City of Nanaimo

REPORT TO COUNCIL

DATE OF MEETING: 2015-JUN-01

AUTHORED BY: GARY NOBLE, DEVELOPMENT APPROVAL PLANNER, PLANNING & DESIGN SECTION

RE: DEVELOPMENT PERMIT NO. DP930 - 2232 DOCKSIDE WAY

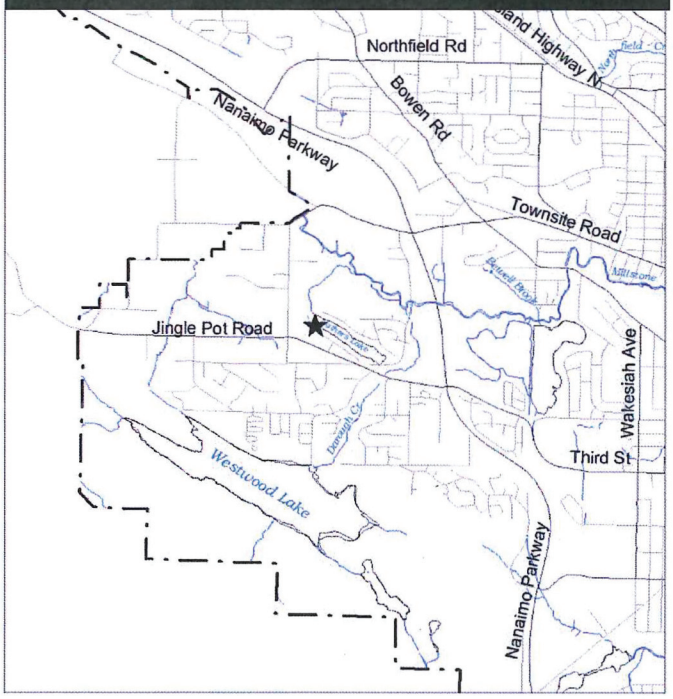
STAFF RECOMMENDATION:

That Council issue Development Permit No. DP930 at 2232 DOCKSIDE WAY with one variance to reduce the watercourse setback to 10.3m.

PURPOSE:

The purpose of this report is to seek Council authorization to issue a development permit for a proposed deck and addition on an existing single family dwelling with one variance.

Map 1 - General City Location



BACKGROUND:

A development permit application was received from WILLIAM AND MICHELLE MANSON.

The existing house was constructed in 1994. The original siting of the house and deck did not anticipate the now required 15.0m watercourse setback from the natural boundary of Cathers Lake.

Staff supports the application, including the proposed variance, and recommends Council approve the development permit.

☑ Council
☐ Committee.....
☑ Open Meeting
☐ In-Camera Meeting
Date 2015.JUN.01

Subject Property

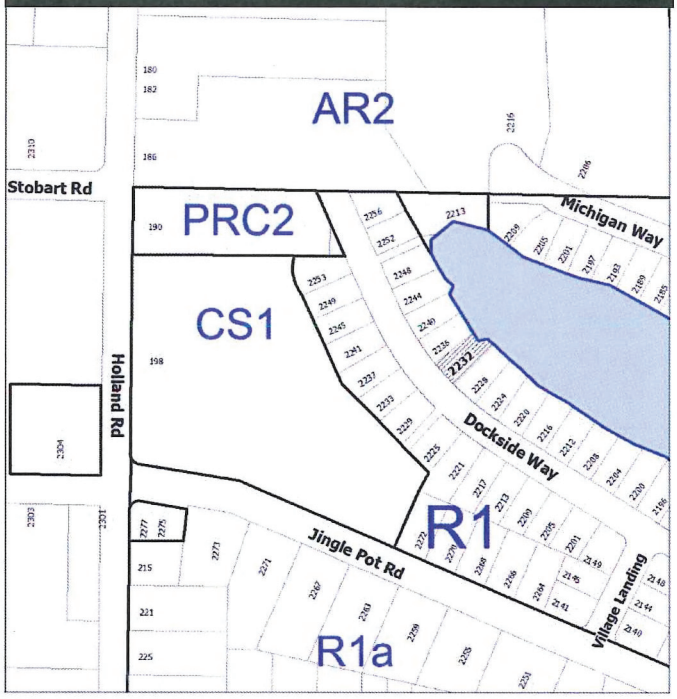
Zoning	R1- Single Family Residential
Location	The subject property is located on the south side of Cathers Lake and is accessed from Jingle Pot Road via Village Landing.
Total Area	617m^2
Official Community Plan (OCP)	Map 1 – Future Land Use – Neighbourhood; Map 3 – Development Permit Area DPA No. 1 – Watercourses – Development Permit Area DPA No. 9 - Commercial, Industrial, Institutional, Multiple Family and Mixed Commercial/Residential Development.

DISCUSSION:

Proposed Development

The proposed development is to add an addition to the existing building, where an existing deck had been constructed, and a new deck for a small legal suite which lies within the 15.0m watercourse setback from the natural boundary of Cathers Lake.

Map 2 – Subject Property Location



Watercourse Setback

The Qualified Environmental Professional (QEP) has reviewed the subject property and the extent of the renovations.

The QEP concludes the proposed renovations are unlikely to cause adverse environmental impacts, provided that care is taken and that standard mitigation measures are implemented.

Proposed riparian restoration works

EDI Environmental Dynamics Inc. (EDI) was retained to review the subject property (2232 Dockside Way) and provide a riparian restoration plan associated with the proposed redevelopment of the property. The restoration works are required by the City of Nanaimo to improve the condition of the riparian area in order to maintain the principle of 'No Net Loss' for any encroachment into the existing watercourse setback areas and to define the Streamside Protection and Enhancement Area (SPEA), as required under the Riparian Areas Regulation. A mitigation plan has been prepared and is consistent with the City's Watercourse Development Permit Area criteria. The plan includes prescriptions to remove existing invasive plants (Himalayan Blackberry) and re-establish 125m² of lakeshore riparian vegetation. This will include:

- 14 trees
- 222 native shrubs
- The QEP will be onsite at the start of planting in the fall

A three year maintenance and inspection period will be required (ending fall of 2018).

Provided that the restoration activities are completed as described herein, no additional works should be needed to adequately mitigate the proposed renovation works on the subject property.

It is the opinion of the Qualified Environmental Professional that since some riparian restoration will occur to mitigate the "loss" of the site potential vegetation (caused by the construction of the house and deck additions within the existing developed areas), there should be no net loss of natural features, functions and conditions that support fish life processes in the watercourse assessment area. Given that the QEP will inspect the planted area to ensure survival targets are met (set at no less than 80%), it is anticipated that there will be a net gain of riparian fish habitat on this property. Given the nature of the proposed renovation and restoration works, no serious harm to fish and fish habitat (as defined by the Federal Fisheries Act) is expected and a review by Department of Fisheries and Oceans is not necessary for the proposed works.

Required Variances

The proposed watercourse setback from the natural boundary of Cathers Lake is 15.0m. The proposed addition is sited 10.3m from the natural boundary, a proposed variance of 4.7m.

Respectfully submitted,

B. Anderson
MANAGER
PLANNING & DESIGN SECTION

Concurrence by:

D. Lindsay
DIRECTOR
COMMUNITY DEVELOPMENT

T. Seward
ACTING GENERAL MANAGER
COMMUNITY DEVELOPMENT &
PROTECTIVE SERVICES

CITY MANAGER COMMENT:

I concur with the staff recommendation.

Drafted: 2015-MAY-15
Prospero attachment: DP000930
GN/lb

Development Permit DP000930 **Schedule A**

2232 Dockside Way

SITE PLAN

(Illustrates extent of Watercourse Setback Variance)

B.C. LAND SURVEYOR'S CERTIFICATE OF PROPOSED LOCATION ON:

LOT 30, SECTION 12, RANGE 7, MOUNTAIN DISTRICT, PLAN 49025.

Scale 1:300

0 3 6 9 12 15 18

ALL DISTANCES AND ELEVATIONS ARE IN METRES AND DECIMALS THEREOF, UNLESS OTHERWISE NOTED.

LOT DIMENSIONS ARE DERIVED FROM REGISTERED PLANS.

