



## COWICHAN VALLEY REGIONAL DISTRICT

**DEVELOPMENT PERMIT**REGISTERED PROPERTY OWNER(S):CVRD FILE NO.: **DP23E05**

**DU-APP GP LTD., INC.NO. BC1384273**  
**415 – 1788 WEST 5<sup>TH</sup> AVENUE**  
**VANCOUVER, BC**  
**V6J 1P2**

DATE ISSUED: **July 28, 2023**

1. This Development Permit is issued and is subject to compliance with all of the bylaws of the Regional District applicable thereto, except as specifically varied or supplemented by this Permit.
2. This Development Permit applies to and only to those lands within the Regional District described below:

**Section 7, Range 6, Sahtlam District, Except Part in Plan EPP18482 (PID: 009-845-119), and Parcel B (DD 865681) Of Section 7 Range 7 Sahtlam District Except Part in Plan EPP18482, EPP26101 And EPP67975 (PID: 009-849-637).**

3. Authorization is hereby given for **the clearing of of two private access roads (driveways) within the Environmental Protection Development Permit Area** subject to the following requirements:
  - No works shall occur on **PID 009-849-581**;
  - The private access roads may be compacted but shall not be hard surfaced. Further road works will require a development permit amendment;
  - Development shall occur in accordance with attached Schedules **A – D**;
  - Prior to the commencement of any land-clearing activities the 30m Riparian Assessment Area Boundary shall be flagged by a Qualified Environmental Professional and verified by a qualified land surveyor in accordance with Schedules C and D;
  - All flagged 30m Riparian Assessment Area Boundaries shall be defined with temporary fencing in accordance with Schedule C;
  - Invasive species in proximity to the proposed access road footprints and workspace and equipment laydown areas shall be removed in accordance with Schedule C;
  - Areas disturbed by road building that are not part of the permanent road footprint (as depicted in Schedule B) shall be re-vegetated in accordance with Schedule C;
  - Areas disturbed by road building that are part of the permanent road footprint (as depicted in Schedule B) shall be compacted and/or hydroseeded to prevent erosion/sedimentation to the satisfaction of the Qualified Environmental Professional;

- A raptor nest survey shall be completed by a QEP prior to development activities in accordance with Schedule C;
- Vegetation and tree removal shall be completed outside of the migratory bird window unless a QEP conducts nest search survey prior to the start of activities in accordance with Schedule C; and,
- A qualified environmental professional shall regularly monitor the site for signs of sedimentation during all phases of the work in accordance with Schedule C and Schedule D.

4. The following Schedules are attached to and form a part of this permit:

**SCHEDULE A – Subject Property Map**

**SCHEDULE B – Site Plan**

**SCHEDULE C – Qualified Environmental Professional Memo, prepared by Asio Environmental Consulting May 2023**

**SCHEDULE D – Professional Engagement Letter, prepared by Asio Environmental Consulting June 2023**

5. The land described herein shall be developed in substantial compliance with the terms and provisions of this Permit and any plans and specifications attached to this Permit shall form a part thereof.
6. Subject to the terms of this Permit, if the holder of this Permit does not substantially start any construction within 2 years of its issuance, this Permit will lapse.

