

JUAN DE FUCA LAND USE COMMITTEE

Notice of Meeting on Tuesday, **January 15, 2019 at 7 p.m.**

Juan de Fuca Local Area Services Building, #3 – 7450 Butler Road, Otter Point, BC

AGENDA

1. Election of Vice Chair
2. Approval of Agenda
3. Approval of the Supplementary Agenda
4. Adoption of Minutes of December 17, 2018
5. Chair's Report
6. Planner's Report
7. Development Permit with Variance Application
 - a) DV000063 - Lot 2, Section 43, Highland District, Plan 14620 (6890 Mark Lane)
8. Soil Deposit Permit Application
 - a) SP000092 - Section 42, Otter District except that part lying 50 feet on each side of the centre line of the right of way shown on Plan 121 RW and except that part in Plan EPP63580 (Clark Road)
9. Temporary Use Permit Application
 - a) TP000010 - Lot 4, Section 47, Otter District, Plan 23769 (7822 Tugwell Road)
10. Adjournment



Making a difference...together

**Minutes of a Meeting of the Juan de Fuca Land Use Committee
Held Tuesday, December 17, 2018, at the Juan de Fuca Local Area Services Building
3 – 7450 Butler Road, Otter Point, BC**

PRESENT: Mike Hicks (Chair), Stan Jensen, Roy McIntyre, Ron Ramsay, Dale Risvold
Sandy Sinclair, Art Wynans
Staff: Iain Lawrence, Manager, Local Area Planning; Emma Taylor, Planner;
Wendy Miller, Recorder
PUBLIC: Approximately 29

The meeting was called to order at 7:00 p.m.

1. Approval of the Agenda

MOVED by Roy McIntyre, **SECONDED** by Art Wynans that the agenda be approved.

CARRIED

2. Approval of the Supplementary Agenda

MOVED by Art Wynans, **SECONDED** by Ron Ramsay that the supplementary agenda be approved.

CARRIED

3. Adoption of Minutes from the Meeting of November 20, 2018

MOVED by Sandy Sinclair, **SECONDED** by Art Wynans that the minutes from the meeting of November 20, 2018, be adopted.

CARRIED

4. Chair's Report

The Chair thanked attendees for coming to the meeting.

5. Planner's Report

- a) East Sooke Advisory Planning Commission
Date: Wednesday, January 9, 2019
Time: 7 pm
Place: East Sooke Community Hall
- b) Otter Point Advisory Planning Commission
Date: Tuesday, January 22, 2019
Time: 7 pm
Location: Juan de Fuca Local Area Services Building
- c) Public Hearing – Bylaw No. 4259 (9330 Invermuir Road)
Date: January 23, 2019
Time: 7 pm
Location: Shirley Community Hall

- d) Public Hearing – Bylaw Nos. 4246 (6400 Block East Sooke Road), 4257 (5480, 5488 & 5494 Mt. Matheson Road) and 4260 (1021 Parkheights)
Date: January 30, 2019
Time: 7 pm
Location: East Sooke Community Hall

6. Development Permit with Variance Application

a) DV000062 - Lot 10, District Lot 136, Malahat District, Plan 30892 (4133 Rocky Mountain Road)

Iain Lawrence spoke to the staff report and the request for a development permit with variance to reduce the statutory requirement that the minimum frontage on the highway must be 10% of the perimeter of the lot, for the purpose of permitting a two-lot subdivision in the Greenbelt 2 (Gb2) zone.

The Chair confirmed that the applicant was not present.

Iain Lawrence responded to questions from the LUC advising that:

- Section 512 (1) of the *Local Government Act (LGA)* requires that the minimum frontage on the highway must be 10% of the perimeter of the lot
- Section 512 (2) of the *LGA* permits a local government to exempt a parcel from the minimum frontage requirement
- the Gb2 zone allows that parcels that existed prior to adoption of the land use bylaw that are in excess of 2 ha may be subdivided once into two parcels provided that no parcel is less than 1 ha
- the subject property fronts onto a cul-de-sac
- proposed Lot A and proposed Lot B are long and narrow
- proposed Lot B does not meet the frontage requirement

MOVED by Dale Risvold, **SECONDED** by Sandy Sinclair that the Land Use Committee recommends to the CRD Board:

That Development Permit with Variance DV000062 to authorize the two-lot subdivision of Lot 10, District Lot 136, Malahat District, Plan 30892, and to exempt proposed Lot B from the statutory frontage requirement by reducing the frontage from 67.6 m (10%) to 23.3 m (~3.5%), be approved.

CARRIED

7. Soil Deposit Permit Application

a) SP000092 - Section 42, Otter District except that part lying 50 feet on each side of the centre line of the right of way shown on Plan 121 RW and except that part in Plan EPP63580 (Clark Road)

Iain Lawrence spoke to the staff report and the request for a soil permit to deposit up to 20,000 cubic metres (m³) of soil on the subject property to complete creek restoration and for road construction associated with a proposed subdivision.

Iain Lawrence clarified that the subject property was not Private Managed Forests Land (PMFL) when the previous owner logged and cleared the subject property. A development permit (DP-06-14) was issued for forestry activity on the subject property.

Iain Lawrence advised that the applicant has submitted a professional report and site remediation plan and that A Permit to Construct, Use, and Maintain Access to a Provincial

Public Highway for road access to the property via Aythree Road to Clark Road has been approved by the Ministry of Transportation and Infrastructure (MoTI).

Iain Lawrence outlined the conditions of the permit and directed attention to the supplementary submissions received from Paul Clarkston, Annette Moyer and James Isram, Jo Phillis and Hillary and Jason Childs which state concern with the application.

The Chair confirmed that the representative for the application was present.

The representative for the application responded to questions from the LUC advising that:

- fill has been certified clean for residential, park land and riparian use
- removal and deposit will be monitored by WSP Canada Ltd.
- fill origin site is in a residential development off of West Shore Parkway
- the applicant supports working with the community, including limiting the hours of work to 8:30 a.m. – 3:00 p.m. and working around Easter break
- four trucks are anticipated each working hour
- permission to access the subject property is requested as the subject property is an active work site

The biologist for the application stated:

- trees have been felled and the creek channel has been leveled which impacts shade protection and filtration
- area has been taken over by weeds
- fill is required to reinstate creek habitat and support tributaries that support fish habitat
- soil work needs to be done between June 15 and September 15 to meet the fisheries window

Iain Lawrence confirmed that the soil would be deposited at a staging area, outside of the Steep Slope and Sensitive Ecosystems Development Permit Areas, prior to June 15 and that soil would then be moved to the restoration site as needed. It was advised that the applicant wishes to deposit the soil before the start of the fisheries window.

The representative for the application responded to questions from the public and the LUC advising that:

- soil is required for riparian restoration and for road development
- soil would be required for tree planting
- approximately 12,000 m³ of soil is required for riparian works
- the initial deposit area has been flatted to create a staging area for further soil deposits
- tarping and sentiment fencing will be used to armour the soil deposit
- improvements will increase the overall aesthetics of the subject property

Members of the public stated:

- support for the LUC visiting the site and access along Otter Point Place and Clark Road
- support for a feasibility study for the proposed subdivision
- general frustration related to ongoing clearing up to the water line of DeMamiel Creek, Muir Creek and King Creek and their tributaries
- concern regarding the feasibility of re-establishing the riparian area
- concern that deposited soil will run into the riparian area
- subject property is re-naturalizing

MOVED by Director Hicks, **SECONDED** by Art Wynans that the Land Use Committee consider application SP000092 at its next meeting to allow for site visits to the origin site and the subject property.

CARRIED

8. Proposed Bylaws

a) **Bylaw No. 4271, “Juan de Fuca Land Use Committee Bylaw No. 1, 2004, Amendment Bylaw No. 8, 2018”**

Iain Lawrence spoke to the staff report and the proposed amendment to Bylaw No. 3166 to update the Juan de Fuca Land Use Committee’s authority to make recommendations to the Board on land use matters including retail cannabis and liquor licences, conversion of previously occupied buildings to strata, radio-communication and broadcasting towers, and applications pertaining to land in the Agricultural Land Reserve.

MOVED by Roy McIntyre, **SECONDED** by Stan Jensen that the Land Use Committee recommends to the CRD Board:

- a) That Bylaw No. 4271, "Juan de Fuca Land Use Committee Bylaw No. 1, 2004, Amendment Bylaw No. 8, 2018", be introduced and read a first and second time;
- b) That Bylaw No. 4271 be read a third time and adopted.

b) **Cannabis Bylaw, Bylaw No. 4278, “Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 141, 2018”**

Emma Taylor spoke to the staff report and the proposed amendment to Bylaw No. 2040 to update definitions and permitted uses in the Agricultural (AG) zone to reflect the current legislative framework for non-medical cannabis.

Emma Taylor outlined the federal licence categories for cannabis growing, production, testing, research and sales for medical purposes. It was confirmed that the *Agricultural Land Reserve (ALR) Regulation* was recently amended to define the lawful production of cannabis as a farm use for the purposes of the *Agricultural Land Commission (ALC) Act*. Cannabis can now be cultivated outdoors or in specified structures. Local government bylaws may not prohibit the lawful production of cannabis in the ALR.

Emma Taylor directed attention to the supplementary agenda that requests an amendment to proposed Bylaw No. 4278 to clarify ancillary production activities included in the proposed definition for Cannabis Production. Staff also request that the referral list for Bylaw No. 4278 be amended to strike MFLNRORD – Archaeology Branch and replace with the Agriculture Land Commission.

Emma Taylor advised that:

- 18 properties in the Sooke Business Park are currently zoned to permit the production of medical marijuana
- there are currently 6 rezoning applications to permit cannabis production in the Juan de Fuca
- separate amendments to the Land Use Bylaw and the Development Procedures Bylaw will be presented to the LUC to address the referral of retail licence applications from the Province
- 2 retail licence applications have been received

Staff confirmed that it has been requested that proposed Bylaw No. 4278 be considered by the Otter Point Advisory Planning Commission (APC) as there are existing and pending applications for cannabis in Otter Point.

Staff responded to questions from the LUC advising that:

- retail licence applications will be considered by the LUC and by the local community
- the ALC requires cannabis grown indoors to be grown on a dirt floor unless the structure predates the amendment to the *ALR Regulation*
- it is understood that properties in the ALR will be assessed and taxed as farm
- production of cannabis on land in the ALR will have to meet federal licensing requirements including security measures

A member of the public stated that outdoor growing falls under the *Hemp Act*. The level of THC produced by a plant determines if the plant is considered hemp. A licence is required for hemp production.

MOVED by Roy McIntyre, **SECONDED** by Art Wynans that staff be directed to refer proposed Bylaw No. 4278, “Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 141, 2018”, as amended, to the Otter Point Advisory Planning Commission, to appropriate CRD departments and the following external agencies for comment:

Agricultural Land Commission	Island Health	RCMP
BC Hydro	MFLNRORD – Groundwater Protection Branch	T’Sou-ke First Nation
District of Sooke	Ministry of Transportation and Infrastructure (MoTI)	

CARRIED

9. Rezoning Applications

a) RZ000255 - Strata Lots 13, 26 and 27, Section 16, Otter District, Plan VIS7096 (Butler Road)

Emma Taylor spoke to the staff report and the amended request to rezone three properties in the Sooke Business Park development from the General Industrial (M-2) zone to the Sooke Business Park Industrial (M-SBP) zone. The revised application would clarify that licensed *cannabis processing* is a general industrial use on properties that are not adjacent to institutional, rural or rural residential zoned land.

Emma Taylor confirmed that the Otter Point Advisory Planning APC considered the initial application on June 5, 2018, and outlined the concerns expressed by the APC at that time.

Emma Taylor responded to a question from the LUC advising that it is understood that products are shipped off site by way of courier.

MOVED by Dale Risvold, **SECONDED** by Sandy Sinclair:

- a) That comments submitted by the Otter Point Advisory Planning Commission, agencies and CRD departments through the referral of proposed Bylaw No. 4234, “Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 133, 2018”, be received.
- b) That staff be directed to refer revised proposed Bylaw No. 4234, “Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 133, 2018”, to the Otter Point Advisory Planning Commission, appropriate CRD departments and to the following agencies for comment:

BC Hydro	Island Health	RCMP
District of Sooke	Ministry of Transportation and Infrastructure (MoTI)	T'Sou-ke First Nation

CARRIED

b) RZ000257 - Strata Lot 10, Section 16, Otter District, Plan VIS7096 (Butler Road)

Emma Taylor spoke to the staff report and the request to rezone the subject property from the General Industrial (M-2) zone to the General Industrial – Medical Marihuana (M-2MM) zone in order to permit a licensed medical cannabis cultivation facility pursuant to Health Canada’s former *Access to Cannabis for Medical Purposes Regulations (ACMPR)*. It was advised that, while the owner has requested the M2-MM zone, staff recommend that the bylaw be revised prior to First Reading to apply Sooke Business Park Industrial (M-SBP) zone as the M-SBP has been amended to permit intensive agriculture – medical marihuana production and refine prohibited uses.

The LUC stated support for rezoning applications in the Sooke Business Park to permit medical marihuana not being referred to the Otter Point APC as there has been community support for such facilities being located in the business park.

Iain Lawrence confirmed that, at present, a property would have to be rezoned should a medical cannabis facility wish to cultivate recreational cannabis.

A member of the public stated:

- that it is understood that there will be a transition period for licences issued under the ACMPR to amend the licences to eliminate the difference between medical cannabis and recreational cannabis
- support for small “craft” cultivation facilities to stop black market sales

MOVED by Roy McIntyre, **SECONDED** by Ron Ramsay that staff be directed to refer proposed Bylaw No. 4276, "Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 139, 2018", to the Otter Point Advisory Planning Commission, to appropriate CRD departments and the following external agencies for comment:

BC Hydro	Island Health	RCMP
District of Sooke	Ministry of Transportation and Infrastructure	T'Sou-ke First Nation

CARRIED

MOVED by Director Hicks, **SECONDED** by Roy McIntyre that staff amend the Juan de Fuca Land Use Bylaw, Bylaw No. 2040, 1992, to eliminate the distinction between medical cannabis production and recreational cannabis production in the Sooke Business Park Industrial (M-SBP) zone.

CARRIED

c) RZ000258 - Lot 2, Section 95, Sooke District, Plan 45068 (1021 Parkheights Drive)

Iain Lawrence spoke to the staff report and the request to rezone the subject property from Rural Residential 3 (RR-3) to a new Rural Residential 6A (RR-6A) zone to permit a two-lot subdivision. Iain Lawrence outlined the referral comments received from agencies including the recommendations received from CRD Regional Parks and the concerns raised by the public at an information held in East Sooke on October 10, 2018.

Attention was directed to the supplementary submissions received from Rhonda Underwood, Nick Wilde, Gerald Hall and Teresa Schrader Hall, and MD Litster in support of the application. The submission from Layton Engwer states concern with the proposed subdivision and the use of lot averaging and the submission received from H el ene and Pierre Rousseau states concerns with:

- construction of additional dwellings in the form of suites
- the minimum parcel size of 0.5 ha permitted by the RR-6A zone
- the professional reports not addressing further construction on Lot B
- water availability in the area
- the riparian area assessment not capturing all the wetlands

Iain Lawrence confirmed that the East Sooke Official Community Plan supports an average parcel size of one hectare and that, in response to comments received from the public, staff recommend that a covenant be considered at the time of subdivision that acknowledges that the lots were created through parcel averaging and that prevents future subdivision. Staff further recommend that as a condition of rezoning, the applicant enter into a covenant that requires that if the supply well accessed via easement is to be used for subdivision, that the provision of a pump test conducted by a qualified professional confirming that the supply well can provide each connection with a sustained flow rate of at least 1,400 litres/day.

In response to comments from Regional Parks, staff recommend that covenant be registered prior to adoption of the bylaw prescribing a 10 m vegetated buffer on the subject property along the boundary of proposed Lot B and East Sooke Regional Park.

The Chair confirmed that the applicant was present.

Iain Lawrence responded to a question from the LUC confirming that a variance will be required as a condition of subdivision as proposed Lot B does not achieve the required frontage of 10% of the lot perimeter.

MOVED by Stan Jensen, **SECONDED** by Sandy Sinclair that the Land Use Committee recommends to the CRD Board:

- a) That the referral of proposed Bylaw No. 4260 directed by the Juan de Fuca Land Use Committee to the East Sooke Advisory Planning Commission; BC Hydro; District of Sooke; Island Health; Ministry of Forests, Lands, Natural Resource Operations and Rural Development – Archaeology Branch; Ministry of Transportation and Infrastructure; RCMP; Scia'new First Nation; Sooke School District #62; T'Sou-ke First Nation and appropriate CRD departments be approved and the comments received;
- b) That proposed Bylaw No. 4260, "Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 137, 2018" be introduced and read a first time and read a second time; and
- c) That in accordance with the provisions of Section 469 of the *Local Government Act*, the Director for the Juan de Fuca Electoral Area, or Alternate Director, be delegated authority to hold a Public Hearing with respect to Bylaw No. 4260.

CARRIED

d) RZ000259 - That Part of Lot 2, Section 90, Renfrew District, VIP6764 Lying to the North of the 66 Foot Road Dedicated by Said Plan – 9330 Invermuir Road

Iain Lawrence spoke to the staff report and the request to rezone the property from the Rural (A) and Forestry (AF) zones for the purpose of permitting agriculture. Iain Lawrence confirmed that no objections were received from referral agencies with the exception of the Shirley/Jordan River APC. In response to comments received from the APC and the applicant, staff have amended proposed Bylaw No. 4259 to outline a new Rural 2 (RU2) zone, as included in the supplementary agenda.

The Chair confirmed that the agent and applicant were present.

Iain Lawrence responded to a question from the LUC confirming that the setback for agricultural uses and farm buildings in the RU2 zone is 30 m, with the exception of grazing of livestock and growing of agricultural crops.

MOVED by Roy McIntyre, **SECONDED** by Sandy Sinclair that the Land Use Committee recommends to the CRD Board:

- 1) That the referral of proposed Bylaw No. 4259 directed by the Juan de Fuca Land Use Committee to the Shirley/Jordan River Advisory Planning Commission; BC Hydro; District of Sooke; Island Health; Ministry of Agriculture, Ministry of Energy & Mines; Ministry of Forests, Lands, Natural Resource Operations and Rural Development – Archaeology Branch; Ministry of Transportation and Infrastructure; Pacheedaht First Nation; RCMP; Sooke School District #62; T'Sou-ke First Nation and appropriate CRD departments be approved and the comments received;
- 2) That proposed Bylaw No. 4259, "Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 136, 2018", as amended, be introduced and read a first time and read a second time; and

- 3) That in accordance with the provisions of Section 469 of the *Local Government Act*, the Director for the Juan de Fuca Electoral Area, or Alternate Director, be delegated authority to hold a Public Hearing with respect to Bylaw No. 4259.

CARRIED

10. Adjournment

The Chair thanked Art Wynans for his years of service noting that this evening is Mr. Wynans' last meeting.

The meeting adjourned at 8:30 p.m.

Chair



**REPORT TO THE JUAN DE FUCA LAND USE COMMITTEE
MEETING OF TUESDAY, JANUARY 15, 2019**

SUBJECT **Development Permit with Variance for Lot 2, Section 43, Highland District, Plan 14620 – 6890 Mark Lane**

ISSUE

A request has been made for a development permit with variance to decrease the rear yard setback requirements of the Community Residential One (CR-1) zone, and to address the Steep Slopes and the Foreshore, Wetlands and Riparian Areas Development Permit (DP) guidelines for the construction of a deck extension.

BACKGROUND

The 1.16 ha subject property is located at 6890 Mark Lane in Willis Point (Appendix 1) and is zoned CR-1 in the Comprehensive Community Plan for Willis Point, 2002, Bylaw No. 3027 (Willis Point CCP). The property is bounded by CR-1 zoned properties to the north and south, Mark Lane to the east, and Saanich Inlet to the west. The property is designated as a Steep Slopes and a Foreshore DP Area in Bylaw No. 3027.

In April 2016, the owner applied for a building permit for internal structural alterations to the home. During a site visit, the Building Inspector discovered that an addition to the previously approved deck had been constructed without a permit. Modifications to the deck occurred prior to the current owner taking possession; however, the property disclosure statement provided at the time of purchase did not include this information.

In 2014, the previous owner obtained a development permit with variance (DP-04-09) for a retaining wall, which was also constructed without a building permit. The variance allowed the retaining wall to be sited 0 m from the side property line.

The owner has now requested a development permit with variance in order for the expanded deck to be brought into compliance with the Willis Point CCP. A geotechnical report has been submitted to assess the deck construction and to identify any erosion or degradation (Appendix 2). A site survey has been submitted to identify the required rear yard setback variance. The survey indicates that closest part of the deck is located 2.3 m from the rear property rather 6 m, as required by the CR-1 zone (Appendix 3).

ALTERNATIVES

That the Land Use Committee recommends to the Capital Regional District Board:

1. That Development Permit with Variance DV000063, for Lot 2, Section 43, Highland District, Plan 14620, to authorize the siting of an existing deck, and to vary the Willis Point Comprehensive Community Plan, 2003, Bylaw No. 3027, Schedule B, Part IV, Section 22.2(d)(iv), by reducing the rear yard setback from 6 m to 2.3 m, be approved.
2. That DV000063 be denied and require the development to comply with zoning requirements and that a Development Permit be obtained.
3. That the application be referred back to staff for more information.

LEGISLATIVE IMPLICATIONS

The Willis Point Comprehensive Community Plan, Bylaw No. 3027, Schedule A, Section 4.10, designates development permit areas and outlines development permit guidelines. The property is located within the Steep Slopes and the Foreshore, Wetlands and Watercourses DP areas; therefore, a development permit is required. CRD Delegation of Development Permit Approval Authority Bylaw, 2009, Bylaw No. 3462, gives the General Manager, Planning and Protective Services, the power to issue a development permit; however, the delegated authority does not include development permits that require a variance, as stated in Section 5(a) of the bylaw.

The Willis Point Comprehensive Community Plan, Bylaw No. 3027, Schedule B, Part IV, Section 22.2(d), specifies setback requirements for the CR-1 zone. A development variance permit is required in order to vary these requirements.

PUBLIC CONSULTATION IMPLICATIONS

Pursuant to Section 499 of the *Local Government Act (LGA)*, if a local government proposes 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 January 15, 2019, Land Use Committee meeting. There is no requirement for public consultation if a local government is considering a development permit.

LAND USE IMPLICATIONS

Development Permit:

The applicant has submitted a geotechnical report prepared by Lane Campbell, M.Eng., P.Eng., of Ryzuk Geotechnical, dated June 1, 2018, to assess the condition and construction of the deck. The report described the deck and supports in three principal areas: near the shoreline, at the midpoint and at the house footings.

The engineer stated that the deck appears to be about eight years old, that the column supports have been pinned to the bedrock and that the concrete is still in full contact. The DP guidelines specify that disturbed sites be revegetated using plant material indigenous to the site or other suitable non-invasive plants; and that development be designed to avoid storm water runoff that could destabilize slopes or cause damage to neighbouring properties. The Engineer's report stated that there was no evidence of past movement of the deck supports and that the foundations were adequate to support the deck. In light of the Engineer's statement and since construction was completed eight years ago, staff are not recommending additional site work related to the DP guidelines at this time.

Variance:

The owner has requested a variance to reduce the rear yard setback from 6 m to 2.3 m to allow the siting of a deck constructed without a building permit. Modifications to the deck occurred prior to the current owner taking possession. The deck has now been in use for eight years and does not appear to adversely affect the use and enjoyment of the adjacent land. A development variance permit is required in order to vary the setback requirement as a Board of Variance does not have authority to deal with matters that are covered in a development permit as per *LGA* Section 542(2)(b).

Development Permit with Variance DV000063 (Appendix 4) has been prepared for consideration to authorize the proposed development and bring the deck into compliance with the Bylaw.

Staff recommend approval of the development permit with variance, subject to public notification.

CONCLUSION

The applicant is requesting a development permit with variance in order for authorize a previously constructed deck and to bring the property into compliance with the CR-1 zone and the steep slopes and foreshore DP areas in the Willis Point Comprehensive Community Plan, Bylaw No. 3027. The applicant has provided a geotechnical engineer’s report to assess the condition and construction of the deck. A site survey plan has also been submitted to indicate the requested variance to reduce the rear yard setback from 6 m to 2.3 m.

RECOMMENDATION

That the Land Use Committee recommends to the Capital Regional District Board:

That Development Permit with Variance DV000063, for Lot 2, Section 43, Highland District, Plan 14620, to authorize the siting of an existing deck, and to vary the Willis Point Comprehensive Community Plan, 2003, Bylaw No. 3027, Schedule B, Part IV, Section 22.2(d)(iv), by reducing the rear yard setback from 6 m to 2.3 m, be approved.

