are already considered in Bylaw Section 6.4 and the associated Actions described in this report. As such, while consideration of the Marine Policies is required, no additional Actions are recommended.

Section 6.4 Guideline 4

*The applicant for a Development Permit for land within the “Marine Shoreline DPA” on Map 5b, the Development Permit must provide an assessment by a Qualified Environmental Professional on the environmental conditions, and an assessment by a Qualified Professional on the shoreline conditions on the proposed development site and recommendations on the suitability of the site for the proposed development. The assessment should include proposals for vegetation protection, enhancement or retention, where applicable. A plan prepared by a British Columbia Land Surveyor may be required as a condition of the Development Permit.*

Guideline 4 Action

See Part A, Guideline 9 Action, above.  
The conceptual site plan shows compliance with the 15 m setback from the foreshore zone as stipulated in Map 5b. However, this setback is subject to reduction to 7.5 m pending acceptance by the CRD and contingent on the findings of a geotechnical assessment by a Qualified Professional (Ryzuk). As the design of the site is advanced, the developer will ensure that any changes to the concept or design will comply with the accepted setback and associated Bylaw requirements with respect to this Guideline.

Section 6.4 Guideline 5

*Compliance with any or all conditions recommended in the report prepared by the Qualified Environmental Professional or Qualified Professional may be required.*

Guideline 5 Action

Consideration of those recommendations provided in this report.

Section 6.4 Guideline 7

*An applicant may be required to provide a sediment and erosion plan with*

LETTER REPORT – ENVIRONMENTAL OVERVIEW ASSESSMENT – FINAL (REVISION 1)  
LOT 3  
CAPITAL REGIONAL DISTRICT

PAGE 8 OF 14

*recommendations for implementation. Erosion control measures, during and after construction, may be specified in the permit.*

Guideline 7 Action

See Section A, Guideline 7 Action, above.

Section 6.4 Guideline 8

*Planting of indigenous vegetation may be required on the site to reduce erosion risk, restore the natural character of the site, improve water quality or stabilize slopes and banks. An applicant may be required to provide a re-vegetation plan with recommendations for implementation.*

Guideline 8 Action

No native plant re-vegetation plan is recommended. The retention of the 15 m setback from the marine foreshore provides adequate native vegetation buffer between the development envelop and the foreshore.

Section 6.4 Guideline 9

*Where a shoreline stabilization device is proposed, the applicant may be required to provide a report from a Qualified Professional assessing the risk of erosion and the suitability of the parcels for such a device. The report must also assess the impacts on adjacent parcels as a result of installing or not installing the proposed device. Shoreline stabilization devices are not supported on parcels that are not subject to active erosion.*

Guideline 9 Action

The subject property is protected along the marine foreshore area by an ~3.5 m high bedrock bluff. This bluff eliminated any risk of active shoreline erosion. As such, shoreline stabilization is neither required or being contemplated. No action is recommended.

Section 6.4 Guideline 10

*The use of marine retaining walls and other hard surfaces such as rip-rap shall only be supported where a Qualified Professional has determined that alternative approaches to shoreline stabilization such as vegetation enhancement, upland drainage control or gravel placement are not appropriate given site specific conditions.*

Guideline 10 Action

The use of retaining walls or other hard surfaces is not specifically known at this time. As such, no action is recommended.

Section 6.4 Guideline 14

*Where the Qualified Environmental Professional or Qualified Professional recommends re-vegetation or remediation works, a landscaping plan and security deposit may be required.*

Guideline 14 Action

See Part A, Guideline 10 Action, above.

**Part C. Bylaw Section 6.5 – Development Permit Area No. 3 – Watercourses and Wetlands Area**

There are no watercourses or wetlands on the subject property. As such, Bylaw Section 6.5 does not apply.

**Part D. Bylaw Section 6.6 – Development Permit Area No. 4 – Sensitive Ecosystems Areas**

The following addresses Bylaw No. 3819, Section 6.6 Guidelines relevant to environmental protection.

Section 6.6 Guideline 1

*No development, subdivision or sewage disposal system will be permitted in a "Sensitive Ecosystems DPA", as specified in the Justification above,*

LETTER REPORT – ENVIRONMENTAL OVERVIEW ASSESSMENT – FINAL (REVISION 1)  
LOT 3  
CAPITAL REGIONAL DISTRICT

PAGE 9 OF 14

*except as allowed by a Development Permit or subject to a general exemption as outlined in Section 6.2 of this Plan.*

See Part A, Guideline 1 Action, above.

Guideline 1 Action

Section 6.6 Guideline 2

*Avoid intrusion of development into Development Permit Areas and minimize the impact of any activity in these areas. Development shall generally only be supported where the applicant provides compelling reasons supported by a Qualified Environmental Professional's recommendations for mitigation to support the request or if there are no alternate building locations. Variances from other applicable regulations, including height, setback and location regulations may be considered in order to minimize encroachment into the Development Permit Area.*

Guideline 2 Action

There are no alternate options to develop this site beyond what is currently contemplated. No further action is recommended.

Section 6.6 Guideline 3

*Development or subdivision of land should be designed to comply with the policies in Section 5.3.2 of this Plan.*

Guideline 3 Action

The Sensitive Ecosystem Policies described in Section 5.3.2 address measures to minimize impacts within a Development Permit Area and where impacts may / will occur, address these impacts through consultation with a Qualified Environmental Professional. These measures are addressed in detail in Section 6.6. As such, this Assessment Report addresses these considerations.

Section 6.6 Guideline 4

*The applicant for a Development Permit for land within the 'Sensitive Ecosystems DPA' must provide an assessment by a Qualified Environmental Professional on the environmental conditions on the proposed development site and recommendations on the suitability of the site for the proposed development. The assessment must include proposals for vegetation protection, enhancement or retention, where applicable. A plan prepared by a British Columbia Land Surveyor may be required as a condition of the Development Permit.*

Guideline 4 Action

See Part A, Guideline 9 Action, above.  
The conceptual site plan shows compliance with the 15 m setback from the foreshore zone as stipulated in Map 5b. However, this setback is subject to reduction to 7.5 m pending acceptance by the CRD and contingent on the findings of a geotechnical assessment by a Qualified Professional (Ryzuk). As the design of the site is advanced, the developer will ensure that any changes to the concept or design will comply with the accepted setback and associated Bylaw requirements with respect to this Guideline.

Section 6.6 Guideline 5

*As a condition of the issuance of a Development Permit, compliance with any or all conditions recommended in the report prepared by the Qualified Environmental Professional or Qualified Professional may be required.*

Consideration of those recommendations provided in this report.

Section 6.6 Guideline 6

*Disturbance to existing vegetation that is not directly affected by the footprint of building, ancillary uses, and driveways must be minimized. Any disturbed areas shall be rehabilitated with appropriate landscaping and habitat compensation measures. Loss of natural habitat shall be minimized.*

Guideline 6 Action

Disturbance to existing vegetation will be limited to the minimum reasonably required to complete planned works. Vegetation disturbance beyond the

LETTER REPORT – ENVIRONMENTAL OVERVIEW ASSESSMENT – FINAL (REVISION 1)  
Lot 3  
CAPITAL REGIONAL DISTRICT

PAGE 10 OF 14

planned works to address issues related to hazardous trees, unavoidable damage to vegetation (e.g. damage to underlying root networks on trees outside of the construction disturbance envelop where those root systems extend within the worksite), and / or vegetation clearing to accommodate septic field installation and other related works, etc. may be required, in part, to comply with the Bylaws. It is anticipated that much of the upslope property will be developed. While some residual disturbed areas may result, these temporal vegetation losses (if they occur) can be rehabilitated with appropriate plant species as required. However, addressing this through a formal landscaping plan is not advised.

Section 6.6 Guideline 7

*A buffer zone within which land alteration or structures will be limited to those compatible with the characteristics of the sensitive ecosystems, or those that can be mitigated in a manner recommended by a Qualified Environmental Professional may be required and the specific or general location of the buffer zone may be designated.*

Guideline 7 Action

See Guideline 4 Action. With the exception of the buffer at the foreshore zone described above, there are no other buffer zones assigned to this property development.

Section 6.6 Guideline 8

*In order to ensure unnecessary encroachment does not occur into the Development Permit area at the time of construction, permanent or temporary fencing measures may be required.*

Guideline 8 Action

Temporary snow fencing or other visible delineation will be installed along the no entry foreshore zone setback 15 m (or 7.5 m if accepted by the CRD) in a manner that does not result in significant vegetation and / or root disturbance. Alternatively, the boundary may be flagged at regular intervals to provide a clearly visible demarcation for site works. All site workers will be made aware of this no entry zone.

Section 6.6 Guideline 9

*Environmentally sensitive areas and the habitat requirements for wildlife species at risk as defined in the federal Species at Risk Act should remain in their natural state and should not be developed or disturbed.*

Guideline 9 Action

There are no environmentally sensitive areas or habitat requirements for wildlife species at risk on this property. As such, maintaining the natural state and avoiding development / disturbance is required. No action is recommended.

Section 6.6 Guideline 10

*Where possible, large tracts of wildlife habitat or continuous habitat corridors should be preserved, in order to facilitate movement of wildlife. In addition, where possible, landscape plans should enhance, expand or create wildlife habitat such as wetlands, native aquatic and terrestrial plants.*

Guideline 10 Action

The subject property is bounded by West Coast Road, existing residential properties and the marine foreshore. As such, there are no large tracts of wildlife habitat or continuous habitat corridors on this property. Further, the single lot size of the property does not provide any opportunities to expand / create wildlife habitat. As such, no action is recommended.