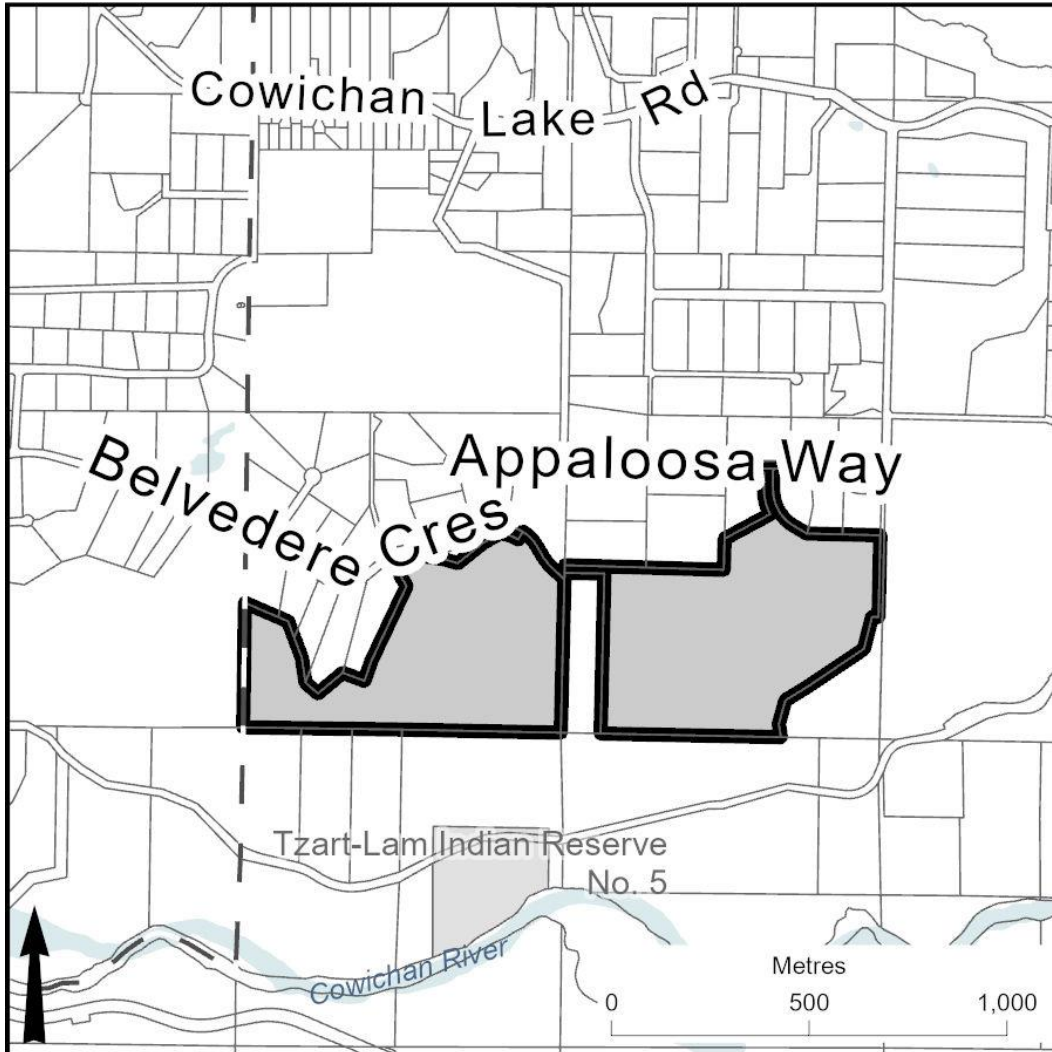


Mike Tippett, Acting General Manager  
Land Use Services Department

**This Permit is not a Building Permit or subdivision approval.** Where applicable, no occupancy certificate or final subdivision approval shall be issued until all items of this Development Permit have been complied with to the satisfaction of the Land Use Services Department.

**This permit is not a Soil Deposit Permit.** A Soil Deposit Permit Application may be required to ensure compliance with the CVRD Soil Deposit Bylaw - please call Bylaw Enforcement for further information 250.746.2655.

