CITY OF COLWOOD

3300 Wishart Road | Colwood | BC V9C 1R1 | 250 294-8153
planning@colwood.ca | www.colwood.ca

File: DP000025

DEVELOPMENT PERMIT DP000025

THIS PERMIT, issued **May 8, 2024,** is,

ISSUED BY: **CITY OF COLWOOD**, a municipality incorporated under the *Local Government Act*, 3300 Wishart Road, Victoria, BC, V9C 1R1

(the "City")

PURSUANT TO: Section 490 of the *Local Government Act* , RSBC 2015, Chapter 1

ISSUED TO: RPSP BEACH FRONT NOMINEE LTD
305-111 WATER ST
VANCOUVER BC V6B 1A7

(the "Permittee")

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1. This Natural Hazards (Steeply Sloped) Development Permit applies to those lands within the City of Colwood described below, and any and all buildings, structures, and other development thereon:

   LOT J, SECTION 53, ESQUIMALT LAND DISTRICT, PLAN VIP58414, & SEC 54
   LOT I, SECTION 54, ESQUIMALT LAND DISTRICT, PLAN VIP58414
   METCHOSIN RD

   (the "Lands")

2. This Development Permit regulates the development and alterations of the Land, and supplements the *"Colwood Land Use Bylaw, 1989"* (Bylaw No. 151), to ensure the Natural Hazard considerations for tree removal and grading works are consistent with the Natural Hazard guidelines for areas designated as "Steeply Sloped" in the City of Colwood Official Community Plan (Bylaw No. 1700).

3. This Development Permit contains additional requirements that **must** be met before grading works commence.

4. This Development Permit is **NOT** a Building Permit or a subdivision approval.

5. This Development Permit is issued subject to compliance with all of the bylaws of the City of Colwood that apply to the development of the Lands, except as specifically supplemented by this Permit.

6. The Director of Development Services or their delegate may approve minor variations to the schedules attached to and forming part of this Development Permit, provided that such minor variations are consistent with the overall intent of the original plans and do not alter the environmental conditions of the development authorized by those plans.

7. If the Permittee does not substantially start the construction permitted by this Permit within 24 months of the date of this Permit, the Permit shall lapse and be of no further force and effect.

8. The development is to be constructed in accordance with the following plans and specifications, which are attached to and form as part of this permit:

Schedule 1	Arborist Report prepared by D. Clark Arboriculture dated March 20, 2024.
Schedule 2	Tree Site Plan prepared by D. Clark Arboriculture, dated August 29, 2023.
Schedule 3	Tree Replacement Plan.
Schedule 4	Beachlands Wildlife Tree Survey prepared by Corvidae Environmental Consulting Inc. dated April 10, 2024.
Schedule 5	Stormwater Management Memo prepared by On Point Project Engineers Ltd. dated April 24, 2024.
Schedule 6	Geotechnical Memo prepared by Geopacific Consultants dated April 18, 2024.

9. This Development Permit authorizes the removal of 19 trees and associated grading works. The Lands shall not be altered, nor any buildings or structures constructed, except in accordance with the following conditions:

GENERAL

9.1. The following permits issued on the Lands by the City of Colwood apply, remain valid and are in no way diminished by this Development Permit:

9.1.1. DP000005 – Multifamily Development in Lot 1 of Area 2 Beachlands; and

9.1.2. DP000009 – Presentation Centre at 298 Beachlands Blvd.

9.2. This Permit shall not be construed as relieving the Permittee from compliance with any of the requirements contained within the Section 219 covenants registered as "CA8955703" as amended from time to time.

9.3. British Columbia's archaeological sites are protected under the Heritage Conservation Act and shall not be altered or damaged without the required permits from the Provincial Archaeology Branch.

9.3.1. There are areas of archaeological potential located within the subject property, which may contain archaeological sites protected by the Heritage Conservation Act. Please contact the Archaeology Branch of the Provincial Government (250-953-3334) to learn more about responsibilities and obligations during construction.

TREE MANAGEMENT CONDITIONS

General

9.4. All recommendations from the Arborist Report prepared by D. Clark Arboriculture (Schedule 1) must be followed and only varied with written consent from the Director of Development Services.

Tree Protection

9.5. All protection measures for retained trees must be in accordance with the approved Arborist Report prepared by D. Clark Arboriculture (Schedule 1) and only varied with written consent from the Director of Development Services.

9.6. The Tree Protection Zone must be installed in accordance with the approved Arborist Report (Schedule 1) and Tree Site Plan (Schedule 2) prepared by D. Clark Arboriculture and be inspected by the Project Arborist.

9.7. Installation photos must be submitted to the City for approval prior to grading works, to the satisfaction of the Director of Development Services.

9.8. An updated Tree Protection Plan prepared by the project arborist must be submitted to the City for approval if any changes to the Tree Protection Zone are proposed, to the satisfaction of the Director of Development Services.

Replacement Trees

9.9. A security deposit of **$9,500** has been accepted for 38 replacement trees (calculated at a 2:1 ratio) per requirements of the Urban Forest Bylaw No. 1735.

9.10. Once the replacement trees have been planted, photos of the replacement trees must be submitted to the City to the satisfaction of the Director of Development Services. The date the photos are received will become the replacement tree planting date.

9.11. The replacement tree security deposit will be held until photographs confirming the survival of the trees have been submitted to the City, no sooner than 1 year from the replacement tree planting date.

9.12. If any replacement tree does not survive for 1 year, the Permittee shall, within 6 months, replace the tree(s) with a replacement tree in accordance with approved Tree Replacement Plan (Schedule 3) and shall thereafter maintain the replacement tree for a period of 1 year.

9.13. Replacement trees must be a minimum of 1.5m in height at the time of planting and the must be a native species found in the Coastal Douglas-fir ecosystem as per requirements of the Urban Forest Bylaw No. 1735 and in accordance with the approved Tree Replacement Plan (Schedule 3) in consultation with a qualified landscape architect and/or horticulturalist.

Retained Trees

9.14. A security deposit of **$42,500** has been accepted for 17 retained trees per requirements of the Urban Forest Bylaw No. 1735.

9.15. The retained tree security deposit will be held until photographs confirming the survival of the trees

have been submitted to the City, no sooner than 1 year from the conclusion of the grading works date, as determined by the Director of Development Services.

Nesting and Migratory Birds

9.16. It is the property owner's responsibility to ensure that physical works are compliant with the Federal Migratory Birds Convention Act, 1994 and the provincial Wildlife Act with respect to bird nests. Both of these acts prohibit the disturbance or destruction of active nests and eggs.