Section 6.6 Guideline 11

*Planting of invasive species adjacent to or within designated "Sensitive Ecosystems DPA" will not be permitted.*

LETTER REPORT – ENVIRONMENTAL OVERVIEW ASSESSMENT – FINAL (REVISION 1)  
Lot 3  
CAPITAL REGIONAL DISTRICT

PAGE 11 OF 14

<u>Guideline 11 Action</u>	There will be no planting of invasive species anywhere on the property.
<u>Section 6.6 Guideline 12</u>	<i>Changes in the land surface which could affect the health of vegetation or the biodiversity of any plant communities and disturbance of mature vegetation and understorey plants will be minimized.</i>
<u>Guideline 12 Action</u>	Disturbance and / or encroachment into the 15 m (or 7.5 m if accepted by the CRD) no entry foreshore zone will not occur. Installation of a visible demarcation as described above will ensure this setback is respected and maintained. This foreshore zone consists predominantly of a dense cover of Salal and large conifer trees as described in this report. This zone will be maintained.
<u>Section 6.6 Guideline 13</u>	<i>Any development must be designed to avoid storm water runoff and the development or subdivision may be required to be carried out in accordance with recommendations contained in a drainage plan that the applicant may be required to provide.</i>
<u>Guideline 13 Action</u>	See Part A Guideline 8 Action, above.
<u>Section 6.6 Guideline 14</u>	<i>Removal of gravel, sand, soil or peat in ‘Sensitive Ecosystems DPA’ will be strictly limited and only permitted if impacts can be mitigated in a manner recommended by a Qualified Environmental Professional.</i>
<u>Guideline 14 Action</u>	The subject property is predominated by a shallow organic soil horizon underlain by bedrock as evident by the bedrock escarpment at the marine foreshore. Excavation will be limited to the minimum required to accommodate site development (including construction of the house foundation). As such, no action is required.
<u>Section 6.6 Guideline 15</u>	<i>Development should generally conform to Develop with Care 2012: Environmental Guidelines for Urban and Rural Land Development in British Columbia.</i>
<u>Guideline 15 Action</u>	This document provides general guidance to developers with respect to developments in sensitive areas and near streams, including minimizing environmental impacts and intrusions, sediment and drainage management, etc. It is most applicable to larger developments and those with a significant permanent and temporal impact.  The small scope of this single family house development does not warrant comprehensive consideration of the Develop with Care guidance other than committing to those protection measures outlined in this Assessment Report. Further, the author will be available to the landowner to provide advice on environmental protection issues if and as required.
<u>Section 6.6 Guideline 16</u>	<i>Development may be required to incorporate environmentally sound building practices where appropriate, such as natural drainage, or use of permeable paving materials.</i>
<u>Guideline 16 Action</u>	There is no municipal drainage infrastructure (e.g. storm sewers, etc.) within this area of the CRD. As such, all site drainage, including existing drainage off West Coast Road, is conveyed to the existing vegetation for infiltration. Ultimately this drainage naturally discharges to the marine foreshore area by

Prepared by: Applied Ecological Solutions Corp.  
Project No.: 215-017-1

March 7, 2016

LETTER REPORT – ENVIRONMENTAL OVERVIEW ASSESSMENT – FINAL (REVISION 1)  
Lot 3  
CAPITAL REGIONAL DISTRICT

PAGE 12 OF 14

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percolating through the shallow soil layer. It is anticipated that property drainage installed during site development will utilize the same mechanism. The extent of paved surfaces (if used) will be limited to the driveway access off of West Coast Road, parking etc. This is considered an insignificant overall contribution of runoff.

Section 6.6 Guideline 17

*A subdivision application which proposes the creation of parcels less than the average parcel size supported by this Plan and located within a smaller footprint of the parent parcel may be supported where the conditions are secured for the permanent on-going protection or restoration of environmentally sensitive features without an amendment to this Plan. However, the overall number of parcels must be consistent with the Land Use Designation.*

Guideline 17 Action

This single-family property development is not within a larger subdivision. As such, no action is required.

Section 6.6 Guideline 18

*Where the Qualified Environmental Professional or Qualified Professional recommends re-vegetation or remediation works, a landscaping plan and security deposit may be required.*

Guideline 18 Action

It is anticipated that the small scope of this development and the retention of a 15 m (or 7.5 m if accepted by the CRD) foreshore zone buffer as described above will not require a formal landscaping plan. Vegetation disturbance outside of the foreshore zone available for re-vegetation or restoration is likely to be minimal or non-existent as much of the upslope property (i.e. beyond the 15 m (or 7.5 m) foreshore zone) will be within the development envelop.

As such, any areas available for remediation (if any) can be implemented without formal involvement of a Qualified Environmental Professional. As such, it is anticipated that a landscape plan / security deposit will not be required.

**GENERAL RECOMMENDATIONS FOR ENVIRONMENTAL PROTECTION DURING CONSTRUCTION**

The small single family scope of this development does not warrant attendance by a QEP / Environmental Monitor or other qualified person to monitor construction for environmental protection purposes. Nor does this project require dedicated environmental protection planning and implementation documents such as an Environmental Management Plan or similar document.

Further, it is extremely unlikely that the property development will generate significant volumes of silt laden runoff. These runoff volumes are more likely to originate from West Coast Road runoff and not directly related to the planned development. Regardless, it is anticipated that runoff can be managed easily and efficiently using materials and equipment likely to be available on site.

The following information is provided for consideration for work on the property.

Sediment and erosion control measures may include (but not be limited to) the following:

- Limit ground disturbance to what is required to complete the planned works,
- Maintaining intact vegetation areas where potentially silt-laden water can be directed to provide mechanical treatment (i.e. settlement) and infiltration prior to discharge the marine foreshore area,

LETTER REPORT – ENVIRONMENTAL OVERVIEW ASSESSMENT – FINAL (REVISION 1)  
LOT 3  
CAPITAL REGIONAL DISTRICT

PAGE 13 OF 14

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- Managing runoff water quality at the source using accepted erosion prevention and management practices and methodology,
  - Stabilizing areas vulnerable to erosion using accepted means such as covering with impervious material, spreading straw to ameliorate rill and gully erosion and seeding.

The author will be available to provide as-required advice on any aspect of the property development and as required.

### **FINDINGS AND RECOMMENDATIONS**

The following findings and recommendations are provided to satisfy the CRD's environmental requirements regarding the development of this site.

#### **Overall Site Development**

<i>Finding</i>	The property is situated within adjacent small, waterfront lots that have been previously developed as single family residences. These adjacent properties have similar site conditions as the subject property.
<i>Recommendation</i>	Development of the property should be undertaken in consideration of the Bylaw Sections 6.3, 6.4 and 6.6 Actions described above. <b>Bylaw Section 6.5 does not apply to this property or development as no watercourses or wetlands occur on or near this subject property.</b>
<i>Finding</i>	The developer has proposed to the CRD a reduction in the 15 m setback from the foreshore area as stipulated in Bylaw Section 6.4, Guideline 4 (see Part A, Guideline 9 Action and Part B, Guideline 4 Action, above). Acceptance of this reduction is contingent on the findings by an Qualified Professional.
<i>Recommendation</i>	Assessment by Ryzuk is ongoing and independent of this report. No recommendation is advised.

#### **Tree Clearing**

<i>Finding</i>	The subject property is undeveloped, with several large diameter trees occurring throughout. Tree clearing will be required to accommodate permitted development of this property.
<i>Recommendation</i>	Ensure that all tree removal (i.e. felling) is completed prior to the onset of the Bird Breeding and Nesting Window described above. Otherwise, onerous nesting surveys may be required to confirm active nesting is not occurring in those trees selected for removal.

#### **Nearby Bald Eagle Nests**

<i>Finding</i>	Three Bald Eagle nests occur near the subject property. The nearest of these is approximately 450 m north. No Bald Eagle nests were observed in the trees on the subject property.
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LETTER REPORT – ENVIRONMENTAL OVERVIEW ASSESSMENT – FINAL (REVISION 1)  
LOT 3  
CAPITAL REGIONAL DISTRICT

PAGE 14 OF 14

- Recommendation**
- [1] Development of the property is not constrained in any way by the existence of these Bald Eagle nests.
- [2] While no protected nest was observed in the trees on the subject property during the field review, these veteran trees should be visually inspected again prior to felling to confirm that no protected nests occur in any of the trees to be felled. If a nest is identified, consultation with the Provincial (and potentially Federal) regulatory agencies will be required to obtain a permit to remove the tree.

**PROFESSIONAL OPINION**

In my opinion, development of this property can be undertaken in compliance with the CRD Otter Point OCP and its associated Bylaws as described in Sections 6.3 6.4 and 6.6 of Schedule 'A'.

If development of the subject property is undertaken in consideration and compliance with the Findings and Recommendations described above and including the findings of a geotechnical assessment (by Ryzuk), there will be no adverse environmental impacts associated with developing this site as planned.

Sincerely,

Craig T. Barlow, R.P.Bio., QEP  
Fisheries Biologist



cb/

Report Distribution: (property owner)  
Capital Regional District Planning Department  
AESCR file

**Appendix D: Geotechnical Report**

**RYZUK GEOTECHNICAL**

Engineering & Materials Testing

28 Crease Avenue, Victoria, BC, V8Z 1S3 Tel: 250-475-3131 Fax: 250-475-3611 www.ryzuk.com

March 10, 2016  
File No: 8-7537-1

**Re:** Geotechnical Assessment  
Lot 3, 8000 Block West Coast Road – Otter Point, B.C.

Further to our preliminary assessment letter of November 16, 2015, we have reviewed a recent architectural site plan of the proposed building, as well as a survey plan prepared by a BCLS, particularly as such pertain to the proposed building setback from the Present Natural Boundary of the sea (PNB) and the Flood Construction Level (FCL). Our comments and recommendations with regard to these matters, and other geotechnical aspects of the proposed development, are presented herein. Our work has been undertaken in accordance with, and is subject to, the attached Terms of Engagement.

The property is a waterfront lot that lies wholly or partially within both the Steep Slopes and Marine Shoreline Areas Development Permit Areas (DPA's) as defined in the Official Community Plan (OCP) for the area. It is bounded by West Coast Road to the northwest and the shoreline of the Strait of Juan de Fuca to the south-southeast. Similar sized properties are present to the east and west, with the lot to the east having a residence (8035 West Coast Road).