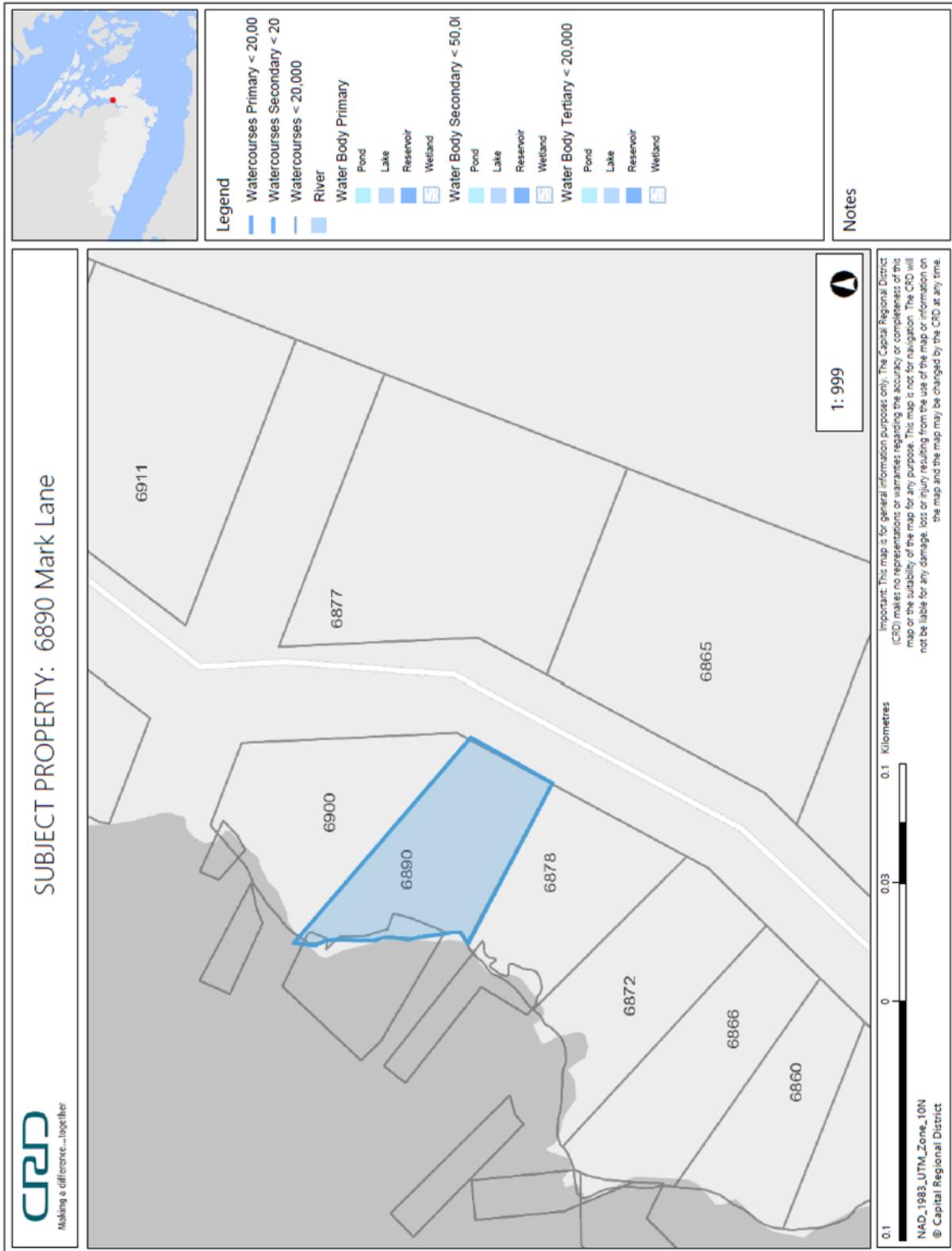
Submitted by:	Regina Robinson, Planning Assistant
Concurrence:	Iain Lawrence, MCIP, RPP, Manager, Local Area Planning
Concurrence:	Kevin Lorette, P.Eng., MBA, Acting Chief Administrative Officer

RR: wm

Attachments:

- Appendix 1: Subject Property Map
- Appendix 2: Geotechnical Report
- Appendix 3: Site Plan
- Appendix 4: Development Permit with Variance DV000063

Appendix 1: Subject Property Map



Appendix 2: Geotechnical Report



RYZUK GEOTECHNICAL
ENGINEERING & MATERIALS TESTING

28 Crease Avenue
Victoria, B.C.
V8Z 1S3
Tel: 250-475-3131
Fax: 250-475-3611
mail@ryzuk.com

Geotechnical Field Review / Site Instruction

Project No: [REDACTED]
Project: Deck Foundation Assessment - 6890 Mark Lane, Victoria, BC
Client: [REDACTED]
Email / Fax No: [REDACTED]
Date: June 1, 2018

Copy to:	Email / Fax:	Copy to:	Email / Fax:
<input checked="" type="checkbox"/> Robert Gutierrez -CRD Chief Building Inspector rgutierrez@crd.bc.ca		<input type="checkbox"/>	
<input type="checkbox"/>		<input type="checkbox"/>	

As requested, we have visually assessed the condition of the foundation supports for the deck extension, which we understand the CRD Building Inspector has asked to have reviewed, as it was not completed under a building permit. Our work in this regard is completed in accordance with, and is subject to, the attached Term of Engagement.

We understand that the deck extension was completed by the previous owner, and that you have owned the property for some 5 years. Based on the condition of the deck, it is estimated that the extension is likely in the order of 8 years old, give or take a few years.

The deck extension is supported in three principal areas. The outermost deck columns (nearer shoreline) are supported on relatively short concrete pads, formed by sono-tube, directly on bedrock. It is evident that these column supports have been pinned to the bedrock, however, the details of the pinning are unknown. We noted that the concrete is still in full contact with the intact bedrock, and such has not moved or delaminated from the bedrock since construction. A photo of one of the lower pads is shown below. The rebar sticking out is believed to have been for support of the sono-tube formwork.



RYZUK GEOTECHNICAL

June 1, 2018

The second area of the deck extension support is roughly midway, supporting both the stairs and the midspan. In this area, the timber columns are supported by a narrow concrete strip footing, which bears directly on the hard till soils. While the footing is not embedded into the till for frost protection, we do not deem that such is needed. We found no evidence of erosion or degradation of the till slope close to the footing. In conjunction with this strip footing, an additional sono-tube formed footing was present on the steep rock slope to the west. As with the others, it appeared in good condition, and the concrete configuration suggested it was also pinned to the rock slope.

In summary, we see no evidence of pass movement in the deck supports which in itself would indicate less than favourable bearing support. While the pinning detail of the sono-tube formed concrete pad supports on the bedrock slope are not known, the visible condition of the concrete and the concrete/bedrock interface suggests that they are pinned. Given the relatively low compressive static loads on the footings, as well as relatively minor seismic loads during a design earthquake, we would consider the deck foundations adequate for support of the deck, considering a design seismic event of 2% probability of exceedance in 50 years.

The CRD is considered an approved user of this report and can rely on its contents.

We trust the above is suitable for your purposes at present. If you have any questions, or require further clarification, please call.

Regards,
Ryzuk Geotechnical



Lane Campbell, M. Eng., P. Eng.
Senior Geotechnical Engineer

Attachment: Terms of Engagement

RYZUK GEOTECHNICAL

TERMS OF ENGAGEMENT

GENERAL

Ryzuk Geotechnical (the Consultant) shall render the Services, as specified in the agreed Scope of Services, to the Client for this Project in accordance with the following terms of engagement. The Services, and any other associated documents, records or data, shall be carried out and/or prepared in accordance with generally accepted engineering practices in the location where the Services were performed. No other warranty, expressed or implied is made. The Consultant may, at its discretion and at any stage, engage sub-consultants to perform all or any part of the Services.

Ryzuk Geotechnical is a wholly owned subsidiary of C. N. Ryzuk & Associates Ltd.

COMPENSATION

All charges will be payable in Canadian Dollars. Invoices will be due and payable by the Client on receipt of the invoice without hold back. Interest on overdue accounts is 24% per annum.

REPRESENTATIVES

Each party shall designate a representative who is authorized to act on behalf of that party and receive notices under this Agreement.

TERMINATION

Either party may terminate this engagement without cause upon thirty (30) days' notice in writing. On termination by either party under this paragraph, the Client shall forthwith pay to the Consultant its Charges for the Services performed, including all expenses and other charges incurred by the Consultant for this Project.

If either party breaches this engagement, the non-defaulting party may terminate this engagement after giving seven (7) days' notice to remedy the breach. On termination by the Consultant under this paragraph, the Client shall forthwith pay to the Consultant its Charges for the Services performed to the date of termination, including all fees and charges for this Project.

ENVIRONMENTAL

The Consultant's field investigation, laboratory testing and engineering recommendations will not address or evaluate pollution of soil or pollution of groundwater. The Consultant will cooperate with the Client's environmental consultant during the field work phase of the investigation.

PROFESSIONAL RESPONSIBILITY

In performing the Services, the Consultant will provide and exercise the standard of care, skill and diligence required by customarily accepted professional practices and procedures normally provided in the performance of the Services contemplated in this engagement at the time when and the location in which the Services were performed.

INSURANCE

Ryzuk Geotechnical is covered by Professional Indemnity Insurance as follows:

1. \$ 2,000,000 each and every claim
2. \$ 4,000,000 aggregate
3. \$ 5,000,000 commercial/general liability coverage

LIMITATION OF LIABILITY

The Consultant shall not be responsible for:

1. the failure of a contractor, retained by the Client, to perform the work required for the Project in accordance with the applicable contract documents;
2. the design of or defects in equipment supplied or provided by the Client for incorporation into the Project;
3. any cross-contamination resulting from subsurface investigations;
4. any Project decisions made by the Client if the decisions were made without the advice of the Consultant or contrary to or inconsistent with the Consultant's advice;
5. any consequential loss, injury or damages suffered by the Client, including but not limited to loss of use, earnings and business interruption;
6. the unauthorized distribution of any confidential document or report prepared by or on behalf of the consultant for the exclusive use of the Client
7. Subsurface structures and utilities

V.L.I

The Consultant will make all reasonable efforts prior to and during subsurface site investigations to minimize the risk of damaging any subsurface utilities/mains. If, in the unlikely event that damage is incurred where utilities were unmarked and/or undetected, the Consultant will not be held responsible for damages to the site or surrounding areas, utilities/mains or drilling equipment or the cost of any repairs.

The total amount of all claims the Client may have against the Consultant or any present or former partner, executive officer, director, stockholder or employee thereof under this engagement, including but not limited to claims for negligence, negligent misrepresentation and breach of contract, shall be strictly limited to the amount of any professional liability insurance the Consultant may have available for such claims.

No claim may be brought against the Consultant in contract or tort more than two (2) years after the date of discovery of such defect.

DOCUMENTS AND REPORTING

All of the documents prepared by the Consultant or on behalf of the Consultant in connection with the Project are instruments of service for the execution of the Project. The Consultant retains the property and copyright in these documents, whether the Project is executed or not. These documents may not be used on any other project without the prior written agreement of the Consultant.

The documents have been prepared specifically for the Project, and are applicable only in the case where there has been no physical alteration to, or deviation from any of the information provided to the Consultant by the Client or agents of the Client. The Client may, in light of such alterations or deviations, request that the Consultant review and revise these documents.

The identification and classification as to the extent, properties or type of soils or other materials at the Project site has been based upon investigation and interpretation consistent with the accepted standard of care in the engineering consulting practice in the location where the Services were performed. Due to the nature of geotechnical engineering, there is an inherent risk that some conditions will not be detected at the Project site, and that actual subsurface conditions may vary considerably from investigation points. The Client must be aware of, and accept this risk, as must any other party making use of any documents prepared by the Consultant regarding the Project.

Any conclusions and recommendations provided within any document prepared by the Consultant for the Client has been based on the investigative information undertaken by the Consultant, and any additional information provided to the Consultant by the Client or agents of the Client. The Consultant accepts no responsibility for any associated deficiency or inaccuracy as the result of a miss-statement or receipt of fraudulent information.

JOBSITE SAFETY AND CONTROL

The Client acknowledges that control of the jobsite lies solely with the Client, his agents or contractors. The presence of the Consultant's personnel on the site does not relieve the Client, his agents or contractors from their responsibilities for site safety. Accordingly, the Client must endeavor to inform the Consultant of all hazardous or otherwise dangerous conditions at the Project site of which the Client is aware.

The client must acknowledge that during the course of a geotechnical investigation, it is possible that a previously unknown hazard may be discovered. In this event, the Client recognizes that such a hazard may result in the necessity to undertake procedures which ensure the safety and protection of personnel and/or the environment. The Client shall be responsible for payment of any additional expenses incurred as a result of such discoveries, and recognizes that under certain circumstances, discovery of hazardous conditions or elements requires that regulatory agencies must be informed. The Client shall not bring about any action or dispute against the Consultant as a result of such notification.

FIELD SERVICES

Where applicable, field services recommended for the Project are the minimum necessary, in the sole discretion of the Consultant, to observe whether the work or a contractor retained by the Client is being carried out in general conformity with the intent of the Services. Any reduction from the level of services recommended will result in the Consultant providing qualified certifications for the work.

DISPUTE RESOLUTION

If requested in writing by either the Client or the Consultant, the Client and the Consultant shall attempt to resolve any dispute between them arising out of or in connection with this Agreement by entering into structured non-binding negotiations with the assistance of a mediator on a without prejudice basis. The mediator shall be appointed by agreement of the parties. If a dispute cannot be settled within a period of thirty (30) calendar days with the mediator, the dispute shall be referred to and finally resolved by arbitration under the rules of the arbitrator appointed by agreement of the parties or by reference to a Judge of the British Columbia Court.

V.I.I

Appendix 4: Development Permit with Variance DV000063



CAPITAL REGIONAL DISTRICT

DEVELOPMENT PERMIT WITH VARIANCE NO. DV000063

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 to buildings, structures, and other development thereon:
PID: 004-233-271;
Legal Description: Lot 2, Section 43, Highland District, Plan 14620 (the "Land")
3. This development permit authorizes construction of a deck (the "development") on the Land, located within the development permit areas established by the Comprehensive Community Plan for Willis Point, Bylaw No. 1, 2002, Schedule A, Section 4.10.3 (Steep Slopes) and Section 4.10.4 (Foreshore, Wetlands and Riparian Areas), 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 within the areas identified on the Site Plan, prepared by JE Anderson & Associates, dated February 15, 2018;
 - b. That the development comply with the recommendations outlined in the report prepared by Lane Campbell, M.Eng., P.Eng., of Ryzuk Geotechnical, dated June 1, 2018 (the "Geotechnical Report").
5. The Capital Regional District's Bylaw No. 3027, Schedule B, is varied under section 498 of the *Local Government Act* as follows:
 - a. That Schedule B, Part IV, Section 22 2(d)(iv) be varied by reducing the rear yard setback of the Community Residential One (CR-1) zone from 6 m to 2.3 m for the purpose of constructing a deck, as shown on the Site Plan prepared by JE Anderson & Associates, dated February 15, 2018.
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 (DV000063) 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:
 - 1) Site Plan prepared by JE Anderson & Associates, dated February 15, 2018;
 - 2) Geotechnical Report prepared by Lane Campbell, M.Eng., P.Eng., of Ryzuk Geotechnical, dated June 1, 2018.
10. This Permit is NOT a Building Permit.
11. In issuing this Development Permit, the CRD does not represent or warrant that the land can be safely developed and used for the use intended and is acting in reliance upon the conclusions of the Geotechnical Report regarding the conditions to be followed for the safe development of the land.

RESOLUTION PASSED BY THE BOARD, THE _____ day of _____, 2019.

ISSUED this _____ day of _____, 2019

Corporate Officer



RYZUK GEOTECHNICAL
ENGINEERING & MATERIALS TESTING

28 Crease Avenue
Victoria, B.C.
V8Z 1S3
Tel: 250-475-3131
Fax: 250-475-3611
mail@ryzuk.com

Geotechnical Field Review / Site Instruction

Project No: [REDACTED]
Project: Deck Foundation Assessment - 6890 Mark Lane, Victoria, BC
Client: [REDACTED]
Email / Fax No: [REDACTED]
Date: June 1, 2018

Copy to:	Email / Fax:	Copy to:	Email / Fax:
<input checked="" type="checkbox"/>	Robert Gutierrez -CRD Chief Building Inspector rgutierrez@crd.bc.ca	<input type="checkbox"/>	
<input type="checkbox"/>		<input type="checkbox"/>	

As requested, we have visually assessed the condition of the foundation supports for the deck extension, which we understand the CRD Building Inspector has asked to have reviewed, as it was not completed under a building permit. Our work in this regard is completed in accordance with, and is subject to, the attached Term of Engagement.

We understand that the deck extension was completed by the previous owner, and that you have owned the property for some 5 years. Based on the condition of the deck, it is estimated that the extension is likely in the order of 8 years old, give or take a few years.

The deck extension is supported in three principal areas. The outermost deck columns (nearer shoreline) are supported on relatively short concrete pads, formed by sono-tube, directly on bedrock. It is evident that these column supports have been pinned to the bedrock, however, the details of the pinning are unknown. We noted that the concrete is still in full contact with the intact bedrock, and such has not moved or delaminated from the bedrock since construction. A photo of one of the lower pads is shown below. The rebar sticking out is believed to have been for support of the sono-tube formwork.



RYZUK GEOTECHNICAL

June 1, 2018

The second area of the deck extension support is roughly midway, supporting both the stairs and the midspan. In this area, the timber columns are supported by a narrow concrete strip footing, which bears directly on the hard till soils. While the footing is not embedded into the till for frost protection, we do not deem that such is needed. We found no evidence of erosion or degradation of the till slope close to the footing. In conjunction with this strip footing, an additional sono-tube formed footing was present on the steep rock slope to the west. As with the others, it appeared in good condition, and the concrete configuration suggested it was also pinned to the rock slope.

In summary, we see no evidence of pass movement in the deck supports which in itself would indicate less than favourable bearing support. While the pinning detail of the sono-tube formed concrete pad supports on the bedrock slope are not known, the visible condition of the concrete and the concrete/bedrock interface suggests that they are pinned. Given the relatively low compressive static loads on the footings, as well as relatively minor seismic loads during a design earthquake, we would consider the deck foundations adequate for support of the deck, considering a design seismic event of 2% probability of exceedance in 50 years.

The CRD is considered an approved user of this report and can rely on its contents.

We trust the above is suitable for your purposes at present. If you have any questions, or require further clarification, please call.

Regards,

Ryzuk Geotechnical



Lane Campbell, M. Eng., P. Eng.
Senior Geotechnical Engineer

Attachment: Terms of Engagement

RYZUK GEOTECHNICAL



DV000063

TERMS OF ENGAGEMENT

GENERAL

Ryzuk Geotechnical (the Consultant) shall render the Services, as specified in the agreed Scope of Services, to the Client for this Project in accordance with the following terms of engagement. The Services, and any other associated documents, records or data, shall be carried out and/or prepared in accordance with generally accepted engineering practices in the location where the Services were performed. No other warranty, expressed or implied is made. The Consultant may, at its discretion and at any stage, engage sub-consultants to perform all or any part of the Services.

Ryzuk Geotechnical is a wholly owned subsidiary of C. N. Ryzuk & Associates Ltd.

COMPENSATION

All charges will be payable in Canadian Dollars. Invoices will be due and payable by the Client on receipt of the invoice without hold back. Interest on overdue accounts is 24% per annum.

REPRESENTATIVES

Each party shall designate a representative who is authorized to act on behalf of that party and receive notices under this Agreement.

TERMINATION

Either party may terminate this engagement without cause upon thirty (30) days' notice in writing. On termination by either party under this paragraph, the Client shall forthwith pay to the Consultant its Charges for the Services performed, including all expenses and other charges incurred by the Consultant for this Project.

If either party breaches this engagement, the non-defaulting party may terminate this engagement after giving seven (7) days' notice to remedy the breach. On termination by the Consultant under this paragraph, the Client shall forthwith pay to the Consultant its Charges for the Services performed to the date of termination, including all fees and charges for this Project.

ENVIRONMENTAL

The Consultant's field investigation, laboratory testing and engineering recommendations will not address or evaluate pollution of soil or pollution of groundwater. The Consultant will cooperate with the Client's environmental consultant during the field work phase of the investigation.

PROFESSIONAL RESPONSIBILITY

In performing the Services, the Consultant will provide and exercise the standard of care, skill and diligence required by customarily accepted professional practices and procedures normally provided in the performance of the Services contemplated in this engagement at the time when and the location in which the Services were performed.

INSURANCE

Ryzuk Geotechnical is covered by Professional Indemnity Insurance as follows:

1. \$ 2,000,000 each and every claim
2. \$ 4,000,000 aggregate
3. \$ 5,000,000 commercial/general liability coverage

LIMITATION OF LIABILITY

The Consultant shall not be responsible for:

1. the failure of a contractor, retained by the Client, to perform the work required for the Project in accordance with the applicable contract documents;
2. the design of or defects in equipment supplied or provided by the Client for incorporation into the Project;
3. any cross-contamination resulting from subsurface investigations;
4. any Project decisions made by the Client if the decisions were made without the advice of the Consultant or contrary to or inconsistent with the Consultant's advice;
5. any consequential loss, injury or damages suffered by the Client, including but not limited to loss of use, earnings and business interruption;
6. the unauthorized distribution of any confidential document or report prepared by or on behalf of the consultant for the exclusive use of the Client
7. Subsurface structures and utilities

V.11



DV000063

The Consultant will make all reasonable efforts prior to and during subsurface site investigations to minimize the risk of damaging any subsurface utilities/mains. If, in the unlikely event that damage is incurred where utilities were unmarked and/or undetected, the Consultant will not be held responsible for damages to the site or surrounding areas, utilities/mains or drilling equipment or the cost of any repairs.

The total amount of all claims the Client may have against the Consultant or any present or former partner, executive officer, director, stockholder or employee thereof under this engagement, including but not limited to claims for negligence, negligent misrepresentation and breach of contract, shall be strictly limited to the amount of any professional liability insurance the Consultant may have available for such claims.

No claim may be brought against the Consultant in contract or tort more than two (2) years after the date of discovery of such defect.

DOCUMENTS AND REPORTING

All of the documents prepared by the Consultant or on behalf of the Consultant in connection with the Project are instruments of service for the execution of the Project. The Consultant retains the property and copyright in these documents, whether the Project is executed or not. These documents may not be used on any other project without the prior written agreement of the Consultant.

The documents have been prepared specifically for the Project, and are applicable only in the case where there has been no physical alteration to, or deviation from any of the information provided to the Consultant by the Client or agents of the Client. The Client may, in light of such alterations or deviations, request that the Consultant review and revise these documents.

The identification and classification as to the extent, properties or type of soils or other materials at the Project site has been based upon investigation and interpretation consistent with the accepted standard of care in the engineering consulting practice in the location where the Services were performed. Due to the nature of geotechnical engineering, there is an inherent risk that some conditions will not be detected at the Project site, and that actual subsurface conditions may vary considerably from investigation points. The Client must be aware of, and accept this risk, as must any other party making use of any documents prepared by the Consultant regarding the Project.

Any conclusions and recommendations provided within any document prepared by the Consultant for the Client has been based on the investigative information undertaken by the Consultant, and any additional information provided to the Consultant by the Client or agents of the Client. The Consultant accepts no responsibility for any associated deficiency or inaccuracy as the result of a mis-statement or receipt of fraudulent information.

JOBSITE SAFETY AND CONTROL

The Client acknowledges that control of the jobsite lies solely with the Client, his agents or contractors. The presence of the Consultant's personnel on the site does not relieve the Client, his agents or contractors from their responsibilities for site safety. Accordingly, the Client must endeavor to inform the Consultant of all hazardous or otherwise dangerous conditions at the Project site of which the Client is aware.

The client must acknowledge that during the course of a geotechnical investigation, it is possible that a previously unknown hazard may be discovered. In this event, the Client recognizes that such a hazard may result in the necessity to undertake procedures which ensure the safety and protection of personnel and/or the environment. The Client shall be responsible for payment of any additional expenses incurred as a result of such discoveries, and recognizes that under certain circumstances, discovery of hazardous conditions or elements requires that regulatory agencies must be informed. The Client shall not bring about any action or dispute against the Consultant as a result of such notification.

FIELD SERVICES

Where applicable, field services recommended for the Project are the minimum necessary, in the sole discretion of the Consultant, to observe whether the work or a contractor retained by the Client is being carried out in general conformity with the intent of the Services. Any reduction from the level of services recommended will result in the Consultant providing qualified certifications for the work.

DISPUTE RESOLUTION

If requested in writing by either the Client or the Consultant, the Client and the Consultant shall attempt to resolve any dispute between them arising out of or in connection with this Agreement by entering into structured non-binding negotiations with the assistance of a mediator on a without prejudice basis. The mediator shall be appointed by agreement of the parties. If a dispute cannot be settled within a period of thirty (30) calendar days with the mediator, the dispute shall be referred to and finally resolved by arbitration under the rules of the arbitrator appointed by agreement of the parties or by reference to a Judge of the British Columbia Court.

V.1.1



Making a difference...together

SP000092

**REPORT TO THE JUAN DE FUCA LAND USE COMMITTEE
MEETING OF MONDAY, DECEMBER 17, 2018**

SUBJECT **Soil Deposit Permit for Section 42, Otter District except that part lying 50 feet on each side of the centre line of the right of way shown on Plan 121 RW and except that part in Plan EPP63580**

ISSUE

A request has been made for a soil permit to deposit up to 20,000 cubic metres (m³) of soil on the subject property to complete creek restoration and for road construction associated with a proposed subdivision.

BACKGROUND

The 57.9 ha property is located on Clark Road in the Otter Point Official Community Plan (OCP) Area and is zoned Forestry (AF) in the Juan de Fuca Land Use Bylaw, 1992, Bylaw No. 2040. The property is bounded by Rural (A) zoned properties to the south and east, and Forestry (AF) zoned properties to the north and west (Appendices 1 and 2).

The parcel was logged and cleared by the previous owner under the *Private Managed Forests Land Act*. The land clearing involved the removal of trees and other vegetation from around a wetland and watercourses, including a tributary to King Creek. It is the current owner's intent to restore those damaged areas.

The property is designated as a Steep Slopes Development Permit Area (DPA); a Watercourses, Wetlands and Riparian Areas DPA; and a Sensitive Ecosystem DPA by the Otter Point OCP Bylaw No. 3719, Part 6.0; however, the proposed soil deposit works (Appendix 3) are outside of the Steep Slope and Sensitive Ecosystems DPAs. A development permit for the Watercourses and Wetlands areas is not required at this time as the applicant has obtained approval for Changes in and About a Stream under Section 11 of the *Water Sustainability Act* for the creek restoration.

The applicant submitted a completed soil permit application including a professional report and site remediation plan by WSP Canada Inc., dated October 4, 2018, a site plan showing the location of the proposed soil deposit, and a cut and fill volumes plan prepared by Westbrook Consulting Ltd., dated October 2, 2018 (Appendix 4). A Permit to Construct, Use, and Maintain Access to a Provincial Public Highway for road access to the property via Aythree Road to Clark Road has been approved by the Ministry of Transportation and Infrastructure (MoTI).

ALTERNATIVES

That the Land Use Committee recommends:

1. That Soil Deposit Permit SP000092 for Section 42, Otter District except that part lying 50 feet on each side of the centre line of the right of way shown on Plan 121 RW and except that part in Plan EPP63580, for the purpose of creek restoration and levelling areas for road construction associated with subdivision and comments received be forwarded to the General Manager of Planning and Protective Services for a decision.

2. That the Soil Permit be denied.
3. That the application be referred back to staff for more information.

LEGISLATIVE IMPLICATIONS

The Bylaw to Regulate the Removal or Deposit of Soil on Lands within the Juan de Fuca Electoral Area, Bylaw No. 3941 was enacted to regulate the removal and deposit of soil in the general public interest. Section 10.0 designates soil permit authority to the General Manager, Planning and Protective Services and indicates that the General Manager may require that the application be referred to the Juan de Fuca Land Use Committee.

CONSULTATION IMPLICATIONS

Section 11 of the Juan de Fuca Soil Removal or Deposit Bylaw, 2015, Bylaw No. 3941, states that staff will refer applications for amounts greater than 250 m³ to the MoTI, the provincial Archaeological Branch and the Ministry of Environment for comment. Comments received are noted below.

Ministry of Transportation and Infrastructure had no objection to the proposal and noted that the property had been granted an Industrial Access Permit for Aythree Road and Clark Road for work on the property.

Archaeological Branch had no objections and stated that no known archaeological sites are recorded on the property and that unknown sites are protected under the *Heritage Conservation Act* and must not be altered or damaged without a permit.

Ministry of Environment had no objection and noted that their conditions for the approval for the Works in and About a Stream under Section 11 of the *Water Sustainability Act* included: appropriate erosion and sediment control measures, completing instream work while the channel is dry, and having an Environmental monitor onsite while conducting instream work.

In addition, Section 11 of the Juan de Fuca Soil Removal or Deposit Bylaw, 2015, Bylaw No. 3941, states that staff will provide written notice of application by mail to the owner of any parcel that abuts a parcel with a pending soil application a minimum of 10 working days prior to the decision on the permit application. Any responses received will be presented at the December 17, 2018, Land Use Committee meeting.

