Staff Report for Decision

File Number: DP001171

DATE OF MEETING June 15, 2020

AUTHORED BY SADIE ROBINSON, PLANNING ASSISTANT, CURRENT PLANNING

SUBJECT **DEVELOPMENT PERMIT APPLICATION NO. DP001171 – 3258 STEPHENSON POINT ROAD**

OVERVIEW

Purpose of Report

To present for Council's consideration, a development permit application to authorize the construction of a single residential dwelling within the watercourse setback at 3258 Stephenson Point Road.

Recommendation

That Council issue Development Permit No. DP1171 at 3258 Stephenson Point Road with the following variance:

- reduce the minimum watercourse setback from 30m to 6.9m as measured from the top of bank of Cottle Creek in order to permit the construction of a proposed single residential dwelling and site improvements.

BACKGROUND

A development permit application, DP1171, was received from Doug Jarvie, to reduce the watercourse setback from the top of bank of Cottle Creek to allow construction of a single residential dwelling on the subject property.

Subject Property and Site Context

Zoning	Single Dwelling Residential (R1)
Location	The subject property is located on the south side of Stephenson Point Road, approximately 33m east of the Pacific Biological Station.
Total Area	2,217m^2
Official Community Plan (OCP)	Map 1 – Future Land Use – Neighbourhood Map 3 – Development Permit Area No. 1 – Watercourses (Cottle Creek)

The subject property is an undeveloped ocean-fronting lot in an area primarily characterized by single residential dwellings. The site contains mature trees and slopes to the south, dropping approximately 21m in elevation from Stephenson Point Road to the natural boundary of the sea.

The subject property was created through subdivision in 1995 in compliance with the watercourse protection regulations in place at that time. A Fish and Wildlife Covenant (EJ95044) was registered at the time of subdivision to prevent development within 7.5m of the top of bank of Cottle Creek and 7.5m from the natural boundary of the sea. At the time the lot was created the City did not have a Watercourses Development Permit Area in place and the

"City of Nanaimo Zoning Bylaw 1993 No. 4000" required a setback of 15m from the natural boundary of Cottle Creek for buildings and structures. The lot was created prior to the enactment of Provincial Riparian Areas Regulation (RAR), which includes allowances for development to occur on lots that were created under a prior regulatory regime.

Nearly the entire property (except 15m^2) is located within the city's watercourse setback. The west side of the lot is bounded by Cottle Creek and is subject to City bylaws, as follows:

- "City of Nanaimo Zoning Bylaw 2011 No. 4500" (the "Zoning Bylaw") – Schedule C requires a 30m leave strip as measured from the top of bank of Cottle Creek, based on the RAR simple assessment methodology (2006);
- Official Community Plan – Watercourses Development Permit Area (DPA1) requires a Development Permit to authorize development within the 30m leave strip.

In order to achieve a functional building envelope and use the existing driveway to minimize disturbance, the applicant proposes to reduce the watercourse setback requirements of the Zoning Bylaw.

DISCUSSION

The proposed development includes the construction of a single residential dwelling and site improvements to the existing driveway and landscaping within the watercourse setback. The proposed building footprint is 320m^2, or 14% of the total lot area. The building footprint is sited on the east side of the lot away from Cottle Creek, in the area with the fewest trees, and is more than 15m away from the natural boundary of the sea.

In accordance with the City's Watercourses Development Permit Area (DPA1) Guidelines and the RAR requirements, a Detailed Assessment was completed by a Qualified Environmental Professional (QEP) to determine the Streamside Protection Enhancement Area (SPEA) necessary to protect fish habitat and riparian function. The report concluded that fish cannot access Cottle Creek from the ocean due to excessive grades, but Cottle Creek does support resident fish that largely originate from Cottle Lake upstream. The SPEA was determined to be 10m as measured from high-water mark of Cottle Creek (6.9m as measured from top of bank). The Province has reviewed and accepted the QEP's detailed assessment and the defined SPEA.

The applicant proposes to reduce the City's watercourse setback from 30m (from top of bank of Cottle Creek) to 6.9m (from top of bank) to align with the RAR 10m SPEA while ensuring the new dwelling is sited without negatively impacting riparian form and function. There would be some minor intrusion into the 1995 Fish and Wildlife Covenant (EJ95044) area for the existing driveway, but this intrusion would not extend into the 10m SPEA setback. The SPEA will also be protected by permanent post and rail fencing and habitat protection signage, to be installed as a condition of this development permit.

In accordance with the Development Permit Area (DPA) guidelines, the QEP's environmental assessment also considered the current conditions of vegetation and evidence of significant wildlife within the subject property. The QEP concluded that while there is some wildlife use (raccoon, gray squirrel, and blacktail deer), there was no evidence (e.g., significant game trails) found on site demonstrating the subject property serves as a wildlife corridor. Existing

vegetation includes forest cover consisting of mature Douglas fir, western red cedar, red alder, arbutus, and some Garry oak with an understorey largely comprised of invasive species. The QEP concluded no raptor or heron nests were observed on the subject property. The SPEA is currently impacted by invasive plant species, which are impairing its proper form and function, and most of the trees within the ocean setback are covered with English ivy.

In order to restore and improve the existing riparian form and function, a Vegetation Management Plan and detailed Landscape Plan will be executed to remove the invasive species and revegetate the riparian and coastal bluff areas with species that are appropriate for the Coastal Douglas-fir Biogeoclimatic Zone. The planting plan includes approximately 1,329 indigenous plants representing 24 different species. Fourteen trees are proposed to be removed and replaced with approximately 25 new trees throughout the site. The QEP has reviewed the detailed Landscape Plan and concluded the proposed restoration strategy will improve the existing ecological conditions of the site. Additionally, proposed revegetation, drainage rock pits, and permeable driveway pavers will maintain natural flows to Cottle Creek. As a condition of the development permit, the development will be required to follow the recommendations contained in the Vegetation Management Plan and Three-Year Monitoring and Maintenance Plan (Attachment E).

Staff have confirmed the Province is agreeable to granting permission to allow the existing driveway to encroach into the existing Fish and Wildlife Covenant (EJ95044) area, given its pre-disturbed nature. Written permission for any works intruding into the covenant area, or discharge of this covenant, is required as a condition of this development permit.

Proposed Variances

Minimum Watercourse Setback

Section 6.3.1.5 of the Zoning Bylaw requires a minimum watercourse setback from Cottle Creek of 30m, as measured from top of bank. The proposed setback is 6.9m from top of bank; a proposed variance of 23.1m (Attachment C).

The 30m watercourse setback was established in 2006 utilizing the RAR-based simple assessment methodology. In order for the City to be in compliance with the RAR at the time it was instituted, the City was required to demonstrate its bylaws would meet or beat the required RAR setback requirements. The City completed an RAR simple assessment for Cottle Creek that resulted in a 30m setback. Any proposed development within the 30m setback triggers a detailed RAR assessment that defines a site appropriate SPEA. In this case, a detailed assessment was completed in accordance with the City's DPA guidelines and current RAR methodology and determined a SPEA of 10m from natural boundary (6.9m from top of bank).

The proposed setback variance would achieve a functional building envelope with measures to protect and improve the existing riparian form and function within the site. The building siting utilizes an existing driveway and is located away from Cottle Creek, with efforts made to ensure no encroachment into the ocean leave strip. The riparian restoration strategy is appropriate for the biogeoclimatic zone and will mitigate any potential impacts of the residential development, while realizing the allowable use of the parcel. The proposal meets the DPA guidelines; the conditions of the permit will ensure no negative impact on fish habitat.

This application has addressed the DPA guidelines and the proposal is approvable under the DPA guidelines. Given there is no negative impact on fish habitat and the proposed development includes improvements to the existing riparian form and function, and the recommended environmental protection measures will be secured as condition of the development permit, Staff support the proposed variance.