As observed during a detailed site reconnaissance on October 9, 2015, the majority of the property consists of a bench about 2 m below the level of West Coast Road that slopes gently to the south. The bench is forested, with a thick cover of undergrowth (mostly salal) in most areas. A bedrock bluff about 5 – 6 m high is present directly back of the shoreline, and a small cottage is located about 6 – 7 m back of the crest of this bluff. Otherwise, the lot is undeveloped, although an old concrete cistern was observed near the road. There is no driveway on the property.

Under the requirements of the Marine Shoreline DPA, no new development is permitted within 15 m of the PNB although existing structures can remain. Depending upon site conditions, it is sometimes possible to relax this 15 m setback, on the basis of an assessment by a Qualified

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Ryzuk Geotechnical

March 10, 2016

Lot 3, 8000 Block West Coast Road – Otter Point, B.C.

Professional. A geotechnical assessment is also required for any development within the Steep Slopes DPA. The local OCP also requires that the FCL (loosely defined as the underside of any floor system or the top of any pad supporting any habitable space or room) be a minimum of 1.5 m above the PNB.

According to regional geology mapping, as well as our own observations, the rock that forms the foreshore bluff, and upon which the existing cottage is constructed, is a unit of the Metchosin formation, which consists of hard volcanic rock. This rock type is relatively resistant to erosion or instability due to wave action, and as such recession of the bluff crest would be expected to be minimal over the lifetime of any existing or proposed structure. Given that the foundations of the existing cottage already lie behind/below an imaginary line projected up from the natural boundary at an inclination of 1 Horizontal : 1 Vertical, we consider that the existing cottage is in a safe position with respect to shoreline stability, and, from a geotechnical perspective, could continue to be used indefinitely.

According to drawings prepared by Mallen Gowing Berzins Architecture (MGBA) dated 2016.02.09, the proposed new residence would be located about 4 m to the west of the existing cottage, and would have a design top of slab elevation is a minimum of 4.1 m above the surveyed elevation of the PNB. Accordingly, the FCL requirements of the OCP are satisfied. The southern side of the building would encroach to within about 4.3 – 4.5 m of the crest of the bluff in the central area, while the southwest and southeast corners of the building would be about 9.0 and 10.5 m back of the crest of the bluff, respectively. The central part of the building would encroach within about 5.1 m of the PNB at the closest point, while the south corners of the building would be 10.5 -12 m or so back of this line. In view of the grades and the nature of the bluff as discussed above, we consider that the proposed building location is geotechnically stable provided that appropriate measures are incorporated into the design. In particular, all footings along the protruding central part south side of the building should be taken down to intact bedrock, and where the bedrock at a footing location is inclined steeper than 15° and is not naturally keyed it will be necessary to either chip a flat bench to accommodate the footings or dowel the footings into the rock. We can provide specific direction in this regard at the time of construction. Also, all site drainage should be disposed of into ground in the area north of the building site or conveyed by solid pipe to the beach or a non-erodible bedrock area, and should not be allowed to flow over the bluff in an uncontrolled manner.

We did not observe any slopes on the property in excess of 20% except directly along the shoreline and in the immediate vicinity of the highway embankment, and as such we do not consider the building site subject to a slope stability hazard. Further, and subject to the implementation of the above recommendations, we recommend that the 15 m horizontal setback from the PNB be relaxed to permit the building to be constructed in the location proposed.

In consideration of the above, our assessment is that the site may be safely used for the use intended, that being a single family residence constructed at the location described above and

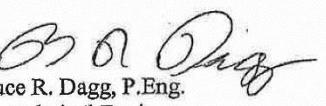
March 10, 2016

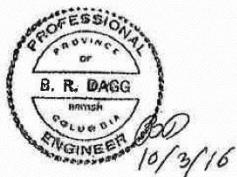
Lot 3, 8000 Block West Coast Road – Otter Point, B.C.

shown on the MGBA drawings. Our assessment is in accordance with Section 56 of the Community Charter and includes consideration of the impact of an earthquake with a 2% probability of exceedance in 50 years.

We trust that the preceding is suitable for your current requirements. We would be pleased to assist you during construction as required. Thank you for the opportunity to have been of service to you.

Yours very truly,  
Ryzuk Geotechnical

  
Bruce R. Dagg, P.Eng.  
Geotechnical Engineer



Attachment: Terms of Engagement

Appendix E: Permit DV000046



Making a difference...together

CAPITAL REGIONAL DISTRICT

**DEVELOPMENT PERMIT WITH VARIANCE AND FLOODPLAIN EXEMPTION NO. DV000046**

1. This Development Permit with Variance and Floodplain Exemption is issued subject to compliance with all of the bylaws of the Regional District applicable thereto, except as specifically authorized by this Permit.
2. This Development Permit with Variance and Floodplain Exemption 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: 000-653-250;**  
**Legal Description: Lot 3, Section 32, Otter District, Plan 25866**
3. Pursuant to the Capital Regional District's **Bylaw No. 3819**, Section 6.3 (Steep Slopes), Section 6.4 (Marine Shoreline Areas) and Section 6.6 (Sensitive Ecosystem Areas) and Sections 490 and 491 of the *Local Government Act*, this development permit for construction of a single-family dwelling with attached cottage, driveway and septic field, is issued subject to the following requirements, terms and conditions:
  - a. That the proposed development of the property comply with the Site Plan prepared by Mallen, Gowing, Berzins Architecture Incorporated, dated March 14, 2016, attached.
  - b. That the proposed development comply with the recommendations outlined in the report prepared by Ryzuk Geotechnical, dated March 10, 2016, attached.
  - c. That a Professional Engineer submit a post-construction report confirming that the development was completed in accordance with the recommendations outlined in the report prepared by Ryzuk Geotechnical, dated March 10, 2016, attached.
  - d. That the proposed development comply with the recommendations outlined in the report prepared by Applied Ecological Solutions Corp., dated March 7, 2016, attached.
  - e. That a qualified environmental professional submit a post-construction report confirming that the development was completed in accordance with the recommendations outlined in the report prepared by Applied Ecological Solutions Corp., dated March 7, 2016, attached.
4. The Capital Regional District's **Bylaw No. 2040** is varied under Section 498 of the *Local Government Act* as follows:
  - a. That Schedule A, Part II, Section 6.07(b) be varied by reducing the eastern side yard setback of the Rural Residential 2 (RR-2) zone from 6 m to 4.7 m for the purpose of renovating an existing cottage as shown on the Site Plan, dated March 14, 2016, and the Building Plans, dated January and March 2016, prepared by Mallen, Gowing, Berzins Architecture Incorporated attached.
  - b. That Schedule A, Part II, Section 6.07(d) be varied by reducing the rear yard setback of the Rural Residential 2 (RR-2) zone from 10 m to 9.53 m for the purpose of constructing a single-family dwelling with covered deck as shown on the Site Plan, dated March 14, 2016, and the Building Plans, dated January and March 2016, prepared by Mallen, Gowing, Berzins Architecture Incorporated, dated March 14, 2016, attached.
5. Pursuant to the Capital Regional District's **Bylaw No. 2040**, Schedule A, Part 5, Section 2.0 (2)(b) and Sections 524 of the *Local Government Act*, an exemption from the floodplain specifications for construction of a single-family dwelling with attached cottage, is issued subject to the following:
  - a. That the floodplain setback be reduced from 15 m to 5.11 m for the proposed construction of a single-family dwelling as shown on the Site Plan prepared by Mallen, Gowing, Berzins Architecture Incorporated, dated March 14, 2016, attached.



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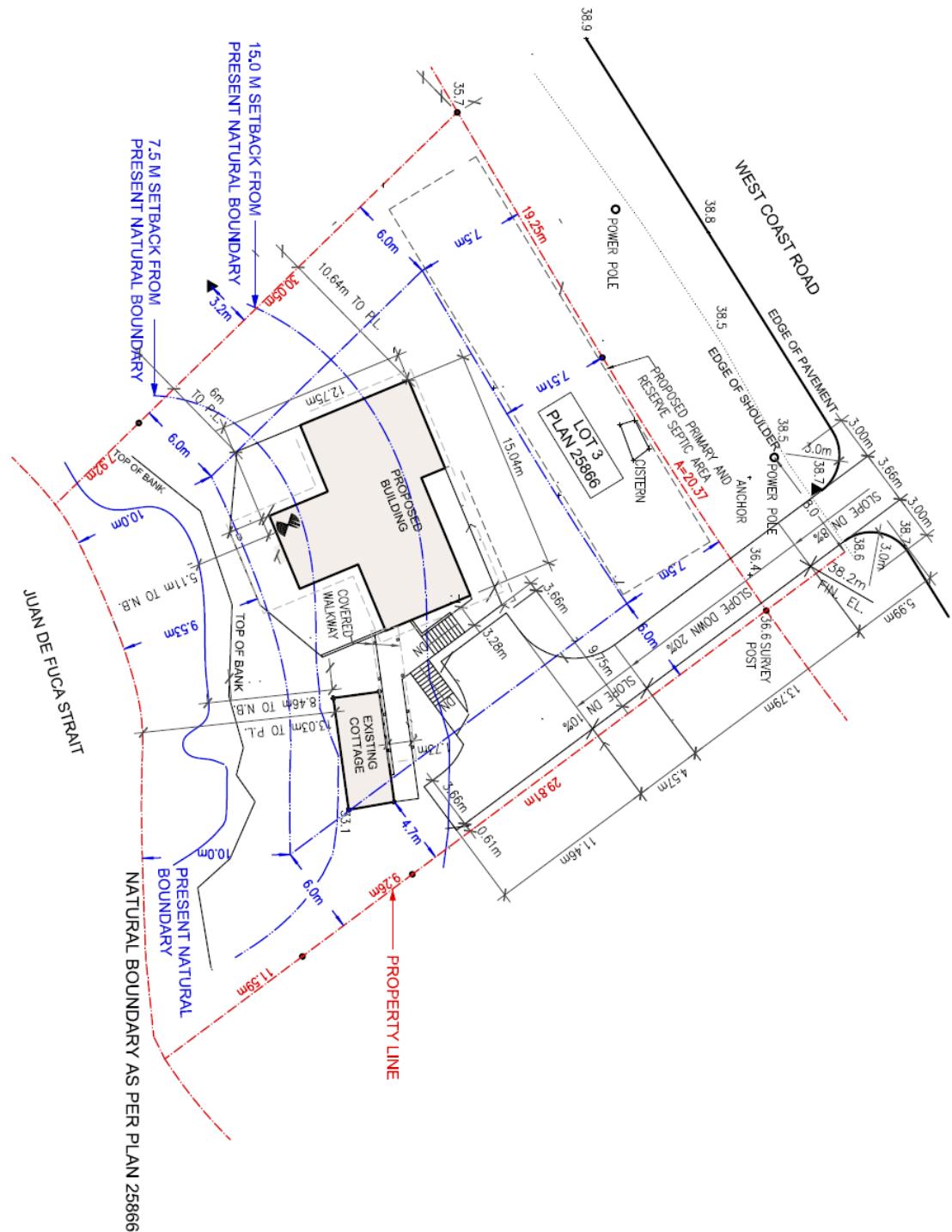
- b. That the floodplain setback be reduced from 15 m to 8.46 m for the proposed renovation of an existing cottage as shown on the Site Plan prepared by Mallen, Gowing, Berzins Architecture Incorporated, dated March 14, 2016, attached.
- c. That the report prepared by Ryzuk Geotechnical, dated March 10, 2016, be secured by covenant as part of the building permit process.
6. Notice of this Permit shall be filed in the Land Title Office at Victoria under Section 503 of the *Local Government Act*, and the terms of this Permit (DV000046) 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.
9. The following plans and specifications are attached to and form part of this Permit:
  - a) Site Plan prepared by Mallen, Gowing, Berzins Architecture Incorporated, dated March 14, 2016;
  - b) Building Plans prepared by Mallen, Gowing, Berzins Architecture Incorporated, dated January and March, 2016;
  - c) Geotechnical Assessment Report prepared by Ryzuk Geotechnical, dated March 10, 2016;
  - d) Environmental Overview Assessment Report prepared by Applied Ecological Solutions Corp., dated March 7, 2016.
10. This Permit is NOT a Building Permit.