PROFESSIONAL REPORT RECOMMENDATIONS

An environmental overview assessment of the site was prepared by Susan Blundell, R.P. Bio, and Karen Truman, R.P.Bio., of WSP Canada Inc., on October 4, 2018. The recommendations from the environmental assessment include the deposit of between 15,000 m³ and 20,000 m³ of clean fill to restore damage to the creek from previous logging activity and to landscape proposed road embankments. There is concern that heavy rainfall combined with high volumes of outflow from the wetland will result in further degradation of stream channels and heavy sediment loads entering the tributary to King Creek. The construction aggregate required to complete the road base will be sourced from the site through a program of rock blasting and aggregate production using a crusher.

The report describes the proposed creekside environmental works, and a sediment, drainage and erosion plan. The report includes recommendations for environmental monitoring and post-construction follow up.

ANALYSIS

The subject property was heavily logged and cleared by the previous owner under the *Private Managed Forests Land Act*. The land clearing involved the removal of trees and vegetation from around several watercourses and a wetland.

A request has been made by the current owner for a soil permit to deposit 20,000 cubic metres (m³) of soil on the subject property to complete restoration work around several watercourses and a wetland, and as part of road construction within a proposed subdivision on Clark Road. An Environmental Overview Assessment prepared by a professional biologist has been submitted in support of the application.

The Private Managed Forest Land area north of Clark Road and Section 42 continues to be actively harvested. This activity involves the use of Clark Road by heavy truck traffic and the deposit of soil in the quantity requested will significantly increase the number of heavy vehicles using Clark Road. For this reason, staff recommend that soil deposit activity be restricted to occur Monday through Friday, excluding statutory holidays, between the hours of 8:30 am and 3:00 pm.

Given that the overall condition of the property and surrounding environment will be improved by the proposed watercourse and wetland restoration work, staff recommend approval of the soil permit subject to the recommendations and conditions of the Environmental Overview Assessment, the conditions listed in the Approval for Works in and About a Stream from the Ministry of Environment, the conditions listed in the Permit to Construct, Use, and Maintain Access to a Provincial Public Highway from the Ministry of Transportation and Infrastructure, and subject to public notification.

RECOMMENDATION

That the Land Use Committee recommends:

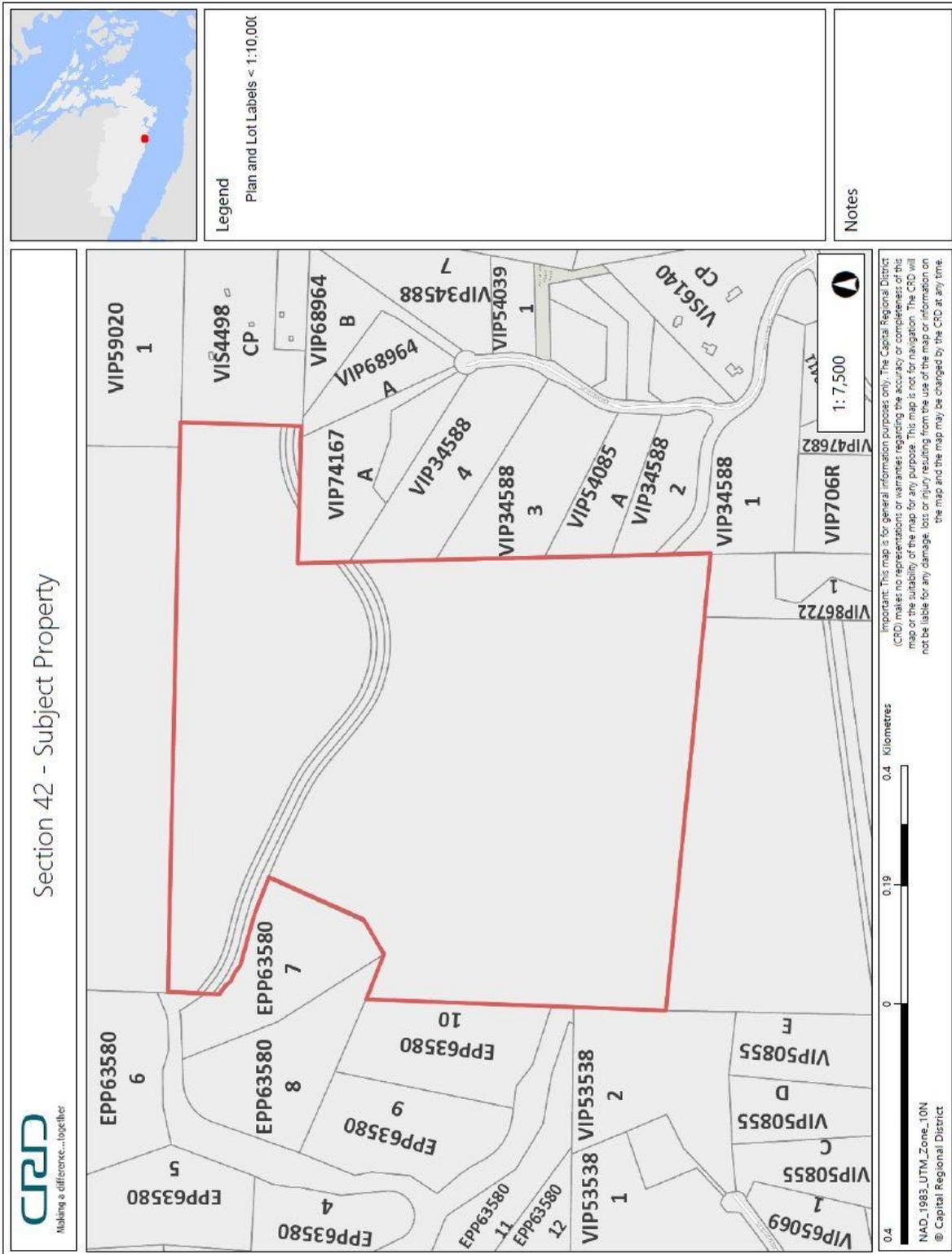
That Soil Deposit Permit SP000092 for Section 42, Otter District except that part lying 50 feet on each side of the centre line of the right of way shown on Plan 121 RW and except that part in Plan EPP63580, for the purpose of creek restoration and levelling areas for road construction associated with subdivision and comments received be forwarded to the General Manager of Planning and Protective Services for a decision.

Submitted by:	Regina Robinson, Planning Assistant
Concurrence:	Iain Lawrence, MCIP, RPP, Manager, Local Area Planning
Concurrence:	Kevin Lorette, P.Eng., MBA, General Manager, Planning & Protective Services

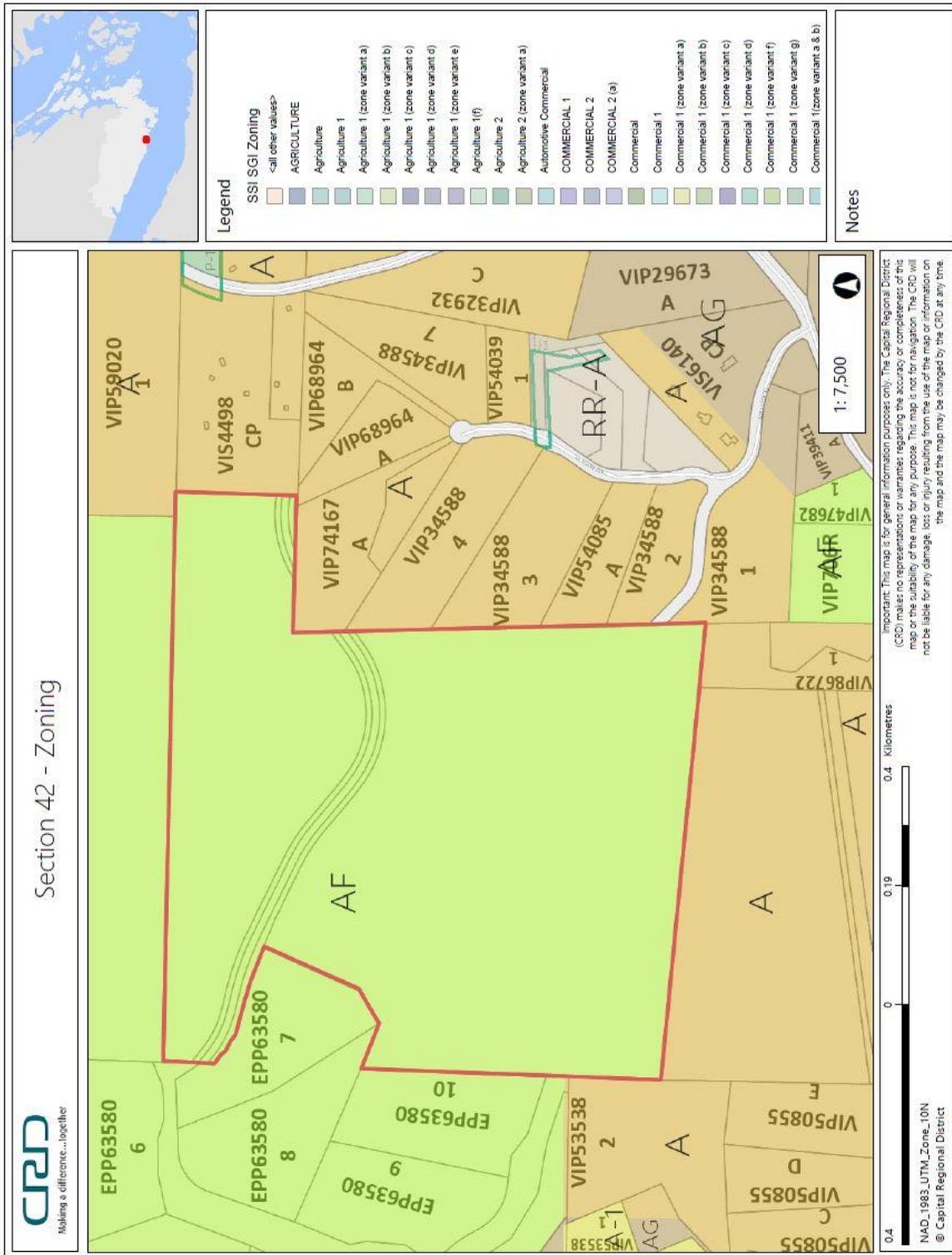
Attachments

- Appendix 1: Subject Property Map
- Appendix 2: Zoning Map
- Appendix 3: Proposed Soil Deposit Works
- Appendix 4: Cut and Fill Volumes Plan
- Appendix 5: Soil Permit SP000092

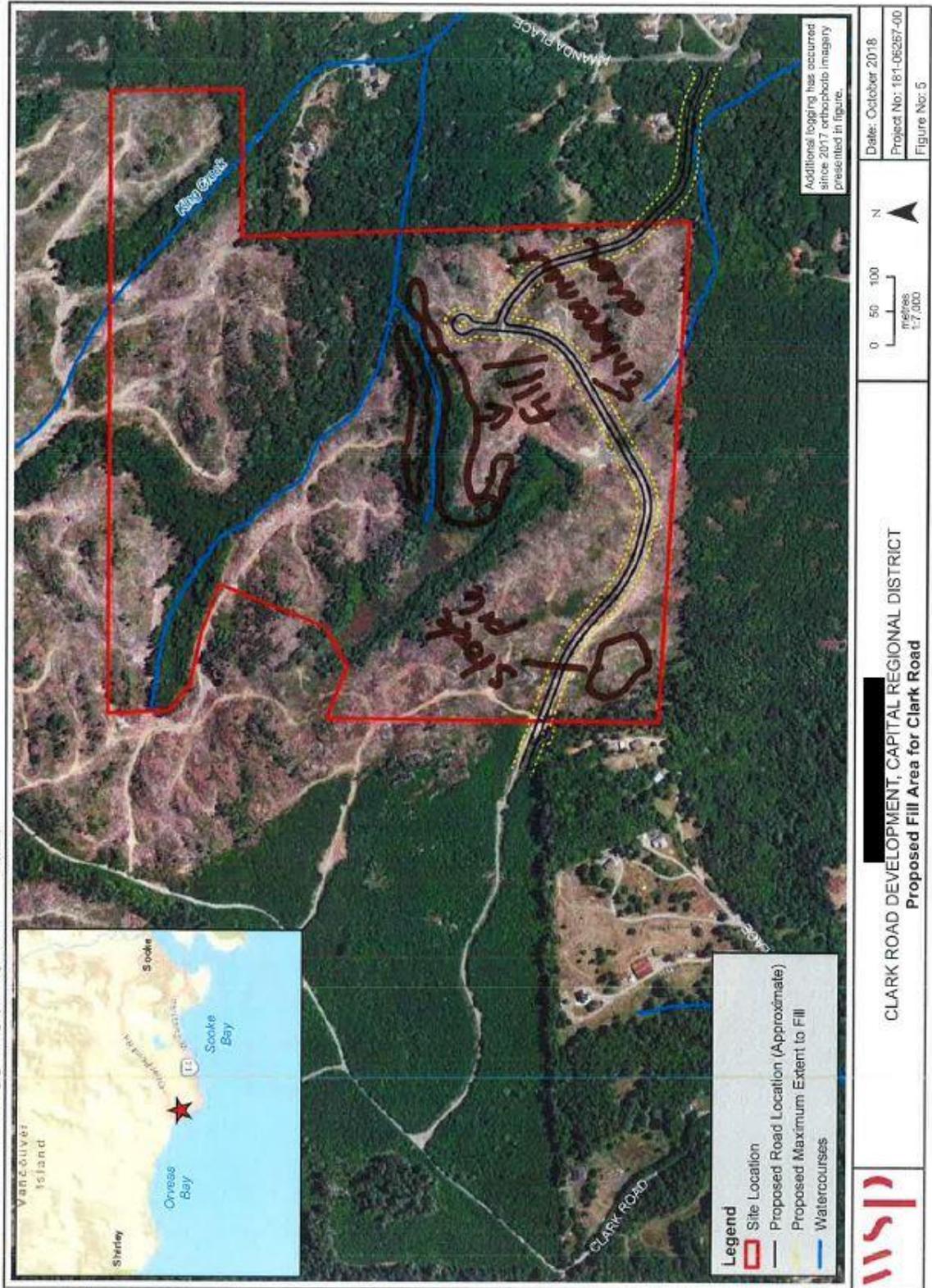
Appendix 1: Subject Property Map



Appendix 2: Zoning Map



Appendix 3: Proposed Soil Deposit Works





Making a difference...together

CAPITAL REGIONAL DISTRICT

SOIL DEPOSIT PERMIT NO. SP000092

Date of Issue: _____, 2018
Date of Expiry: _____, 2019

Permit Fee: \$1000.00
Security Deposit: \$10,000.00

Issued to: Granite Resources Inc.

1. This Soil Deposit Permit is issued subject to compliance with all of the bylaws of the Regional District applicable thereto, except as specifically supplemented by this Permit.
2. This Permit authorizes the deposit of **20,000** m³ of soil on:
Section 42, Otter District except that part lying 50 feet on each side of the centre line of the right of way shown on Plan 121 RW and except that part in Plan EPP63580 (PID: 009-497-790) (the "Land")
3. This soil permit authorizes the deposit of soil for the purposes of watercourse and riparian area restoration and road construction associated with subdivision (the "development") on the Land in accordance with the Cut and Fill Volumes Plan and the Environmental Overview Assessment 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. No person shall engage in either the removal or deposit of soil on any Saturday, Sunday or Holiday.
 - b. No deposit or removal of soil shall occur except between the hours of 8:30 a.m. and 3 p.m. on those days operations are not prohibited.
 - c. The soil deposit shall comply with Cut and Fill Volumes Plan prepared by Westbrook Consulting Ltd., dated October 2, 2018, and the Environmental Overview Assessment prepared by Susan Blundell, R.P. Bio., and Karen Truman, R.P. Bio., October 4, 2018.
 - d. The soil deposit shall comply with the conditions outlined in the Ministry of Transportation & Infrastructure (MoTI) Industrial Access Permit.
 - e. The soil deposit shall comply with the conditions outlined in the approval for Works in and About a Stream from the Ministry of Environment.
 - f. A report generated by a qualified professional shall be submitted to JDF Planning staff when soil deposit activities are deemed complete to verify conditions of the Permit have been met. This report is required for completion of the Permit.
 - g. The holder of the Permit shall post a copy of the Permit, or otherwise shall post a clear and legible sign, in English, indicating the duration and extent of the Soil Deposit at the point of entry to the property from the main road. The sign is to be 1 m x 1 m square and must include the Permit number on it.
5. The following plans and specifications are attached to and form part of this Permit:
 - Appendix 1: Environmental Overview Assessment
 - Appendix 2: Cut and Fill Volumes Plan
 - Appendix 3: Highway Access Permit
 - Appendix 4: Works in and About a Stream Approval

SP000092

6. The holder of the Permit shall at all times bear full responsibility for any accident which may occur, or damage which may be done to any person or property whatsoever, caused directly or indirectly by the work authorized by the Permit, and shall save harmless and keep indemnified the Capital Regional District from all claims and demands whatsoever in respect of the work.
7. Issuance of this Permit does not automatically authorize a health permit or building permit.

ISSUED this ____ day of _____, 2018

Kevin Lorette, P.Eng., MBA
General Manager, Planning and Protective Services

SP000092

Appendix 1: Environmental Overview Assessment

Granite Resources Inc.

ENVIRONMENTAL OVERVIEW ASSESSMENT

PROPOSED RESIDENTIAL DEVELOPMENT
Clarke Road, Capital Regional District

October 4, 2018

WSP CANADA INC.
760 Enterprise Crescent
Victoria, BC Canada

WSP.COM

SP000092



October 4, 2018

Granite Resources Inc.
300-162 Cumberland St.
Toronto ON
M5R 3N5

Attention: Richard Weldon

**Subject: Environmental Overview Assessment -
Clark Road, Capital Regional District**

Dear Mr. Weldon,

WSP Canada Inc. is pleased to submit a PDF copy of the Environmental Overview Assessment report for the above-referenced property.

We trust that the enclosed report meets your current requirements. If you have any questions regarding this project, the enclosed reports, or our services, please do not hesitate to call the undersigned at (250) 360-3578.

Thank you for utilizing our professional services. We look forward to serving your future environmental and engineering needs.

Sincerely,

A handwritten signature in black ink that reads "Susan Blundell".

Susan Blundell, M. Sc., R. P. Bio
Project Manager

Encl. Environmental Overview Assessment

WSP ref: 181-06267-00

Granite Resources Inc.
Clark Road
Environmental Overview Assessment

WSP File No: 181-06267-00
September 2018
Page II

SP000092



SIGNATURES

PREPARED BY

A handwritten signature in black ink that reads 'Susan Blundell'.

Susan Blundell, M. Sc., R. P. Bio
Senior Biologist

A handwritten signature in black ink that reads 'Karen Truman'.

Karen Truman, B. Sc., R. P. Bio
Biologist

No environmental site assessment or investigation can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a site. Performance of a standardized environmental site assessment protocol is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with the Site, given reasonable limits of time and cost.

This report was prepared by WSP Canada Inc. (WSP) for Granite Resources Inc. for due diligence purposes. The disclosure of any information contained in this report is the sole responsibility of the intended recipient. The material in it reflects WSP's best judgement in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. WSP accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report. This limitations statement is considered part of this report.

The original of the technology-based document sent herewith has been authenticated and will be retained by WSP for a minimum of ten years. Since the file transmitted is now out of WSP's control and its integrity can no longer be ensured, no guarantee may be given with regards to any modifications made to this document.

SP000092



TABLE OF CONTENTS

1.	INTRODUCTION	1
1.1.	PROJECT DESCRIPTION	1
2.	ENVIRONMENTAL SETTING	1
2.1.	PREVIOUS STUDIES	1
2.2.	OCP OBJECTIVES	1
2.3.	TERRESTRIAL RESOURCES	2
2.3.1	General	2
2.4.	VEGETATION	3
2.4.1	Methods	3
2.4.2	Results	4
2.4.3	Vegetation Communities	9
2.4.4	Sensitive Ecosystems	11
2.4.5	Rare and Endangered Vascular Plants and Plant Communities	11
2.4.6	Significant Trees	12
2.5.	WILDLIFE	12
2.5.1	Methods	12
2.5.2	Results	14
2.5.3	Habitat Assessment	20
2.5.4	Wildlife Ratings	22
2.6	AQUATIC RESOURCES	25
3.	PROPOSED DEVELOPMENT PLAN	26
3.1	Creekside Environmental Works	26
3.2	Site Access Road	26
3.3	Acreage Lots	27
4.	BEST MANAGEMENT PRACTICES	28
4.1	WILDLIFE MANAGEMENT PLAN	28
4.1.1	GENERAL MITIGATION RECOMMENDATIONS	28
4.1.2	RAPTOR AND BREEDING BIRD MANAGEMENT PLAN	28
4.1.3	AMPHIBIAN MANAGEMENT PLAN	29
4.1.4	SMALL MAMMAL MANAGEMENT PLAN	30
4.2	SEDIMENT AND POLLUTION CONTROL PLAN	30
4.3	SPILL PREVENTION PLAN	31
4.4	ENVIRONMENTAL MONITORING	32
4.4.1	MEETINGS AND COMMUNICATION	32
4.4.2	MONITORING PRIOR TO AND DURING SITE CLEARING	32
4.5	DRAINAGE AND SEDIMENT CONTROL	33
4.5.1	CONTROL OF DELETERIOUS SUBSTANCES ON THE DEVELOPMENT SITE	34
4.5.2	FREQUENCY OF SITE INSPECTIONS	34
4.5.3	REPORTING	34
5.	REFERENCES	35

SP000092



TABLES

Table 1: Vegetation Typically Occurring within the Coastal Douglas-fir Moist Maritime Subzone (CDFmm).....	4
Table 2: Vegetation Occurring on the Clark Road Site (May 2018).....	6
Table 3: Rare Plant Species Known to Occur in Close Vicinity of the Project Area.....	11
Table 4: Summary of Bird Observations in the Project Area.....	14
Table 5: Summary of Mammal, Herptile and Invertebrate Observation in the Project Area.....	16
Table 6: Amphibian Species of Conservation Concern Potentially Occurring within the Project Area.....	17
Table 7: Bird Species of Conservation Concern Potentially Occurring within the Project Area.....	17
Table 8: Mammal Species of Conservation Concern Potentially Occurring within the Project Area.....	18
Table 9: Potential Invertebrate Species Occurring within the Project Area.....	19
Table 10: Habitat Values for Selected Vertebrate Species/Species Groups.....	23
Table 11: Summary of Values in Habitat Types.....	23

FIGURES

- FIGURE 1: SITE LOCATION
- FIGURE 2: SITE LAYOUT
- FIGURE 3: TERRESTRIAL AND AQUATIC RESOURCES

APPENDICES

- APPENDIX A: FIGURES
- APPENDIX B: ARCHAEOLOGY DESKTOP STUDY
- APPENDIX C: CONSERVATION DATA CENTRE INFORMATION
- APPENDIX D: PHOTOPLATES
- APPENDIX E: FILL REQUIREMENTS AND DESIGN FOR CREEK RESTORATION AND PROPOSED ROAD

SP000092



1. INTRODUCTION

1.1. PROJECT DESCRIPTION

Granite Resources Inc. is proposing to develop a 57.9 ha parcel of land located at the west end of Clark Road in the Capital Regional District (herein after referred to as the Site). Figures 1 and 2 show the project area overview and site location, respectively.

As part of the development process, the developer requested that WSP Canada Inc. (WSP) complete an environmental overview of the Site and provide recommendations on minimizing environmental impacts associated with the proposed development. As well, WSP completed a desktop archaeological review (Appendix B).

This report identifies the environmental resources present on the Site. The majority of forest on the Site had been cleared by the former owner of the property. A preliminary clearing plan was not available at the time of report preparation so direct impacts cannot be assessed at this time.

2. ENVIRONMENTAL SETTING

2.1. PREVIOUS STUDIES

No previous baseline studies have been completed for the Site, however a sensitive ecosystem inventory was conducted in the Otter Point area in 2010 which included the Site, following the methodology carried out by the Canadian Wildlife Service for other Capital Regional District (CRD) communities. The result was the identification and classification of sensitive ecosystems which were then adopted into the Otter Point Official Community Plan (OCP) to be integrated into land use planning decisions.

2.2. OCP OBJECTIVES

It is an objective of the OCP to protect watercourses, wetlands, riparian areas, and sensitive ecosystems that provide habitat for rare and endangered species, and this is enacted through the designation of Development Permit Areas.

Sensitive ecosystems are protected through Watercourse, Wetlands and Riparian Development Permit Areas and Sensitive Ecosystem Area Development Permit Areas. The Site is within a Watercourse, Wetlands and Riparian Development Permit Area and a Sensitive Ecosystem Development Permit Area. Except where otherwise permitted by a Development Permit, all uses, buildings and structures should be located outside of sensitive ecosystem areas.

In addition, the Riparian Areas Regulation (RAR) sets out the criteria for the determination of the riparian protection and streamside protection enhancement areas in connection with development in riparian areas. A Riparian Areas Assessment (RAA) has been completed in addition to this Development Permit Application for the

SP000092



Site. Map 4 of the OCP shows the general locations of streams and water bodies within the Site based upon provincial TRIM data. The location of the watercourses on the Site are different and the mapping shown in the OCP and has been updated as part of the RAA process. A Section 11 approval has also been submitted to FrontCounter BC due to the former landowner's tree clearing and damage to the wetland and riparian areas of the Site. The Section 11 notification was submitted in order to complete restoration works this fall to prevent further sediment and erosion issues downstream.

Non-fish bearing streams and watercourses and watercourse ecosystems are also designated as Development Permit Areas and shown on Map 5c of the OCP.

2.3. TERRESTRIAL RESOURCES

2.3.1 General

The Site is located in the Georgia Puget Basin Ecoregion within the Nanaimo Lowlands Ecoregion. This Site lies within the Coastal Western Hemlock Very Dry Maritime (CWHxm2) Biogeoclimatic Subzone.

The Site is bounded to the south by Otter Point Road and rural developments, and regenerating forest to the west, north and east. Access to the Site is via Clark Road and Aythree Road from the west.

The Site has been cleared of most of the forest and the remaining patches are predominantly composed of second and third growth woodland. Age classes of forest types range from herbaceous (structural stage 2) to mature (structural stage 6).

The Site has several wetlands and watercourses located on it which have been severely impacted due to recent logging activities. In many cases, tree clearing has extended below the high-water mark. Of particular concern is the eastern outlet to a large wetland which flows into a tributary to King Creek (WSC 930-027900). The outlet channel has been entirely denuded of trees and shrubs, and the channel itself has been severely impacted. Consequently, flows are braided and unconfined in numerous areas resulting in extensive scour and the movement of sediments downstream. There are concerns that heavy rainfall combined with high volumes of outflow from the wetland will result in further degradation of the channel and heavy sediment loads entering the tributary to King Creek which is currently intact. In order to reinstate the watercourse a new channel will be constructed under a Section 11 notification approval.

