



CAPITAL REGIONAL DISTRICT

DEVELOPMENT PERMIT WITH VARIANCE NO. DV000088

1. This Development Permit with Variance is issued under the authority of Sections 490 and 498 of the *Local Government Act* and subject to compliance with all of the bylaws of the Regional District applicable thereto, except as specifically varied or supplemented by this Permit.
2. This Development Permit with Variance applies to and only to those lands within the Regional District described below (legal description), and any and all buildings, structures, and other development thereon:

PID: 026-023-105;
Legal Description: Lot 12, Section 10, Otter District, Plan VIP77477 (the "Land")
3. This development permit authorizes a 2-lot fee-simple subdivision and related services (the "development") on the Land, located within the development permit areas established under the Otter Point Official Community Plan, Bylaw No. 3819, Section 6.6 (Sensitive Ecosystems) in accordance with the plans submitted to the CRD and subject to the conditions set out in this Permit.
4. The conditions under which the development referred to in section 3 may be carried out are as follows:
 - a. That the components of the development occur in conformity of the Subdivision Plan prepared by West Coast Design and Development Services, dated August 3, 2021; and
 - b. That the proposed development comply with the recommendations outlined in the report prepared by Patrick Lucey, RP.Bio., dated May 6, 2022 (the "Environmental Report").
5. The Capital Regional District's Bylaw No. 2040, Part 2, Section 3.10(4), is varied under section 498 of the *Local Government Act* as follows:
 - a. That the the minimum frontage requirement of proposed Lot B be reduced from 10% to 1.93%;
6. Notice of this Permit shall be filed in the Land Title Office at Victoria as required by Section 503 of the *Local Government Act*, and the terms of this Permit (DV000088) 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:

Appendix A: Subdivision Plan
Appendix B: Environmental Report
10. This Permit is NOT a Building Permit.

RESOLUTION PASSED BY THE BOARD, THE ____ day of _____, 2022.

ISSUED this ____ day of _____, 2022.

Kristen Morley
Corporate Officer



DV000088

Appendix B: Environmental Report



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Iain Lawrence, MCIP, RPP
Manager
Juan de Fuca Community Planning
CRD, Sooke, B.C.

May 6th, 2022

Re: 2193 Otter Ridge Drive – Environmental Review – DPAs

Dear Iain:

Aqua-Tex was retained by [REDACTED], home owner at 2193 Otter Ridge Drive, to conduct a site assessment determine whether any Sensitive Ecosystems, as inventoried by the Province (CDC Conservation Data Centre) and the CRD, exist on the property (Figure 1 and Figure 2). [REDACTED] has applied to subdivide the property to create a second dwelling on the subdivided parcel (Figure 3).

Aqua-Tex staff (Wm. Patrick Lucey, RP Bio.) and a specialist in sensitive botanical species (Mr. Ted Lea, former Ministry of Environment scientist) conducted a site visit (April 15, 2022), having reviewed the background information associated with the Environmental Inventory assessments associated with the property and its surrounding areas (Figure 4 – Figure 9). Subsequently, Mr. Lucey had a phone discussion with Erica Wheeler, a Botanist and specialist on Slimleaf onion. Ms. Wheeler's comments on Slimleaf onion and Seaside Bone Lichen have been incorporated into our recommendations.

Our review of the literature in the CDC Occurrence Map of Species and Ecosystems at Available Occurrences (Figure 6) indicated that two species of concern had been historically identified in the area. In addition, the CRD Environmental Inventory Map (Figure 4 and Figure 5) indicated there might be Mature Forest associated with the subject property or adjacent properties. A review of the CRD Aquatic Mapping did not reveal any freshwater landscape features associated with the subject property or on adjacent properties.

Schedule "A" of Capital Regional District Bylaw No. 3819 Otter Point Official Community Plan (Appendix A) outlines Development Permit Areas (DPAs) associated with Sensitive Ecosystems for which conservation measures may be applied to proposed development, including Watercourses, Herbaceous, and Mature Forest.

The *Otter Point Sensitive Ecosystem Inventory* (Schaefer, C., Page, N., and Harrison, D. 2011. Report Prepared for the CRD. 32 pg. (Appendix – Sensitive Ecosystems Inventory of Otter Point) makes reference to a Mature forest category (Figure 5 and Figure 7) on



DV000088

the parent property and the CDC Conservation Data Centre lists two sensitive species associated with the property and/or adjacent areas (Figure 6).

Summary Findings & Recommendations

1. Two sensitive species identified in the CDC Data Base have been reported from the Otter Point region - Slimleaf onion (*Allium amplexens*) and Seaside Bone Lichen (*Hypogymnia heterophylla*). Neither species was observed during the site assessment.
2. It is acknowledged that a single site visit was conducted to both a) observe whether either of the species was present and b) to ascertain whether habitat associated with these species is present on the property, especially the Slimleaf onion. This species is associated with the Herbaceous Sensitive Ecosystem. The Herbaceous category is a true Sensitive Ecosystem category.
3. There is a small, inland Herbaceous area on the parent property, restricted to a bed rock outcrop, that will not be impacted by the proposed subdivision development. This Herbaceous area is found at the southeast boundary of the parent lot. A fragment of a second bed rock outcrop occurs on the proposed daughter lot adjacent to, but separated from, the larger bed rock outcrop. This fragment has minimal Slimleaf onion habitat.
4. If the Slimleaf onion (Figure 6 and Figure 9) was to occur on this property, it may occur in the Herbaceous bed rock knoll, although aspects of this habitat are not appropriate to support Slimleaf onion. Slim leaf onion is frequently found on rocky shoreline ledges, especially where vernal pools are present. No such habitats occur on the subject property.
5. If the parhandle driveway is constructed to avoid disturbance to the bed rock outcrop, at the entrance to the proposed subdivided Lot, there will be no impact from the development on this Herbaceous ecosystem area.
6. On Southern Vancouver Island, Seaside Bone Lichen has a very narrow habitat range. All known populations occur within about 100 m of the ocean in the driest subzones of the Coastal Western Hemlock Biogeoclimatic Zone and the neighbouring Coastal Douglas-fir Zone. Here it characteristically colonizes the branches of young to mid-seral Shore Pine (*Pinus contorta var. contorta*) forests, especially on rocky, windswept ledges. (Excerpted from the Federal Recovery Strategy for the Seaside Bone Lichen (*Hypogymnia heterophylla*) in Canada, 2017. Species at Risk Act Recovery Strategy Series. Environment and Climate Change Canada, Ottawa. vi + 28 pp.)
7. The Shore Pines in these relatively uncommon sites are somewhat stunted and prone to branch destruction and damage from offshore winds and winter storms. Seaside Bone Lichen appears to be excluded from less exposed sites by other arboreal lichen species (Ibid).
8. The main threats to Seaside Bone Lichen are climate change and removal of, or damage to, its host trees. All populations face the risk of destruction or damage of host trees via the increasing severity and frequency of winter storms predicted with climate change. It is also suggested that a mean minimum winter temperature above freezing was the most important environmental variable for identifying suitable habitat (Ibid).