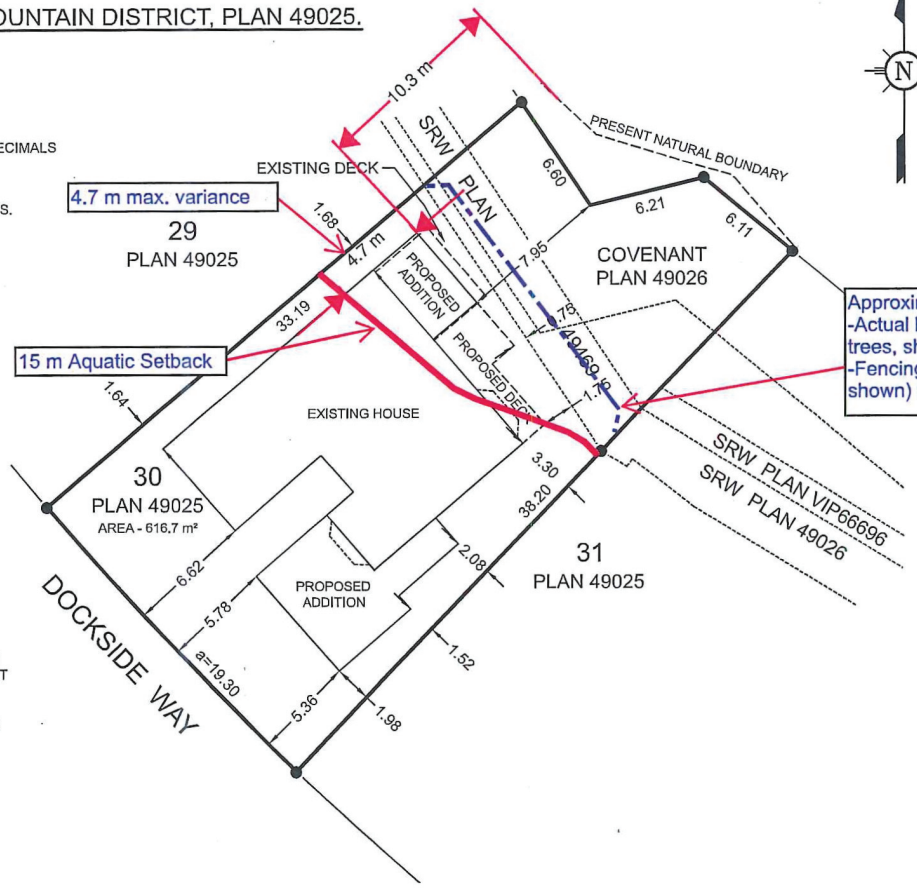
CIVIC ADDRESS: 2232 DOCKSIDE WAY, NANAIMO.

PID: 014-733-064 ZONING: R-1.

ELEVATION DATUM IS DERIVED FROM OBSERVATIONS TO GEODETIC MONUMENT 88H4769
MONUMENT ELEVATION = 106.582.

LEGEND:

● DENOTES LEGAL POST FOUND.



Approximate sediment fence location:
-Actual location to accommodate locations of trees, sheds and other features.
-Fencing to curve upwards at either end (as shown) to contain any sediment laden runoff.

MAXIMUM HOUSE HEIGHT CALCULATION	
MEAN FG	—.—
MEAN NG	104.78
MAXIMUM HEIGHT PER BYLAW	9.00
MAXIMUM ROOF PEAK	113.78
EXISTING MAIN FLOOR	—.—
APPROX. HEIGHT TO PEAK	—.—
EXISTING ROOF PEAK	110.77

THIS PLAN PURPORTS TO POSITION ONLY THE ACTUAL AND/OR PROPOSED IMPROVEMENT(S) SHOWN RELATIVE TO ONLY THE BOUNDARIES SHOWN OF OR APPURTENANT TO THE ABOVE DESCRIBED PARCEL(S).
THIS PLAN PROVIDES NO WARRANTY OR REPRESENTATION WHATSOEVER WITH RESPECT TO THE LOCATION OF ANY OTHER ACTUAL OR PROPOSED IMPROVEMENT(S) RELATIVE TO ANY BOUNDARY OF OR APPURTENANT TO THE ABOVE DESCRIBED PARCEL(S).
THIS PLAN IS NOT TO BE USED TO RE-ESTABLISH BOUNDARY LINES.

THE UNDERSIGNED CONFIRMS THAT HE HAS BEEN RETAINED BY RAYLENE MANSON TO PROVIDE FOUNDATION LAYOUT IN ACCORDANCE WITH THE FOUNDATION LOCATION SHOWN ON THIS PLAN.

THIS PARCEL MAY BE SUBJECT TO REGISTERED CHARGES, INTERESTS AND LEGAL NOTATIONS AS SHOWN ON TITLE NO: CA699523.

THIS PLAN DOES NOT PURPORT TO VERIFY COMPLIANCE WITH THE RESTRICTIONS THEREIN.

THE SIGNATORY ACCEPTS NO RESPONSIBILITY OR LIABILITY FOR ANY DAMAGES THAT MAY BE SUFFERED BY A THIRD PARTY AS A RESULT OF ANY DECISIONS MADE, OR ACTIONS TAKEN BASED ON THIS DOCUMENT.

THIS BUILDING LOCATION CERTIFICATE HAS BEEN PREPARED IN ACCORDANCE WITH THE MANUAL OF STANDARD PRACTICE AND IS CERTIFIED CORRECT THIS DATE OF : JANUARY 13, 2015.

ANDRÉ MCNICOLL B.C.L.S.
THIS DOCUMENT IS INVALID UNLESS SIGNED AND SEALED.

Harbour City Land Surveying Ltd.
1825 LATIMER ROAD
NANAIMO BC V9S 5H2
PHONE: 250-758-4180

DRAWING: 15001-BP.DWG
LAYOUT: 1

Color markups provided by EDI Environmental Dynamics Inc.

Development Permit DP000930 **Schedule B**
2232 Dockside Way

SITE PLAN

(Shows Riparian Restoration Area & Technical Information required as part of the RAR Assessment)

B.C. LAND SURVEYOR'S CERTIFICATE OF PROPOSED LOCATION ON:

LOT 30, SECTION 12, RANGE 7, MOUNTAIN DISTRICT, PLAN 49025.

Scale 1:300

0 3 6 9 12 15 18

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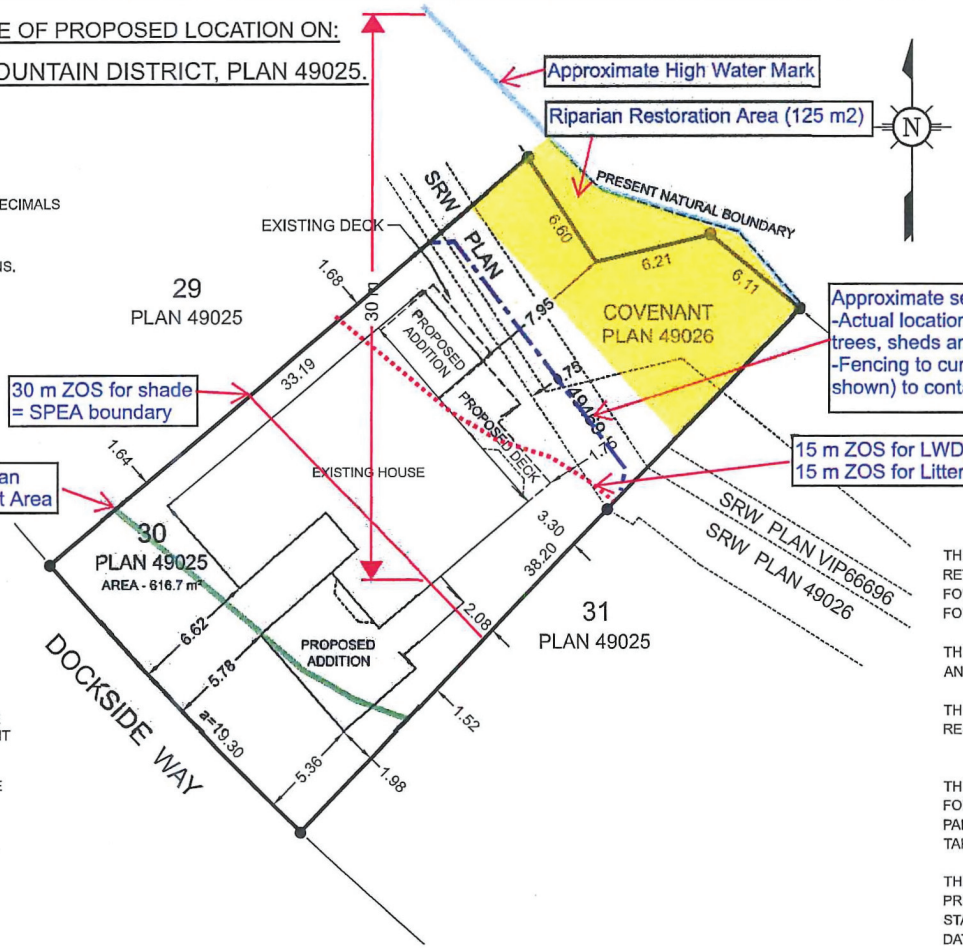

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LAYOUT: 1

Color markups provided by EDI Environmental Dynamics Inc.