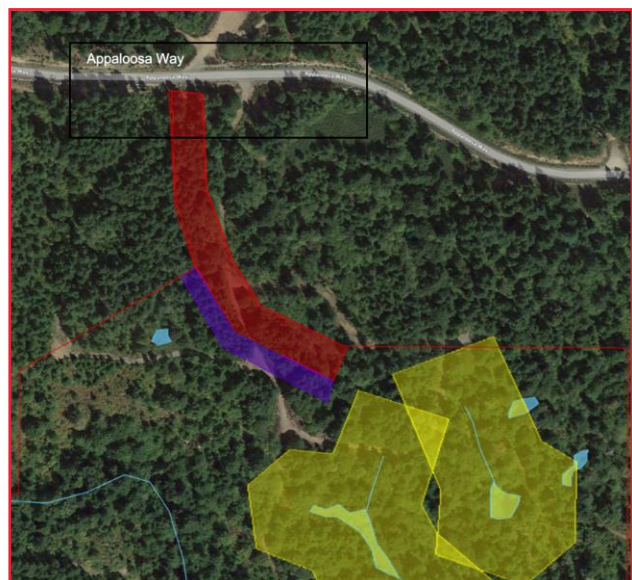
## Subject Properties



# Site Plan



NOTE:  
Belvedere Cres:  
 Road Width = 30m & Length = 170m  
 Workspace Area Width = 20m & Length = 170m



NOTE:  
Appaloosa Way:  
 Road Width = 30m & Length = 220m  
 Workspace Area Width = 20m & Length = 120m





May 12, 2023

Top Down Investments  
Suite 106, 225 Canada Avenue,  
Duncan, BC V9L 1T6

## ENVIRONMENT MEMO FOR DRIVEWAY CONSTRUCTION AT PARCEL B, APPALOOSA WAY, DUNCAN, BC

### INTRODUCTION

Parcel B Appaloosa Way (the property) is an assembly of three parcels in the Sahtlam Area, west of Duncan, BC. The property details are provided below in Table 1 and in Figure 1.

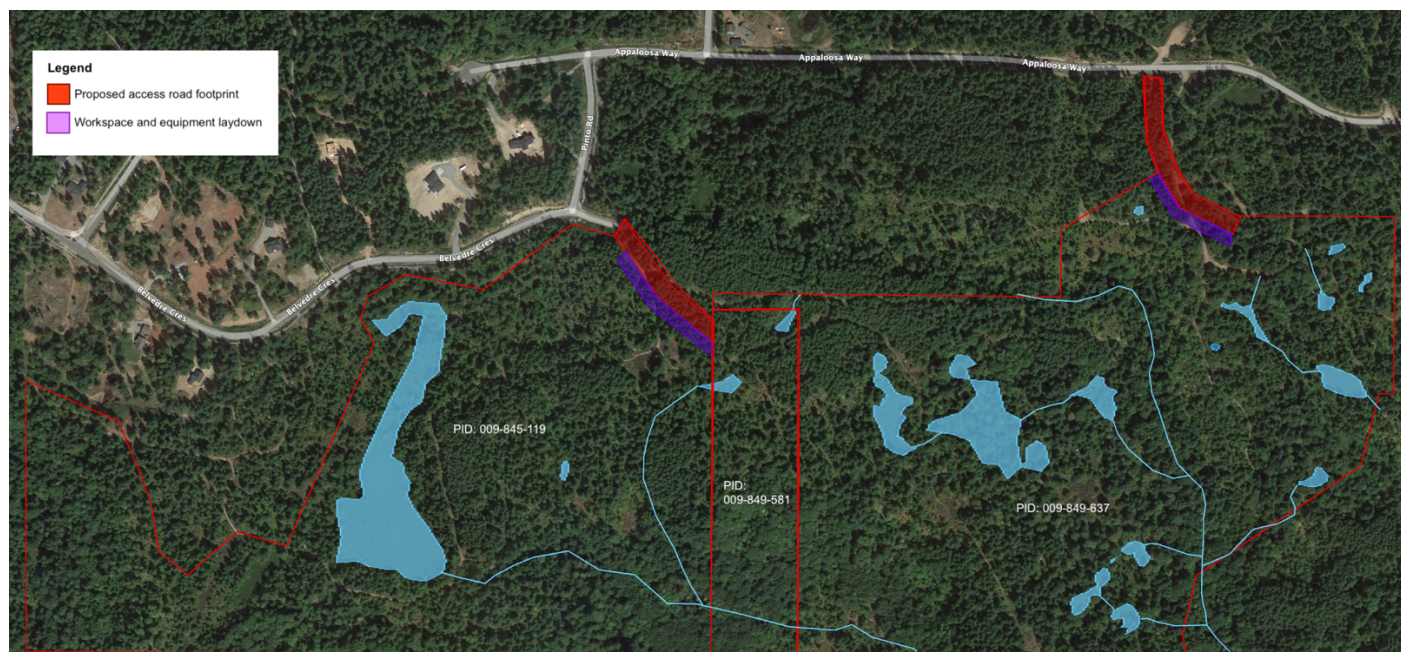
Table 1. Parcel B Appaloosa Way Property Details

