ENVIRONMENTAL ASSESSMENT

FOR 773 & 755 CORDOVA BAY ROAD & 5371 ALDERLEY ROAD

PREPARED FOR:

ARAGON (CORDOVA BAY) PROPERTIES LTD.
201 – 1628 WEST 1ST AVE
VANCOUVER, BC V6J 1G1

AND

DISTRICT OF SAANICH
770 VERNON AVE
SAANICH, BC V8X 2W7

CORVIDAE PROJECT #2024-025
JUNE 2025

CORVIDAE
ENVIRONMENTAL CONSULTING INC

6526 WATER STREET, SOOKE, BC

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF PHOTOS

CAVEAT

This Environmental Assessment (EA) has been prepared with the best information available at the time of writing, including the District of Saanich Official Community Plan, communications with the client and regulators, site visits, review of site plans and design drawings and other documentation relevant to the project. This EA has been developed to assist the project in remaining in compliance with relevant environmental regulations, acts and laws pertaining to the project and to identify and mitigate the expected impacts of the project and reclamation activities directly related to the project.

1 INTRODUCTION

Corvidae Environmental Consulting Inc. (Corvidae) is pleased to provide this Environmental Assessment (EA) for the proposed development of 773 Cordova Bay Road (PID 005-917-310; LOT 2 PLAN VIP6042 SECTION 41 & 42 LAKE EXCEPT PLAN 8605), 755 Cordova Bay Road (PID 005-949-891; LOT 5 SECTION 42 LAKE PLAN VIP651 EXCEPT PLAN EPP38166), and 5317 Alderley Road (PID 004-158-687; LOT B SECTION 41 LAKE PLAN VIP15533), referred to collectively as "the Site". The Site is currently zoned as Residential Mixed (RM-3TR), Industrial (M-2), and Recreation and Open Space (P-4). Site boundaries are shown in Figure 1, designated by the red polygon.

Aragon (Cordova Bay) Properties Ltd. (Aragon) is proposing to develop a master-planned residential community on the Site. The preliminary plans for the development include a combination of housing types (e.g., townhomes, duplexes, and multi-family residential), commercial space, and designated park and greenspace areas. The development is comprised of 13 smaller development areas (DA-1 though DA-13). This report has been prepared as part of the comprehensive development permit application for all development areas. The preliminary site plan is shown in Figure 2.

The Site is a decommissioned gravel mine and is highly disturbed. However, some remaining Douglas-fir forest ecosystem remains at the property edges (Figure 1). The Site is located within the Saanich General DPA.

This document addresses the requirements in Schedule B of the District of Saanich Official Community Plan (OCP) Bylaw No. 10000 and provides an assessment of the environmental conditions on the Site, potential impacts of the proposed development, and recommendations on the protection of environmentally sensitive features and methods to minimize impacts of the proposed development.

Project area and environmental features

- Storm drain
- Drainage
- Douglas-fir forest
- Wildlife Tree
- Surface water
- Property Boundary
- Seepage
- Shiny Geranium infestation

0 25 50 100 150 200 Meters

Project: 773 Cordova Bay Road, 755 Cordova Bay Road and 5317 Alderley Road
Sources: Capital Regional District

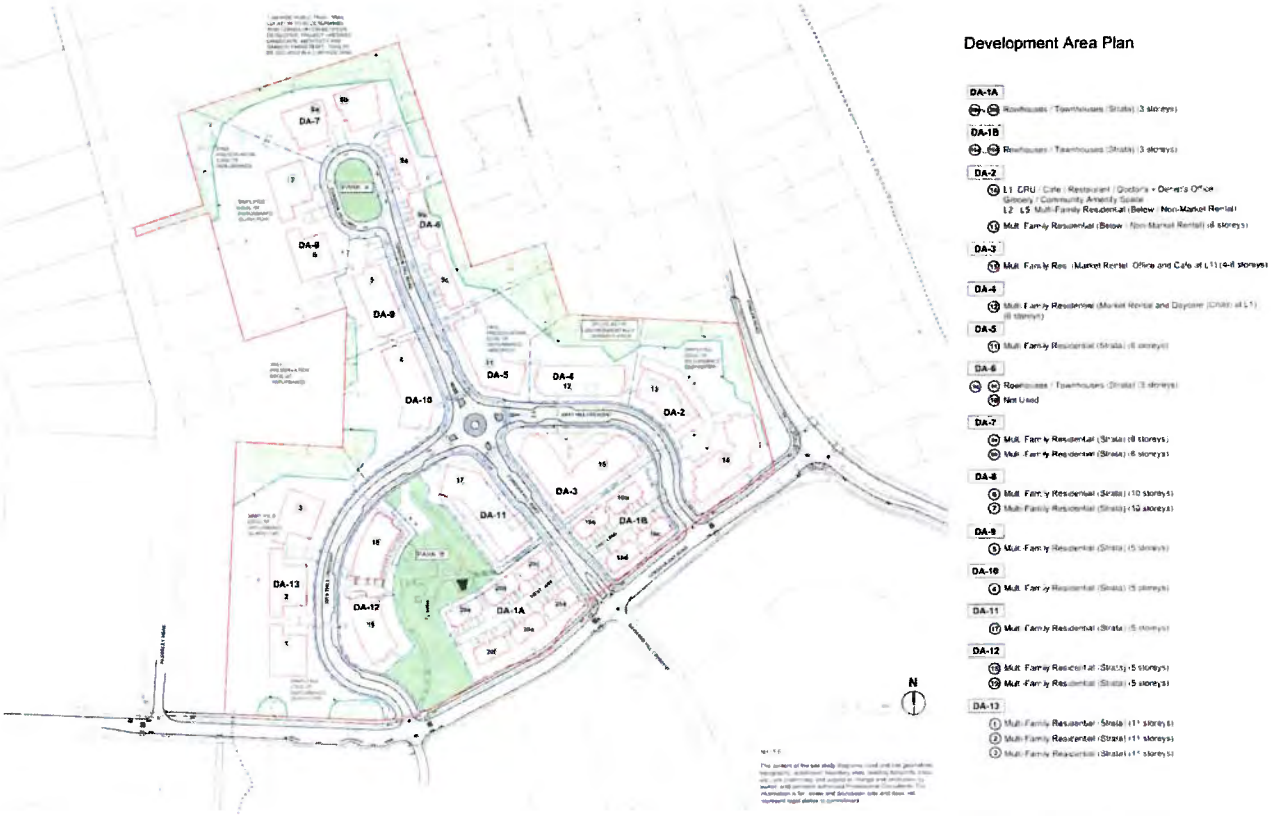
CORVIDAE ENVIRONMENTAL CONSULTING INC

Rev #	Date
0	April 02, 2024

Corvidae Project No.
COR-2024-025

Figure 1

Figure 2. Site Plan



1.1 REGULATORY FRAMEWORK

This environmental assessment is designed to comply with the provisions set out in the District of Saanich Official Community Plan (OCP) for development permit areas and for compliance with the provisions for environmental protection contained in the following relevant legislation:

