Our File: 2211-47748-00

SITE SERVICING REPORT – REV. 1

To	From
[redacted]	**Tiffany Noddin, EIT** **Supervised by: Neil Penner, P.Eng.**
Re	**Date**
Site Servicing Report for 721 Lazo Road in Support of Development Permitting **Parcel B (DD 20772N) of District Lot 191, Comox District, 721 Lazo Road, Comox, BC**	**December 12, 2025** **Rev. 1 Issued for Permitting and Rezoning**

1. INTRODUCTION

This Site Servicing Report has been prepared on behalf of the owners in support of permitting applications for the above noted parcel. The development proposes to subdivide the subject parcel into six bare land strata lots and a common property lot, provide a park dedication and provide statutory right of ways (SRWs) to provide public access to the foreshore. Building construction is not being considered at this time.

This servicing report covers stormwater management, and potable water. Commentary is also provided with respect to sanitary sewer (septic fields by others) and third party (BC Hydro, Telus, Rogers and Fortis BC natural gas) servicing.

This report presents both the estimated development loads as well as the general servicing methodology and confirms the suitability of the subject parcel for the intended development.

2. SITE DESCRIPTION

The subject property is located within the Town of Comox (Town) and legally identified as Parcel B (DD 20772N) of District Lot 191, Comox District, PID 009-547-461. The civic address is 721 Lazo Road, Comox, BC.

The 2.30-hectare parcel, zoned Single-Family – Large Lot (R3.3), is bounded to the north and east by R3.3 and CD-15 properties. The lot is bound northwest by Lazo Rd and southwest by Comox Valley

Regional District (CVRD) Residential One (R-1) properties. The existing lot contains two residential buildings

Through a biological assessment of the property, the western portion of the property was found to contain old growth forests, Garry Oak trees and an eagle nest. Please see **Appendix A** for the biological assessment report by Pacificus Biological Services Ltd.

3. Proposed Development

The development proposes to subdivide the subject property into six parcels with each parcel supporting a single-family home. To achieve this, a rezoning of the property to Residential 1.0 (R1.0 – Small Scale Multi-Family Housing) is required. The development will only subdivide the property and provide the necessary services and accesses, with no building construction proposed. One existing building is proposed to be retained on proposed lot 1, with the other building being demolished.

As part of the subdivision, the existing forested area on the west side of the property will be dedicated to the Town as park to preserve the natural environment; a total of 1.31 ha. A common property lot will be created adjacent to the park dedication that includes the sand dune and slope on private property. Please see **Appendix C: Proposed Subdivision Plan** for details.

The maximum buildable areas and approximate building siting on each lot are shown in **Appendix C: Proposed Subdivision Plan**.

4. STORMWATER MANAGEMENT

4.1. OBJECTIVES AND TARGETS

The Town has provided the following stormwater requirements in their Development Approval Information (DAI) letter #2, dated October 31, 2022:

- Each strata lot is to be serviced by its own onsite storm water disposal (A.2.d.ii)
- Storm Water Management (B.2.b):
    i. Showing on plan, proposed locations and specify estimated area required for onsite storm water disposal facilities and impermeable area assumptions upon which the estimate is made;
    ii. No direct storm water discharge to the Strait of Georgia;
    iii. Accommodating up to the 1:100 year rain storm event (in relation to conveyance);
    iv. Analysis of the soil's capacity for storm water facilities to function as planned;
    v. Any maintenance regime needed for the storm water systems to function in a suitable manner and, if maintained as directed, not result in any negative impact on any adjoining property; and

vi. Statement of any limitations for onsite storm water disposal in regard to:
   I. Setbacks of onsite storm water facilities from slopes;
   II. The proposed park;
   III. The present natural boundary with the sea;
   IV. Environmental features (including native vegetation and trees to be retained)'
   V. Shared lot lines;
   VI. Buildings and structures; or
   VII. Areas required for onsite sanitary disposal systems;

In addition, the Town requires storm water runoff peak rates to be mitigated/ attenuated to pre-development rates up to and including the 1:25 year return period rainfall event.

4.2. PRE-DEVELOPMENT RUNOFF AND PERFORMANCE TARGETS

A hydraulic model was developed using SWMM software to analyze the existing site response to a variety of design rainfall events. The park dedication area and common property lot were not included in the hydrological modelling as any run on from this area will remain independent of development storm mitigation system and will be routed around to a suitable outlet.

Pre-Developmental stormwater modelling was completed for the developable area of the site (strata lots and access road). Geotechnical testing has confirmed that the site contains organic topsoil, sands (fine sand, poorly graded, trace gravel, loose to compact, dune sand), and gravels (sandy, medium to coarse sand, sub-rounded, well graded, compact, fluvial deposit). This soil type is considered SCS Soil Class A in the existing and post-development SWMM models.

Model simulations were completed for the 1-year, 2-year, 5-year, 10-year, 25-year and 100-year design rainfall events. Design rainfall events were derived from Environment Canada (EC) Comox A Rain Gauge (1021830) and include an additional 15% on all intensities to account for climate change. Model input parameters, based on pre-development site parameters are summarized in the following **Table 1**. The results of the modeled pre-development site responses are summarized in **Table 2** and illustrated in **Appendix D: Pre-Development and Post Development Runoff Graphs**.

Table 1: Pre-Development Site-Specific Storm Water Management Parameters

PARAMETER	PRE- DEVELOPMENT
Area (ha)	0.809
Width (m)	90
Slope (%)	1.2
% Impervious	23.4
N Imperv	0.013

PARAMETER	PRE- DEVELOPMENT
N Perv	0.6
Dstore Imperv	2
Dstore Perv (mm)	6
Zero % Imperv	25
Outlet Routing	Pervious
SCS Curve #	53

Table 2: Pre-Development Runoff Quantities

24 HOUR DISTRIBUTION (ENVIRONMENT CANADA COMOX A +15%)	TOTAL PRECIPITATION	PRE- DEVELOPMENT	
		PEAK RATE (L/S)	TOTAL VOLUME (m^3)
1 in 1-Year +15%	55.2 mm	2.36	11.40
1 in 2-Year +15%	67.6 mm	3.81	16.44
1 in 5-Year +15%	85.4 mm	6.50	24.38
1 in 10-Year +15%	97.2 mm	8.43	30.05
1 in 25-Year +15%	112.1 mm	11.11	37.60
1 in 100-Year +15%	134.1 mm	15.46	49.45

4.3. PROPOSED STORMWATER MANAGEMENT AND INFRASTRUCTURE

As listed in **Section 4.1** above, the Town requires each lot to have its own stormwater management facilities installed that meet the design criteria noted, along with stormwater infrastructure (surface and or sub-surface) that can convey the 100-year storm event. During preliminary analysis of the post-development site model, it was revealed that the installation of the access road (assumed to be paved) as well as paved driveways for the strata lots would increase peak rates above pre-development levels. As a result, these common property impervious areas onsite will also require capture and mitigation to meet pre-development peak runoff rates.

The most efficient way for the development to meet the Town's performance targets is to install a single stormwater detention and infiltration system for the development. Our preliminary designs propose the installation of an 80 cubic metre storage unit that allows for infiltration into the in-situ soil. The preliminary

dimensions of the storage unit are 26.2m long by 4.8m wide by 1.14m deep. Soil infiltration is assumed to be 100 mm/hr following discussions with geotechnical staff as a conservative value for the well drained soils onsite. An outlet control structure will be placed downstream of the storage unit to limit discharge peak rates to pre-development levels, up to and including the 25-year return period storm event.

Additional proposed Best Management Practices for the development are as follows:

- Retain and re-establish native vegetation throughout the site wherever possible.
- Place amended topsoil over all landscaped areas of the site (150mm depth minimum).
- Provide positive drainage away from all buildings.
- Stormwater management facilities to be a minimum of 7.5m away from any septic disposal field.
- Install ditching around the cul-de-sac to capture run on from the park dedication and direct it to the storm system downstream of the control manhole (flow through).
- Install a dispersion trench near the 15m setback from the present natural boundary. The dispersion trench will allow for infiltration into the soil of any flows that leave the storage unit, as well as allow for the trench to backup and discharge to the surface. Once on the surface, flows will sheet flow towards the Straight of Georgia. The preliminary design is for a 6m long dispersion trench; the size and design may change at time of detailed design.

Please see the **Site Servicing Plan in Appendix B** for additional proposed stormwater infrastructure details.

4.4. POST DEVELOPMENT RUNOFF

Post-Development stormwater modelling was completed for the same catchment area as the Pre-development model. Simulations were completed for the 1-year, 2-year, 5-year, 10-year, 25-year and 100-year design rainfall events. Design rainfall events were derived from Environment Canada (EC) Comox A Rain Gauge (1021830) and include an additional 15% on all intensities to account for climate change.

Model input parameters, based on post development site parameters are summarized in the following **Table 3**. The post-development model includes the effects of the Best Management Practice's (BMP) described in **Section 4.3**. The post-development model includes three catchments; the area draining from the proposed buildings into the storage reservoir, the area of the development that is captured by development and draining into the storage reservoir (the driveways, roadways, and landscaping of the two western lots), and the landscaped/ vegetated areas of the development that are not captured (Park Dedication and Common Property and SRW's).

Table 3: Post Development Site-Specific Storm Water Management Parameters

PARAMETER	POST DEVELOPMENT		
	PROPOSED BUILDINGS	CATURED AREA	NON-CAPTURED AREA
Area (ha)	0.175	0.292	0.342
Width (m)	35	30	59
Slope (%)	1.0	1.0	1.0
% Impervious	95	55	10
N Imperv	0.011	0.013	0.013
N Perv	0.011	0.2	0.5
Dstore Imperv (mm)	1.3	2	2
Dstore Perv (mm)	2	5	6
Zero % Imperv	25	25	25
Outlet Routing	Outlet	Pervious	Pervious
SCS Curve #	98	71	39

Table 4 below compares pre-development and post-development simulated runoff for the site. The analysis shows that with the use of the listed stormwater management methods and BMP's listed above in **Section 4.3**, runoff can be detained and released with peak rates at or below existing up to the 25-year design storm. Please see **Appendix D: Pre-Development and Post Development Runoff Graphs** for illustration of this table.

Table 4: Pre-Development and Post Development Runoff Quantities

PROPOSED DEVELOPMENT					
24 HOUR DISTRIBUTION (ENVIRONMENT CANADA COMOX A +10%)	TOTAL PRECIPITATION	PRE-DEVELOPMENT RUNOFF		POST-DEVELOPMENT RUNOFF	
		PEAK RATE (L/S)	TOTAL VOLUME (m^3)	PEAK RATE (L/S)	TOTAL VOLUME (m^3)
1 in 1-Year +15%	55.2 mm	2.36	11.40	2.32	14.69
1 in 2-Year +15%	67.6 mm	3.81	16.44	2.88	18.44

PROPOSED DEVELOPMENT					
1 in 5-Year +15%	85.4 mm	6.50	24.38	6.32	24.83
1 in 10-Year +15%	97.2 mm	8.43	30.05	8.38	29.48
1 in 25-Year +15%	112.1 mm	11.11	37.60	10.77	35.55
1 in 100-Year +15%	134.1 mm	15.46	49.45	21.25	45.61

5. POTABLE WATER DEMAND

Estimated potable water demands for the proposed development have been calculated based on Town Bylaw 2048 and MMCD Design Guidelines 2022.

5.1. PROPOSED BUILDING WATER DEMANDS

Population estimates were used to determine the proposed water demand for the developed and were assumed to be 2.4 people per unit for single-family homes. With six lots total proposed, the total population for the development is 15 people.

Per Town Bylaws, the Peak Day demand is 2100 L/c/d, and the Peak Hour demand is 3000 L/c/d. Based on the this, the development domestic demands are as follows:

- Peak Day Demand = 0.36 L/s
- Peak Hour Demand = 0.52 l/s

5.2. FIRE FLOW AMOUNTS

Without detailed building dimensions or details, MMCD Design Guidelines 2022 were used to estimate the minimum required fire flow for the development. Per Section 2.5, Table 2.5, Single Family Residential, the minimum fire flow required is 60 L/s.

5.3. TOTAL DEVELOPMENT DOMESTIC WATER DEMAND

Per Town Bylaw 2048, the total development demand is the largest of the peak hour demand and peak day demand plus fire flow demand.

The total development demand = 60.37 L/s.

5.4. LOT SERVICING

As per the Town's direction, the development proposes installing water services that will connect to a new 200mm diameter PVC water service that extends through the proposed park dedication to the existing 300mm diameter PVC on Lazo Rd.

The development will need to install one (1) hydrant onsite to provide for a hydrant within 90m of all strata lots and will decommission the existing water service from Lazo Road. The current survey only identifies one existing well. The existence of the well in the southern corner of the parent lot is to be confirmed.

Please see **Site Servicing Plan in Appendix B** for additional details.

6. SEPTIC SANITARY DEMANDS

Estimated septic sanitary sewer demands for the proposed development have been calculated based on Town Bylaw 2048 and MMCD Design Guidelines 2022.

6.1. PROPOSED SANITARY SEWER FLOW

Population estimates were used to determine the proposed septic sanitary sewer demand for the development, with the population assumed to be 2.4 people per unit for the single-family homes. With six lots total proposed, the development population is 15 people. Using Town Bylaw 2048, the sanitary demand was estimated as follows:

- Average Dry Weather Flow = 360 L/c/d x 15 people = 0.06 L/s
- Peaking Factor = 4.40
- Infiltration Allowance (assuming below water table – MMCD DGL Section 3.5) = 0.81 ha x 0.26 L/ha/s = 0.21 L/s
- Design sanitary flow = 0.49 L/s

6.2. LOT SERVICING

The development proposes installing a stand alone sanitary sewer disposal fields for each lot. Such designs are being completed by others.

7. Road Network

The site is serviced via a gravel driveway from Lazo Road. This driveway will be left as is and new access to the site will be developed from Andrew Avenue. The new access from Andrew Avenue will be a 6m wide access road with two – 3.0m wide lanes (including curb gutter) and 450mm wide barrier curb. The development will install a cul-de-sac with a gutter line radius of 5.8m to allow for vehicles to turn around onsite. No access is being proposed to Hutton Road due to topographical constraints.

8. Third Party Utilities

The existing two buildings on the parcel are serviced by underground BC Hydro from Hutton Road. These services will be removed as part of the development works.

We have also confirmed that overhead BC Hydro, Telus and Rogers/ Shaw services are available on Andrew Avenue.

FortisBC has confirmed that gas service is not currently available for the development with no service on Lazo Road, Hutton Road or Andrew Avenue.

As required by the Town of Comox, underground servicing from BC Hydro, Telus and Rogers/ Shaw is required for the development.