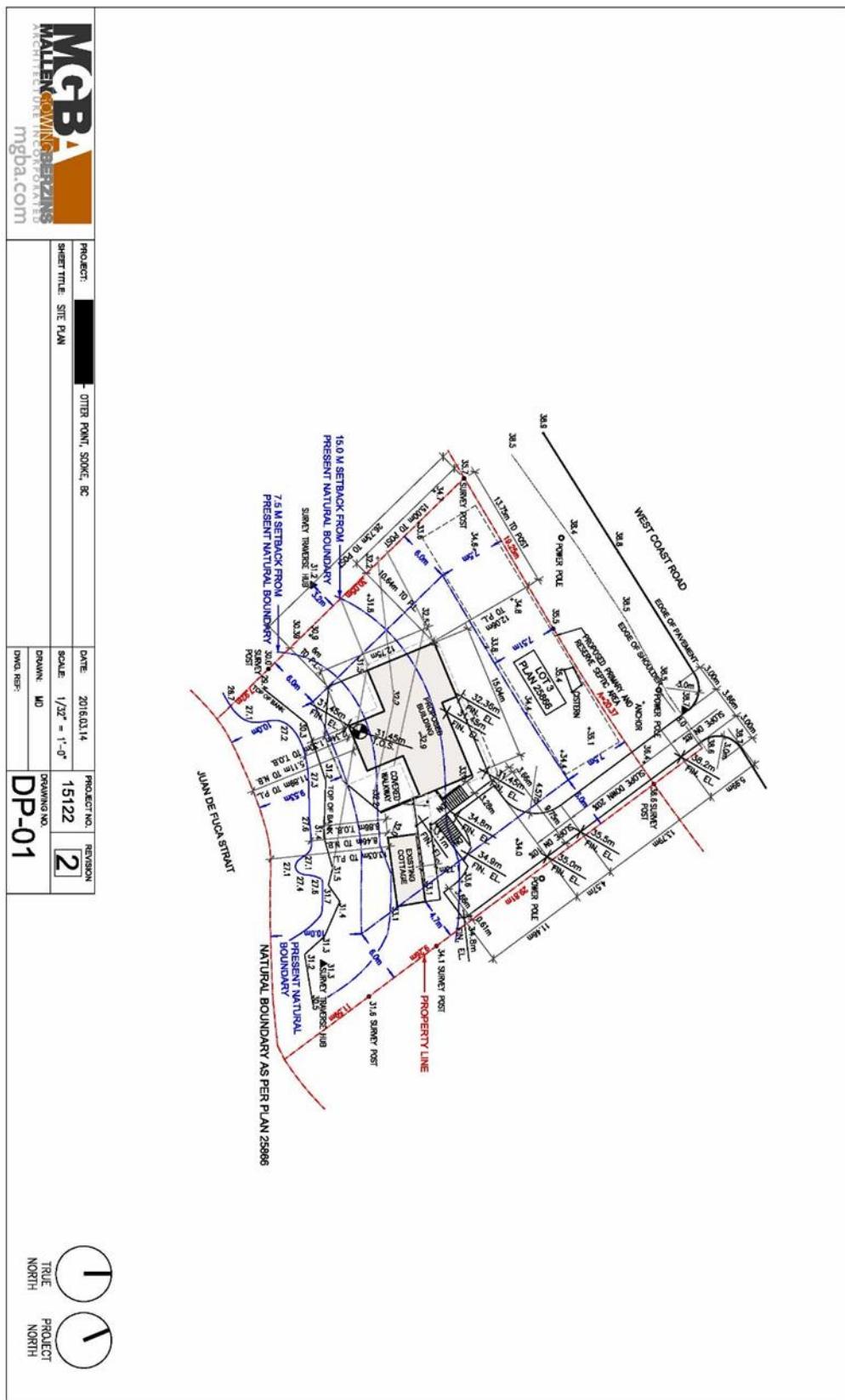
**RESOLUTION PASSED BY THE BOARD, THE \_\_\_th day of May, 2016.**

**ISSUED** this \_\_\_\_\_ day of \_\_\_\_\_, 2016

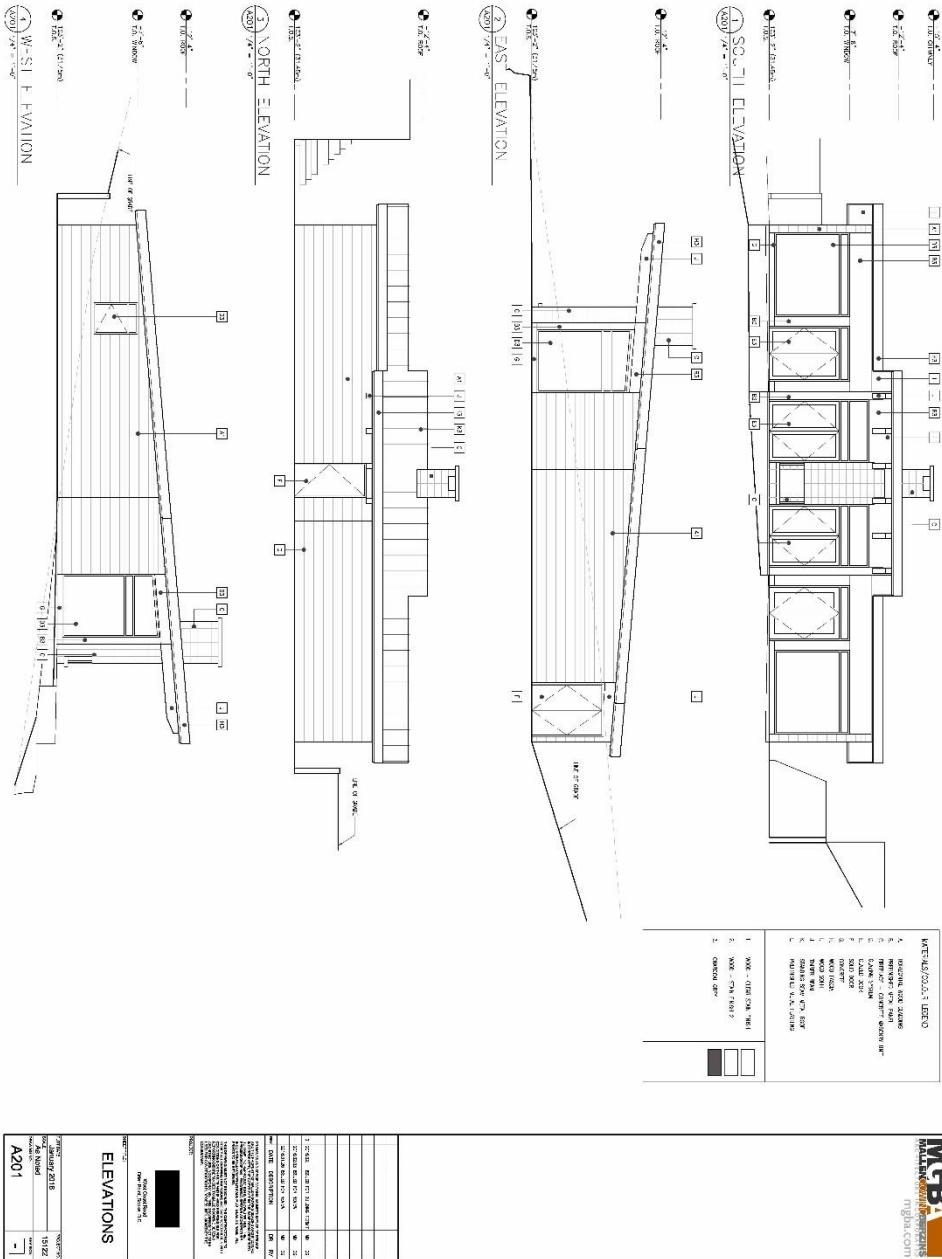
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Corporate Officer