PID	SIZE	DETAILS/NOTES
PID:009-845-119	66.75 acres	Property 1. Western most parcel. Contains existing historical roads. A large portion of this parcel, surrounding the largest wetland, is designated as a covenant for the Nature Conservancy.
PID: 009-849-581	10.00 acres	Property 2. Middle parcel. The southern half of this parcel is within the NCC covenant.
PID: 009-849-637	72.98 acres	Property 3. Eastern most parcel. A portion of the southern part of this parcel is within the NCC covenant.

The properties are currently zoned as R-5 within the Cowichan Valley Regional District (CVRD) Electoral Area E - Cowichan Koksilah/Quw'utsun Xwulqw'selu. The properties are currently undeveloped. A series of overgrown historical logging roads criss-cross the property. The property is forested and contains a complex stream and wetland network.

The owner is proposing to install access roads from the main, paved roads to the interior of each parcel: one road will extend from the end of Belvedere Crescent across the top of property 1 to the boundary of property 2; the other will provide access to property 3 from Appaloosa Way.

Figure 1. Parcel B properties, proposed access roads, and aquatic ecosystems



This memo addresses the requirements in Schedule C of Bylaw No. 4270 and provides an assessment on the environmental conditions on the property, potential impacts of the proposed access roads, and recommendations on the protection of environmentally sensitive features and methods to minimize impacts on the environment.

Asio Environmental Consulting Inc. (Asio) was engaged to complete an environmental assessment of the property to specifically address the requirements of the development permit areas. Background information was reviewed, and site conditions were documented during several field visits in 2022. The following biophysical features were considered in this report:

- Areas of sensitivity, including aquatic ecosystems and riparian areas.
- Areas of habitat and biodiversity values.
- Plant communities and plant species in the area.
- Wildlife presence and wildlife habitat.

The impacts of the proposed road building on the environmental features were assessed and specific mitigation to reduce any residual impacts have been recommended.

## DEVELOPMENT PERMIT AREAS

The property is located within the CVRD, specifically within Electoral Area E. The property is overlapped by four CVRD development permit areas (DPAs): riparian, sensitive ecosystems, aquifer protection and wildfire hazard. This report will address the riparian and sensitive ecosystem DPAs. The pertinent objectives of these DPAs are summarized below and can be found in full in Section 14.5 of the CVRD Official Community Plan (CVRD 2021a) and Schedule C of the CVRD Development Permit Areas (CVRD 2021b).

The footprints of the proposed access roads have been planned to be at least 30m from any watercourses or waterbodies and are therefore located outside of the 30m riparian assessment area and no riparian development permit is required for the access road installation.