9.17. Additional Bird Nest Sweeps must be conducted prior to tree cutting in accordance with the Beachlands Wildlife Tree Survey prepared by Corvidae Environmental Consulting Inc. (Schedule 4) and be submitted to City to the satisfaction of the Director of Development Services.

NATURAL HAZARDS CONDITIONS

General

9.18. This permit does not authorize any blasting on the site; additional permits will be required.

Tree removal

9.19. No land alteration, including the removal of tree stumps, is permitted until the following documents have been submitted and approved by the City, to the satisfaction of the Director of Development Services.

i. Grading Plan for the Lands prepared by a professional engineer.
ii. Geotechnical Report and Landslide Assessment from a professional engineer confirming that the Lands are safe for the use intended.

Stormwater Management

9.20. Stormwater management shall be in accordance with an approved Stormwater Management Memo prepared by On Point Project Engineers Ltd. (Schedule 5).

9.21. No land alteration, including the removal of tree stumps, is permitted until an updated Stormwater Management Plan addressing the tree removals and proposed grading is submitted and approved by the City, to the satisfaction of the Director of Development Services.

Erosion and Sediment Control

9.22. Erosion and sediment control shall be in accordance with the approved Geotechnical Memo prepared by Geopacific Consultants (Schedule 6).

9.23. No land alteration, including the removal of tree stumps, is permitted until an updated Erosion Sediment Control Plan addressing the tree removals and proposed grading is submitted and approved by the City, to the satisfaction of the Director of Development Services.

ISSUED ON THIS 8th DAY OF MAY, 2024.

JOHN ROSENBERG, A.Sc.T.
DIRECTOR OF ENGINEERING AND DEVELOPMENT SERVICES

THE FOLLOWING REQUIREMENTS MUST BE SUBMITTED AND ACCEPTED BY THE DIRECTOR OF DEVELOPMENT SERVICES BEFORE GRADING WORKS CAN COMMENCE:

1. Grading Plan prepared by a professional engineer;
2. Geotechnical Report and Landslide Assessment from a professional engineer confirming the Lands are safe for the use intended;
3. Stormwater Management Plan addressing the lands after tree removal; and
4. Erosion and Sediment Control Plan addressing the lands after tree removal.

Schedule 1

D. Clark Arboriculture
2741 The Rise Victoria B.C. V8T-3T4
(250)474-1552 (250)208-1568
clarkarbor@gmail.com
www.dclarkarboriculture.com

Arborist Report for Development Purposes
Re: Proposed Development, and Construction

Site Location: Beachlands, Colwood BC
Ryan Senechal ON-1272AT, TRAQ, BC WDTA 3013P
March 20th, 2024

For Darby Hunt, Turnbull Construction Project Managers
Unit 308 – 780 Blanshard Street
Victoria, BC, V8W 2H1

Re. Proposed Development, and Construction at Beachlands

1.0 - Scope of Work

D. Clark Arboriculture has been retained by Turnbull Construction Project Managers to provide an initial tree inventory and report and tree management plan for Protected trees that may be conflicting with proposed site grading and construction of homes and roads, and to produce a Tree Protection Plan for the Beachlands property on Metchosin Rd. as per the requirements of the City of Colwood.

The Arborist's assignment in this project is to gather site and tree information in areas identified by our client and to make recommendations on:

- Tree suitability for retention
- Protection measures required for retained trees
- The requirement for tree removal where conflicts are likely to cause disturbances or injuries that destabilize or severely degrade tree health

The Tree Protection Plan includes preventative best management practices for retaining trees through construction activities and may include physical protections, the production of correspondence and markups for the benefit of the project team, and arborist supervision of works that encroach on established Tree Protection Zones (TPZs). The arborist will also support inspection and mitigation needs should a tree or trees identified for retention be injured during the project. Ongoing monitoring will be conducted to ensure preventative protection measures such as fencing and signage are maintained, and to identify any damages or disturbances that have occurred.

2.0 - Summary

During our site work on August 3rd and 4th, 2023, a total of (87) trees were initially inventoried in 2 areas of the lot (Figure 1). Only trees that are of a Protected size under City of Colwood's Urban Forest Bylaw No. 1735, 2018 were inventoried. Several multi-stemmed trees that were tagged during our site visit were not reflected in the final inventory as they were later determined to be undersized based on Colwood's multiple stem diameter formula. A third area of the lot (Figure 3) was surveyed by myself (Ryan Senechal) and Miche Hachey on January 31st, 2024 to determine if additional Bylaw Protected trees were within the grading footprint. No additional trees were identified as being in direct conflict. Grading may encroach on eastern bluff trees, and measures have been outlined in 6.0 and 7.0 of this report to address those potential disturbances.

Bylaw Protected trees (19) run along a bluff edge at the east side of the property adjacent a service road currently in use for site earthworks and these trees are required to be removed as they fall within planned grading. An additional strip of (57) Bylaw Protected trees at the crest of a slope on the southern-most side of the property have been retained with tree protection measures outlined in this report.

Table 1. Summary of Tree Inventory and Recommendations

Tree Ownership	Protected Trees	Protected Trees to be Removed	Protected Trees to be Retained	Replacement Trees Required
Onsite trees	19	19	0	38

3.0 - Introduction and Methodology

Ryan Senechal and Miche Hachey attended the site on August 3rd and 4th, 2023 to inspect and inventory on-property trees of a Protected status that have potential to be disturbed or injured by proposed construction. An initial report was submitted for this project on September 26th, 2023, and this subsequent arborist report was completed by Ryan Senechal on March 20th, 2024.

Tasks performed include:

- An aerial site map was generated indicating tree locations (Figure 1).
- A visual inspection of (76) protected trees and (11) unprotected trees was completed. An additional area was surveyed on January 31st, 2024 (Figure 3) to determine if Bylaw Protected trees were in that area.
- Information gathered included ID, species, diameter at breast height (DBH), tree height, bylaw protection status, crown width, health condition, structural condition, and condition notes.
- Trees were tagged using numerically stamped aluminum discs.
- Tree height was measured to the nearest metre with a Trupulse 200 Laser Rangefinder. Canopy width was estimated to the widest point. Diameters were measured with a fabric tape.
- Tree locations were provided by On Point Project Engineers Ltd. and are adapted in orthographic imagery in this report.
- A Tree Protection Plan (attachment) implementing local site and species knowledge and Industry Best Management Practices[1].
- Photos of the site.

[1] Matheny et al. (2023). Managing Trees During Site Development and Construction: Best Management Practices, Third Edition.