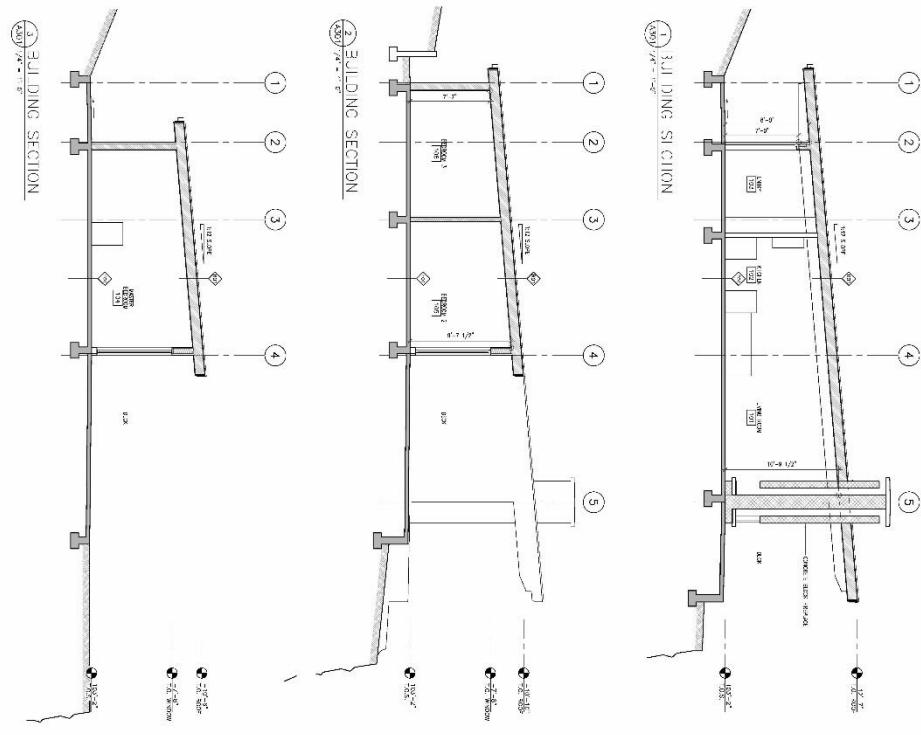
## Site Plan





## Building Plans





BUILDING SECTIONS	
Section A-301	Section A-302
Section A-303	

**McB**  
McBride Construction  
mcb.com

**Geotechnical Report**

**RYZUK GEOTECHNICAL**

Engineering & Materials Testing

28 Crease Avenue, Victoria, BC, V8Z 1S3 Tel: 250-475-3131 Fax: 250-475-3611 www.ryzuk.com

March 10, 2016  
File No: 8-7537-1

**Re:** Geotechnical Assessment  
Lot 3, 8000 Block West Coast Road – Otter Point, B.C.

Further to our preliminary assessment letter of November 16, 2015, we have reviewed a recent architectural site plan of the proposed building, as well as a survey plan prepared by a BCLS, particularly as such pertain to the proposed building setback from the Present Natural Boundary of the sea (PNB) and the Flood Construction Level (FCL). Our comments and recommendations with regard to these matters, and other geotechnical aspects of the proposed development, are presented herein. Our work has been undertaken in accordance with, and is subject to, the attached Terms of Engagement.

The property is a waterfront lot that lies wholly or partially within both the Steep Slopes and Marine Shoreline Areas Development Permit Areas (DPA's) as defined in the Official Community Plan (OCP) for the area. It is bounded by West Coast Road to the northwest and the shoreline of the Strait of Juan de Fuca to the south-southeast. Similar sized properties are present to the east and west, with the lot to the east having a residence (8035 West Coast Road).

As observed during a detailed site reconnaissance on October 9, 2015, the majority of the property consists of a bench about 2 m below the level of West Coast Road that slopes gently to the south. The bench is forested, with a thick cover of undergrowth (mostly salal) in most areas. A bedrock bluff about 5 – 6 m high is present directly back of the shoreline, and a small cottage is located about 6 – 7 m back of the crest of this bluff. Otherwise, the lot is undeveloped, although an old concrete cistern was observed near the road. There is no driveway on the property.

Under the requirements of the Marine Shoreline DPA, no new development is permitted within 15 m of the PNB although existing structures can remain. Depending upon site conditions, it is sometimes possible to relax this 15 m setback, on the basis of an assessment by a Qualified

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Ryzuk Geotechnical

March 10, 2016

Lot 3, 8000 Block West Coast Road – Otter Point, B.C.

Professional. A geotechnical assessment is also required for any development within the Steep Slopes DPA. The local OCP also requires that the FCL (loosely defined as the underside of any floor system or the top of any pad supporting any habitable space or room) be a minimum of 1.5 m above the PNB.

According to regional geology mapping, as well as our own observations, the rock that forms the foreshore bluff, and upon which the existing cottage is constructed, is a unit of the Metchosin formation, which consists of hard volcanic rock. This rock type is relatively resistant to erosion or instability due to wave action, and as such recession of the bluff crest would be expected to be minimal over the lifetime of any existing or proposed structure. Given that the foundations of the existing cottage already lie behind/below an imaginary line projected up from the natural boundary at an inclination of 1 Horizontal : 1 Vertical, we consider that the existing cottage is in a safe position with respect to shoreline stability, and, from a geotechnical perspective, could continue to be used indefinitely.

According to drawings prepared by Mallen Gowing Berzins Architecture (MGBA) dated 2016.02.09, the proposed new residence would be located about 4 m to the west of the existing cottage, and would have a design top of slab elevation is a minimum of 4.1 m above the surveyed elevation of the PNB. Accordingly, the FCL requirements of the OCP are satisfied. The southern side of the building would encroach to within about 4.3 – 4.5 m of the crest of the bluff in the central area, while the southwest and southeast corners of the building would be about 9.0 and 10.5 m back of the crest of the bluff, respectively. The central part of the building would encroach within about 5.1 m of the PNB at the closest point, while the south corners of the building would be 10.5 -12 m or so back of this line. In view of the grades and the nature of the bluff as discussed above, we consider that the proposed building location is geotechnically stable provided that appropriate measures are incorporated into the design. In particular, all footings along the protruding central part south side of the building should be taken down to intact bedrock, and where the bedrock at a footing location is inclined steeper than 15° and is not naturally keyed it will be necessary to either chip a flat bench to accommodate the footings or dowel the footings into the rock. We can provide specific direction in this regard at the time of construction. Also, all site drainage should be disposed of into ground in the area north of the building site or conveyed by solid pipe to the beach or a non-erodible bedrock area, and should not be allowed to flow over the bluff in an uncontrolled manner.

We did not observe any slopes on the property in excess of 20% except directly along the shoreline and in the immediate vicinity of the highway embankment, and as such we do not consider the building site subject to a slope stability hazard. Further, and subject to the implementation of the above recommendations, we recommend that the 15 m horizontal setback from the PNB be relaxed to permit the building to be constructed in the location proposed.

In consideration of the above, our assessment is that the site may be safely used for the use intended, that being a single family residence constructed at the location described above and

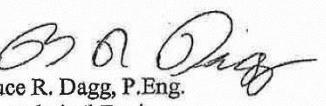
March 10, 2016

Lot 3, 8000 Block West Coast Road – Otter Point, B.C.

shown on the MGBA drawings. Our assessment is in accordance with Section 56 of the Community Charter and includes consideration of the impact of an earthquake with a 2% probability of exceedance in 50 years.

We trust that the preceding is suitable for your current requirements. We would be pleased to assist you during construction as required. Thank you for the opportunity to have been of service to you.

Yours very truly,  
Ryzuk Geotechnical

  
Bruce R. Dagg, P.Eng.  
Geotechnical Engineer



Attachment: Terms of Engagement

**Environmental Report**

**Applied Ecological Solutions Corp.**

Fisheries • Land Use • Management



March 7, 2016  
AESC Project No.: 215-017-1

**Re: Environmental Overview Assessment  
Lot 3, Capital Regional District, BC**

Dear:

As requested, I have completed an overview environmental site review of the above referenced subject property.

The intent of this field assessment and letter report is to:

1. Ensure compliance with the Capital Regional District's (CRD) Otter Point Official Community Plan Bylaw No. 3819 – Schedule “A” – Sections 6.3 and 6.4, to ensure that environmental issues have been fully considered in the contemplation of the development of this property,
2. Provide advice on how to develop the property in consideration of general environmental protection.

This revised Final Report has been prepared and issued to address comments from the CRD Planner.

**SUBJECT PROPERTY LEGAL INFORMATION**

The subject property is legally described as follows:

*Parcel Identification – 000-653-250; Lot 3; Section 32; Otter District; Plan 25866*

**SUPPORTING INFORMATION AND DOCUMENTATION**

This letter report has been prepared in consideration of the following information:

1. Field review of the subject property on October 27, 2015,
2. Documentation provided by the landowner,
3. Review of the CRD Otter Point OCP Bylaw No. 3819 Sections 6.3, 6.4, 6.5 and 6.6,
4. CRD Natural Atlas<sup>1</sup>,
5. Wildlife Tree Stewardship Atlas<sup>2</sup>.

**OVERALL SITE CONTEXT**

The subject property is approximately 0.15 hectares (~0.37 acre).

Figure 1 provides an overview of the subject property location in Otter Point.

<sup>1</sup> [http://maps.crd.bc.ca/imf/imf.jsp?site=public\\_crdviewer](http://maps.crd.bc.ca/imf/imf.jsp?site=public_crdviewer)

<sup>2</sup> [www.wildlifetree.ca/atlas.html](http://www.wildlifetree.ca/atlas.html)

ENVIRONMENTAL OVERVIEW ASSESSMENT – FINAL (REVISION 1)  
LOT 3  
CAPITAL REGIONAL DISTRICT

PAGE 2 OF 14



Figure 1 Orthophoto showing property location (yellow polygon; base ortho-image from CRD Natural Atlas).

The marine foreshore fringe consists of a vertical bedrock bluff approximately 3.5 m above the beach elevation for the entire width of the property and beyond (Photo 1). Adjacent developed properties immediately east and west of the subject property exhibit the same characteristics.