The geological records for the area record the site to be underlain by Diamicton (till) comprising silty sand and gravels with frequent bedrock outcrops across the site. The surface topography is undulating with localized steep slopes relating to bedrock outcrops. Bedrock is recorded to be rocks belonging to the Metchosis Igneous Complex, comprising basaltic pillowed flows, hyaloclastic breccia, tuff massive basalt, rare limestone, subaerial amygdaloidal basalt flows and minor breccia of Paleogene age.

SP000092



WSP's site walkover generally confirmed the expected surficial conditions with numerous bedrock outcrops and occasional bluffs, especially around the waterbody in the central part of the site. Soil exposures were limited but where observed indicated dense brown silty sands and gravels.

A letter regarding steep slopes, with respect to the Otter Point OCP requirements, has been submitted under a separate cover. WSP does not envisage any significant impact to or from the steep slopes at the site related to the proposed development.

2.4. VEGETATION

2.4.1 Methods

2.4.1.1 Office Study

Prior to the field program a desktop study was completed to review available secondary information. The following were examined:

- 1:20,000 colour orthophotos (2017)
- TRIM mapping (1:20,000 scale)
- SEI mapping (1:20,000 scale).

In addition, the following websites were visited to collect data on sensitive ecosystems, record trees and rare vegetation species occurrence and soils:

- Capital Regional District's Natural Areas Atlas <https://maps.crd.bc.ca/Html5Viewer/?viewer=public>
- Ministry of Environment's Species and Ecosystems Explorer <http://www.env.gov.bc.ca/atrisk/toolintro.html>
- Sensitive Ecosystem Inventory http://www.env.gov.bc.ca/sei/van_gulf/index.html
- Wildlife Tree Stewardship Atlas <http://cmnmaps.ca/wits/>
- B.C. Big Tree Registry <http://bcbigtree.ca/>
- Soils of Southern Vancouver Island <http://sis.agr.gc.ca/cansis/publications/surveys/bc/bc44/index.html>

Potential Occurrence of Species of Conservation Concern

Species identified in the review either have/are:

- (1) COSEWIC status of Endangered, Threatened, or Special Concern or BC List status of Red (endangered or threatened) or Blue (special concern) (updated status as per BC CDC, 2018);
- (2) Endangered, Threatened, or Special Concern under the *Species At Risk Act* (SARA Schedule 1) (Government of Canada, 2016).

SP000092



2.4.1.2 Field Survey

The focus of the field survey was to determine the potential presence of rare and endangered vascular plants and plant communities, and to confirm the location of environmentally sensitive areas. Following a review of mapping and aerial photographs, a field survey was completed to determine vegetation composition. WSP visited the Site on May 4, 2018, at which time vegetation plots (approximately 10 m x 10 m) were established and examined. Figure 2 shows the location of the vegetation plots.

The following information was collected for each quadrat:

- Dominant tree species (primary and secondary canopy)
- Dominant tall and low shrub species
- Dominant herbs
- Aspect and gradient

Concurrent with the vegetation survey, the Site was examined for the occurrence of rare plants. Based on the timing of the survey a comprehensive plant inventory was not possible.

2.4.2 Results

The CWHxm2 subzone lies at mid to low elevations along the coast. Due to its wet and mild climate, forests contain a high degree of forest cover and structural diversity. In the CWHxm2 mesic sites are also dominated by Douglas-fir forests, but western hemlock takes on a dominating role as a regenerating conifer. Western redcedar is still present but in lower abundance. Oceanspray, baldhip rose and common snowberry are virtually absent, and grand fir, big-leaf maple and arbutus also have a much reduced occurrence. Salal still is the dominant shrub, however red huckleberry (*Vaccinium parvifolium*) becomes more common with increasing elevation.

A species list for vegetation typically occurring within the CWHxm is presented below in Table 1. Table 2 shows the plant species encountered during the 2018 field survey.

Table 1: Vegetation Typically Occurring within the Coastal Western Hemlock Very Dry Maritime Subzone (CWHxm)

Common Name	Latin Name
Arbutus	<i>Arbutus menziesii</i>
bigleaf maple	<i>Acer macrophyllum</i>
Douglas-fir	<i>Pseudotsuga menziesii ssp. menziesii</i>
grand fir	<i>Abies grandis</i>
red alder	<i>Alnus rubra</i>
shore/lodgepole pine	<i>Pinus contorta</i>
Western hemlock	<i>Tsuga heterophylla</i>
Western redcedar	<i>Thuja plicata</i>
Baldhip rose	<i>Rosa gymnocarpa</i>
devil's club	<i>Oplopanax horridus</i>
dull Oregon-grape	<i>Mahonia nervosa</i>
false azalea	<i>Menziesia ferruginea</i>
Labrador tea	<i>Ledum groenlandicum</i>

SP000092



Oceanspray	<i>Holodiscus discolor</i>
red huckleberry	<i>Vaccinium parvifolium</i>
Salal	<i>Gaultheria shallon</i>
Salmonberry	<i>Rubus spectabilis</i>
Bracken fern	<i>Pteridium aquilinum</i>
deer fern	<i>Blechnum spicant</i>
hairy cat's ear	<i>Hypochoeris radicata</i>
lady fern	<i>Athyrium filix-femina</i>
oak fern	<i>Gymnocarpium dryopteris</i>
skunk cabbage	<i>Lysichiton americanum</i>
sweet-scented bedstraw	<i>Galium triflorum</i>
sword fern	<i>Polystichum munitum</i>
three-leaved foamflower	<i>Tiarella trifoliata</i>
Twinflower	<i>Linnaea borealis</i>
vanilla leaf	<i>Achlys triphylla</i>
wall-lettuce	<i>Lactuca muralis</i>
coastal leafy moss	<i>Plagiomnium insigne</i>
electrified cat's tail moss	<i>Rhytidiadelphus triquetrus</i>
juniper haircap moss	<i>Polytrichum juniperinum</i>
lanky moss	<i>Rhytidiadelphus loreus</i>
Lichen	<i>Cladina spp.</i>
Oregon-beaked moss	<i>Kinbergia oregana</i>
palm tree moss	<i>Leucolepis menziesii</i>
red-stemmed feathermoss	<i>Pleurozium schreberi</i>
sphagnum moss	<i>Sphagnum spp.</i>
step moss	<i>Hylocomium splendens</i>

SP000092



Table 2: Vegetation Occurring on the Clark Road Site (May 2018)

Trees	
bigleaf maple	<i>Acer macrophyllum</i>
red alder	<i>Alnus rubra</i>
arbutus	<i>Arbutus menziesii</i>
Sitka spruce	<i>Picea sitchensis</i>
shore pine	<i>Pinus contorta</i>
Douglas-fir	<i>Pseudotsuga menziesii</i>
Garry oak	<i>Quercus garryana</i>
western redcedar	<i>Thuja plicata</i>
Shrubs	
saskatoon	<i>Amelanchier alnifolia</i>
hairy manzanita	<i>Arctostaphylos columbiana</i>
kinnikinnick	<i>Arctostaphylos uva-ursi</i>
Scotch broom	<i>Cytisus scoparius</i>
sala	<i>Caultheria shallon</i>
oceanspray	<i>Holodiscus discolor</i>
twinflower	<i>Linnaea borealis</i>
western trumpet honeysuckle	<i>Lonicera ciliata</i>
hairy honeysuckle	<i>Lonicera hispidula</i>
black twinberry	<i>Lonicera involucrata</i>
tall Oregon-grape	<i>Mahonia aquifolium</i>
dull Oregon-grape	<i>Mahonia nervosa</i>
falsebox	<i>Paxistima myrsinites</i>
stink currant	<i>Ribes bracteosum</i>
gummy gooseberry	<i>Ribes lobbii</i>
red-flowering current	<i>Ribes sanguineum</i>
red flowering currant	<i>Ribes sanguineum</i>
baldhip rose	<i>Rosa gymnocarpa</i>
thimbleberry	<i>Rubus parviflorus</i>
salmonberry	<i>Rubus spectabilis</i>
trailing blackberry	<i>Rubus ursinus</i>
Hooker's willow	<i>Salix hookeriana</i>
Pacific willow	<i>Salix lasiandra</i>
Scouler's willow	<i>Salix scouleriana</i>
red elderberry	<i>Sambucus racemosa</i>
hardhack	<i>Spiraea douglasii ssp. douglasii</i>
common snowberry	<i>Symphoricarpos albus</i>
evergreen huckleberry	<i>Vaccinium ovatum</i>
red huckleberry	<i>Vaccinium parvifolium</i>

SP000092



Herbs	
yarrow	<i>Achillea millefolium</i>
vanilla leaf	<i>Achlys triphylla</i>
pathfinder	<i>Adenocaulon bicolor</i>
bent grass	<i>Agrostis pallens</i>
early hairgrass	<i>Aira praecox</i>
sweet vernalgrass	<i>Anthoxanthum odoratum</i>
parsley	<i>Aphanes</i> sp.
big-leaved sandwort	<i>Arenaria macrophylla</i>
Vancouver ground cone	<i>Boschniakia hookeri</i>
harvest brodiaea	<i>Brodiaea coronaria</i>
California brome	<i>Bromus carinatus</i>
soft brome	<i>Bromus hordeaceus</i>
bald brome	<i>Bromus racemosus</i>
Columbia brome	<i>Bromus vulgaris</i>
common camas	<i>Camassia quamash</i>
bittercress	<i>Cardamine hirsuta</i>
small-flowered blue-eyed Mary	<i>Collinsia parviflora</i>
vari-leaved collomia	<i>Collomia heterophylla</i>
western coralroot	<i>Corallorhiza mertensiana</i>
hedgehog dogtail	<i>Cynosurus echinatus</i>
fragile fern	<i>Cystopteris fragilis</i>
California oat-grass	<i>Danthonia californica</i>
American wild carrot	<i>Daucus pusillus</i>
Menzie's larkspur	<i>Delphinium menziesii</i>
dusky fork moss	<i>Dicranum scoparium</i>
broad-leaved shootingstar	<i>Dodecatheon hendersonii</i>
blue wildrye	<i>Elymus glaucus</i>
small-flowered willowherb	<i>Epilobium minutum</i>
white fawn lily	<i>Erythronium oregonum</i>
western fescue	<i>Festuca occidentalis</i>
woodland strawberry	<i>Fragaria vesca</i>
wild strawberry	<i>Fragaria virginiana</i>
checker lily	<i>Fritillaria affinis</i>
cleaver	<i>Galium aparine</i>
sweet-scented bedstraw	<i>Galium triflorum</i>
dovefoot geranium	<i>Geranium molle</i>
rattlesnake plantain	<i>Goodyera oblongifolia</i>
dwarf rattlesnake plantain	<i>Goodyera repens</i>
Smooth alumroot	<i>Heuchera glabra</i>
small-flowered alumroot	<i>Heuchera micrantha</i>

SP000092



white hawkweed	<i>Hieracium albiflorum</i>
hairy cat's ear	<i>Hypochaeris radicata</i>
purple peavine	<i>Lathyrus nevadensis</i>
spring-gold	<i>Lomatium utriculatum</i>
little tarweed	<i>Madia exigua</i>
yellow monkey-flower	<i>Mimulus guttatus</i>
small-leaved montia	<i>Montia parvifolia</i>
wall lettuce	<i>Mycelis muralis</i>
goldenback fern	<i>Pentagramma triangularis</i>
plantain	<i>Plantago bigelowii</i>
seablush	<i>Plectritis congesta</i>
Kentucky bluegrass	<i>Poa pratensis</i>
licorice fern	<i>Polypodium glycyrrhiza</i>
sword fern	<i>Polystichum munitum</i>
juniper haircap moss	<i>Polytrichum juniperinum</i>
self-heal	<i>Prunella vulgaris</i>
bracken fern	<i>Pteridium aquilinum</i>
western buttercup	<i>Ranunculus occidentalis</i>
sheep sorrel	<i>Rumex acetosella</i>
Pacific sanicle	<i>Sanicula crassicaulis</i>
yerba buena	<i>Satureja douglasii</i>
broad-leaved stonecrop	<i>Sedum spathulifolium</i>
Wallace's selaginella	<i>Selaginella wallacei</i>
Cooley's hedge-nettle	<i>Stachys chamissonis</i>
broad-leaved starflower	<i>Trientalis latifolia</i>
common vetch	<i>Vicia sativa</i>
small fescue	<i>Vulpia microstachys</i>
meadow death-camas	<i>Zigadenus venenosus</i>
skunk cabbage	<i>Lysichiton americanus</i>
lady fern	<i>Athyrium filix-femina</i>
deer fern	<i>Blechnum spicant</i>
common cattail	<i>Typha latifolia</i>
Pacific water-parsley	<i>Oenanthe sarmentosa</i>
three-leaved foamflower	<i>Tiarella trifoliata</i>
emergent bur-reed	<i>Sparganium emersum</i>
yellow pond lily	<i>Nuphar polysepala</i>
buckbean	<i>Menyanthes trifoliata</i>
stinging nettle	<i>Urtica dioica</i>
false hellebore	<i>Veratrum viride</i>
Mosses and Lichens	
red bryum	<i>Bryum miniatum</i>

SP000092



wavy leaved cottonmoss	<i>Buckiella undulata</i>
reindeer lichen	<i>Cladina spp.</i>
cup lichen	<i>Cladonia spp.</i>
brook moss	<i>Dicranum scoparium</i>
step moss	<i>Hylacomium splendens</i>
Oregon beaked moss	<i>Kindbergia oregana</i>
palm tree moss	<i>Leucolepis menziesii</i>
dog lichen	<i>Peltigera sp.</i>
hair-cap moss	<i>Polytrichum juniperinum</i>
polytrichum moss	<i>Polytrichum piliferum</i>
rock moss	<i>Racomitrium elongatum</i>
hoary rock moss	<i>Racomitrium lanuginosum</i>
electrified cat tail moss	<i>Rhytidiadelphus triquetrus</i>
broom moss	<i>Trachybryum megaptilum</i>

2.4.3 Vegetation Communities

The following vegetation communities were observed on the Site.

2.4.3.1 Rock Outcrop (RO)

The rock outcrop ecosystem typically occurs on gentle to moderately steep slopes. This ecosystem is dominated by a mix of mosses and grasses growing over bedrock outcrops and often occurs in large open areas in association with other open type ecosystems such as Douglas-fir/Shore pine. This ecosystem is dominated by sweet vernal grass, rock moss, Wallace's selaginella, reindeer lichen and early hairgrass, with lesser amounts of timber oatgrass, broadleaf shooting star, common camas, harvest brodiaea, yarrow, spring gold, hedgehog dogtail, sea blush, hairy cat's ear and death camas. There are portions of five rock outcrops located in the central and north parts of the site.

2.4.3.2 Douglas-fir / Shore Pine – Cladina (DC)

The Douglas-fir/Shore pine - Cladina site series has a very dry soil moisture regime and a very poor to medium soil nutrient regime. The tree canopy is often interrupted because of the rock outcrops and pockets of shallow soil. Mature stands are dominated by Douglas-fir and shore pine. Arbutus is often present as a minor tree species. The shrub layer contains juvenile Douglas-fir, oceanspray, salal and dull Oregon-grape. Red huckleberry and baldhip rose are also present in minor amounts. The herb layer is sparse and consists primarily of twinflower, bracken, hairy cat's ear, sword fern and vanilla leaf. The moss/lichen layer is well represented and diverse and consists of step moss, Oregon-beaked moss, electrified cat's-tail moss, red-stemmed feathermoss, juniper haircap moss and reindeer lichen. This community type occurs in a mosaic with rock outcrops.

SP000092



2.4.3.3 Western hemlock/Douglas-fir - Kindbergia (HK)

The Western hemlock/Douglas-fir - Kindbergia site series has a moderately dry soil moisture regime and a very poor to medium soil nutrient regime. This site association occurs on gentle to moderate slopes in the middle slope position. Mature stands have a canopy cover that is continuous except for opening caused by rock outcrops and shallow soils. The tree layer is dominated Douglas-fir, usually with a component of shore pine and western redcedar. The shrub layer in mature stands is well developed, containing mainly salal and dull Oregon-grape with lesser amounts of red huckleberry, oceanspray and baldhip rose. The herb layer is less well developed is dominated by sword fern, twinflower, trailing blackberry, foamflower and white fawn lily. Oregon beaked moss is the predominant moss. Other species that often have high cover are step moss and electrified cat's-tail moss. Only remnants of this plant community are present on the Site; most of it has been logged.

2.4.3.4 Western redcedar - Foamflower (RF)

The Western redcedar - Foamflower plant community occurs in the vicinity of the two undisturbed tributaries to King Creek located in the north part of the property as well as remnants along the north end of the large wetland. The tree layer consists of a mix of coniferous and deciduous species including Douglas-fir, western redcedar, shore pine, Sitka willow, Pacific willow and red alder. The shrub layer consists of salmonberry, hardhack, common snowberry and red huckleberry. The herb layer consists of lady fern, sword fern, three-leaved foamflower and vanilla leaf. The moss layer is comprised of Oregon-beaked moss, step moss and electrified cat's-tail moss.

2.4.3.5 Wetland (WN)

There is a large Sitka sedge - Water-parsley marsh occurring on the center of the property. Plant species include cattails, Sitka sedge, Pacific water-parsley, yellow pond lily, buckbean and skunk cabbage. This wetland has been damaged due to logging up to the high-water mark, and piles of woody debris have been deposited into the marsh.

There is also a smaller hardhack swamp located at the headwaters of the northern King Creek tributary located in the northwest corner of the site. It consists of dense Douglas' spiraea with patches of slough sedge.

There are numerous small isolated wetlands with no inlet or outlet channels scattered throughout the logged area. Due to the extensive disturbance of the site it was not possible to determine the wetland classification at these locations.

2.4.3.6 Disturbed (DI)

The majority of the site is disturbed as a result of logging activities. Regenerating vegetation ranges from herbaceous (structural stage 2) to tall shrub (structural stage 3b). In addition, there are numerous clearings and logging roads.

SP000092



2.4.4 Sensitive Ecosystems

According to the CRD Atlas there are three types of sensitive ecosystem polygons present within the study area. Based on WSP's site survey it was determined that there are actually four sensitive ecosystems present on the Site; woodland, terrestrial herbaceous, riparian and wetland (Figure 3). Those ecosystem polygons shown as woodland on the CRD Atlas are actually woodland-terrestrial herbaceous mosaics.

2.4.5 Rare and Endangered Vascular Plants and Plant Communities

Rare vascular plants occurring within the South Island Forest District listed by the Conservation Data Center (CDC) are shown in Appendix A. As of October 2018, 62 plant species were present on the CDC list, including 26 red-listed species and 36 blue-listed species.

Rare and endangered vascular plant species are listed by the Conservation Data Center (CDC), which categorizes them as either red listed or blue listed. Red-listed species include species that are extirpated in British Columbia, in danger of becoming extirpated, or threatened. Blue-listed species are species that are sensitive or vulnerable to human activity or habitat encroachment. The CDC now makes available from its website a search engine to determine whether there are any element occurrence polygons present on the property. These polygons indicate the expected area in which a rare plant may be found. There were no polygons found in the immediate vicinity of the property.

There were no rare vascular plants observed during the May 2018 survey, although a comprehensive rare plant survey was not completed. The following rare plants were documented by the CDC to occur in the general area. Common bluecup, slimleaf onion and heterocodon have some possibility of occurring on the site in the rock outcrop areas.

Table 3: Rare Plant Species Known to Occur in Close Vicinity of the Project Area

Plant Species		Status	Location and Date of Observation	Habitat
Common Name	Latin Name			
Common bluecup	<i>Githopsis speculoroides</i>	S2, red	1986 - Sooke Hills	Palustrine, temporary pool
Slimleaf onion	<i>Allium amplexans</i>	S3, blue	1961 - Otter Point	Marine, coastal bluffs
Heterocodon	<i>Heterocodon rariflorus</i>	S3, blue	1978 - Young Lake	Terrestrial, grassland herbaceous
Banded cord moss	<i>Entosthodon fascicularis</i>	S2S3, blue	1969 - Eliza Point	Terrestrial, lowland

The CDC reports the occurrence of 24 rare and endangered plant communities in the South Island Forest District within the CWHxm2; 10 are red-listed, 13 are blue-listed, and one is yellow listed (Appendix A). The following rare plant communities were observed on site:

- Douglas-fir -Shore pine / Cladina (red-listed) - on rock outcrops

SP000092



- Western redcedar / Three-leaved foamflower (blue-listed) – in riparian areas
- Western hemlock / Douglas-fir - Kindbergia (red-listed) – only present in remnants due to logging

2.4.6 Significant Trees

The CDC does not have any records from the *B.C. Register of Big Trees* of “record” occurring within the Site and no large diameter trees were noted on the Site due to the recent logging.

2.5. WILDLIFE

2.5.1 Methods

2.5.1.1 Desktop Study

The following information was reviewed:

- TRIM mapping (1:20,000 scale);
- Target species (species to be studied with a particular focus on species at risk), including habitat use, feeding behavior, and breeding behavior;
- Mapping for the study site and area (i.e. air photo, 1:15,000 scale and topographic mapping, 1:20,000 forest cover maps, 1:20,000 scale TRIM mapping) and aerial photographs to identify potential habitat or target species.

This information was used to assist in aerial photograph interpretation of vegetation, drainages, landform and any other prominent features located in the Site. Maps and aerial photographs reviewed included ortho-rectified aerial

The following webpages were also visited to collect relevant wildlife data for the subject site:

- BC CDC Species and Ecosystem Explorer (BC CDC, 2018) - Search Criteria: Search Type: Animal and Capital Regional District (CRD) (restricted to Red, Blue, and legally designated species); and Coastal Western Hemlock Biogeoclimatic zone;
- iMapBC (DataBC, 2018);
- Conservation Data Centre (CDC) iMap <http://maps.gov.bc.ca/ess/sv/cdc/>
- E-Fauna (E-Fauna BC, 2018);
- eBird (Audubon and Cornell Lab of Ornithology, 2018);
- British Columbia Great Blue Herons Atlas (Great Blue Heron Management Team, 2018)
- Sensitive Ecosystem Inventory http://www.env.gov.bc.ca/sei/van_gulf/index.html

SP000092



- Wildlife Tree Stewardship Atlas <http://cmnmaps.ca/wits/>
- B.C. Big Tree Registry <http://bcbigtree.ca/>
- Species-specific COSEWIC and SARA documents

No publicly available or masked Mapped Known Occurrences of Species at Risk occur in the general area.

2.5.1.2 Field Study

Encounter transects were conducted throughout all vegetation communities within the Site boundaries with a focus on verifying presence and potential use by breeding birds, including raptors, as well as mammals, amphibians, and invertebrates. The wildlife surveys consisted of:

1. Breeding Bird Point Count Stations
2. Wildlife Tree and Nest Survey
3. Incidental Sightings of Wildlife and sign
4. Assessment of habitat value

Breeding Bird Point Count Stations

The aim of this inventory was to record all forest birds present within the Site and specifically to identify the presence or habitat potential for any species of conservation concern known to occur in the region.

The field biologist established point count stations approximately 400 m apart and recorded all birds seen and heard for 5 minutes within a 100 m radius as per RISC standards (RIC, 1999) at each station.

Wildlife Tree and Nest Survey

The Site was traversed in order to determine if there were any wildlife trees of high significance or nest trees that might be protected permanently under Section 34 of the Wildlife Act. No wildlife trees or nests were located. A search of the Wildlife Tree Stewardship community atlas noted multiple Bald Eagles nests in the region, however there were located off Site on the coastline.

Incidental Survey

The purpose of the ground survey was to:

1. Identify any areas of potential habitat use;
2. Record observations of any bird, mammal, herptile or invertebrate presence (incidental sightings).
3. Wildlife activity was described by detections of sign such as prey remains, regurgitated pellets, whitewash, feathers, old and/or new open nests, cavity nests or roosts, foraging tree cavities, dens, burrows, browse, tree scratches, scat, fecal droppings, tracks, and trails.

Habitat Assessment

A habitat assessment was undertaken to rate the suitability of the different vegetation communities for the major species guilds. Specific environmental variables noted included the presence of snags, coarse woody debris, surface complexity, forage

SP000092



potential, cover and travel corridor potential. The removal of the majority of tree cover on the Site has changed the structural stage of the forest to an earlier seral stage. The reduction of the amount of tree cover on the Site has therefore altered the value of the habitat for some species in the Project area.

2.5.2 Results

2.5.2.1 Breeding Birds

Based on habitat features present songbirds form the largest part of the area's bird population. The recently logged areas are currently a thick diverse short shrub layer (structural stage 3a) which can attract use by many songbird species. As the forest regenerates the species assemblage will evolve with the later seral stages. The mature forest habitats provide the highest levels of structural diversity, and therefore are expected to possess the highest songbird densities however are only retained in small patches on the landscape.

Table summarizes all bird species recorded during the field survey both on the point count surveys and incidentally, and additional species that could be present based on the results of a secondary data review for the area. A total of 24 songbird species were observed on the Site during the May 2018 visit, none of which are species of conservation concern. During the desktop review of online inventories on the Site or nearby with similar habitat, an additional 55 species were shown on eBird and iMap as being potentially present.

Table 4: Summary of Bird Observations in and near the Project Area

Species	Detected during WSP 2018 site visit	Other sources of detections in area
Birds		
American robin	√	
Anna's hummingbird	√	
California quail	√	
Stellar's jay		eBIRD
Common raven		eBIRD
Northern flicker		eBIRD
Downy woodpecker	√	
Pileated woodpecker		eBIRD
Hairy woodpecker	√	
Red-breasted sapsucker		eBIRD
Pine siskin		eBIRD
Red-breasted nuthatch	√	
Brown creeper	√	
Golden-crowned kinglet		eBIRD
Ruby crowned kinglet		eBIRD
Spotted towhee	√	
Pacific wren		eBIRD
Bewick's wren	√	
Chestnut-backed chickadee	√	
Brown creeper		eBIRD
Bushtit		eBIRD

SP000092



Species	Detected during WSP 2018 site visit	Other sources of detections in area
Red-winged blackbird	√	
Olive-sided flycatcher	√	eBIRD
Dark-eyed junco	√	
Canada goose	√	
Turkey vulture		eBIRD
Bald eagle		eBIRD
House finch		eBIRD
Purple finch		eBIRD
Hermit thrush		eBIRD
Varied thrush		eBIRD
Swainson's thrush		eBIRD
Pacific-slope flycatcher	√	
Willow flycatcher		eBIRD
Olive-sided flycatcher		eBIRD
Western wood-peewee		eBIRD
American goldfinch		eBIRD
Black-headed grosbeak	√	
Evening grosbeak		eBIRD
Red crossbill		eBIRD
Cedar waxwing		eBIRD
Townsend's solitaire		eBIRD
European starling		eBIRD
Cassin's vireo		eBIRD
Warbling vireo		eBIRD
Hutton's vireo		eBIRD
Mourning dove	√	
White-crowned sparrow		eBIRD
Song sparrow		eBIRD
Savannah sparrow		eBIRD
Chipping sparrow		eBIRD
House sparrow		eBIRD
Violet-greened swallow		eBIRD
Tree swallow		eBIRD
Brown-headed cowbird		eBIRD
Orange-crowned warbler	√	
Rufous hummingbird		eBIRD
Yellow-rumped warbler	√	
Yellow warbler	√	
Black-throated grey warbler		eBIRD
Wilson's warbler	√	
Townsend's warbler		eBIRD
Common yellowthroat		eBIRD
Western tanager		eBIRD
Ruffed grouse		eBIRD
Band-tailed pigeon		eBIRD
Spotted sandpiper		eBIRD
Common nighthawk		eBIRD
American kestrel		eBIRD
Red-tailed hawk	√	

SP000092



Species	Detected during WSP 2018 site visit	Other sources of detections in area
Great-blue heron	√	
Northwestern crow	√	
Cooper's hawk		eBIRD
Sharp-shinned hawk		eBIRD
Red-tailed hawk		eBIRD
Northern pygmy owl, <i>swarthi</i> spp.		eBIRD
Northern goshawk, <i>laingi</i> spp.		eBIRD
Barred owl		eBIRD
Great-horned owl		eBIRD

No nests of species continuously protected under Section 34 of the B.C. *Wildlife Act* (e.g. bald eagle; great blue heron) were found on the property. The closest active bald eagle nests are located along the coastline beside Highway 14 (Wildlife Tree Stewardship, 2018). Although not observed on the Site, there is potential for the establishment of a great blue heron colony near the Site (Great Blue Heron Management Team, 2018).

