AQUAPARIAN
Environmental Consulting Ltd.

August 11, 2025

Michele Yung
[redacted]

C/O Rachel Sansom A.Sc.T
Grayland Consulting Ltd.

Via Email: [redacted]
Cc: [redacted]

RE: 2367 ARBOT ROAD, NANAIMO BC
RIPARIAN RESTORATION PLAN

1.0 INTRODUCTION

Aquaparian Environmental Consulting Ltd. (Aquaparian) was retained to complete a riparian restoration plan for 2367 Arbot Road waterfront to Westwood Lake in Nanaimo, BC. The subject parcel is 1.16ha in area and zoned Commercial Recreation Centre (CC6) and is currently developed as the Westwood Tennis Club. The parcel is proposed to be rezoned for construction of a multi-family townhouse development. A drawing showing the proposed townhouse development has been provided by Java Designs and is included as Figure 1. The property is located between Arbot Road and the Westwood Lake trail which runs along the lake edge. Most of the parcel has been developed for use as a tennis club. A review of the Official Community Plan (City Plan 2022) and the City Map identifies that Westwood Lake has a 15m Development Permit Area (DPA) 1 – Environmentally Sensitive Areas (Watercourse). In addition, a secondary planting area has been included to enhance the function of the riparian area.

The DPA includes a strip of park where the trail is aligned and then extends into the subject parcel approximately 7.8m on the west side of the parcel and 5.9m on the east side.

2.0 VEGETATION RESTORATION PLAN

Two planting areas have been proposed. Planting Area #1 is to restore the 15m DPA within the parcel. The DPA extends into the parcel approximately 7m on average across the south boundary of the property. The planting area is 75m long. The overall average restoration area is 525m^2. There will be a 1.5m wide foot path to the waterfront (~10m^2),

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and 80m^2 has been subtracted from the planting area to account for the area occupied by scattered mature Douglas fir trees and their root zones. The resulting restoration area is **435m^2**. This will include the removal of a 60m strip of Himalayan blackberry (*Rubus armeniacus*) from the fence line. The area of blackberry removal within Area #1 is approximately (2.5m x 60m) 150m^2. Area #1 will be planted densely as specified by the City of Nanaimo Landscape Design Criteria (Manual of Engineering Standards & Specifications 14th Ed. 2022) with trees spaced 3.0m on centre and shrubs spaced one per 0.75m apart. Small shrubs are to be spaced 0.5m apart. Nootka rose and snowberry have been selected to be densely planted in this area for their ability to form a thicket and outcompete Himalayan blackberry to prevent it from growing back in. There is a slope at the back of the planting area where a row of oceanspray can be planted as it likes to grow on slopes. Oceanspray is known to grow quite large and should be spaced 2m apart to allow it to spread. Place two sword ferns between each oceanspray. Area #1 will be protected from encroachment with a split rail fence along the north side and the west side where the trail will be positioned. The trail will be < 1.5m wide and surfaced with impervious material such as bark mulch as per the City of Nanaimo requirements identified in the DPA Guidelines (Zoning Bylaw No. 4500).

Area #2 has been planned to enhance and strengthen the features and functions of the Riparian Zone of Westwood Lake. Mature trees will be left in place, invasive species such as Himalayan blackberry and English ivy (*Hedera helix*) will be removed, and native understory species will be installed. The size of Area #2 was estimated by placing an overlay image of the townhouse development plan (Fig. 1) onto Google Earth and measuring the approximate area with the measurement tool. The area is ~1200 m^2 in total and corresponds with the tree root protection setback recommended by the arborist report completed by Capital Tree Service Inc. This planting area will be less densely planted, concentrating understory species in and around the existing trees. Approximately 20 large diameter mature trees are scattered through planting Area #2. To account for the existing mature trees and root zones, 80m^2 has been subtracted from the planting area and an additional 8m^2 has been subtracted to account for the path resulting in a restoration area of **1122m^2**. Plant trees 5m apart, sword fern 1.0m apart, and salal and dull Oregon-grape 0.5m apart in Area #2. Species chosen were selected to create a Douglas-fir / Dull Oregon-grape forest community, which is suitable to the conditions identified and a provincially red-listed ecological community.