Municipal

- Sustainable Saanich OCP, Schedule A to OCP Bylaw 2023, No. 10000 (DOS 2024a)

3.1.5.n. The design and siting of buildings should aim to incorporate and retain high value trees and natural habitat.

3.6.1.a. The total impervious cover of the site should minimize impact on the receiving aquatic environment. The use of green infrastructure such as bioswales, raingardens and on-site filtration should be designed to treat and manage rainwater runoff.

3.6.1.b. Site design should incorporate, where appropriate, green infrastructure elements to protect and enhance natural riparian zones, watercourses and urban forests within major centers.

3.6.1.c. Wherever possible, preserve areas (including buffers) which contain plants and animal habitat which are designated by the Federal Species At Risk Act and are red listed (endangered) or blue listed (vulnerable) by the Conservation Data Center.

3.6.1.d. Invasive Species should be removed from properties as per Saanich's Noxious Weed Bylaw and provincially recognized high priority invasive species.

3.6.1.e. Naturescape principles should be followed in landscape design and restoration efforts.

The guiding principle for the use of Development Permits is found within the *Local Government Act*. Development Permit Areas can be designated for purposes such as, but not limited to the following:

- Protects, enhances and restores the biodiversity and ecological values and functions of environmentally sensitive areas.
- Fosters compatibility between development, existing land uses and environmentally sensitive areas.
- Maintains connectivity between sensitive ecosystems; and
- Protects water quality and quantity.

Provincial

- Wildlife Act
- Invasive Species Council of BC
- Weed Control Act

Federal

- Migratory Birds Convention Act
- Species at Risk Act (SARA)

2 SCOPE OF WORK

Corvidae completed an environmental assessment for the Site. The environmental assessment documented the ecological features on the Site. Background information was reviewed, including applicable databases. The following features were documented during the assessment and are discussed in this report:

- Areas of sensitivity including Douglas-fir forest ecosystem,
- Areas of habitat and biodiversity values,
- Plant communities and plant species on site,
- Potential wildlife presence and wildlife habitat,
- Soil types and terrain, and
- Surface water flow patterns.

Following the field assessment, the biophysical features were mapped. Mitigations to minimize the impacts of the proposed residential development on the environment have been provided in Section 6.

3 METHODS

3.1 DESKTOP REVIEW

Baseline biophysical conditions were compiled by reviewing the best available data and information including existing reports for the area and conducting searches of online provincial and federal databases:

- BC Conservation Data Centre (BC CDC 2025a and 2025b);
- BC HabitatWizard (Province of BC 2025);
- Aerial photographs of the Site (Google Earth 2025);
- CRD mapping system and database (CRD 2025);
- SaanichMap (DOS 2025);
- Sustainable Saanich OCP Schedule A to Bylaw 2023, No. 10000 (DOS 2024b).

3.2 FIELD ASSESSMENT

A field assessment of the Site was completed in March 2024 by a Qualified Environmental Professional (QEP) from Corvidae. The assessment included characterization of vegetation and habitat types, wildlife sign and species observations, wildlife habitat, and assessment of the current conditions of the Site.

4 ENVIRONMENTAL SITE ASSESSMENT

Corvidae completed a site visit on March 20th, 2024. Site photographs are included as Appendix A.

4.1 LAND USE

The Site was historically used as a gravel mine for Trio Gravel Mart. The gravel mine has been inactive since the early 2000s, though some structures and equipment remain. The Site fronts Cordova Bay Road to the south and is bound by residential properties to the north, east, and west.

4.2 CLIMATE AND BIOGEOCLIMATIC ZONE

The project is located within the Coastal Douglas-fir (CDF) biogeoclimatic zone, specifically in the Moist Maritime Coastal Douglas-fir Subzone (CDFmm) (BC CDC 2023b). The CDFmm occurs at low elevations (<150 m) along southeast Vancouver Island, the southern Gulf Islands, and part of the Sunshine Coast. The CDFmm has the mildest climate in Canada. This subzone has a long growing season with warm, dry summers and mild, wet winters.

4.3 TERRAIN AND SOILS

Soils in the CDF biogeoclimatic zone are generally derived from morainal, colluvial, and marine deposits, and are typically Brunisols, grading with increased precipitation to Humo-Ferric Podzols (Nuszdorfer et al. 1991). The natural terrain and soils on the Site have been altered by historic mining activity. The western Site boundary has steep west-facing slopes ranging from 30 – 100% grade. The northern and eastern boundaries are also steep with approximately 30% slopes.

4.4 VEGETATION

The Site has been cleared of most natural vegetation as a result of previous gravel mining activity. Exotic and invasive species have established in the previously cleared areas and are particularly dense in the southwestern corner of the Site. Invasive species identified include Scotch broom, Himalayan blackberry, yellow archangel, oxeye daisy, poison hemlock, and more. Oxeye daisy and poison hemlock are also listed as a "noxious weed" by the District of Saanich Noxious Weed Bylaw No. 8080 (DOS 2000). A patch of shiny geranium, a high-priority invasive species, is growing at the southern boundary of the Site, near Cordova Bay Road (Figure 1). Measures to remove and prevent invasive species are provided in Section 6.

COASTAL DOUGLAS-FIR ECOSYSTEM

SaanichMap shows a mapped polygon of Coastal Douglas-fir (CDF) young forest along the northeast boundary of the Site. The actual boundary of the CDF forest was field verified during the assessment and is shown in Figure 1.