Photo 1 Panoramic view of bedrock bluff along the marine frontage of the subject property.

Based on the predominance of bedrock along the marine foreshore, it is assumed that this bedrock horizon extends upslope throughout the property and is overlain with an organic topsoil layer. However, no exposed bedrock was observed in the developable portion of the property. , comprised predominantly of bedrock overlain with organic soil. The property from the top of the bluff extending to West Coast Road is sloped at approximately 15%. A short, steep slope extends up to the elevation of West Coast Road.

### **PLANNED DEVELOPMENT**

The property is currently undeveloped. The proposed development is to construct a single family dwelling on the property that is accessible directly off West Coast Road.

Prepared by: Applied Ecological Solutions Corp.  
Project No.: 215-017-1

March 7, 2016

### **ECOLOGICAL FEATURES**

#### *Aquatic*

The subject property includes approximately 40 m of marine foreshore frontage. There are no other aquatic features on or adjacent to the property.

#### *Vegetation*

The property is within the 'Coastal Douglas-Fir zone, moist maritime subzone' as defined by the BC Ministry of Forests. Existing vegetation on the property includes (but is not limited to) the following plant species listed in Table 1.

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

Canopy (Tree) Species		Understorey (Shrub) Species	
Common Name	Scientific Name	Common Name	Scientific Name
Douglas Fir	<i>Pseudotsuga menziesii</i>	Salal	<i>Gaultheria shallon</i>
Western Redcedar	<i>Thuja plicata</i>	Sword Fern	<i>Polystichum munitum</i>
Red Alder	<i>Alnus rubra</i>	Bracken Fern	<i>Pteridium aquilum</i>
		Common Snowberry	<i>Symporicarpos albus</i>
		Oceanspray	<i>Holodiscus discolor</i>
		Nootka Rose	<i>Rosa nutkana</i>
		Willow	<i>Salix sp.</i>
		Scotch Broom*	<i>Cytisus scoparius</i>

\* Invasive plant species.

Salal represents the predominant ground cover shrub on the property (Photo 2). The occurrence of other plant species listed in Table 1 are extremely limited.



**Photo 2** Subject property typical condition.

Of the tree species observed, several are large diameter trees. The total number (in brackets) and diameter (m) of trees 0.6 m DBH<sup>3</sup> and greater are as follows:

Douglas Fir (7): 1.10, 0.85, 1.40, 0.70, 1.20, 1.10, 1.30  
Western Redcedar (9): 1.10, 0.90, 0.70, 1.00, 0.60, 0.60, 0.85, 1.70\*, 1.05

\* Twin trunk

<sup>3</sup> Diameter at breast height. This is the standard point of measurement for all forestry inventory work. Diameter can be measured overbark or underbark. The international metric standard for DBH is overbark at a point 1.3 metres above the ground.

LETTER REPORT – ENVIRONMENTAL OVERVIEW ASSESSMENT – FINAL (REVISION 1)  
LOT 3  
CAPITAL REGIONAL DISTRICT

PAGE 4 OF 14

Wildlife

An review of the wildlife tree registry to identify any protected nests (i.e. Bald Eagle, Osprey, Great Blue Heron) was undertaken. This registry reveals there are no known Bald Eagle nests on the subject property. Three Bald Eagle nests occur near the subject property, two of which are directly north (nests BAEA-102-022, BAEA-102-023) and one that is directly west (nest BAEA-102-001). The nearest of these (nest BAEA-102-023) is approximately 450 m north of the subject property (Figure 2).



Figure 2 Location of Bald Eagle Nests within the vicinity of the subject property.

**SENSITIVE ECOSYSTEM MAPPING**

The Province of British Columbia has developed sensitive ecosystem inventory mapping for eastern Vancouver Island. This mapping provides users with valuable information regarding the occurrence of known sensitive ecosystem classes within the landscape, including wetlands, old growth forests and coastal bluff, among others. The extent of this mapping terminates just east of the subject property. There is no associated mapping for the ecosystems at and within the vicinity of the subject property.

**TREE CLEARING**

In advance of building construction, some tree clearing will be required. This clearing will be required to accommodate the house construction.

*Bird Breeding and Nesting 'Reduced Risk Timing Window'*

The landowner is advised that a Bird Breeding and Nesting 'Reduced Risk Timing Window' (Window) may apply to tree clearing. The Window has been established by the BC Ministry of Environment. It pertains primarily to nesting birds. The Window is the period between March 15 and July 31 of any calendar year when tree clearing is restricted to protect birds that are breeding, nesting, brooding on eggs or fledging chicks. It is intended that all tree and

LETTER REPORT – ENVIRONMENTAL OVERVIEW ASSESSMENT – FINAL (REVISION 1)  
LOT 3  
CAPITAL REGIONAL DISTRICT

PAGE 5 OF 14

understorey shrub clearing be completed outside of the Window (i.e. before March 15 and / or after July 31).

In the event tree removal is delayed to March 15 or later, a nesting survey by a QEP may be required to verify that no active nesting is occurring in trees identified for removal. On this verification, tree clearing can occur within the Window. For this reason, it is advised that felling of trees be completed prior to March 15.

This Window restriction is unrelated to any Tree Cutting Bylaws and any associated permitting requirements.

### **DISPOSAL OF WASTEWATER**

Disposal and dispersal of septic wastewater on the property has been evaluated by a Registered Professional. This evaluation confirmed that there is a primary reserve area suitable for a five bedroom home up to 295 m<sup>2</sup> (3,175 ft<sup>2</sup>) using accepted septic system design. A larger home can be accommodated with the use of a treatment plant.

### **COMPLIANCE WITH RELEVANT GUIDELINES OF OTTER POINT OCP – SCHEDULE 'A' – BYLAW No. 3819**

#### **Part A. Bylaw Section 6.3 – Development Permit Area No. 1 – Steep Slopes**

The following addresses Bylaw No. 3819, Section 6.3 Guidelines relevant to environmental protection.

##### Section 6.3 Guideline 1

*No development, subdivision or sewage disposal system will be permitted in a "Steep Slopes DPA", as specified in the Justification above, except as allowed by a Development Permit or subject to a general exemption as outlined in Section 6.2 of this Plan.*

##### Guideline 1 Action

There are no alternate options to develop this site beyond what is currently contemplated. Septic and sewage management on the subject property has been evaluated by a Qualified Professional who has advised that the site can be developed as described above. No further action is recommended.

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##### Section 6.3 Guideline 7

*An applicant may be required to provide a sediment and erosion plan with recommendations for implementation. Erosion control measures, during and after construction, may be specified in the permit.*

##### Guideline 7 Action

The small, single lot development does not warrant development of comprehensive erosion and sediment control planning. However, since the site is graded towards the marine foreshore the developer is advised to undertake site development in consideration of water management. This includes consideration of the following as appropriate:

Sediment and erosion control measures may include (but not be limited to) any combination of the following:

- Maintaining intact vegetation areas where potentially silt-laden water can be directed to provide mechanical treatment (i.e. settlement) and infiltration,
- Managing runoff water quality at the source using accepted erosion prevention and management practices and methodology,
- Stabilizing areas vulnerable to erosion using accepted means such as [1] covering with impervious material (e.g. tarpaulin or polyethylene sheeting), [2] spreading straw over exposed surfaces susceptible to erosion to ameliorate rill and gully erosion, and [3] seeding.

LETTER REPORT – ENVIRONMENTAL OVERVIEW ASSESSMENT – FINAL (REVISION 1)  
LOT 3  
CAPITAL REGIONAL DISTRICT

PAGE 6 OF 14

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**Section 6.3 Guideline 8**

Any development must be designed to avoid storm water runoff that could destabilize the slope or cause damage to neighbouring properties. An applicant may be required to provide a drainage plan with recommendations for implementation.

**Guideline 8 Action**

The small, single lot development does not warrant development of comprehensive stormwater runoff management from waters originating within the subject property. Runoff from West Coast Road may discharge down the embankment slope and contribute to other water within the property.

This may require some management that includes, but is not limited to, directing West Coast Road runoff to a location from which it can be managed. The configuration of the subject property suggests that there is no likelihood that works on the subject property will impact neighbouring properties. The downslope limit of the property at the marine foreshore is defined by a 3.5 m high bedrock bluff. The likelihood of destabilization along the foreshore is remote (see Guideline 9 Action, below).

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**Section 6.3 Guideline 9**

*Removal of vegetation should be minimized to allow only for building sites, sewage disposal systems, driveways, landscaping and other permitted land uses.*

**Guideline 9 Action**

The Marine Shoreline DPA stipulates a 15 m setback from the foreshore. However, in consultation with the CRD, the developer has previously proposed the setback be reduced to 7.5 m. CRD acceptance of this setback reduction is contingent on confirmation by a Qualified Professional that any reduced setback will not result in a geotechnical risk. Ryzuk Geotechnical Engineering (Ryzuk) has been retained by the developer to complete this assessment. The findings of this assessment will be reported separately.

Assuming the reduced setback is accepted by the CRD, veteran trees (i.e. those with a trunk diameter greater than 0.6 m DBH) within the 7.5 m setback from the high water mark as required within the Marine Shoreline Area will be retained unless the findings of a Qualified Professional (i.e. arborist) conclude that specifically identified trees should be removed because of degraded tree health, potential for root damage from excavation and other site activities, improved viewscape, etc.

Some trees outside of the 7.5 m setback and within the development site may also be retained as desired by the developer. Those to be retained can be selected in consideration of desired viewscapes, risk and where the no underlying tree roots will be damaged by any site works, including excavation, etc. Where tree retention is contemplated, additional advice from a Qualified Professional (i.e. arborist) is recommended to ensure that the tree is sufficiently healthy that it does not present a future risk of toppling, rotting, etc.

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**Section 6.3 Guideline 10 & 12**

*Where the Qualified Professional recommends re-vegetation or remediation works, a landscaping plan and security deposit may be required.*

**Guidelines 10 & 12 Action**

Site re-vegetation is not advised at this time. Further, remedial works can only be identified on the completion of site works and as such, no remedial works are recommended. A re-vegetation or landscape plan is not recommended or warranted at this site.