EDI
ENVIRONMENTAL DYNAMICS INC.

208A – 2520 Bowen Road
Nanaimo, BC V9T 3L3
P: (250) 751-9070 ▪ F: (250) 751-9068

May 14, 2015

EDI Job Number: 15N0032

Shane and Raylene Manson
2232 Dockside Way
Nanaimo, BC V9R 6T8

Re: Proposed riparian restoration works at 2232 Dockside Way, Nanaimo

EDI Environmental Dynamics Inc. (EDI) has been retained to review the subject property (2232 Dockside Way) and provide a riparian restoration plan associated with proposed redevelopment of the property. This plan shall be reviewed and approved by City of Nanaimo staff prior to implementation. The restoration works are required by the City of Nanaimo to improve the condition of the riparian area as a tradeoff for allowing redevelopment to occur within the riparian leave strip and Streamside Protection and Enhancement Area (SPEA). These tradeoffs are consistent with watercourse development permit area criteria and they are required to encourage improvement and prevent further degradation of historically impacted riparian ecosystems in Nanaimo. The restoration plan is also provided with the goal of achieving compliance with the RAR for the proposed residential redevelopment within the SPEA.

Proposed Riparian Restoration Works

Riparian restoration includes the following activities:

1. Removal of invasive species (Holly tree and Himalayan blackberry).
2. Planting native riparian species (trees and shrubs).

Removal of Invasive Species

The attached guidance documents shall be followed during invasive species removal. The following invasive species removal activities shall be done prior to planting:

- Cut down and remove the large holly tree that is within the riparian area. This is important to prevent the spread of holly into the restoration area and other riparian areas around the lake.
- Remove all Himalayan blackberry from the restoration area (there are many small plants beginning to sprout in the area where blackberry was removed):

- All blackberry stems and roots must be pulled out by hand and removed from the soil. Shovels may need to be used to loosen soil around roots to ensure that all roots are removed.
- All parts of removed blackberry plants must be bagged and disposed of at the local landfill.
- Care shall be taken to not remove other, native plants that are also sprouting up in the area.

Riparian Planting

1) Plant native trees and shrubs throughout the riparian restoration area.

- All trees to be planted shall be at least 1 Gallon pot size.
- All shrubs to be planted shall be at least 9 cm pot size.
- All trees to be planted at an average spacing interval of 3.0 m. As the restoration area is 125 m^2, 14 trees will be needed.
- All shrubs to be planted at an average spacing interval of 0.75 m. As the restoration area is 125 m^2, 222 shrubs will be needed.
- Up to 150 of the shrubs can be live stakes.
  - Live stakes shall be at least 1.5 cm in diameter and at least 60 cm long. At least 70% of the live stake shall be inserted into the ground.
  - The QEP shall be on site at the start of planting to provide additional advice on live staking requirements.
- All trees and shrubs to be planted with a teabag style fertilizer pouch.
- All trees and shrubs to be planted such that the level of the soil from the pot is approximately 2 cm below the adjacent soil elevation. Soil excavated to create a hole for each plant shall then be used to cover the soil from the pot (to prevent soil from the pot from drying out or becoming oversaturated).
- All trees and shrubs to be planted between September 15 and November 15, 2015.

The table below lists the native species to be planted. At least 3 species of trees and 5 species of shrubs shall be used from the list. EDI shall review and approve the final list of plants proposed for the site before the nursery order is confirmed. Species that are not preferred by beavers shall be favored during plant selection as the lake is known to have relatively high beaver activity. These may include elderberry, cascara, Indian plum, ninebark, and twinberry; however, this shall be reviewed further prior to plant selection.

Table 1. List of appropriate tree and shrub species to be planted.

Trees	Shrubs and ferns
Cascara (*Rhamnus purshiana*)	beaked hazelnut (*Corylus cornuta*)
Indian plum (*Oemleria cerasiformis*)	ocean spray (*Holodiscus discolor*)
Oregon Ash (*Fraxinus latifolia*)	red flowering currant (*Ribes sanguineum var. sanguineum*)
Douglas (Black) Hawthorn (*Crataegus douglasii*)	red huckleberry (*Vaccinium parvifolium*)
Pacific crabapple (*Malus fusca*)	snowberry (*Symphoricarpos albus*)
bitter cherry (*Prunus emarginata*)	thimbleberry (*Rubus parviflorus*)
choke cherry (*Prunus virginiana*)	red elderberry (*Sambucus racemosa var. arborescens*)
Hooker's willow* (*Salix hookeriana*)	Nootka Rose (*Rosa nutkana*)
Scouler's willow* (*Salix scouleriana*)	salmonberry (*Rubus spectabilis*)
Pacific willow* (*Salix lucida*)	red osier dogwood* (*Cornus stolonifera*)
	twinberry (*Lonicera involucrata*)
	Pacific ninebark (*Physocarpus capitatus*)
	Hardhack (*Spirea douglasii*)
	Oval-leaved Blueberry (*Vaccinium ovalifolium*)

*species can be used for live stakes

After Planting

Install a 1 m high barrier made of galvanized, welded wire fencing or other sturdy material above the shoreline to prevent beaver browse. The fence can be removed after the first one or two growing seasons as plants will have established enough to withstand browsing. Tree trunks can be permanently surrounded by wire fencing to prevent beaver damage over the long-term.

Maintenance and Inspection

1) Implement watering on an as-needed basis during dry periods (June to September) within the first one or two growing seasons (2016/2017).

2) Implement annual monitoring and maintenance to ensure survival targets are met and invasive species colonization is controlled.

- A three year maintenance and inspection period is required by the City of Nanaimo (ending fall of 2018).
- Each spring (2016 to 2018), invasive plants shall be removed by the owner following the guidance provided in Attachment 2 for non-chemical control of invasive plants.
- EDI shall briefly inspect the site annually in the fall for 3 years (2016-2018). Each inspection shall include:

  i) An estimate of percent survival of trees and percent survival of shrubs.

  ii) An estimate of percent area coverage of invasive plants (primarily Himalayan blackberry which has been observed within the subject property).

  iii) EDI shall provide a brief summary email with a list of recommendations to the owners following each site inspection. The report shall include general observations, overall health and growth of plants (poor, fair, moderate, good etc.), number and species of replacement plants needed, where replacement plants are needed, areas in which invasive species removal is needed and watering needs. The summary shall list when each of the recommendations should be completed.

  iv) The owner shall then follow the recommendations made in each annual report.

  v) Provided that the results of the final annual inspection are acceptable to EDI, the final report shall be submitted to the City of Nanaimo to complete the restoration requirements for this project.

The target survival rate of trees and shrubs shall be 80%. When less than 80% survival is observed in a given year, replacement planting shall be recommended to bring the areas back up to at least 90% survival. After the final inspection, the site shall be considered to be successfully restored if:

- At least 80% of trees and 80% of shrubs are established and healthy.
- Little or no invasive plants are present.

Environmental Monitoring

In addition to the prescribed inspections, EDI shall be on site to monitor the installation of the plants. At a minimum, EDI shall be on site at the start of planting and near the end of planting to confirm that planting methods and site selection for various plants are appropriate.

Conclusion

Provided that the restoration activities are completed as described herein, no additional works should be needed to adequately mitigate the proposed renovation works on the subject property. In addition, it is my

opinion that since some riparian restoration will occur to mitigate the "loss" of the site potential vegetation (caused by construction of the house additions within existing developed areas), there should be no net harmful alteration, disruption or destruction of natural features, functions and conditions that support fish life processes in the riparian assessment area. Given that I will inspect the planted area to ensure survival targets are met, I would anticipate that, over time, there will be a net gain of riparian fish habitat at this property. Given the nature of the proposed renovation and restoration works, serious harm to fish and fish habitat (as defined by the Federal Fisheries Act) is not expected and a review by Department of Fisheries and Oceans is, therefore, not considered to be necessary for the proposed works.