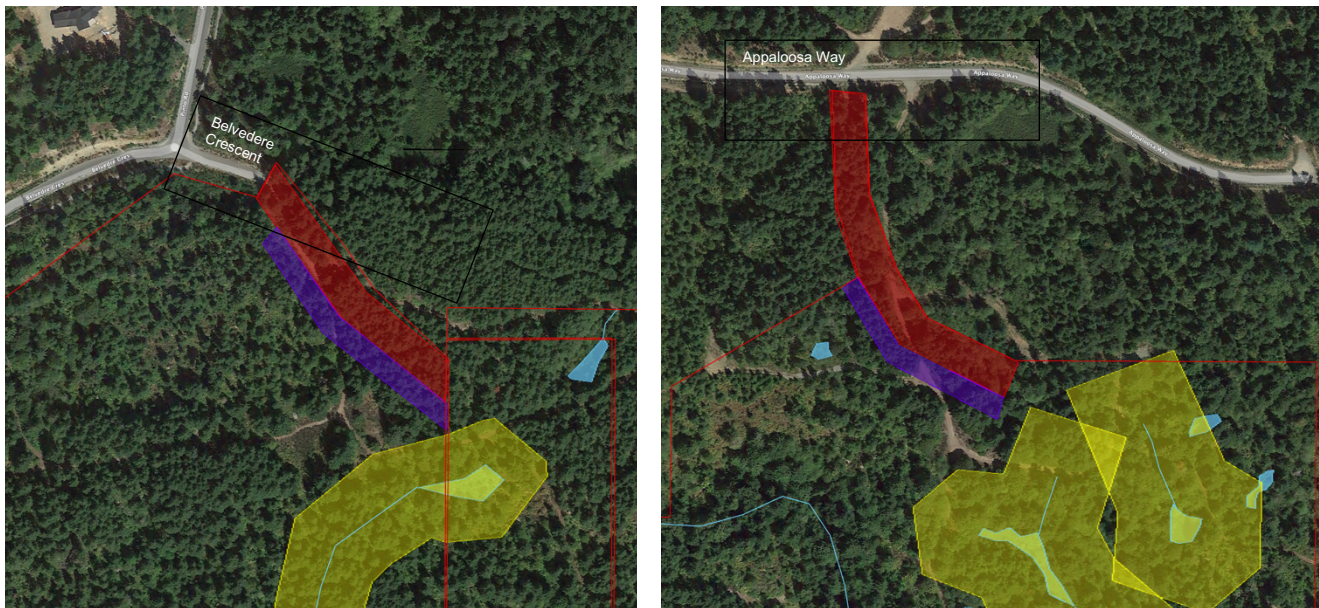


Figure 2. Areas immediately surrounding proposed access roads (west on the left, east on the right), including 30m Riparian Assessment Areas/DPAs

The footprints of the proposed access roads overlap DPA 2: Sensitive Ecosystem Protection for Western Toad. Pertinent measures for protecting natural attributes of sensitive areas, including terrestrial western toad habitat, include:

- SE2. Include in the environmental site plan measures to maintain connectivity and linkages with adjacent sensitive ecosystems and other habitat areas through the use of corridors and greenways to minimize fragmentation. [...]
- SE4. Design and implement a sediment and erosion control plan to protect sensitive ecosystems from silt smothering of low-growing plants where land disturbance is planned or likely.
- SE6. Use only native plant species where development occurs within or adjacent to a sensitive ecosystem, and do not use invasive plant species as identified by the Invasive Species Council of BC.



- SE7. Create and implement a plan to control the introduction or spread of invasive plant species. This plan may include removal of invasive species by hand clearing, pruning, mowing, excavation or other appropriate method. Disturbed sites are to be planted with appropriate native species.
- SE8. Avoid development activities in areas that would disturb wildlife during nesting and breeding seasons. Ensure that wildlife agencies and experts are consulted as necessary to determine the best times and practices for development.

## PROVINCIAL AND FEDERAL LEGISLATION

Provincial and federal legislation that may apply to the access road installation are detailed in Table 2.