2.1 Planting Plan

Aquaparian recommends re-vegetation using species and densities identified in the table below. Overall planting density to be achieved as per the City of Nanaimo Landscape Design Criteria

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includes trees spaced 3m apart on centre, shrubs spaced 0.75m apart, and groundcover species spaced 0.5m apart with the goal of 100% cover within 2-3 years. If species substitutions are required because of availability, Aquaparian is to be consulted to ensure the proposed substitution is appropriate for the site. Conditions were observed to be characteristic of a dry Douglas-fir forest. Though riparian to Westwood Lake, moisture tolerant plants appeared to be restricted to the lake edge. The subject parcel slopes up from the trail and was observed to have dry soil conditions and a mature Douglas-fir canopy.

TABLE 1. PLANTING PLAN

Common Name	Species	Spacing	Size	No.	Cost per	Total
Area #1: 455m^2	**Dense Riparian Buffer**					
Bigleaf maple	*Acer macrophyllum*	3m	5 gal	5	$30.00	$150.00
Sword fern	*Polystichum munitum*	1m	1 gal	76	$11.00	$836.00
Oceanspray	*Holodiscus discolor*	2m	1 gal	38	$11.00	$418.00
Nootka rose	*Rosa nutkana*	0.75m	1 gal	186	$11.00	$2,046.00
Snowberry	*Symphoricarpos albus*	0.75m	1 gal	186	$11.00	$2,046.00
Sub-total				491		$5,496.00
Area #2: 1122m^2	**Douglas-fir / Dull Oregon-grape Ecosystem**					
Douglas fir	*Pseudotsuga menziesii*	5m	2 gal	5	$17.50	$87.50
Grand fir	*Abies grandis*	5m	2 gal	3	$17.50	$52.50
Oceanspray	*Holodiscus discolor*	2m	1 gal	15	$11.00	$165.00
Sword fern	*Polystichum munitum*	1m	1 gal	300	$11.00	$3,300.00
Salal	*Gaultheria shallon*	0.5m	10cm	730	$4.50	$3,285.00
Dull Oregon-grape	*Mahonia nervosa*	0.5m	10cm	730	$4.50	$3,285.00
Sub-total				1783		$10,175.00
TOTAL				**2274**		**$15,671.00**

*Note: cost estimates are for planning purposes and are based on the Streamside Native Plants Wholesale Price Guide. Costs will vary depending on the supplier.

The City of Nanaimo requires a Landscape Bond for Development Permit Applications based on % (plants, materials & labour) of the cost estimate in the form of either a credit card, irrevocable letter of credit or cheque/cash. A portion of the bond will be returned following a 1-year inspection and the remainder returned after the 2-year inspection if the planting was successful. The cost to include installation can be roughly estimated by doubling the cost of plants. Alternately, an installation estimate can be provided by a landscape company for accuracy.

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Bond estimate:

Plants: $15,671.00
Topsoil with organic compost: 2.6 cubic yards @ $68/cu yard to backfill 2198 plants: $176
NaturaBone meal (Home Hardware) 15 bags @ $43/10kg bag: $645
Mulch (Milner Group Gravel Mart, Nanaimo): 8.5 cubic yards + delivery: $580
Labour: $17,072
Bond: $34,144

2.2 PLANT SOURCES

Streamside Native Plants
7455 Island Highway West, Bowser, BC V0R 1G0
Phone/Fax: 250-757-9999 / Toll Free: 1-877-570-3138
https://www.streamsidenativeplants.com/
E-mail: orderdesk@streamsidenativeplants.com

Green Thumb Nurseries
6261 Hammond Bay Road, Nanaimo BC V9T 5M4
Phone: 250-758-0808
E-mail: greenthumbnurseriesnanaimo@gmail.com

Satinflower Nurseries
2716 Dooley Rd, Saanich BC
778-679-3459 (Saanich)
4286 Metchosin Road, Metchosin BC
(778-679-8051 (Metchosin)
E-mail: info@satinflower.ca

2.3 INSTALLATION & MAINTENANCE RECOMMENDATIONS

1. **Himalayan blackberry removal:**

- Plan for blackberry removal in late August/September when the plants are stressed and when the migratory bird nesting season (March 15-August 15) is over, as clearing during the nesting season is not advised;
- Hand removal is only successful if all parts of the plant are removed. This includes canes, roots and root crowns;