SUMMARY POINTS

- Development Permit Application No. DP1171 proposes a variance to reduce the minimum required watercourse setback from 30m to 6.9m from the top of bank of Cottle Creek to allow a proposed single residential dwelling, and site improvements.
- The proposed building location will be outside of the Provincially-required RAR 10m SPEA and the City-required 15m setback from natural boundary of the sea.
- The proposed variance will achieve a functional building envelope, and the riparian restoration plan will enhance the existing riparian form and function within the site.
- Staff support the proposed variance.

ATTACHMENTS

ATTACHMENT A: Permit Terms and Conditions
ATTACHMENT B: Location Plan
ATTACHMENT C: Proposed Site Plan
ATTACHMENT D: Environmental Summary
ATTACHMENT E: Vegetation Management Plan and Three-Year Monitoring and Maintenance Plan
ATTACHMENT F: Proposed Landscape Plan and Details
ATTACHMENT G: Aerial Photo

Submitted by:

Lainya Rowett
Manager, Current Planning

Concurrence by:

Jeremy Holm
Director, Development Approvals

Dale Lindsay
General Manager, Development Services

ATTACHMENT A
PERMIT TERMS AND CONDITIONS

TERMS OF PERMIT

"City of Nanaimo Zoning Bylaw 2011 No. 4500" is varied as follows:

1. Section 6.3.1.5. – *Location and Siting of Buildings and Structures to Water Courses* – reduce the minimum watercourse setback from 30m to 6.9m as measured from the top of bank of Cottle Creek in order to permit the construction of the proposed single residential dwelling and site improvements.

CONDITIONS OF PERMIT

1. The subject property is developed in accordance with the proposed Site Plan prepared by Kate Stefiuk Studio, received 2020-JUN-01, as shown on Attachment C.

2. The subject property is developed in accordance with the Environmental Assessment prepared by Toth and Associates Environmental Services dated 2019-OCT-21.

3. The subject property is developed and maintained in substantial compliance with the Vegetation Management Plan and Three-Year Monitoring and Maintenance Plan prepared by Kate Stefiuk Studio, received 2019-NOV-29, as shown on Attachment E.

4. Security is to be submitted prior to building permit issuance and held for three years from the date of completion, to ensure the lot is developed in accordance with the proposed Vegetation Management Plan and Three-Year Monitoring and Maintenance Plan. A certified Letter of Completion is required from a qualified professional at the end of the three-year maintenance period.

5. The subject property is developed in accordance with the proposed Landscape Plan and Details prepared by Kate Stefiuk Studio, received 2020-JUN-01, as shown on Attachment F.

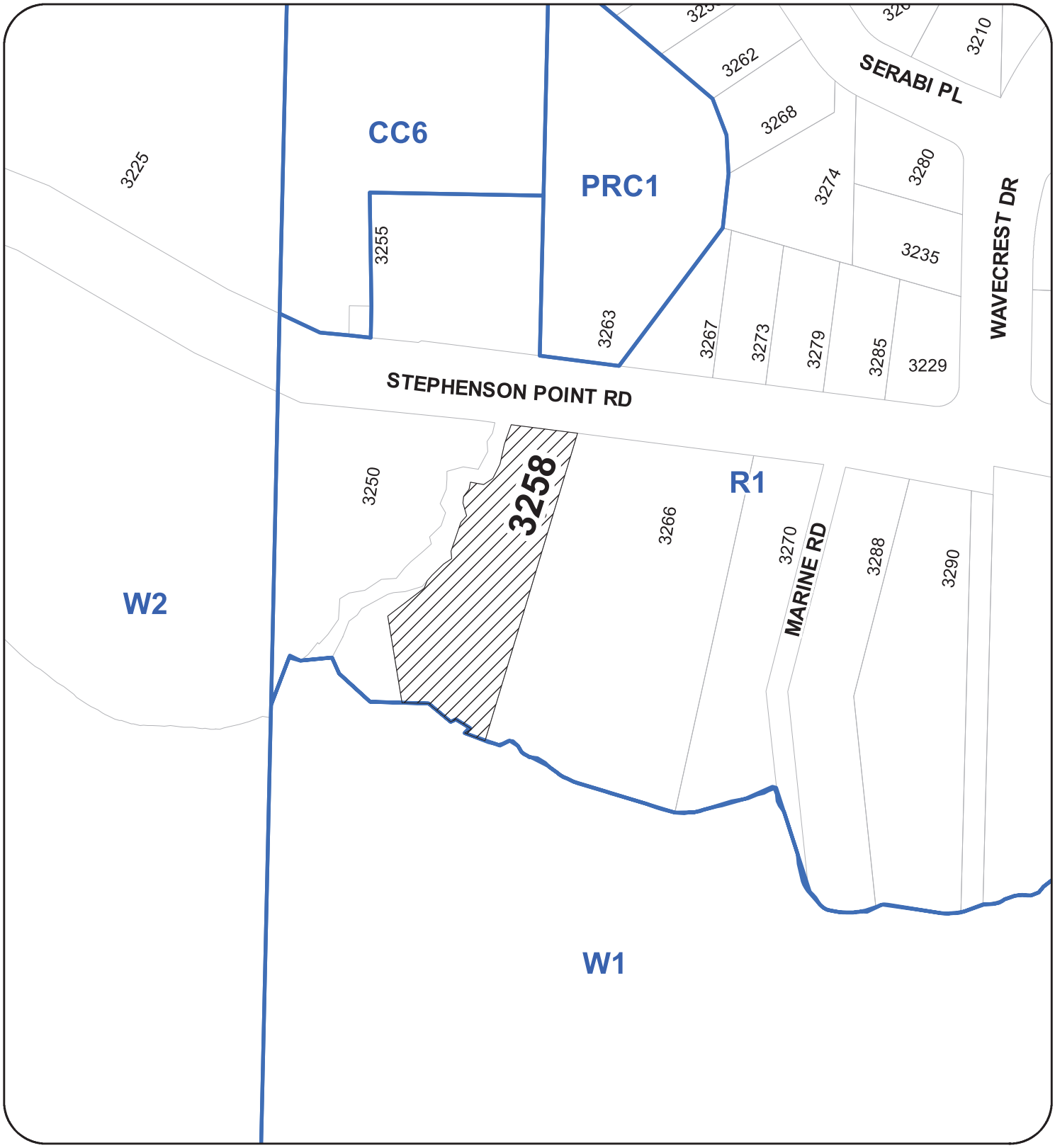
6. Permanent, post and rail fencing adjacent Cottle Creek with signage identifying the environmentally-sensitive area is to be installed prior to Building Permit issuance.

7. Discharge of the Fish & Wildlife Covenant (EJ95044) or proof of encroachment permission from Provincial Ministry required prior to Building Permit issuance.

8. Tree removal permit issuance required prior to Building Permit issuance.

9. Temporary construction fencing identifying the 15m setback to the sea is to be in place prior to any construction activity.