Figure 1 – Aerial view of property and tree locations

Figure 2 – Grading Cut/Fill Plan

Figure 3 – Additional survey area (highlighted blue portion)

4.0 - Tree Inventory

Beachlands Inventory of Trees										
#	Species	DBH (cm)	Height (m)	Width (m)	PRZ (m)	Structural Condition	Health Condition	Bylaw protected	Recommendation	Condition Notes
1	Garry oak	17	7	7	2	good	good	Yes	Retain	small deadwood
2	Garry oak	19	8	6	2.3	fair	fair	Yes	Retain	50% live foliage
3	Garry oak	14	8	5	1.7	fair	fair	Yes	Retain	25% live, suppressed
4	Garry oak	7	6	4	.8	poor	poor	Yes	Retain	25% live foliage, suppressed
5	Garry oak	11	4	6	1.3	fair	fair	Yes	Retain	30% live foliage, suppressed
6	Douglas fir	43	13	9	5.2	fair	fair	Yes	Retain	below average needle density and yellowing colour indicate stress and decline
7	Douglas fir	74	18	10	8.9	fair	fair	Yes	Retain	average needle density and colour
8	Arbutus	20	8	6	2.4	fair	fair	Yes	Retain	small deadwood, multi stem
9	Garry oak	10	5	4	1.2	poor	poor	Yes	Retain	10% live foliage, suppressed
10	Garry oak	9	4	3	1.1	fair	fair	Yes	Retain	30% live foliage, suppressed
11	Garry oak	29	8	10	3.5	poor	fair	Yes	Retain	multiple primary branch failures, dieback, over extended branch, in contact with ID7
12	Douglas fir	30	11	7	3.6	fair	fair	Yes	Retain	small deadwood, average needle density and colour
13	Garry oak	8	2	3	1.0	fair	fair	Yes	Retain	30% live foliage, suppressed
14	Garry oak	6	2	3	.7	fair	fair	Yes	Retain	30% live foliage, suppressed
15	Garry oak	9	4	3	1.1	fair	fair	Yes	Retain	tip dieback, 30% live foliage, suppressed
16	Garry oak	4	2	2	.5	fair	fair	Yes	Retain	suppressed sapling
17	Garry oak	21	7	3	2.5	fair	fair	Yes	Retain	50% live foliage, suppressed
18	Douglas fir	35	11	5	4.2	fair	fair	Yes	Retain	poor live crown ratio, average needle density and colour
19	Garry oak	5	2	2	.6	fair	fair	Yes	Retain	suppressed sapling
20	Douglas fir	41	20	8	4.9	poor	poor	Yes	Retain	poor live crown ratio, average needle density and colour.
21	Douglas fir	54	22	10	6.5	fair	fair	Yes	Retain	average needle and colour
22	Arbutus	6	2	1	.7	fair	fair	Yes	Retain	suppressed sapling
23	Arbutus	11	5	3	1.3	good	good	Yes	Retain	
24	Douglas fir	58	26	10	7.0	fair	fair	Yes	Retain	newly formed top. over extended lateral branches. average needle density and colour
25	Arbutus	6	3	3	.7	fair	fair	Yes	Retain	suppressed sapling
26	Arbutus	9	5	3	1.1	fair	poor	Yes	Retain	dead top, 10% live foliage

#	Species	DBH (cm)	Height (m)	Width (m)	PRZ (m)	Structural Condition	Health Condition	Bylaw protected	Recommendation	Condition Notes
27	Arbutus	11	6	4	1.3	fair	fair	Yes	Retain	small dead branches
28	Arbutus	14	4	2	1.7	poor	critical	Yes	Retain	only live growth is basal sprouts
29	Arbutus	5	2	3	.6	fair	fair	Yes	Retain	suppressed, spreading form
30	Arbutus	9	4	4	1.1	fair	fair	Yes	Retain	suppressed, spreading form
31	Douglas fir	46	21	8	5.5	fair	fair	Yes	Retain	below average needle colour and needle density. indication of stress.
32	Arbutus	90	20	18	10.8	fair	good	Yes	Retain	minor decay at base, multiple codominants, included bark, elongated primary branches, minor top dieback. good foliage density and wound response
33	Arbutus	64	15	8	7.7	fair	fair	Yes	Retain	basal decay, multi stem, moderate small branch dieback
34	Bigleaf maple	30	18	10	3.6	fair	fair	Yes	Retain	suppressed, uneven branch distribution, minor small branch dieback
35	Douglas fir	43	21	10	5.2	fair	fair	Yes	Retain	healthy upper crown, uneven branch distribution, minor needle dieback
36	Arbutus	55	18	11	6.6	poor	poor	Yes	Retain	large dead primary branches, poor foliage density
37	Arbutus	33	12	8	4.0	poor	critical	Yes	Retain	only live growth is basal sprouts
38	Douglas fir	31	20	9	3.7	good	good	Yes	Retain	good branch distribution, average needle density and colour
39	Arbutus	71	16	12	8.5	fair	fair	Yes	Retain	moderate branch dieback, canker, basal decay, codominants
40	Douglas fir	46	19	10	5.5	good	fair	Yes	Retain	suppressed lower branches and minor dieback, otherwise good needle density and colour
41	Douglas fir	31	12	8	3.7	good	good	Yes	Retain	good branch density and distribution, average needle colour and density
42	Arbutus	78	20	18	9.4	fair	fair	Yes	Retain	codominants and included bark at base. moderate low branch dieback. good foliage density and health in upper canopy. good wound response.
43	Arbutus	30	14	9	3.6	fair	fair	Yes	Retain	moderate small branch dieback, suppressed, canker and basal decay
44	Arbutus	32	10	8	3.8	poor	poor	Yes	Retain	severe basal canker, decay, branch dieback
45	Arbutus	35	18	14	4.2	fair	fair	Yes	Retain	minor canker, moderate branch dieback in interior crown
46	Arbutus	34	18	13	4.1	fair	fair	Yes	Retain	basal decay, moderate interior branch dieback
47	Douglas fir	43	20	15	5.2	fair	fair	Yes	Retain	average needle density and colour
48	Arbutus	23	12	7	2.8	fair	good	Yes	Retain	basal cavity, minor branch dieback
49	Arbutus	50	18	15	6.0	fair	fair	Yes	Retain	moderate basal canker, small branch dieback
50	Arbutus	41	14	14	4.9	poor	poor	Yes	Retain	severe basal canker and decay. 25% live foliage.
51	Arbutus	86	18	20	10.3	poor	poor	Yes	Retain	severe dieback. 10% live foliage remains
52	Arbutus	50	9	9	6.0	poor	poor	Yes	Retain	moderate canker and foliar blight, moderate dieback.
53	Arbutus	34	2	2	4.1	poor	poor	Yes	Retain	severe dieback. 10% live foliage remains
54	Garry oak	16	4	4	1.9	fair	fair	Yes	Retain	minor foliar injury likely from exposure on steep slope