Please let me know if you have any questions regarding this restoration plan.

Yours truly,

EDI ENVIRONMENTAL DYNAMICS INC.

Adam Compton, R.P. Bio.
Project Manager/Senior Biologist

Attachments: Invasive Plant Removal Methods

Original signed + sealed May 14/15

Invasive Species Council of British Columbia

Himalayan Blackberry

Rubus armeniacus

TIPS

Updated July 2014

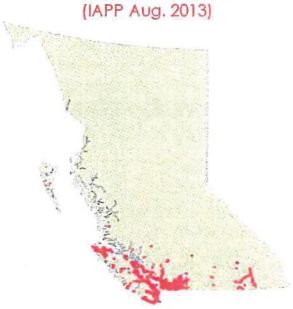
Legal Status

Community Charter

Distribution

Currently found in BC in the Lower Mainland, Sunshine Coast, Fraser Valley, Gulf Islands, central to southern Vancouver Island, Queen Charlotte Islands, the Okanagan, and the West Kootenay areas.

Distribution in BC
(IAPP Aug. 2013)



Identification

Flowers: Small (2.5 cm diameter), white to pinkish, stalked, 5-petalled, arranged in clusters of 5-20; flower stalks are wooly and prickly.

Stems: Robust, stiff, 5-angled stems (canes) that support large, flattened, and hooked or straight prickles. Canes grow to 3 m in height and up to 12 m in length. First year canes produce leaves only and can root at the tips, producing daughter plants. Second year canes grow from the axils of first year canes and produce flowers and fruits.

Leaves: Evergreen, predominantly large, rounded or oblong, toothed leaflets radiate from the end of the leaf stem. Leaves are generally grouped in fives on first-year canes and threes on flowering (second-year) canes.

Fruits: Fruits (drupelets) are up to 2 cm in diameter, oblong to spherical, black and shiny, and hairless. They form on second year canes and ripen from mid-summer to fall. Each berry produces numerous seeds that have a hard, impermeable coat.

Similar Native Species: (i) Trailing blackberry *(Rubus ursinus)* is a smaller and less robust trailing plant with a smaller stem size (0.5 cm), white waxy stem coating, deciduous leaves found in groups of three, and a tendency to lie on the ground; (ii) salmonberry *(Rubus spectabilis)* has smaller zigzagged stems, red-pink flowers, and reddish or yellowish edible berries.

Similar Non-Native Species: Cut-leaf or evergreen blackberry *(Rubus laciniatus)* has deeply incised leaflets. Note: Himalayan blackberry is a variable species with several cultivars, thus making identification difficult.

Ecological Characteristics

Habitat: Found on disturbed sites, along roadsides and right-of-ways, in pastures, along river and stream banks, freshwater wetlands, riparian areas, forest edges, and wooded ravines. Prefers rich, well-drained soils, but can grow well on a variety of barren, infertile soil types, a wide range of soil pH and textures, and is tolerant of periodic flooding by brackish or fresh water. Prefers full sunlight, but can survive in varied light conditions.

© The Illustrated Flora of BC

Reproduction: A mostly biennial plant that reproduces by seed, vegetatively by rooting at stem tips to form daughter plants, and sprouts from root buds. Plants begin flowering in spring with fruit ripening in midsummer to late August. Thickets can produce 7,000-13,000 seeds per square meter, and seeds can remain viable in the soil for several years. Fruiting stems generally die back at the end of the season, but non-fruiting stems may persist for several years before producing fruit.

Dispersal: Primarily dispersed by root and stem fragments. Birds and omnivorous mammals, such as foxes, bears, and coyotes can consume berries and disperse seeds. Humans also contribute to blackberry spread by purposefully planting canes.

Impacts

Ecological: Outcompetes low growing native vegetation through shading and build-up of leaf litter and dead stems. Can prevent the establishment of shade intolerant trees such as Garry oak and ponderosa pine. Himalayan blackberry forms large, dense, impenetrable thickets that limit the movement of large animals, takes over stream channels and stream banks, and reduces sight lines along right-of-ways. Thickets increase flooding and erosion potential by preventing the establishment of deep-rooted native shrubs that would otherwise provide bank stability.

Integrated Pest Management

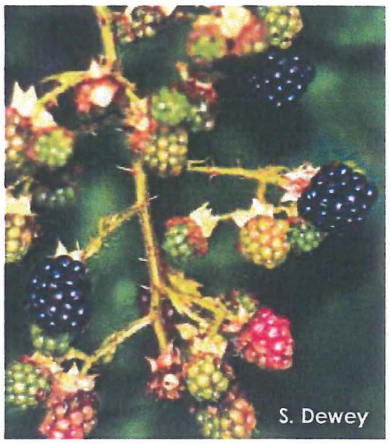
IPM is a decision-making process that includes identification and inventory of invasive plant populations, assessment of the risks that they pose, development of well-informed control options that may include a number of methods, site treatment, and monitoring.

Prevention

- Monitor for Himalayan blackberry on both disturbed and undisturbed areas.
- Do not purchase, trade, or grow Himalayan blackberry. Instead, grow regional native plants as they are naturally adapted to the local environment and are non-invasive.
- Ensure soil, gravel, and other fill material are not contaminated.
- Avoid unloading, parking, or storing equipment and vehicles in infested areas.
- Remove plants, plant parts, and seeds from personal gear, clothing, pets, vehicles, and equipment. Wash vehicles, including tires and undercarriage, and equipment at designated cleaning sites before leaving infested areas.
- Bag or tarp plants, plant parts, and seeds before transporting to a designated disposal site (e.g. landfill).
- Take special care when controlling Himalayan blackberry near streams or ditch lines, to prevent the movement of plant parts downstream.
- Maintain or establish healthy plant communities that are resistant to invasion by invasive plants.

Mechanical Control

- Mowing, including the use of riding mowers and tractor-mounted mowers, can be very effective, but can also harm desirable species. If roots are not manually removed, mowing several times per year over several years is necessary to exhaust root reserves. If mowing or cutting is only done once per year, it should be done when the plants begin to flower. Do not mow where soil is highly susceptible to compaction or erosion, or where soil is very wet.
- Persistent cultivation (tillage) or cutting in combination with mowing can be very effective. Because mechanical control can stimulate strong regrowth, follow-up with either spot applications of herbicide or hand digging to remove the entire root system.
- Grazing by goats has proven effective.
- Monitor controlled infestations during growing season.
- Disposal: If plants are cut, all plant material must be collected in bags or tarps and incinerated or bagged and deeply buried at a landfill. Care should be taken to ensure that plant parts are not distributed during transport.


S. Dewey

Biocontrol

- There are no biocontrol agents for Himalayan blackberry. The release of herbivorous insects has not been undertaken due to the risk these insects may pose to closely related, commercially important *Rubus* species.

Chemical Control

Herbicide recommendations and use must consider site characteristics and be prescribed based on site goals and objectives. Herbicide labels and other sources of information must be reviewed before selecting and applying herbicides.

- Ensure that chemical treatments do not injure or kill susceptible, non-target vegetation.
- The following herbicides provide effective control for common tansy: picloram, picloram/2,4 D, metsulfuron methyl, and aminopyralid.
- Application of pesticides on Crown land must be carried out following a confirmed Pest Management Plan *(Integrated Pest Management Act)* and under the supervision of a certified pesticide applicator. www.env.gov.bc.ca/epd/ipmp/

References/Links

- BC Ministry of Forests, Lands, and Natural Resource Operations, Invasive Alien Plant Program (IAPP). www.for.gov.bc.ca/hra/Plants/application.htm
- *Controlling Himalayan Blackberry in the Pacific Northwest*. The Nature Conservancy. www.invasive.org/gist/moredocs/rubarm01.pdf
- E-Flora BC, an Electronic Atlas of the Plants of BC. www.eflora.bc.ca/
- King County Noxious Weed Control Program: Best Management Practices for Himalayan blackberry. King County, Washington. http://your.kingcounty.gov/dnrp/library/water-and-land/weeds/BMPs/blackberry-control.pdf
- Garry Oak Ecosystem Recovery Team: Best Practices for Himalayan Blackberry Management. www.goert.ca/publications_resources/invasive_species.php

ADDITIONAL CONTACT INFO

BRITISH COLUMBIA

Thank you to the BC Ministry of Environment for providing project funding, and to those who advised the development of these management recommendations.