ATTACHMENT B
LOCATION PLAN



DEVELOPMENT PERMIT NO. DP001171

LOCATION PLAN

Civic: 3258 STEPHENSON POINT ROAD
Legal: LOT 2, SECTION 11, WELLINGTON DISTRICT, PLAN VIP61952

N

SUBJECT PROPERTY

Document Path: V:\Source Data\Departmental Data\EngPubWks\GIS\Projects\TEMPLATES\LOCATION_PLAN\Maps\DP001171_LP.mxd

ATTACHMENT C
PROPOSED SITE PLAN

CONTEXT PLAN
NTS

Required 30m Watercourse Setback from from Top of Bank

Top of Bank

Streamside Protection Enhancement Area (6.9m setback from Top of Bank)

SITE PLAN
SCALE 1:200

DEVELOPMENT DATA

Civis Address
3258 Stephenson Point Road, Nanaimo, BC, V9T 1K2

Legal Description:
Lot 2, Section 11, Wellington District, Plan VIP61952

Zoning:
R1 (Single Dwelling Residential)

Development Permit Area:
Watercourse Development Permit Area (Cottle Creek); and Environmentally Sensitive Area - Ocean (Departure Bay)

Total Parcel Area:	2,217m²	100%
Aquatic DP Area:	2,202m²	99%
Net Developable Area:	15m²	1%
Proposed Developable Area:	1,078m²	49%
Proposed Building Footprint:	320m²	14%
Proposed Paved Area:	220m²	10%
Proposed Deck Area:	138m²	6%
Proposed Landscape Area:	400m²	18%

Refer to **Sheet L1.02** for Landscape Plan

Refer to **Sheet L2.01** for Plant Notes & Planting Plan North

Refer to **Sheet L2.02** for Plant List & Planting Plan South

LEGEND

SYMBOL	DESCRIPTION
	30M WATERCOURSE LEAVE STRIP
	10M RAR SPEA
	7.5M F&W COVENANT
	15M ESA (OCEAN) DPA
	STEPPING STONE PATH
	BOULDERS (salvaged from site)
	DECK (refer to Architectural Drawings)
	DRIVEWAY (permeable paving)
	GRAVEL PATH (see sheet L1.02, Landscape Plan)
	GREEN SPACE (see sheet L1.02, Landscape Plan)
	EXISTING DECIDUOUS TREE
	EXISTING CONIFEROUS TREE

RECEIVED
DP1171
2020-JUN-01
Current Planning

KATE STEFIUK STUDIO
1070 Nelson Street Nanaimo BC V9S 2K2
250-753-8093
kate.stefiuk@gmail.com

CLIENT

DOUG & CINDY JARVIE
3378 Greyhawk Drive Nanaimo BC V9T 6T4
250-758-3237

NO.	DATE	ISSUE
1	2019-11-29	ISSUED FOR AQUATIC DP
2	2020-06-01	REISSUED FOR AQUATIC DP

NO.	DATE	REVISION

PROJECT

JARVIE RESIDENCE

3258 Stephenson Point Road
Nanaimo, B.C.

SITE PLAN

All drawings and specifications are the copyright property of the Landscape Architect. Use or reproduction of documents in whole or in part is subject to the Landscape Architect's specific consent.

PROJECT 19004
DB KS **CB** KS

SCALE 1:200
DATE October 31, 2019

L1.01

Toth and Associates Environmental Services
6821 Harwood Drive, Lantzville, B.C. V0R 2H0
Tel: (250) 390-7602
E-mail: stoth@shaw.ca

ATTACHMENT D
ENVIRONMENTAL SUMMARY

May 28, 2020

Doug Jarvie
2238 The Jib,
Nanoose Bay, BC. V9P-9B6

Re: Environmental Summary for proposed development of 3258 Stephenson Point Road, Nanaimo.

Toth and Associates conducted an environmental assessment of the proposed residential development of the 0.2217 ha undeveloped property located at 3258 Stephenson Point Road (the subject property) on March 29, 2019. The subject property is located within the City of Nanaimo's 30 m from top of bank Watercourse Development Permit Area (DPA 1) associated with Cottle Creek, and 15 m from natural boundary Environmentally Sensitive Area (DPA 2) for the ocean. DPA2 is also designated a Development Approval Information Area.

The proposed development plan includes construction of a single family residential home, driveway, and associated supporting infrastructure (e.g. power, water, sewer, gas), yard and landscaping. All of these development activities will occur outside the SPEA setbacks, with the possible exception of potential temporary intrusion / disturbance during excavation along the west side of the proposed foundation, the extent of which will largely be dictated by the requirements of Section 20 of WorkSafe BC's *Occupation Health and Safety Regulation* regarding excavations.

Our prior experience with Cottle Creek gained over the past 27 years includes several RAR assessments and detailed fish habitat assessments, water quality and fish population sampling. Fish cannot access Cottle Creek from the ocean due to channel gradients exceeding 24% grade immediately upstream of the ocean. However, Cottle Creek does support a population of resident cutthroat trout, most of which appear to be downstream migrants from Cottle Lake.

The stream channel through the subject property is cut through sandstone, with large blocks of sandstone within the channel, frequent cascades and near vertical sandstone banks. Forest cover consists of mature Douglas-fir, western redcedar, red alder, arbutus and a few Garry oak, with an understorey largely comprised of introduced invasive species including spurge laurel, cotoneaster, Asian plum, daffodil and Himalayan blackberry. Most of the trees within the ocean setback are covered with English ivy. Native plant species include tall Oregon-grape, salal, salmonberry, common snowberry, pacific sanicle, yerba buena, Indian plum and Saskatoon.

Evidence of wildlife use included raccoon, introduced gray squirrel and blacktail deer. There was no evidence (e.g. significant game trails) found on site to suggest that the subject property serves as a wildlife corridor. No raptor or heron nests were observed on the subject property.

Our provincial *Riparian Areas Regulation* (RAR) Detailed Assessment prepared for the proposed development determined that Cottle Creek would receive Streamside Protection and Enhancement

RECEIVED
DP1171
2020-MAY-28
Current Planning

Area (SPEA) setbacks of 10.0 m from high water mark. The RAR Assessment (#5936) was reviewed and accepted by the province on January 14, 2020.

Based on current conditions within the Coast ESA DPA, I believe that remediation / rehabilitation of the 15 m DPA is warranted as a condition of development. As indicated previously, the vegetation community within the DPA is largely composed of invasive species and the viability of many of the trees has been impacted by English ivy infestation.

It is my understanding that since our field assessment you have removed by hand the vast majority of invasive plants (spurge laurel, Himalayan blackberry, English ivy and Scotch broom) from the property.

A detailed Landscape Plan has been prepared for the development by Kate Stefiuk Studio. The plan includes planting of approximately 1,329 native plants representing 24 different species. Implementation of the plan will ensure that the ecological community on the property following development is far superior to current ecological conditions.

Based on our assessment, residential development of the portions of the property located outside the 10 m SPEA setback and 15 m Coast ESA DPA can be undertaken without causing significant environmental impacts.

Please contact us if you require any additional information.

Sincerely,
Steve Toth, AScT, R.P.Bio.

Toth and Associates Environmental Services

8.0 VEGETATION MANAGEMENT PLAN

8.1 Site Overview

The existing plant communities on the parcel are representative of a convergence of coastal Garry oak, moist riparian and drier upland sites characteristic of the Coastal Douglas Fir biogeoclimatic zone. This includes a mix of Douglas fir, arbutus, grand fir, bigleaf maple, and western redcedar that transitions to a more Garry oak meadow dominated zone as the parcel slopes toward the ocean.

The dominant indigenous understorey species is Oregon grape, with salal and sword fern also common to the site. Overall, however, the understorey has been largely overtaken by invasive species, primarily Daphne/ spurge laurel. Other invasive species observed at the site include English ivy, English holly, and Himalayan blackberry.

The western edge of the parcel is bounded by Cottle Creek, which displays common riparian plant communities, and an understory less impacted by invasive species.

8.2 Indigenous Plants on Site

The following indigenous plants were observed on site visits conducted between April and October, 2019:

Botanical Name	Common Name
Evergreen Trees	
Psuedotsuga menziesii	Douglas fir
Abies grandis	Grand fir
Thuja plicata	Western redcedar
Arbutus menziesii	Arbutus
Deciduous Trees	
Acer macrophyllum	Bigleaf maple
Quercus garryana	Garry oak
Alnus rubra	Red alder
Shrubs	
Holodiscus discolor	Oceanspray
Mahonia nervosa	Dull Oregon Grape
Mahonia aquifolium	Tall Oregon Grape
Gaultheria shallon	Salal
Symphoricarpos albus	Snowberry
Herb Layer	
Polystichum munitum	Swordfern
Sanicula crassicaulis	Pacific Sanicle
Satureja douglasii	Yerba Buena

8.3 Approach

To justify development on a parcel currently considered a sensitive and protected environment, the approach to this Vegetation Management Plan is to employ a Landscape Restoration Strategy across the entire parcel. This includes establishing reference ecosystems from within Coastal Douglas Fir biogeoclimatic zone to guide revegetation; identifying complimentary plant species that contribute to restoration objectives; and employing measures to address the anticipated impacts of development.