DV000088

9. The Federal Recovery Strategy for the Seaside Bone Lichen (2017) identified critical habitat as wherever the following biophysical attributes occur:
 - Areas with high exposure to wind and sunlight, and
 - Early to intermediate seral stage shoreline forest habitat, including one or more known host trees and shrubs: Shore Pine, Douglas-fir, Sitka Spruce, Oceanspray.
10. The property under review is at least 225 m from the marine shoreline, lying at an elevation of ~40 – 45 m above sea-level.
11. No Shore Pine were observed growing on the subject property, nor on adjacent neighbouring properties, though Douglas-fir, Oceanspray, and a few isolated Sitka Spruce were observed. A visual examination of conifer needles did not reveal any Seaside Bone Lichens.
12. Based upon a review of the scientific literature, the extremely narrow habitat requirements required to support a population of Seaside Bone Lichen strongly favour our observation that this species is not expected to occur in the subject property.
13. It is recommended that when the trees are to be removed from the panhandle driveway and for the residential building, and when the septic disposal field is installed, that a qualified Botanist check the tree tops for the presence of Seaside Bone Lichen. Tree tops (2 m in length) shall be left on the property to function as potential recruitment sources of the lichen. Trunks shall be left under the forest canopy to provide woody debris for wildlife habitat, providing the trunks do not increase forest floor fuel loading, associated with wildland-urban interface fire management.
14. The Mature Forest Category starts at 80 years old - which is what is mapped in the Otter Point SEI Report (CRD, 2011).
15. No forest stands of the age that meets the Mature Forest category were seen on the portion of the parent property proposed to be subdivided to create the daughter Lot.
16. There was only a young forested copse of conifers (< 40 years old) that occurred on the proposed building site or what would be within the panhandle corridor on which the driveway access would be constructed (Figure 3).
17. An isolated pond was observed on the adjacent property to the south (2195 Otter Ridge Drive) (Figure 2).
18. The isolated pond is not connected by surface stream channel to any fisheries habitat, therefore the pond is not subject to the Riparian Areas Protection Regulation (RAPR), nor to the Federal *Fisheries Act*.
19. The pond appeared to be man-made and, as such, is not subject to the *Water Sustainability Act (WSA)* (i.e., it is not a natural watercourse).
20. The isolated, man-made pond is not subject to the CRD Watercourses DPA.

The section following provides the study method, our observations and findings, and relevant background information on which we based the above Summary Findings.

We would be pleased to discuss with you our Recommendations should you have any questions.

Sincerely,



DV000088

Wm. Patrick Lucey, B.Sc., B.A. (WD), M.Sc., R.P. Bio., CBiol., MRSB
Sr. Aquatic Ecologist & President
Aqua-Tex Scientific Consulting Ltd.

Cc: [Redacted] Home Owner
Ted Lea, Botanical Scientist
/Users/Patrick/Documents/Projects/2193 Otter Ridge Drive [Redacted]/Final Report to CRD
Planning/2193 Otter Ridge Drive_Environmental Report_2022-05-06.docx



DV000088

Study method, Background Habitat Information, Findings

A site visit to 2193 Otter Ridge Drive was conducted on the morning of April 15, 2022 by [REDACTED] and the author, with [REDACTED] (property owner) assisting.

The subject property was walked in its entirety, with brief forays onto adjacent properties.

The intent of the field visit was to document the vegetation cover on the subject property to ascertain whether 1) either of the two species identified in the Sensitive Species Inventory (Figure 6) presently occur on the subject, or adjacent, property, and 2) whether any of the Sensitive Ecosystems identified in the Otter Point Official Community Plan Bylaw No. 3819 (Figure 4) are present on the subject property. In particular, habitats associated with the two species identified in the Sensitive Species Inventory – Slimleaf Onion and Sea Bone Lichen – were assessed to verify if either of these species are present or are likely to be present on the subject property. Aquatic landscape features were also assessed, though the CRD Habitat Mapping does not list this habitat type as occurring on any of the properties in this area (Figure 10 and Figure 11).

The site assessment included photographs representative of what was observed during the tour of the properties.

Background Species Habitat Information and Field Observations

Prior to conducting the site assessment, a review of scientific literature on the two sensitive species of concern (Figure 6), associated with the subject property and the surrounding area, was conducted. The findings of that literature review (prepared by Mr. Lea) follow.

Slimleaf Onion (Allium amplexans)

The following botanical and habitat information regarding this species was abstracted from the Garry oak ecosystems recovery team (GOERT) factsheet.
<https://goert.ca/wp/wp-content/uploads/SAR-factsheet-allium-amplexans.pdf>

Habitat

Slimleaf Onion inhabits a variety of sites which are moist in the spring and dry out later in summer. Occupied sites include vernal moist coastal bluffs, shallow swales among rock outcrops in larger meadow or oak woodland complexes, and along the bases of riverside cliffs supplied with seasonal seepage. **The majority of sites in which Slimleaf onion occurs are on rocky bluffs and ledges within a short distance of the ocean.** Plants generally occur as diffuse colonies in thin soils over bedrock. Tree and shrub cover are generally sparse or lacking entirely. Mosses and grasses such as California Oatgrass (*Danthonia californica*), Roemer's Fescue (*Festuca roemerii*), Sweet Vernalgrass* (*Anthoxanthum odoratum*), Common Velvet-grass* (*Holcus lanatus*), and hairgrass species* (*Aira spp.*) are often dominant. Species commonly found with Slimleaf Onion include Broad-leaved Stoncerop (*Sedum spathulifolium*), Chocolate Lily (*Fritillaria affinis*), Menzies' Larkspur (*Delphinium menziesii*), Sea Blush (*Plectritis congesta*),



DV000088

camas species (*Camassia spp.*), and Oceanspray (*Holodiscus discolor*). [NB. * refers to non-native species.]

Slimleaf Onion on 2193 Otter Ridge Drive

Our site assessment was unable to determine whether this species occurs on the bed rock outcrop at the entrance to the proposed panhandle driveway (Figure 3) (Photo 1, Photo 2, Photo 4 – Photo 7). Given that the literature indicates that this species is almost always observed on coastal bluff areas, in close approximation to the exposed shoreline, it strongly suggests that the subject property's bed rock outcrop habitat, as a possible location for this species to thrive, is too far from the ocean.

- Since the proposed driveway access can be constructed to avoid disturbing the two bed rock outcrops at the entrance to the driveway (Photo 7), this potential Slimleaf onion habitat shall remain on the parent property.
- The panhandle driveway access shall be constructed to prevent any disturbance of the two bed rock outcroppings to conserve potential Slimleaf onion habitat.