ENGLISH HOLLY

Name: English Holly *(Ilex aquifolium)*
Common Name: Christmas Holly
Origin: Britain
How to recognize it: English Holly is an evergreen tree with spreading branches up to 15 metres tall. Its leaves are alternate, glossy, dark green, spiky and evergreen. Flowers are small and white growing into poisonous, red berries on female trees in winter. English Holly is usually found in forests and well-shaded areas.
Impact on humans and the environment: Holly displaces native species. The berries act as a food source for birds who disperse the seeds with their droppings.
Management techniques: Small seedlings can be pulled out of the ground minimizing soil disturbance. Larger plants that are difficult to pull should be cut off at ground level. The stump could be damaged with an axe to reduce re-sprouting. It is best to do large tree removal before the berries have formed to avoid scattering them throughout the area. If the tree is full of berries, remove it anyway being aware that dispersed seeds may sprout in subsequent years. Take care not to disperse berries along the removal route. Debris can be removed using a tarp or garbage bags. Young seedlings can be confused with Oregon Grape (*Mahonia sp*).

Close-ups of invasive English Holly leaves and berries.

FORM 1

Riparian Areas Regulation - Qualified Environmental Professional - Assessment Report

Riparian Areas Regulation: Assessment Report

Date: 2015-05-14

I. Primary QEP Information

First Name	Adam	Middle Name		
Last Name	Compton			
Designation	R.P.Bio.	Company: EDI Environmental Dynamics Inc.		
Registration #	1605	Email: acompton@edynamics.com		
Address	Unit 208A – 2520 Bowen Road			
City	Nanaimo	Postal/Zip V9T 3L3	Phone # 250-751-9070	
Prov/state	BC	Country Canada		

II. Secondary QEP Information (use **Form 2** for other QEPs)

First Name		Middle Name	
Last Name			
Designation		Company	
Registration #		Email	
Address			
City		Postal/Zip	Phone #
Prov/state		Country	

III. Developer Information

First Name	Shane and Raylene	Middle Name	
Last Name	Manson		
Company	Shane and Raylene Manson		
Phone #	(250) 714-3114	Email mrm72@shaw.ca	
Address	2232 Dockside Way		
City	Nanaimo	Postal/Zip V9R 6T8	
Prov/state	BC	Country Canada	

IV. Development Information

Development Type	Construction: Single Family Residential		
Area of Development (ha)	0.01	Riparian Length (m)	16
Lot Area (ha)	0.06	Nature of Development	Redevelopment
Proposed Start Date	2015-06-02	Proposed End Date	2015-12-31

V. Location of Proposed Development

Street Address (or nearest town)	2232 Dockside Way						
Local Government	City of Nanaimo			City	Nanaimo		
Stream Name	Cathers Lake						
Legal Description (PID)	014-733-064			Region	Vancouver Island		
Stream/River Type	lake			DFO Area	South Coast		
Watershed Code	920-395400-21500-43200						
Latitude	49	10	22.3	Longitude	123	59	46.7

Table of Contents for Assessment Report

Page Number

Section 1. Description of Fisheries Resources Values and a Description of the Development proposal

Connectivity to Downstream Habitats:

Cathers Lake flow into Millstone River via Sabiston Creek. Millstone River flows into the sea at Nanaimo Harbour (Figure 1).

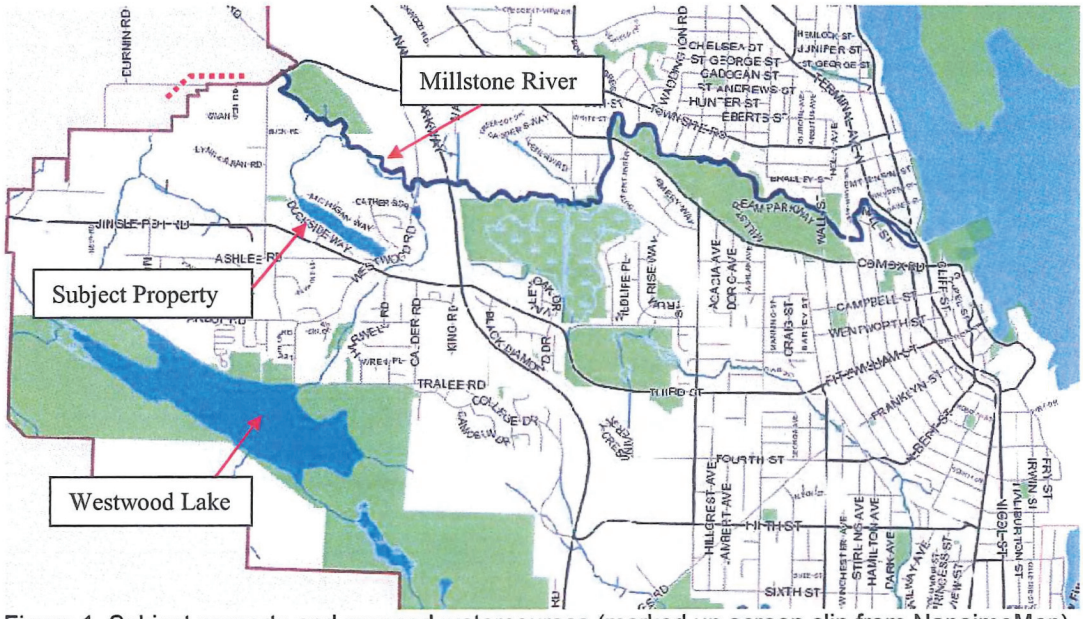


Figure 1. Subject property and mapped watercourses (marked up screen clip from NanaimoMap).

Species Present:

Habitat Wizard indicates that rainbow trout are present in Cathers Lake and Fish Inventories Data Queries indicates that the lake has been stocked with rainbow trout.

Fish Habitat Present:

There is good quality rearing and overwintering habitat in the lake. Habitat quality may be limited in the summer (increased temperature and decreased dissolved oxygen) as the lake is small and shallow, contains substantial milfoil and does not have much riparian shading.

Current Riparian Vegetation Condition:

The riparian area along the lake has been substantially disturbed by historic developments; however, this lake was created by the construction of a weir. The narrow yard between the house and the lake is sparsely vegetated. Recent landscaping works has resulted in the removal of Himalayan blackberry but it is unclear if other shrub species may have also been removed.

Nature of Development:

The proposed development is to renovate the existing house. Proposed developments within the 30 m Riparian Assessment Area of the stream include:

- Demolition and removal of existing deck and brick patio (within the SPEA).

- Construction of an addition within the footprint of the existing deck and patio (within the SPEA).
- Construction of a deck above the existing garden bed and brick stairway.
- Construction of an addition at the south side of the house (slightly within the SPEA).
- Revegetation along the lakeshore (see attached restoration plan).

Description of how Works within the SPEA are to be Approved:

As per Section 7, paragraph 2.a) of this report, the QEP is to describe how works within the SPEA are to be approved ("include local government flex letter, DFO Letter of Advice, or description of how DFO local variance protocol is being addressed"). None of the options provided are currently feasible under the RAR.

The proposed renovations are unlikely to cause adverse environmental impacts provided that care is taken and that the measures described in this report are implemented. The following points support this conclusion:

- All of the proposed renovations are within the footprint of the existing developed areas immediately adjacent to the house.
- The footprints of the proposed developments are not expected to negatively impact the ecological values of the riparian area:
  - No new, previously undeveloped areas would be modified.
  - No naturally vegetated areas would be cleared and no trees would be removed.
  - The existing garden bed is to remain with the deck located above. Some minor disturbance to the garden bed would be needed for the deck post footing(s) but the garden is to remain vegetated. Any plants removed will be set aside and replaced.
- Substantial riparian revegetation is to occur along the lake (see attached restoration plan).

Section 2. Results of Detailed Riparian Assessment

Refer to Chapter 3 of Assessment Methodology

Date: 2015-01-29

Description of Water bodies involved (number, type): Cathers Lake

Stream	
Wetland	
Lake	x
Ditch	
Number of reaches	1
Reach #	1

Channel width and slope and Channel Type (use only if water body is a stream or a ditch, and only provide widths if a ditch)

	Channel Width(m)	Gradient (%)
starting point		
upstream		
downstream		
Total: minus high /low		
mean		

	R/P	C/P	S/P
Channel Type			

I, Adam Compton *(name of qualified environmental professional)*, hereby certify that:

a) I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the *Fish Protection Act*;

b) I am qualified to carry out this part of the assessment of the development proposal made by the developer Shane and Raylene Manson *(name of developer)*;

c) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and

d) In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation.