The western CDF polygon represents a young forest ecosystem. This ecosystem has been degraded due to fragmentation, adjacent disturbance, and previous logging. However, some of the natural vegetation community remains. The canopy is mostly composed of young Douglas-fir and arbutus with some bigleaf maple and western redcedar. The understory is characterized by dull Oregon-grape,

snowberry, tall Oregon-grape, oceanspray, baldhip rose, sword fern, and pacific sanicle. Invasive species observed in this area include Scotch broom, spurge-laurel, and English ivy.

The eastern CDF polygon represents a Douglas-fir / dull Oregon-grape forest ecosystem. Like the western forest polygon, this ecosystem has been disturbed but some of the natural species assemblage remains. The overall forest age is young to mature. Canopy species include Douglas-fir, arbutus, bigleaf maple, and western redcedar. The shrub layer is composed of dull Oregon-grape, salal, snowberry, trailing blackberry, osoberry, oceanspray, and tall Oregon-grape. Herbaceous species include sword fern, bracken fern, cleavers, and mountain sweet cicely. Invasive species include English ivy, Himalayan blackberry, spurge-laurel, yellow archangel, and periwinkle.

At the northern edge of the Site, a young CDF tree canopy remains, but fill placement has eliminated most of the natural understory. Outside the Site boundaries, to the north, the young CDF forest has a more intact understory.

The remainder of the CDF polygon as per SaanichMap, is no longer characteristic of a Douglas-fir forest ecosystem due to extensive disturbance. The polygon is treed in some areas, but the natural understory has been impacted by fill deposition and encroachment of the gravel mine.

All vegetation species noted during the March 20th, 2024 field visit are included below in Table 1.

Table 1. Plant species observed on site during field visit on March 20th, 2024.

Common Name	Scientific Name	BC Provincial Status[1]	*SARA* Schedule 1 Status[2]
Arbutus	*Arbutus menziesii*	Yellow	--
Baldhip rose	*Rosa gymnocarpa* var. *gymnocarpa*	Yellow	--
Bigleaf maple	*Acer macrophyllum*	Yellow	--
Bracken fern	*Pteridium aquilinum*	Yellow	--
Butterfly bush	*Buddleja davidii*	**Invasive**; Exotic	--
Cleavers sp.	*Galium sp.*	--	--
Common cattalil	*Typha latifolia*	Yellow	--
Common periwinkle	*Vinca minor*	**Invasive**; Exotic	--
Common snowberry	*Symphoricarpos albus*	Yellow	--
Creeping buttercup	*Ranunculus repens*	Yellow	--
Douglas-fir	*Pseudotsuga menziesii*	Yellow	--
Dull Oregon-grape	*Mahonia nervosa*	Yellow	--
Electrified cat's tail moss	*Rhytidiadelphus triquetrus*	Yellow	--
English holly	*Ilex aquifolium*	**Invasive**; Exotic	--
English ivy	*Hedera helix*	**Invasive**; Exotic	--
Fuller's teasel	*Dipsacus fullonum*	**Invasive**; Exotic	--
Great mullein	*Verbascum thapsus*	Exotic	--
Hairy honeysuckle	*Lonicera hispidula*	Yellow	--
Herb Robert	*Geranium robertianum*	Exotic	--
Himalayan blackberry	*Rubus armeniacus*	**Invasive**; Exotic	--
Large periwinkle	*Vinca major*	**Invasive**; Exotic	--
Miner's lettuce	*Claytonia perfoliata ssp. perfoliata*	Yellow	--
Mountain sweet-cicely	*Osmorhiza berteroi*	Yellow	--
Oceanspray	*Holodiscus discolor*	Yellow	--

Common Name	Scientific Name	BC Provincial Status[1]	*SARA* Schedule 1 Status[2]
Orange honeysuckle	*Lonicera ciliosa*	Yellow	--
Orchard grass	*Dactylis glomerata*	Exotic	--
Osoberry	*Oemleria cerasiformis*	Yellow	--
Oxeye daisy	*Leucanthemum vulgare*	**Noxious**[3]; Exotic	--
Pacific sanicle	*Sanicula crassicaulis*	Yellow	--
Poison-hemlock	*Conium maculatum*	**Noxious**[3]; Exotic	--
Purple dead-nettle	*Lamium purpureum*	Exotic	--
Rattlesnake plantain	*Goodyera oblongifolia*	Yellow	--
Red alder	*Alnus rubra*	Yellow	--
Reed canarygrass	*Phalaris arundinacea var. arundinacea*	Exotic	--
Salal	*Gaultheria shallon*	Yellow	--
Scotch broom	*Cytisus scoparius*	**Invasive**; Exotic	--
Shiny geranium	*Geranium lucidum*	**Invasive;** Exotic	--
Spurge-laurel	*Daphne laureola*	**Invasive**; Exotic	--
Sword fern	*Polystichum munitum*	Yellow	--
Tall Oregon-grape	*Mahonia aquifolium*	Yellow	--
Thistle sp.	*Cirsium sp.*	--	--
Trailing blackberry	*Rubus ursinus*	Yellow	--
Western redcedar	*Thuja plicata*	Yellow	--
Yellow archangel	*Lamium galeobdolon*	**Invasive**; Exotic	--
Yerba buena	*Clinopodium douglasii*	Yellow	--

[1] BC CDC 2024a
[2] Government of Canada 2024
[3] District of Saanich 2000

4.5 WILDLIFE

Remaining trees on the property provide nesting and roosting habitat for birds, including migratory songbirds, year-round resident species, raptors, and owls. Two wildlife trees (dead or decaying trees with signs of woodpecker foraging use) were identified on the Site (Figure 1). No nests were observed during the site assessment. Remaining shrubs and understory vegetation provide habitat for birds and small mammals.

During the site assessment the species in Table 2 were observed on the Site.