A nest survey was not completed as part of the wildlife assessment. Bird nesting season typically begins in early March with owls and passerines starting later. Passerine singing on the breeding territories had begun before the site visit occurred (Bird Studies Canada, 2018). No surveys for other bird guilds aside from passerines (songbirds) were completed.

2.5.2.2 Wildlife Tree

No wildlife trees were detected.

2.5.2.3 Incidental Survey

Incidental detections of mammals, herptiles from the Site were recorded (Table 5).

Table 5: Summary of Mammal, Herptile and Invertebrate Observations in the Project Area

Species	Type of observation during WSP 2018 site visit
Mammals	
Black-tailed Deer	sign
Eastern Cottontail	sign
Black bear	sign
Cougar	sign
Wolf	sign
Elk	sign
Herptiles	
Pacific treefrog	visual

Other species that have potential of occurring on the Site include small mammals such as bats and furbearers such as mink and marten. The Site likely supports a variety of birds, terrestrial and aquatic salamanders, molluscs and butterflies, damselflies and dragonflies.

SP000092



2.5.2.4 Species of Conservation Concern

This section has separated wildlife species into taxonomic groups due to the number of potential species that could be present.

2.5.2.4.1 Herptiles

The Northern Red-legged frog was detected as a tadpole in a wetland on Site and the desktop study identified two other amphibian species of conservation concern that could be present in the Site (Table 6).

Table 6: Amphibian Species of Conservation Concern Potentially Occurring within the Site.

English Name	Scientific Name	COSEWIC	BC List	SARA
Western Toad	<i>Anaxyrus boreas</i>	SC	Yellow	SC
Wandering Salamander	<i>Aneides vagrans</i>	SC	Blue	SC
Northern Red-legged Frog	<i>Rana aurora</i>	SC	Blue	SC

Notes: COSEWIC = Committee on the Status of Endangered Wildlife in Canada; BC List = BC Conservation Data Centre Status; SARA = Species At Risk Act; SC = Special Concern.

2.5.2.4.2 Birds

The desktop study identified Eight species that could be present at the Site, however no detections of the Western screech owl, or *kennicottii* subspecies were noted nearby during the secondary review of detections (Table). The recent logging of the majority of the Site has altered the habitat suitability and it is only currently suitable for potential species associated with a shrubby habitat and small patches of woodland. The current structural stage of short shrub dominates the Site except for the remnant woodland, rock outcrop mosaic patches. The habitat onsite currently would likely be suitable for species of conservation concern such as the Olive-sided flycatcher, the common nighthawk, and evening grosbeak.

Table 7: Bird Species of Conservation Concern Potentially Occurring within the Site.

English Name	Scientific Name	COSEWIC	BC List	SARA
Northern Goshawk, <i>laingi</i> subspecies	<i>Accipiter gentilis laingi</i>	T	Red	T
Great Blue Heron, <i>fannini</i> subspecies	<i>Ardea herodias fannini</i>	SC	Blue	SC
Common Nighthawk	<i>Chordeiles minor</i>	SC	Yellow	T
Evening Grosbeak	<i>Coccothraustes vespertinus</i>	SC	Yellow	
Olive-sided Flycatcher	<i>Contopus cooperi</i>	SC	Blue	T
Northern Pygmy-owl, <i>swarthi</i> subspecies	<i>Glaucidium gnoma swarthi</i>		Blue	

SP000092



Western Screech-Owl, <i>kennicottii</i> subspecies	<i>Megascops kennicottii kennicottii</i>	T	Blue	T
Band-tailed Pigeon	<i>Patagioenas fasciata</i>	SC	Blue	SC

Notes: COSEWIC = Committee on the Status of Endangered Wildlife in Canada; BC List = BC Conservation Data Centre Status; SARA = Species At Risk Act; E = Endangered; T = Threatened; SC = Special Concern.

2.5.2.4.3 Mammals

Five mammal species were identified in the desktop study that could be present on the Site (Table). As with the birds the loss of mature and older trees on site has reduced the sites current suitability for bat species. Roosevelt elk may use the area for foraging and the American water shrew may use the watercourses on Site however as with the bats the removal of riparian cover of the wetland and watercourses has reduced the habitat suitability for the shrew.

Table 8: Mammal Species of Conservation Concern Potentially Occurring within the Site.

English Name	Scientific Name	COSEWIC	BC List	SARA
Roosevelt Elk	<i>Cervus elaphus roosevelti</i>		Blue	
American Water Shrew, <i>brooksi</i> spp.	<i>Sorex navigator brooksi</i>		Blue	
Townsend's Big-eared Bat	<i>Corynorhinus townsendii</i>		Blue	
Keen's Myotis	<i>Myotis keenii</i>	DD	Blue	
Little Brown Myotis	<i>Myotis lucifugus</i>	E	Yellow	E

Notes: COSEWIC = Committee on the Status of Endangered Wildlife in Canada; BC List = BC Conservation Data Centre Status; SARA = Species At Risk Act; E = Endangered; DD = Data Deficient.

2.5.2.4.4 Invertebrate Species

Multiple invertebrate species occur throughout the habitat of coastal BC; some of which are of conservation concern and could occur on the Site given the available habitat (Table). However, anthropogenic activity is continually reducing the amount of available habitat throughout their range. Many snail and slug species prefer the moist forests in the region with leaf litter and decaying coarse woody debris which has now been altered given the removal of most of the tree canopy. Dragonflies and damselfies require aquatic habitat for breeding however can use upland habitat during the remainder of the season and butterflies and moths use a variety of different habitat types and can be tied to a particular host plant.

SP000092



Table 9: Potential Invertebrate Species Occurring within the Site.

English Name	Scientific Name	COSEWIC	BC List	SARA
Prairie Fossaria	<i>Galba bulimoides</i>		Blue	
Dromedary Jumping-slug	<i>Hemphillia dromedarius</i>	T	Red	T
Western Pondhawk	<i>Erythemis collocata</i>		Blue	
Rocky Mountain Physa	<i>Physella propinqua</i>		Blue	
Sunset Physa	<i>Physella virginea</i>		Blue	
Meadow Rams-horn	<i>Planorbula campestris</i>		Blue	
Blue-grey Taildropper	<i>Prophysaon coeruleum</i>	T	Blue	E
Monarch	<i>Danaus plexippus</i>	E	Blue	SC
Johnson's Hairstreak	<i>Callophrys johnsoni</i>		Red	
Moss' Elfin, <i>mossii</i> subspecies	<i>Callophrys mossii mossii</i>		Blue	
Common Wood-nymph, <i>incana</i> subspecies	<i>Cercyonis pegala incana</i>		Red	
Common Ringlet, <i>insulana</i> subspecies	<i>Coenonympha tullia insulana</i>		Red	
Silver-spotted Skipper	<i>Epargyreus clarus californicus</i>		Red	
Western Branded Skipper, <i>oregonia</i> subspecies	<i>Hesperia colorado oregonia</i>	E	Red	
Greenish Blue, <i>insulana</i> subspecies	<i>Plebejus saepiolus insulana</i>	E	Red	E
Clodius Parnassian subspecies	<i>Parnassius clodius claudianus</i>		Blue	
Audouin's Night-stalking Tiger Beetle	<i>Omus audouini</i>	T	Red	T

SP000092



English Name	Scientific Name	COSEWIC	BC List	SARA
Sinuus Snaketail	<i>Ophiogomphus occidentis</i>		Blue	
Blue Dasher	<i>Pachydiplax longipennis</i>		Blue	
Autumn Meadowhawk	<i>Sympetrum vicinum</i>		Blue	

Notes: COSEWIC = Committee on the Status of Endangered Wildlife in Canada; BC List = BC Conservation Data Centre Status; SARA = Species At Risk Act; E = Endangered; T = Threatened; SC = Special Concern.

2.5.3 Habitat Assessment

The property is north of Otter Point Road and bounded by rural land development and forestry operations for the surrounding of the perimeter. There were five general habitat types (vegetation communities) surveyed during the wildlife field survey not including the large area of disturbed habitat which likely overlapped with all 5 types present. These areas and the habitat they provide are briefly described below. Forest regeneration in the CWH Biogeoclimatic zone is usually rapid and forest openings can quickly develop a dense canopy of young trees with sparse understory vegetation. There was an absence of large coarse woody debris and wildlife trees on the Site due to the recent logging.

2.5.3.1 Rock (RO)

Rock outcrops (Terrestrial Herbaceous SEI) are a habitat type that provides a thermal and foraging resource to a variety of wildlife species in the area. Borders of south facing rock outcrops provide an optimal foraging habitat to Roosevelt elk (Quayle and Brunt, 2003). Rock outcrops are commonly surrounded or interspersed with forest and in this case the rock outcrops are surrounded by forest. Because of their exposed nature, rock outcrops are often used as resting/basking spots for ungulates and reptiles. Some species (e.g. deer) seem to prefer them as travel corridors. They are also providing vantage points from which larger mammals and birds of prey can hunt from. Cougar scat was detected on one of the rock outcrops. The microsites of rock outcrops can provide specialized habitats for some invertebrates.

2.5.3.2 Dry Coniferous Forest (DC)

The dry conifer dominated forest which is the Douglas-fir / shore pine - Cladina (Woodland SEI) vegetation community also present on the Site was mature forest and is the forest that was surrounding the rock outcrops on site. This forest has a moderately open to open canopy with a well-developed shrub understory, minimal herb layer due to its dry and poor soil nutrient levels but has a diverse and dense moss layer. Douglas-fir, and shore pine are the dominant tree species. This forest provides habitat for songbirds hawks, and amphibians. The forest around a rock outcrop can provide vantage points from which larger mammals and birds of prey can hunt from.

SP000092



Mature areas of this forest have a more varied and complex canopy and multiple layers of vegetation. Larger trees, multiple tree species, vertical layers and canopy openings allow for a wider diversity of shrub species in the understorey including fruit-bearing shrubs which increases the foraging potential of the areas.

2.5.3.3 Mesic Conifer Forest (HK)

The mesic mixed forest (Western Hemlock / Douglas-fir - Kindbergia vegetation community) is also present on the Site as a mature forest. This forest was located on the mid slopes of the Site however due to the recent logging was only present in remnants of mature forest. This forest has an open canopy with a well-developed shrub understorey. The tree layer is dominated Douglas-fir, usually with a component of shore pine and western redcedar. The shrub layer in mature stands is well developed, and the herb layer is well developed. Deer forage and cover values are generally quite high. The habitat is less suitable for amphibians and small mammals due to its dryness. The structural simplicity of even-aged fir stands resulted in a lower rating for songbird suitability. An abundance of legacy snags and large woody debris if present can provide good cover habitat for foraging and nesting habitat for woodpeckers.

2.5.3.4 Riparian Forest (RF)

The riparian forest (Western redcedar - foamflower vegetation community) is a wet mixed forest also present as a mature forest and is located near the two unnamed disturbed tributaries to King Creek in the north part of the property as well as remnants around the north end of the large wetland. The characteristic features of a functioning riparian area usually include a well-developed shrub and herb layer, a significant deciduous tree component, and abundant woody debris. They provide moist refuges for amphibians that require aquatic environments because of the high soil moisture content and woody debris. This habitat is of high ecological significance for small mammals due to its proximity to water, high herbage values and abundant woody debris. Riparian habitats attract considerable wildlife use as foraging areas, nesting areas and movement corridors. They provide moist refuges for both lentic and pond-breeding amphibians because of the high soil moisture content and woody debris. During the winter and growing season this habitat along the coast is important to Roosevelt Elk. The shrub layer present in the riparian area will provide nesting cover for many riparian breeding species. Herbage and berry production are generally high in this habitat type. The more diverse canopy and well-developed shrub layer provide a structural complexity that is attractive to breeding songbirds.

2.5.3.5 Wetland (WN)

The wetlands on the Site are of two different classifications however as a whole wetlands provide high value habitat to many species. Riparian habitat is the preferred habitat of many bird species. The shrub layer present in the riparian area will provide nesting cover for many riparian breeding species. Herbage and berry production are generally high in this habitat type. The more diverse canopy and well-developed shrub layer provide a structural complexity that is attractive to breeding songbirds. This wetland would provide some foraging habitat for owls, because of the abundance of their prey, frogs and small mammals.

SP000092



2.5.3.6 Disturbed (DI)

The majority of the site is disturbed as a result of logging activities. Regenerating vegetation ranges from herbaceous (structural stage 2) to tall shrub (structural stage 3b). In addition, there are numerous clearings and logging roads. They are generally low-quality habitats, although they possess fairly high herbage values and cover habitat for some bird and small mammal species. Native and introduced herbs and shrubs are present. The main species present were salal, and trailing blackberry, with salmon berry in the moister areas. Invasive shrubs such as Scotch broom and Himalayan blackberry provide some food and cover values for small wildlife.

2.5.4 Wildlife Ratings

The habitat ratings for the above-mentioned species groups and habitat types are presented in Table 10 and Table 1.

SP000092



Table 10: Habitat Values for Selected Vertebrate Species/Species Groups

Habitat Grouping	Relative Importance to Species / Species Group						Overall Wildlife Rating
	Deer	Furbearers ¹	Small Mammals ²	Herptiles ³	Woodpeckers	Songbirds	
Riparian forest (RF)	High	Moderate to High	High	Moderate to High	Moderate to High	High	Moderate to High
Wetland (WN)	High	Moderate to High	High	Moderate to High	Moderate	High	Moderate to High
Mesic conifer dominated forest (HK)	Low	Moderate	Low	Moderate to High	High	Moderate	Moderate
Dry coniferous forest (DC)	Low to Moderate	Low	Moderate	Low	Moderate	Moderate	Moderate
Rock outcrop (RO)	Moderate	Low	Low	Low to Moderate	Low	Low	Low
Disturbed (DI)	Low to Moderate	Low to Moderate	Moderate	Low	Low	Moderate	Low to Moderate

Notes:
¹ "Furbearers" is a generalized term, which includes raccoons, mustelids, Eastern cottontails and red squirrels.
² "Small Mammals" include shrews, mice and voles native to Vancouver Island.
³ "Herptiles" is a term given to the combined grouping of amphibians with reptiles.

Table 11: Summary of Values in Habitat Types

Habitat Grouping	Forage Production			Snag Abundance	Coarse Woody Debris	Surface Complexity	Hiding Cover	Travel Corridor Potential
	Browse	Herbage	Berries					
Riparian forest (RF)	Low	Low	Low to Moderate	Moderate	Moderate to High	Moderate	Moderate to High	Moderate
Wetland (WN)	High	Moderate	Low	Low to Moderate	Moderate	Low	High	High
Mesic conifer dominated forest (HK)	Low	Low	Low to Moderate	Moderate	Low to Moderate	Low to Moderate	Moderate	Moderate

SP000092



Dry conifer dominated forest (DC)	Moderate	Moderate	Moderate	Moderate to High	Moderate	Moderate to High	Moderate to High	Moderate to High
Rock outcrop (RO)	Low	Low	Low	Low to Moderate	Low	Moderate to High	Moderate	Low
Disturbed (DI)	Low to Moderate	Low to Moderate	Low to Moderate	Low	Low	Low	Low to Moderate	Low

SP000092



2.6 AQUATIC RESOURCES

The Site has several wetlands and watercourses located on it which are part of the King Creek watershed (WSC 930-027900). A small portion of the King Creek mainstem is located in the northeast portion of the property. It flows in a southeast orientation across the property, and then a further 2.95 km to the southeast and then the south-southwest before discharging into the Pacific Ocean in the vicinity of 8000 West Coast Road.

The headwaters of two tributaries to King Creek are present on the site. The northern tributary which flows across the center of the site in an east-southeast direction has not been logged and the riparian setback has been retained. The upper reach of the watercourse consists of a spiraea swamp and it has a gentle gradient (3%). The lower reach is a cascade-pool stream with an average channel width and gradient of 6 m and 10%, respectively. Substrate in the upper reach is primarily fines, while the lower reach consists of small and large cobbles and boulders.

A linear wetland located to the south and its associated outlet channel which flows into this tributary have been severely impacted due to recent logging activities undertaken by the previous property owners. In many cases, tree clearing has extended to the high-water mark. The outlet channel has been entirely denuded of trees and shrubs and the channel itself has been severely impacted. Consequently, flows are braided and unconfined in numerous areas resulting in extensive scour and the movement of sediments downstream.

Another tributary is located to the south of the linear wetland. The CRD Atlas and the Ministry of Environment Fish Habitat Wizard interactive maps show this tributary as the outlet to the wetland, but this is not correct. It is possible that this watercourse once drained the wetland but there have been extensive earthworks associated with historic road construction which prohibits flow in this direction. Currently, the watercourse starts approximately 150 m to the southeast of the wetland.

There is no data available regarding fish distribution in King Creek and a comprehensive fisheries inventory has not been completed on site.

SP000092



3. PROPOSED DEVELOPMENT PLAN

WSP understands that the proposed development comprises an initial creek restoration project followed by the construction of an access road that will service approximately ten large acreage residential lots. The construction aggregate to construct the road embankments, pavement, house driveways and the development pads within the lots will be sourced from within the site through a program of rock blasting and aggregate production using a crusher.

Clean fill will be brought in order to restore the damage to the creek and to complete the landscaping along the proposed road sides. Further detail is found in the Sections below. Extent of clean fill required for the restoration of the creek and landscaping of the road embankments is shown in Appendix E. The quantity of clean fill required for the restoration is approximately 15,000 - 20,000 cubic metres, and will cover an area of approximately 2 hectares to an average depth of 1.0 metre. Any soils not required for the restoration works will be stockpiled on site for future use as top dressing for road fill slopes. Best Practices will be employed for erosion and sediment control for the clean fill placement and stock piles.

3.1 Creekside Environmental Works

In order to restore the outlet creek that leads eastwards from the wetland it is proposed that a number of shallow terraces be constructed to provide large level riparian areas filled with clean imported fill material with the aim of improving the riparian habitat and stabilizing the channel. A geotechnical design for the terraces has been provided to the client previously that uses site sourced rock to create a series of small retaining walls/shallow terraces with an overall site angle in the order of 2H:1V which should be globally under both static and dynamic conditions. WSP Geotechnical will remain involved during the construction phase to review construction practices and ensure that the geotechnical recommendations have been complied with.

3.2 Site Access Road

The development proposal for the Site shows one road running approximately east-west through the site that will allow access to all lots. The rock material that will be used to construct the road is to be sourced from a number of rock outcrops across the site. General shotrock will be used as bulk fill to reach sub-grade and a rock crusher will be used on site to produce various aggregate grades suitable for the base gravels for pavement construction.

For the bulk fills the shotrock should comprise clean durable angular rock, well graded and 300 mm down. The shotrock should be placed on a geotechnically approved

SP000092



subgrade in loose lifts no thicker than 450 mm and thoroughly compacted using a 10-ton steel drum vibratory roller with at least six passes in each direction.

For preliminary purposes the pavement gravels will likely be required to meet MMCD standards, however this should be confirmed by the Civil Engineer (Westbrook) prior to the specifications being produced. Base gravels should be placed in lift thicknesses commensurate with the compaction plant being used and should be compacted to minimum 95% Modified Proctor Maximum Dry Density.

The embankment sides and shoulder will be landscaped with imported clean soils the volume of soils required along the road will be dependent on the thickness of rock fill required to achieve the civil design grades.

Road stormwater will be managed using road side ditches and/or bioswales.

3.3 Acreage Lots

WSP understands that the development will only create the service road up to the lot boundaries and that any development within the lots will be undertaken by the purchaser. WSP understands that the lots will have no hard stormwater or sewer connections and that they will be serviced via septic fields and storm to ground systems. Any geotechnical requirements for the lot development will need to be addressed by the lot owner and their geotechnical engineer. WSP understands that a certain volume of the clean imported fill will be used to landscape the lots.

SP000092



4. BEST MANAGEMENT PRACTICES

4.1 WILDLIFE MANAGEMENT PLAN

The following wildlife and general management guidelines are intended to act as a planning tool and a way to mitigate impacts from a development plan to the adjacent retained habitat.

4.1.1 GENERAL MITIGATION RECOMMENDATIONS

For the site it is recommended that:

- If possible for night lighting, use low-pressure sodium lights and install them at a height and angle that will minimize light and glare impacts onto the adjacent forest habitat, as these lamps will be less attractiveness to night-flying insects and reduce light disturbances to nocturnal animals;
- Implement a sediment and erosion control plan pre-construction;
- Do not leave open garbage cans out, especially at night when opportunists are most active, as this would encourage opportunists such as raccoons and support populations above that found in the wild.
- Give preference to native species in landscape planting. Landscape planting using exotic species is of little value to wildlife and serves to reduce the biodiversity of the area, especially with the significant polygons in the area.

If the construction is to occur during the dry season (summer period), before grading or using heavy construction equipment, the ground should be sprayed with water which will reduce the amount of dust released into the air;

- During construction activities, hydroseeding and other planting efforts should utilize indigenous vegetation, preferably indigenous species already existing in the area. Salvage any plants to be removed and replace them in areas where they would be of benefit. If possible, seed for planting should be obtained from local sources. Appropriate indigenous seed mixes should be used for hydroseeding. Conscientious hydroseeding will prevent the spread of, and introduction of, exotic species.

4.1.2 RAPTOR AND BREEDING BIRD MANAGEMENT PLAN

General recommendations for the retention and development of breeding passerine habitat, not specific to any species, should include the following where possible:

SP000092



- Encourage the placement of nest boxes in areas throughout the area post-construction to benefit cavity nesters (i.e. red-breasted nuthatch, Bewick's wren, woodpeckers, and the chestnut-backed chickadee), and along open, primary successive vegetated growth for cavity nesting birds (i.e. swallows, and Bewick's wrens);
- Where possible, retain natural corridors for wildlife movement and replant areas devoid of vegetation with native species of shrubs and trees to allow contiguous corridor travel and create safety habitat for birds during the breeding season and during the migration seasons (spring and fall);
- Avoid forest clearing during the nesting period to prevent bird-nest abandonment (April-August) for bird species covered under the *Migratory Bird Convention Act*. Where possible, clearing should be done before or after this period;
- Avoid the use of pesticides in the area, post-construction, to control weeds.

A general raptor management approach for the site should include the following:

- Where possible, the prohibition of site construction or maintenance around any identified, active raptor nests from February through to late July. No active raptor nests have been observed on site;
- The retention of any potential roost trees in the site along the edges of retained or created trails adjacent to the study site boundary. These should be maintained primarily in relatively large reserve patches or areas of intact forest adjacent to the site;
- Where possible, along the edges of the development, the retention of a selection of stand structural elements, such as large green trees, snags, logs on the forest floor, and canopy gaps. Older green trees should have structural characteristics such as cracks and holes in the bole where limbs have been shed. Snags that are retained should have cracks, bird holes and hollow interiors or should have the potential to develop these characteristics;

4.1.3 AMPHIBIAN MANAGEMENT PLAN

The following general recommendations should be taken into consideration and implemented where possible to reduce potential impacts to amphibians:

- Post-development, avoid the use of pesticides. Spot treatments with herbicides may be used in exceptional circumstances (e.g., noxious weeds) where it can be demonstrated that the herbicide will not be harmful to the herpetofauna habitat; and,
- Maintain natural wildlife corridors for dispersal.

SP000092



4.1.4 SMALL MAMMAL MANAGEMENT PLAN

The following mitigation measures should be implemented where possible to reduce potential impacts to small mammals and sustain this food source for raptors and large mammals:

- Post-development, allow the remaining protected habitat to provide insects, not only from the forest but from the watercourse. This means protecting the small microclimates can be sustained to favor foraging areas for small mammals;
- Retain, where possible, the coniferous and mixed forest areas (i.e. study site perimeter habitat) that have well-developed canopy cover and an abundance of coarse woody debris necessary for microclimate protection and cover;
- Retain, in the forested, loose bark trees and coarse woody debris;
- Maintain connective corridors between vegetation units and core forested areas surrounding the study site;
- Where possible, retain areas of dense herbaceous and/or shrub layers, and forest litter.

4.2 SEDIMENT AND POLLUTION CONTROL PLAN

A sediment control plan should be followed throughout and following the construction phase. The sediment control plan will consist of the following elements:

- To the extent possible, site clearing and grading will be scheduled for the dry weather period (summer), when the potential for surface runoff to erode exposed soils is lowest. As much as possible, the clearing and grading operations will be staged to avoid having large areas of disturbed soil present at any time, and particularly during the winter;
- To the extent possible, site clearing will immediately precede construction to minimize the amount of time that disturbed soils are exposed to weathering. Clearing will be limited to the minimum area necessary for construction;
- If any soil or other erodable material is to be stockpiled for more than seven days, it will be covered with polyethylene sheeting that is anchored securely to prevent displacement by wind.
- Where necessary, sedimentation ponds and silt fencing will be used to retain sediments on the construction site. The design engineers will determine the appropriate sizes and locations of settling ponds;

SP000092



- The sediment control structures will be installed as the first construction activity. All sediment control structures will be inspected regularly, and repaired/maintained as necessary;
- Ditches and/or berms will be installed as necessary to direct surface runoff away from disturbed areas. The ditches will be designed to prevent erosion due to high water velocities through the use of check dams (sandbags), filter fabric, rock rip-rap or polyethylene lining. Apart from these necessary diversions, the natural drainage patterns will be maintained;
- Sediment and erosion control materials will be stockpiled on site for use in any emergency situation that may arise. Stockpiled materials will include filter cloth, hay bales, rip-rap, grass seed, drain rock, culverts, matting polyethylene, used tires, etc; and,
- As soon as practical after construction, any remaining disturbed soils will be revegetated using an appropriate grass seed mixture. Seeding will be conducted before the end of the growing season to allow establishment of germination/roots.