9. Conditions for Development

The following development conditions are required based on our preliminary servicing design and review:

1. Install an 80 cubic meter stormwater detention facility with a minimum infiltration area of 126 square meters.
2. Retain and re-establish native vegetation throughout the site wherever possible.
3. Place amended topsoil over all landscaped areas of the site (150mm depth minimum).
4. Provide positive drainage away from all buildings.
5. Stormwater management facilities to be a minimum of 7.5m away from any septic disposal field.
6. Install a dispersion trench immediately upstream of the 15m Present Natural Boundary Setback for discharge into the environment.
7. Install a 200mm diameter PVC water main to provide onsite water service.
8. Install one (1) fire hydrant onsite to provide fire protection.
9. Each lot to install its own septic disposal field.
10. Install underground BC Hydro, Telus and Rogers services onsite.

10. CLOSURE

We trust the information provided herein is sufficient in support of permitting applications, should Town staff wish to discuss the information provided, we would be pleased to meet at staff's convenience.

Submitted by N. Penner, P.Eng, McElhanney
Stamp of Neil Penner, P.Eng.
Signature of Neil Penner, P.Eng.
I certify this to be a report prepared under the direct supervision of Neil Penner, P.Eng.

2025-12-12

PERMIT TO PRACTICE
McElhanney Ltd.
PERMIT NUMBER: 1003299
Engineers and Geoscientists of BC

Signature of Tiffany Noddin, EIT
Prepared by Tiffany Noddin, EIT.

Revision History

Date	Status	Revision	Author
2025-01-09	Draft	Rev. 0 – Draft for Client review	TN
2025-12-12	Final	Rev.1 – Issued for Permit and Rezoning	TN

Limitation

This report has been prepared for the exclusive use of Gregg and Thomas Hart and the Town of Comox. The material in it reflects the best judgement of the Consultant in light of the information available to the Consultant at the time of preparation. As such, McElhanney, its employees, sub-consultants and agents will not be liable for any losses or other consequences resulting from the use or reliance on the report by any third party.

Appendix A

Biological Assessment

PACIFICUS
BIOLOGICAL SERVICES LTD

[redacted]
Royal LePage
121-750 Comox Road
Courtenay, B.C. V9N 3P6
[redacted]

January 30, 2023
Amended August 14th, 2025
Amended September 5th, 2025
Amended December 2nd, 2025

Re: Summary of the Updated Biological Assessment and Potential Impacts to Identified Environmental Sensitive Areas (ESAs) for Parcel B (DD 20772N) of District Lot 191, Comox District (PID: 009-547-461); 721 Lazo Road, Comox, BC

Dear Mr. Hart,

This letter provides information from an updated biophysical assessment conducted by Pacificus Biological Services Ltd. (Pacificus) on May 28th, 2025 and November 14th, 2025, at Parcel B of District Lot 191 located within the Comox District (721 Lazo Road: PID: 009-547-461). This report serves as addendum to a previous biophysical assessment conducted by Pacificus in 2023[1]. The updated assessment was determined to be required as a result of amendments to the subdivision layout and the proposed water servicing design (Appendix 2 & 3). The objective of this assessment was to determine the location of any environmentally sensitive features (ESAs) within Development Permit Areas (DPAs) that may affect future potential development such as watercourses applicable under the Riparian Areas Protection Regulation (RAPR)[2] as well as any bald eagle nests, Garry Oak ecosystems, older forest sensitive ecosystems or other sensitive ecosystems as identified within the Town of Comox Official Community Plan (OCP)[3]. In addition, the footprint of the proposed water servicing design was reviewed in the field to determine the impacts to identified ESAs and the total number of trees (both protected and not protected) within the construction footprint that would be affected by proposed water servicing works. The following is a summary of the results of the assessment, and recommendations for applicable setbacks. An Environmental Mitigation Plan (EMP) has been provided in Appendix 1 highlighting recommended mitigative measures for the proposed works. The results presented in the report reflect current conditions.

[1] Pacificus Biological Services Ltd. 2023. Summary of the Biological Assessment for Parcel B (DD 20772N) of District Lot 191, Comox District (PID: 009-547-461); 721 Lazo Road, Comox, BC.
[2] Riparian Areas Protection Regulation. BC Reg 178/2019. Available at https://www.canlii.org/en/bc/laws/regu/bc-reg-178-2019/latest/bc-reg-178-2019.html
[3] Town of Comox 2011 Official Community Plan. https://comox.ca/modx/sl-ob.pdf

Background

The subject property is located within the Town of Comox. The Comox OCP designates the requirement for a development permit for properties containing environmental features such as watercourses, bald eagle or heron nests, Garry Oak habitat, and upland environment with older forests. Properties subject to these and other development permit areas are identified by the Town of Comox Development Permit Area (DPA) maps within the OCP[4]. The subject property is designated as being within DPA#9b (Upland Environment with Older Forest ESA), DPA#10 (Bald Eagle and Great Blue Heron Nesting and Perching Trees), and DPA#12 (Garry Oak). Prior to any development or improvements to the property in question, a Registered Professional Biologist (RPBio) is required to conduct a Bio-physical Assessment in order to determine if these DPAs are applicable to the subject lot.

Previous Assessments

Previous assessments conducted by Pacificus include January 28th, 2020, which identified one bald eagle nest, Garry oak trees, and upland environment with potential older forest. No other watercourses or sensitive ecosystems were identified on the subject lot. A secondary assessment was conducted on February 12th, 2020, to more closely examine the potential of older forest and determine an average diameter at breast height (dbh) of mature trees within the forested portion of the lot. A drone survey was completed April 24th, 2020, to assess the property for potential eagle nests not located during the ground survey. An assessment of the Garry oak ecosystems was conducted on May 10th, 2021, to document the vegetative communities associated with the woodlands.

Proposed Development

The owners of Parcel B of District Lot 191 (721 Lazo Road, Comox, BC) are in the planning stages of developing a 0.81-hectare parcel of land located adjacent to the ocean. The proposed lot will be developed for residential use and include a subdivision into 6 bare land strata lots, each to be used for single family dwellings. Two common property lots are proposed adjacent to and in between the subdivided single-family dwellings, one of which is 0.12ha and the other 0.17ha. The 0.12ha common property will be a continuation of Andrew Avenue for road access. A statutory right of way (ROW) is located in between the SL 6 lot and the 0.11 ha common property lot to facilitate the installation of the proposed watermain to service the new developments. The watermain will be tied into the existing 300 PVC CL watermain located on Lazo Road and the alignment will generally follow the existing gravel driveway alignment as much as practicable to reduce overall impacts to ESAs. The footprint of the watermain installation is anticipated to be

[4] Town of Comox, Development Permit Area Maps. Available from https://comox.ca/modx/assets/pdfs/bylaws/Maps%20DPA%201-9%2017APR19.pdf

approximately 9m wide and will span across 254m of the property (Appendix 3). The remainder of the property (1.38 ha) is to be dedicated as park for the conservation of the natural environment and for low impact pedestrian use by members of the public. The proposed engineering site plans and preliminary servicing plans are included in Appendix 3 of this report (*Bazett Land Surveying: Plan of Proposed Bare Land Strata Subdivision of Parcel B (DD 20772N) of District 191, Comox District; June 5th, 2025* and *McElhanney Engineering: Lazo Road Watermain Plan and Profile, Preliminary, Not for Construction, September 22nd, 2025*).

The eastern portion of the lot is previously developed and contains two single family homes, a driveway, parking area, landscaped lawn and vegetation, and a small shed and greenhouse (Photo 1). Demolition of the greenhouse as well as the existing house straddling proposed Lot SL2 and SL3 will be required. The northwest portion of the developed area consists of a cleared area while the remainder of the property was forested and contained mature Douglas fir (*Pseudotsuga menziesii*) and Garry oak (*Quercus garryana*). The undergrowth vegetation consisted primarily of salal (*Gaultheria shallon*), dull Oregon-grape (*Mahonia nervosa),* Nootka rose (*Rosa nutkana),* Bracken fern (*Pteridium aquilinum)* and sword fern (*Polystichum munitum*) (Photo 2).

Assessment Results and Recommendations

Garry Oak Habitat

Garry oak woodlands are nationally, provincially, and regionally rare. These ecosystems typically support high biodiversity and specialized habitats due to their diverse physical structure. A list of species at risk associated with Garry oak ecosystems is provided in Appendix 4. A total of seven Garry Oak stands and six individual Garry Oak trees were identified within the subject property. As per Section 3.12.2 of the Town of Comox OCP, the purpose of DPA #12 Garry Oak Habitat, is to protect the natural environment, its ecosystems and biological diversity in relation to Garry Oak ecosystems.

A site visit was conducted on May 10th, 2021 to assess areas containing Garry oak for vegetative communities associated with Garry Oak woodlands. Garry oaks identified on the property were isolated and did not have connectivity within the parcel. Garry oak ecosystems were not identified in close proximity on adjacent parcels. The updated field assessment conducted on May 28th, 2025, found additional Garry Oak trees and stands that weren't previously identified. In addition, two additional Garry oak trees were identified on November 14th, 2025, during the assessment conducted to survey the area impacted by the proposed servicing design. As such, it was determined that most of the Garry Oak stands and trees within the subject property did have connectivity within the parcel, but, did not contain the vegetative communities associated with Garry Oak woodlands. The Garry Oak trees and stands that were observed to have connectivity were located upslope of the existing homes, from the sandy slope through the middle of the

subject property, to the southwestern property boundary. This connected ecosystem consisted of one large stand with the previously identified krumholz Garry Oak trees, Stand 1 (Photo 3), one medium sized stand, Stand 2, three small sized stands, Stand 3, 4, and 5, and six individual trees, Trees 1, 2, 3, 4, 5 and 6(Photo 4). Outside of the connected trees and stands, two additional smaller stands were identified, one located approximately 55m upslope from the shoreline, Stand 6 (Photo 5), and one located in the middle of the lot, approximately 15m from the northeast property boundary, Stand 7.

The Garry oak trees and stands located throughout the lot, ranged in size from sapling to large mature trees. The large stand, Stand 1, consisted primarily of krumholz Garry Oaks, with a few large mature trees along the ridge of a sandy slope and extending east for approximately 10m down the slope, and 25m along the driveway (Photo 6). The krumholz trees were short (1-2m height) and grew in close proximity to each other (Photo 7). The krumholz Garry Oaks were assessed to determine the total number of trees within the stand, specifically, the number of individuals and stems. There were determined to be approximately two individuals, one with 180 stems and the other with 290 stems. For the purposes of this assessment, an individual is defined as an entire root system that is connected, and the stems are small individual trunks or shoots that all grow from that root system. However, it is recommended that a certified ISA arborist assess these stands to provide a definitive count. Understory vegetation was minimal and consisted of grass, bracken fern (*Pteridium aquilinum*) and scotch broom. Spare self-heal (*Prunella vulgaris*) was observed growing on the sandy slope. Other Garry Oak meadow associated species were not noted at the time of this assessment. The other Garry Oak stands and trees on the subject property were observed within a mixed stand, primarily consisting of Douglas fir trees (*Pseudotsuga menziesii*). Understory vegetation consisted primarily of salal (*Gaultheria shallon*), dull Oregon-grape (*Mahonia nervosa),* Nootka rose (*Rosa nutkana),* Bracken fern (*Pteridium aquilinum)*, sword fern (*Polystichum munitum*), and grass, similar to the understory vegetation found throughout the subject property. Garry oak meadow associated species were not identified during the assessment.

As such, it is recommended that all Garry oaks on property are given a development buffer extending a minimum of twice the crown radius of the tree (Minimum of 10m from the base of the tree) in order to protect the root system[5], support the undergrowth of woodland species and prevent the alteration of ecosystem values associated with Garry oak woodlands. Moreover, Garry oak stands did not contain other associated Garry oak woodland plant species and did not contain the high biodiversity and specialized habitats associated with Garry oak woodlands[6].

[5] Garry Oak Ecosystem Recovery Team. 2013. Best Management Practices for Garry Oak and Associated Ecosystems: Section 2.4. http://www.goert.ca/documents/GOERT-BMPs.pdf.
[6] Canadian Wildlife Service: Environmental Conservation Branch. 2000. Sensitive Ecosystem Inventory: East Vancouver Island and Gulf Islands, 1993 -1997.

During all construction, including site access and servicing, within proposed lots containing Garry oaks, measures to ensure no degradation of Garry oak ecosystems must be implemented. This includes maintenance of a vegetated buffer in which topsoil is retained, and no vegetation removal occurs, and placement of the construction footprint such that the growth of immature Garry oaks is not constrained (minimum of 10m from the base of all Garry oaks). The increase in residential use of the area may result in decreased wildlife use of the Garry oak ecosystems present. Additionally, construction of residences and landscaping in the vicinity of the identified Garry oaks may prevent expansion of the ecosystem on this lot. Accordingly, the following measures should be implemented for development occurring adjacent to Garry Oak stands:

- Prior to development, the 'Protected and/or Critical Root Zones' of Garry Oak trees should be clearly marked on all plans following an assessment by an ISA certified arborist. Lateral roots of Garry Oak trees can extend beyond the dripline by as much as twice the crown radius, so it is important to protect as large an area as possible around the tree.
- Garry Oak stands should be protected by temporary fencing to make sure that there are no impacts within these zones.
- Care should be taken to minimize the amount of disturbance and grading that is done within Garry Oak stands as these activities destroy the ecosystems and change the waterflow. Changes to the groundwater or surface water hydrology adjacent to Garry Oak stands should be minimized or avoided.
- Uncontaminated gravel should be utilized during road construction in order to prevent invasive species such as Scotch Broom from moving in. Prompt re-planting of disturbed areas is important for preventing the establishment and spread of invasive species.
- Refer to the Best Management Practices for Garry Oak and Associated Ecosystems for additional guidance[7].

Garry Oak Stands and Trees Affected by the Proposed Development

Based on current development and servicing plans, five Garry oak stands and their associated buffers, two individual Garry oak trees and their associated buffers, and the development buffer of a sixth stand are all located within the boundary of the strata lot lines and the footprint of the watermain installation. (Figure 1). This included the following:

1. Stand 1, the largest Garry oak stand located adjacent to the eastern boundary of the dedicated park parcel, in which the stand and it's corresponding buffer were encroached on by the watermain, a majority of the 0.17ha common property parcel, part of the statutory right of way, a very small section of the 0.12ha common property access parcel, as well a

[7] Garry Oak Ecosystems Recovery Team. 2013. Best Management Practices for Garry Oak & Associated Ecosystems. Victoria, BC. https://goert.ca/wp/wp-content/uploads/GOERT-Best-Management-Practices-2013.pdf

portion of the SL 6 parcel (Figure 1). As such, it is anticipated that a large portion of this stand will need to be removed.