#	Species	DBH (cm)	Height (m)	Width (m)	PRZ (m)	Structural Condition	Health Condition	Bylaw protected	Recommendation	Condition Notes
55	Garry oak	15	3	3	1.8	fair	fair	Yes	Retain	foliage density below average
56	Arbutus	21	5	6	2.5	poor	fair	Yes	Retain	severe canker and dieback of primary stem
57	Arbutus	52	8	8	6.2	fair	fair	Yes	Retain	multi stem, moderate dieback
58	Douglas fir	42	12	10	N/A	good	good	Yes	Remove	good branch distribution, low interior needle density
59	Douglas fir	47	12	11	N/A	fair	good	Yes	Remove	reiterated top, lower branch mechanical wounding, over extended low branches
60	Douglas fir	45	12	13	N/A	very good	very good	Yes	Remove	full density, good needle colour
61	Douglas fir	30	11	10	N/A	good	fair	Yes	Remove	low branch dieback, below average needle density and colour
62	Douglas fir	30	12	8	N/A	good	fair	Yes	Remove	below average needle density and yellowing on water side. lower branch dieback.
63	Douglas fir	36	12	8	N/A	good	fair	Yes	Remove	below average needle density and yellowing on water side. lower branch dieback.
64	Douglas fir	31	12	8	N/A	good	fair	Yes	Remove	below average needle density and yellowing on water side. lower branch dieback.
65	Douglas fir	37	12	10	N/A	good	good	Yes	Remove	average branch density and needle colour
67	Douglas fir	43	12	12	N/A	fair	fair	Yes	Remove	codominant top. good needle density, and branch distribution. Wind exposure from ocean. steep slope.
71	Douglas fir	31	10	9	N/A	poor	fair	Yes	Remove	side of roadway. Numerous mechanical wounding on base and throughout trunk. sap oozing. Broken hanging branches under 4cm in sizes.
72	Douglas fir	30	10	8	N/A	poor	fair	Yes	Remove	on roadway/steep slope. codominant stem at base. included bark. minor broken branches. Big leaf maple wrapped around stem. competing.
74	Douglas fir	31	16	13	N/A	good	good	Yes	Remove	On steep slope. Minor die back. Naturally thinner canopy due to competing vegetation.
75	Douglas fir	32	18	4	N/A	good	fair	Yes	Remove	On steep slope. Thinner presence of foliage on water side.
78	Bigleaf maple	33	14	9	N/A	fair	good	Yes	Remove	on steep slope. Gravel backfill on base. mechanical injury on trunk. included bark
79	Douglas fir	46	16	12	N/A	fair	fair	Yes	Remove	on steep slope, codominant stem with included seam at approximately 11m height.
83	Douglas fir	30	17	9	N/A	good	Fair	Yes	Remove	At bottom of steep slope. Needle density rated poor. Minor foliage die back
84	Douglas fir	32	18	9	N/A	good	fair	Yes	Remove	on Steep slope. needle density rated fair. Minor sized dead broken branches
85	Douglas fir	33	17	12	N/A	fair	good	Yes	Remove	on roadside. steep slope. fill of gravel and soil pushed up to base of trunk to approximately 30 cm height. Good needle density
86	Douglas fir	31	17	8	N/A	good	good	Yes	Remove	On steep slope. minor dead branches.

DBH-Diameter at Breast Height. Measured at 1.4m from the point of germination. Where the tree is multi-stemmed at 1.4m, the DBH shall be considered 100% of the three largest stems, rounded to the nearest cm.

PRZ-Protected Root Zone. The PRZ shall be considered 12x the DBH, rounded to the nearest 10 cm.

5.0 - Site Description

The Beachlands property is a former gravel/sand quarry with patches of remaining mixed age deciduous and coniferous forest. Species composition at the south side of the property on sandy soils and sloped terrain is a mixture of young lodgepole pine to the west and on the south and southeast, juvenile Garry oak, and a small number of mature Douglas fir and Arbutus (Figure 3). To the east along the steeper slopes at the crest of the bluff are primarily bigleaf maple coppices, Douglas fir, and red alder (on more recently disturbed areas). Both areas observed were moderately degraded, for example, localized vegetation loss and erosion caused by recreational activities. Site earthworks were ongoing during our initial survey, and much of the vegetation visible in 2021 CRD aerial imagery has been removed for remediation and grading purposes.

The City of Colwood's Royal Beach Sub Area Plan and Waterfront Stewardship Plan were reviewed as part of this assignment.

Figure 4 – Edge of service road adjacent eastern bluff

6.0 - Grading and Proposed Construction Conflicts with Trees

6.1. Cut/fill grading requirements present conflicts with Protected trees. Based on plans reviewed at this phase (eastern bluff), (19) Protected trees are required to be removed.

6.2. Erosion and sediment control measures and environmental monitoring are in the planning stages including in the area along the eastern edge of the lot[2].

6.3. Grading may encroach on bluff trees. Increasing the grading edge distance from trees at the top of the eastern bluff will decrease the likelihood of tree decline for trees in fair to poor condition and decrease the likelihood of tree failure for taller wind-exposed Douglas fir over the medium-term. A minimum buffer of 5 m is recommended between the grading edge and existing trees near the top of the bluff.

6.4. The final planned grading edge will be the basis for establishment of Tree Protection Zones (7.1). The Tree Protection Plan will be updated with the final planned grading edge once those plans have been provided to us.

6.4. Heavy equipment movement and staging should be minimized to grading within 10 m of off-property trees at the top of the steep slope traffic.

7.0 - Tree Protection Plan

7.1. A Tree Protection Zone (TPZ) will initially be installed at the top of the eastern bluff at the grading edge to prevent vehicle and worker access down slope.

7.2. Fencing for the TPZ must be either securely anchored 2x4 posts and framing, paneled with securely affixed orange snow fence or plywood, or continuous temporary jobsite fencing (metal) secured with bailing wire or zip ties. Fencing will incorporate highly visible signs that include “TREE PROTECTION AREA- NO ENTRY” (See appendix for an example). The area inside TPZs is restricted to workers, equipment, and storage of materials. Areas outside the tree protection fence will remain open for passage, as work areas, and for storage of materials.

7.3. Tree protection measures will remain in place for the duration of the project unless they are amended and documented by the project arborist.

7.4. Tree protection measures will not be amended in any way without approval from the project arborist. Any additional tree protection measures will be documented in a memo to City of Colwood and our client.