Seaside Bone Lichen

Habitat

Seaside Bone Lichen is restricted to the branches and terminal twigs of conifers, and occasionally woody shrubs, in exposed seaside habitats along the Pacific coast of temperate North America. It primarily occurs on trees growing on rocky, windswept ledges, in early to intermediate seral Shore Pine (*Pinus contorta var. contorta*) forests. The trees in these locations are somewhat stunted and prone to branch destruction and damage from offshore winds and winter storms. [NB. The following references were excerpted from the Federal Recovery Strategy for the Seaside Bone Lichen (*Hypogymnia heterophylla*) in Canada, 2017. Species at Risk Act Recovery Strategy Series. Environment and Climate Change Canada, Ottawa. vi + 28 pp.]

Seaside Bone Lichen **appears to be excluded from less exposed sites** by other arboreal lichen species (Goward 1996). Shore Pine is the most common host tree for Seaside Bone Lichen in Canada. However, this species has also been found on Douglas-fir (*Pseudotsuga menziesii*) (Goward and Knight 1991; Marsh 2012), Sitka Spruce (*Picea sitchensis*) (Noble 1975), and Oceanspray (*Holodiscus discolor*) (Goward and Knight 1991). It is usually found on live branches but occurs frequently on dead branches as well (Marsh 2012). No Shore Pine were observed growing on the subject property, nor on adjacent neighbouring properties, though Douglas-fir, Oceanspray, and a few isolated Sitka Spruce were observed. A visual examination of conifer needles did not reveal any Seaside Bone Lichens.

Seaside Bone Lichen grows in **close proximity to the coast** and, in Canada, is found within 100 m of the ocean (Goward 1996) (at its closest, the property lies ~225 m from the exposed shoreline and known historical siting (Figure 6 and Figure 8). This may indicate a requirement for salts associated with sea spray, as hypothesized for other coastal arboreal lichens (Glavich 2003). Alternatively, it may point to pronounced sensitivity to subfreezing winter temperatures. Proximity to the ocean has a strong moderating influence on temperature. The subject property lies at an elevation of ~40 m



DV000088

above sea level, at elevation at which freezing temperatures occur during the winter months.

Habitat requirements *Hypogymnia heterophylla* is restricted to the branches and terminal twigs of conifers, especially shore pine (*Pinus contorta* var. *contorta*) in exposed seaside habitats along the northwest Pacific coast. *H. heterophylla* occupies the driest subzones of the Coastal Western Hemlock Zone of the British Columbia Biogeoclimatic Ecosystem Classification System (Meidinger & Pojar 1991), in a region of rain shadow-induced Mediterranean climate.

In Canada, this species appears to be restricted to younger forest stands and may therefore be indirectly dependent on early seral forest attributes. Its distribution, for the most part, may further be controlled by a requirement for salts associated with sea spray (Goward 1996). Other lichens are similar; for instance, Clavich (2003) speculates that the epiphytic species *Bryoria pseudocapillaris* and *B. spiratifera* may be dependent on oceanic salts because they are only found in locations in close proximity to the coastline in the Pacific Northwest.

The climate in the region of Vancouver Island in which the four locations containing *Hypogymnia heterophylla* were found can be characterized as oceanic. The Sheringham Point weather station, located approximately 8 km west of the Sooke area, reported a mean annual temperature of 10.4°C, mean December minimum temperature of 3.7°C, extreme minimum temperature of -3.5°C, mean maximum August temperature is 17.9°C and extreme maximum temperature is 29.8 °C (1996–2004) (Environment Canada 2006). It should be noted that during the 2021 'heat dome' maximum temperatures exceeding 29.8 °C most likely occurred along the southern shoreline of Vancouver Island.

Though actual data are lacking, the microsites colonized by *Hypogymnia heterophylla* are expected to have a distinct thermal profile due to their locations along the outer coast and are subject to a strong moderating influence from the adjacent ocean. In addition, Coxson *et al.* (1984) demonstrated that thallus temperatures in *Hypogymnia* (specifically *H. physodes* (L.) Nyl.) exposed to full sunlight are much higher than adjacent air temperatures, notwithstanding strong convective wind cooling. Because *H. heterophylla* occurs primarily in rather exposed, well-illuminated sites, elevated temperatures must constitute an important part of its operating environment (Goward 1996).

Recovery Strategy for Seaside Bone in Canada *Hypogymnia heterophylla* (2017)

A treatise on conservation strategies for this species can be found at:

COSEWIC report for Seaside Bone - https://www.registrelep-sararegistry.gc.ca/virtual_sara/files/cosewic/sr%5Fseaside%5Fbone%5F0808%5F0%2Epdf

Seaside Bone on 2193 Otter Ridge Road

It is unlikely that Seaside Bone occurs at 2193 Otter Ridge Road, due to its distance from the ocean, which is more than two times (~225 metres) (Figure 6) the distance of 100 metres from the coast line that the species has been found and is expected to be found to meet its habitat requirements. As well, the main host species for Seaside Bone, which is shore pine, was not found on the subject property. Multiple terminal branches were



DV000088

assessed for this species, but the species was not seen (Photo 17 – Photo 20). Additional information can be found at: https://www.crd.bc.ca/docs/default-source/jdf-pdf/otter-point-otp/otter-point-sensitive-ecosystem-inventory.pdf?sfvrsn=11e289e9_0

- The site assessment revealed that based upon a review of the scientific literature, the extremely narrow habitat requirements required to support a population of Seaside Bone Lichen strongly favour our observation that this species is not expected to occur in the subject property.

Herbaceous Ecosystems

Herbaceous ecosystems are non-forested (less than 10% tree cover), generally with shallow soils and often with bedrock outcroppings. Outwash deposits left in rock crevices and depressions sheltered from prevailing winds give rise to dry nutrient-poor soils that support limited plant growth. Herbaceous ecosystems in the Otter Point study area are predominantly coastal headlands or rocky bluffs along the shoreline, vegetated fairly sparsely with grasses and herbs or sometimes low shrubs, and often dominated by numerous moss and lichen species.

Subclass definitions

The defining concept of this class (HB:hb) is an inland, non-forested ecosystem with less than 10% tree cover, generally with shallow soils and often with exposed bedrock; it has a mix of grasses and forbs which typically account for 20% cover or more, and lichens and mosses are prevalent. This subclass was not mapped in the study area but is included here for context. When these same characteristics are found at the coast, the subclass coastal herbaceous (HB:cs) is used.

SEI for 2193 Otter Ridge Road

The Herbaceous category is a true Sensitive Ecosystem category. The only example of this habitat category we observed was the bed rock outcrop at the entrance to the proposed daughter Lot (Photo 4 – Photo 7).