2. Stand 2, the medium sized stand located along the western boundary of the SL 6 parcel, in which the stand and its corresponding buffer were encroached on by the watermain, and a portion of the SL 5 & 6 parcel (Figure 1). As such, it is anticipated that a portion of this stand will need to be removed.
3. Stands 3 & 4. The Garry oak stand located northwest of the proposed parcels, along the existing gravel driveway, in which the stand and its corresponding buffer are encroached on by the watermain installation. As such, it is anticipated that the stand will need to be removed. Stand 6, the isolated Garry oak stand located approximately 55m upslope from the shoreline in which the stand and its corresponding buffer within the 0.12ha common property access parcel were encroached on, as well as by parcels SL 3 & 4 along the northwest boundary. However, based on current designs, the stand is anticipated to be retained.
4. Stand 7, the isolated Garry oak stand located in the center of the property, in which the 10m buffer will be encroached on by the watermain installation. However, based on current designs, the stand is anticipated to be retained. Tree 1, an individual Garry oak tree located in the northwest corner of parcel SL 5, in which the corresponding buffer encroached on a portion of the parcel in the northern corner (Figure 1). However, based on current designs, the tree is anticipated to retained.
5. Tree 2, an individual Garry oak tree located in SL 6, in which the tree and its corresponding buffer will be encroached on. As such, it is anticipated that the tree will need to be removed
6. Tree 3, an individual Garry oak tree located northwest of the proposed parcels, along the existing gravel driveway, in which the tree and its corresponding buffer will be encroached on by the watermain installation. As such, it is anticipated that the tree will need to be removed.

The remaining Garry Oak stand and trees, Stand 5 7, and Trees 4, 5, and 6, and their corresponding buffers were located within the dedicated park parcel, and did not impact the strata lots (Figure 1).

Therefore, overall impacts to existing Garry oak habitat as a result of the proposed development is significant as approximately 945.6m² will be impacted by the proposed watermain servicing installation design. At this time, it is unknown how the removal of some Garry oak trees will impact the overall health of the stands. Where possible, dense stands of Garry Oaks requiring removal for development should be salvaged and relocated to a suitable nearby habitat (e.g., a greenspace or park). If salvage and relocation is possible, trees should be planted in a manner that will optimize growth and maturation (i.e., suitably spaced out rather than planted in clusters). Measures and best management practices prior to, during, and following construction are detailed in the Environmental Mitigation Plan (Appendix 1). In addition, a Tree Cutting Permit Application

may be required prior to the removal of any Garry Oaks on the subject property for the proposed development. As such, a revegetation plan may be required to replace any lost trees.

Bald Eagle Nest

One eagle nest was located on an adjacent property north of the subject lot, approximately 3m from the property boundary. The nest was located in a mature Douglas fir tree and was observed to be active (Figure 1; Photo 8 & 9) (10U, 364408.55 m E, 5505361.45 m N). Two adult Bald eagles (*Haliaeetus leucocephalus*) and two eaglets were observed to be in the nest during the May 2025 assessment, with white wash, bones, and feathers observed at the base of the tree (Photo 10). No additional raptor nests were identified during the survey, however, a mature Douglas fir perch tree was identified (10 U 364375.58 m E, 5505296.48 m N) and was utilized by an eagle during the assessment (Photo 11).

Based on a lot size of 2.3ha, the identified eagle nest tree requires a development buffer of 100m (Town of Comox OCP[8]). In addition to the development buffer of 100m, a breeding season 'quiet buffer' of 100m should be observed during construction or land clearing activities (Appendix 1) unless a development permit exemption is obtained.

Upland Environment with Older Forest

The Town of Comox has designated a development permit area for parcels identified within the OCP as upland environment within 30m measured upland of the natural boundary of the Strait of Georgia, and all areas with significant upland habitat including older forest sensitive ecosystems. Environment Canada and the Canadian Wildlife Service Sensitive Ecosystems Inventory[9] and the CVRD web-mapping services have identified coniferous older forest on the property[10].

Much of the assessed property consists of mature coniferous forest, a significant portion of which has potential to be considered older forest (average age of tree >100 years[11]). Areas that were identified as potential older forest were indicated by a majority of trees having soft flaky bark or hard bark with deep fissures, branch stubs replaced by knot or whorl indicators, and small to large epicormic branches (Photo 12)[12]. Potential older forest identified at this site consisted primarily of Douglas fir (Photo 13 & 14) and was located on the northwestern portion of the property, extending from the road approximately 75m southeast, and north of the driveway extending from

[8] Town of Comox Official Community Plan. 2011 Section 3.10 pg. 161.
[9] Canadian Wildlife Service: Environmental Conservation Branch. 2000. Sensitive Ecosystem Inventory: East Vancouver Island and Gulf Islands, 1993 -1997.
[10] Comox Valley Regional District iMap, 2025. https://mapviewer.imaptoo.ca/secure/
[11] Canadian Wildlife Service: Environmental Conservation Branch. 2000. Sensitive Ecosystem Inventory: East Vancouver Island and Gulf Islands, 1993 -1997.
[12] Van Pelt, R. 2007. Identifying Mature and Old Forests in Western Washington. Washington State Department of Natural Resources, Olympia, WA. 104 p

approximately 100m to 200m southeast of Lazo Road (Figure 1). The areas identified as potential older forest contained several standing snags, fallen trees and stumps. The average DBH of trees within the forested area on the lot was approximately 0.9m. However, some Douglas fir trees with a DBH of 4.0m were observed. Although forest within the identified polygons may consist of mixed-age class trees, these areas contain a greater proportion of older trees, as well as components that contribute to structural complexity and variable canopy closure associated with environmental values such as high wildlife values and specialized habitats of older forest ecosystems.

The purpose of the assessment conducted in November 2025 was to document the number of trees, both protected and not protected, that would be affected by the proposed development, including the watermain servicing installation. In total, approximately **103 trees** were located within the extent of the proposed development and as such, are anticipated to be removed. Approximately 62 mature Douglas fir trees, 15 younger Douglas fir trees, 6 Lodgepole pine trees, and a mix of 14 young and mature Grand fir trees were identified within the development footprint. Therefore, overall impacts to existing older forest habitat as a result of the proposed development is significant as approximately 1463m² will be impacted by the proposed watermain servicing installation design.

Older forest should be retained with a development buffer extended to the width of the crown to protect the root systems and prevent the alteration of environmental values associated with older forest ecosystems. Increased residential use of the lot may reduce the wildlife use of older forest ecosystems. Vegetation adjacent to the identified older forest ecosystem will be removed to allow for construction of residences and servicing. The retention of mature trees and other vegetation should be retained where possible.

Strata lots 1-4 are located within the 30m setback from the natural boundary of the Strait of Georgia. Vegetation on any new lots on the undeveloped portion of the subject property within this area should be retained to ensure no degradation of fish habitat occurs. The majority of this setback on the subject property has been previously developed and consisted of a lock block retaining wall, landscaped lawn and residential buildings. Vegetation within 30m of the natural boundary on the undeveloped portion of the lot includes grass, bracken fern, rose, English ivy, and scotch broom. Sparse stonecrop (*Sedum spp.*) and field chickweed (*Cerastium arvense*) Vegetation within 30m of the natural boundary with the Strait of Georgia should be retained on any new lots on the undeveloped portion of the subject property to ensure no degradation of fish habitat occurs. Site servicing is anticipated to include on site septic systems and on site storm drainage. Storm drainage should utilize a rock pit, dispersion trench, splash pad or swale, and must not create a point source discharge of storm water to the natural boundary at the ocean and must not negatively impact adjacent properties. Construction, including site access and servicing of lots fronting the ocean must have a sediment and erosion control plan established prior to works. Vegetation on lots upland of the marine environment should be minimized where possible.

All vegetation clearing should be completed outside of the migratory breeding bird timing window for the region (March 12th to August 17th). Due to the dense canopy and complex habitat observed throughout the lot, bird sweep surveys may not be effective in identifying all nests, or, can cause significant delays in the project due to the amount of nesting habitat available. Recommendations for the protection of trees to be retained is detailed in the Environmental Mitigation Plan (Appendix 1).

Biophysical Assessment Summary

The assessment of 721 Lazo Road was conducted for the purpose of providing guidance regarding future subdivision and development and to identify any watercourses applicable under RAPR as well as Garry Oak ecosystems, upland environment with older forests, bald eagle nests and other ESA's as outlined in the Town of Comox OCP. Seven Garry Oak stands, six individual Garry Oak trees, and potential older coniferous forest were identified on the subject lot, in addition to a bald eagle nest located on an adjacent lot, approximately 3m north of the subject property. No watercourses or other sensitive ecosystems were identified on the subject property. At the time of writing the proposed development consists of re-zoning and subdivision. Subdivision of the property will entail physical works including common property access and site servicing (water, electricity, on site-septic, and storm drainage). Additionally, due to the location of the proposed watermain, significant impacts and loss of the Garry oak and older forest habitat is anticipated. General guidance for development of the subdivided lots is provided in the Environmental Mitigation Plan (EMP) in Appendix 1. The results presented in this report reflect current conditions at the time of assessment and are subject to change over time.

Notwithstanding any other statement in this report, this report may be relied upon by the Town of Comox in considering an application for rezoning, Development Permit under DPA #9, 10, AND 12, and future bare land strata subdivision into 5 to 6 lots under Section 86(1)(d) of the *Land Title Act*. The author of this report has reviewed a title search printout for the subject property. No other associated documents are available for the subject property. The assessment methodology and findings presented in this report have been reviewed by a qualified environmental professional and a member in good standing with the British Columbia College of Applied Biology.

If you have any questions or concerns regarding information presented in this report, please do not hesitate to contact our office at 250-949-9450.

Sincerely,

Charlotte Palmer BSc &
Brittany Blanchard BBRM

Reviewed by:

COLLEGE OF APPLIED BIOLOGY
Jennifer Russell
R.P. Bio #1758
CAB

Jennifer Russell, RPBio

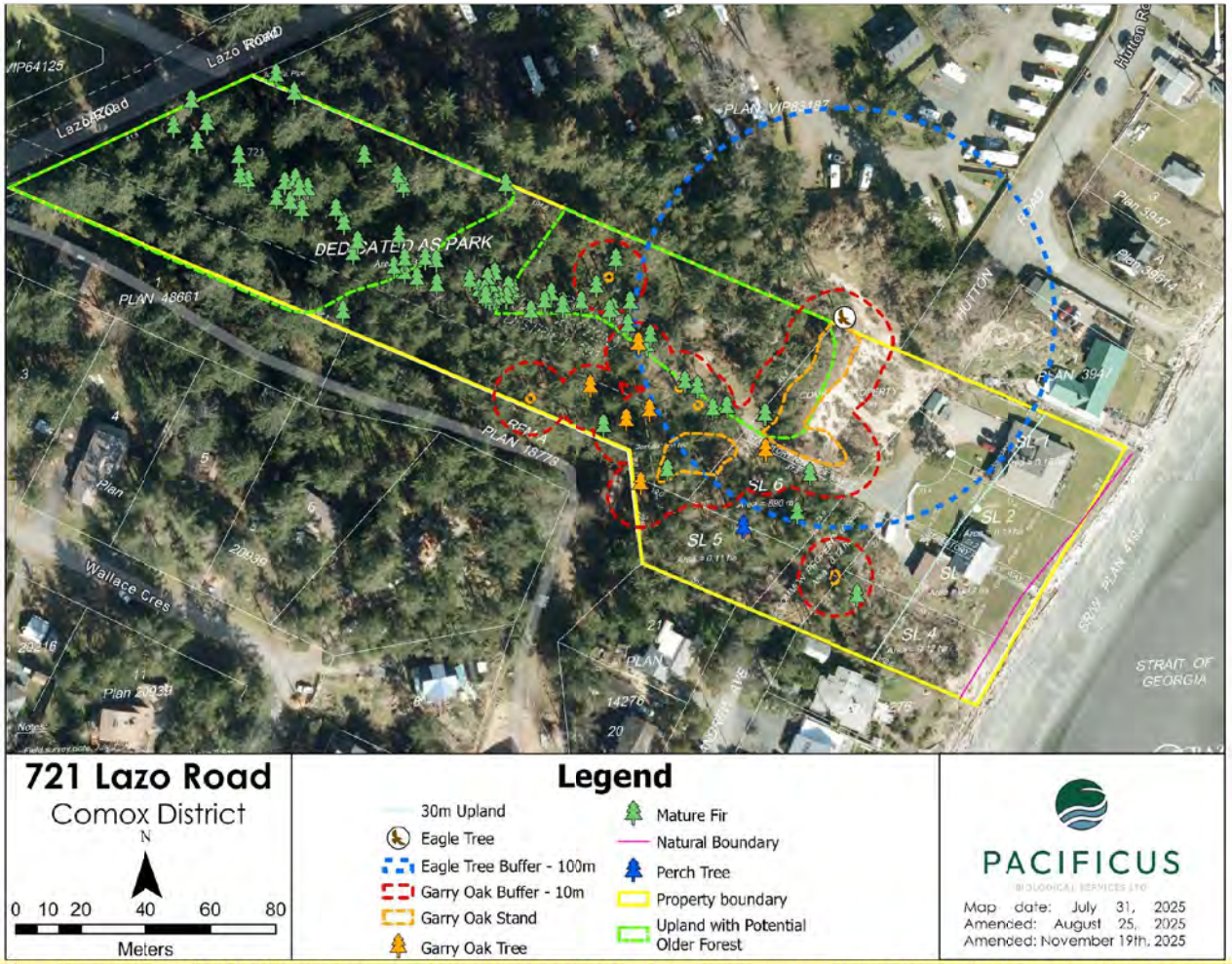


Figure 1. Map of the bare land strata subdivision of Parcel B of District Lot 101 at 721 Lazo Road, Town of Comox. Map showing the identified sensitive environmental features, associated setbacks, and proposed subdivision lines based on the engineering plans dated June 5th, 2025. **It should be noted not that all mature trees on the subject lot were documented, but rather, the mature trees within the proposed development footprint. All linework is approximate.**