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- Hand pulling is recommended for small seedlings or young plants or shade-supressed canes in the understory. Pull when plants are large enough to grasp but have not produced seeds.
- Dig/grub more established plants, avoid leaving root fragments behind as they may re-sprout. Claw mattocks or Pulaski's have been proven to be effective tools.
- Cut canes down to ~30cm before digging/grubbing to remove thickets while easily locating root crowns;
- Bag or tarp all plant parts and seeds before transporting to a designated disposal facility such as a landfill or destroy by incineration;
- Take special care when removing blackberry near the lake to prevent the movement of plant parts to other riparian locations;
- Spread straw over exposed soils to prevent erosion until native plants have been installed and soils are stable, and,
- Methods were based on the Himalayan Blackberry FactSheet available from the Invasive Species Council of BC which has been included with this report as Appendix B.

2. English Ivy Removal:

- Hand pulling and cutting of vines can be effective in late summer or fall, when plants are easier to remove;
- Above ground vines should be cut and pulled so no rooted portions re-grow;
- Climbing vines growing on a host plant can be cut at a comfortable height to kill upper portions. Rooted vines should be pulled as they remain alive after cutting;
- Mechanical removal is labour intensive and may require several years to eradicate;
- Wear gloves and long sleeves when pulling to avoid skin rash;
- Bag and dispose of all parts of the plants at a landfill so they do not set new roots; and,
- Methods were based on the English Ivy FactSheet available from the Invasive Species Council of BC which has been included with this report as Appendix B.

3. Plant Installation

- Install silt fencing (properly trenched into the ground at the base) along the east property boundary to prevent migration of fines into the lake during plant installation and leave in place until soils are stable;

- It is recommended that installation of vegetation is completed spring or early fall in cool, wet weather and should be maintained and irrigated as necessary through at least three summer seasons to optimize survival;

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- Use a pocket planting method to install plants. Dig a hole 2x the size of the pot and backfill with a mixture of 50% organic compost and 50% topsoil;

- Install plants with a handful of bone meal into the planting hole to reduce transplant shock;

- Cover the planting area (leaving a gap around the plant) with a layer of 50% composted organic bark mulch to help retain moisture and reduce surface erosion. Water plantings immediately and as often as necessary until established – especially through the first two or three summers. Planting in cool wet weather will reduce transplant shock and allow the plants to establish root systems without drought stress;

- Area #1: Overall shrub density should be approximately one tree per 3m spacing (on centre), one shrub per 0.75m as per City of Nanaimo Landscape Design Criteria;

- Area #2: Slightly less dense - plant sword fern 1m apart, salal and dull Oregon-grape 0.5m apart, and space trees 5m on center;

- For both Area #1 and Area #2, leave 2m around oceanspray because they spread and grow large;

- Plant placement should mimic a natural growth pattern i.e. clusters of same species;

- Concentrate sword fern around the base of mature Douglas fir trees as it is shade tolerant;

- A maintenance period of three years is recommended to determine planting success. Every year the site will need to be inspected for invasive species growth and dead plants. Invasives plant species including are to be fully removed from the restoration areas including the roots as often as necessary and dead plants are to be replaced until 100% cover is achieved. Natural infill is expected to occur from the selected species.

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3.0 CLOSURE

This report has been based on a site assessment, past project experience and in accordance with generally accepted biological practices. No other warranty is made, either expressed or implied. Aquaparian trusts that the information provided in this report meets your requirements. Any questions regarding information provided in this document, please contact the undersigned at (250) 591-2258.

Sincerely,

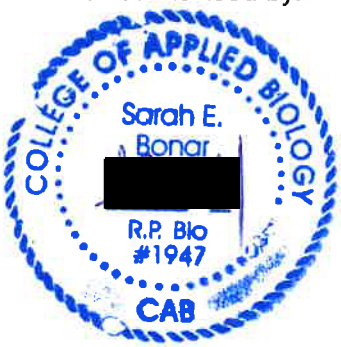
AQUAPARIAN ENVIRONMENTAL CONSULTING LTD.