Table 2. Wildlife Species observed on site during field visit on March 20th, 2024

Common Name	Scientific Name	BC Provincial Status[1]	*SARA* Schedule 1 Status[2]
American robin	*Turdus migratorius*	Yellow	--
Anna's hummingbird	*Calypte anna*	Yellow	--
Black-tailed deer (scat)	*Odocoileus hemionus*	Yellow	--
California quail	*Callipepla californica*	Exotic	--
Chestnut-backed chickadee	*Poecile rufescens*	Yellow	--
Common raven	*Corvus corax*	Yellow	--
Common wall lizard	*Podarcis muralis*	Exotic	--
Dark-eyed junco	*Junco hyemalis*	Yellow	--

Common Name	Scientific Name	BC Provincial Status[1]	*SARA* Schedule 1 Status[2]
Golden-crowned kinglet	*Regulus satrapa*	Yellow	--
Golden-crowned sparrow	*Zonotrichia atricapilla*	Yellow	--
House finch	*Haemorhous mexicanus*	Yellow	--
House sparrow	*Passer domesticus*	Exotic	--
Mallard	*Anas platyrhynchos*	Yellow	--
Owl sp. (pellet)	--	--	--
Pacific wren	*Troglodytes pacificus*	Yellow	--
Red-breasted nuthatch	*Sitta canadensis*	Yellow	--
Spotted towhee	*Pipilo maculatus*	Yellow	--
White-crowned sparrow	*Zonotrichia leucophrys*	Yellow	--

[1] BC CDC 2024a
[2] Government of Canada 2024

4.6 SURFACE WATER

Several isolated pools of standing water were observed during the field assessment. Based on their size and volume of water, it is likely that most of the pools are seasonal, except for a large pond located near the center of the Site which may remain wet year-round. The large pond is artificially formed and was likely created for surface water management for the gravel mine. The pond is sparsely vegetated with reed canarygrass and cattail. Mallard ducks were observed foraging in the pond. In the past, the pond likely drained to the east via ditches and/or pipes before reaching a concrete drainage channel, and entering a storm drain at Fowler Road. Presently, the eastern edge of the pond is dammed with concrete blocks and fill. Some stagnant water has pooled on the downstream side of the dam, but this water does not continue to flow east. The concrete drainage channel was dry at the time of the assessment.

In the northwest area of the Site is a seepage located on a steep slope. The seepage has no defined channel which indicates that it may only flow seasonally. At the base of the slope, the seepage is no longer visible and appears to transition to subsurface flow.

None of the surface water features on the Site are natural or connected to a fish-bearing watercourse. Therefore, they are not regulated under the provincial *Water Sustainability Act* (WSA), or Riparian Areas Protection Regulation (RAPR).

4.7 SPECIES AT RISK

A query of the BC CDC iMap tool yielded occurrences of the following 11 species at risk and 10 ecosystems at risk within a two-kilometer radius of the property (BC CDC 2025b). Species are listed in Table 3 and the location of occurrences in relation to the property is provided in Figure 3. None of the species were observed during the assessment and it is unlikely that any of the species in Table 3 would occur due to the disturbed condition of the Site.

None of the ecosystems included in Table 3 were observed on the Site except for a degraded Douglas-fir / dull Oregon-grape ecosystem (see eastern CDF polygon in Figure 1). It is possible a Douglas-fir / arbutus ecosystem was present on the Site prior to the gravel mining disturbance. Remaining evidence of this ecosystem is seen in the western CDF polygon (Figure 1), but this area has been highly degraded and is no longer characteristic of an intact Douglas-fir / arbutus ecosystem.

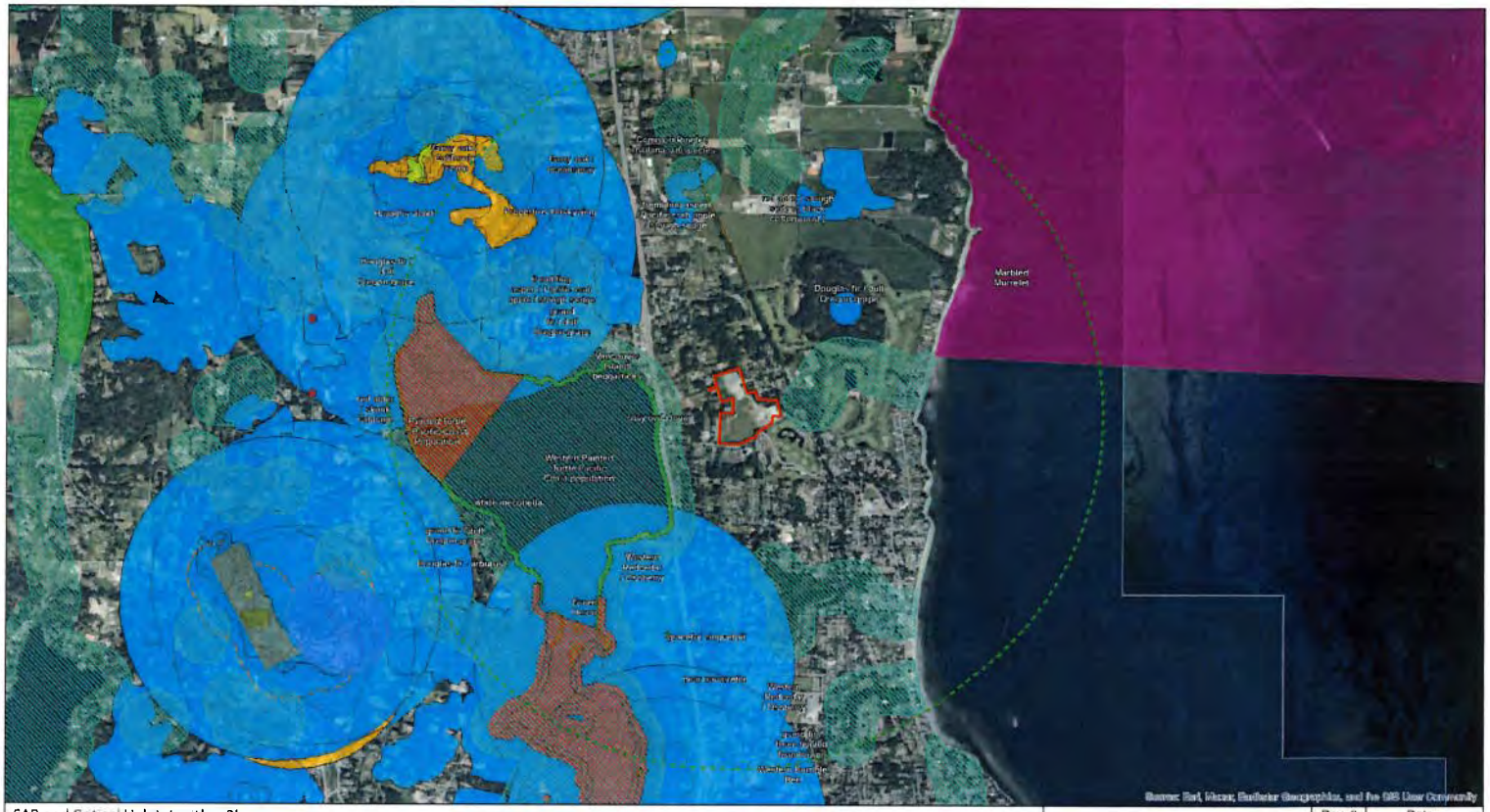
Table 3. Species and ecosystem at risk occurrences within 2 km of the Site.