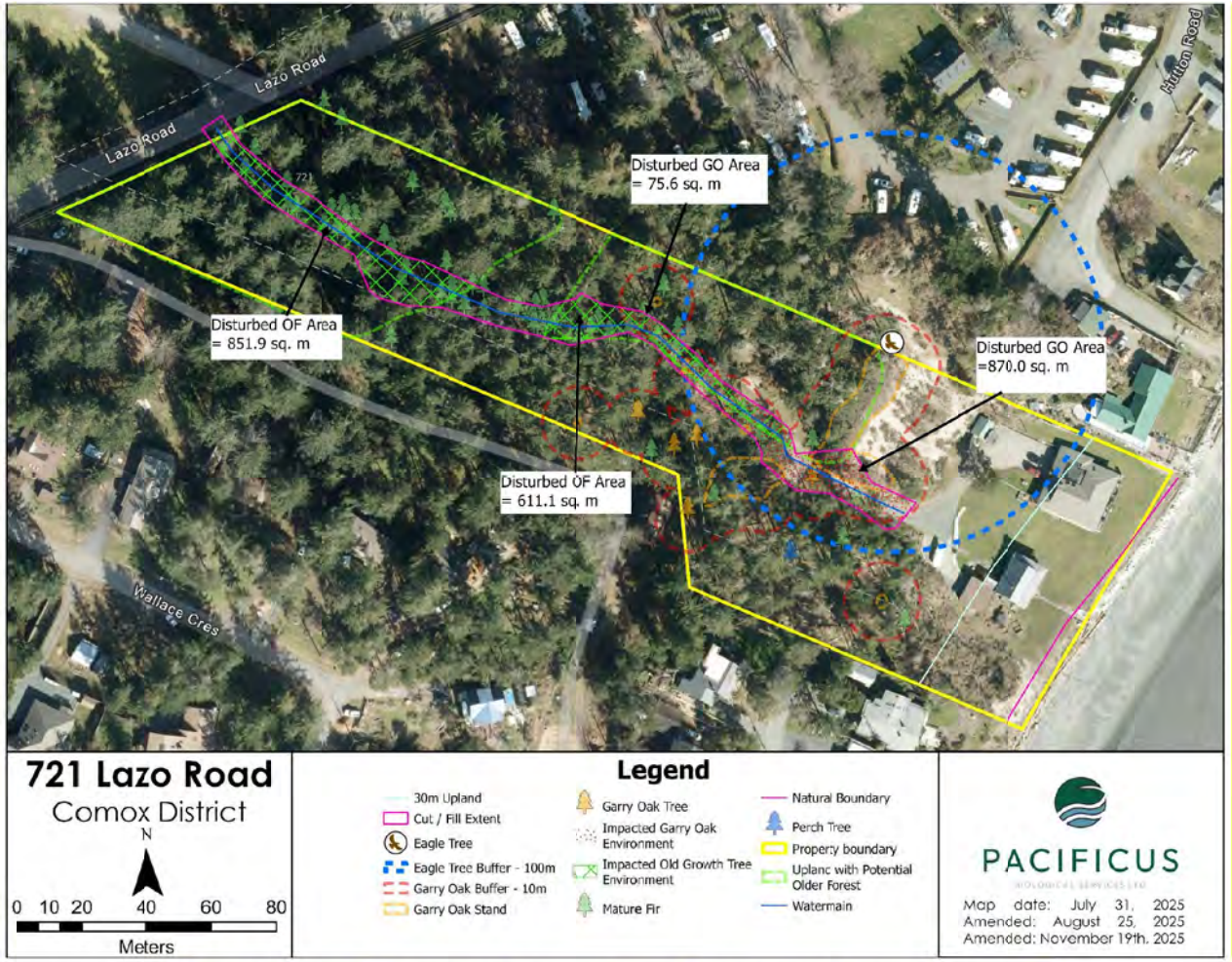


Figure 2. Map showing the ESA's impacted by the proposed development. **It should be noted that all linework is approximate*....*

Site Photos

Photo 1. May 28th, 2025. Photo showing the existing development in the eastern portion of the subject lot.

Photo 2. May 28th, 2025. Photo showing the understory vegetation observed throughout the lot.

Photo 3. May 28th, 2025. Photo showing the largest Garry Oak stand, Stand 1, located at the top of the sandy slope.

Photo 4. May 28th, 2025. Photo showing one of the individual Garry Oak trees identified on the subject property, located in the SL 5 parcel.

Photo 5. May 28th, 2025. Photo showing the Stand 6, located within the proposed 0.12ha common property access parcel.

Photo 6. May 28th, 2025. Photo showing a mature Garry Oak within Stand 1, located on the ridge of the sandy slope.

Photo 7. January 28th, 2020. Photo showing the Krumholz Garry oaks identified on the subject property.

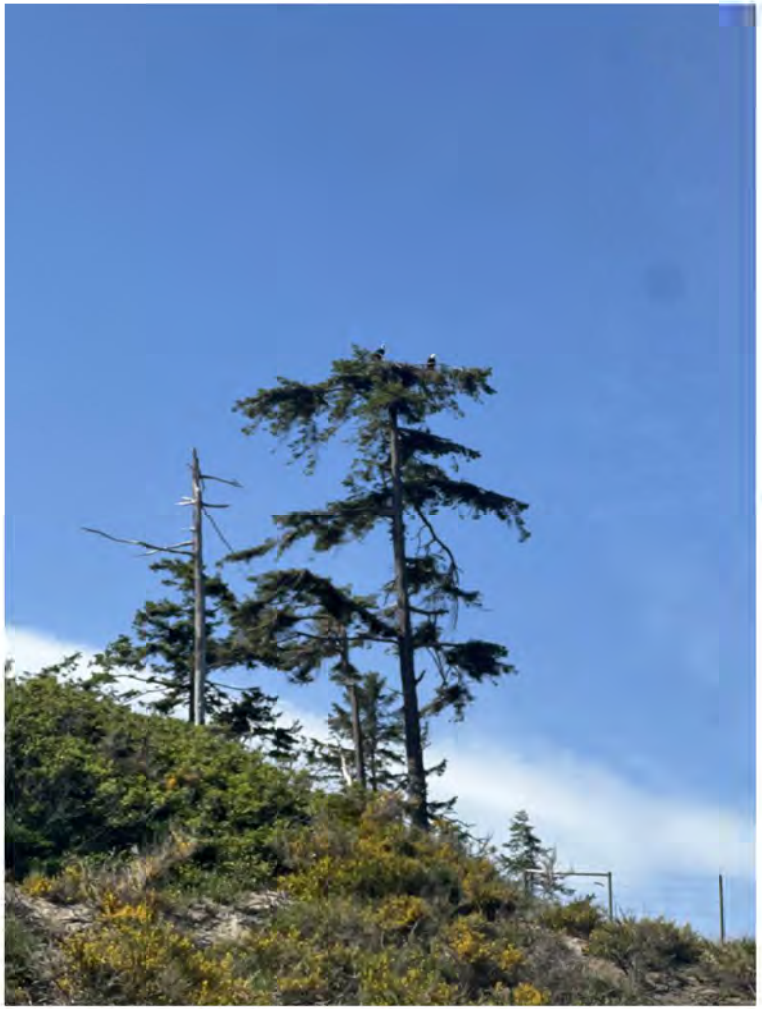


Photo 8. May 28th, 2025. Photo showing the active bald eagle nest identified on an adjacent property, approximately 3m north of the subject property.

Photo 9. May 28th, 2025. Photo showing the bald eagle nest with one of the eaglets and a parent sitting within the nest.

Photo 10. May 28th, 2025. Photo showing some of the bones observed beneath the active eagle tree on the adjacent lot.

Photo 11. May 28th, 2025. Photo showing the perch tree identified on the subject property, with an eagle observed to be actively using the tree.

Photo 12. May 28th, 2025. Photo showing the upland environment with potential older forest.

Photo 13. May 28th, 2025. Photo showing an older Douglas fir with characteristics of a potentially older tree.

Photo 14. November 14th, 2025. Photo showing an older Douglas fir with characteristics of a potentially older tree.

Appendix 1. Environmental Management Plan (EMP) for 721 Lazo Road (PID: 009-547-461), Comox BC

The following EMP provides RPBio recommendations to facilitate the issuance of a Development Permit or Development Covenant. This includes development setbacks, vegetated buffer distances and general guidance pertaining to the identified Environmentally Sensitive Areas (ESAs) associated with 721 Lazo Road. The development proposal includes rezoning, subdivision and physical works for site access and site servicing.

Environmental Sensitive Areas (ESAs) Setbacks

General

- No works should occur within the setbacks, construction material and spoil pile must not be placed within the setbacks.
- Temporary fencing must be placed at the setback for all identified ESAs to prevent encroachment during physical works.

Garry Oak ecosystems (DPA #12)

- A total of seven Garry Oak stands and six individual Garry Oak trees were identified within the subject property. A vegetated buffer should be maintained around all Garry oak trees. Immature or sapling Garry oaks may receive a vegetated buffer of 5m from the base of the tree, and mature Garry oaks should receive a vegetated buffer of 10m from the base of the tree. For the purposes of this assessment, all Garry oak trees have been given a development buffer of 10m. Reduced buffers should be given at the discretion of a certified ISA arborist.
- The construction footprint must be set back a minimum of 10m from all Garry oaks to facilitate the growth of the trees and vegetative communities. Moreover, soils within the vegetated buffer must remain undisturbed.
- Where possible, dense clusters of immature Garry Oaks requiring removal for road works and servicing should be salvaged and relocated to a suitable nearby habitat (e.g., a greenspace or park). If salvage and relocation is possible, trees should be planted in a manner that will optimize growth and maturation (i.e., suitably spaced out rather than planted in clusters).
- Prior to development, the 'Protected and/or Critical Root Zones' of Garry Oak trees should be clearly marked on all plans following an assessment by an arborist. Lateral roots of Garry Oak trees can extend beyond the dripline by as much as twice the crown radius, so it is important to protect as large an area as possible around the tree.
- Garry Oak stands should be protected by temporary fencing to make sure that there are no impacts within these zones as even road fill dumped temporarily in tree root zones can lead to death of the tree.

- Care should be taken to minimize the amount of blasting and grading that is done within Garry Oak stands as these activities destroy the ecosystems and change waterflow. Changes to the groundwater or surface water hydrology adjacent to Garry Oak stands should be minimized or avoided.
- Uncontaminated gravel should be utilized during road construction in order to prevent invasive species such as Scotch Broom from moving in. Prompt re-planting of disturbed areas is important for preventing the establishment and spread of invasive plants.
- Refer to the Best Management Practices for Garry Oak and Associated Ecosystems for additional guidance.[13]
- All Garry oak trees and stands that are anticipated to be removed as required by the proposed watermain servicing installation design should be replaced at a 3:1 ratio. The Town of Comox does not currently have a replacement ratio recommendation, therefore, the 3:1 ratio is recommended based on the City of Courtenay's Tree Protection Bylaw for greenfield properties[14].

Upland Environment with Older Forest Ecosystem (DPA #9)

- Strata lots 1-4 are located within the 30m setback from the natural boundary of the Strait of Georgia. Vegetation on any new lots on the undeveloped portion of the subject property within this area should be retained to ensure no degradation of fish habitat occurs.
- Older forest should be retained with a development buffer extended to the width of the crown to protect the root systems and prevent the alteration of environmental values associated with older forest ecosystems.
- Site servicing is anticipated to include on site septic systems, on site storm drainage, and watermain servicing. Storm drainage should utilize a rock pit, dispersion trench, splash pad or swale, and must not create a point source discharge of storm water to the natural boundary at the ocean and must not negatively impact adjacent properties.
- Construction, including site access and servicing of lots fronting the ocean must have a sediment and erosion control plan established prior to works.
- Vegetation will be maintained wherever practicable, especially vegetation directly adjacent to any waterbody, in order to prevent bank erosion and minimize disturbance to potential fish habitat.
- Vegetation removal will predominantly target invasive species and the removal of trees as well as native species will be avoided where practical. Riparian areas along the natural boundary of the Strait of Georgia site should be replanted with native plant species following construction.
- Plantings should match the type, density, and distribution of the pre-area with inclusion of

[13] Garry Oak Ecosystems Recovery Team 2013. Best Management Practices for Garry Oak & Associated Ecosystems. Victoria, BC. www.goert.ca/land-manager-BMPs. Accessed November 29th, 2022
[14] The Corporation of the City of Courtenay, Bylaw No. 2850. Tree Protection Bylaw.

natural shoreline habitat features, such as large pieces of driftwood. Native plant species as well native seed mixes or legume mixture should be utilized for landscaping on strata lots #1-4. Refer to Appendix 4 for a list of species recommended for Re- vegetation.

Bald Eagle Nest (DPA #10)

- The breeding season "quiet buffer" is an additional distance of 100m (200m total for the subject lot).
- The breeding window is January 1st to August 31st, or earlier than August 31st if young bald eagles have fledged as confirmed by a Registered Professional Biologist, or, January 1st to April 30th where a Registered Professional Biologist has confirmed no nesting activity for Bald Eagles.
- An assessment by a QEP should be conducted prior to works to determine if there is any additional eagle activity in the vicinity of the works and, if possible, whether the mapped nest is active.
- Reduce vegetation clearing to the minimum amount possible; avoid removing vegetation that has the potential to support nests during the nesting period (Nesting Zone A1: late March – mid-August; ECC 2017)[15]. All effort should be made to ensure that no vegetation removal is conducted during the applicable breeding and nesting windows. If removal of potential nesting habitat is required to occur during the nesting period, multiple nest survey should be conducted by a QEP ahead of the vegetation removal to determine if any nests are present.
- An EM should monitor the area throughout the works for signs of disturbance and implement additional mitigation measures as necessary.

Tree Protection

- Clearing activities in proximity to the setback and trees that are to be retained that are in close proximity to the buffers/development setback should be protected through the following measures:
    - An additional protection area extending to 2x the width of the drip line of larger trees within the identified older forest should be implemented to protect trees within the ESA during construction. These areas can be captured during the pre- work assessment conducted by the EM,
    - Do not trench through the root zone of a tree.
    - Do not pave around trees,
    - Do not allow concrete washout or other pollutants to contaminate the soil around the setback,
    - Vertical mulching may be necessary; where significant root damage has been caused, and
    - Prune any broken limbs with clean cuts.

Vegetation Clearing

Vegetation removal will be restricted to areas that are part of the project footprint. Vegetation removal will predominantly target invasive species, however the removal of mature trees as well as native species may be required based on the proposed servicing design. Riparian areas along the natural boundary of strata lots #1-4 should be replanted with native plant species following construction (Appendix 4). Mitigation measures to be followed during vegetation removal include, but are not limited to:

- The removal of mature vegetation, particularly trees, outside of the ESA setbacks should be minimized wherever possible.
- Follow timing windows to avoid disturbance to vegetation that would impact wildlife (e.g., avoid vegetation removal during bird breeding season); do not clear open land and forest from March 12th to August 17th (timing window is therefore from August 12th to March 11th) to comply with the *Wildlife Act* and *Migratory Birds Convention Act*, unless a breeding bird survey completed by a RPBio, concludes there is a high probability that no nests are present in the immediate vicinity of the area to be cleared.
- Clearing of any shrubs and/or low-lying vegetation may occur without a nest survey conducted by a qualified environmental professional.
- Vegetation clearing will be kept to the minimum amount necessary to complete the works; vegetation will be maintained wherever practicable, especially vegetation directly adjacent to any waterbody, in order to prevent bank erosion and minimize disturbance to potential fish habitat.