4.3 SPILL PREVENTION PLAN

The spill prevention plan consists of the following elements:

- Activities that carry a risk of materials' spills should take place within a bermed staging area. These activities include mixing concrete or other materials, any vehicle fuelling, and other maintenance of equipment that is done on site;
- Any areas where vehicle fuels or other potentially deleterious substances are stored should be equipped with impervious containment berms. If fuel tanks larger than 250 L are present within a berm, the bermed area should have a holding capacity equal to 125% of the capacity of the largest tank;
- Storage and maintenance facilities should have spill clean-up and disposal equipment. They also should have Material Safety Data Sheets (MSDS) for any hazardous substances, a list of emergency contact names and telephone numbers, and a written list of emergency response and spill-reporting procedures;
- Mobile construction equipment should be fuelled, lubricated and serviced only at these approved locations;
- If a spill does occur, it should immediately be reported to the environmental monitor and to the Provincial Emergency Program (1-800-663-3456). Written notification should follow within two weeks of the verbal report;

SP000092



- If a spill does occur, site personnel should immediately take steps to stop the discharge (if possible). As quickly as possible, they should contain the spill, clean up the affected area and dispose of waste materials at an approved disposal site;
- All hydraulic systems, fuel systems and lubricating systems should be in good repair;
- Equipment should be inspected before commencing work. Equipment with fuel or fluid leaks should not be permitted to work within or above any watercourse. Any equipment that develops a leak should immediately be removed from the watercourse and repaired;
- Before commencing work, all equipment should be steam-cleaned to remove oil, grease and other substances deleterious to aquatic life, and,
- Equipment should use only biodegradable hydraulic fluid.

The Spill Prevention Plan will be operationalized and put into effect by the Environmental Monitor, who will be responsible for ensuring that the contractor is familiar with the plan, and that all elements of the plan are appropriately put into effect.

4.4 ENVIRONMENTAL MONITORING

The environmental monitor (monitor) will be responsible for ensuring compliance with these guidelines, the authorization from the CRD and possibly provincial and government agencies. They will follow and enforce the approved sediment erosion control plans and other relevant legislation, and are responsible for putting the Spill Prevention Plan into effect. The monitoring guidelines will be in place prior to any works proceeding.

4.4.1 MEETINGS AND COMMUNICATION

The monitor will meet with the general contractor for the site to establish appropriate lines of communication. The monitor should also meet with the site contractor during any site inspection. The monitor will also meet with subcontractors, other field staff, environmental agency representatives, key stakeholders and other engineering staff associated with the project where required. The monitor will also contact the CRD designate prior to visiting the site.

4.4.2 MONITORING PRIOR TO AND DURING SITE CLEARING

The monitor will be responsible for the following activities prior to and during site clearing:

- Examining clearing areas prior to commencement of work to identify sensitive areas where adverse effects may occur to ensure that they are adequately delineated;

SP000092



- Reviewing vehicle access points to the site and the sediment control structures at these points prior to the start of clearing;
- Providing information and advice to project staff and contractors about construction matters related to environmental issues;
- Preparing site inspection field notes, and routinely taking photographs (and where necessary video) to record conditions; and
- Reviewing the sediment control structures proposed during construction.

4.5 DRAINAGE AND SEDIMENT CONTROL

The environmental monitor will review the proposed sedimentation control plan proposed for the site with the site contractor prior to construction activities. The monitor will be on site during construction of the sediment control system (SCS). It is understood that the General Contractor will be responsible for ensuring that the SCS is maintained and working adequately to control all discharges from the site. Their responsibilities will include inspection and maintenance of the SCS.

During construction, the responsibility of the monitor will be to:

- Examine the adequacy of the sedimentation and control works in reaching acceptable sediment levels as recommended by DFO/MoE guidelines (ie. total suspended solids and turbidity) discharged from the site;
- Make recommendations to the General Contractor on improving the SCS, if required;
- Review placement of sand, gravel and materials (eg. hydroseed and mulch) specified to control erosion in exposed areas;
- Require that works be stopped in the event of malfunctions of the sediment control system or contravention of discharges limits;
- Ensure that runoff is diverted from cleared areas by use of swales or low berms and that runoff is routed to the appropriate sedimentation control structures. In environmentally sensitive or problem areas, the monitor will need to oversee the installation and maintenance of sediment control structures;
- Review stockpiling methods for excavated materials to ensure that they are placed in appropriate locations and stored properly (eg. covered with tarps); and,
- Recommend mitigation measures and ensure expeditious implementation of these if activities are found to have the potential for environmental impact or poor water quality runoff.

SP000092



4.5.1 CONTROL OF DELETERIOUS SUBSTANCES ON THE DEVELOPMENT SITE

The monitor will review housekeeping practices on site (e.g. daily cleanup, use of disposal bins) and ensure proper use, storage and disposal of deleterious substances and associated containers. This necessitates that the monitor be aware of all such substances used on site. Any spillage of fuels, lubricants or hydraulic oils events should be immediately reviewed by the monitor to determine if additional remedial measures are required and, if necessary, implemented expeditiously. The monitor will operationalize the Spill Prevention Plan and will ensure that an inventory of all hazardous materials is maintained.

4.5.2 FREQUENCY OF SITE INSPECTIONS

Initially, the monitor will visit the site daily. Once all the environmental management measures are in place and these measures have demonstrated effective site control, the frequency of monitoring will be decreased to once per week. This frequency will increase during heavy rainfall events.

4.5.3 REPORTING

The monitor will provide environmental monitoring summary reports to the project developer and CRD Planner as required. The monitor will also complete an environmental completion report at the end of the construction phase, which will outline the major construction activities in relation to environmental issues, significant concerns encountered during the project and mitigation measures used to deal with those concerns.

SP000092



5. REFERENCES

Audubon and Cornell Lab of Ornithology. 2018. eBird. Available at: <http://ebird.org/content/ebird/>. Accessed August 2018.

Bird Studies Canada. 2018. Nesting Query Calendar. Available at: <https://www.birdscanada.org/volunteer/pnw/rnest/warning.jsp?lang=en&lang=en>. Accessed August 2018.

DataBC. 2018. IMapBC 2.0 - Public Application. Available at: <http://maps.gov.bc.ca/ess/sv/imapbc/>. Accessed August 2018.

ECCC. 2018. List of Migratory Birds protected in Canada under the Migratory Birds Convention Act, 1994. Available at: <http://www.ec.gc.ca/nature/default.asp?lang=En&n=421B7A9D-1>. Accessed August 2018.

E-Fauna BC. 2018. Electronic Atlas of the Fauna of British Columbia. Lab for Advanced Spatial Analysis, Department of Geography, University of British Columbia, Accessed August 2018.

Great Blue Heron Management Team. 2018. Available at: http://cmnbc.ca/atlas_gallery/great-blue-heron-gbhe-management-team. Accessed August 2018.

Ministry of Environment, Lands and Parks (Vancouver Island Region, 2001. Environmental Objectives, Best Management Practices and Requirements for Land Developments (http://wlapwww.gov.bc.ca/vir/pa/bmp_dev2.htm)

Quayle, J., and K. Brunt. 2003. Status of Roosevelt Elk (*Cervus elaphus roosevelti*) in British Columbia. BC Ministry of Sustainable Resource Management. Conservation Data Center and BC Ministry of Water, Land and Air Protection, Biodiversity Branch, Victoria, BC.

Resource Inventory Committee (RIC). 1999. Inventory Methods for Forest and Grassland Songbirds. Standards for Components of British Columbia's Biodiversity No. 15. Version 2.0. Report prepared for Ministry of Environment, Lands and Parks.

Resource Inventory Committee, Wildlife Branch. 1996. Standard Inventory Methodologies for Components of British Columbia's Biodiversity.

WSP. 2017. Environmental Overview Assessment Lot 8-1, 75658 CLSR, East Saanich IR. No 2 - Proposed Residential Assessment.

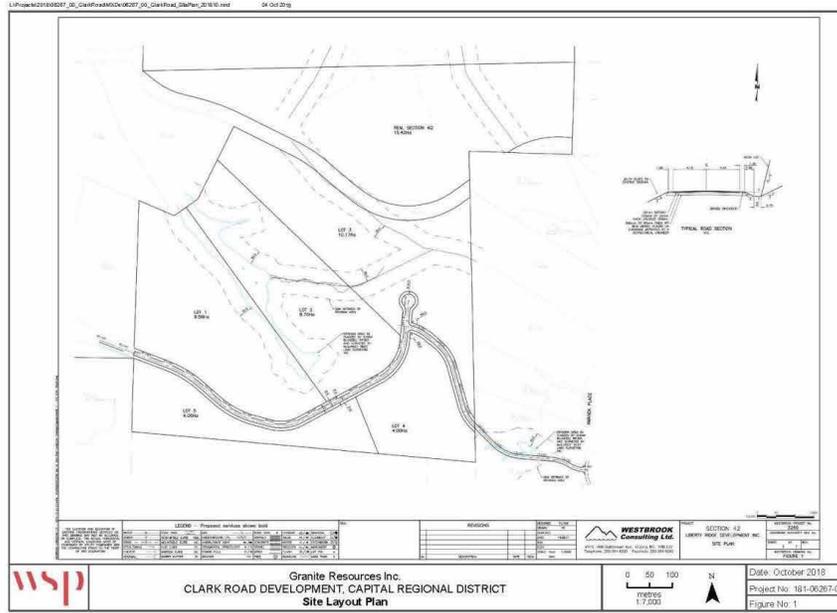
SP000092



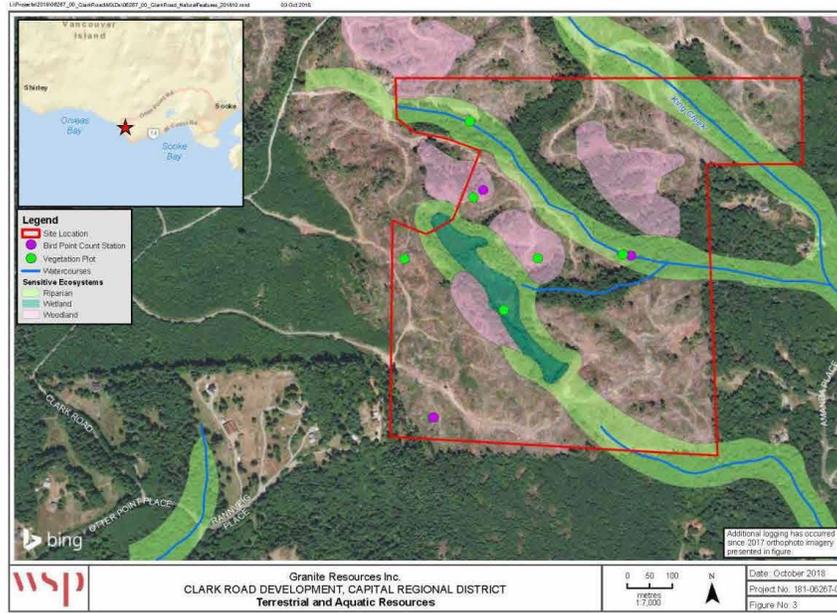
SP000092



SP000092



SP000092



SP000092



SP000092

Vennels, Breanne

From: Cooper, Diana FLNR:EX <Diana.Cooper@gov.bc.ca>
Sent: September-20-18 12:35 PM
To: Truman, Karen
Subject: RE: Data Request: Karen Truman - WSP

Hello Karen,

Thank you for your archaeological data request regarding the property legally described as SEC 42 OTTER DISTRICT EXC PT LYN 50 FT ON EACH SIDE OF THE CENTRE LINE OF THE RW SHWN ON PL 121 RW, PID 009497790. According to Provincial records there are no known archaeological sites recorded on the subject property.

There is always a possibility for unknown archaeological sites to exist on the property. Archaeological sites (both recorded and unrecorded) are protected under the *Heritage Conservation Act* and must not be altered or damaged without a permit from the Archaeology Branch. If any land-altering development is planned for the property, owners and operators should be notified that if an archaeological site is encountered during development, activities must be halted and the Archaeology Branch contacted at 250-953-3334 for direction.

Please review the screenshot of the property below (outlined in yellow). If this does not represent the property listed in the data request please contact me.

Do not hesitate to contact me if you have any further questions.

Kind regards,

Diana

SP000092

Postal Code	V8Z 6R4
Phone Number	250-360-3566
Information Requested	I request information and advice about archaeological sites on the parcel(s) described below (include civic address, PID, legal description, attach maps below if available): PID 009 497 790
Why Site Information is Required	Other (describe below): I am a consultant for a company that has purchased the property.
Third Party Access	The following person(s) may have access to this information: The client and then the CRD
Format Required	PDF, Shapefile (ESRI, NAD 83, BC Albers Projection)
Who Prompted	My local government
File Attachment#1	
File Attachment#2	
File Attachment#3	
File Attachment#4	
File Attachment#5	

SP000092



SP000092

10/2/2018 BC Species and Ecosystems Explorer Search Results (Printer-friendly)

BC Species and Ecosystems Explorer Search Results

Scientific Name	English Name	Biogeoclimatic Units	Status		Provincial FRPA	Land Use Objectives
			BC List	Global		
<i>Abronia latifolia</i>	yellow sand-verberna	CDFmm CWHm CWHm	S3 (2018)	Blue GS (1988)		
<i>Adiantum alberticum</i> var. <i>subpinnatum</i>	dwarf maiden-hair fern	CWHm	S253 (2017)	Blue GS71T2 (2015)		
<i>Allium amplexans</i>	slimleaf onion	CDFmm CWHm	S3 (2015)	Blue G4 (1988)		
<i>Alisa californica</i>		CDF CWH	S3 (2015)	Blue G4 (1992)		
<i>Balsamorhiza deltoidea</i>	deltoid balsamroot	CDFmm CWHm	S1 (2015)	Red GS (1988)	E (2009)	1-E (2003)
<i>Bertramia stricta</i>	rigid apple moss	CDF CWH	S2 (2015)	Red GU (2006)	E (2009)	1-E (2003)
<i>Bidens ampullissima</i>	Vancouver Island beggarticks	CDFmm CWHm CWHms CWHm	S3 (2015)	Blue G3 (1988)	SC (2001)	1-SC (2003)
<i>Brachyotum nobiligeri</i>		CDF CWA CWH ESSF IDF JMA NH NS SBS	S253 (2011)	Blue GU (2000)		
<i>Bryum gemmiparum</i>		CWH ESSF IDF	S3 (2015)	Blue G3G5 (1991)		
<i>Callitriche heterophylla</i> var. <i>heterophylla</i>	two-edged water-starwort	BAFAung CDFmm CWHm CWHm CWHm	S253 (2000)	Blue G5T5 (1998)		
<i>Calyptegia solidanella</i>	beach birdweed	CWHm CWHm CWHm	S3 (2018)	Blue GS (1988)		
<i>Cardamine angulata</i>	angled bittercress	CWHm CWHm CWHm	S152 (2015)	Red GS (1988)		
<i>Cardionema ramosissimum</i>	sandmat	CWHm	S1 (2015)	Red GS7 (1991)		
<i>Castilleja ambigua</i> sp. <i>ambigua</i>	estuarine paintbrush	CWHm	S3 (2015)	Blue G4T3T4		

1/5

52

SP000092

10/2/2018
Viola praemorsa var. *praemorsa* yellow montane violet
Woodwardia fimbriata giant chain fern

BC Species and Ecosystems Explorer Search Results (Printer-friendly)

SZ (2005)

Red

GSTJTS (2000)

E (2007)

1-E (2003)

S3 (2015)

Blue

GS (1994)

CDPmm

CWHam

CDPmm

CWHam

Search Summary

Time Performed
 Tue Oct 02 18:38:18 PDT 2018

Results
 62 records.

Search Criteria

Plants
 AND Forest Districts: South Island Forest District (OSD) (Restricted to Red, Blue, and Legally designated species)
 AND MOE Regions: 1 - Vancouver Island (Restricted to Red, Blue, and Legally designated species)
 AND Regional Districts: Capital (CRD)
 AND BCC Zone:
 Sort Order: Scientific Name Ascending

Notes

1. Citation: B.C. Conservation Data Centre. 2018. BC Species and Ecosystems Explorer. B.C. Minist. of Environ. Victoria, B.C. Available: <http://s100.gov.bc.ca/pub/espexpl/> (accessed Oct 2, 2018).
2. Forest District, MOE Region, Regional District and habitat lists are restricted to species that breed in the Forest District, MOE Region, Regional District or habitat (i.e., species will not be placed on lists where they occur only as migrants).
3. The data contained in the Results Export in BCSEE are provided under the [Open Government License - BC](#).

[Modify Search](#) | [New Search](#) | [Results](#)

SP000092

10/2/2018 BC Species and Ecosystems Explorer Search Results (Printer-friendly)

BC Species and Ecosystems Explorer Search Results

Biogeoclimatic Units Provincial BC List Global COSEWIC SARA Provincial Land Use FRPA Objectives

Status

SNR No Status GNR

CDPmm
 WmS1
 CWHmm1
 CWHmm2
 CWHw1
 CWHm1
 CWHm1
 CWHm1
 CWHm2

English Name water shield - bladderworts

Scientific Name *Brasenia schreberi - Utricularia* spp.

English Name slender sedge - white beak-rush

Scientific Name *Carex lasiocarpa - Rhychospora alba*

English Name three-way sedge

Scientific Name *Dulichium arundinaceum*
 Herbaceous Vegetation

English Name dune wildrye - beach pea

Scientific Name *Leymus mollis* ssp. *mollis* - *Lathyrus japonicus*

English Name sweet gale / Silka sedge

Scientific Name *Myrica gale / Carex stichensis*

English Name Silka spruce / salmonberry

Scientific Name *Picea sitchensis / Rubus spectabilis* Very Dry Maritime

English Name lodgepole pine / peat-mosses Very Dry Maritime

Scientific Name *Pinus contorta / Sphagnum* spp. Very Dry Maritime

English Name black cottonwood - red alder / salmonberry

Scientific Name *Populus trichocarpa - Alnus rubra / Rubus spectabilis*

Biogeoclimatic Units	Provincial BC List	Global COSEWIC	SARA	Provincial Land Use FRPA	Objectives
CDPmm WmS1 CWHmm1 CWHmm2 CWHw1 CWHm1 CWHm1 CWHm1 CWHm2					
CDPmm/WFS3 CWHmm1/WFS3 CWHmm2/WFS3 CWHm1/WFS3 CWHm2/WFS3	S2 (2004)	Red	G2		South Central Coast LUO
CDPmm/WmS1 CWHmm1/WmS1 CWHm2/WmS1 CWHm1/WmS1	S2 (2004)	Red	GNR		South Central Coast LUO
CDPmm CWHm1 CWHm2 CWHw1 CWHm1 CWHm1 CWHw1 CWHm1 CWHm2	S1S2 (2008)	Red	GNR		Central and North Coast LUO Haida Gwaii LUO South Central Coast LUO
CDPmm/WFS2 CWHmm1/WFS2 CWHmm2/WFS2 CWHm1/WFS2 CWHm2/WFS2	S2 (2004)	Red	G3		Central and North Coast LUO Haida Gwaii LUO South Central Coast LUO
CWHm1/08 CWHm2/08	S2 (2004)	Red	G3		Central and North Coast LUO South Central Coast LUO
CWHm1/11 CWHm2/11	S3 (2004)	Blue	GNR		South Central Coast LUO
CDPmm/08 CWHm1/09 CWHm2/09 CWHm1/09 CWHm2/09 CWHm1/10 CWHm2/10	S3 (2010)	Blue	GNR		South Central Coast LUO

http://ls100.gov.bc.ca/pub/eswp/jsp/results_print.jsp

1/4

57

SP000092

10/2/2018 BC Species and Ecosystems Explorer Search Results (Printer-friendly)

Species	Common Name	Code	Year	Color	Region
<i>Populus trichocarpa</i> / <i>Salix sitchensis</i>	black cottonwood / Sitka willow	CWHm1/06 CWHws1/08 CWHsm1/08 CWHsm2/09	S253 (2004)	Blue	South Central Coast LUO
<i>Pseudotsuga menziesii</i> - <i>Pinus contorta</i> / <i>Cladonia</i> spp.	Douglas-fir - lodgepole pine / reindeer lichens	CWHm1/10 CWHsm1/10 CWHsm2/10	S2 (2004)	Red	South Central Coast LUO
<i>Pseudotsuga menziesii</i> / <i>Polystichum munitum</i>	Douglas-fir / sword fern	CWHsm2/02 CWHsm1/04 CWHsm2/04	S253 (2013)	Blue	South Central Coast LUO
<i>Pseudotsuga menziesii</i> - <i>Tsuga heterophylla</i> / <i>Gaultheria shallon</i> Dry Maritime	Douglas-fir - western hemlock / salal Dry Maritime	CWHsm1/03 CWHsm2/03	S253 (2013)	Blue	South Central Coast LUO
<i>Rhododendron opendium</i> / <i>Kalmia microphylla</i> / <i>Sphagnum</i> spp.	Labrador-tea / western bog-laurel / peat-mosses	CDPmm/Wb50 CWHsm1/Wb50 CWHsm2/Wb50	S3 (2004)	Blue	G4
<i>Selaginella wallacii</i> / <i>Cladonia</i> spp.	Wallace's selaginella / reindeer lichens	CDPmm CWHsm1 CWHsm2	S3 (2012)	Blue	GNR
<i>Spiraea douglasii</i> / <i>Carex sitchensis</i>	hardhack / Sitka sedge	CDPmm/Ws50 CWHsm1/Ws50 CWHsm2/Ws50 CDPmm/Ws50 SBSwk1/Ws50 SBSwk2/Ws50	S4 (2004)	Yellow	G4
<i>Thuja plicata</i> / <i>Carex obnupta</i>	western redcedar / slough sedge	CWHsm1/15 CWHsm2/15	S253 (2013)	Blue	GNR
<i>Thuja plicata</i> / <i>Lonicera involucrata</i>	western redcedar / black twimberry	CWHsm1/14 CWHsm2/14	S1 (2010)	Red	GNR
<i>Thuja plicata</i> - <i>Picea sitchensis</i> / <i>Lysichiton americanus</i>	western redcedar - Sitka spruce / skunk cabbage	CWHsm1/12 CWHsm2/12 CWHsm3/11 CWHsm4/11 CWHsm5/11 CWHsm6/11 CWHsm7/11 CWHsm8/11 CWHsm9/11 CWHsm10/11 CWHsm11/11 CWHsm12/11 CWHsm13/11 CWHsm14/11 CWHsm15/11 CWHsm16/11 CWHsm17/11 CWHsm18/11 CWHsm19/11 CWHsm20/11 CWHsm21/11 CWHsm22/11 CWHsm23/11 CWHsm24/11 CWHsm25/11 CWHsm26/11 CWHsm27/11 CWHsm28/11 CWHsm29/11 CWHsm30/11 CWHsm31/11 CWHsm32/11 CWHsm33/11 CWHsm34/11 CWHsm35/11 CWHsm36/11 CWHsm37/11 CWHsm38/11 CWHsm39/11 CWHsm40/11 CWHsm41/11 CWHsm42/11 CWHsm43/11 CWHsm44/11 CWHsm45/11 CWHsm46/11 CWHsm47/11 CWHsm48/11 CWHsm49/11 CWHsm50/11	S37 (2004)	Blue	Central and North Coast LUO South Central Coast LUO
<i>Thuja plicata</i> / <i>Polystichum munitum</i> / <i>Lysichiton americanus</i>	western redcedar / sword fern - skunk cabbage	CDPmm/11 CWHsm1/11 CWHsm2/11 CWHsm3/11 CWHsm4/11 CWHsm5/11 CWHsm6/11 CWHsm7/11 CWHsm8/11 CWHsm9/11 CWHsm10/11 CWHsm11/11 CWHsm12/11 CWHsm13/11 CWHsm14/11 CWHsm15/11 CWHsm16/11 CWHsm17/11 CWHsm18/11 CWHsm19/11 CWHsm20/11 CWHsm21/11 CWHsm22/11 CWHsm23/11 CWHsm24/11 CWHsm25/11 CWHsm26/11 CWHsm27/11 CWHsm28/11 CWHsm29/11 CWHsm30/11 CWHsm31/11 CWHsm32/11 CWHsm33/11 CWHsm34/11 CWHsm35/11 CWHsm36/11 CWHsm37/11 CWHsm38/11 CWHsm39/11 CWHsm40/11 CWHsm41/11 CWHsm42/11 CWHsm43/11 CWHsm44/11 CWHsm45/11 CWHsm46/11 CWHsm47/11 CWHsm48/11 CWHsm49/11 CWHsm50/11	S37 (2012)	Blue	GNR

2/4

58

SP000092

10/2/2018 BC Species and Ecosystems Explorer Search Results (Printer-friendly)

Species	Common Name	Year	Color	Region
<i>Thuja plicata</i> / <i>Polystichum munitum</i> Very Dry Maritime	western redcedar / sword fern Very Dry Maritime	SZ53 (2009)	Blue	South Central Coast LUC
<i>Thuja plicata</i> / <i>Rubus spectabilis</i>	western redcedar / western redcedar / salmonberry	S15Z (2009)	Red	South Central Coast LUC
<i>Thuja plicata</i> / <i>Tharalia trifoliata</i> Very Dry Maritime	western redcedar / three-leaved foamflower Very Dry Maritime	SZ53 (2013)	Blue	South Central Coast LUC
<i>Thuja heterophylla</i> - <i>Pseudotsuga menziesii</i> / <i>Eurhynchium onganium</i>	western hemlock - Douglas-fir / Oregon beaked-moss	SZ (2013)	Red	South Central Coast LUC
<i>Thuja heterophylla</i> - <i>Thuja plicata</i> / <i>Blechnum spicant</i>	western hemlock - western redcedar / deer fern	SZ (2013)	Red	South Central Coast LUC
<i>Typia latifolia</i> Marsh	common cattail Marsh	S3 (2004)	Blue	South Central Coast LUC

Search Summary

Time Performed Tue Oct 02 18:41:31 PDT 2018
 Results 25 records.

Search Criteria Ecosystem Realm-Groups: Flood Group (F) OR Forest OR Grassland Group (G) OR Hydrogenic Group (H) OR Rock Group (R) OR Subalpine Shrub Group (S) OR Mineral Wetland Group OR Peatland Group OR Estuarine Ream (A) OR Beach Group (B)
 AND Node: District: South Island Forest District (DS) (Restricted to Red, Blue, and Legally designated species)
 AND Node: Region: Vancouver Island (Restricted to Red, Blue, and Legally designated species)
 AND Regional Districts: Capital (CRD)
 AND BGC Zone:
 AND BGC Zone, Subzone, Variant, Phase: CWHm2
 Sort Order: Scientific Name Ascending
 (accessed Oct 2, 2018).