Common Name	Scientific Name	BC Provincial Status[1]	COSEWIC Status[2]	*SARA* Schedule 1 Status[2]
Species				
Common ringlet, *insulana* subspecies	*Coenonympha california insulana*	Red	n/a	n/a
Graceful cinquefoil	*Potentilla gracilis var. gracilis*	Red	n/a	n/a
Green heron	*Butorides virescens*	Blue	n/a	n/a
Howell's violet	*Viola howellii*	Red	n/a	n/a
Near navarretia	*Navarretia propinqua*	Blue	n/a	n/a
Painted Turtle - Pacific Coast Population	*Chrysemys picta pop. 1*	Red	Threatened	Threatened
Propertius Duskywing	*Erynnis propertius*	Red	n/a	n/a
Rosy owl-clover	*Orthocarpus bracteosus*	Red	n/a	Endangered
Vancouver Island beggarticks	*Bidens amplissima*	Blue	Special Concern	Special Concern
Western Bumble Bee	*Bombus occidentalis*	Yellow	Threatened	n/a
White meconella	*Meconella oregana*	Red	n/a	Endangered
Ecosystems				
Douglas-fir / arbutus	*Pseudotsuga menziesii / Arbutus menziesii*	Red	n/a	n/a
Douglas-fir / dull Oregon-grape	*Pseudotsuga menziesii / Mahonia nervosa*	Red	n/a	n/a
Garry oak / California brome	*Quercus garryana / Bromus carinatus*	Red	n/a	n/a
Garry oak / oceanspray	*Quercus garryana / Holodiscus discolor*	Red	n/a	n/a
Grand fir / dull Oregon-grape	*Abies grandis / Mahonia nervosa*	Red	n/a	n/a
Grand fir / three-leaved foamflower	*Abies grandis / Tiarella trifoliata*	Red	n/a	n/a
Red alder / skunk cabbage	*Alnus rubra / Lysichiton americanus*	Red	n/a	n/a
Red alder / slough sedge [black cottonwood]	*Alnus rubra / Carex obnupta [Populus trichocarpa]*	Red	n/a	n/a
Trembling aspen / Pacific crab apple / slough sedge	*Populus tremuloides / Malus fusca / Carex obnupta*	Red	n/a	n/a
Western redcedar / Osoberry	*Thuja plicata / Oemleria cerasiformis*	Red	n/a	n/a

[1] BC CDC 2025a
[2] Government of Canada 2025

CRITICAL HABITAT

No mapped critical habitat for species at risk overlaps the Site.



SAR and Critical Habitat within 2km

Property Boundary
2 km area around property boundary

Critical Habitat
- Blue-grey Taildropper
- Marbled Murrelet
- Sharp-tailed Snake
- Western Painted Turtle Pacific Coast population
- White Meconella
- Yellow Montane Violet praemorsa subspecies

Species at Risk
- Ecological Community
- Invertebrate Animal
- Nonvascular Plant
- Vascular Plant
- Vertebrate Animal

N

0 250 500 1,000 1,500 2,000 Meters

Project: 360 Arbutus Avenue | Sources: Capital Regional District, DataBC

CORVIDAE
ENVIRONMENTAL CONSULTING INC

Rev #	Date
0	April 02, 2024

Corvidae Project No.
COR-2024-025

Figure 3

5 POTENTIAL ENVIRONMENTAL EFFECTS

The potential effects of the proposed development of the Site on the environment are:

- Disturbance to Douglas-fir forest ecosystem,
- Loss of native vegetation and spread of invasive plant species,
- Disturbance to wildlife during construction activities,
- Sediment movement in the project area.

The potential environmental effects of the activities on the Site will be reduced by the implementation of the mitigation and restoration measures recommended in Section 6 of this report.

DOUGLAS-FIR FOREST ECOSYSTEM

The remnant Douglas-fir forest ecosystems on the Site are in poor condition due to previous disturbance. The site plan has been designed to avoid disturbance of the Douglas-fir forest ecosystems; however, minor tree removal is required. Details on tree removal are provided in the Tree Management Plan by Gye and Associates. Habitat enhancement measures recommended in Section 6 will offset the tree removal and result in an overall increase in habitat and biodiversity on the Site.

VEGETATION

The effects of tree and vegetation removal may include loss of biodiversity of plant species and increased susceptibility to invasive plants not only in the cleared area but also in adjacent plant communities. Vegetation and plant communities immediately adjacent to cleared areas may experience changes due to windthrow and changes in microclimate (increased light and moisture penetration) due to removal of mature trees.

INVASIVE SPECIES

Invasive plants are particularly adept at colonizing degraded plant communities and disturbed soils. Invasive plants establish readily in disturbed areas as they have a wide ecological tolerance and grow and propagate quickly. The effects of invasive plant establishment may be the reduction or displacement of native species by capturing resources and occupying habitats.

WILDLIFE AND WILDLIFE HABITAT

Little natural wildlife habitat remains on the Site, though some birds and small mammals have colonized the disturbed, invasive-dominated areas. Loss and alteration of terrestrial vegetation may result in the temporary loss of habitat for wildlife species. However, wildlife and pollinator habitat will be created through future landscape remediation areas. Noise from site preparation and construction may temporarily disturb and displace wildlife in the area. The introduction of buildings with many windows into previously unused spaces can increase mortality risk for birds.

EROSION AND SEDIMENT

Ground disturbance from construction activities exposes soils to erosion and can result in the movement of sediment on the property. Damage or degradation of soil surfaces during construction can include loss of soil structure, increased erosion, and soil compaction, which can negatively affect post-construction reclamation efforts.