LETTER REPORT – ENVIRONMENTAL OVERVIEW ASSESSMENT – FINAL (REVISION 1)  
LOT 3  
CAPITAL REGIONAL DISTRICT

PAGE 7 OF 14

**Part B. Bylaw Section 6.4 – Development Permit Area No. 2 – Marine Shoreline Areas**

The following addresses Bylaw No. 3819, Section 6.4 Guidelines relevant to environmental protection.

Section 6.4 Guideline 1

*No development, subdivision or sewage disposal system will be permitted in a “Marine Shoreline DPA”, as specified in the Justification above, except as allowed by a Development Permit or subject to a general exemption as outlined in Section 6.2 of this Plan.*

See Part A, Guideline 1 Action, above.

Section 6.4 Guideline 2

*Avoid intrusion of development into Development Permit Areas and minimize the impact of any activity in these areas. Development shall generally only be supported where the applicant provides compelling reasons supported by a Qualified Environmental Professional’s recommendations for mitigation to support the request or if there are no alternate building locations. Variances from other applicable regulations, including height, setback and location regulations may be considered in order to minimize encroachment into the Development Permit Area.*

Guideline 2 Action

There are no alternate options to develop this site beyond what is currently contemplated. No further action is recommended.

Section 6.4 Guideline 3

*Development or subdivision of land should be designed to comply with the Marine Policies in Section 4.3.1 of this Plan.*

Guideline 3 Action

The Marine Policies primarily address items that are already considered in Bylaw Section 6.4 and the associated Actions described in this report. As such, while consideration of the Marine Policies is required, no additional Actions are recommended.

Section 6.4 Guideline 4

*The applicant for a Development Permit for land within the “Marine Shoreline DPA” on Map 5b, the Development Permit must provide an assessment by a Qualified Environmental Professional on the environmental conditions, and an assessment by a Qualified Professional on the shoreline conditions on the proposed development site and recommendations on the suitability of the site for the proposed development. The assessment should include proposals for vegetation protection, enhancement or retention, where applicable. A plan prepared by a British Columbia Land Surveyor may be required as a condition of the Development Permit.*

Guideline 4 Action

See Part A, Guideline 9 Action, above.  
The conceptual site plan shows compliance with the 15 m setback from the foreshore zone as stipulated in Map 5b. However, this setback is subject to reduction to 7.5 m pending acceptance by the CRD and contingent on the findings of a geotechnical assessment by a Qualified Professional (Ryzuk). As the design of the site is advanced, the developer will ensure that any changes to the concept or design will comply with the accepted setback and associated Bylaw requirements with respect to this Guideline.

Section 6.4 Guideline 5

*Compliance with any or all conditions recommended in the report prepared by the Qualified Environmental Professional or Qualified Professional may be required.*

Guideline 5 Action

Consideration of those recommendations provided in this report.

Section 6.4 Guideline 7

*An applicant may be required to provide a sediment and erosion plan with*

LETTER REPORT – ENVIRONMENTAL OVERVIEW ASSESSMENT – FINAL (REVISION 1)  
LOT 3  
CAPITAL REGIONAL DISTRICT

PAGE 8 OF 14

*recommendations for implementation. Erosion control measures, during and after construction, may be specified in the permit.*

Guideline 7 Action

See Section A, Guideline 7 Action, above.

Section 6.4 Guideline 8

*Planting of indigenous vegetation may be required on the site to reduce erosion risk, restore the natural character of the site, improve water quality or stabilize slopes and banks. An applicant may be required to provide a re-vegetation plan with recommendations for implementation.*

Guideline 8 Action

No native plant re-vegetation plan is recommended. The retention of the 15 m setback from the marine foreshore provides adequate native vegetation buffer between the development envelop and the foreshore.

Section 6.4 Guideline 9

*Where a shoreline stabilization device is proposed, the applicant may be required to provide a report from a Qualified Professional assessing the risk of erosion and the suitability of the parcels for such a device. The report must also assess the impacts on adjacent parcels as a result of installing or not installing the proposed device. Shoreline stabilization devices are not supported on parcels that are not subject to active erosion.*

Guideline 9 Action

The subject property is protected along the marine foreshore area by an ~3.5 m high bedrock bluff. This bluff eliminated any risk of active shoreline erosion. As such, shoreline stabilization is neither required or being contemplated. No action is recommended.

Section 6.4 Guideline 10

*The use of marine retaining walls and other hard surfaces such as rip-rap shall only be supported where a Qualified Professional has determined that alternative approaches to shoreline stabilization such as vegetation enhancement, upland drainage control or gravel placement are not appropriate given site specific conditions.*

Guideline 10 Action

The use of retaining walls or other hard surfaces is not specifically known at this time. As such, no action is recommended.

Section 6.4 Guideline 14

*Where the Qualified Environmental Professional or Qualified Professional recommends re-vegetation or remediation works, a landscaping plan and security deposit may be required.*

Guideline 14 Action

See Part A, Guideline 10 Action, above.

**Part C. Bylaw Section 6.5 – Development Permit Area No. 3 – Watercourses and Wetlands Area**

There are no watercourses or wetlands on the subject property. As such, Bylaw Section 6.5 does not apply.

**Part D. Bylaw Section 6.6 – Development Permit Area No. 4 – Sensitive Ecosystems Areas**

The following addresses Bylaw No. 3819, Section 6.6 Guidelines relevant to environmental protection.

Section 6.6 Guideline 1

*No development, subdivision or sewage disposal system will be permitted in a "Sensitive Ecosystems DPA", as specified in the Justification above,*

LETTER REPORT – ENVIRONMENTAL OVERVIEW ASSESSMENT – FINAL (REVISION 1)  
LOT 3  
CAPITAL REGIONAL DISTRICT

PAGE 9 OF 14

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*except as allowed by a Development Permit or subject to a general exemption as outlined in Section 6.2 of this Plan.*

See Part A, Guideline 1 Action, above.

Guideline 1 Action

Section 6.6 Guideline 2

*Avoid intrusion of development into Development Permit Areas and minimize the impact of any activity in these areas. Development shall generally only be supported where the applicant provides compelling reasons supported by a Qualified Environmental Professional's recommendations for mitigation to support the request or if there are no alternate building locations. Variances from other applicable regulations, including height, setback and location regulations may be considered in order to minimize encroachment into the Development Permit Area.*

Guideline 2 Action

There are no alternate options to develop this site beyond what is currently contemplated. No further action is recommended.

Section 6.6 Guideline 3

*Development or subdivision of land should be designed to comply with the policies in Section 5.3.2 of this Plan.*

Guideline 3 Action

The Sensitive Ecosystem Policies described in Section 5.3.2 address measures to minimize impacts within a Development Permit Area and where impacts may / will occur, address these impacts through consultation with a Qualified Environmental Professional. These measures are addressed in detail in Section 6.6. As such, this Assessment Report addresses these considerations.

Section 6.6 Guideline 4

*The applicant for a Development Permit for land within the 'Sensitive Ecosystems DPA' must provide an assessment by a Qualified Environmental Professional on the environmental conditions on the proposed development site and recommendations on the suitability of the site for the proposed development. The assessment must include proposals for vegetation protection, enhancement or retention, where applicable. A plan prepared by a British Columbia Land Surveyor may be required as a condition of the Development Permit.*

Guideline 4 Action

See Part A, Guideline 9 Action, above.  
The conceptual site plan shows compliance with the 15 m setback from the foreshore zone as stipulated in Map 5b. However, this setback is subject to reduction to 7.5 m pending acceptance by the CRD and contingent on the findings of a geotechnical assessment by a Qualified Professional (Ryzuk). As the design of the site is advanced, the developer will ensure that any changes to the concept or design will comply with the accepted setback and associated Bylaw requirements with respect to this Guideline.

Section 6.6 Guideline 5

*As a condition of the issuance of a Development Permit, compliance with any or all conditions recommended in the report prepared by the Qualified Environmental Professional or Qualified Professional may be required.*

Consideration of those recommendations provided in this report.

Section 6.6 Guideline 6

*Disturbance to existing vegetation that is not directly affected by the footprint of building, ancillary uses, and driveways must be minimized. Any disturbed areas shall be rehabilitated with appropriate landscaping and habitat compensation measures. Loss of natural habitat shall be minimized.*

Guideline 6 Action

Disturbance to existing vegetation will be limited to the minimum reasonably required to complete planned works. Vegetation disturbance beyond the

LETTER REPORT – ENVIRONMENTAL OVERVIEW ASSESSMENT – FINAL (REVISION 1)  
Lot 3  
CAPITAL REGIONAL DISTRICT

PAGE 10 OF 14

---

planned works to address issues related to hazardous trees, unavoidable damage to vegetation (e.g. damage to underlying root networks on trees outside of the construction disturbance envelop where those root systems extend within the worksite), and / or vegetation clearing to accommodate septic field installation and other related works, etc. may be required, in part, to comply with the Bylaws. It is anticipated that much of the upslope property will be developed. While some residual disturbed areas may result, these temporal vegetation losses (if they occur) can be rehabilitated with appropriate plant species as required. However, addressing this through a formal landscaping plan is not advised.

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Section 6.6 Guideline 7

*A buffer zone within which land alteration or structures will be limited to those compatible with the characteristics of the sensitive ecosystems, or those that can be mitigated in a manner recommended by a Qualified Environmental Professional may be required and the specific or general location of the buffer zone may be designated.*

Guideline 7 Action

See Guideline 4 Action. With the exception of the buffer at the foreshore zone described above, there are no other buffer zones assigned to this property development.

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Section 6.6 Guideline 8

*In order to ensure unnecessary encroachment does not occur into the Development Permit area at the time of construction, permanent or temporary fencing measures may be required.*

Guideline 8 Action

Temporary snow fencing or other visible delineation will be installed along the no entry foreshore zone setback 15 m (or 7.5 m if accepted by the CRD) in a manner that does not result in significant vegetation and / or root disturbance. Alternatively, the boundary may be flagged at regular intervals to provide a clearly visible demarcation for site works. All site workers will be made aware of this no entry zone.