Notes 1. Citation: B.C. Conservation Data Centre. 2018. BC Species and Ecosystems Explorer. B.C. Minist. of Environ. Victoria, B.C. Available: <http://a100.gov.bc.ca/pub/a100/>

http://a100.gov.bc.ca/pub/a100/wspj/results_print.jsp

SP000092

10/2/2018

BC Species and Ecosystems Explorer Search Results (Printer-friendly)

2. Forest District, MoE Region, Regional District and habitat lists are restricted to species that breed in the Forest District, MoE Region, Regional District or habitat (i.e., species will not be placed on lists where they occur only as migrants).
3. The data contained in the Results Export in RCSEE are provided under the [Open Government License - BC](#).

[Modify Search](#) | [New Search](#) | [Results](#)

http://s100.gov.bc.ca/pub/ewsp/ep/results_print.jsp

4/4

60

SP000092

10/2/2018 BC Species and Ecosystems Explorer Search Results (Printer-friendly)

BC Species and Ecosystems Explorer Search Results

Scientific Name	English Name	Biogeoclimatic Units	Provincial BC List	Status Global	COSEWIC	SARA	Provincial FRPA	Land Use Objectives
<i>Accipiter gentilis laingi</i>	Northern Goshawk, <i>laingi</i> subspecies	CDF CWH	S2 (2010) Red	G5T2 (2009)	T (2013)	I-T (2003)	Y	
<i>Anarta edwardsii</i>	Edwards' Beach Moth	CDF CWH	S1 (2009) Red	GMR	E (2009)	I-E (2011)		
<i>Anaxyrus boreas</i>	Western Toad	BG BWRB CDF CWH IDF	S4 (2016) Yellow	G4 (2008)	SC (2012)	I-SC (2018)		
<i>Aneides vagrans</i>	Wandering Salamander	CDF CWH	S3 (2016) Blue	G4 (2005)	SC (2014)	I-SC (2018)		
<i>Ardea herodias flindleri</i>	Great Blue Heron, <i>flindleri</i> subspecies	CDF CWH	S2S3B, S4N (2018) Blue	G5T4 (1997)	SC (2008)	I-SC (2010)	Y	
<i>Asio flammeus</i>	Short-eared Owl	BG BWRB CDF CWH ICH IDF MS PP SBPS SBS SWB	S3B, S2N (2013) Blue	G5 (2014)	SC (2008)	I-SC (2012)	Y	
<i>Botaurus lentiginosus</i>	American Bittern	BG BWRB CDF CWH ICH IDF MS PP SBPS SBS	S3B, SNRN (2015) Blue	G5 (2016)				
<i>Brachyramphus marmoratus</i>	Marbled Murrelet	CDF CWH MH	S3B, S3N (2013) Blue	G3 (2013)	T (2012)	I-T (2003)	Y	
<i>Butorides virescens</i>	Green Heron	BG CWH ICH IDF	S3S4B (2015) Blue	G5 (2014)				

http://is100.gov.bc.ca/pub/ewsp/jsp/results_print.jsp

SP000092

BC Species and Ecosystems Explorer Search Results (Printer-friendly)

10/2/2018	PP	SIS	Species	Subspecies	Code	Year	Status	Code	Year	Notes
	CDF	CWH	<i>Calliphys erythron sheltonensis</i>	Western Pine Elfín, sheltonensis subspecies	S3	(2013)	Blue	GSTNR		
	CDF	CWH	<i>Calliphys johnsoni</i>	Johnson's Hairbreak	S1S2	(2013)	Red	G5G4 (2004)		Y
	CDF	CWH	<i>Calliphys mossii mossii</i>	Moss' Elfín, mossii subspecies	S2S3	(2013)	Blue	G4T4 (2001)		
	CDF	CWH	<i>Carychium occidentale</i>	Western Thorn	S3	(2015)	Blue	G3G4 (2002)		
	CDF	CWH	<i>Ceryonix pegale incana</i>	Capecod Wood-nymph, incana subspecies	S2	(2013)	Red	G5T3T5 (2003)		
	CWH	MH	<i>Cervus elaphus roosevelti</i>	Roosevelt Elk	S3S4	(2017)	Blue	G5T4 (2016)		
	CDF	CWH	<i>Chordeiles minor</i>	Common Nighthawk	S4B	(2015)	Yellow	G5 (2014)	SC (2018)	1-T (2010)
	BG	BWBS	<i>Chrysemys picta</i>	Painted Turtle	S3	(2018)	No Status	G5 (2016)	E/SC (2006)	1-E/SC (2007)
	CDF	CWH	<i>Chrysemys picta pop. 1</i>	Painted Turtle - Pacific Coast Population	S1S2	(2018)	Red	G5T2 (2007)	T (2016)	1-E (2007)
	CDF	CWH	<i>Coccythraustes vespertinus</i>	Evening Grosbeak	S5	(2015)	Yellow	G5 (1996)	SC (2016)	
	CDF	CWH	<i>Coereba melanocephala</i>	Common Ringlet, insulana	S1	(2013)	Red	G5T3T4		

2/8

62

SP000092

BC Species and Ecosystems Explorer Search Results (Printer-friendly)
 (1998)

10/2/2018	1562 (2018)	Red	G5 (2016)	E (2009)	L-E (2003)
<i>Insulina</i>	subspecies				
<i>Conopsis tenuis</i>	Sharp-tailed Snake				
<i>Contopus cooperi</i>	Olive-sided Flycatcher	Blue	G4 (2008)	5c (2018)	L-T (2010)
<i>Corynorhinus townsendii</i>	Townsend's Big-eared Bat	Blue	G4 (2015)		
<i>Cryptomastix olearia</i>	Puget Oregonian	Red	G3 (2005)	XT (2013)	L-XK (2005)
<i>Cypseloides niger</i>	Black Swift	Blue	G4 (2015)	E (2015)	
<i>Danaus plexippus</i>	Monarch	Blue	G4 (2015)	E (2016)	1-SC (2003)
<i>Epieryxneus clausi</i>	Silver-spotted Skipper	Blue	G5 (2009)		
<i>Epieryxneus clausi californicus</i>	Silver-spotted Skipper, californicus subspecies	Red	G5TNR		

3/8

63

SP000092

BC Species and Ecosystems Explorer Search Results (Printer-friendly)

10/2/2018			SZ (2013)	Red	G5 (2009)	
<i>Erymnis procerus</i>	Propertius Duskywing	CDF CWA CWH MH				
<i>Erythemis collocata</i>	Western Pondhawk	BG CDF CWH ESSF PP	S354 (2015)	Blue	G5 (2016)	
<i>Euthice ausonides insulanus</i>	Large Marble, <i>insulanus</i> subspecies	CDF CWH	SX (2013)	Red	G5TL (2010)	1-XX (2003)
<i>Eumetopias jubatus</i>	Stellar Sea Lion	CDF CWA CWH MH	SBS, SAN (2013)	Blue	G3 (2011)	1-SC (2005)
<i>Euphrys editha taylori</i>	Edith's Checkerspot, <i>taylori</i> subspecies	CDF CWH	S1 (2013)	Red	G5TL (2008)	1-E (2003)
<i>Euphyes vestris</i>	Dun Skipper	CDF CWA CWH ESSF IDF TMA MH PP	S2 (2013)	Red	G5 (2016)	1-T (2003)
<i>Falco peregrinus</i>	Peregrine Falcon	BG BWBS CWA CWH ESSF ICH IDF MH PP SBS SWB	S3 (2015)	No Status	G4 (2000)	1-SC
<i>Falco peregrinus anatum</i>	Peregrine Falcon, <i>anatum</i> subspecies	BG BWBS CWA CWH MH PP SBS	S27 (2011)	Red	G4TA (2006)	1-SC (2012)
<i>Fratruncula cirneata</i>	Tufted Puffin	CDF CWH	S353B, SAN (2015)	Blue	G5 (2003)	
<i>Galba bullinoides</i>	Prairie Posaona	CDF CWA CWH ESSF ICH IDF MH PP SBS	S37 (2015)	Blue	G5 (1999)	

http://100.gov.bc.ca/pub/ewsp/jsp/results_print.jsp

SP000092

BC Species and Ecosystems Explorer Search Results (Printer-friendly)

10/2/2018			S37 (2015)	Blue	G3 (2014)	DO (2003)	3 (2005)	Y
<i>Myotis keenii</i>	Keen's Myotis	BWBS CWF CWH MH	S37 (2015)	Blue	G3 (2014)	DO (2003)	3 (2005)	Y
<i>Myotis lucifugus</i>	Little Brown Myotis	BG BWBS CWF ESSF ICH IDF MH MS P SPPS SBS SWB	S4 (2015)	Yellow	G3 (2015)	E (2013)	1-E (2014)	
<i>Nearctule sp. 1</i>	Threaded Vertigo	CDF CWH	S3 (2015)	Blue	G3CS (2006)	SC (2010)	1-SC (2012)	
<i>Onychomys leucogaster</i>	Audubon's Night-stalking Tiger Beetle	CDF CWF	S1 (2017)	Red	G5 (2008)	T (2013)	1-T (2018)	
<i>Oncorhynchus clarkii clarkii</i>	Cutthroat Trout, <i>clarkii</i> subspecies	BWBS CWF CWH SBS	S354 (2004)	Blue	G4T4 (1997)			
<i>Ophiodromus occidentalis</i>	Sinusus Snakehead	BAFA BG CWF CWA CWH ESSF ICH IDF JMA MH MS P SPPS	S3 (2015)	Blue	G5 (2015)			
<i>Pachydiplax longipennis</i>	Blue Dasher	CWF	S354 (2015)	Blue	G5 (2015)			
<i>Parus glaucus</i>	Clodius Parus, <i>claudius</i> subspecies	CDF CWA CWH MH	S354 (2013)	Blue	G5TNR			
<i>Ptilinopus fasciata</i>	Band-tailed Pigeon	CDF CWF ICH IDF MS SBS	S354 (2015)	Blue	G4 (2000)	SC (2008)	1-SC (2011)	
<i>Phalaropus lobatus</i>	Double-crested Cormorant	BWBS CWF CWH ICH	S354 (2015)	Blue	G5 (1999)	NAR (1978)		

SP000092

BC Species and Ecosystems Explorer Search Results (Printer-friendly)

10/2/2018	IDF PP SBS	Brandt's Cormorant	51B,54N (2015)	Red	G5 (1999)	
<i>Phalacrocorax penicillatus</i>	CDF CWA CWH MH					
<i>Physella proglutinosa</i>	BAPA CWA CWH ESSF IDF MHA MH MS SBPS SBS	Rocky Mountain Physa	S,354 (2015)	Blue	GSQ (2015)	
<i>Physella virginea</i>	BAPA BG CDF CWA CWH ESSF ICH IDF MHA MH MS SBPS SBS	Sunset Physa	S,355 (2015)	Blue	GSQ (2015)	
<i>Pituophis catenifer</i>	BG CDF CWH IDF PP	Gopher Snake	S3 (2018)	No Status	G5 (2015)	1-XX(T) (2005)
<i>Pituophis catenifer catenifer</i>	CDF CWH	Gopher Snake, catenifer subspecies	SX (2018)	Red	G5T3 (2016)	XT (2012) 1-XX (2005)
<i>Pleuronotus campestris</i>	BAPA BWB5 CDF CWA CWH ESSF ICH MHA MH SBS	Meadow Rammer-horn	S,354 (2015)	Blue	G4G5 (2015)	
<i>Plebejus canifolius blackmorei</i>	CDF CWH MH	Blackmore's Blue, blackmorei subspecies	S3 (2013)	Blue	G5T3 (2006)	
<i>Plebejus saepiolus insulanus</i>	CDF CWH	Greenish Blue, insulanus subspecies	SH (2013)	Red	G5TH (2003)	1-E (2003)
<i>Prasioloma jahirsoni</i>	CDF	Broadwing Tiptail	S3 (2015)	Blue	G3 (2013)	

7/8

67

SP000092



SP000092

wsp



Plate 1: Douglas-fir/Shore pine – Cladina (DC) plant community



Plate 2: Western redcedar – Foamflower (RF) plant community

Liberty Ridge Homes Inc.
Clark Road
Photoplates

WSP File No. 181-06267-00
September 2018
Page 1

SP000092

wsp



Plate 3: Remnant of Western hemlock/Western redcedar – Kindbergia (HK) plant community



Plate 4: Moss-dominated rock outcrop (RO) plant community

Liberty Ridge Homes Inc.
Clark Road
Photoplates

WSP File No.: 181-06267-00
September 2018
Page 2

SP000092



Plate 5: Regenerating forest after logging



Plate 6: Looking south from the north end of the large marsh

Liberty Ridge Homes Inc.
Clark Road
Photoplates

WSP File No. 181-06267-00
September 2018
Page 3

SP000092



Plate 7: Linear Sitka sedge – Water-parsley (Wm50) damaged by logging



Plate 8: Skunk cabbage wetland located in outlet channel also damaged by logging

Liberty Ridge Homes Inc.
Clark Road
Photoplates

WSP File No.: 181-06267-00
September 2018
Page 4

SP000092

wsp



Plate 9: Undisturbed (north) King Creek tributary during low flows

Liberty Ridge Homes Inc.
Clark Road
Photoplates



Plate 10: Damaged outlet channel (south) to linear wetland

WSP File No. 181-06267-00
September 2018
Page 5

SP000092

wsp



Plate 11: Red-legged frog tadpole from linear wetland



Plate 12: Gray wolf tracks

Liberty Ridge Homes Inc.
Clark Road
Photoplates

WSP File No. 181-06267-00
September 2018
Page 6

SP000092



Plate 13: Cougar track



Plate 14: Vertical rock with structural complexity and fissures

Liberty Ridge Homes Inc.
Clark Road
Photoplates

WSP File No.: 181-06267-00
September 2018
Page 7

SP000092

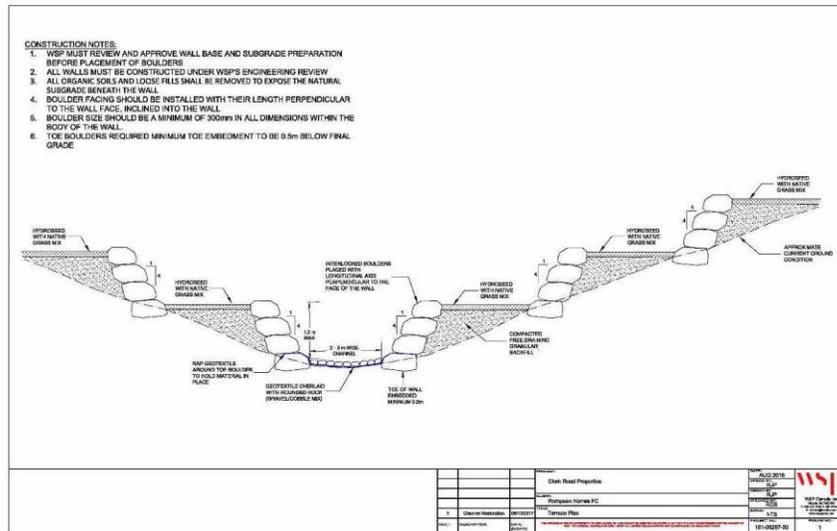
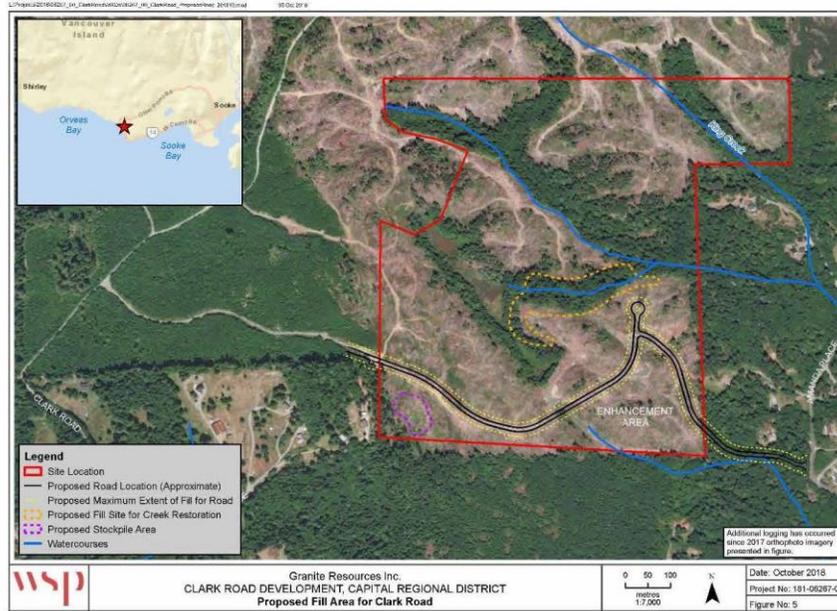
A graphic for Appendix E. It features a light blue background with a white diagonal stripe. The word "APPENDIX" is written in red at the top. Below it, a large red letter "E" is positioned to the left of the text "FILL REQUIREMENTS AND DESIGN FOR CREEK RESTORATION AND PROPOSED ROAD", which is also in red.

APPENDIX

E FILL
REQUIREMENTS
AND DESIGN
FOR CREEK
RESTORATION
AND PROPOSED
ROAD

77

SP000092



SP000092

Appendix 3: Highway Access Permit



BRITISH COLUMBIA | Ministry of Transportation and Infrastructure

Permit/File Number: 2018-05886
Office: Saanich Area Office

PERMIT TO CONSTRUCT, USE, AND MAINTAIN ACCESS TO A PROVINCIAL PUBLIC HIGHWAY

PURSUANT TO TRANSPORTATION ACT AND/OR THE INDUSTRIAL ROADS ACT AND/OR THE MOTOR VEHICLE ACT AND/OR AS DEFINED IN THE NISGA'A FINAL AGREEMENT AND THE NISGA'A FINAL AGREEMENT ACT.

BETWEEN:

The Minister of Transportation and Infrastructure

Saanich Area Office
240-4460 Chatterton Way
Victoria, British Columbia V8X 5J2
Canada

("The Minister")

AND:

Granite Resources Ltd.
300-162 Cumberland Street
Toronto, Ontario M5R 3N5
Canada

("The Permittee")

WHEREAS:

- A. The Minister has the authority to grant permits for the auxiliary use of highway right of way, which authority is pursuant to both the Transportation Act and the Industrial Roads Act, the Motor Vehicle Act, as defined in the Nisga'a Final Agreement and the Nisga'a Final Agreement Act;
- B. The Permittee has requested the Minister to issue a permit pursuant to this authority for the following purpose:
The installation, operation, and maintenance of a commercial access via Aythree Road to Clark Road for construction vehicles to facilitate a residential subdivision and environmental restoration works as per application dated January 11, 2018
- C. The Minister is prepared to issue a permit on certain terms and conditions;

ACCORDINGLY, the Minister hereby grants to the Permittee a permit for the Use (as hereinafter defined) of highway right of way on the following terms and conditions:

- 1. The Minister shall designate an official ("the Designated Ministry Official") who shall act as the Minister's agent in the administration of this permit in the manner hereinafter set out.
- 2. The Use shall be carried out according to the reasonable satisfaction of the Designated Ministry Official.
- 3. The Permittee shall indemnify and save harmless the Ministry, its agents and employees, from and against all claims, liabilities, demands, losses, damages, costs and expenses, fines, penalties, assessments and levies made against or incurred, suffered or sustained by the Ministry, its agents and employees, or any of them at any time or times, whether before or after the expiration or termination of this permit, where the same or any of them are based upon or arise out of or from anything done or omitted to be done by the Permittee, its employees, agents or Subcontractors, in connection with the permit.
- 4. The Permittee shall make diligent attempts to determine if there are other users of the right of way in the vicinity of the Permittee's location whose use may be affected. It shall be the responsibility of the Permittee to contact any such users before exercising any of the rights granted hereunder and to attempt to reach an accommodation.
- 5. The Minister shall take reasonable care to do as little damage or interference, as possible, to any Use authorized by this permit in the carrying out of the construction, extension, alteration improvement, repair, maintenance or operation of any work adjacent thereto, but the Minister shall not be responsible for any damage regardless.

Page 1 of 3

SP000092



BRITISH COLUMBIA | Ministry of Transportation and Infrastructure

Permit/File Number: 2018-05886
Office: Saanich Area Office

6. The Minister at the absolute discretion of the Minister may, at any time, cancel this permit for any reason upon giving reasonable notice; provided, however, that in the case of default by the Permittee or in the case of an emergency no notice shall be necessary. The Minister shall not be liable for any loss incurred as a result of permit cancellation.
7. Placing of speed arresters on the access (or accesses) or in the Permittee's property without the prior consent in writing of the Designated Ministry Official shall render the permit void.
8. The Permittee shall be responsible for replacing any survey monuments that may be disturbed or destroyed by the Use. Replacement must be by a British Columbia land surveyor at the Permittee's expense.
9. The Permittee shall remove any mud, soil, debris, or other foreign material tracked onto the highway from the access authorized herein. Such removal shall be at the Permittee's expense and shall be done at any time the material unduly inconveniences traffic and, in any event, daily.
10. The Permittee acknowledges that the issuance of this permit by the Minister is not a representation by the Minister that this permit is the only authority needed to carry out the Use. The Permittee shall give deference to any prior permission given for use of the right of way in the vicinity of the permit area, shall obtain any other permission required by law, and shall comply with all applicable laws regardless of their legislative origin.
11. At the end of the term of this permit, or when the permit is cancelled or abandoned, the Permittee shall, if so requested by the Minister, remove all installations and shall leave the site as near as reasonably possible in the condition it was in before this permit was issued or such other condition as shall reasonably be required by the Designated Ministry Official. If the Permittee refuses to comply with these obligations, the Minister may perform them as required and the Permittee shall be liable to the Minister for the costs of doing so.
12. The rights granted to the Permittee in this permit are not assignable without the consent of the Minister.
13. As a condition of this permit, the permittee unconditionally agrees with the Ministry of Transportation and Infrastructure that the permittee is the prime contractor or will appoint a qualified prime contractor, as described in Section 118 of the Workers Compensation Act, for the purposes of the work described by this permit, at the work location described in this permit, and that the permittee or designated prime contractor will observe and perform all of the duties and obligations which fall to be discharged by the prime contractor pursuant to the Workers Compensation Act and the Occupational Health and Safety Regulation.
14. The permittee is advised and acknowledges that the following hazards may be present at the work location and need to be considered in co-ordinating site safety: overhead hazards, particularly electrical or telecommunications lines; buried utilities, particularly electrical, telecommunication, and gas lines; traffic; danger trees, falling rocks, and sharp or infectious litter.
15. Any works within the Ministry right-of-way that fall within the scope of "engineering" under the Engineers and Geoscientists Act will be performed by a Professional Engineer, and shall comply with this Ministry's "Engineer of Record and Field Review Guidelines". The Guidelines can be viewed on the Ministry's website at <http://www2.gov.bc.ca/assets/gov/driving-and-transportation/transportation-infrastructure/engineering-standards-and-guidelines/technical-circulars/2009/06-09.pdf>
16. The permittee is responsible for preventing the introduction and spread of noxious weeds on the highway right-of-way as defined by the British Columbia Weed Control Act and Weed Control Regulation.
17. The Use shall be carried out according to the following drawings and specifications, which are attached and shall be considered to be part of this permit:
18. The Permittee shall take all reasonable precautions to attempt to ensure the safety of the public in connection with the Use. In particular, but not so as to limit this obligation, the Permittee shall, if so required by the Designated Ministry Official on reasonable grounds, prepare and implement a traffic control plan. The contents of the plan and the manner in which it is implemented must meet the reasonable satisfaction of the Designated Ministry Official.
19. That before opening up any highway or interfering with any public works, written notice of intention to do so must be given to the Designated Ministry Official at least two(2) weeks before the work is begun.
20. The access (or accesses) shall be graveled to an extent satisfactory to the Designated Ministry Official to prevent the tracking of mud and soil onto the highway surface.
21. The access (or accesses) shall be constructed with 500mm culvert pipe manufactured to CSA or ASTM standards and laid at ditch invert elevation. Maintenance and periodic cleaning of this culvert is the responsibility of the Permittee.
22. The profile of the access (or accesses) shall not exceed 5% grade from the ditchline for a distance of at least 9 metres as measured away from the highway along the centerline of the access.
23. This permit does not provide licencing and insurance and/or oversize, overweight authorization for a commercial vehicle to access a provincial highway from an industrial road. Commercial vehicle operators require authority pursuant to Section 8 of the Commercial Transport Act, R.S.B.C. 1996, and should contact the Provincial Permit Centre at 1-800-559-9688 to obtain a Highway Crossing Permit.

Page 2 of 3

81

SP000092



BRITISH COLUMBIA | Ministry of Transportation and Infrastructure

Permit/File Number: 2018-05886
Office: Saanich Area Office

24. The Permittee will ensure that the works do not, impair, impede or otherwise interfere with;
 - I. public passage on the Highways;
 - II. the provision of highway maintenance services by the Province, or by its servants, contractors, agents or authorized representatives of the Province in connection with the Highways, or
 - III. the operation of the Highways;
25. That where the said works are in the proximity of any bridge, culvert, ditch or other existing work, such work shall be properly maintained and supported in such manner as not to interfere with its proper function, and on the completion of the said works any bridge, culvert, ditch or other existing work interfered with shall be completely restored to its original condition.
26. **The Permittee is responsible for ensuring that the access does not cause mud, dirt or debris to accumulate on Clark Road or Aythree Road. Any mud or debris which accumulates as a result of use of the access is to be removed from the roads by the Permittee immediately.**

The rights granted to the Permittee in this permit are to be exercised only for the purpose as defined in Recital B on page 1.

Dated at Victoria, British Columbia, this 23 day of October, 2018

On Behalf of the Minister

SP000092

Appendix 4: Changes in and About a Stream Approval



Water Sustainability Act

APPROVAL
CHANGES IN AND ABOUT A STREAM
Section 11 (2), Clause (a)

This approval grants authority under Section 11 of the *Water Sustainability Act* only, and does not constitute permission or consent under any other Act or authority.

Liberty Ridge Homes is hereby authorized to make the following changes in and about an unnamed creek, wetland outlet channel, a tributary to King Creek at a location best described as:
SECTION 42, OTTER DISTRICT EXCEPT THAT PART LYING 50 FEET ON EACH SIDE OF THE CENTRE LINE OF THE RIGHT OF WAY SHOWN ON PLAN 121 RW AND EXCEPT THAT PART IN PLAN FPP63580
PID: 009-497-790, Clark Road, Sooke BC
Geographic Coordinates of Works: 48.3816400, -123.8211800

Changes proposed:

The subject site has several wetlands and watercourses located on it which have been severely impacted due to recent logging activities undertaken by the previous property owners. In many cases, tree clearing has extended to the high water mark. Of particular concern is the eastern outlet to a large wetland which flows into a tributary to King Creek (WSC 930-027900). The outlet channel has been entirely denuded of trees and shrubs and the channel itself has been destroyed. Consequently, flows are braided and unconfined in numerous areas resulting in extensive scour and the movement of sediments downstream.