6 RECOMMENDED ENVIRONMENTAL PROTECTION MEASURES

The mitigation measures provided in this report are designed to protect sensitive ecosystems and were developed in accordance with:

- Sustainable Saanich OCP, Schedule A to OCP Bylaw 2023, No. 10000 (DOS 2024)
- Procedures for Mitigating Impacts on Environmental Values (Environmental Mitigation Procedures) (BC Ministry of Environment [MOE] 2014a),
- Develop with Care 2014: Environmental Guidelines for Urban and Rural Land Development in British Columbia (MOE 2014b), and
- Environmental Best Management Practices for Urban and Rural Land Development in British Columbia (BC MOE 2004).

DOUGLAS-FIR FOREST ECOSYSTEM

Where feasible, remaining Douglas-fir forest should be retained as park or natural greenspace areas. To improve habitat and biodiversity on the Site, it is recommended that retained forest be enhanced through invasive species removal and native planting. Invasive species should be removed following the recommendations in the Sections below.

- Following removal, native species should be planted in bare areas. Table 4 provides a list of recommended species that are suitable for the Douglas-fir forest ecosystems on the Site.
- Recommended planting density is one tree per 6 m^2, one shrub per 2 m^2, and one herb per 1 m^2.
- Planting should take place in the fall to increase plant survivorship. Plantings may require irrigation during the dry season until established.
- Species will be planted in locations suitable for their respective growth conditions (e.g., light, moisture, soil type).
- Plantings should be arranged in loose groupings rather than at uniform distances to achieve a more natural aesthetic.
- Manual weed and invasive species removal within the ecosystem should occur bi-annually for two years following the construction and landscaping completion. Corvidae recommends that the property management include invasive species and weed removal in any future landscape maintenance contracts.
- Coarse woody debris (CWD; minimum 2 m length and 20 cm diameter) found within the ecosystem polygons should be retained and supplemented with additional pieces of CWD from elsewhere on Site, within the development footprint. CWD provides insect and wildlife habitat, and natural soil amendment over time. It can also create a physical barrier to protect planting areas from foot traffic.

Table 4. Recommended native vegetation to plant in Douglas-fir forest.

Common Name	Species
TREES	
Douglas-fir	*Pseudotsuga menziesii*
Arbutus	*Arbutus menziesii*
Western redcedar	*Thuja plicata*
Grand fir	*Abies grandis*
Bigleaf maple	*Acer macrophyllum*
SHRUBS	
Dull Oregon-grape	*Mahonia nervosa*
Tall Oregon-grape	*Mahonia aquifolium*
Salal	*Gaultheria shallon*
Common snowberry	*Symphoricarpos albus*
Red huckleberry	*Vaccinium parvifolium*
Oceanspray	*Holodiscus discolor var. discolor*
Osoberry	*Oemleria cerasiformis*
Baldhip rose	*Rosa gymnocarpa*
Saskatoon	*Amelanchier alnifolia*
Kinnikinnik	*Arctostaphylos uva-ursi*
Red-flowering currant	*Ribes sanguineum*
Mock orange	*Philadelphus lewisii*
Thimbleberry	*Rubus parviflorus*
HERBS	
Sword fern	*Polystichum munitum*
Bracken fern	*Pteridium aquilinum*
Broad-leaved starflower	*Lysimachia latifolia*
Vanilla leaf	*Achlys triphylla*
Miner's lettuce	*Claytonia perfoliata*
Yarrow	*Achillea millefolium*
Red columbine	*Aquilegia formosa*
Siberian miner's lettuce	*Claytonia sibirica*
Pacific bleeding heart	*Dicentra formosa*
White fawn lily	*Erythronium oregonum*
Woodland strawberry	*Fragaria vesca*
Mountain sweet cicely	*Osmorhiza berteroi*
Pacific sanicle	*Sanicula crassicaulis*

VEGETATION

It is recommended that native vegetation be incorporated into landscaped areas wherever suitable, meeting the District of Saanich objectives for native plant habitat and biodiversity. Landscaping with native species can reduce irrigation maintenance, erosion potential, and improve habitat and biodiversity on the Site.

Existing trees on the Site should be protected where possible. Detailed tree protection measures will be provided by the project arborist. Prior to any clearing, construction fencing should be installed along the project footprint boundaries to protect the areas to remain as greenspace. Have a QEP on site to ensure it is in place and properly installed prior to start of any clearing.

INVASIVE SPECIES

Many of the invasive species on the Site will be removed as the Site is developed (e.g., during earthworks and construction). It is recommended that invasive species outside of the development footprint also be removed. Species should be removed using the most appropriate methods, at the correct time of year, and plant material must be disposed of correctly to avoid re-establishment or spread. Details of removal methods for the invasive species on the properties are below in Table 5.

Table 5. Removal and disposal methods for invasive species

Species	Removal Method	Removal Timing	Plant Disposal
Butterfly bush	Hand-pull small plants. For large bushes, cut the plant at the base. Dig up the roots. Cover any remaining roots with a thick plastic bag. Dispose of cut stems right away as they may root.	Remove when flowering and before it goes to seed.	Bagged and disposed of properly in a landfill. Do not compost.
English ivy	Can be removed by hand pulling and cutting of vines. Roots should be pulled so no rooted portions re-grow.	Removal should occur in the fall, when plants are easier to remove due to moist soil conditions.	Burned or bagged and disposed of properly in a landfill. Do not compost.
English holly	English holly can be removed by hand pulling small seedlings or cutting mature trees at ground level removing all plant material.	Removal is best done before flowering to eliminate seed production.	Does not root again once removed, so it can also be piled to desiccate on site. Bag and dispose of properly in a landfill. Do not compost.
Fuller's teasel	Cut or hoe roots at least 5 cm below the soil surface. Hand-pull if soil conditions allow for removal of most of the taproot. Use a hand-held propane torch for seedlings and isolated plants.	Prior to going to seed, in early spring when flowering.	Burned or bagged and disposed of properly in a landfill. Do not compost.
Himalayan blackberry	Can be removed by pulling or cutting the canes from the ground. If possible, dig out the roots, paying careful attention not to damage nearby vegetation.	Removal should occur in the spring and early summer before they produce berries as canes that are cut as the plant is producing flowers are least likely to re-sprout.	Burned or bagged and disposed of properly in a landfill. Do not compost.
Oxeye daisy	Pull or dig up plants, ensuring that all roots are removed.	Removal should occur before flowering to eliminate seed production.	Bagged and disposed of properly in a landfill. Do not compost.
Periwinkle sp.	Can be removed by hand pulling and cutting of vines. Roots should be pulled so no rooted portions re-grow.	Removal should occur in the fall, when plants are easier to remove due to moist soil conditions.	Burned or bagged and disposed of properly in a landfill. Do not compost.