7.5. Work inside the established TPZ of any retained tree identified in this plan for any reason will take place under the supervision of the project arborist or their designate. Root disturbance and injury mitigation techniques may be specified by the arborist including, but not limited to the use a hydro-vac or Airspade®, a finishing bucket on an excavator removing shallow volumes of soil under constant arborist guidance, or digging using hand tools to expose roots for inspection. Any roots damaged or injured inside TPZs may trigger the requirement for a tree risk assessment to evaluate tree stability.

7.6. Site servicing and road building may conflict with TPZs. Plans will require review for conflicts with retained trees by the project arborist when plans are produced.

[2] Corvidae Environmental Consulting Inc. (2023). Erosion and Sediment Control Plan, Royal Beach Bulk Earthworks (Draft v 0.1)

7.7. Any pruning of protected trees during the project will be performed by an ISA (International Society of Arboriculture) Certified Arborist guided by industry best management practices and specifications prepared by the project arborist.

7.8. Landscaping has potential to disturb or injure tree within the TPZ. All protection measures outlined in the Tree Protection Plan extend to landscaping activities. Any changes will be approved by the project arborist with amendments to the report and plan documented in correspondence to the city and the developer.

8.0 - Role of the Project Arborist

8.1. No aspect of this Tree Protection Plan will be amended in whole or in part without the permission of the project arborist. Any amendments to the plan must be documented in memorandums for the City of Colwood, and for the developer.

8.2. The project arborist must approve all tree protection measures before construction is to begin.

8.3. A site meeting including the project arborist, developer, project supervisor and any other related parties to review the tree protection plan will be held at the beginning of the project.

8.4. The developer may keep a copy of the Tree Protection Plan on site to be reviewed and/or circulated to all relevant project participants. The project arborist is responsible for ensuring that all aspects of this plan, including violations, are documented in memorandums and circulated to the City of Colwood and to the developer.

9.0 - Replacement Trees and Achieving Tree Minimum

The City of Colwood requires replacement trees be planted for every bylaw protected tree removed. A landscape plan has not been provided for our review at this preliminary stage. Locations of the replacement trees will be required in the production of the project landscape plan.

Securities are required for the protection of retained trees and for the replacement of removed trees:

The applicable tree replacement ratio (2:1) requires (38) replacement trees for the (19) trees to be removed.

Item	Quantity of Trees	Unit Cost	Total Cost
Replacement Tree Security	38	$250	$9,500
Retained Protected Tree Security	38	$2500	$95,000

Thank you for the opportunity to comment on these trees.
Should any issues arise from this report, I am available to discuss them by phone, email or in person.
Regards,

Ryan Senechal

UBC Master's of Urban Forestry Leadership (MUFL)
ISA Certified Arborist ON-1272A
ISA Tree Risk Assessment Qualification
BC Wildlife & Danger Tree Assessor #3013P

Disclosure Statement

An arborist uses their education, training and experience to assess trees and provide prescriptions that promote the health and wellbeing, and reduce the risk of trees.

The prescriptions set forth in this report are based on the documented indicators of risk and health noted at the time of the assessment and are not a guarantee against all potential symptoms and risks.

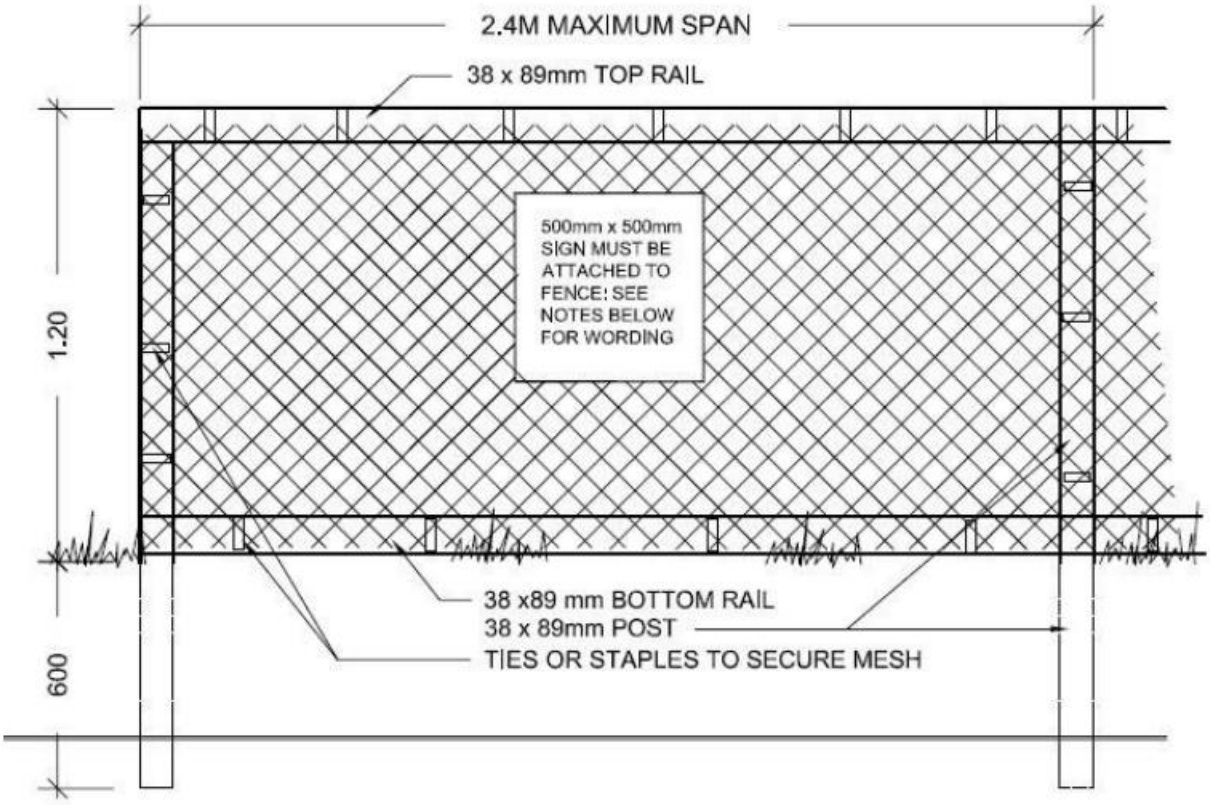
Trees are living organisms and subject to continual change from a variety of factors including but not limited to disease, weather and climate, and age. Disease and structural defects may be concealed in the tree or underground. It is impossible for an arborist to detect every flaw or condition that may result in failure, and an arborist cannot guarantee that a tree will remain healthy and free of risk.

To live near trees is to accept some degree of risk. The only way to eliminate the risks associated with trees is to eliminate all trees.