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Section 6.6 Guideline 9

*Environmentally sensitive areas and the habitat requirements for wildlife species at risk as defined in the federal Species at Risk Act should remain in their natural state and should not be developed or disturbed.*

Guideline 9 Action

There are no environmentally sensitive areas or habitat requirements for wildlife species at risk on this property. As such, maintaining the natural state and avoiding development / disturbance is required. No action is recommended.

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Section 6.6 Guideline 10

*Where possible, large tracts of wildlife habitat or continuous habitat corridors should be preserved, in order to facilitate movement of wildlife. In addition, where possible, landscape plans should enhance, expand or create wildlife habitat such as wetlands, native aquatic and terrestrial plants.*

Guideline 10 Action

The subject property is bounded by West Coast Road, existing residential properties and the marine foreshore. As such, there are no large tracts of wildlife habitat or continuous habitat corridors on this property. Further, the single lot size of the property does not provide any opportunities to expand / create wildlife habitat. As such, no action is recommended.

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Section 6.6 Guideline 11

*Planting of invasive species adjacent to or within designated "Sensitive Ecosystems DPA" will not be permitted.*

LETTER REPORT – ENVIRONMENTAL OVERVIEW ASSESSMENT – FINAL (REVISION 1)  
Lot 3  
CAPITAL REGIONAL DISTRICT

PAGE 11 OF 14

<u>Guideline 11 Action</u>	There will be no planting of invasive species anywhere on the property.
<u>Section 6.6 Guideline 12</u>	<i>Changes in the land surface which could affect the health of vegetation or the biodiversity of any plant communities and disturbance of mature vegetation and understorey plants will be minimized.</i>
<u>Guideline 12 Action</u>	Disturbance and / or encroachment into the 15 m (or 7.5 m if accepted by the CRD) no entry foreshore zone will not occur. Installation of a visible demarcation as described above will ensure this setback is respected and maintained. This foreshore zone consists predominantly of a dense cover of Salal and large conifer trees as described in this report. This zone will be maintained.
<u>Section 6.6 Guideline 13</u>	<i>Any development must be designed to avoid storm water runoff and the development or subdivision may be required to be carried out in accordance with recommendations contained in a drainage plan that the applicant may be required to provide.</i>
<u>Guideline 13 Action</u>	See Part A Guideline 8 Action, above.
<u>Section 6.6 Guideline 14</u>	<i>Removal of gravel, sand, soil or peat in 'Sensitive Ecosystems DPA' will be strictly limited and only permitted if impacts can be mitigated in a manner recommended by a Qualified Environmental Professional.</i>
<u>Guideline 14 Action</u>	The subject property is predominated by a shallow organic soil horizon underlain by bedrock as evident by the bedrock escarpment at the marine foreshore. Excavation will be limited to the minimum required to accommodate site development (including construction of the house foundation). As such, no action is required.
<u>Section 6.6 Guideline 15</u>	<i>Development should generally conform to Develop with Care 2012: Environmental Guidelines for Urban and Rural Land Development in British Columbia.</i>
<u>Guideline 15 Action</u>	This document provides general guidance to developers with respect to developments in sensitive areas and near streams, including minimizing environmental impacts and intrusions, sediment and drainage management, etc. It is most applicable to larger developments and those with a significant permanent and temporal impact.  The small scope of this single family house development does not warrant comprehensive consideration of the Develop with Care guidance other than committing to those protection measures outlined in this Assessment Report. Further, the author will be available to the landowner to provide advice on environmental protection issues if and as required.
<u>Section 6.6 Guideline 16</u>	<i>Development may be required to incorporate environmentally sound building practices where appropriate, such as natural drainage, or use of permeable paving materials.</i>
<u>Guideline 16 Action</u>	There is no municipal drainage infrastructure (e.g. storm sewers, etc.) within this area of the CRD. As such, all site drainage, including existing drainage off West Coast Road, is conveyed to the existing vegetation for infiltration. Ultimately this drainage naturally discharges to the marine foreshore area by

Prepared by: Applied Ecological Solutions Corp.  
Project No.: 215-017-1

March 7, 2016

LETTER REPORT – ENVIRONMENTAL OVERVIEW ASSESSMENT – FINAL (REVISION 1)  
LOT 3  
CAPITAL REGIONAL DISTRICT

PAGE 12 OF 14

---

percolating through the shallow soil layer. It is anticipated that property drainage installed during site development will utilize the same mechanism. The extent of paved surfaces (if used) will be limited to the driveway access off of West Coast Road, parking etc. This is considered an insignificant overall contribution of runoff.

Section 6.6 Guideline 17

*A subdivision application which proposes the creation of parcels less than the average parcel size supported by this Plan and located within a smaller footprint of the parent parcel may be supported where the conditions are secured for the permanent on-going protection or restoration of environmentally sensitive features without an amendment to this Plan. However, the overall number of parcels must be consistent with the Land Use Designation.*

Guideline 17 Action

This single-family property development is not within a larger subdivision. As such, no action is required.

Section 6.6 Guideline 18

*Where the Qualified Environmental Professional or Qualified Professional recommends re-vegetation or remediation works, a landscaping plan and security deposit may be required.*

Guideline 18 Action

It is anticipated that the small scope of this development and the retention of a 15 m (or 7.5 m if accepted by the CRD) foreshore zone buffer as described above will not require a formal landscaping plan. Vegetation disturbance outside of the foreshore zone available for re-vegetation or restoration is likely to be minimal or non-existent as much of the upslope property (i.e. beyond the 15 m (or 7.5 m) foreshore zone) will be within the development envelop.

As such, any areas available for remediation (if any) can be implemented without formal involvement of a Qualified Environmental Professional. As such, it is anticipated that a landscape plan / security deposit will not be required.

**GENERAL RECOMMENDATIONS FOR ENVIRONMENTAL PROTECTION DURING CONSTRUCTION**

The small single family scope of this development does not warrant attendance by a QEP / Environmental Monitor or other qualified person to monitor construction for environmental protection purposes. Nor does this project require dedicated environmental protection planning and implementation documents such as an Environmental Management Plan or similar document.

Further, it is extremely unlikely that the property development will generate significant volumes of silt laden runoff. These runoff volumes are more likely to originate from West Coast Road runoff and not directly related to the planned development. Regardless, it is anticipated that runoff can be managed easily and efficiently using materials and equipment likely to be available on site.

The following information is provided for consideration for work on the property.

Sediment and erosion control measures may include (but not be limited to) the following:

- Limit ground disturbance to what is required to complete the planned works,
- Maintaining intact vegetation areas where potentially silt-laden water can be directed to provide mechanical treatment (i.e. settlement) and infiltration prior to discharge the marine foreshore area,

LETTER REPORT– ENVIRONMENTAL OVERVIEW ASSESSMENT – FINAL (REVISION 1)  
LOT 3  
CAPITAL REGIONAL DISTRICT

PAGE 13 OF 14

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- Managing runoff water quality at the source using accepted erosion prevention and management practices and methodology,
  - Stabilizing areas vulnerable to erosion using accepted means such as covering with impervious material, spreading straw to ameliorate rill and gully erosion and seeding.

The author will be available to provide as-required advice on any aspect of the property development and as required.

### **FINDINGS AND RECOMMENDATIONS**

The following findings and recommendations are provided to satisfy the CRD's environmental requirements regarding the development of this site.

#### **Overall Site Development**

<i>Finding</i>	The property is situated within adjacent small, waterfront lots that have been previously developed as single family residences. These adjacent properties have similar site conditions as the subject property.
<i>Recommendation</i>	Development of the property should be undertaken in consideration of the Bylaw Sections 6.3, 6.4 and 6.6 Actions described above. <b>Bylaw Section 6.5 does not apply to this property or development as no watercourses or wetlands occur on or near this subject property.</b>
<i>Finding</i>	The developer has proposed to the CRD a reduction in the 15 m setback from the foreshore area as stipulated in Bylaw Section 6.4, Guideline 4 (see Part A, Guideline 9 Action and Part B, Guideline 4 Action, above). Acceptance of this reduction is contingent on the findings by an Qualified Professional.
<i>Recommendation</i>	Assessment by Ryzuk is ongoing and independent of this report. No recommendation is advised.

#### **Tree Clearing**

<i>Finding</i>	The subject property is undeveloped, with several large diameter trees occurring throughout. Tree clearing will be required to accommodate permitted development of this property.
<i>Recommendation</i>	Ensure that all tree removal (i.e. felling) is completed prior to the onset of the Bird Breeding and Nesting Window described above. Otherwise, onerous nesting surveys may be required to confirm active nesting is not occurring in those trees selected for removal.

#### **Nearby Bald Eagle Nests**

<i>Finding</i>	Three Bald Eagle nests occur near the subject property. The nearest of these is approximately 450 m north. No Bald Eagle nests were observed in the trees on the subject property.
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LETTER REPORT – ENVIRONMENTAL OVERVIEW ASSESSMENT – FINAL (REVISION 1)  
LOT 3  
CAPITAL REGIONAL DISTRICT

PAGE 14 OF 14

- Recommendation**
- [1] Development of the property is not constrained in any way by the existence of these Bald Eagle nests.
- [2] While no protected nest was observed in the trees on the subject property during the field review, these veteran trees should be visually inspected again prior to felling to confirm that no protected nests occur in any of the trees to be felled. If a nest is identified, consultation with the Provincial (and potentially Federal) regulatory agencies will be required to obtain a permit to remove the tree.

**PROFESSIONAL OPINION**

In my opinion, development of this property can be undertaken in compliance with the CRD Otter Point OCP and its associated Bylaws as described in Sections 6.3 6.4 and 6.6 of Schedule 'A'.

If development of the subject property is undertaken in consideration and compliance with the Findings and Recommendations described above and including the findings of a geotechnical assessment (by Ryzuk), there will be no adverse environmental impacts associated with developing this site as planned.

Sincerely,



Craig T. Barlow, R.P.Bio., QEP  
Fisheries Biologist



cb/

Report Distribution: (property owner)  
Capital Regional District Planning Department  
AES file