Site Servicing

- It is anticipated that site servicing will include on site septic, storm water drainage, and city water.
- Septic fields must be designed as to not impact ESAs or ESA buffer on the lot.
- Storm water drainage must not create a point source discharge of storm water to the natural boundary with the ocean and must not impact adjacent properties.

Sediment and Erosion Control

Sediment discharges to a watercourse or waterbody have the potential to result in the *death of fish and the harmful alteration, disruption, or destruction of fish habitat (HADD),* which are prohibited under *subsections 34.4(1) and 35(10 of the Fisheries Act*. This includes a section located within the 30m natural boundary setback on strata lots 1-4. In order to avoid the introduction of sediment into any waterbody during all phases of the work, undertaking or activity and prevent adverse effects to the aquatic environment including HADD, a variety of measures and strategies to manage erosion and sediment will be implemented during the project works. The EM will be responsible for applying these measures, as necessary. These include but are not

limited to the following:

- Consideration for potential erosion and sediment control measures will be taken into account in the layout and design of project activities. A site-specific plan will be provided at a later date, prior to construction.
- All work is to be completed in the dry above the tide level. Works will be completed in a timely manner so as to avoid prolonged disturbances to the area and minimize the release of sediment or mobilization of sediment into the water column.
- Working during periods of heavy precipitation will be avoided, if possible. Rainwater flows will be diverted away from open construction sites (via pumps, sandbags etc.)
- Erosion and sediment control materials will be readily available and on site prior to the commencement of work. These will be installed surrounding the work site, as required to minimize the dispersal of sediments and avoid releasing sediments into the marine environment. The materials should include, but are not limited to the following:
    - Silt fencing and erosion control matting (tarps, geotextile filter fabric, matting, silt curtains, seeding, etc.).
    - Water pumps, sandbags, straw bales and hand tools (shovel and rakes).
- In the event that erosion and sediment control structures or materials are utilized, ensure that the materials are installed properly by the contractor in order to achieve proper mitigation.
- Regular monitoring, maintenance, and repair of sediment control systems will be undertaken by the contractor in order to maintain the functionality and effectiveness of these systems.
- Sediment control measure(s) will be removed only after any sediment plume within has dissipated, as confirmed by visual observations and by turbidity monitoring data. BC Approved Water Quality Guidelines should be followed (Table 2: BC MOE, 2021).[17]
- Surplus trenched material, if any, will be removed from the site and disposed of at an appropriate offsite location.
- Excavated material and stockpiles will be removed from site or placed in a stable area (away from any waterbodies) to prevent run off.
- Ditches will not be allowed to flow unobstructed into watercourses.
- If necessary, heavy machinery will be utilized to texture exposed slopes in order to minimize erosion and sedimentation.
- Following construction, topsoil will be replaced and seeded with native vegetation in previously vegetated areas (if required).
- The contractor is to ensure that town streets are kept clean and free of equipment and materials at all times during the construction period.
- Sediment traps should be installed in catch basins within the work area to prevent sediment laden water runoff into the Town of Comox sanitary system.

- Activity specific sediment and erosion control plans must be approved by an RPBio prior to the commencement of works.

Table 2. Provincial Water Quality Guidelines for turbidity (BC MOE 2021).

Water Use	Turbidity
Aquatic Life (Fresh, Marine, Estuarine)	Change from background of 8 NTU at any one time for a duration of 24 hours in all waters during clear flows or in clear waters.
	Change from background of 2 NTU at any one time for a duration of 30 days in all waters during clear flows or in clear waters.
	Change from background of 5 NTU at any time when background is 8-50 NTU during high flows or in turbid waters.
	Change from background of 10% when background is >50 NTU at any time during high flows or in turbid waters.

Protection of Fish and Aquatic Habitat

While the project is not anticipated to have a significant impact on fish and/or aquatic habitat, the Strait of Georgia is located within the vicinity of the site and accordingly, construction works will be conducted with special consideration for fish and aquatic habitat. Measures to be implemented to protect fish and aquatic habitat will include but not be limited to the following:

- Careful planning and staging will be implemented such that work can be completed in a timely manner.
- Works conducted within the Upland area (within 30m of the Strait of Georgia natural boundary) will largely occur during periods of dry weather; working during inclement weather conditions (i.e. heavy precipitation, strong winds) should be avoided.
- The worksite will be isolated using sediment and erosion control measures, as directed by the EM, to ensure that no sediment-laden water enters the foreshore area.
- Any groundwater being diverted will be monitored to ensure it complies with the provincial turbidity guidelines for freshwater and marine aquatic life (Table 2: *BC MOE 2021*).
- All refueling and/or maintenance of equipment will be undertaken away from any waterbody (at least 30m, where possible) to minimize the risk of deleterious substances entering the aquatic environment.
- The EM will conduct regular site visits throughout the project to provide on-going advice with respect to the mitigation of potential impacts to fish and/or aquatic habitat.

Machinery and Equipment

There will be no heavy equipment operating within the marine foreshore below the high-water mark (HWM). Machines will complete their work from the landward side of their work area and the machinery will remain above the HWM. The EM will identify a specific route for machine access and an appropriate area where machines can work. By establishing areas where

machines can track and work from, minimizes the area of disturbance. In addition, any environmentally sensitive areas adjacent to the project that are not within the footprint of the work will be identified and marked to minimize the disturbance to adjacent habitats.

- All machinery and equipment should arrive on-site in good working condition, free of any leaks and/ invasive species.
- Machinery that is resulting in excessive exhaust fumes and/or noise should be repaired or replaced, as necessary.
- All refueling and/or maintenance of machinery should occur a minimum of 30m from any waterbody, where practicable.
- Any machinery that is not in use should be turned off to help maintain the air quality in the surrounding areas.
- All equipment on-site should have an appropriately sized spill kit on board and in an accessible location.

Material Placement

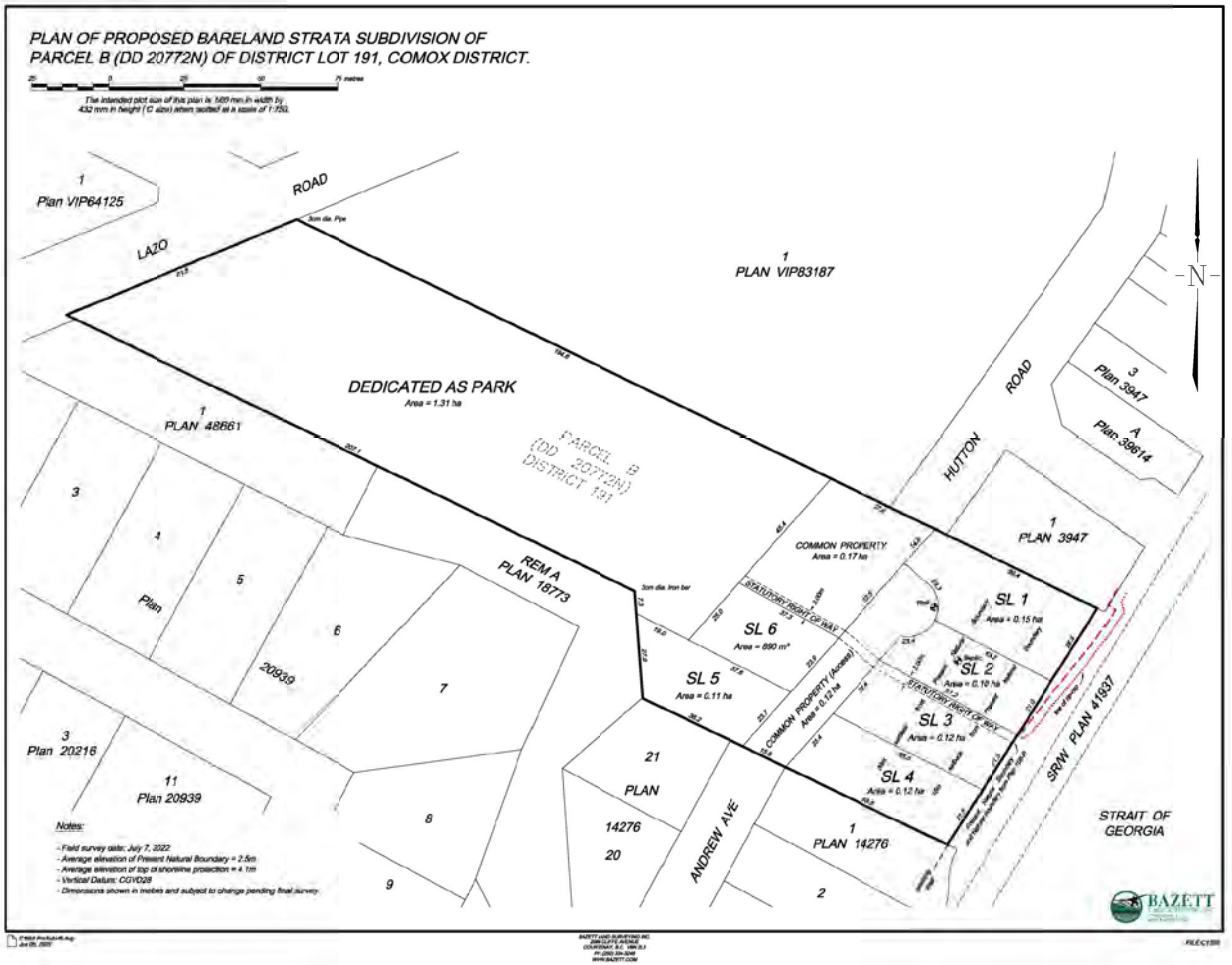
- Excavations with the potential of being inundated by seawater will not be left open during a tide cycle. Excavations will be backfilled during the same low tide window.
- Materials will not obstruct or interfere with the passage of fish and will not be stockpiled below the HWM where they are susceptible to erosion from high water. Materials will be stockpiled above the HWM and the armoring will be placed individually, in a controlled manner.
- End dumping of material below the shoreline where it could flow into the intertidal zone below high-water mark will be avoided.
- The excavation of shoreline materials may require a substantial amount of native salt laden materials, which is considered impacted materials. All materials excavated are intended for re-use on site, as directed by the contractor and EM.

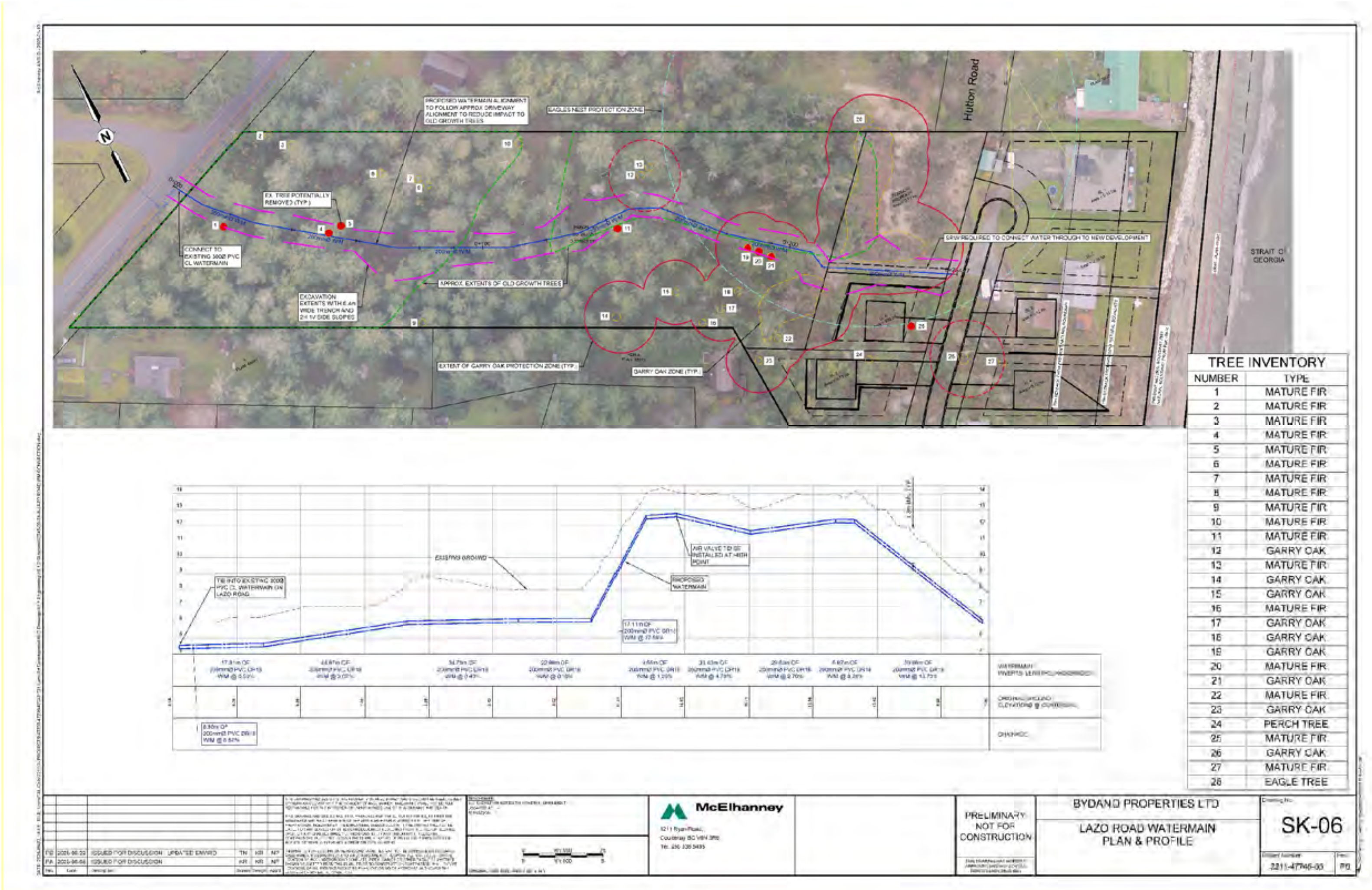
Additional Measures

Additional guidance for mitigating or avoiding impacts associated with the development can be found in the document *Develop with Care 2014: Environmental Guidelines for Urban and Rural Land Development in British Columbia*[15].