To implement this strategy, the parcel is divided into a Restoration Zone and a Residential Development Zone, each with distinct restoration objectives and activities. The Restoration Zone is further divided into two Subzones reflecting the distinct, but overlapping riparian and Garry oak ecosystems that characterize the protected SPEA along Cottle Creek and the Environmentally Sensitive Area adjacent to the ocean. Altogether, the zones are:

- Zone 1: Restoration
  - Subzone 1: Riparian Area
  - Subzone 2: Coastal Garry Oak Area
- Zone 2: Residential Development

Within Zone 1: Restoration, the Landscape Restoration Strategy fulfills the following objectives:

1. **Protect Restoration Zone from Disturbance.**
2. **Remove Invasive Species.**
3. **Create conditions to promote natural revegetation of indigenous species.**
4. **Revegetate with target and complimentary indigenous species.**
5. **Monitor Restoration and Maintain Landscape**.

Within Zone 2: Residential Development, the Landscape Restoration Strategy fulfills the following objectives:

1. **Protect Adjacent Areas from the impacts of Residential Development**
2. **Remove Invasive Species.**
3. **Create conditions to promote natural revegetation of indigenous species.**
4. **Create a naturalized-like setting for the outdoor yard area by revegetating with target species and complementary indigenous and ornamental species.**
5. **Incorporate long term protective measures into the site plan.**

8.4 Zone 1: Restoration

8.4.1 Subzone 1: Riparian Area

The Riparian Area, as shown on Schedule 4, Site Plan, coincides with the Streamside Protection Enhancement Area (SPEA), as required by the Provincial Riparian Areas Regulation, measuring 10m from the high water mark of Cottle Creek.

Riparian Area Reference Ecosystem

The reference ecosystem for the Riparian Area is the Douglas Fir – Grand Fir – Oregon Grape site association of the Coastal Douglas Fir biogeoclimatic zone. When mature and undisturbed, this ecosystem is characterized by the following plant community:

Tree Layer	Shrub Layer	Herb Layer
Douglas-fir	Dull Oregon-grape	Sword fern
Western redcedar	Salal	Braken fern
Grand fir	Oceanspray	Vanilla-leaf
Western flowering dogwood	Baldhip rose	Three-leaved foamflower
Bigleaf maple		

Riparian Area Complimentary Plant Species

Complimentary species for the Riparian Area include indigenous species found within the adjacent Coastal Garry Oak Area; any indigenous species already noted on the site, and indigenous species found more generally across the Coastal Douglas Fir biogeoclimatic zone that are known to be particularly resilient, are widely available; or contribute specifically to riparian habitat value including kinnikinnick (*Arcostaphylos uva-ursi)*, evergreen huckleberry (*Vaccinium ovatum),* Nootka rose (*Rosa nutkana)* and shore pine (*Pinus contorta).* Schedule 6, Planting Plan includes a list of plants to be used in the restoration of the Riparian Area.

Anticipated Impacts of Development on the Riparian Area

Portions of a narrow stepping stone path along the west side of the proposed home is the only development proposed within the Riparian Area. Machinery is to avoid encroaching into the Riparian Area. Any compaction arising from encroachment that may occur is to be decompacted, covered with a minimum of 5mm (2”) of mulch, and replanted with indigenous species.

The natural gradient of the site causes runoff to flow south, toward the ocean, so sedimentation and erosion resulting from development has minimal potential to flow into the Riparian Area or Cottle Creek.

Restoration activities designed to re-establish and protect the Douglas Fir – Grand Fir – Oregon Grape site association are the primary activities proposed for the Riparian Area. This may cause short-term soil disturbance due to the removal of invasive species. For protection over the long term, permanent measures are incorporated into the overall site design to discourage disturbance of the Riparian Area.

8.4.2 Riparian Area – Landscape Restoration Objectives and Activities:

Objective 1. Protect Riparian Area from Disturbance

Activity 1. Erect orange construction fencing along the SPEA boundary to protect the riparian area during construction (refer to Schedule 3, Tree Management Plan for Tree Protection Fence detail).

Activity 2. Incorporate permanent fencing along the edge of the SPEA into the landscape design to discourage intrusion into Riparian Area (refer to Schedule 5, Landscape Plan).

Activity 3. Create a separate pet enclosure to function as a `dog-run`, providing an outdoor space for domestic pets away from the Riparian Area (refer to Schedule 5, Landscape Plan).

Objective 2. Remove Invasive Species

Activity 1. Employ appropriate hand removal methods, as described in section 8.7 Invasive Species Removal for invasive species found within the Riparian Area.

Activity 2. Apply 50mm (2”) of organic mulch to gaps in understorey arising from the removal of invasive species.

Objective 3. Create conditions to promote natural revegetation of indigenous species.

Activity 1. Eliminate any compaction within the Riparian Area by making disturbed soil rough and loose.

Activity 2. Use logs and woody debris from trees felled on site to minimize soil erosion due to rainfall, emulate natural conditions and create microhabitats for local biodiversity.

Objective 4. Revegetate with Target Species

Activity 1. Plant gaps in understory arising from invasive plant removal with drifts of species typical to the Douglas Fir – Grand fir – Oregon Grape site association as well as complimentary plant species described above (refer to Schedule 6, Planting Plan).

Activity 2. Implement Schedule 3, Tree Management Plan. Within the Riparian Area, plant 18 of the 25 replacement trees required as a result of removing 14 significant trees from the parcel (refer to schedule 6, Planting Plan).

Objective 5. Monitoring and Maintenance

Activity 1. Implement section 9.0 Three-Year Monitoring and Maintenance Plan provided below to control invasive species while indigenous species planted in the Riparian Area are re- establishing.

8.4.3 Subzone 2: Coastal Garry Oak Area

The Coastal Garry Oak Area coincides with the City of Nanaimo, Environmentally Sensitive Area (Ocean) Development Permit Area, which extends 15m from the natural boundary of Departure Bay. Proposed development within the Coastal Garry Oak Area is confined to a permeable, 1.5m pathway providing access from the proposed home and yard to the beach along Departure Bay.

Coastal Garry Oak Area Reference Ecosystem

The reference ecosystem for the Coastal Garry Oak Area is the Douglas fir – Shorepine – Arbutus site association of the Coastal Douglas Fir biogeoclimatic zone. When mature and undisturbed, this ecosystem is characterized by the following plant community:

Tree Layer	Shrub Layer	Herb Layer
Douglas Fir	Oceanspray	Alaska oniongrass
Arbutus	Dull Oregon-grape	Swordfern
Garry Oak	Snowberry	Pacific sanicle
	Salal	

Coastal Garry Oak Area Complimentary Plant Species

Complimentary species for the Coastal Garry Oak Area include indigenous species found within the Riparian Area; any indigenous species already noted on the site, and indigenous species found more generally across the Coastal Douglas Fir biogeoclimatic zone that are known to be particularly resilient, are widely available; or contribute specifically to Garry oak meadow habitat. Examples include indigenous grasses, common camas (*Camassia quamash)*, yarrow (*Achillea millefolium)*, nodding onion (*Allium cernuum*), woolly sunflower (*Eriophyllum lanatum*), field chickweed (*Cerastium arvense*), kinnikinnick (*Arcostaphylos uva-ursi)*, evergreen huckleberry (*Vaccinium ovatum),* Nootka rose (*Rosa nutkana)* and shore pine (*Pinus contorta).* Schedule 6, Planting Plan includes a list of plants to be used in the restoration of the Coastal Garry Oak Area.