Assumptions and Limiting Conditions

- Altering this report in any way invalidates the entire report.
- The use of this report is intended solely for the addressed client and may not be used or reproduced for any reason without the consent of the author.
- The information in this report is limited to only the items that were examined and reported on and reflect only the visual conditions at the time of the assessment.
- The inspection is limited to a visual examination of the accessible components without dissection, excavation or probing, unless otherwise reported. There is no guarantee that problems or deficiencies may not arise in the future, or that they may have been present at the time of the assessment.
- Sketches, notes, diagrams, etc. included in this report are intended as visual aids, are not considered to scale except where noted and should not be considered surveys or architectural drawings.
- All information provided by owners and or managers of the property in question, or by agents acting on behalf of the aforementioned is assumed to be correct and submitted in good faith. The consultant cannot be responsible or guarantee the accuracy of information provided by others.
- It is assumed that the property is not in violation of any codes, covenants, ordinances or any other governmental regulations.
- The consultant shall not be required to attend court or give testimony unless subsequent contractual arrangements are made.
- The report and any values within are the opinion of the consultant, and fees collected are in no way contingent on the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, or any finding to be reported.

10.0 - Appendix



TREE PROTECTION FENCING

Tree Protection Fencing Specifications:

1. The fence will be constructed using 38 x 89 mm (2" x 4") wood frame:
   - Top, Bottom and Posts. In rocky areas, metal posts (t-bar or rebar) drilled into rock are acceptable.
   - Use orange snow fencing mesh and secure to the wood frame with "zip" ties or galvanized staples. Painted plywood or galvanized fencing may be used in place of snow fence mesh
2. Attach a roughly 500 mm x 500 mm sign with the following wording: **TREE PROTECTION AREA- NO ENTRY**. This sign must be affixed on every fence face or at least every 10 linear metres.

ID	Species	DBH (cm)	ID	Species	DBH (cm)
1	Garry oak	17	39	Arbutus	71
2	Garry oak	19	40	Douglas fir	46
3	Garry oak	14	41	Douglas fir	31
4	Garry oak	7	42	Arbutus	78
5	Garry oak	11	43	Arbutus	30
6	Douglas fir	43	44	Arbutus	32
7	Douglas fir	74	45	Arbutus	35
8	Arbutus	20	46	Arbutus	34
9	Garry oak	10	47	Douglas fir	43
10	Garry oak	9	48	Arbutus	23
11	Garry oak	29	49	Arbutus	50
12	Douglas fir	30	50	Arbutus	41
13	Garry oak	8	51	Arbutus	86
14	Garry oak	6	52	Arbutus	50
15	Garry oak	9	53	Arbutus	34
16	Garry oak	4	54	Garry oak	16
17	Garry oak	21	55	Garry oak	15
18	Douglas fir	35	56	Arbutus	21
19	Garry oak	5	57	Arbutus	52
20	Douglas fir	41	58	Douglas fir	42
21	Douglas fir	54	59	Douglas fir	47
22	Arbutus	6	60	Douglas fir	45
23	Arbutus	11	61	Douglas fir	30
24	Douglas fir	58	62	Douglas fir	30
25	Arbutus	6	63	Douglas fir	36
26	Arbutus	9	64	Douglas fir	31
27	Arbutus	11	65	Douglas fir	37
28	Arbutus	14	67	Douglas fir	43
29	Arbutus	5	71	Douglas fir	31
30	Arbutus	9	72	Douglas fir	30
31	Douglas fir	46	74	Douglas fir	31
32	Arbutus	90	75	Douglas fir	32
33	Arbutus	64	78	Bigleaf maple	33
34	Bigleaf maple	30	79	Douglas fir	46
35	Douglas fir	43	83	Douglas fir	30
36	Arbutus	55	84	Douglas fir	32
37	Arbutus	33	85	Douglas fir	33
38	Douglas fir	31	86	Douglas fir	31

Beachlands Bluffs Tree Inventory - August 29, 2023 - Coordinates Provided by On Point Project Engineers Ltd.

- Retain Tree
- Remove Tree

Calculated Tree Protection Zone

Tree Protection Zone Fencing

D.Clark Arboriculture
2741 The Rise, Victoria, BC
(250)208-1568
www.dclarkarboriculture.com

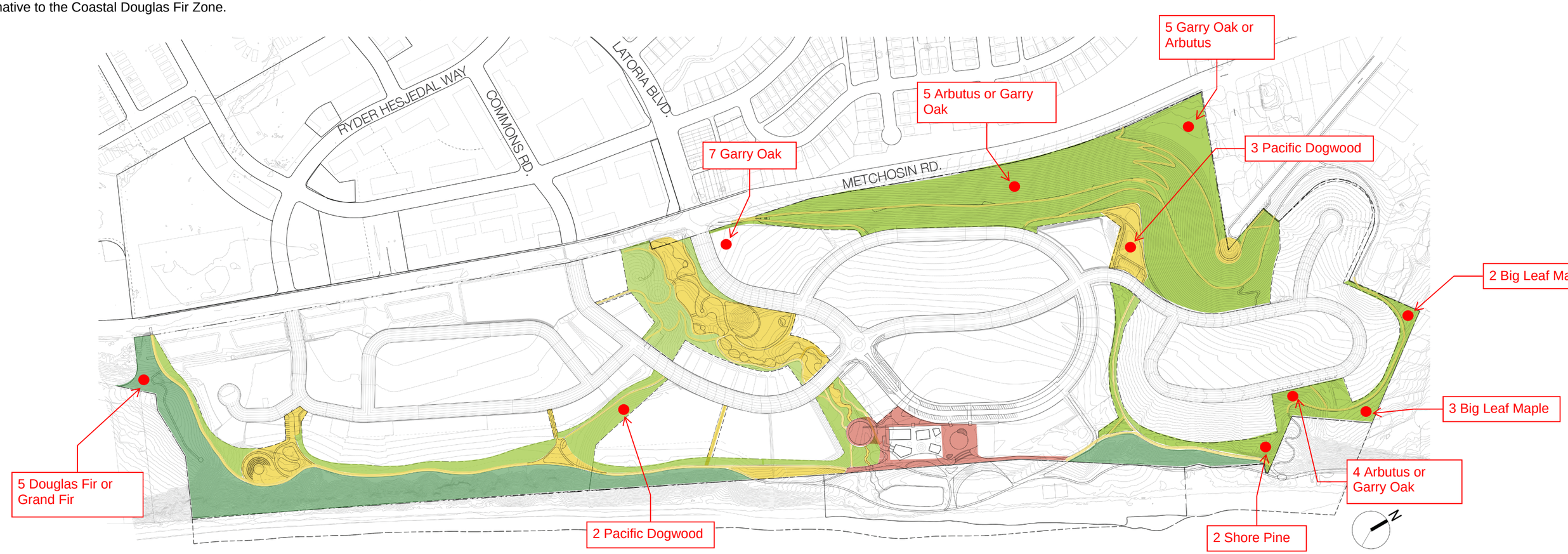
Schedule 3

Tree Replacement Plan - Total 38 Trees:

ALL TREES TO BE NO LOESS THAN 1.5M IN HEIGHT

5 - Douglas Fir or Grand Fir
14 - Arbutus or Garry Oak
7 - Garry Oak
5 - Pacific Dogwood
5 - Big Leaf Maple
2 - Shore Pine

*note this plan is conceptual and final locations and species may vary in consultation with a qualified landscape architect and/or horticulturist. Final selected tree species to will be native to the Coastal Douglas Fir Zone.