[15] https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/laws-policies-standards-guidance/best-management-practices/develop-with-care

Appendix 2: Site Plan & Watermain Servicing Design




Hutton Road
STRAIT OF GEORGIA
PROPOSED WATERMAIN ALIGNMENT TO FOLLOW APPROX DRIVEWAY ALIGNMENT TO REDUCE IMPACT TO OLD GROWTH TREES
EAGLES NEST PROTECTION ZONE
EX. TREE POTENTIALLY REMOVED (TYP.)
CONNECT TO EXISTING 300Ø PVC CL WATERMAIN
EXCAVATION EXTENTS WITHIN AN WIDE TRENCH AND 2H:1V SIDE SLOPES
APPROX. EXTENTS OF OLD GROWTH TREES
EXTENT OF GARRY OAK PROTECTION ZONE (TYP.)
GARRY OAK ZONE (TYP.)
SRW REQUIRED TO CONNECT WATER THROUGH TO NEW DEVELOPMENT
EXISTING GROUND
PROPOSED WATERMAIN
AIR VALVE TO BE INSTALLED AT HIGH POINT
TIE INTO EXISTING 300Ø PVC CL WATERMAIN ON LAZO ROAD
TREE INVENTORY
NUMBER TYPE
1 MATURE FIR
2 MATURE FIR
3 MATURE FIR
4 MATURE FIR
5 MATURE FIR
6 MATURE FIR
7 MATURE FIR
8 MATURE FIR
9 MATURE FIR
10 MATURE FIR
11 MATURE FIR
12 GARRY OAK
13 MATURE FIR
14 GARRY OAK
15 GARRY OAK
16 MATURE FIR
17 GARRY OAK
18 GARRY OAK
19 GARRY OAK
20 MATURE FIR
21 GARRY OAK
22 MATURE FIR
23 GARRY OAK
24 PERCH TREE
25 MATURE FIR
26 GARRY OAK
27 MATURE FIR
28 EAGLE TREE
McElhanney
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LAZO ROAD WATERMAIN PLAN & PROFILE
SK-06
2211-47746-03

Appendix 3: Species at Risk in Garry Oak and Associated Ecosystems

Category	Latin Name	English Name	Global Rank	Prov Rank	COSEWIC Status	BC Status	SARA Schedule	Species-level planning in GOERT strategy?
Bird	*Ardea herodias fannini*	Pacific great blue heron (great blue heron, *fannini* subspecies)	G5T4	S3B,S4N	SC	Blue	3	No
Bird	*Asio flammeus*	short-eared owl	G5	S3B,S2N	SC	Blue	3	No
Bird	*Columba fasciata (Patagioenas fasciata)*	band-tailed pigeon	G4	S3S4B	SC	Blue		No
Bird	*Glaucidium gnoma swarthi*	northern pygmy owl, *swarthi* subspecies	G5T3Q	S3		Blue		No
Bird	*Megascops kennicottii kennicottii (Otus kennicottii kennicottii)*	western screech owl, *kennicottii* subspecies	G5T4	S3	SC	Blue	1	No
Bird	*Progne subis*	purple martin	G5	S2S3B		Blue		No
Bird	*Tyto alba*	barn owl	G5	S3	SC	Blue	1	No
Bird	*Coccyzus americanus*	yellow-billed cuckoo	G5	SXB		Red		No
Bird	*Eremophila alpestris strigata*	horned lark, *strigata* subspecies	G5T2	SX	E	Red	1	Yes
Bird	*Falco peregrinus anatum*	peregrine falcon (peregrine falcon, *anatum* subspecies)	G4T3	S2B	T	Red	1	No

Bird	*Melanerpes lewis pop. 1*	Lewis's woodpecker (Georgia Depression population)	G5TXQ	SXB	SC (metapopulation)	Red	1 (metapopulation)	Yes
Bird	*Pooecetes gramineus affinis*	vesper sparrow, *affinis* subspecies	G5T3	S1B	E	Red		Yes
Bird	*Sialia mexicana* pop. 1	western bluebird, Georgia Depression population	G5TNRQ	SHB		Red		Yes
Bird	*Sturnella neglecta* pop. 1	western meadowlark, Georgia Depression population	G5TNRQ	SXB		Red		Yes
Butterfly	*Colias occidentalis*	western sulphur	G3G4	S4		Blue		Yes
Butterfly	*Erynnis propertius*	propertius duskywing	G5	S2S3		Blue		Yes
Butterfly	*Euphyes vestris*	dun skipper	G5	S3	T	Blue	1	No
Butterfly	*Hesperia colorado oregonia*	common branded skipper, *oregonia* subspecies	G5T3T4	S2S3		Blue		Yes
Butterfly	*Icaricia icariodes blackmorei (Plebejus icarioides blackmorei)*	Boisduval's blue, *blackmorei* subspecies	G5T3	S3		Blue		Yes
Butterfly	*Incisalia mossii mossii (Callophrys mossii mossii)*	Moss' elfin, *mossii* subspecies	G4T4	S2S3		Blue		Yes
Butterfly	*Oeneis nevadensis*	great arctic	G5	S3		Blue		Yes
Butterfly	*Cercyonis pegala incana*	common woodnymph, *incana* subspecies	G5T4T5	S2		Red		Yes

Butterfly	*Coenonympha california insulana (Coenonympha tullia insulana)*	common ringlet, *insulana* subspecies	G5T3T4	S1		Red		Yes
Butterfly	*Euchloe ausonides insulanus*	island marble, undescribed island subspecies	G5T1	SX	XT	Red	1	Yes
Butterfly	*Euphydryas editha taylori*	Taylor's checkerspot (Edith's checkerspot, *taylori* subspecies)	G5T1	S1	E	Red	1	Yes
Butterfly	*Plebejus saepiolus insulanus*	island blue (greenish blue, *insulanus* subspecies)	G5TH	SH	E	Red	1	Yes
Butterfly	*Speyeria zerene bremnerii*	zerene fritillary, *bremnerii* subspecies	G5T3T4	S2		Red		Yes
Invertebrate (not butterfly)	*Camirus porosus*	(shield-backed bug)				Red		Yes
Invertebrate (not butterfly)	*Ceratocapsus downesi*	(leaf bug)				Red		Yes
Invertebrate (not butterfly)	*Clivenema fusca*	(plant bug)				Red		Yes
Invertebrate (not butterfly)	*Harmostes dorsalis*	(scentless plant bug)				Red		Yes
Invertebrate (not butterfly)	*Nicocles rufus*	(robber fly)				Red		Yes
Invertebrate (not butterfly)	*Scleropogon bradleyi*	(robber fly)				Red		Yes

Invertebrate (not butterfly)	*Scolopostethus tropicus*	(seed bug)				Red		Yes
Invertebrate (not butterfly)	*Erythemis collocata*	western pondhawk	G5	S3		Blue		Yes
Invertebrate (not butterfly)	*Pachydiplax longipennis*	blue dasher	G5	S3S4		Blue		Yes
Invertebrate (not butterfly)	*Sympetrum vicinum*	yellow-legged meadowhawk (autumn meadowhawk)	G5	S3S4		Blue		Yes
Invertebrate (not butterfly)	*Prophysaon coeruleum*	blue-grey taildropper slug	G4	S1	E	Red	1	No
Mammal	*Cervus elaphus roosevelti (Cervus canadensis roosevelti)*	Roosevelt elk	G5T4	S2S3		Blue		No
Mammal	*Corynorhinus townsendii*	Townsend's big-eared bat	G4	S2S3		Blue		No
Mammal	*Mustela erminea anguinae*	ermine, anguinae subspecies	G5T3	S3		Blue		No
Moss	*Bartramia stricta*	rigid apple moss	G2G4	S1	E	Red	1	Yes
Moss	*Entosthodon fascicularis*	banded cord-moss	G4G5	S2	SC	Red	1	Yes
Moss	*Syntrichia laevipila (Tortula laevipila* var. *laevipila* and *T. laevipila* var. *meridionalis)*	twisted oak moss	G3G5TNR	S1	SC	Red	1	Yes
Reptile	*Contia tenuis*	sharp-tailed snake	G5	S1	E	Red	1	No

Reptile	*Pituophis catenifer catenifer*	Pacific gopher snake (gopher snake, *catenifer* subspecies)	G5T5	SX	XT	Red	1	No
Vascular Plant	*Allium amplectens*	slimleaf onion	G4	S3		Blue		Yes
Vascular Plant	*Allium geyeri* var. *tenerum*	Geyer's onion	G4G5T3T5	S2S3		Blue		No
Vascular Plant	*Clarkia amoena* var. *caurina*	farewell-to-spring	G5T5?	S3		Blue		Yes
Vascular Plant	*Clarkia amoena* var. *lindleyi*	farewell-to-spring	G5T5	S3		Blue		Yes
Vascular Plant	*Dryopteris arguta*	coastal wood fern	G5	S2S3	SC	Blue	1	Yes
Vascular Plant	*Githopsis specularioides*	common bluecup	G5	S2S3		Blue		Yes
Vascular Plant	*Heterocodon rariflorum*	heterocodon	G5	S3		Blue		No
Vascular Plant	*Isoetes nuttallii*	Nuttall's quillwort	G4?	S3		Blue		Yes
Vascular Plant	*Linaria canadensis* var. *texana*	blue toadflax	G5T4T5	S3		Blue		No
Vascular Plant	*Lotus unifoliolatus* var. *unifoliolatus*	Spanish-clover	G5T5	S2S3		Blue		Yes
Vascular Plant	*Rupertia physodes*	California-tea	G4	S3		Blue		No
Vascular Plant	*Sericocarpus rigidus (Aster curtus)*	white-top aster	G3	S3	SC	Blue	1	Yes
Vascular Plant	*Toxicodendron diversilobum*	poison oak	G5	S2S3		Blue		Yes

Vascular Plant	*Trifolium depauperatum* var. *depauperatum*	poverty clover	G5T5?	S3		Blue		Yes
Vascular Plant	*Trifolium dichotomum*	Macrae's clover	G4?	S2S3		Blue		Yes
Vascular Plant	*Viola howellii*	Howell's violet	G4	S2S3		Blue		No
Vascular Plant	*Alopecurus carolinianus*	Carolina meadow-foxtail	G5	S2		Red		Yes
Vascular Plant	*Balsamorhiza deltoidea*	deltoid balsamroot	G5	S1	E	Red	1	Yes
Vascular Plant	*Bulbostylis capillaris*	densetuft hairsedge	G5	S1		Red		No
Vascular Plant	*Callitriche marginata*	winged water-starwort	G4	S1		Red		Yes
Vascular Plant	*Carex feta*	green-sheathed sedge	G5	S2		Red		No
Vascular Plant	*Carex tumulicola*	foothill sedge	G4	S2	E	Red		Yes
Vascular Plant	*Castilleja levisecta*	golden paintbrush	G1	S1	E	Red	1	Yes
Vascular Plant	*Castilleja victoriae*	Victoria owl-clover	G1?	S1	E	Red		Yes
Vascular Plant	*Centaurium muehlenbergii*	Muhlenberg's centaury	G5?	S1	E	Red		Yes
Vascular Plant	*Clarkia purpurea* ssp. *quadrivulnera*	small-flowered godetia	G5T5	S1		Red		Yes
Vascular Plant	*Crassula connata* var. *connata*	erect pygmyweed	G5TNR	S2		Red		Yes
Vascular Plant	*Epilobium densiflorum*	dense spike-primrose	G5	S1	E	Red	1	Yes

Vascular Plant	*Epilobium torreyi*	brook spike-primrose	G5	SX	XT	Red	Consider 1	Yes
Vascular Plant	*Idahoa scapigera*	scalepod	G5	S2		Red		Yes
Vascular Plant	*Juncus kelloggii*	Kellogg's rush	G3?	S1	E	Red	1	Yes
Vascular Plant	*Juncus occidentalis*	Western rush	G5	S1		Red		No
Vascular Plant	*Lasthenia glaberrima*	smooth goldfields	G5	S1	E	Red		Yes
Vascular Plant	*Lepidium oxycarpum*	sharp-pod peppergrass	G4	SX		Red		No
Vascular Plant	*Limnanthes macounii*	Macoun's meadowfoam	G3	S2	T	Red	1	Yes
Vascular Plant	*Lomatium dissectum* var. *dissectum*	fern-leaved desert-parsley	G4T4	S1		Red		Yes
Vascular Plant	*Lomatium grayi*	Gray's desert-parsley	G5	S1	T	Red		Yes
Vascular Plant	*Lotus formosissimus*	seaside birds-foot lotus (seaside bird's-foot trefoil)	G4	S1	E	Red	1	Yes
Vascular Plant	*Lotus pinnatus*	bog bird's-foot trefoil	G4G5	S1	E	Red	1	Yes
Vascular Plant	*Lupinus densiflorus* var. *densiflorus*	dense-flowered lupine	G5T4	S1	E	Red	1	Yes
Vascular Plant	*Lupinus lepidus*	prairie lupine	G5	S1	E	Red	1	Yes
Vascular Plant	*Lupinus oreganus* var. *kincaidii*	sulphur lupine	G5T2	SX	XT	Red		Yes

Vascular Plant	*Madia minima*	small-headed tarweed	G4	S1		Red		No
Vascular Plant	*Marah oreganus*	manroot	G5	S1		Red		Yes
Vascular Plant	*Meconella oregana*	white meconella	G2G3	S1	E	Red	1	Yes
Vascular Plant	*Microseris bigelovii*	coast microseris	G4	S1	E	Red	Consider 1	Yes
Vascular Plant	*Minuartia pusilla*	dwarf sandwort	G5	S1	E	Red	1	Yes
Vascular Plant	*Navarretia intertexta*	needle-leaved navarretia	G5	S2		Red		No
Vascular Plant	*Orthocarpus bracteosus*	rosy owl-clover	G3?	S1	E	Red	1	Yes
Vascular Plant	*Piperia candida*	white-lip rein orchid	G3G4	S2		Red		No
Vascular Plant	*Plagiobothrys figuratus*	fragrant popcornflower	G4	S1	E	Red		Yes
Vascular Plant	*Plagiobothrys tenellus*	slender popcornflower	G4G5	S2	T	Red		Yes
Vascular Plant	*Psilocarphus elatior*	tall woolly-heads	G4Q	S1	E	Red	1	Yes
Vascular Plant	*Psilocarphus tenellus* var. *tenellus*	slender woolly-heads	G4T4	S2	NAR	Red		Yes
Vascular Plant	*Ranunculus alismifolius* var. *alismifolius*	water-plantain buttercup	G5T5	S1	E	Red	1	Yes
Vascular Plant	*Ranunculus californicus*	California buttercup	G5	S1	E	Red		Yes
Vascular Plant	*Ranunculus lobbii*	Lobb's water-buttercup	G4	SH		Red		Yes