Anticipated Impacts of Development on Coastal Garry Oak Area

The only development proposed within the Coastal Garry oak area is the construction of a narrow footpath providing access to the waterfront. No trees will be removed to accommodate the proposed path, unless noted in Schedule 3, Tree Management Plan. The path will be constructed of gravel when not located on existing native sandstone found on the site. Field-fitted dry stack rock and boulders will be used to accommodate access along steeper portions of the path, creating natural stair features and retaining structures. The area of disturbance to create the path will be confined to a 2-metre width. Any disturbance will be restored according to the restoration objectives outlined in section 8.4.4, below.

It is anticipated that an increased volume of runoff will arise from the construction of a residential dwelling. To mitigate against the potential increase in rainwater runoff flowing into the Garry Oak Area during storm events, rock pits to enable infiltration are to be included to intercept rooftop runoff.

Restoration activities designed to remove invasive species and re-establish and protect the Douglas-fir-Shorepine-Arbutus site association are proposed for the Coastal Garry Oak Area. This will focus on

increasing the number of Garry oak trees and replicating a Garry oak meadow in the area. Localized placement of soil to support restoration activities may be required.

8.4.4 Coastal Garry Oak Area Restoration Objectives

Objective 1. Protect Coastal Garry Oak Area from Disturbance

Activity 1. Indicate the edge of the Coastal Garry Oak Area with brightly coloured flagging tape to discourage unnecessary encroachment by machinery.

Objective 2. Remove Invasive Species

Activity 1. Employ appropriate hand removal methods, as described in 8.7 Invasive Species Removal, for invasive species found within the Coastal Garry Oak Area.

Activity 2. Apply 50mm (2”) of organic mulch to gaps in understorey arising from the removal of invasive species.

Objective 3. Create conditions to promote natural revegetation of indigenous species.

Activity 1. Eliminate any compaction within the Coastal Garry Oak Area by making the soil surface rough and loose.

Activity 2. Use logs and woody debris from felled trees to minimize soil erosion due to rainfall, emulate natural conditions and create microhabitats for local biodiversity.

Objective 4. Revegetate with Target Species

Activity 1. Plant gaps in understory arising from invasive plant removal with drifts of species typical to the Douglas-fir-Shorepine-Arbutus site association and complementary plant species (listed above) for revegetation in the Coastal Garry Oak Area.

Activity 2. Implement Schedule 3, Tree Management Plan. Within the Coastal Garry Oak Area. Plant 7 of the 25 replacement trees, primarily Garry oak, within the Coastal Garry Oak Area required as a result of removing 14 significant trees from the parcel.

Objective 5. Monitoring and Maintenance

Activity 1. Implement section 9.0 Three-Year Monitoring and SMaintenance Plan to control invasive species while indigenous species planted in the Coastal Garry Oak Area are establishing.

8.5 Residential Development Zone

The Residential Development Zone represents the remainder of the parcel, extending from the road right-of-way along Stephenson Point Road to the Environmentally Sensitive Area (Ocean) Development Permit Area to the south, and the SPEA along Cottle Creek to the west. This Zone is dedicated to supporting the R1 Single Dwelling Residential use for which the parcel is zoned.

8.5.1 Residential Development Zone Reference Ecosystem

The reference ecosystem for the Residential Development Zone is the Douglas fir- Salal site association of the Coastal Douglas Fir biogeoclimatic zone. When mature and undisturbed, this ecosystem is characterized by the following plant community:

Tree Layer	Shrub Layer	Herb Layer
Douglas-fir	Salal	Vanilla-leaf
Western redcedar	Dull Oregon-grape	Bracken fern
Grand fir	Oceanspray	Sword fern
Bigleaf maple	Baldhip rose	
Western flowering dogwood	Snowberry	
Arbutus	Western trumpet honeysuckle	

8.5.2 Residential Development Zone Complimentary Plant Species

Complimentary species for the Residential Development Zone include indigenous species found within the Restoration Zone; any indigenous species already noted on the site, and indigenous species found more generally across the Coastal Douglas Fir biogeoclimatic zone that are known to be particularly resilient, are widely available; or contribute specifically to Garry oak meadow habitat including indigenous grasses, common camas (*Camassia quamash)*, yarrow (*Achillea millefolium)*, nodding onion (*Allium cernuum*), woolly sunflower (*Eriophyllum lanatum*), field chickweed (*Cerastium arvense*), kinnikinnick (*Arcostaphylos uva-ursi)*, evergreen huckleberry (*Vaccinium ovatum),* Nootka rose (*Rosa nutkana)* and shore pine (*Pinus contorta).*

Complimentary species in the Residential Development Zone also include non-invasive ornamental species that reinforce the naturalized, park-like character desired for the outdoor yard area, including rhododendrons (*Rhododendron spp.),* strawberry bush (*Arbutus unedo*), pink flowering dogwood (*Cornus kousa*), and boxwood (*Buxus spp.).*Refer to Schedule 5, Planting Plan for complete plant list.

8.5.3 Anticipated Impacts of Development in the Residential Development Zone

As implied by the name, the Residential Development Zone is the portion of the parcel in which development related activities are concentrated. This includes the construction of a driveway, a home, and a landscaped yard and garden area. Realizing this development involves removal of 14 significant trees from the Zone, to be replaced with 25 indigenous trees planted across the site; as well as the removal of understorey species, and the construction of decks, a hot tub area and other areas intended for human use.

The new driveway will be constructed with pavers for permeability. Roof areas will generate increased rainwater runoff, to be managed in rock pits for infiltration. Runoff will be directed away from Cottle Creek, mimicking the natural flow of water on the site.

The overall goal for the Residential Development Zone is to accommodate the intended use of the parcel, while removing invasive species, preventing their future establishment, and revegetating open spaces with target species and other indigenous and appropriate ornamental species that strengthen the natural, park-like character of the setting.

8.6 Residential Development Zone Restoration Objectives:

Objective 1. Protect Adjacent areas from the Impacts of Residential Development

Activity 1. All existing and new plants, site services, curbs, paving, structures, and all other features shall be protected against damage during construction.

Activity 2. Take appropriate measures to ensure that no spillage of fuels, fertilizers, toxic construction materials, or other toxic wastes occurs, and where use of such materials is necessary, to ensure that adequate containment facilities and clean-up equipment are used.

Activity 3. No toxic or waste materials, fuels and fertilizers shall be stored adjacent to or dumped into water courses or any other water body either on or off the job site, or in a location where spillage could result in seepage into a watercourse

Activity 4. All toxic wastes and other material shall be disposed of in a manner acceptable to the owner and in accordance with municipal, provincial and federal regulations.

Objective 2. Remove Invasive Species

Activity 1. Employ appropriate mechanical and/ or hand removal methods, as described in 8.7 Invasive Species Removal**,** below, for invasive species found within the Residential Development Zone.

Activity 2. Apply a minimum of 50mm (2”) of organic mulch to the outdoor yard area to ensure successful establishment of indigenous and ornamental plantings.

Objective 3. Create conditions to promote natural revegetation of indigenous species.

Activity 1. Eliminate compaction caused by construction within the Residential Development Zone by making compacted soils rough and loose.

Activity 2. Minimize areas planted with grasses. Select an upland Garry oak mix that includes species representative of the Garry oak meadow ecosystem for grassy areas.

Objective 4. Create a naturalized setting by Revegetating with Target Species and Appropriate Indigenous and Ornamental Species

Activity 1. Target species typical to the Douglas-fir-Salal site association as well as complementary plant species (listed above) for revegetation in the Residential Zone

Activity 2. Implement Schedule 3, Tree Management Plan. Within the Residential Development Zone, remove 14 significant trees which are to be replaced with 25 trees as compensation planted within the Restoration Zone.

Activity 3. Implement 9.0 Three-Year Monitoring and Maintenance Plan provided below to control invasive species while planted areas within the Residential Development Zone are establishing.

Objective 5. Incorporate long term protective measures into the site plan

Activity 1. Include permanent fencing along the outer edge of the SPEA.