Prepared by:

[redacted]

Jeni Rowell, B.Sc.
Biologist-in-Training

Reviewed/Revised by:



Sarah Bonar B.Sc., R.P.Bio
Senior Biologist / Principal

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FIGURE 1

PROPOSED DEVELOPMENT LAYOUT

(JAVA DESIGNS)

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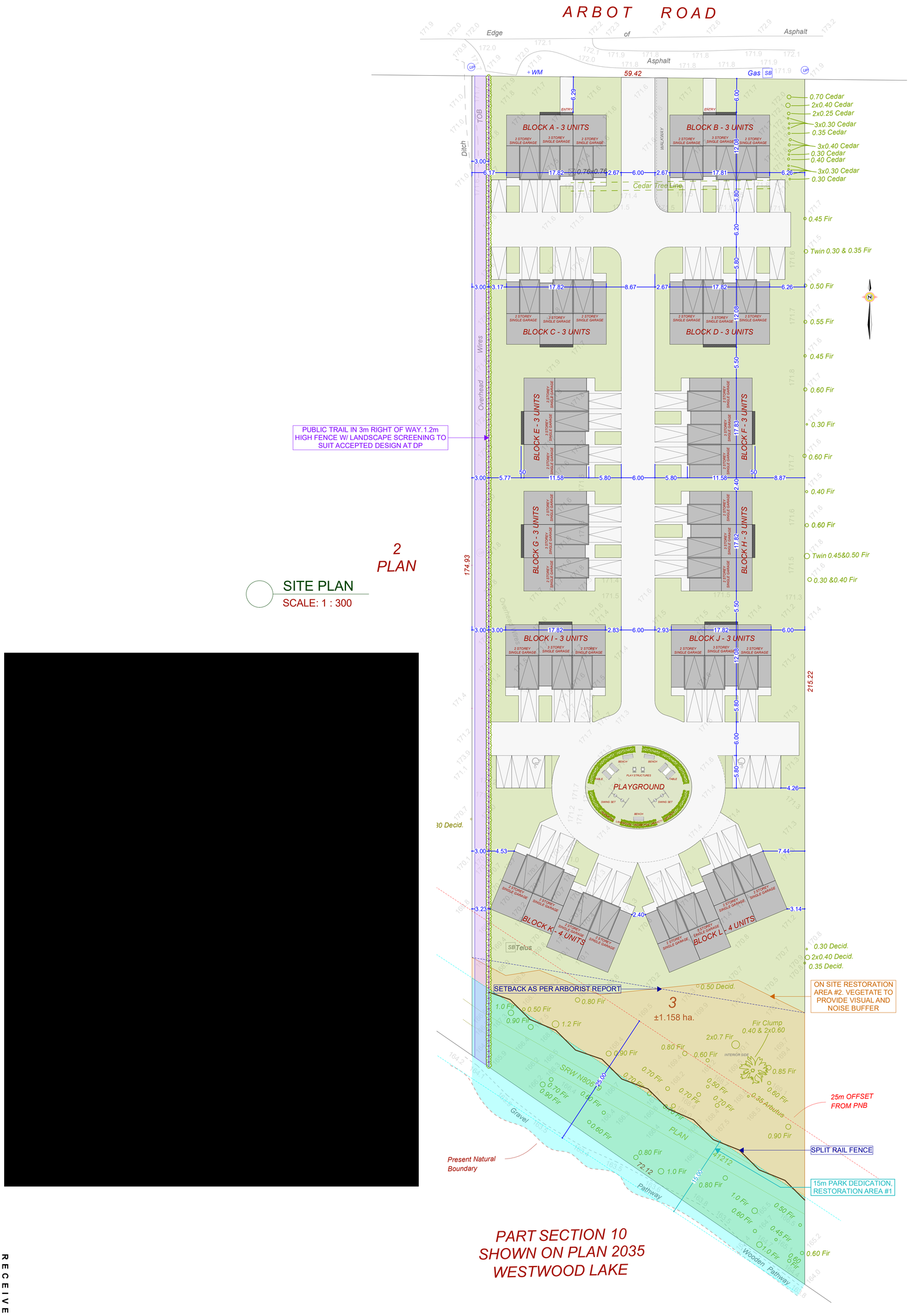