Site Potential Vegetation Type (SPVT)

	Yes	No	
SPVT Polygons		X	Tick yes only if multiple polygons, if No then fill in one set of SPVT data boxes

I, Adam Compton *(name of qualified environmental professional)*, hereby certify that:

a) I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the *Fish Protection Act*;

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c) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and

d) In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation.

Polygon No:	1		
	LC	SH	TR
SPVT Type			x

Method employed if other than TR

Polygon No:			
	LC	SH	TR
SPVT Type			

Method employed if other than TR

Polygon No:			
SPVT Type			

Method employed if other than TR

Zone of Sensitivity (ZOS) and resultant SPEA

Segment No:	1	If two sides of a stream involved, each side is a separate segment. For all water bodies multiple segments occur where there are multiple SPVT polygons						
LWD, Bank and Channel Stability ZOS (m)	15							
Litter fall and insect drop ZOS (m)	15							
Shade ZOS (m) max	30	South bank	Yes	x	No			
Ditch	Justification description for classifying as a ditch (manmade, no significant headwaters or springs, seasonal flow)							
Ditch Fish Bearing	Yes		No		If non-fish bearing insert no fish bearing status report			
SPEA maximum	**30**	(For ditch use table3-7)						

Segment No:		If two sides of a stream involved, each side is a separate segment. For all water bodies multiple segments occur where there are multiple SPVT polygons						
LWD, Bank and Channel Stability ZOS (m)								
Litter fall and insect drop ZOS (m)								
Shade ZOS (m) max		South bank	Yes		No			
SPEA maximum		(For ditch use table3-7)						

Segment No:		If two sides of a stream involved, each side is a separate segment. For all water bodies multiple segments occur where there are multiple SPVT polygons						
LWD, Bank and Channel Stability ZOS (m)								
Litter fall and insect drop ZOS (m)								
Shade ZOS (m) max		South bank	Yes		No			
SPEA maximum		(For ditch use table3-7)						

I, Adam Compton *(name of qualified environmental professional)*, hereby certify that:

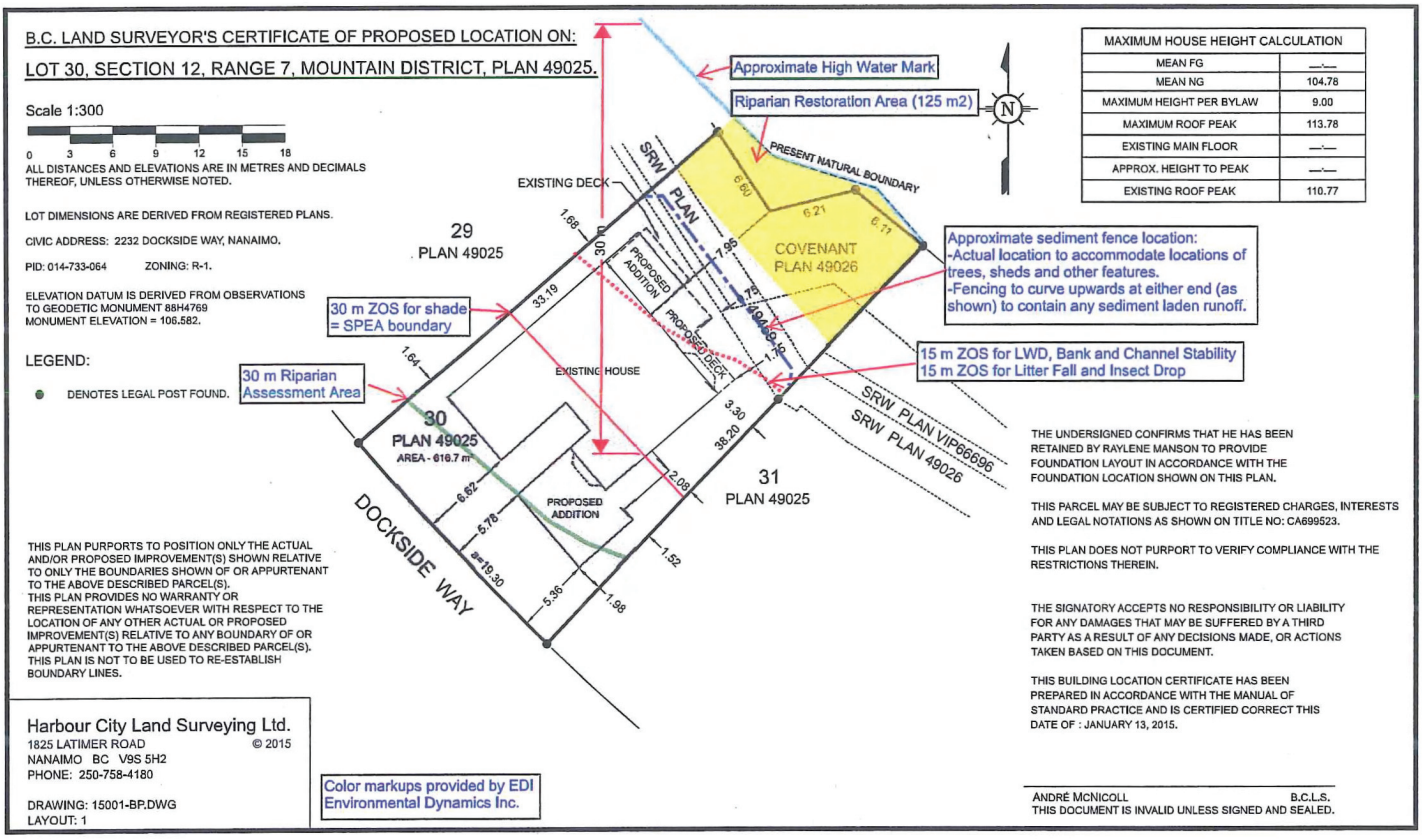
a) I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the *Fish Protection Act*;
b) I am qualified to carry out this part of the assessment of the development proposal made by the Shane and Raylene Manson *(name of developer)*;
c) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and
d) In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation.

Comments

More than half the lot and most of the existing house are within the SPEA.

Section 3. Site Plan

Site Plan
See following page.