Activity 2. Provide a dog run adjacent to the home to provide an outdoor space for domestic pets.

Activity 3. Include rock pits, infiltration chambers and other best management practices to manage rainfall onside without negatively affecting Cottle Creek, or other protected areas.

8.7 Invasive Plant Removal

The understorey species on the parcel at 3258 Stephenson Point are predominantly non-indigenous invasive species. The foundation for the Landscape Restoration Strategy for the site is to remove invasive species and prevent their re-establishment. This is necessary in order for the target indigenous species for each reference ecosystem to establish, thrive and eventually self-propagate.

The following invasive plants were observed on visits conducted between April and October, 2019:

Botanical Name	Common Name
Daphne laureola	Daphne, Spurge Laurel
Rubus discolor	Himalayan Blackberry
Hedera helix	English Ivy
Ilex aquifolium	English holly

It is the responsibility of the owner or contractor to identify and remove invasive plant species that may be on the site in the future.

8.8 REMOVAL METHODS

8.8.1 Daphne (*Daphne laureola*)

***Caution*: Daphne contains naturally occurring toxins that can cause skin and respiratory irritation. Always wear protective clothing including eye protection and a breathing mask when working with Daphne. Never transport cuttings in an enclosed vehicle.**

Condition	Removal Method	Timing	Other considerations
Mature Plants and Young Shrubs	Hand Removal: Cut stem below the soil line. Push or kick bypass loppers into the ground at the base of the plant. Close them to cut the stem below ground.	Summer	• Avoid direct skin contact with the plant. • Cut the bottom of the stem where there is an obvious colour change between stem and root. • Inspect stem for a diagonal cut that bisects the area of colour change. • Minimize soil disturbance. • Seed or plant with indigenous species following removal

Large patches of seedlings	Mechanical Removal Cutting with weed eater.	Summer. For 3-years following removal of mature plants.	• **Caution:** This method releases vapours that can cause respiratory irritation. Wear protective gear. Ensure others are not in vicinity. • Avoid damaging nearby plants. • Plant with target indigenous species after treatment.
Smaller patches of seedlings	Cutting with hand tool.	Summer. For 3-years following removal of mature plants.	• Labour intensive. • Produces less toxic vapour than a weed eater. • Cut below lowest point where leaves occur. • Wear protective clothing and avoid direct skin contact with the plant. • Plant with target indigenous species after treatment.

8.8.2 Himalayan Blackberry (*Rubus discolor*)

Condition	Removal Method	Timing	Other considerations
Any size patch in Riparian or Coastal Garry oak area	Manual control using loppers, hand clippers or brush saw.	Aug. to Oct. (before roots form from draping shoots.)	• Remove cut canes to expose root crown or burl. • Remove root crowns and burls using a pick axe or Pulaski. • Take care to remove plant debris from site as root fragments can regrow. • Avoid damaging indigenous plants.
Large, thick patch in Residential Development Zone	Remove biomass with backhoe and scrape down to soil	Any time.	• Repair compaction from machinery by scraping soil surface to make it rough and loose. • Avoid damaging indigenous plants. • Do not encroach into sensitive or protected areas.
Draping Tips Beginning to Root	Hand extraction with paring knife	As soon as tips root (Oct. – Nov.)	• Pulling alone is insufficient for removing roots.

New Growth from Root Fragments or Root Crown	Manual Control using loppers or hand clippers.	2-3 times per year, for at least three years.	• Eradication may take up to 5-years.

8.8.3 English Ivy (*Hedera helix*)

Condition	Removal Method	Timing	Other considerations
Mature plants climbing trees	Use saw, clippers, loppers or similar to physically remove 1m tall band of ivy at waist to breast height around circumference of affected tree.	Fall	• Ivy above band removed may be left in place to die on the tree. • Ensure band is kept clear of new growth as dead ivy may function as a ladder for new growth. • Ensure all contact between roots and upper parts of ivy plants are severed.
Lower portion of mature plants on tree trunk after climbing portions are severed	Pry roots from base of trunk and soil using grub hoe, cable winch or come-along.	Late Fall (Nov.)	• Roots may be over 3m (10 feet) long.
Juvenile mats spreading horizontally on ground	Dig out roots using paring knife, weed wrench or similar and roll into 2-person manageable piles.	Late Fall (Nov.)	• Lift gently or roots will break and resprout • In protected areas, minimize soil compaction by laying planks to work from • Be cautious of juvenile and emerging indigenous plants

8.8.4 English Holly (*Ilex aquifolium*)

Condition	Removal Method	Timing	Other considerations
Seedling	Hand-pull from ground.	Anytime	• Minimize soil disturbance. • Do not confuse with juvenile or emerging Oregon grape specimens.
Small shrub	Cut off at ground level	Summer to Fall	• Avoid dispersing berries if present. If present, use tarp for removal. • Wear pants, long sleeves, gloves and eye protection to avoid scratches. • Monitor for sprouts and remove using clippers.
Large Shrub or Tree	Cut off at ground level. Remove roots if possible or damage stump with axe.	Spring to Summer (before seed formation)	• Avoid scattering seeds • If seeds have formed, remove debris using a tarp or garbage bags • Wear pants, long sleeves, gloves and eye protection to avoid scratches. • Stump is likely to resprout for several growing seasons. Monitor for sprouts and remove using clippers.

9.0 THREE YEAR MONITORING AND MAINTENANCE PLAN

9.1 General:

Monitoring and maintenance will take place for three years from the time of acceptance of Substantial Completion of the project.

9.2 Monitoring

Monitoring will include inspection, documentation and reporting of the health of retained trees and planted specimens; natural regeneration and invasive species removal.

9.3 Maintenance Strategies:

- Hand removal of invasive plants in Restoration Zone.
- Indigenous plants shall be allowed to regenerate naturally.
- Replacement planting as required to compensate for invasive plant and hazard tree removal and die-off of any planted specimens. Cover with 50mm of organic mulch following planting.
- Leave fallen leaves, woody debris and other natural litter in place.

9.4 Maintenance Procedures and Frequencies for all Zones

Procedure	M	A	M	J	J	A	S	O	Frequency
Inspection		X		X		X		X	4 times per year
Reporting		X		X		X		X	4 times per year
Litter Removal									As required for safety. Otherwise, litter to remain in place.
Weeding		X		X		X		X	4 times per year minimum.
Invasive Removal		X		X		X			3 times per year
Mulching		X		X		X			Following invasive removal.
Replacement Planting	X						X	X	Compensation for invasive or hazard tree removal, or die-off.
Repair									As required.
Tree Hazard Assessment									As required.
Pruning									Undertaken to remove broken or dying branches for safety.
Fire Management		X	X	X	X	X	X	X	As required to reduce the risk of ignition and spread of fire.

9.5 Maintenance Operations

Landscape maintenance operations shall include the removal of all invasive plants, and careful removal of all other weeds, taking care to retain all indigenous plants that are naturally regenerating.

The area is intended to be naturalized and park-like, so an informal appearance is desirable with weeds kept to a minimum. Plants should be kept healthy with regular watering as required, until establishment (minimum 3-years). Plants should not be trimmed or pruned except for safety and to reduce fire risk.

The maintenance period shall be from the time of planting until three years from the date of Substantial Completion of the landscape works. After the first year, the owner or contractor will contact the Landscape Architect for inspection.

Maintenance operations for the planted shrubs and ground covers shall include:

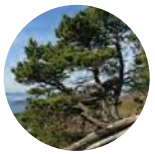
- Watering and weeding, being careful not to remove naturally regenerating indigenous plants. Weeding should occur at least four times per year. Watering should be at least 3-times per week during the dry summer drought period.
- Weeding must be done when isolated weedy patches have a width of 20cm. Weeding shall remove 80% of weeds. "Isolated" means a weed distribution of no greater than four patches per $5m^2$.
- Invasive plant removal should occur as necessary throughout the growing season. Maintenance operations should, where possible, follow ecologically sound practices such as:
  - Integrated Pest Management (IPM)
  - Plant Health Care (PHC)
  - Composting
  - Application of Organic Mulches

9.6 Plan Review

As part of the monitoring process, an adaptive management approach will be applied to this Vegetation Management Plan. As inspections take place, overall plant health will be determined and changes made if necessary, to ensure the success of the planting.