2
PLAN

SITE PLAN
SCALE: 1 : 300

[redacted]

PART SECTION 10
SHOWN ON PLAN 2035
WESTWOOD LAKE

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SHEET NUMBER A1	JAVA DESIGNS 102 - 2871 JACKLIN ROAD VICTORIA BC V9B 0P3 JAVADESIGNS.CA 250.590.2468	ISSUE DATE: JUL 21, 2025 DRAWN BY: NS CHECKED BY: KL	DRAWING NAME: PROPOSED TOWNHOUSE DEVELOPMENT DRAWING SCALE: SEE DRAWINGS	ADDRESS: 2367 ARBOT RD, NANAIMO BC CUSTOMER: LIMONA HOLDINGS LTD	

APPENDIX A

PLANTING PLAN ILLUSTRATION

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APPENDIX A – ILLUSTRATED PLANTING PLAN

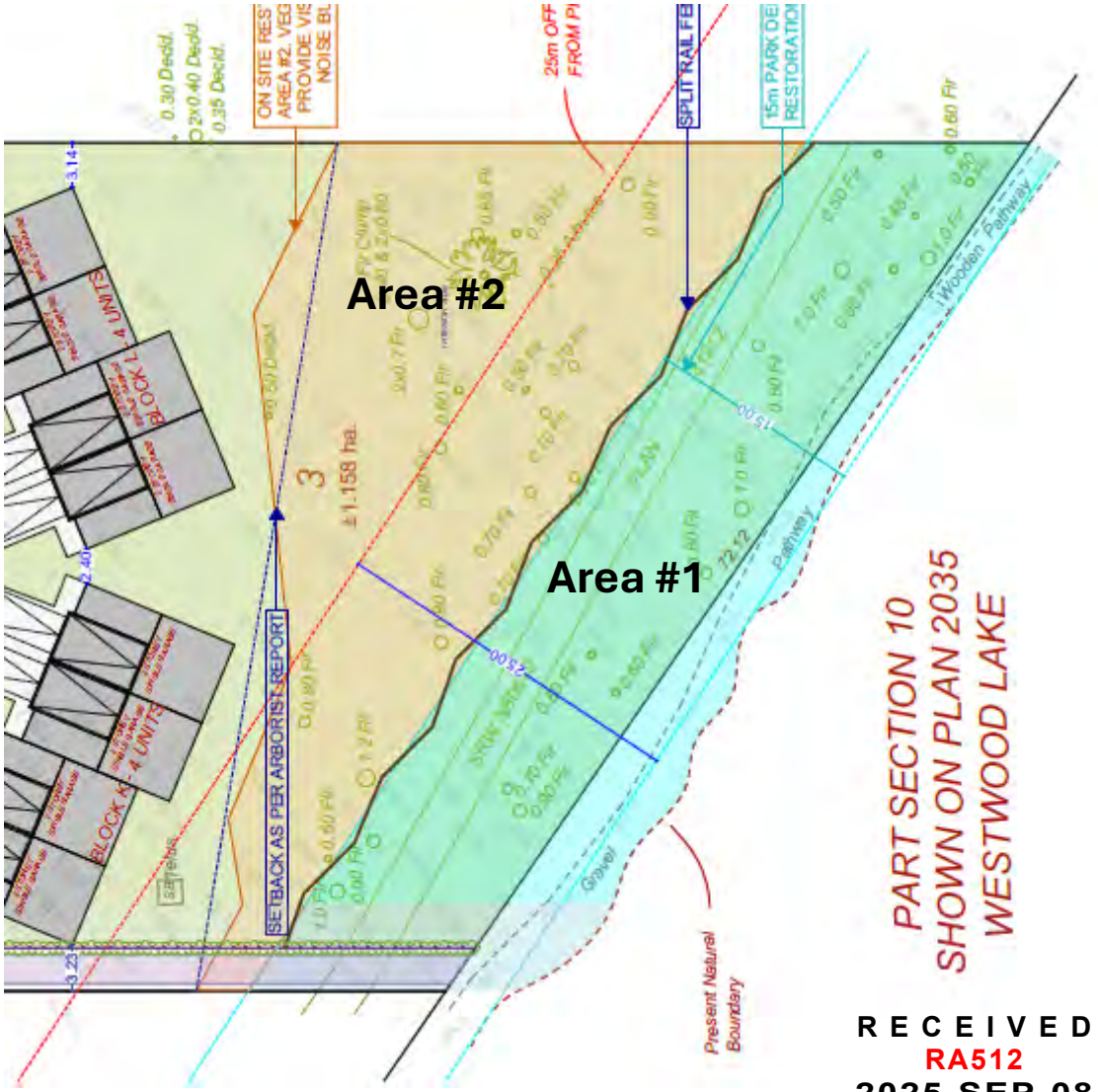

Figure 1. Restoration Planting Areas

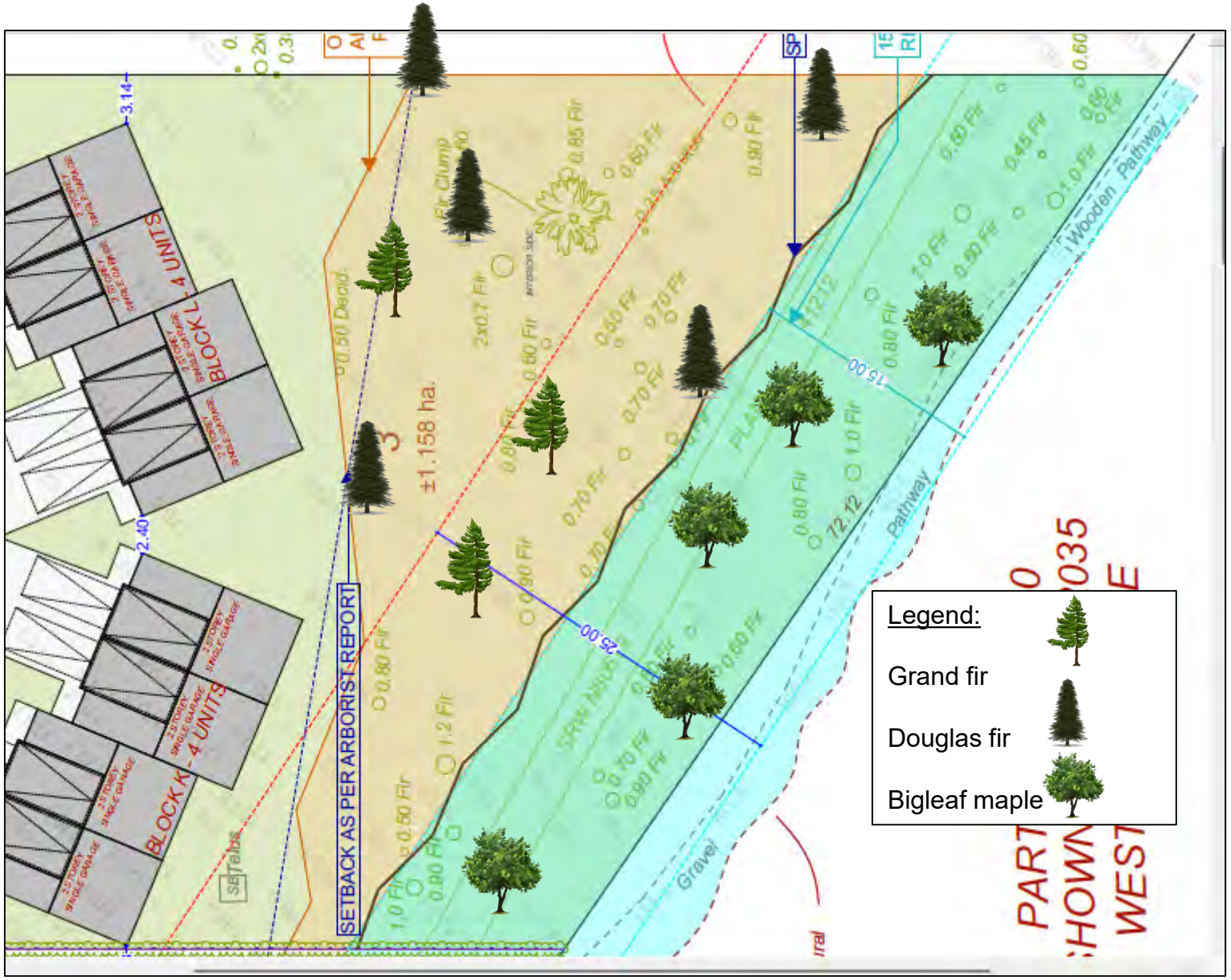

Figure 2. Example of tree placement amongst existing trees
(Note: Consider avoiding placement of new trees directly in view lines of units)