Vascular Plant	*Sanicula arctopoides*	bear's-foot sanicle (snake-root sanicle)	G5	S1	E	Red	1	Yes
Vascular Plant	*Sanicula bipinnatifida*	purple sanicle	G5	S2	T	Red	1	Yes
Vascular Plant	*Silene scouleri* ssp. *grandis*	coastal Scouler's catchfly (Scouler's campion)	G5TNR	S1	E	Red	1	Yes
Vascular Plant	*Tonella tenella*	small-flowered tonella	G5	S1	E	Red	1	Yes
Vascular Plant	*Trifolium cyathiferum*	cup clover	G4	S1		Red		No
Vascular Plant	*Triphysaria versicolor* ssp. *versicolor*	bearded owl-clover	G5T5	S1	E	Red	1	Yes
Vascular Plant	*Triteleia howellii*	Howell's triteleia	G3G4	S1	E	Red	1	Yes
Vascular Plant	*Uropappus lindleyi*	Lindley's microseris	G5	S1	E	Red		Yes
Vascular Plant	*Viola praemorsa* ssp. *praemorsa*	yellow montane violet	G5T3T5	S2	E	Red	1	Yes
Vascular Plant	*Yabea microcarpa*	California hedge-parsley	G5?	S2		Red		Yes

Appendix 4: Species for Re-Vegetation

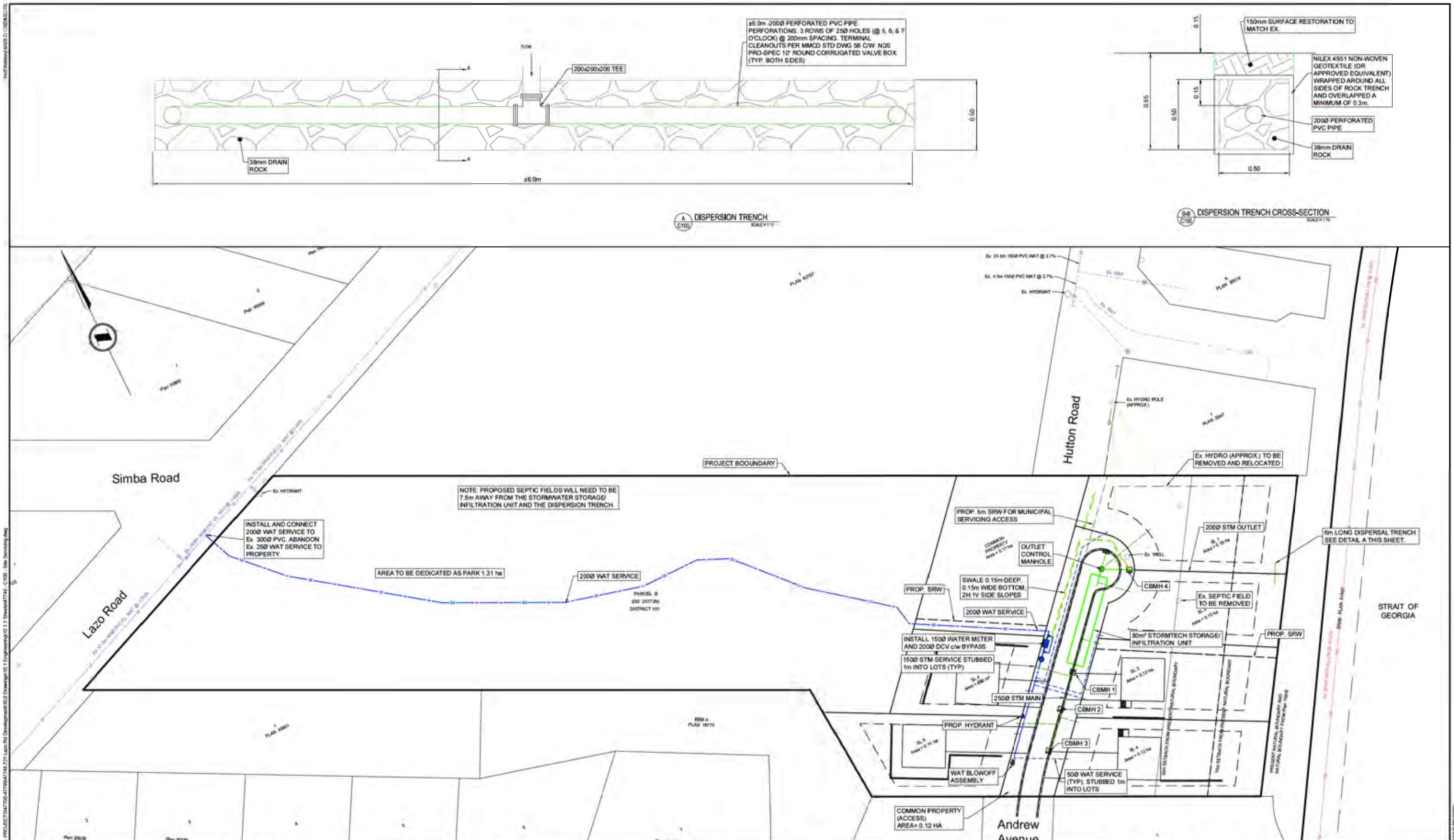
Potential species for re-vegetation at 721 Lazo Road may include, but are not limited to, the following:

Trees		**Shrubs**	
Bigleaf maple	*Acer macrophyllum*	Nootka rose	*Rose nutkana*
Red alder	*Alnus rubra*	Oceanspray	*Holodiscus discolor*
Cascara	*Rhamnus purshiana*	Red flowering current	*Ribes sanguineum*
Douglas maple	*Acer douglasii*	Snowberry	*Syphoricarpus albus*
Pacificus crab apple	*Malus fusca*	Mock-orange	*Philadelphus lewisii*
Douglas-fir	*Pseudotsuga menziesii*	Sweet gale	*Myrica californica*
Sitka spruce	*Picea sitchensis*	Salal	*Gaultheria shallon*
Shore pine	*Pinus contorta*	Oregon-grape	*Mahonia nervosa*
		Salmonberry	*Rubus spectabilis*
		Thimbleberry	*Rubus parviflorus*
		Black twinberry	*Lonicera involucrata*

Grasses		**Wildflowers**	
Beach wild-rye grass	*Leymus mollis mollis*	Entire-leaved gumweed	*Grindelia integrifolia*
Red fescue	*Festuca rubra*	Large-leaved lupine	*Lupinus polyphyllus*
Dune grass	*Elymus mollis*	Seashore lupine	*Lupinus littoralis*
		Beach pea	*Lathyrus japonicus*
		Beach strawberry	*Rubus chiloensis*
		Common yarrow	*Achillea millefolium*
		Wooly sunflower	*Eriophyllum lanatum*

APPENDIX B

McElhanney Drawings



Rev	Date	Description	Drawn	Design	App'd
1	2025-12-11	ISSUED FOR SERVICING	TN	NP	DJ
0	2024-12-13	ISSUED FOR DEVELOPMENT PERMIT	TN	NP	NP

BENCHMARK
ALL ELEVATION REFER TO CONTROL MONUMENT: -
LOCATED AT: -
ELEVATION: -

0 1:500 25

ORIGINAL DWG SIZE: ANSI D (22" x 34")

McElhanney
1211 Ryan Road,
Courtenay BC V9N 3R6
Tel 250 338 5495

PRELIMINARY NOT FOR CONSTRUCTION

THIS DRAWING HAS NOT BEEN APPROVED AND MAY CONTAIN ERRORS AND OMISSIONS

BYDAND PROPERTIES LTD.

SITE SERVICING PLAN

Drawing No. C100

Project Number 2211-47748

Rev. 1

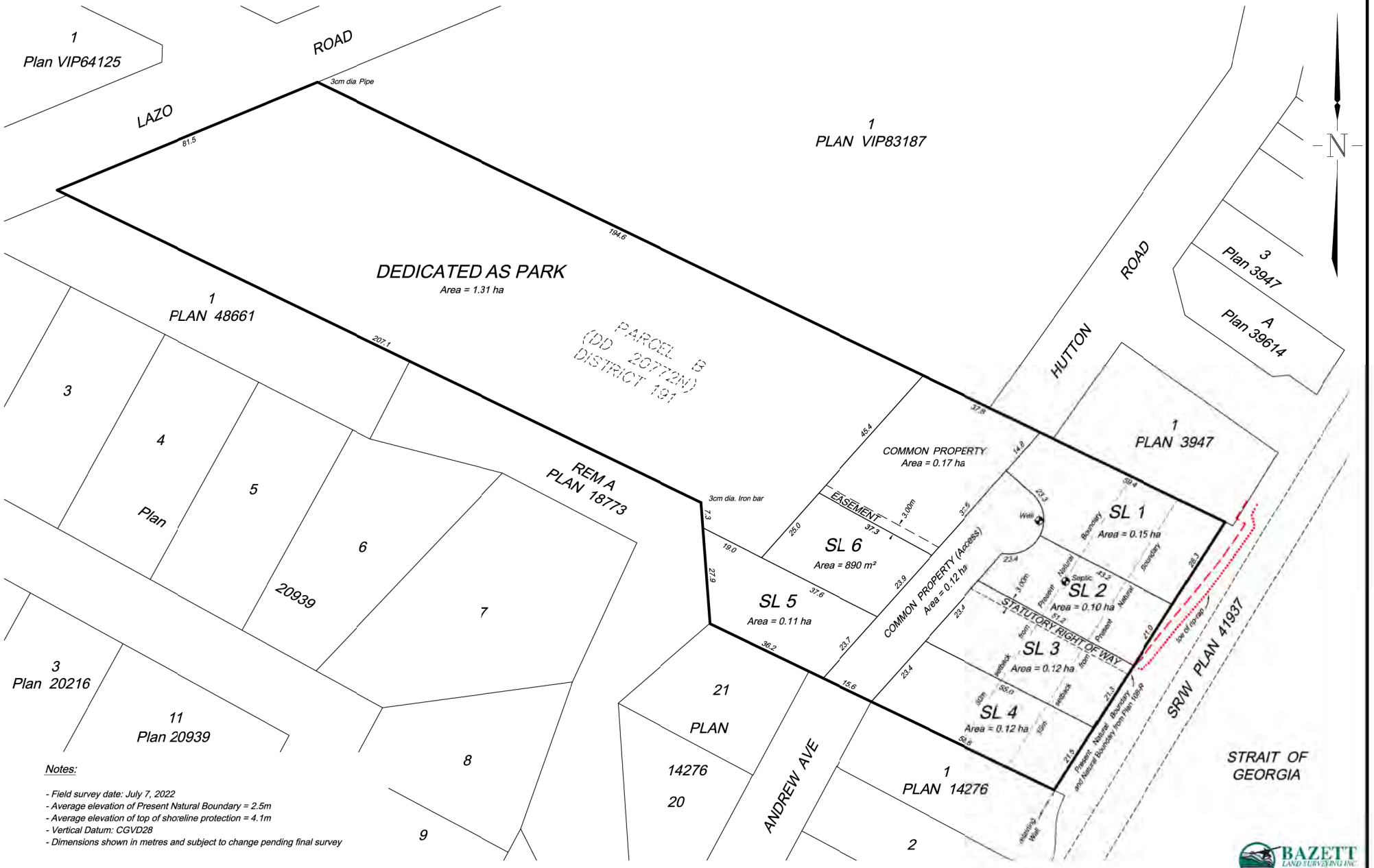
APPENDIX C

Proposed Subdivision Plan

PLAN OF PROPOSED BARELAND STRATA SUBDIVISION OF PARCEL B (DD 20772N) OF DISTRICT LOT 191, COMOX DISTRICT.

25 0 25 50 75 metres

The intended plot size of this plan is 560 mm in width by 432 mm in height (C size) when plotted at a scale of 1:750.



Notes:

- Field survey date: July 7, 2022
- Average elevation of Present Natural Boundary = 2.5m
- Average elevation of top of shoreline protection = 4.1m
- Vertical Datum: CGVD28
- Dimensions shown in metres and subject to change pending final survey

C1555 ProSubV6.dwg
May 29, 2025

BAZETT LAND SURVEYING INC.
2088 CLIFFE AVENUE
COURTENAY, B.C. V9N 2L3
PH. (250) 334-3248
WWW.BAZETT.COM

FILE:C1555

APPENDIX D

Pre-Development and Post Development Runoff Graphs

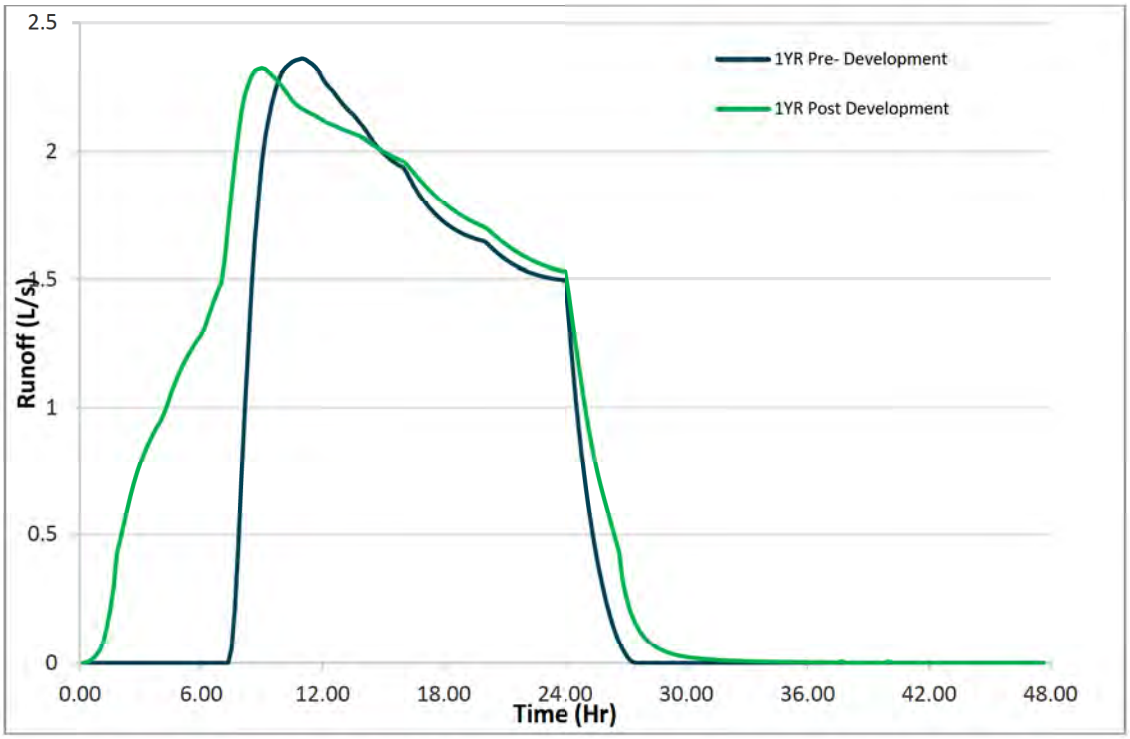


Figure 1: 1-Year Design Rainfall Event Pre-Development and Post Development Runoff