It has vegetation dominated by mosses, grasses and forbs, including the native forbs, licorice fern, heuchera, blue-eyed Mary and fool's onion. If the species at risk – slim-leaved onion – was to occur on this property it may occur here, although aspects of habitat are not appropriate.

- As stated, there will be no impact from the development on this ecosystem's plant community.
- These two bed rock outcrops shall be left undisturbed.

Mature Forests

Mature forests are usually conifer-dominated, typically older than 80 years in age, and can range from dry to moist. They have a more complex structure than young forests, with more differentiation between canopy layers and more coarse woody debris on the forest floor. Other SEIs (e.g. East Vancouver Island and Gulf Islands SEI, Sunshine Coast SEI) only mapped mature forests that were larger than 2.5 ha; however, since



DV000088

mature forests were uncommon in the study area all stands, regardless of size, were mapped.

Sensitivity and importance

Mature forests are not as fragile as the ecosystems described above, but are included in SEIs for the following reasons:

- They represent the future old-growth forests. There were no remnant old forests in Otter Point. The only way Otter Point can regain these important ecosystems is to protect the existing mature forests.
- The mature forests provide landscape connectivity with other natural areas. This connectivity allows for the movement and dispersal of many forest dwelling species.
- These older second-growth forests can act as buffers, minimizing disturbance to sensitive ecosystems that occur within or adjacent to the forest.
- Buffers provide a vegetated area that bears the brunt of edge effects such as windthrow, invasive species colonization and human disturbance factors, thereby sheltering wetlands, woodlands and sparsely vegetated rock outcrops that are often found adjacent to, or surrounded by, mature forest.
- The forest stand may also maintain the micro-climate conditions that may be critical to the adjacent wetland or riparian ecosystem.
- Mature forest removal typically has negative repercussions on sensitive ecosystems in the watershed, from increasing sediment in watercourses and negatively affecting fish habitat, to reducing precipitation infiltration and changing the hydrology of wetlands.

The Mature Forest Category starts at 80 years old - that is what is mapped in the Otter Point SEI. The Mature Forest Category is not considered a Sensitive Ecosystem. The 2011 *Otter Point Sensitive Ecosystem Inventory Report* categorizes these areas under "Other Important Ecosystems" noting they represent "future old growth". Other than a single mature tree whose top half had been broken off, no trees of this age category were observed on the subject property; a few mature aged trees were observed on the adjacent property.

Watercourses DPA

On the adjacent property to the south (2195 Otter Ridge Drive) there is an isolated, man-made wetland / pond was assessed to inventory its habitat and to verify whether it was connected by a surface channel to fisheries habitat downstream (Photo 10 – Photo 12). The feature has a shallow depressional pond surrounded by sedges and rushes. There is a young red alder canopy that surrounds the feature, providing shade and organic leaf litter. The pond may be a breeding and rearing habitat for amphibians during the spring and summer months. However, it is not known if this wetland / pond dries up during the summer months, nor what temperatures the water could reach if the pond retains surface water during the summer months.

An assessment of discharge channels leading from the wetland / pond was made (Photo 14 and Photo 15) and **no surface channels (i.e., streams) were observed** – the feature is isolated. Therefore, the feature is not subject to the RAPR nor to the Federal *Fisheries*



DV000088

Act. Given that the feature is man-made the *Water Sustainability Act (WSA)* does not apply (*i.e.*, it is not a natural watercourse).

The Otter Point OCP (Bylaw No. 3819, September, 2014) defines a 'watercourse' as:

- WATERCOURSE means a permanent or non-permanent (containing water at least six months of the year) source of water supply that is natural or man-made, including a pond, lake, river, creek, brook, ditch, spring or wetland that is integral to a stream, with well-defined banks and a bed of 0.6 m or more below the surrounding land serving to give direction to or containing a current of water but **does not apply to a man-made pond that does not connect to a stream;**
- The aquatic man-made feature on 2195 Otter Ridge Drive is not subject to the Otter Point OCP.

There was a second wetland / pond identified on 8354 West Coast Road, lying to the west of the subject property (Photo 13). It was not determined if this wetland / pond is connected to downstream fisheries habitat; however, it appears to lie more than 30 m from any proposed development on the subject property. If the RAPR applies to this wetland / pond the SPLA would be 15 m to the east, such that the SPLA would not extend onto the subject property.

Neither the wetland / pond on 8354 West Coast Road or on 2195 Otter Ridge Drive are mapped (Figure 10 and Figure 11) in the Otter Point OCP Bylaw No. 3819 Map 5c: *Watercourse and Wetlands Development Permit Areas*. The 2011 Otter Point Sensitive Ecosystem Inventory Report acknowledged that small natural and man-made wetland / ponds, often isolated and unconnected to watercourses have not been mapped and, therefore, are not identified on common reference documents.

Recommendations to Conserve Sensitive Ecosystem Habitats

Based upon the ecological characteristics observed on the subject property, the following land use BMPs shall guide proposed development on the daughter Lot:

- The isolated wetland / pond lies entirely on the 2195 Otter Ridge Drive property.
- This isolated wetland / pond is not subject to the *WSA*, the Federal *Fisheries Act*, the RAPR, or to the Otter Point OCP.
- The proposed driveway and residential dwelling on the daughter lot shall be at least 5 m from the High Water Mark of the wetland / pond or the side yard setback width, whichever is greater, unless an alternative riparian setback is approved by a QEP.
- The proposed pan handle driveway and any building construction shall not disturb the soils or roots of the plant community within the riparian setback.
- Trees removed from the panhandle to facilitate an access driveway shall not result in disturbance to vegetation within the riparian setback unless approved by an Arborist and a QEP. Damaged or killed trees and/or shrubs within the driveway access shall be replaced based upon a replanting plan provided by the QEP.
- Runoff from the driveway and dwelling shall be designed to infiltrate and be treated within the native soils, acknowledging that the natural drainage pattern from the daughter Lot is south to the wetland / pond on 2195 Otter Ridge Drive.



DV000088

- The proposed development on the daughter Lot will not have any effect on the wetland / pond on the 8354 West Coast Road property, given the forest stand that lies between the wetland / pond and proposed development.
- The wetland / pond on 8354 West Coast Road lies entirely on the adjacent property to the west of the subject property; the wetland's HWM was field estimated to be ~30 m from the west property boundary of the parent lot (Figure 2) and from any proposed development on the daughter Lot. If subject to the RAPR, the SPEA for this wetland / pond would be 15 m to east, the SPEA lying entirely on the 8354 West Coast Road property.



DV000088

Figures



Figure 1. CRD NAA map showing the subject property (yellow arrow) relative to the exposed marine shoreline (Figure 4).