ATTACHMENT F
PROPOSED LANDSCAPE PLAN AND DETAILS

DESIGN PRECEDENTS


01 Shore Pine


02 White Flowering Dogwood


03 Pink Flowering Dogwood


06 Garry Oak Meadow


07 Restoration Plantings


08 Restoration Logs


09 Boulder Cheek Wall

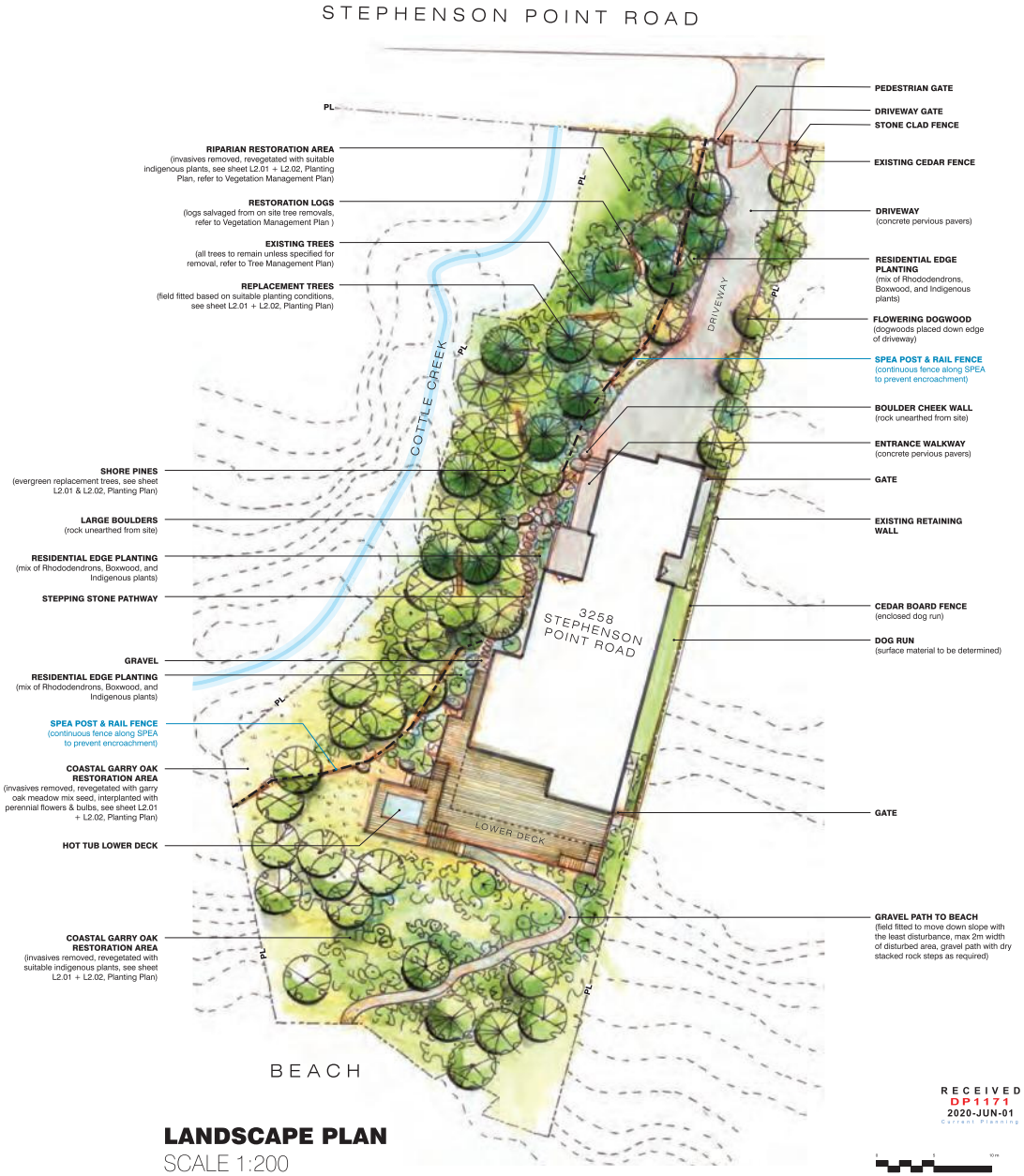

10 Stepping Stone Path


11 Post & Rail Fence

Refer to **Sheet L1.01** for Site Plan & Notes

Refer to **Sheet L2.01** for Plant Notes & Planting Plan North

Refer to **Sheet L2.02** for Plant List & Planting Plan South



LANDSCAPE PLAN
SCALE 1:200

RECEIVED
DP1171
2020-JUN-01
Current Planning

KATE STEFIUK STUDIO
1070 Nelson Street Nanaimo BC V9S 2K2
250-753-8093
kate.stefiuk@gmail.com

CLIENT

DOUG & CINDY JARVIE
3378 Greyhawk Drive Nanaimo BC V9T 6T4
250-758-3237

NO.	DATE	ISSUE
1	2019-11-29	ISSUED FOR AQUATIC DP
2	2020-06-01	REISSUED FOR AQUATIC DP

NO.	DATE	REVISION

PROJECT

JARVIE RESIDENCE

3258 Stephenson Point Road
Nanaimo, B.C.

LANDSCAPE PLAN

All drawings and specifications are the copyright property of the Landscape Architect. Use or reproduction of documents in whole or in part is subject to the Landscape Architect's specific consent.

PROJECT 19004
DB KS **CB** KS

SCALE 1:200
DATE October 31, 2019

L1.02

REPLACEMENT TREES

1. The Tree Management Plan identifies 14 significant trees for removal and 25 replacement trees as compensation. Refer to the Tree Managemant Plan.
2. Replacement trees to be field fitted based on suitable planting conditions. Refer to Planting Plan for schematic layout of trees.

Coniferous Tree Replacements

Pseudotsuga menziesii	10
Pinus contorta	7
Total	**17**

Deciduous Tree Replacements

Acer macrophyllum	1
Cornus eddies white wonder	5
Quercus garryana	2
Total	**8**

TOTAL REPLACEMENT TREES 25

PLANTING NOTES

1. Prior to starting work the watercourse setback boundary (10m SPEA) to be fenced with orange construction fencing (refer to Tree Management Plan for Tree Protection Fence detail).
2. Prior to starting work refer to the Vegetation Management Plan.
3. All landscape construction to be in accordance with the City of Nanaimo Engineering Standards & Specifications.
4. All landscape construction to meet the current edition of the Canadian Landscape Standards as a minimal acceptable standard.

ZONE 1: RESTORATION

All invasive plants are to be removed by hand as outlined in the Vegetation Management Plan (no machine removal).

Replanting will take place in the gaps left by the removal of the invasive species as outlined in the Vegetation Management Plan.

50mm of organic mulch to be applied over revegetated areas after planting.

Riparian

Estimated 30% of area to be revegetated. Refer to planting plan for schematic plant layout, plant species and estimated quantities.

Plants to be field fitted following invasive plant removal.

Coastal Garry Oak

Estimated 30% of area to be revegetaed. Refer to planting plan for schematic plant layout, species and estimated quantities.

Garry oak upland grass mix to be seeded over part of the area and planted with a mix of prennial flowers & bulbs. Refer to planting plan for layout and plant species

Plants to be field fitted following invasive plant removal.

ZONE 2: RESIDENTIAL DEVELOPMENT

All invasive plants are to be removed from planted areas as outlined in the Vegetation Management Plan.

Refer to planting plan for plant layout, plant species, and quantities.