Species	Removal Method	Removal Timing	Plant Disposal
Poison hemlock	**Note: All parts of the plant are highly poisonous** and should be handled with caution. Use gloves and protective clothing. Wash clothing and tools following removal and avoid skin contact with plant material. Cut flowering stems as close to ground as possible. Young plants can be dug-up or pulled.	Remove flowering stems prior to seed production. If digging or pulling, remove when soil is most.	Place plant parts in garbage bag and dispose of at landfill. Do not compost.
Scotch broom	Avoid disturbing the soil which can stimulate dormant broom seeds to sprout. Small broom plants can be pulled easily from the ground by hand without disturbing the soil. Larger plants should be cut below the root crown using loppers or a pruning saw.	Scotch broom removal should occur mid-April through early June, before its seed pods begin to open.	Bagged and disposed of properly in a landfill. Do not 'recycle' garden debris or compost.
Shiny geranium	Pull gently to minimize soil disturbance and include the bulbous crown at the base of the stems so plants can't re-sprout. They are very easy to pull. If the site is suitable, mulch the area in the fall. Monitor for several years as the seedbank can survive and persist even after removal	Manually remove before seed dispersal from May to August.	Bagged and disposed of properly in a landfill. Do not compost.
Spurge laurel	Remove by pulling small plants or cutting larger plants just below the soil. Stems may re-sprout after cutting and numerous seedlings may germinate so repeated site visits are necessary. Always wear gloves when handling spurge laurel because it produces a noxious substance which can cause severe eye and skin irritation. Avoid spreading berries during removal.	Can be removed year-round.	Removed plants should be bagged and disposed of properly in a landfill. Do no transport inside an enclosed vehicle as the plants can cause respiratory irritation.
Yellow archangel	Hand-pull to remove. Sift through the soil to ensure no stem or root parts remain. Ensure the complete removal of root systems and re-assess in following years to remove any new shoots. Avoid cutting or mowing as it can actually spread the plant even more. If it has been cut, collect all trimmings to reduce the chance of establishing new plants from stem fragments.	Removal should occur before flowering to eliminate seed production.	Bagged and disposed of properly in a landfill. Do not compost.

WILDLIFE AND WILDLIFE HABITAT

Mitigation measures to minimize impacts on wildlife and wildlife habitat include:

- Vegetation clearing should be completed outside of the migratory bird window (prior to March 15th or after August 15th; Government of Canada 2018).
- If vegetation clearing must take place within the sensitive time period for breeding birds, a QEP should conduct nest search surveys a maximum of 5 days prior to the start of activities. If an active nest is discovered during nest searches or clearing activities, the nest will be subject to site-specific mitigation measures (e.g., protective buffer around the nest or unobtrusive monitoring) until the young have naturally fledged/left the area. Multiple nest sweeps may be required. Nest search areas include both vegetation and onsite, man-made structures that are scheduled for removal.
- If clearing is scheduled between January 1 and August 15, a raptor nests survey should be completed by a QEP prior to clearing. Occupied or active nests would be subject to the actions described above. In addition, permits are required to remove eagle or osprey nests regardless of occupancy. There were no raptor nests found on site at the time of the field assessment.
- Avoid additional removal of established trees or shrubs, where practical, outside of the project footprint, with the exception of identified danger trees that cannot be avoided.
- Plant native trees in landscaped areas to provide future wildlife habitat.

EROSION AND SEDIMENT CONTROL

The primary focus of erosion and sediment control planning is erosion control; if there is no erosion then there is no sediment. Erosion control is far more cost effective to implement and manage than sediment control.

Mitigation options to minimize the potential effects of the project on the natural environment include:

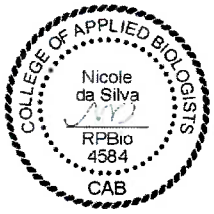
- Monitor stormwater drainage patterns onsite and ensure sediment-laden water is not carried into the Fowler Road storm drain. Installation of sediment control fencing or straw wattles may be necessary.
- Heed weather advisories and schedule work to avoid high wind and heavy rain periods that may result in high flow volumes and/ or increase erosion and sedimentation.
- Keep ESC measures in place until all construction is complete and any disturbed ground has been permanently stabilized and constructed on or vegetated.
- Minimize amount of time soils are exposed by seeding and planting as soon as disturbance is complete. Cover exposed soil areas with tarps if for a prolonged period or during rainfall events.

7 CONCLUSION

During the proposed works at 773 and 755 Cordova Bay Road and 5371 Alderley Road, implementation of the mitigation and restoration measures recommended in this report, including the removal of invasive species and erosion and sediment control measures, will minimize the impacts of the proposed development on the environment.

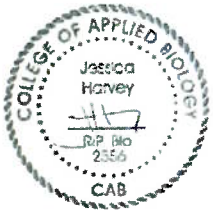
This plan incorporates the District of Saanich's goals for higher density developments and the reclamation of sensitive ecosystems. The Site has been highly degraded by past mining activity. By enhancing the remaining natural areas and creating ecologically beneficial greenspace areas, the preliminary design plan will result in a net benefit to habitat and biodiversity on the Site

Report prepared by:



Nicole da Silva, R.P.Bio, B.Sc
Intermediate Biologist
Corvidae Environmental Consulting Inc.

Report reviewed by:



Jessica Harvey, R.P.Bio, M.Sc.
Senior Biologist / Project Manager
Corvidae Environmental Consulting Inc.

8 REFERENCES

British Columbia Conservation Data Centre (CDC). 2024a. BC Species and Ecosystems Explorer. B.C. Ministry of Environment. Victoria, B.C. Available: http://a100.gov.bc.ca/pub/eswp/. Accessed: April 2024.