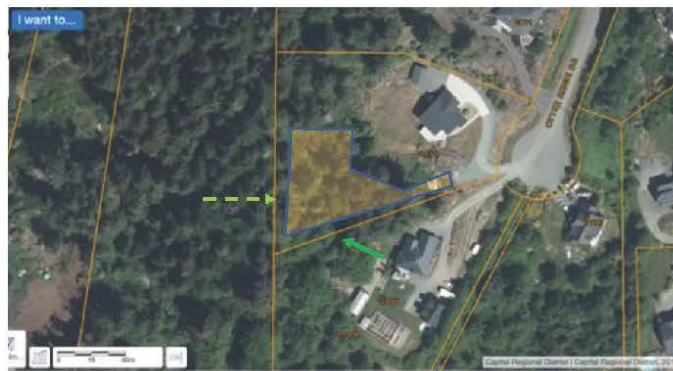


Figure 2. Close up of Figure 1 showing the location of the isolated, man made wetland (green arrow), on 2195 Otter Ridge Drive and the location of the aquatic feature on 8354 West Coast Road (dashed green arrow = 30 m). The trees lying within the orange polygon consist of a mixed deciduous / coniferous stand, <40 years of age, with the building envelope (Figure 3) consisting of a shrub dominated plant community, with a few young conifers and red alders (Photo 22 – Photo 24).



DV000088

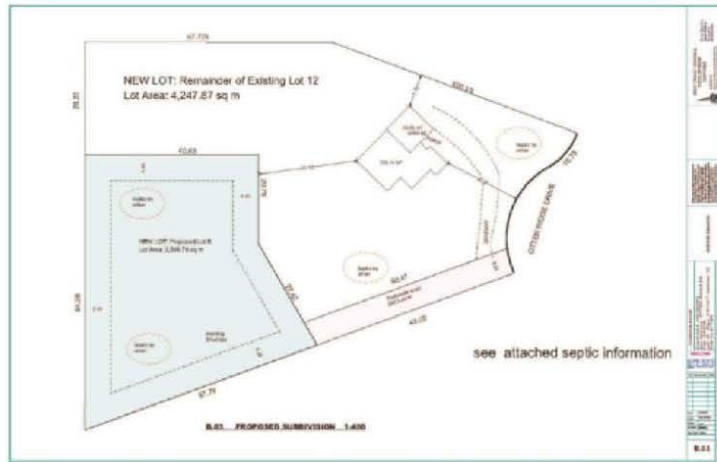


Figure 3. Site Plan showing the location of the proposed subdivision Lots, location of the building area, septic disposal fields (approved by Island Health), and the panhandle access driveway.



DV000088

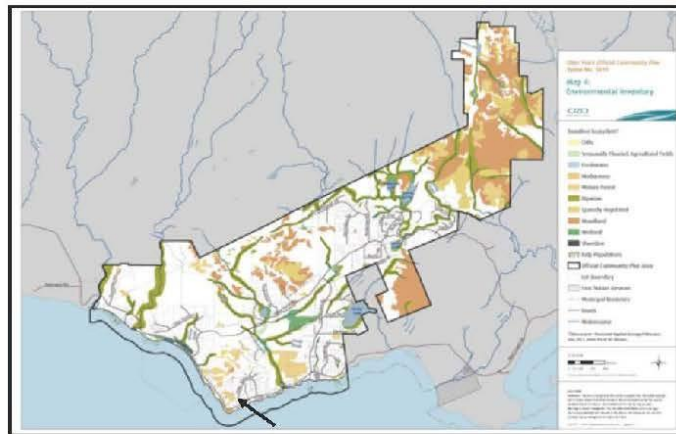


Figure 4. Extract Map showing the Sensitive Ecosystem Inventory associated with the Otter Ridge Drive property and the latter's proximity to the marine shoreline (black arrow). Otter Point Sensitive Ecosystem Inventory. Schaefer, C., Page, N., and Harrison, D. 2011. Report Prepared for the CRD. 32 pg. (Appendix – Sensitive Ecosystems Inventory of Otter Point).



DV000088

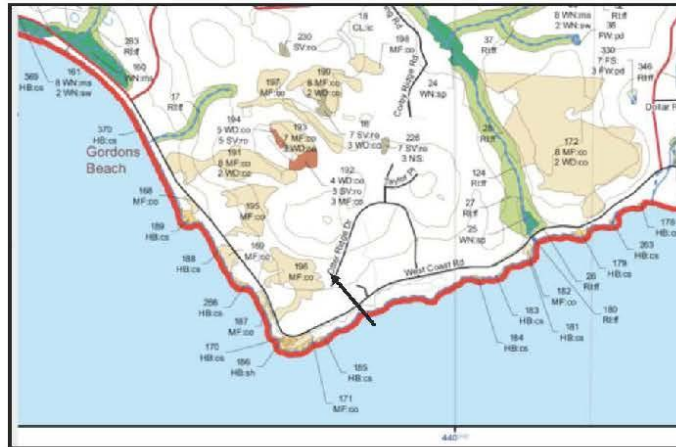


Figure 5. Close-up of the Map in Figure 4. The subject property is shown by the black arrow.



DV000088

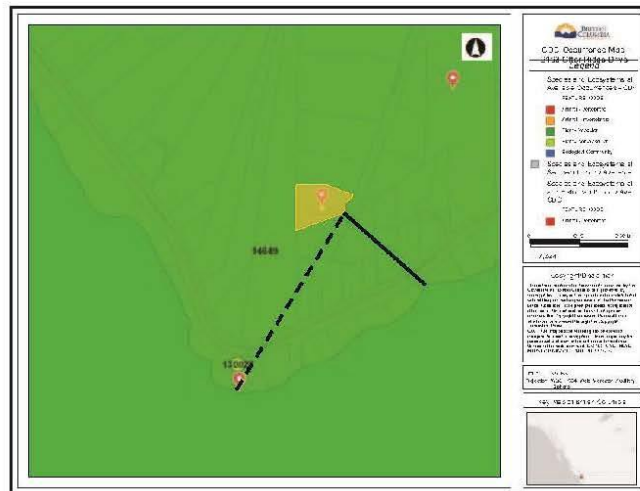


Figure 6. CDC Conservation Data Centre Map of reported sensitive species that historically occurred within the area surrounding the subject property (orange polygon). 130028 = Seaside Bone Lichen (*Hypogymnia heterophylla*) (Figure 8); 14649 = Slimleaf Onion (*Allium amplexans*) (Figure 9). Solid black line = ~220 m; dashed black line = ~425 m. The apex of the two black lines is the location of the Herbaceous ecosystem located on the bed rock outcrop.



DV000088



Figure 7. CRD Map of the Mature Forest. No trees within the subject property were >80 years of age, the age cohort which defines mature Forest. The blue boundary line indicates the parent property (Figure 3).