B.C. LAND SURVEYOR'S CERTIFICATE OF PROPOSED LOCATION ON:
LOT 30, SECTION 12, RANGE 7, MOUNTAIN DISTRICT, PLAN 49025.
Scale 1:300
0 3 6 9 12 15 18
ALL DISTANCES AND ELEVATIONS ARE IN METRES AND DECIMALS THEREOF, UNLESS OTHERWISE NOTED.
LOT DIMENSIONS ARE DERIVED FROM REGISTERED PLANS.
CIVIC ADDRESS: 2232 DOCKSIDE WAY, NANAIMO.
PID: 014-733-064 ZONING: R-1.
ELEVATION DATUM IS DERIVED FROM OBSERVATIONS TO GEODETIC MONUMENT 88H4769 MONUMENT ELEVATION = 106.582.
LEGEND:
DENOTES LEGAL POST FOUND.
Approximate High Water Mark
Riparian Restoration Area (125 m2)
PRESENT NATURAL BOUNDARY
SRW PLAN
EXISTING DECK
29
PLAN 49025
COVENANT
PLAN 49026
PROPOSED ADDITION
PROPOSED 2nd DECK
EXISTING HOUSE
30 m ZOS for shade = SPEA boundary
30 m Riparian Assessment Area
30
PLAN 49025
AREA - 616.7 m²
PROPOSED ADDITION
DOCKSIDE WAY
31
PLAN 49025
SRW PLAN VIP66696
SRW PLAN 49026
Approximate sediment fence location:
-Actual location to accommodate locations of trees, sheds and other features.
-Fencing to curve upwards at either end (as shown) to contain any sediment laden runoff.
15 m ZOS for LWD, Bank and Channel Stability
15 m ZOS for Litter Fall and Insect Drop
N
MAXIMUM HOUSE HEIGHT CALCULATION
MEAN FG —.—
MEAN NG 104.78
MAXIMUM HEIGHT PER BYLAW 9.00
MAXIMUM ROOF PEAK 113.78
EXISTING MAIN FLOOR —.—
APPROX. HEIGHT TO PEAK —.—
EXISTING ROOF PEAK 110.77
THIS PLAN PURPORTS TO POSITION ONLY THE ACTUAL AND/OR PROPOSED IMPROVEMENT(S) SHOWN RELATIVE TO ONLY THE BOUNDARIES SHOWN OF OR APPURTENANT TO THE ABOVE DESCRIBED PARCEL(S). THIS PLAN PROVIDES NO WARRANTY OR REPRESENTATION WHATSOEVER WITH RESPECT TO THE LOCATION OF ANY OTHER ACTUAL OR PROPOSED IMPROVEMENT(S) RELATIVE TO ANY BOUNDARY OF OR APPURTENANT TO THE ABOVE DESCRIBED PARCEL(S). THIS PLAN IS NOT TO BE USED TO RE-ESTABLISH BOUNDARY LINES.
THE UNDERSIGNED CONFIRMS THAT HE HAS BEEN RETAINED BY RAYLENE MANSON TO PROVIDE FOUNDATION LAYOUT IN ACCORDANCE WITH THE FOUNDATION LOCATION SHOWN ON THIS PLAN.
THIS PARCEL MAY BE SUBJECT TO REGISTERED CHARGES, INTERESTS AND LEGAL NOTATIONS AS SHOWN ON TITLE NO: CA699523.
THIS PLAN DOES NOT PURPORT TO VERIFY COMPLIANCE WITH THE RESTRICTIONS THEREIN.
THE SIGNATORY ACCEPTS NO RESPONSIBILITY OR LIABILITY FOR ANY DAMAGES THAT MAY BE SUFFERED BY A THIRD PARTY AS A RESULT OF ANY DECISIONS MADE, OR ACTIONS TAKEN BASED ON THIS DOCUMENT.
THIS BUILDING LOCATION CERTIFICATE HAS BEEN PREPARED IN ACCORDANCE WITH THE MANUAL OF STANDARD PRACTICE AND IS CERTIFIED CORRECT THIS DATE OF : JANUARY 13, 2015.
ANDRÉ MCNICOLL B.C.L.S.
THIS DOCUMENT IS INVALID UNLESS SIGNED AND SEALED.
Harbour City Land Surveying Ltd.
1825 LATIMER ROAD © 2015
NANAIMO BC V9S 5H2
PHONE: 250-758-4180
DRAWING: 15001-BP.DWG
LAYOUT: 1
Color markups provided by EDI Environmental Dynamics Inc.

Section 4. Measures to Protect and Maintain the SPEA

1. Danger Trees	According to the RAR Assessment Methods (Page 48), danger trees include "standing dead trees that are vertical or lean towards the work area, as well as some live trees with large dead branches or tops". No such trees were observed within the SPEA. This does not imply that dangerous trees are not present within or near the subject property. This assessment is only meant to satisfy the definitions and requirements of the RAR. In addition, trees may have become dangerous since the assessment was conducted. All proposed and future work within the property is to be conducted at the sole risk of the persons conducting such work. Should any dangerous trees be identified within the SPEA, they must not be removed unless a subsequent RAR Report is prepared to address such tree removal. Tree replacement would likely be necessary for proposed removal of any native trees within the SPEA.
I, Adam Compton *(name of qualified environmental professional)*, hereby certify that: e) I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the *Fish Protection Act*; f) I am qualified to carry out this part of the assessment of the development proposal made by the developer Shane and Raylene Manson *(name of developer)*; g) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation	
2. Windthrow	Given that no tree removal near the SPEA is proposed, the development is not expected to increase the risk of windthrow for the remaining trees within the SPEA. By signing below I am indicating that based on the above rationale, it is my professional opinion that this site does not warrant a windthrow assessment by a qualified professional. I am not a qualified windthrow assessor and am therefore not qualified to carry out a windthrow assessment. I have not carried out a windthrow assessment; I have only provided an opinion based on my observations and the guidance provided by the RAR Assessment Methods.
I, Adam Compton *(name of qualified environmental professional)*, hereby certify that: a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the *Fish Protection Act*; b. I am qualified to carry out this part of the assessment of the development proposal made by the developer Shane and Raylene Manson *(name of developer)*; c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation	
3. Slope Stability	It is my professional opinion that a slope stability assessment is not warranted. The areas in which developments are proposed have gentle to moderately sloped topography within an existing developed area, several metres back from the slope above the lake. By signing below I am indicating that based on the above

	rationale, it is my professional opinion that this site does not warrant a slope stability assessment by a qualified professional. I am not a qualified slope stability specialist and am therefore not qualified to carry out a slope stability assessment. I have not carried out a slope stability assessment; I have only provided an opinion based on my observations and the guidance provided by the RAR Assessment Methods.
I, Adam Compton (*name of qualified environmental professional*), hereby certify that: a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the *Fish Protection Act*; b. I am qualified to carry out this part of the assessment of the development proposal made by the developer Shane and Raylene Manson (*name of developer*); c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation	
4. Protection of Trees	No native tree species are present on the lot. There are a couple of small, domestic trees, well back from proposed developments. Measures to protect trees are not necessary.
I, Adam Compton (*name of qualified environmental professional*), hereby certify that: a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the *Fish Protection Act*; b. I am qualified to carry out this part of the assessment of the development proposal made by the developer Shane and Raylene Manson (*name of developer*); c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation	
5. *Encroachment*	The existing stacked rock walls above the lake limit access to the lakeshore. The revegetation of the slope above the lake will leave an existing access path to the lake. All other areas of the slope will be densely revegetated and are not generally considered to be useable areas. As such, permanent fencing is not warranted. Temporary fencing to mark the SPEA boundary during construction will not be required as work is occurring within the SPEA. Temporary fencing to mark the top of the slope above the lake is also not required as no encroachment into this steep area is expected. Silt fencing (as required below), will provide sufficient encroachment prevention during construction.
I, Adam Compton (*name of qualified environmental professional*), hereby certify that: a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the *Fish Protection Act*; b. I am qualified to carry out this part of the assessment of the development proposal made by the developer Shane and Raylene Manson (*name of developer*); c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation	
6. Sediment and Erosion Control	Given the nature of the proposed redevelopment, erosion and sediment control is not expected to be a substantial concern. Regardless, there is some potential for sediment to enter the lake during construction periods that overlap with large rainfall events. Also, the SPEA restoration works have some potential to introduce sediment laden runoff into the lake if these activities are not carefully managed. The following measures shall be implemented:

	• Earthworks upslope of the stream shall not be conducted during heavy rainfall events. • During construction, exposed soils shall be protected from erosion during rainfall events by covering with poly, tarps or straw mulch or by surrounding with silt fencing. • Upon completion of construction, exposed soils shall be protected from erosion (gravel, grass seed and straw mulch, landscaping, erosion control blankets etc.). • Silt fencing shall be installed along the width of the property, below the proposed addition at the north side of the house (see site plan). The precise location of the silt fence shall be determined by a QEP from EDI in conjunction with the developer. The silt fencing must be properly installed according to manufacturer specifications and/or standard best practices (e.g. lower part of fabric dug into the ground).

I, Adam Compton (*name of qualified environmental professional*), hereby certify that:

a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the *Fish Protection Act*;
b. I am qualified to carry out this part of the assessment of the development proposal made by the developer Shane and Raylene Manson (*name of developer*);
c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation

7. Stormwater Management	Given that the proposed development is only to add on to the existing house, a stormwater management plan is not warranted. Rooftop stormwater will be discharged into the lake via the existing outfall. Rock shall be placed below the existing outfall to prevent potential, future erosion (there is currently no rock or other energy dissipation below the PVC outfall pipe).

I, Adam Compton (*name of qualified environmental professional*), hereby certify that:

a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the *Fish Protection Act*;
b. I am qualified to carry out this part of the assessment of the development proposal made by the developer Shane and Raylene Manson (*name of developer*);
c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation

8. Floodplain Concerns (highly mobile channel)	It is my professional opinion that this measure does not apply to the site as the lake does not have a "highly mobile channel". By signing below I am indicating that based on the above rationale, it is my professional opinion that this site does not warrant a floodplain hazard assessment by a qualified professional. I am not a qualified floodplain hazard assessor and am therefore not qualified to carry out a floodplain hazard assessment. I have not carried out a floodplain hazard assessment; I have only provided an opinion based on my observations and the guidance provided by the RAR Assessment Methods.