British Columbia Conservation Data Centre (CDC). 2024b. CDC iMap [web application]. Available at: https://maps.gov.bc.ca/ess/hm/cdc. Accessed: April 2024.

British Columbia Ministry of Environment (MOE). 2014a. Procedures for Mitigating Impacts on Environmental Values (Environmental Mitigation Procedures) Version 1.0. Available at: https://www2.gov.bc.ca/assets/gov/environment/natural-resource-policy-legislation/environmental-mitigation-policy/em_procedures_may27_2014.pdf. Accessed: April 2024.

British Columbia Ministry of Environment (MOE). 2014b. Develop with Care 2014: Environmental Guidelines for Urban and Rural Land Development in British Columbia. Available at: https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/laws-policies-standards-guidance/best-management-practices/develop-with-care. Accessed: April 2024.

British Columbia Ministry of Environment (MOE). 2006. Standard for Mapping Ecosystems at Risk in British Columbia. An approach to mapping ecosystems at risk and other sensitive ecosystems.

British Columbia Ministry of Environment (MOE). 2004. Environmental Best Management Practices for Urban and Rural Land Development. Available at: https://www.env.gov.bc.ca/wld/documents/bmp/urban_ebmp/urban_ebmp.html. April 2024.

Capital Regional District (CRD). 2023. CRD Regional Map. Available at: https://maps.crd.bc.ca/Html5Viewer/?viewer=public. Accessed: April 2024.

District of Saanich (DOS). 2025. Saanich Map. Available at: https://map.saanich.ca/html5viewer/?viewer=Public&_ga=2.141997874.1254749570.1673394251-2022237265.1671131267. Accessed: April 2024.

District of Saanich (DOS). 2024a. Development Permit Area Guidelines. https://www.saanich.ca/assets/Local~Government/Documents/Planning/2024-02-26_Saanich_Development_Permit_Guidelines_2024_WEB.pdf

District of Saanich (DOS). 2024b. Sustainable Saanich OCP, Schedule A to OCP Bylaw 2023, No. 10000. Available at: https://www.saanich.ca/assets/Community/Documents/Planning/Strategic~OCP~Update/OCP-adopted-2024%20May-web.pdf

District of Saanich (DOS). 2000. Bylaw No. 8080, For the Removal of Noxious Weeds and Other Vegetation from Real Property. https://www.saanich.ca/assets/Community/Documents/Noxious%20Weeds%20Bylaw_8080.pdf. Accessed: April 2024.

Google Earth. 2024. Available at: https://earth.google.com/web. Accessed: April 2024.

Government of British Columbia. 2012. Develop with Care 2012: Environmental Guidelines for Urban and Rural Land Development in British Columbia. Available at: https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/best-management-practices/dwc-air-quality.pdf. Accessed: April 2024.

Government of Canada. 2023. Species at Risk Public Registry. Available at: https://www.canada.ca/en/environment-climate-change/services/species-risk-publicregistry.html. Accessed: April 2024.

Government of Canada. 2018. General nesting periods of migratory birds. Available at: https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods/nesting-periods.html. Accessed: April 2024.

Nuszdorfer., F.C., K. Klinka, and D.A. Demarachi. 1991. Coastal Douglas-fir Zone. In Ecosystems of British Columbia. D. Meidinger and J. Available at: https://www.for.gov.bc.ca/hfd/pubs/docs/srs/Srs06/chap5.pdf. B.C. Ministry of Forestry, Victoria, BC. Special Report Series 6. Pp 82 - 93. Accessed: April 2024.

Province of British Columbia. 2023. Habitat Wizard. Available at: http://maps.gov.bc.ca/ess/hm/habwiz/. Accessed: April 2024.

APPENDIX A – SITE PHOTOGRAPHS

Photo 1. Entrance to the Site from Cordova Bay Rd (view north). March 27, 2024.

Photo 2. Southeast corner of the Site at 773 Cordova Bay Road. March 27, 2024.

Photo 3. Edge of Site along Fowler Road (view west). March 27, 2024

Photo 4. Middle of 773 Cordova Bay Rd (view south). March 27, 2024.

Photo 5. Edge of SaanichMap CDF polygon (CDF ecosystem no longer present). March 27, 2024.

Photo 6. Access to Fowler Rd. SaanichMap CDF polygon (CDF no longer present). March 27, 2024.

Photo 7. Eastern remnant CDF ecosystem (field verified). March 27, 2024.

Photo 8. Eastern remnant CDF ecosystem (field verified). March 27, 2024.

Photo 9. Southwest view of Site. March 27, 2024.

Photo 10. Largest pond on Site (view west). March 27, 2024.

Photo 11. Concrete blocks and fill "dam" at eastern edge of pond. March 27, 2024.

Photo 12. Old pipes – likely previously connected stormwater drainage. March 27, 2024.

Photo 13. Concrete drainage to Fowler Rd. (view west). March 27, 2024.

Photo 14. Treed edge at northeast corner of 773 Cordova Bay Rd. March 27, 2024.

Photo 15. Eastern edge of 5371 Alderley Rd (view north). March 27, 2024.

Photo 16. Northeast corner of 5371 Alderley Rd (view north). March 27, 2024.

Photo 17. Northeast corner of 5371 Alderley Rd (view west). March 27, 2024.

Photo 18. Northern edge of 5371 Alderley Rd (view east). March 27, 2024.

Photo 19. Northern edge of 5371 Alderley Rd (view west). March 27, 2024.

Photo 20. Western edge of 5371 Alderley Rd (view southwest). March 27, 2024.

Photo 21. Seepage (view west). March 27, 2024.

Photo 22. Himalayan blackberry infestation on Site (view south). March 27, 2024.

Photo 23. Steep, eroding slope at northern boundary of 755 Cordova Bay Rd. March 27, 2024.

Photo 24. 755 Cordova Bay Road (view south). March 27, 2024.

Photo 25. Western CDF ecosystem at top of slope (view northeast). March 27, 2024.

Photo 26. Western CDF ecosystem (view east). March 27, 2024.

Photo 27. Western CDF ecosystem (view east). March 27, 2024.

Photo 28. Overview of Site (view east). March 27, 2024.

Photo 29. Location of Shiny Geranium patch. March 27, 2024.