DV000088

BC Conservation Data Centre: Species Occurrence Report

Shape ID: 14649

Scientific Name: *Allium amplicornis*

English Name: **slimleaf onion**

Identifiers

Occurrence ID: 787

Shape ID: 14649

Taxonomic Class: macrophyte

Element Group: vascular plant

Status

Provincial Rank: S1

BCList: Blue

Global Rank: G4

COSEWIC: **C4**

SARA Schedule: **1**

Locators

Survey Sheet: OTTER FOUNTAIN

Directions:

Biogeoclimatic Zone:

Ecoregion: L.V.1C

Area Description

General Description:

located in grassy openings on creosote bush site.

Vegetation Zone: Lowland

Min. Elevation (m): 6096

Habitat: PFR.NL: Coastal Bluffs

Click on the image below to view an expanded illustration for this species.

Illustration Source: The Illustrated Flora of British Columbia

General:
Perennial bulb from an egg-shaped to nearly globe shaped, scaly bulb. The outer scales somewhat to gray with a strong scarious network; the inner scales red or white; flowering stems erect, 10-40 cm tall; slender, round in cross-section; anthers.

Leaves:
Basal leaves 2 to 4, withering early; linear, flattened to cylindrical, shorter than the flowering stems, very slender, smooth; the margins entire; panicle leaves lacking.

Flowers:
Inflorescence a compact, often head-like, terminal umbel of several to many, stalked flowers; above 2 to 3 membranous, egg-shaped bracts; the stalks 0.5 to 1.0 cm long; flowers white to pink; saucer-shaped, or 8-lobed flowers; the lobes 0.8 cm long; anthers with pointed tips, spreading, in fruit becoming papery and holding over the ovary; stamens 8, nearly as long as the tepals; pistil 1, 3-chambered.

Notes:
Caulicles, more or less egg-shaped, 3-lobed, with 3 low, rounded crests; seeds 6 or fewer, black.

Source: The Illustrated Flora of British Columbia

Max. Elevation (m):

Figure 9. BC Conservation Data Centre information sheet for the species of Slimleaf onion. Inserts show plant in the wild and botanical taxonomic attributes.



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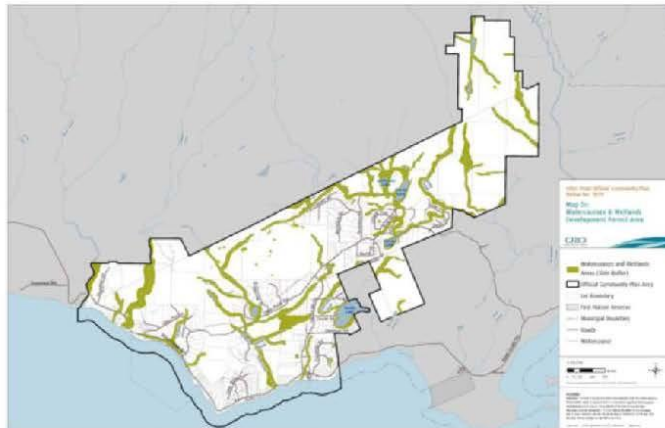


Figure 10. Otter Point OCP Plan identifying watercourses and wetlands mapped and subject to Aquatic Habitat Regulations.



Figure 11. Close-up of Figure 10 for the subject property. Note that neither streams nor wetlands are identified as being associated with the subject property, nor adjacent properties.



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Photographs



Photo 1. Looking south at the bed rock mounds adjacent to the proposed daughter Lot driveway (dashed yellow line). The large bed rock outcrop on the left would remain as part of the parent Lot. The small outcrop on the right would remain undisturbed as part of the daughter Lot.



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Photo 2. Looking southeast at the proposed daughter Lot driveway (dashed yellow line). The large bed rock outcrop on the left would remain as part of the parent Lot.



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Photo 3. Looking across the proposed driveway access. Note the young (<50 years old) conifer stand through which the panhandle driveway would be constructed.



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Photo 4. The large bed rock outcrop has a thin soil layer in which an herb, fern, and forb plant community exists. This outcrop is south facing and subject to extreme dry conditions during the late spring to early autumn months.



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Photo 5. Grasses are found at the base of the outcrop. Note the mosses, forbs, ferns, and lichens.



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Photo 6. The small bed rock outcrop at the edge of the parent Lot property boundary has a thin, dry, soil layer in which mosses, lichens, grasses are growing. There is a single, drought stressed conifer growing at the peak of the outcrop, with a conifer trunk that was topped and left as a wildlife tree. The Scotch broom plant shall be removed.



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Photo 7. Looking across the proposed panhandle daughter Lot access driveway. A narrow (5 m wide) road can be constructed that would leave the two bed rock outcrops undisturbed. The conservation of the bed rock outcrop plant communities would be a prescribed environmental management objective.



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Photo 8. Looking along the parent property boundary property line. The conifer stand delineates the subject property from the adjacent property (Figure 2).



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Photo 9. The young conifer stand associated with the proposed panhandle driveway access road (Figure 3) has a salal understory.



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Photo 10. Looking southwest across the adjacent property (2195 Otter Ridge Drive) at the man made, isolated pond/wetland (Figure 2).



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Photo 11. Looking southwest across the dense sedge community that surrounds the pond. Note the young red alder in the background (2195 Otter Ridge Drive).



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Photo 12. Looking across the wetland / pond landscape feature towards the adjacent dwellings (Figure 2). The property boundary lies within the red alder copse of trees on the left hand side of this image. The feature does not lie on the subject property (2195 Otter Ridge Drive).



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Photo 13. There is a small pond with a dense sedge community surrounding the pond on the adjacent property to the west (8354 West Coast Road). This pond and its riparian plant community is not connected to the isolated wetland pond on 2195 Otter Ridge Drive.



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Photo 14. Looking southwest across the west edge of 2195 Otter Ridge Drive. There are no discharge channels emanating from the wetland / pond on this property.



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Photo 15. Looking south across the rear 2195 Otter Ridge Drive. There are no discharge channels emanating from the wetland / pond on 2195 Otter Ridge Drive.



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Photo 16. Mature spruce on 8354 West Coast Road. This was one of a few remnant mature trees in the area.



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Photo 17. Potential habitat for Seaside Bone Lichen was checked for the presence of this species. None was observed.



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Photo 18. Potential habitat for Seaside Bone Lichen was checked for the presence of this species. None was observed. No Shore Pines were observed on the subject property, nor on adjacent properties.



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Photo 19. Potential habitat for Seaside Bone Lichen was checked for the presence of this species. None was observed.



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Photo 20. Potential habitat for Seaside Bone Lichen was checked for the presence of this species. None was observed.