25% Level 5

48% Level 4

22% Level 3

5% Level 2

Scale 1:5000

0 25 50 100. 200 m.

CORVIDAE
ENVIRONMENTAL CONSULTING INC.

April 10, 2024

MEMO: BEACHLANDS WILDLIFE TREE SURVEY

This memo is a field summary report for the raptor nest and wildlife tree survey performed by a Qualified Environmental Professional (QEP) from Corvidae Environmental Consulting Inc. (Corvidae) at The Beachlands in Royal Bay (PID 018-998-810; LOT J SECTION 53 ESQUIMALT PLAN VIP58414 & SEC 54.).

METHODOLOGY

The raptor nest and wildlife tree survey was conducted on April 9th, 2024. The objective of the survey was to search the area for any active bird nests, year-round protected nests (e.g., eagle, osprey), and nests of forest mammals. The QEP surveyed the trees inside the clearing boundary plus an approximate 100 m buffer outside the boundary. The survey was completed in daylight hours (from 8:15 am-11:00 am) in suitable weather conditions (see Table 1 below).

Table 1. Survey conditions during April 9th, 2024 raptor nest and wildlife tree survey.

	Time	Temperature	Cloud	Precipitation	Wind
Survey Start	8:15	7°C	40%	Light rain	20 km/hr + gusts
Survey End	11:00	10°C	30%	None	20 km/hr + gusts

A combination of low intensity nest searches and passive visual surveys was employed.

- Passive Visual Surveys: Upon arrival at the project area, the QEP performed a visual point survey to observe birds occupying the area and to detect potential nesting behaviour.
- Visual nest searches: The QEP walked transects within and adjacent to the project area. Transects are spaced ~25m apart and are typically non-linear, but parallel, and tracked using a GPS device.
- No aerial drone survey was conducted due to windy conditions. The tops of the trees could be viewed from the ground and nearby high viewpoints.

RESULTS

No wildlife trees were observed in or adjacent to the clearing boundary. Three Canada goose nests were observed during the survey, however the nests are outside the clearing boundary and are located on the ground. Therefore, the removal of the trees is not expected to impact the nests. Further, the client is actively working with the CRD (with permits) to control the population of Canada geese on the site through egg addling.

CORVIDAE
ENVIRONMENTAL CONSULTING INC.

CONCLUSION AND RECOMMENDATIONS

The QEP has completed low-intensity and visual surveys of the project area and adjacent buffer. No wildlife trees were observed. Once the Tree Management Permit is received, Corvidae will conduct Bird Nest Sweeps on two consecutive days to check for new nests that may have been created in the time since the April 9th survey. If an active nest is discovered during the Bird Nest Sweeps, the nest will be subject to site-specific mitigation measures (e.g., protective buffer around the nest or unobtrusive monitoring) until the young have naturally fledged/left the area. Additional nest sweeps may be required. If no nests are discovered, clearing may commence within 48 hours of the most recent nest sweep.

For any questions, please contact the undersigned.

Report Prepared By:

Nicole da Silva, BIT, B.Sc.
Intermediate Biologist
Corvidae Environmental Consulting Inc.
(250)-858-7579

Schedule 5

ONPOINT
PROJECT ENGINEERS LTD.

111-957 Langford Parkway
Victoria, BC V9B 0A5
T: (250) 478-7875
www.oppel.ca

Technical Memorandum

On Point Project File: 174-01
City of Colwood File:

April 24, 2024

City of Colwood
3300 Wishart Rd
Victoria, BC
V9C 1R1

Attention: Aaron Knutson, AScT,
Engineering Technologist

Reference: The Beachlands – Bluffs Earthworks Tree Clearing SWMP

Tree clearing is proposed within the boundary shown on the attached plan dated April 23, 2024. The initial scope of works will include cutting the trees at the stumps and removing the fallen portion of the tree while leaving the stump in situ.

There is no regrading of the site anticipated in this initial scope of works and there should be minimal ground disturbance. Therefore, it is expected that there will be no impact to the current overland storm drainage networks in this area. The attached plan provides an outline of the existing catchment area within the tree clearing area and approximate directions and slope of the existing overland flow routes.

If you have any questions or require further information, please contact the undersigned.

Regards,

R Parkhouse

Ryan Parkhouse, EIT

Approved,

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
A. E. ENTZ
45271
2024-04-24

PERMIT TO PRACTICE
On Point Project Engineers Ltd.
2024-04-24
Andrew Entz, P.Eng.
PERMIT NUMBER 1002973
Engineers and Geoscientists of BC

Andrew Entz, P.Eng.

c. Crystal Loreth – Turnbull Construction Project Managers Ltd.
Andrew Entz – On Point Project Engineers Ltd.

Attachments:

- Bluffs - Earthworks Tree Clearing SWMP – Issued for Approval (Dated: April 23, 2024)

NOTES:

1. EXISTING GROUND FROM 2018-01-22 LIDAR SURVEY.
2. ORTHO PHOTO FROM 2024-01-03.
3. THE PROPOSED TREE CLEARING IS NOT EXPECTED TO EFFECT THE DRAINAGE DIRECTION IN ITS CURRENT STATE.
4. A SPECIFIC DRAINAGE PLAN WILL BE PROVIDED ALONGSIDE THE FINAL GRADING DESIGN FOR THE AREA.
5. STABILITY OF THE SLOPE SHOULD BE ACCESSED BY A QUALIFIED GEOTECHNICAL ENGINEER.
6. DEVELOPER IS REQUIRED TO ACQUIRE AN ESC PLAN FROM A QUALIFIED PROFESSIONAL FOR WORKS RELATED TO TREE CLEARING IN THIS AREA.