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Figure 3. Area #1 plantings example

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Figure 4. Area #2 plantings example

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APPENDIX B

INVASIVE SPECIES COUNCIL OF BC

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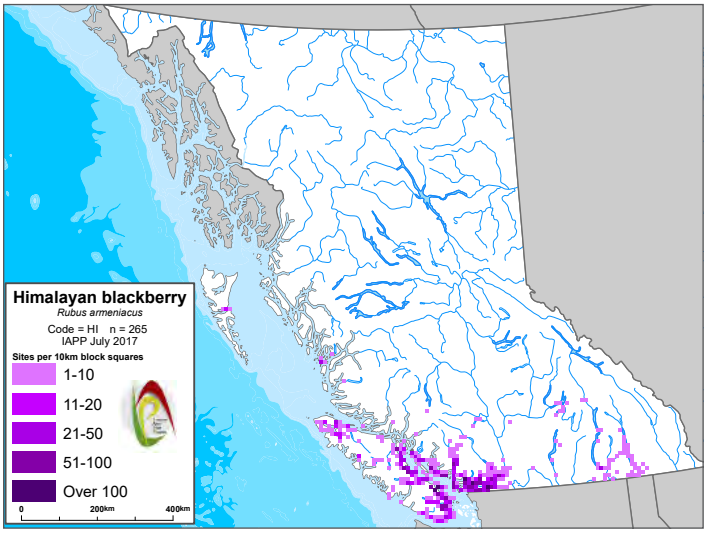
Invasive Species Council of BC

FACTSHEET
MARCH 2019

Himalayan Blackberry *Rubus armeniacus*

Legal Status

Community Charter



Distribution

Currently in BC in the Lower Mainland, Sunshine Coast, Fraser Valley, Gulf Islands, Central to Southern Vancouver Island.

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.

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Reproduction: Reproduces by seed and 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.

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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.

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 Himalayan blackberry: dicamba, glyphosate, triclpyr or metsulfuron methyl alone. Triclopyr + aminopyralid is alo effective.
- 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. https://www2.gov.bc.ca/gov/content/environment/pesticides-pest-management/managing-pests

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
- DiTomas J, M., G.B. Kyser et al. 2013. Weed Control in Natural Areas in Western United States. Weed Research and Information Centre, University of California. 544 pp https://wric.ucdavis.edu/information/natural%20areas/wr_R/Rubus.pdf

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

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Invasive Species Council of BC

FACTSHEET
MARCH 2017

English Ivy *Hedera helix*

About English Ivy

English ivy is a widely planted ornamental that arrived in North America during colonial times. It is indisputable that English ivy inhibits the growth and regeneration of native wildflowers, shrubs and trees through shading smothering and associated harmful pathogens.

Legal Status

Community Charter, Spheres of Concurrent Jurisdiction – Environment and Wildlife Regulation.

Distribution

English ivy is currently found in southwestern BC, along the coast, island, and Haida Gwaii. There have been isolated reports of English ivy in the southern interior and Kootenays.

Identification

Flowers: Flowers are an umbel-shaped cluster of small, greenish-yellow flowers with five thick and pointed petals each 3 mm long. Petals radiate from green, five-sided floral disks.

Stems: An evergreen, climbing shrub that can form dense ground cover or climb to 30 m by aerial roots. Stems can grow to 25 cm in diameter when climbing. Vines covered in gray-brown shiny bark, with raised leaf scars.

Leaves: English ivy has thick, waxy, dark-green leaves with three to five pointed lobes when juvenile. Mature plants have erect branches with unlobed leaves with terminal flower clusters. Leaves are alternate, broadly egg-shaped, ranging from 5-10 cm long and 6-12 cm wide.

Fruits: Are dark blue to purplish, growing in clusters of spherical drupes each 6-9 mm diameter.