Table 2. Provincial and Federal Legislation

LEGISLATION	YEAR	SUMMARY	REQUIREMENTS <sup>1</sup>
<b>PROVINCIAL</b>			
Riparian Areas Protection Regulation	2019	Protect the many and varied features, functions and conditions (FCCs) that are vital for maintaining stream health and productivity. In the RAPR, a Streamside Protection and Enhancement Area (SPEA) is defined as “an area (a) adjacent to a stream that links aquatic to terrestrial ecosystems and includes both existing and potential riparian vegetation and existing and potential adjacent upland vegetation that exerts an influence on the stream, and (b) the size of which is determined according to this regulation on the basis of an assessment report provided by a qualified environmental professional in respect of a development proposal.”	No Riparian DPA required for activities outside of the 30m RAA, therefore no RAPR triggered.
Water Sustainability Act	2016	Protects the quality of water, fish and wildlife habitat, and the rights of licensed water users. Any activities that result in changes in or about a stream require notification or approval under Section 11	n/a
Weed Control Act	1996	Designates provincially and regionally noxious weeds (Schedule A). Provides guidelines for noxious weed prevention and management and imposes a responsibility on all land occupiers to control designated noxious plants.	Apply best practices to prevent spread of weeds.
Wildlife Act; Wildlife Amendment Act	1996, 2004	Protects vertebrate animals from direct harm, except as allowed by regulation within B.C. (e.g. hunting, trapping). This includes all active bird nests.	Avoid or mitigate activities that may impact wildlife (see Mitigation Section).
<b>FEDERAL</b>			
Fisheries Act	2019	Prohibits the harmful alteration, disruption or destruction of fish habitat (HADD). Includes, but not limited to, the release of a deleterious substance.	n/a
Species At Risk Act (SARA)	2002	Provides legal protection for wildlife and wildlife habitat as designated under Schedule 1 of the Act.	n/a
Migratory Bird Convention Act	1994	Protects migratory birds and nests from indiscriminate harvesting and destruction.	If disturbance of vegetation is to occur during the sensitive nesting period for migratory birds, a pre-disturbance nest survey by a biologist is required (see Mitigation Section below).

<sup>1</sup>Potentially required for the project activities.



## ENVIRONMENTAL DESKTOP RESULTS

A desktop review of existing data was completed to reveal known occurrences of species at risk on or near the property.

### Ecosystem Description

The property is located within the Moist Maritime subzone of the Coastal Douglas-fir biogeoclimatic zone (CDFmm; Province of BC 2022a). This ecosystem is typically dominated by Douglas-fir trees, with some grand fir, western redcedar, and bigleaf maple. The understory within this zone typically contains salal, dull Oregon-grape, sword fern and red huckleberry (Green and Klinka 1994). A well-developed moss layer is generally present, particularly in riparian areas.

### Species at Risk

No species or ecosystems at risk occurrence records overlap the property. Nearby occurrences include red-listed ecosystems, red listed species, and blue-listed species (Table 3; BC CDC 2023a).

Table 3. Species at Risk in the Vicinity of the Property

ENGLISH NAME	SCIENTIFIC NAME	BC STATUS <sup>1</sup>	FEDERAL STATUS <sup>2</sup>
SPECIES AT RISK			
Dun Skipper	<i>Euphyes vestris</i>	Blue	Threatened
Three-way sedge	<i>Dulichium arundinaceum</i>	Red	
ECOSYSTEMS AT RISK			
Black cottonwood - red alder/salmonberry	<i>Populus trichocarpa</i> - <i>Alnus rubra</i> / <i>Rubus spectabilis</i>	Blue	--
Grand fir/dull Oregon-grape	<i>Abies grandis</i> / <i>Mahonia nervosa</i>	Red	
Labrador-tea /western bog-laurel /peat-mosses	<i>Rhododendron groenlandicum</i> / <i>Kalmia microphylla</i> / <i>Sphagnum spp.</i>	Blue	
Red alder/salmonberry/common horsetail	<i>Alnus rubra</i> / <i>Rubus spectabilis</i> / <i>Equisetum arvense</i>	Blue	
Red alder/slough sedge [black cottonwood]	<i>Alnus rubra</i> / <i>Carex obnupta</i> [ <i>Populus trichocarpa</i> ]	Red	
Western redcedar / common snowberry	<i>Thuja plicata</i> / <i>Symphoricarpos albus</i>	Red	
Western redcedar / common snowberry	<i>Thuja plicata</i> / <i>Symphoricarpos albus</i>	Red	
Western redcedar / salmonberry	<i>Thuja plicata</i> / <i>Rubus spectabilis</i>	Red	

<sup>1</sup> BC CDC 2023b

<sup>2</sup> Government of Canada 2023

## FIELD RESULTS

A qualified professional biologist from Asio Environmental Consulting completed a number of site surveys and inventory on the property between February and June 2022. The riparian area and aquatic ecosystems, and other potentially sensitive ecosystems, were assessed – including the collection of stream data, vegetation and wildlife observations, and site photographs.