At the current time the channel is dry but there are concerns that heavy rainfall combined with high volumes of outflow from the wetland will result in further degradation of the channel and heavy sediment loads entering the tributary to King Creek which is currently intact. In order to reinstate the watercourse a new channel will be constructed. The channel will have a wetted width ranging between 2 and 3 metres. Adjacent slopes will be tiered using large angular rocks. Tier areas will be covered with topsoil, seeded and covered with either straw mulch or cocoa-matting, depending on the slope grade. To reduce the risk of sedimentation a geotextile fabric will be placed along the channel invert and secured on either side with boulders. The geotextile will be overlaid with rounded gravels and cobbles.

APPROVAL CONDITIONS AND SPECIFICATIONS

1. The work authorized under this Approval shall be completed on or before September 15th, 2020.
2. In-stream work shall be undertaken only during the period of June 15th to September 15th. Any work in the stream outside this period is to be confirmed with the Regional Ecosystems Biologist, Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) and Fisheries and Oceans Canada office.
3. All works are to be constructed in accordance with Engineer Drawings:
 - 1) Proposed Restoration Areas dated August 10, 2018, and,
 - 2) Proposed Channel Restoration Approach - Cross Section dated August 2018.
4. The applicant must ensure that a suitably qualified environmental monitor is on site during all instream construction activities, as specified in the Environmental Management Plan for Section 11 Approval - Clark Road, Capital Regional District, dated October 1, 2018.
5. Machinery shall be in good mechanical condition such that there is no leakage of substances, deleterious to fish, into the stream.
6. This Approval does not relieve the approval holder of the requirement to comply with any other applicable Federal, Provincial, Regional District or Municipal enactment. A permit or an exemption thereof, is required from them, prior to works commencing.
7. The applicant must inform Fisheries and Oceans Canada, in writing, of the location and nature of the works to be constructed.

Page | 1

SP000092



Water Sustainability Act

8. Permission for access through private or public lands must be obtained by the approval holder prior to commencement of the work. No right of expropriation exists under an approval.
9. Every holder of an approval, or person who makes a change in and about a stream in accordance with the regulations, shall exercise reasonable care to avoid damaging land, works, trees, or other property, and shall make full compensation to the owners for damage or loss resulting from construction, maintenance, use, operation, or failure of the works.
10. A change in and about a stream must be designed, constructed, and maintained in such a manner that the change does not pose a significant danger to life, property, or the environment.
11. The applicant must, while making the change in and about the stream:
 - (a) maintain water quality;
 - (b) maintain stream channel integrity;
 - (c) maintain surface and sub-surface drainage systems and flows;
 - (d) conserve wildlife habitat, including riparian vegetation;
 - (e) protect fish habitat and fish passage;
 - (f) prevent erosion, mass wasting, siltation; and
 - (g) prevent degradation to water quality at the intake of existing water supplies authorized under the *Water Sustainability Act*.

Rhonda Morris
Assistant Water Manager

Issued Date: October 12, 2018
District: Victoria

Approval No.: 1004335
Precinct: Victoria



REPORT TO THE JUAN DE FUCA LAND USE COMMITTEE
MEETING OF TUESDAY, JANUARY 15, 2019

SUBJECT Temporary Use Permit for Lot 4, Section 47, Otter District, Plan 23769 –
7822 Tugwell Road

ISSUE

A request has been made for a temporary use permit to allow a federally licensed micro-cannabis cultivation facility in the Rural Residential 2 (RR-2) zone.

BACKGROUND

The subject property is currently zoned Rural Residential 2 (RR-2) in the Juan de Fuca Land Use Bylaw, 1992, Bylaw No. 2040, and is adjacent to other RR-2 zoned properties to the east and west, Tugwell Road to the south, a Rural A property and DeMamiel Creek to the north (Appendix 1). The parcel is designated as Settlement Area One (SA1) and is partly within the Steep Slopes and Riparian Development Permit Areas (DPA) in the Official Community Plan (OCP) for Otter Point, Bylaw No. 3819.

There is an existing single-family dwelling on the property that was constructed in 1978, and Board of Variance approval (BV000348) was granted for the siting of farm building in 2002. The property is serviced by on-site septic and a groundwater well. There are no encumbrances on title.

The legalization of cannabis came into effect in October 2018. The *Cannabis Act and Regulation* establish multiple licence categories for cannabis cultivation, nursery, processing, analytical testing and sale for medical purposes. In response to an industry demand for smaller-scale, 'craft' cannabis products, federal licence categories for micro-cultivation and micro-processing have been established. All federal license holders are required to obtain local government land use approval.

The applicant has provided information about the proposal to establish a licenced micro-cultivation operation on the property (Appendix 2). The property would either need to be rezoned or the owner issued a temporary use permit to allow the proposed use. The owner has applied for a temporary use permit to authorize the facility on a trial basis. If successful, the applicant could apply to rezone to allow the use on a long-term basis.

ALTERNATIVES

Alternative 1:

That staff be directed to refer proposed Temporary Use Permit TP000010 to the Otter Point Advisory Planning Commission, to appropriate CRD departments and the following external agencies for comment:

BC Hydro	MFLNRORD – Archaeology Branch	RCMP
District of Sooke	MFLNRORD – Groundwater Protection Branch	T'Sou-ke First Nation
Island Health	Ministry of Transportation and Infrastructure (MoTI)	

Alternative 2:

That proposed Temporary Use Permit TP000010 not be referred.

Alternative 3:

That more information be provided by staff.

LEGISLATIVE IMPLICATIONS

Section 492 of the *Local Government Act (LGA)* enables a local government to designate areas where temporary uses may be allowed and to specify general conditions regarding the issuance of temporary use permits in those areas. Temporary use permits may be issued throughout the Otter Point Official Community Plan (OCP) area as outlined in Bylaw No. 3819, and in accordance with Section 493 of the *LGA*.

If a local government proposes to pass a resolution to issue a temporary use permit, it must give notice in accordance with Section 494 of the *LGA*. Sections 494(3) and 494(4) require notice to be published in a newspaper at least 3 days and not more than 14 days before the adoption of the resolution to issue the permit, and to be given to each resident/tenant within a given distance as specified by bylaw. CRD Bylaw No. 3110, Development Procedures Bylaw, states that a notice of intent must be mailed to the owners and occupants of land adjacent to the site under consideration within a distance of not more than 500 m.

CRD Bylaw No. 3110, also provides for the Board to refer an application to an agency or organization for their comment. The CRD Board determines which bodies are consulted in accordance with the *LGA*.

Capital Regional District Ticket Information Authorization Bylaw, 1990, Bylaw No. 1857, should be amended to authorize the use of the municipal ticket information for the enforcement of the regulations established by Bylaw No. 4277, and to set certain fine amounts where the use is found to be in contravention of those regulations.

PUBLIC CONSULTATION IMPLICATIONS

The Advisory Planning Commissions (APCs) were established to make recommendations to the Land Use Committee on land use planning matters referred to them relating to Part 14 of the *LGA*; therefore, staff recommend referring the proposed amendment to the Otter Point APC.

PLANNING ANALYSIS

The subject property is designated Settlement Area One (SA1), which indicates that the predominant land use should be rural residential; however, agriculture, resource extraction, commercial, industrial, tourism and park uses are also permitted. Additional uses that are ancillary to the primary residential use and are compatible with the community's character, such as home based businesses and home based industry, are supported and considered opportunities for additional economic activity for residents.

The Otter Point OCP directs that the following should be considered during the evaluation of a temporary use permit application:

- The use must be clearly temporary or seasonal in nature.
- The use should be compatible with adjacent uses.
- The potential impact of the proposed use on the natural environment.
- The intensity of the proposed use.
- The opportunity to conduct the proposed use on other land in the Plan area.
- Remedial measures to mitigate any impact to the natural environment.

The applicant is requesting a temporary use permit for a licenced cannabis micro-cultivation operation on the subject property. A micro-cultivation licence, issued by Health Canada, permits a maximum cultivation area of 200 m², in which all cannabis plants must be contained. Such licences allow for cannabis possession, cultivation, propagation, harvesting, testing and authorized sales via shipping. The applicant is proposing the facility on a trial basis to determine feasibility and market demand for the product. A temporary use permit can be renewed once and rezoning would be required to permit the use long-term.

The adjacent uses are rural, rural residential and vacant agricultural. The proposed micro-cultivation facility is not anticipated to alter the residential character of the area as the subject property is fenced and private. Conditions of the permit have been included that require vegetative buffers and screening of the property. The proposed setbacks from the property lines for the facility are similar to what is required for agricultural buildings. Nuisance odour, light and noise will be restricted in a similar fashion to home based business regulations. Traffic and visitation to the property is also to be kept to a minimum and no retail sales are permitted from the facility.

The applicant proposes to construct a building for micro-cultivation outside of the DP areas. There is an existing groundwater well on the property that may require a provincial licence under the *Water Sustainability Act* if it is used for the proposed business. Alternatively, the applicant has proposed purchasing trucked water to supply the operation. The capacity of the septic system and electrical power will be evaluated as part of the building permit process, with upgrades conducted as required. Therefore, staff do not anticipate any negative impact to the environment as a result of this use.

In comparison with the federally licensed industrial-scale standard cultivation facilities, the intensity of the micro-cultivation facility is more in keeping with a rural residential home based business or small-scale agricultural use. However, there are still strict federal requirements for professional production practices including pest control, air filtration, sanitation, quality assurance, product disposal, packaging and labelling. Licence holders undergo security clearance reviews and are required to maintain records of individuals on site. Physical security measures are also required for micro-cultivation facilities that prevent unauthorized access and create a physical barrier around the site. The applicant proposes that these measures can be implemented while maintaining the rural residential character of the property.

No other land in the Juan de Fuca has been zoned to permit micro-cultivation of cannabis. Within the Sooke Business Park in Otter Point, there are 18 properties zoned to permit industrial-scale medical marijuana production facilities. However, the proposed facility is intended to be smaller in size and may not warrant occupying industrial zoned land. Since this is the first micro-cultivation operation to be proposed in the Juan de Fuca and the full range of impacts are not yet understood, staff recommend that the use be authorized through a temporary use permit, which can be revoked upon contravention of the conditions of the permit.

Staff have prepared proposed Temporary Use Permit TP000010 to permit cannabis micro-cultivation, in accordance with the *Cannabis Act*, on the subject property ancillary to the primary residential use. The permit stipulates conditions to require that the micro-cultivation use to be screened from the road and adjacent properties, to limit traffic flow, to establish 15 m setbacks, restrict nuisances and maintain the residential character. Staff recommend proceeding with referrals and public notification of the temporary use permit application.

CONCLUSION

The application for a temporary use permit to authorize a licenced cannabis micro-cultivation facility is in keeping with the Otter Point OCP policies. Staff recommend proceeding with referrals and public notification of the application.

RECOMMENDATION

That staff be directed to refer proposed Temporary Use Permit TP000010 to the Otter Point Advisory Planning Commission, to appropriate CRD departments and to the following external agencies for comment:

BC Hydro	MFLNRORD – Archaeology Branch	RCMP
District of Sooke	MFLNRORD – Groundwater Protection Branch	T’Sou-ke First Nation
Island Health	Ministry of Transportation and Infrastructure (MoTI)	

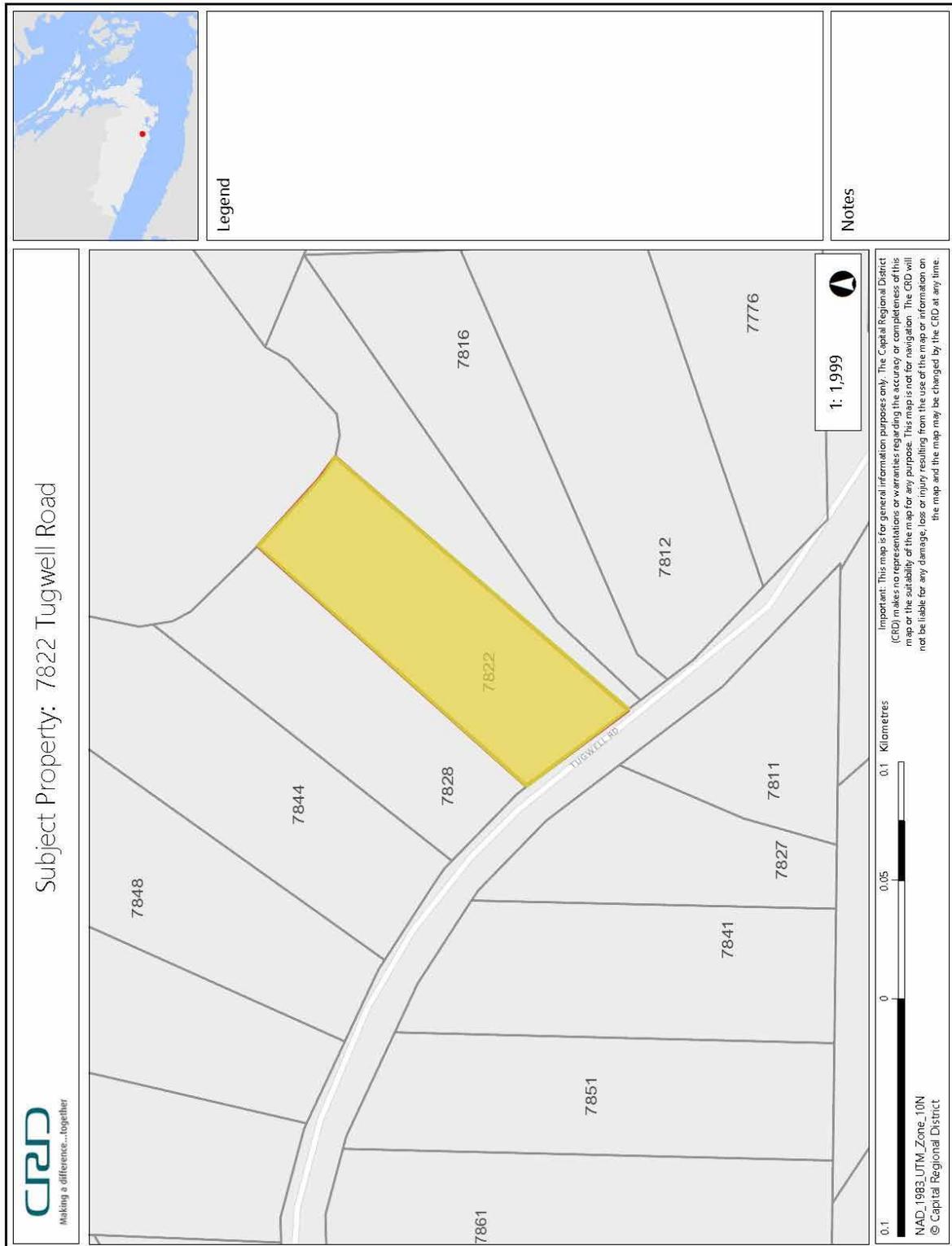
Submitted by:	Emma Taylor, MA, MCIP, RPP, Planner
Concurrence:	Iain Lawrence, MCIP, RPP, Manager, Local Area Planning
Concurrence:	Kevin Lorette, P.Eng., MBA, General Manager, Planning & Protective Services

ET:wm

Attachments:

- Appendix 1. Subject Property Map
- Appendix 2. Applicant’s Proposal
- Appendix 3. Proposed Temporary Use Permit TP000010

Appendix 1: Subject Property Map



Appendix 2: Applicant's Proposal

1) How the facility operates.

Cannabis flowers are the primary product.

Cannabis is a dioecious plant, meaning that there are male and female plants. The pollen from males is used to produce seeds, but generally for medicinal or recreational purposes.

Most people focus on the female plant. The female flower tops in particular are the production item in question.

For a female plant to produce flowers the plant is grown vegetatively for a period of time, generally 10 days to several months. Once the females are the desired size as determined by the grower they are induced into a flowering light cycle.

This requires a change in the number of hours of light the plant receives. When the light cycle is "turned down" to 12 hours of light and 12 hours of darkness then the flowering stage of the plants life begins. For the female plants to become mature enough to be harvested requires generally 6-10 weeks of the flowering light cycle. Typically indoor growers will have 3-5 harvests in a calendar year.

The female plants are either started from seed or small plants, generally referred to as clones. Clones and seeds are available from existing health Canada approved producers or via online.

Once you have your female plant stock then generally a "Mothers room" is built to provide a growing area for the mothers. The mother plants require a different light cycle than the flowering plants. Typically this vegetative light cycle is between 18-24 hours of light per day. This light cycle will keep the females growing vegetatively indefinitely. These mother plants then are grown until they are big enough that smaller plants referred to as clones can be cut from them. As an example a female that is allowed to grow for a month or two will become big enough that dozens of small cutting/clones can be cut off the mother. Those cuttings are then placed in a propagation tray and after approximately 14 days they will have grown roots and will be able to become new plants.

Typically the complete cycle of how the grow room operates.

Then as mother plants are grown, clones are cut from the mother/s and then the clones are placed into the flowering room to complete the lifecycle and render the flower product.

The mothers always stay in their designated area under the 18-24 hours of light and continuously provide the clones that get rotated into the flowering room.

2) Water consumption

At full capacity the proposed micro cultivation license would use approximately 130 - 150 gallons per day. To put it into relevant terms this level of water consumption is less than what two typical North American adults use per day.

I have a well on my property that has been tested and approved as having clean potable water.

I also have a 3000 gallon cistern that I can have water delivered by South Island water.

3) Disposal of waste water

Typically in the "mothers" room or the area where Vegetative growth happens there is very little waste water. The plants receive some fertilizer inputs but there is little waste or run off water/fertilizer in this stage. Typically less than 5/gal per day.

In the flowering room there can be more waste fertilizer. The amount of waste water is largely dependent on the style of growing. In some cases there are techniques and practices where there is little to no waste water/fertilizer. Some organic cultivation techniques achieve this low/no waste water. In the case of my own personal cultivation practice there is typically 5-15 gallons of waste water every time there is a fertilization in the flowering room. Typically fertilization happens every second to third day. I use a mixture of peat moss and perlite as my growing medium. This is what is known as an inert media as it has almost no means of supporting plant life on its own without some kind of amendments to it. I use a combination of organic and salt based fertilizers as my inputs into my growing media. Typically the amount of fertilizers per fertilization is only enough to sustain the plants for a few

days then more inputs are required. This makes fertilizer efficiency fairly high. Waste water can be stored for reuse or disposed of to ground.

4) Chemical products used.

Some of the fertilizers I use are salt based water soluble. Historically I have been producing medical marijuana and have been selective about using only inputs that are high quality, and contain minimal or no trace heavy metals.

Health Canada allows for some fungicides and pesticides.

I may be required to take the BC pesticide certification course as part of the Health Canada requirements. My practice uses good preventative measures in the vegetative stage so that no pesticides or fungicides are used in the flowering cycle. In the vegetative cycle a weekly regiment of vegetable based oil is used as a pest preventative foliar spray. No commercial fungicides or pesticides are used.

The air in the grow spaces is filtered with carbon filters that are set up as “scrubbers”.

The air in the room is filtered thru the scrubbers on a continuous basis to remove any smells, dust, pollen etc.

Similarly the air being vented out of the grow rooms is also filtered thru a carbon filter as it exists.

This practice eliminates any odors from being detectable outside or to neighbours.

5) Waste disposal

There isn't very much waste disposal.

Used soil (the peat moss and perlite mix, also known as soilless mix) could be recycled and used again, composted or sent to landfill.

The parts of the plant that don't get used could be sent to landfill, composted or burned. This includes green compost as plants are pruned back during their growing cycle and the dried stalks after harvest.

6) Workers/staff

You outlined that the premise of the home based business is that the residents and 2-3 workers are what make up the work force. This would be in keeping with how I foresee the micro cultivation operation working. Myself and 1-2 part time employees on a day to day basis.

At harvest time more help is required to cut and manicure all the plants into the finished product.

Hand trimming is performed at this stage and this is one of the distinctions between a micro or craft product and a product produced by the larger licensed producers. Hand trimming is required to maintain the highest level of product.

During harvest time typically an addition 5-6 people are employed to assist with the trimming and harvest. This would also include the transplanting that takes place to start another cycle of flowering plants. The addition 5-6 people are required for 5-8 days approximately every 10 weeks.

Health Canada's micro cultivation license requires that all employees and myself undergo a security clearance check.

7) Security measures

As specified by Health Canada there needs to be a physical barrier (fence) around the property or production site. As my property is already fenced and gated I should meet this criteria.

The production facility and the surrounding property will all be under video surveillance as well.

This isn't innately required by Health Canada but it's important to me and fosters a greater security.

I am currently using Nest Cams and Canary cameras. Both of these security camera manufacturers provide cameras that will send push notifications to my phone if there is detected motion within the camera frame. I have a nest camera subscription that stores all motion video clips

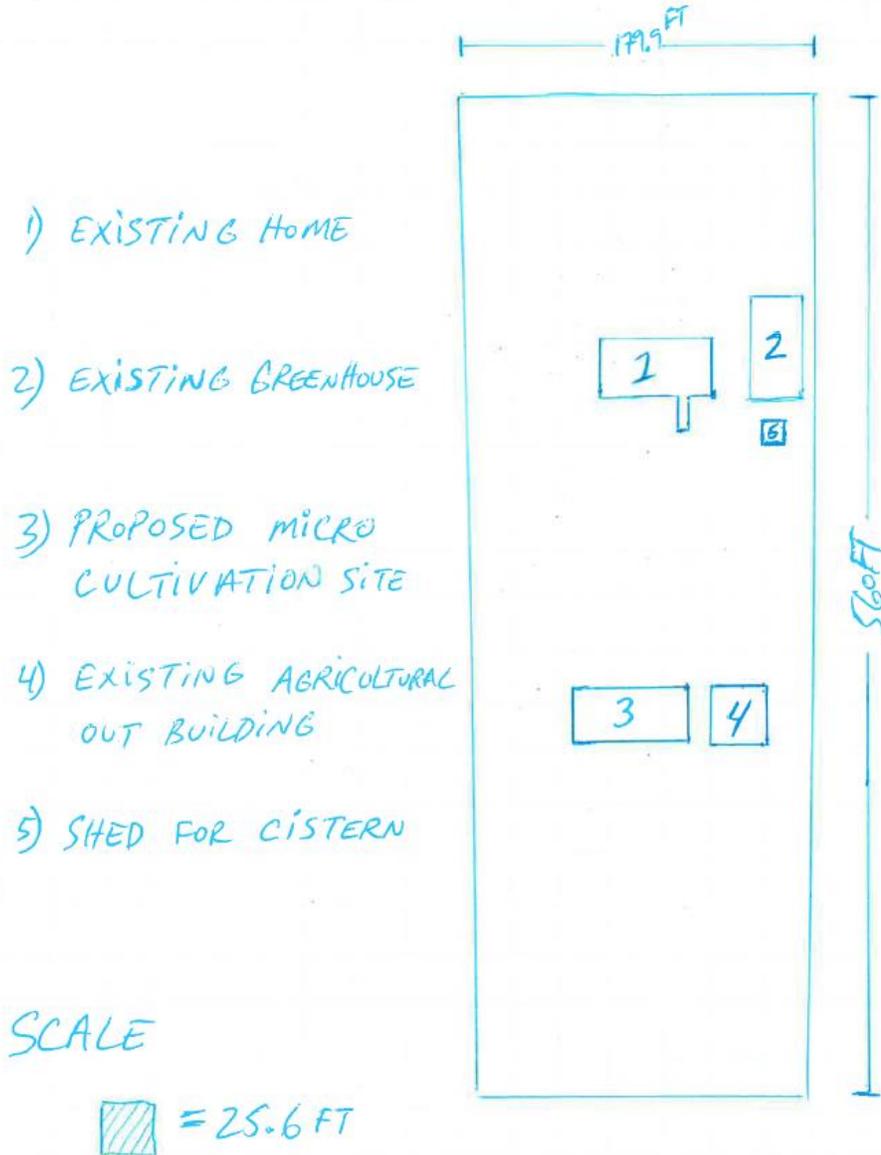
in the cloud for a 10 day period. Both camera types can provide real time video and audio feed to my phone at any time. The Canary cams also have a built in siren that can be activated remotely from my phone.

I currently have 10 nest cams that provide surveillance on all sides of the property. I have an additional 3 Canary cams in various locations too. I also have an additional 4 motion sensors that will provide push notifications to my phone if motion is detected.

There will be at least two highly secure doors to get into the production area and these will both be monitored by cameras.

7022 TUGWELL RD

Nov 20/2018



Appendix 3: Proposed Temporary Use Permit TP000010



CAPITAL REGIONAL DISTRICT

TEMPORARY USE PERMIT NO. TP000010

1. This Permit is issued under the authority of Section 493 of the *Local Government Act* and subject to compliance with all of the bylaws of the Regional District applicable thereto, except as specifically authorized by this Permit.
2. This Permit applies to and only to those lands within the Regional District described below (legal description), and to any and all buildings, structures, and other development thereon:
PID: 001-679-503;
Legal Description: Lot 4, Section 47, Otter District, Plan VIP23769 (the "Land")
3. This Permit authorizes the operation of a cannabis micro-cannabis cultivation facility, including propagation, harvesting, testing and authorized sales via shipping (the "temporary use"), on the Land, 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 temporary use referred to in section 3 may be carried out are as follows:
 - a) The temporary use shall occur at least 15 metres from the property boundaries;
 - b) The temporary use shall be screened from view the public road and adjacent properties through installation of a fence or natural coniferous landscaping;
 - c) The temporary use shall be conducted fully within an accessory building and occupy a floor area no greater than 200 m²;
 - d) Nothing shall be done which is or will become an annoyance or nuisance to the surrounding areas by reason of unsightliness, the emission of odours, liquid effluence, dust, fumes, smoke, vibration, noise or glare; nor shall anything be done which creates or causes a health, fire or explosion hazard, electrical or navigation interference;
 - e) Persons employed on the premises are limited to owners and residents of the property plus up to two non-resident employees;
 - f) Up to five additional temporary workers may be employed for a period of up to 7 days during a 60 day period;
 - g) There shall be no increase in vehicular traffic flow and parking by more than two additional vehicles at a time;
 - h) The use of commercial vehicles for the delivery of materials to and from the premises shall be limited to a maximum of two vehicles per day.
5. 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 (TP000010) or any amendment hereto shall be binding upon all persons who acquire an interest in the land affected by this Permit.
6. 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.
7. The following plans and specifications are attached:
Appendix 1: Site and Building Plans
8. In default of compliance with any of the provisions of this Permit, the Permit shall lapse.
9. The owner agrees to indemnify and save harmless the CRD against all costs and expenses incurred by the CRD, in default by the owner, in the conversion, demolition or removal of the temporary use, and/or legal costs incurred in pursuing such legal remedies as the CRD sees fit.



Making a difference...together

TP000010

10. This Permit is NOT a Building Permit.

11. This Permit shall expire 3 years after the date of issuance of the permit.

RESOLUTION PASSED BY THE BOARD, THE ____ day of _____, 2019.

ISSUED this ____ day of _____, 2019

Corporate Officer



Making a difference...together

TP000010

Appendix 1: Site and Building Plans

7822 TUGWELL RD

Nov 20/2018