Native soil may be used. Supplementary soil may need to be added in areas disturbed from construction. 300mm - 450mm of soil prefered.

This zone is to be a mix of restoration plant species with complementary ornamental plant species.

50mm of organic mulch to be applied over all planted areas.

PLANT LEGEND

SYMBOL	DESCRIPTION
	WILD GRASS AREA Pickseed Garry Oak Upland Mix or equivalent.

- A Acer macrophyllum (replacement tree)
- Ce Cornus eddies white wonder (replacement tree)
- Ck Cornus kousa
- Q Quercus garryana (replacement tree)
- P Pseudotsuga menziesii (replacement tree)
- Pc Pinus contorta (replacement tree)
- A Arbutus unedo
- Au Arctostaphylos uva-ursa
- Bs Buxus sempervirens
- Em Elymus mollis
- Fc Fragaria chiloensis
- Gs Gaultheria shallon
- Hd Holodiscus discolor
- Mn Mahonia nervosa
- Pl Philadelphus lewisii
- Pm Polystichum munitum
- Rh Rhododendron varieties
- Rn Rosa nutkana
- Sa Symphoricarpos albus
- Vo Vaccinium ovatum

Refer to **Sheet L1.01** for Site Plan & Notes

Refer to **Sheet L1.02** for Landscape Plan

Refer to **Sheet L2.02** for Plant List & Planting Plan South

MATCH LINE SEE SHEET L2.02 FOR PLANTING PLAN SOUTH

PLANTING PLAN
NORTH

RECEIVED
DP1171
2020-JUN-01
Current Planning

KATE STEFIUK STUDIO
1070 Nelson Street Nanaimo BC V9S 2K2
250-753-8093
kate.stefiuk@gmail.com

CLIENT

DOUG & CINDY JARVIE
3378 Greyhawk Drive Nanaimo BC V9T 6T4
250-758-3237

NO.	DATE	ISSUE
1	2019-11-29	ISSUED FOR AQUATIC DP
3	2020-06-01	REISSUED FOR AQUATIC DP

NO.	DATE	REVISION

PROJECT

JARVIE RESIDENCE

3258 Stephenson Point Road
Nanaimo, B.C.

PLANTING PLAN

All drawings and specifications are the copyright property of the Landscape Architect. Use or reproduction of documents in whole or in part is subject to the Landscape Architect's specific consent.

PROJECT 19004
DB KS **CB** KS

SCALE 1:100
DATE October 31, 2019

L2.01

PLANT LIST

Z1 Restoration Zone
Z2 Residential Development Zone

Key	Z1	Z2	TOTAL	Botanical Name	Common Name	Spacing	Pot Size
Evergreen Trees							
P	9	1	**10**	Pseudotsuga menziesii	Douglas Fir	1.5m ht.	
Pc	4	3	**7**	Pinus contorta	Shore Pine	1.5m ht.	
Deciduous Trees							
A	1		**1**	Acer macrophyllum	Big Leaf Maple	1.5m ht.	
Ce	2	3	**5**	Cornus eddies white wonder	Eddies White Wonder Dogwood	2m ht.	
Ck		3	**3**	Cornus kousa 'Satomi'	Red Flowering Kousa Dogwood	2m ht.	
Q	2		**2**	Quercus garryana	Garry Oak	1.5m ht.	
Evergreen Shrubs							
A		9	**9**	Arbutus unedo	Strawberry Bush	2 m o.c.	#1
Bs		102	**102**	Buxus sempervirens Raket	Boxwood	60 cm o.c.	#1
Gs	132	44	**176**	Gaultheria shallon	Salal	60 cm o.c.	#1
Hd	14	3	**17**	Holodiscus discolor	Oceanspray	1.2 m o.c.	#1
Mn	142	53	**195**	Mahonia nervosa	Dull Oregon Grape	60 cm o.c.	#1
Pl	4		**4**	Philadelphus lewisii	Mock-orange	2 m o.c.	#1
Rh		21	**21**	Rhododendron varieties	Rhodos	1.2 m o.c.	#1
Rn	12	4	**16**	Rosa nutkana	Nootka Rose	1.2 m o.c.	#1
Sa	37	3	**39**	Symphoricarpos albus	Snowberry	1.2 m o.c.	#1
Vo	7		**7**	Vaccinium ovatum	Evergreen Huckleberry	60 cm o.c.	#1
Groundcovers / Ferns / Perennials							
Am	28	28	**56**	Achillea millefolium	Yarrow	80 cm o.c.	10 cm
Ac	28	28	**56**	Allium cernuum	Nodding Onion	80 cm o.c.	10 cm
Au	34	49	**83**	Arctostaphylos uva-ursi	Kinnikinnick	45 cm o.c.	10 cm
Cq	28	28	**56**	Camassia quamash	Common Camas	80 cm o.c.	10 cm
Ca	28	28	**56**	Cerastium arvense	Field Chickweed	80 cm o.c.	10cm
El	28	28	**56**	Eriophyllum lanatum	Woolly Sunflower	80 cm o.c.	10 cm
Fc	34	30	**64**	Fragaria chiloensis	Coastal Strawberry	30 cm o.c.	10 cm
Pm	143	145	**288**	Polystichum munitum	Sword Fern	60 cm o.c.	#1
Seeds							
Wild Grass Area 177m²				Pickseed Garry Oak Upland Mix or equivalent	89% Roemers Fescue 11% California Oatgrass		

GARRY OAK MEADOW
Seed with Garry Oak Upland Meadow Mix
Pant with a mix of the following (80cm o.c.):
1. Yarrow
2. Nodding Onion
3. Common Camas
4. Field Chickweed
5. Wolly Sunflower

Refer to **Sheet L1.01** for Site Plan & Notes

Refer to **Sheet L1.02** for Landscape Plan

Refer to **Sheet L2.01** for Planting Notes & Planting Plan North

PLANTING PLAN
SOUTH

RECEIVED
DP1171
2020-JUN-01
Current Planning

KATE STEFIUK STUDIO
1070 Nelson Street Nanaimo BC V9S 2K2
250-753-8093
kate.stefiuk@gmail.com

CLIENT
DOUG & CINDY JARVIE
3378 Greyhawk Drive Nanaimo BC V9T 6T4
250-758-3237

NO.	DATE	ISSUE
1	2019-11-29	ISSUED FOR AQUATIC DP
4	2020-06-01	REISSUED FOR AQUATIC DP

NO.	DATE	REVISION

PROJECT
JARVIE RESIDENCE
3258 Stephenson Point Road
Nanaimo, B.C.

PLANTING PLAN

All drawings and specifications are the copyright property of the Landscape Architect. Use or reproduction of documents in whole or in part is subject to the Landscape Architect's specific consent.

PROJECT 19004
DB KS **CB** KS
SCALE 1:100
DATE October 31, 2019

L2.02

ATTACHMENT G
AERIAL PHOTO

N

DEVELOPMENT PERMIT NO. DP001171

Legend

SUBJECT PROPERTY

Document Path: V:\Source Data\Departmental Data\EngPubWks\GIS\Projects\TEMPLATES\LOCATION_PLAN\Maps\DP001171_AP.mxd

Delegation Request

Delegations Information:

Fraser Wilson has requested an appearance before Council.

City: Nanaimo
Province: BC

Delegation Details:

The requested date is June 15, 2020.

The requested meeting is:
Council

Bringing a presentation: No

Details of the Presentation:

Opposing application DP1171 to reduce the riparian zone at 3258 Stephenson Point Road, Nanaimo.

Delegation Request

Delegation's Information:

Doug Jarvie and Steve Toth, ASct. R. P. Bio., have requested an appearance before Council.

City: Nanaimo
Province: BC

Delegation Details:

The requested date is June 15, 2020.

The requested meeting is:
Council

Bringing a presentation: Yes

Details of the Presentation:

Speaking in support of DP1171 – 3258 Stephenson Pt. Rd. variance application.