I, Adam Compton (*name of qualified environmental professional*), hereby certify that:

9. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the *Fish Protection Act*;
10. I am qualified to carry out this part of the assessment of the development proposal made by the developer Shane and Raylene Manson (*name of developer*);
11. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment

Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation

Section 5. Environmental Monitoring

Given the relatively low risk for environmental impacts within the SPEA to occur during construction of this project, environmental monitoring during construction is likely to be minimal. Additional environmental monitoring will be required during riparian restoration within the SPEA and periodically afterwards, until the maintenance and inspection period has ended. The following outlines the minimum environmental monitoring requirements, which may be increased at the discretion of the environmental monitor if it is deemed necessary to ensure compliance with the goals and objectives contained in this report.

Initial Site Visit:

Prior to commencing any construction or demolition activities on the lot, a qualified environmental professional from EDI must be contacted to conduct a site visit and attend a pre-work meeting with primary contractors conducting the work. The objective of this initial meeting will be to confirm the location of the required silt fencing and to ensure that all contractors are aware of any relevant measures, conditions and requirements specified in the final RAR Assessment Report. EDI shall confirm that a spill kit is present at the site and it shall remain on site during periods when gas/diesel powered equipment are present. Also, a communications plan will be developed during this meeting to deal with any environmental incidents or emergencies that may arise during the course of construction. At a minimum the communications plan will contain contact numbers for the environmental monitor and appropriate provincial, federal and municipal contacts for potential environmental emergencies (hydrocarbon spills, water quality etc.). The environmental monitor must be immediately contacted in the event of any such emergency.

Post Construction Site Visit:

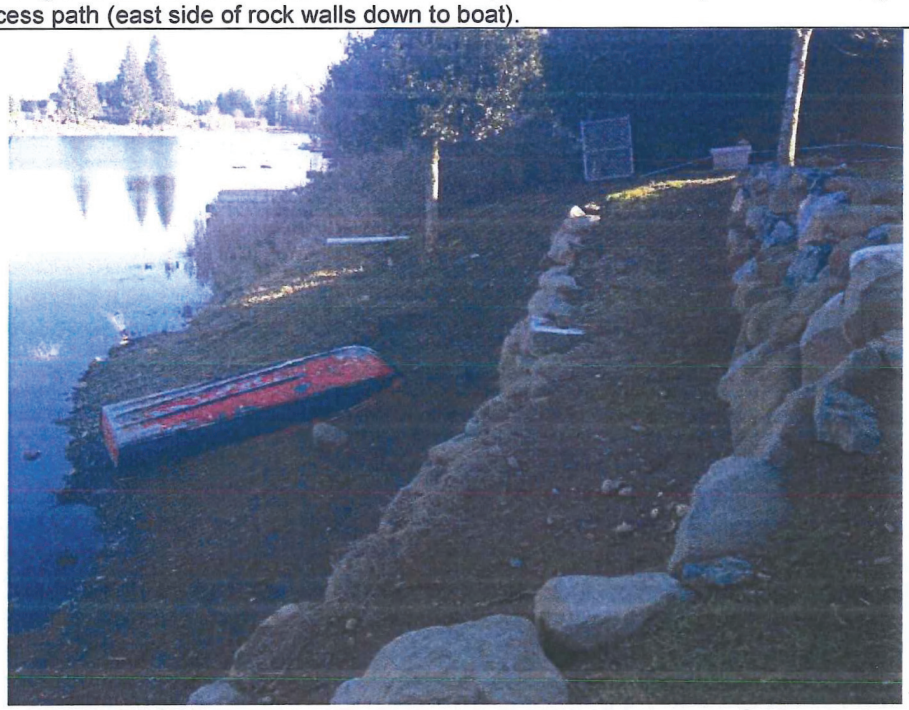
The RAR **requires** that a post-development report be prepared by a QEP to certify that "the conditions set out in assessment reports have been properly implemented". Specifically, the QEP should ensure that all measures to protect the SPEA were properly followed. A post-development report shall be prepared upon completion of construction and riparian restoration activities and a second post-development report shall be prepared following a final site inspection at the end of the specified maintenance period.

Additional Site Visits:

The potential need for additional site visits will be discussed during the pre-work meeting. The communications plan developed at the initial site visit will provide the contact number for the environmental monitor who must be contacted in the event of an environmental emergency. The following is a list of potential reasons to contact the environmental monitor and determine whether an additional site visit is required:

- Hydrocarbon spills
- Generation of sediment laden runoff into the watercourse or the SPEA
- Any damage to existing, natural riparian vegetation within the SPEA

Section 6. Photos

Label	Photo 1. Jan. 29, 2015. Looking southeast at lakeshore and restoration area. Riparian plantings will be located in all areas below the upper rock wall except for the existing access path (east side of rock walls down to boat).
	
Label	Photo 2. Jan. 29, 2015. Looking northwest at existing developed area along back side of house. Existing deck and brick patio will be replaced with an addition.
	

Label	Photo 3. Jan. 29, 2015. Looking southeast at existing developed area along back side of house. Proposed deck will be located above the concrete slab and garden bed.
	
Label	Photo 4. Jan. 29, 2015. View of lake and riparian area from back side of house.
	

Section 7. Professional Opinion

Assessment Report Professional Opinion on the Development Proposal's riparian area.

Date 2015-05-14

1.I/We Adam Compton,

Please list name(s) of qualified environmental professional(s) and their professional designation that are involved in assessment.)

hereby certify that:

a) I am/We are qualified environmental professional(s), as defined in the Riparian Areas Regulation made under the *Fish Protection Act*;
b) I am/We are qualified to carry out the assessment of the proposal made by the developer Shane and Raylene Manson (*name of developer*), which proposal is described in section 3 of this Assessment Report (the "development proposal"),
c) I have/We have carried out an assessment of the development proposal and my/our assessment is set out in this Assessment Report; and
d) In carrying out my/our assessment of the development proposal, I have/We have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation; AND

2. As qualified environmental professional(s), I/we hereby provide my/our professional opinion that:

a) [x] if the development is implemented as proposed by the development proposal there will be no harmful alteration, disruption or destruction of natural features, functions and conditions that support fish life processes in the riparian assessment area in which the development is proposed, **OR**

(Note: include local government flex letter, DFO Letter of Advice, or description of how DFO local variance protocol is being addressed)

b) [ ] if the streamside protection and enhancement areas identified in this Assessment Report are protected from the development proposed by the development proposal and the measures identified in this Assessment Report as necessary to protect the integrity of those areas from the effects of the development are implemented by the developer, there will be no harmful alteration, disruption or destruction of natural features, functions and conditions that support fish life processes in the riparian assessment area in which the development is proposed.

[NOTE: "qualified environmental professional" means an applied scientist or technologist, acting alone or together with another qualified environmental professional, if

(a) the individual is registered and in good standing in British Columbia with an appropriate professional organization constituted under an Act, acting under that association's code of ethics and subject to disciplinary action by that association,
(b) the individual's area of expertise is recognized in the assessment methods as one that is acceptable for the purpose of providing all or part of an assessment report in respect of that development proposal, and
(c) the individual is acting within that individual's area of expertise.]

OWNER'S VARIANCE RATIONALE

2232 Dockside Way
Nanaimo BC V9R 6T8

City of Nanaimo
455 Wallace Street
Nanaimo BC V9R 5J6

Re: Rational for Variance application,

Our initial reason for planning the proposed addition was to create additional living space (small legal suite) for my aging father. The plan we have submitted allows us to create this space for him while maintaining living space for our family. The proposed developments that are within the 15 m zoning bylaw setback from the lake including a proposed addition where we replace existing deck and brick patio beneath the deck by closing it in an making it part of the indoor living space. We thought this would make the best use of space, as the foundation of the proposed addition would occupy the same area as the foundation of the existing brick patio.

Also, by creating a new deck above the existing brick patio, stairway and small garden bed we thought it would be the least intrusive way to maintain a deck for the upper floor without majorly disrupting the current garden, as it would not require a new foundation.

After seeking professional advice from an environmental biologist it was also conformed that this plan would not "cause adverse environmental impacts" as the plan stay within the current developed footprint of the property. We are committed to ensure that the recommended standard mitigation measures are implemented and adhered to during this project.

Thank you,

Regards,

Raylene Manson