Similar Native Species: Salal *(Gaultheria shallon)* is a native creeping to erect shrub found in southwestern BC. While salal does not climb, it can also be differentiated by leaf width and the presence of toothed leaf margins, unlobed leaves, as well as nodding flowers and fruits.

Ecological Characteristics:

Habitat: English ivy does best in moist, open forests, but is adaptable to a range of soil and moisture conditions. Young plants are shade tolerant enabling growth under existing dense stands of plants and trees.

Reproduction: English ivy flowers from late summer to early fall. Vegetative reproduction can occur from cuttings or from juvenile stems in contact with the ground.

Dispersal: The plant remains vegetative when growth is horizontal, but turns reproductive when allowed to climb. Fruit and seeds can be eaten and spread by birds.

Impact

Ecological: English ivy can form dense monocultures that spread on the ground and on other plants and trees. It can suppress and exclude native vegetation by smothering them and competing for light. The excessive weight of English ivy growing on native plants can leave them more vulnerable to blowdown and disease. English ivy can also create unsuitable wildlife habitat and forage availability. It can serve as a vector of Bacterial Leaf Scorch *(Xylella fastidiosa)*, a plant pathogen that is harmful to maples, oaks, elms, and other native plants.

Economic: Has the ability to damage infrastructure it grows on.

Health impacts: Has been found toxic to humans when eaten and may cause dermatitis in sensitive individuals.

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.

A. Prevention

- **Monitor** for English ivy in community gardens, along built-up walls and trees, and in understory vegetation.
- **Destroy** single plants or new infestations early, before seeds are produced.
- **Maintain** a strong, competitive perennial plant cover.

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- **Plant** native and non-invasive species in gardens and community horticulture areas.
- **Bag or tarp** plants, plant parts, and seeds before transporting to a designated disposal site. Do not compost plants.

B. Mechanical control

- Hand pulling and cutting of vines can be effective in late summer or fall, when plants are easier to remove. Aboveground vines should be cut and pulled so no rooted portions re-grow. Mechanical control is labour intensive and may require several years to eradicate, depending on size of area. If pulling, wear gloves and a long-sleeved shirt, as English ivy has been reported to cause skin rashes when handled.
- Climbing vines growing on a host plant can be cut at a comfortable height to kill upper portions. Rooted vines should be pulled as they remain alive after cutting; a combination of cutting and herbicide can be used for more effective treatment.
- Mechanically removed plants should be bagged and disposed of properly in a landfill, where plants cannot set new roots.

C. Biocontrol

- There are currently no biocontrol agents available for English ivy.

D. Chemical control

Herbicide recommendations and use must first 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.

- U.S. research shows triclopyr or glyphosate applied for successive years can provide control. Using a combination of mechanical trimming to reduce layers and injure leaves with herbicide application on cut surfaces has been shown to aid herbicide penetration and increase uptake. Repeated treatments may be necessary, and there may be a possibility of host trees absorbing herbicides.
- Applications of herbicides can be made throughout the year. As English ivy can continue to grow into the winter, killing host plants can be avoided as long as temperatures are above 12 degrees Celsius. Winter application in Oregon has shown good control at this time of year.
- The addition of surfactants in herbicide applications can increase efficacy.

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/epdpa/ipmp/index.html

Disposal

Note: *Disposal of invasive plants varies by region. Contact your local government for specific information on how to dispose your invasive plants.*

- Chemically treated plants can be left on site to compost.
- Tarp and bag removed plants, plant parts and seeds before transporting to a designated disposal site (e.g. landfill or transfer station).
- It is recommended that transfer stations provide disposal bins intended solely for invasive plants. This will ensure the plant matter within the container is transported in a sealed unit and properly disposed of at the landfill.
- Burning and composting at home is not recommended as extreme temperatures are required.

References/Links

BC Laws. http://www.bclaws.ca

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Invasive Plants of the Eastern United States. http://www.invasive.org/eastern/srs/EI.html

Invasive Plants of Southwestern BC website. http://www.shim.bc.ca/invasivespecies/_private/englishivy.htm

Oregon State University Extension Service. http://extension.oregonstate.edu/gardening/node/948

Plant Conservation Alliance. https://www.nps.gov/pLants/alien/fact/hehe1.htm

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