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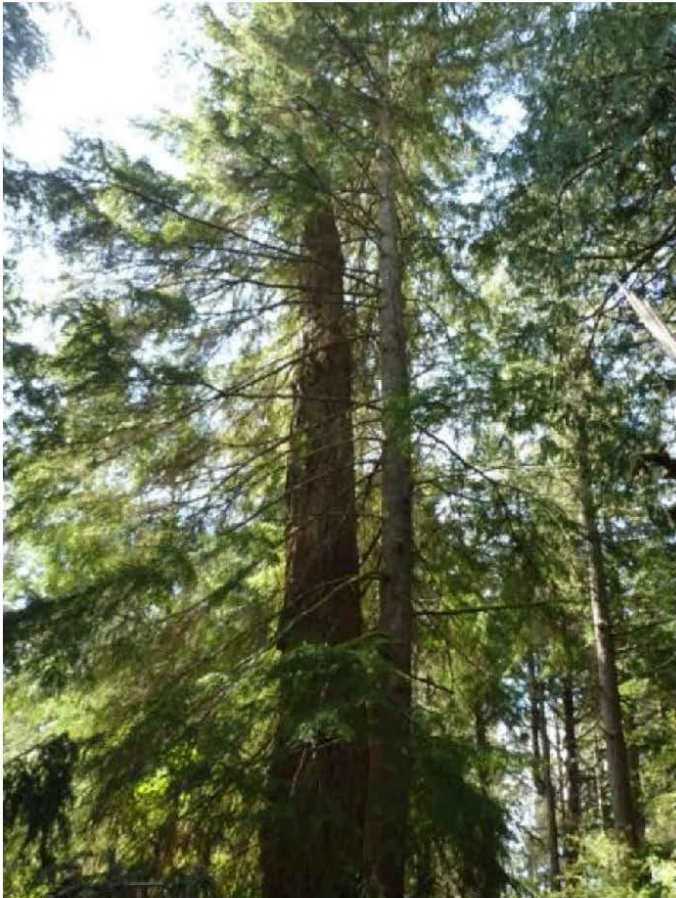


Photo 21. Mature conifer that has been topped during severe winter wind storms. This was one of a few remnant mature trees in the area.



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Photo 22. Looking east across the rear portion of the proposed daughter lot showing the shrub understory with a few immature conifers.



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Photo 23. Looking southeast across the rear portion of the proposed daughter lot showing the shrub understory with a few immature conifers and red alders.



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Photo 24. Looking northeast across the rear portion of the proposed daughter lot showing the shrub understory with a few immature conifers and red alders.



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Appendix A – Watercourses & Sensitive Ecosystems

Schedule "A" of Capital Regional District Bylaw No. 3819

Otter Point Official Community Plan

- c. registering restrictive covenant(s) or conservation covenant(s) securing the measures prescribed in the Qualified Environmental Professional assessment report;
5. Developers are encouraged to exceed the minimum standards set out in the RAR.
6. Development Permits may include requirements for environmental monitoring where riparian areas must be protected, remediation must be completed or where construction requires environmental controls. Environmental monitoring reports, when required, must be prepared by the Qualified Environmental Professional.

Additional Guidelines Applicable to Non-RAR Lakes, Wetlands, and Other Watercourses:

1. Before development is permitted in a "Watercourses DPA" not subject to a RAR, the applicant may be required to supply an assessment, prepared by a Qualified Environmental Professional. The report must inventory the site to identify existing environmentally sensitive feature(s) and assess the environmental impact of the proposed development. The report must provide recommendations for construction, mitigation, and protection of environmentally sensitive features and sensitive habitat, to ensure that the impacts of development are minimized and to preserve and/or restore the natural ecosystem components and processes which are important to maintain ecosystem function and health.
2. Compliance with any or all conditions recommended in the report prepared by the Qualified Environmental Professional may be required in a development permit.

6.6 Development Permit Area No. 4: Sensitive Ecosystems Areas

6.6.1 Designation

That part of the Otter Point area within the boundaries of areas marked "Cliffs", "Seasonally Flooded Agricultural Fields", "Herbaceous", "Mature Forest", "Sparsely Vegetated" and "Woodland" on Map 5d, which is attached to and forms a part of this bylaw, is designated as a Development Permit Area, the "Sensitive Ecosystems DPA", under Section 919.1(1)(a) of the LGA for the protection of the natural environment, its ecosystems and biological diversity.

The "Sensitive Ecosystems DPA" boundaries include Seasonally Flooded Agricultural Fields and the following ecosystems identified in the Sensitive Ecosystem Inventory prepared in July 2011 by Raincoast Applied Ecology/HB Lanarc: Herbaceous, Mature Forest, Sparsely Vegetated and Woodland.

6.6.2 Justification

These are important vegetation communities that have been identified by the Sensitive Ecosystem Inventory. Maintaining this vegetation is important to the protection of habitat and the natural environmental character of Otter Point. Land clearing, tree cutting, construction of buildings or roads, or other site disturbance in these areas could harm their functions and value to the community.

6.6.3 Objective

The primary objective of this Development Permit Area designation is to minimize the impact of development on the natural environment. The natural environment provides essential habitat and corridors for plants, fish, birds and other organisms. Furthermore, as concerns over climate change grow, it should be recognized that functioning ecosystems are more efficient at consuming carbon dioxide as well as carbon storage.

Sensitive ecosystems support a number of provincially Red and Blue-listed species (extirpated, endangered, threatened, and vulnerable) and federally listed species at risk. This Development Permit Area is intended to protect habitat for rare and endangered species of native vegetation or wildlife and to provide wildlife corridors and secondary habitat within Otter Point.

6.6.4 Guidelines

Development Permits issued in "Sensitive Ecosystems DPA" will be in accordance with the following:

1. No development, subdivision or sewage disposal system will be permitted in the "Sensitive Ecosystems DPA", except as allowed by a Development Permit or subject to the general exemptions as outlined in Section 6.2 of this Plan.

50



DV000088

Schedule "A" of Capital Regional District Bylaw No. 3819
Otter Point Official Community Plan

2. Avoid intrusion of development into Development Permit Areas and to 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.
3. Development or subdivision of land should be designed to comply with the policies in Section 5.3.2 of the Plan.
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 recommendations 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.
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 may be required.
6. Disturbance to existing vegetation that is not directly affected by the footprint of building, ancillary uses, and drive-ways must be minimized. Any disturbed areas shall be rehabilitated with appropriate landscaping and habitat compensation measures. Loss of natural habitat shall be minimized.
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.
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.
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.
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.
11. Planting of invasive species adjacent to or within designated "Sensitive Ecosystems DPA" will not be permitted.
12. 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 under-storey plants will be minimized.
13. 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.
14. 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.
15. Development should generally conform to *Develop with Care 2012: Environmental Guidelines for Urban and Rural Land Development in British Columbia*.