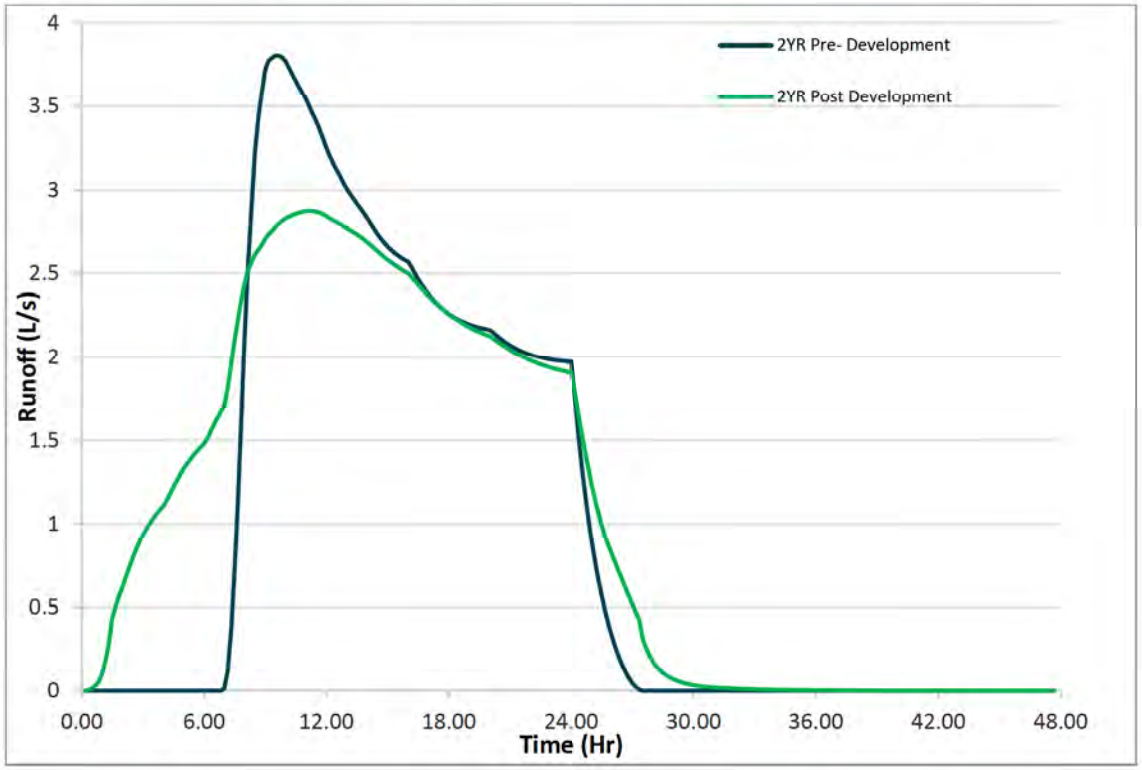


Figure 2: 2-Year Design Rainfall Event Pre-Development and Post Development Runoff

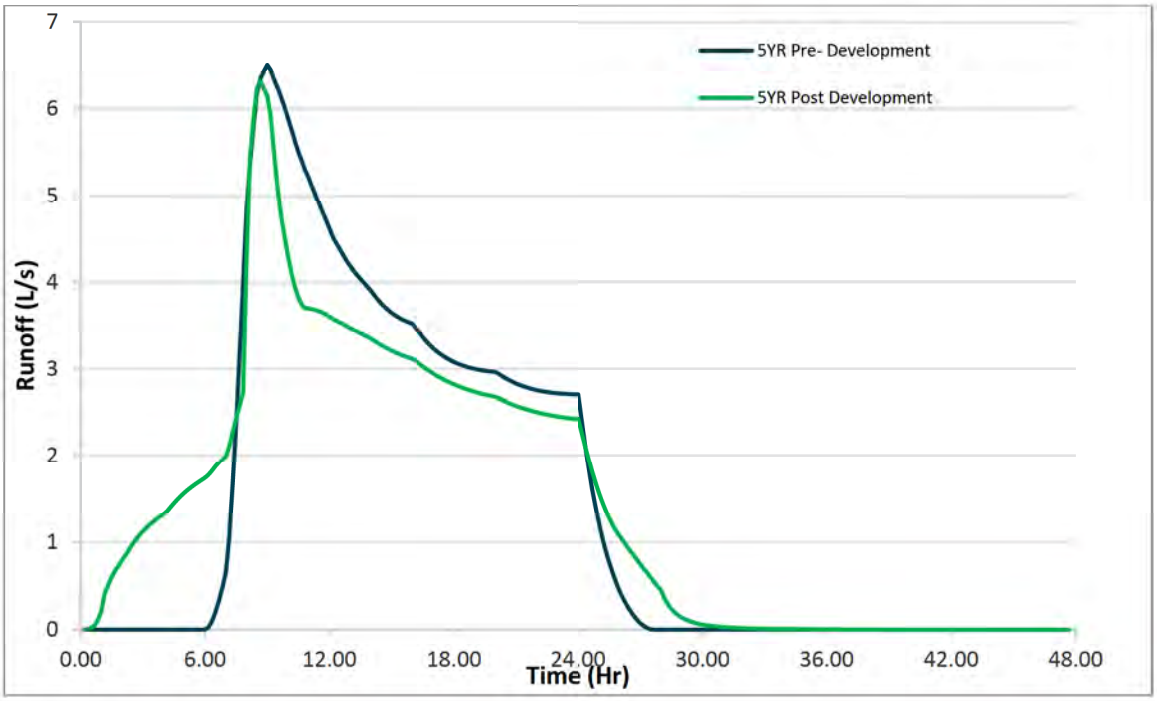


Figure 3: 5-Year Design Rainfall Event Pre-Development and Post Development Runoff

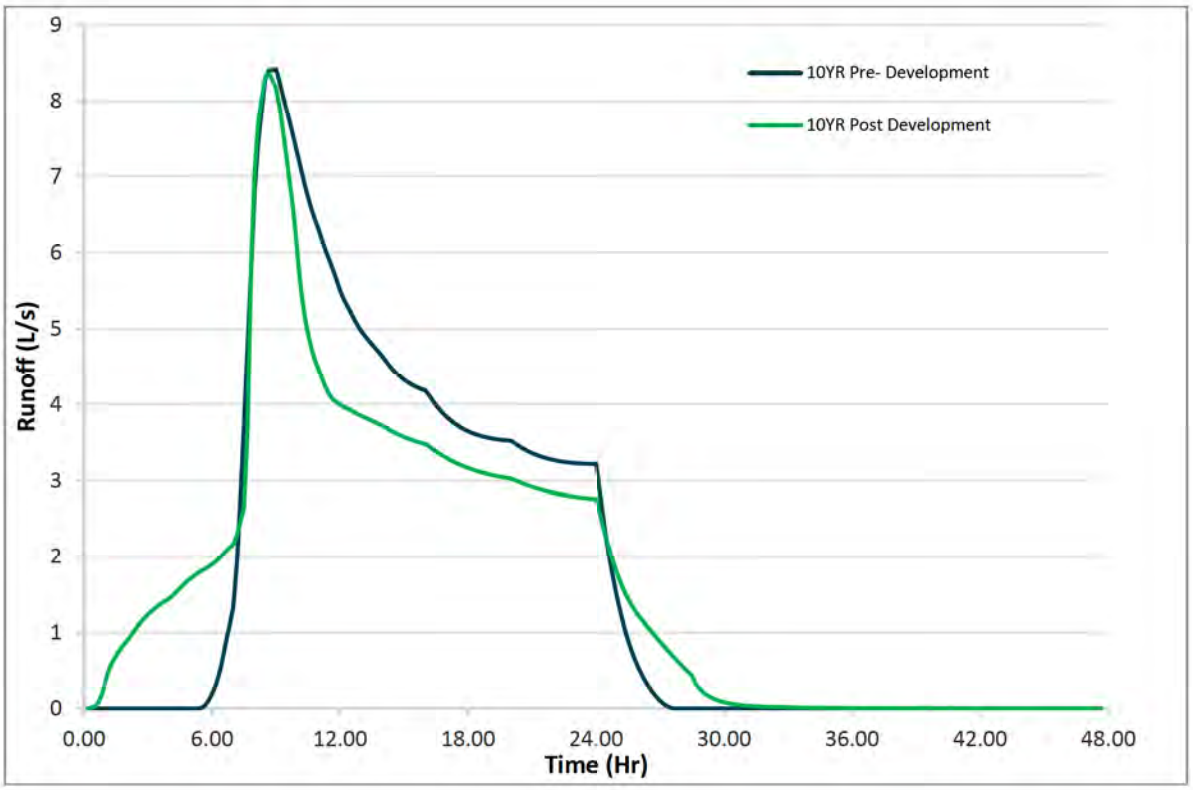


Figure 4: 10-Year Design Rainfall Event Pre-Development and Post Development Runoff

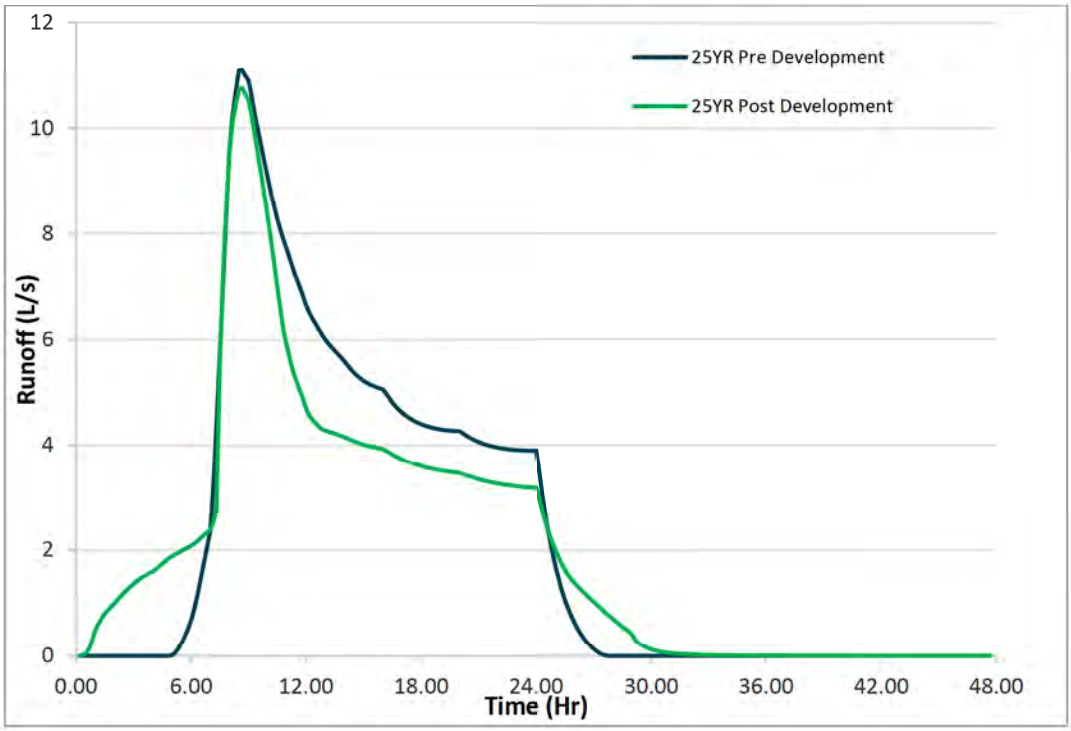


Figure 5: 25-Year Design Rainfall Event Pre-Development and Post Development Runoff

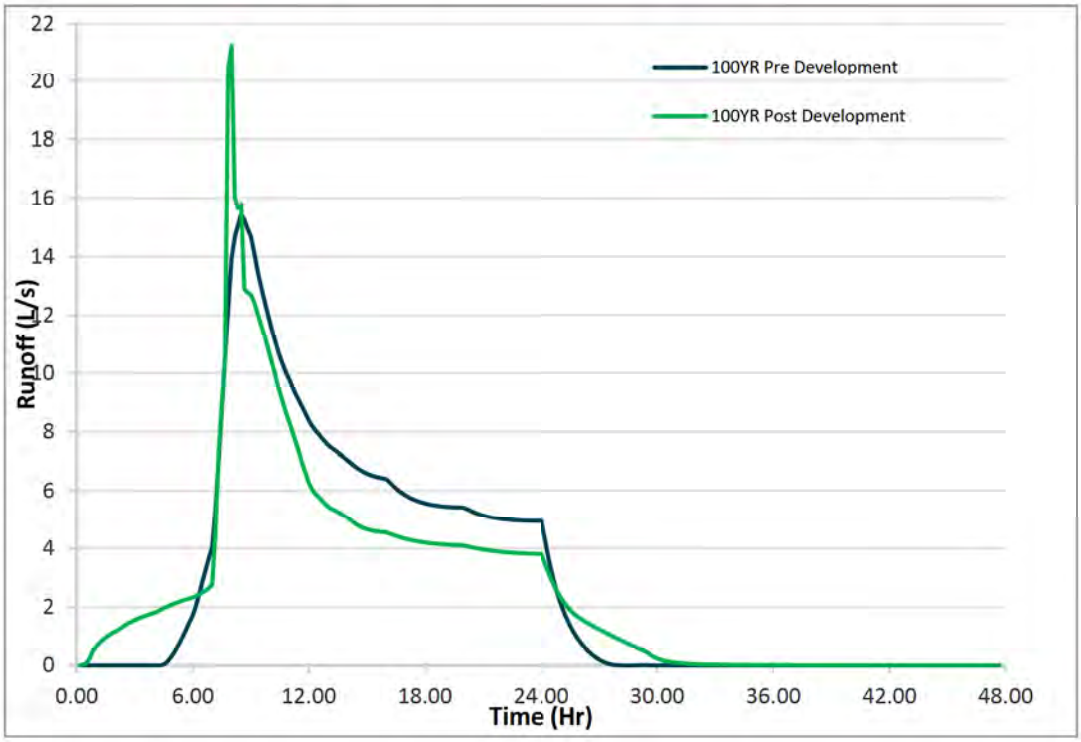


Figure 6: 100-Year Design Rainfall Event Pre-Development and Post Development Runoff