LEGEND:

TREE CLEARING AREA

STORM OVERLAND FLOW / SLOPE

STORM CATCHMENT BOUNDARY

1:400 0 8 24m

APRIL 23, 2024

ISSUED FOR APPROVAL

ONPOINT PROJECT ENGINEERS LTD.
TEL: 250 478-7875 WWW.OPPEL.CA
SUITE 111 - 957 LANGFORD PKWY VICTORIA BC V9B 0A5

ISSUED No.	DESCRIPTION	DATE	SIGN
1	ISSUED FOR APPROVAL	2024-04-23	RP

REVISED No.	DESCRIPTION	DATE	SIGN

DESIGNER: RP
REVIEWED: AE
ENGINEER: AE

SEAL PERMIT TO PRACTICE

SEACLIFF PROPERTIES
RELIANCE PROPERTIES
the beach lands

THE BEACHLANDS - BLUFFS
SEACLIFF

BLUFFS - EARTHWORKS
TREE CLEARING SWMP

ON POINT PROJECT No. 174-01A
GOVERNING AUTHORITY FILE No.
SHEET 1 OF 1
REV:---
ON POINT DRAWING No. 174-01A-SK478

ON POINT - Apr 23, 2024 8:48 AM - F:\174 ROYAL BEACH\01 GENERAL\03 CAD\ A ESIGN\02 ROYAL BEACH - BLUFFS\BLUFFS - DESIGN DRAWINGS\174-01 BLUFFS EARTHWORKS - TREE ZONE SWMP.DWG

GEOPACIFIC CONSULTANTS

P (250) 381 2134
geopacific.ca
2nd Floor, 3351 Douglas Street
Victoria, B.C. V8Z 3L4

GEOTECHNICAL MEMORANDUM

CLIENT:	RPSP Beach Front Development Manager Ltd.	**FILE NO:**	21385-D
PROJECT:	Beachlands Bluffs	**DATE:**	2024-04-18
ADDRESS:	Royal Beach Development, Metchosin Road, Colwood, B.C.	**MEMO NO:**	002-R1

TIME:	N/A	**WEATHER:**	N/A	**MACHINERY/EQUIPMENT ADJACENT TO EXCAVATION:**	N/A

PURPOSE:

- We understand our comment are required with respect to Erosion Sediment Control (ESC) along the crest of the eastern bluffs and the proposed tree removal (Figure 1).

OBSERVATIONS:

- We understand that the removal of trees will be required in advance of completing the proposed site grading in the vicinity of the existing bluffs at the eastern extent of the site.
- Furthermore, we understand that the removal is to occur in the Steep Slope Development Permit area identified by the City of Colwood.

CONCLUSIONS/RECOMMENDATIONS:

- It is our opinion that the trees can be cut, provided that the stumps with their root systems remain in place and no soil is removed.
- GeoPacific is to be notified if any soil is disturbed along the bluffs during the tree removal.
- Provided our recommendations described above are adhered to, we confirm that no Erosion Sediment Control (ESC) plan is required at this stage.
- The civil grading in the bluff area, including stump removal, shall not proceed until Corvidae has provided an update to their ESC plan Rev.1 date September 26, 2023, that addresses the cutting and removal of the upper slope.

--- END OF TECHNICAL MEMORANDUM ---

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA J.A.D. PARSON # 50004 2024-05-03 Permit to Practice 1000742

Reviewed By: JAMES A. D. CARSON, B.A.Sc., P.Eng.

SIGNED: _____

Prepared By: Raymond Dickof, B.Sc.

SIGNED: _____

FIGURES:

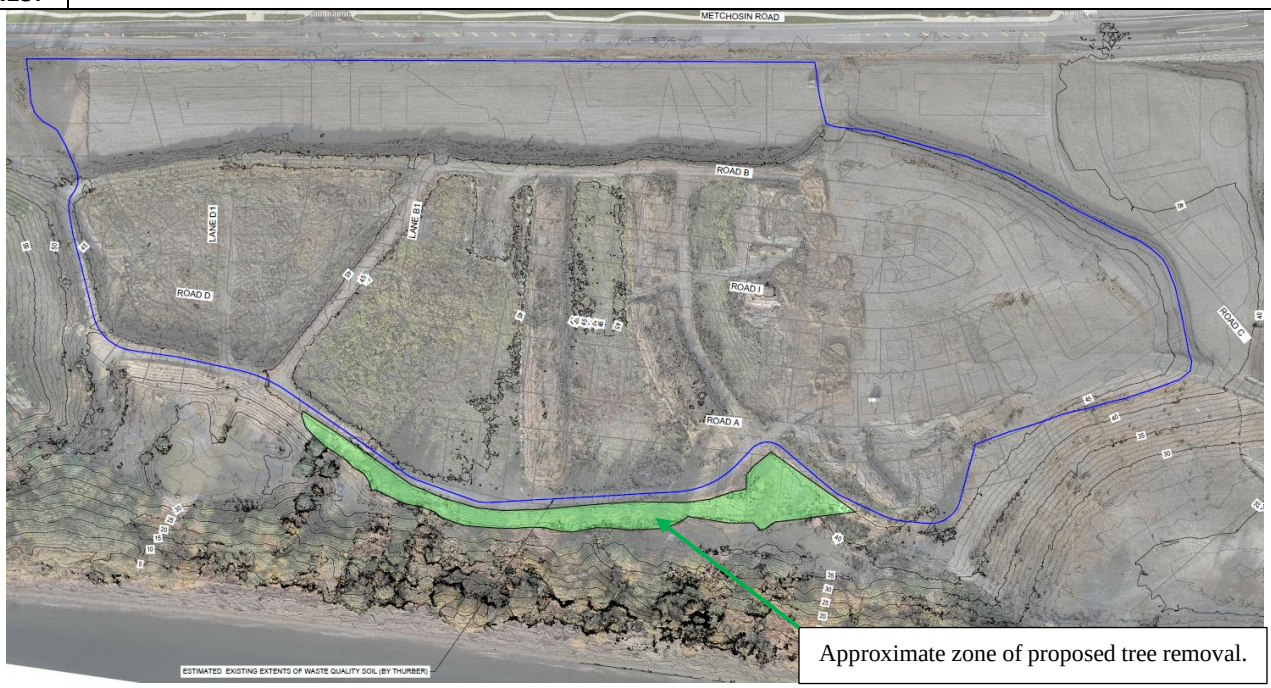


Figure 1: Site Plan

--- END OF FIGURES ---

Reviewed By: *JAMES A. D. CARSON, B.A.SC., P.Eng.*

SIGNED: _____

Prepared By: *Raymond Dickof, B.Sc.*

SIGNED: _____