51



DV000088

Schedule "A" of Capital Regional District Bylaw No. 3819

Otter Point Official Community Plan

16. Development may be required to incorporate environmentally sound building practices where appropriate, such as natural drainage, or use of permeable paving materials.
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.
18. Where the Qualified Environmental Professional or Qualified Professional recommends re-vegetation or remediation works, a landscaping plan and security deposit may be required.

6.7 Development Permit Area No. 5: Commercial and Industrial Development Areas

6.7.1 Designation

That part of the Otter Point area marked "Commercial DPA" and "Industrial DPA" shown on Map 5e, which is attached to and forms a part of this bylaw, is designated as a Development Permit Area, the "Commercial and Industrial DPA", under Section 919.1(1)(f) of the LGA for the form and character of commercial and industrial development.

The "Commercial and Industrial DPA" boundaries include lands zoned commercial or industrial under the Land Use Bylaw.

6.7.2 Justification

The various commercial and industrial areas in Otter Point merit designation as Development Permit Areas for the form and character of commercial and industrial development due to their unique location and their relationship to surrounding land uses.

6.7.3 Objective

To encourage a building design theme and form that is complementary to and respectful, as possible, of the natural setting and the rural character of Otter Point.

6.7.4 Guidelines

Development Permits issued in "Commercial and Industrial DPA" will be in accordance with the following:

1. No development, building, subdivision or sewage disposal system will be permitted in the Commercial and Industrial Development Permit Area, as specified in the Justification above, except as allowed by a Development Permit or subject to the general exemptions as outlined in Section 6.2 of this Plan.
2. Design buildings to take advantage of natural contours and features of the landscape so that buildings and structures fit into the natural surroundings.
3. Design buildings in a form which can make best use of the natural setting, which allows for retention of natural vegetative cover and which reinforces existing aesthetic and natural advantages of the area.
4. Retain existing second-growth forest and native understorey plants in areas where there are no buildings, structures, parking areas or other constructed features.
5. Minimize outdoor storage and screen outdoor storage and loading/unloading facilities from neighbouring properties through the retention of trees and native understorey plants, or through the planting of native or complementary species, or by using fencing.
6. Screen parking areas to the greatest extent possible with existing and new landscaping, as described in subparagraph (5).
7. Install outdoor lighting which is of low intensity and pedestrian-oriented or which is directed down and away from surrounding residential areas so as to reduce and minimize glare into the environment.

52



DV000088

Appendix B – Development Permit Areas

Schedule "A" of Capital Regional District Bylaw No. 3819
Otter Point Official Community Plan

PART 6.0 DEVELOPMENT PERMIT AREAS

Development Permits are a planning tool for sites, buildings and structures that warrant special protection or development control. Unless authority is delegated, Development Permits must be approved by the CRD Board and may require some sort of security to ensure that the conditions in the Development Permit have been achieved. The guiding principle for the use of Development Permits is found within Section 919.1 of the LGA. Development Permit Areas can be designated for purposes such as, but not limited to the following:

- to protect the natural environment, its ecosystems and biological diversity;
- to protect development from hazardous conditions;
- to establish the form and character of commercial, industrial or multi-family residential development; or
- to promote energy conservation, water conservation and the reduction of Green House Gas emissions.

With respect to areas designated as Development Permit Areas, the OCP must:

- describe the conditions or objectives that justify the designation; and
- specify guidelines respecting the manner by which the special conditions or objectives will be addressed.

6.1 General Development Permit Policies

1. Where a development site lies within more than one Development Permit Area, all of the applicable permit guidelines must be met.
2. In accordance with the LGA, a Development Permit must be obtained prior to subdivision, construction, alteration of land, soil deposit or removal, or any other development or activity that would impact on any of the elements protected by a Development Permit.
3. Any additional information, including the preparation of covenants, requested by the CRD as outlined in the following sections will be provided at the applicant's expense.
4. A Development Permit is not required where it can be demonstrated that the proposed development is located outside the designated Development Permit Area. A Qualified Professional or Qualified Environmental Professional must submit a report or provide certification acceptable to the CRD that the proposed development is not within the designated Development Permit Area.

6.2 General Exemptions for a Development Permit

No Development Permit will be required for the following:

1. internal alterations to a building;
2. boundary adjustments between parcels when no new parcels are created and the boundary is not located within 30 metres of a watercourse or wetland;
3. external alterations, including adding a second storey, that are entirely within the building footprint;
4. landscaping, or constructing fences and not located within 30 metres of a stream or wetland;
5. structures which are not greater in area than 10.0 square metres (107 square feet) and are not located within 30 metres of a watercourse or wetland;
6. walkways, ramps and/or stairways, at-grade patios and retaining walls not requiring a building permit and not located within 30 metres of a watercourse or wetland;
7. removal of hazard trees;
8. emergency actions for flood or erosion protection;

43



DV000088

Schedule "A" of Capital Regional District Bylaw No. 3819

Otter Point Official Community Plan

9. emergency works to repair or replace public utilities or infrastructure;
10. removal of invasive non-native vegetation from within 30 metres of a watercourse or wetland;
11. in-stream habitat development or restoration that complies with provincial and federal legislation and requirements;
12. agricultural activities and developments on farms on ALR lands.

References in this section to a distance from a watercourse or wetland shall be deemed to be references to a distance from the natural boundary of the watercourse.

6.3 Development Permit Area No. 1: Steep Slopes

6.3.1 Designation

That part of the Otter Point area shown as "Steep Slopes" on Map 5a, which is attached to and forms a part of this bylaw, is designated as a Development Permit Area, the "Steep Slopes DPA", under Section 919.1(1)(b) of the LGA, for protection of development from hazardous conditions.

The "Steep Slopes DPA" boundaries include areas having slopes exceeding 30% or 16.7 degrees in slope over a minimum 10 metre run. Notwithstanding the areas identified on Map 5a, the actual Development Permit Area will in every case be verified.

6.3.2 Justification

The topography of the area, as well as the slope gradation and thin soil cover, renders the area highly susceptible to erosion hazard. Careful control of development or other alteration of these slopes is needed to reduce the risk to life and property, to prevent erosion and potential risks to down-slope properties, and to prevent destabilization of slopes. Land clearing, road construction, changes in slope profiles, construction of buildings, structures, improvements or roads or other site disturbance in these areas could increase risk to life and property and harm the environmental values of the slopes and are examples of development to be controlled.

6.3.3 Objective

To regulate development in the area with a view to protecting the integrity of the slopes and reducing the risk of injury to persons or damage to property resulting from erosion, landslide and slope slippage.

6.3.4 Guidelines

Development Permits issued in "Steep Slopes DPA" will be in accordance with the following:

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.
2. Avoid intrusion of development into Development Permit Areas and to 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 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 "Steep Slopes DPA".
3. Development or subdivision of land should be designed to comply with the policies in Section 5.4 of the Plan.



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Appendix C
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