### Riparian Areas and Aquatic Ecosystems

A total of 19 wetlands and 15 stream and stream segments were mapped on the property (Figure 1). Several of the wetlands are low saturated areas but are isolated from the stream network. Each wetland or watercourse has a 30m riparian assessment area (RAA). None of the proposed activities for access road installation will enter the 30m RAA, therefore no further discussion of the wetland and watercourse characteristics are included in this memo.

### Vegetation and Wildlife Observations

The property is mostly forested, predominantly mature, second growth forest (Douglas-fir, grand fir, western redcedar, red alder, and bigleaf maple trees) with an understory dominated by sword ferns and salal. There are a number of openings due to historical clearing and use. These areas are dominated by scotch broom and other weedy species. The wetlands on the property are mostly shrubby, dominated by hardhack, or marshy, dominated by sedges. Riparian areas adjacent to the wetlands and streams contain salmonberry, sword fern and bracken fern. No species or ecosystems at risk were observed. During the site assessment the species in Table 4 were found on the site.

TABLE 4. VEGETATION SPECIES OBSERVED at Parcel B Appaloosa Way

COMMON NAME	SCIENTIFIC NAME	SPECIES STATUS
TREES AND SHRUBS		
Bigleaf maple	<i>Acer macrophyllum</i>	Yellow <sup>1</sup>
Douglas-fir	<i>Pseudotsuga menziesii</i>	Yellow <sup>1</sup>
Dull Oregon-grape	<i>Berberis nervosa</i>	Yellow <sup>1</sup>
Grand fir	<i>Abies grandis</i>	Yellow <sup>1</sup>
Hardhack	<i>Spiraea douglasii</i> var. <i>douglasii</i>	Yellow <sup>1</sup>
Nootka rose	<i>Rosa nutkana</i>	Yellow <sup>1</sup>
Oceanspray	<i>Holodiscus discolor</i> var. <i>discolor</i>	Yellow <sup>1</sup>
Pacific dogwood	<i>Cornus nuttallii</i>	Yellow <sup>1</sup>
Baldhip rose	<i>Rosa gymnocarpa</i>	Yellow <sup>1</sup>
Red alder	<i>Alnus rubra</i>	Yellow <sup>1</sup>
Salal	<i>Gaultheria shallon</i>	Yellow <sup>1</sup>
Salmonberry	<i>Rubus spectabilis</i>	Yellow <sup>1</sup>
Thimbleberry	<i>Rubus parviflorus</i>	Yellow <sup>1</sup>
Trailing blackberry	<i>Rubus ursinus</i>	Yellow <sup>1</sup>
Western hemlock	<i>Tsuga heterophylla</i>	Yellow <sup>1</sup>
Western redcedar	<i>Thuja plicata</i>	Yellow <sup>1</sup>
Willow sp.	<i>Salix</i> sp.	--

COMMON NAME	SCIENTIFIC NAME	SPECIES STATUS
FORBS, FERNS AND GRAMNOIDS		
Bracken fern	<i>Pteridium aquilinum</i>	Yellow <sup>1</sup>
Cleavers	<i>Galium aparine</i>	Yellow <sup>1</sup>
Common horsetail	<i>Equisetum arvense</i>	Yellow <sup>1</sup>
Fringecup	<i>Tellima grandiflora</i>	Yellow <sup>1</sup>
Licorice fern	<i>Polypodium glycyrrhiza</i>	Yellow <sup>1</sup>
Orange honeysuckle	<i>Lonicera ciliosa</i>	Yellow <sup>1</sup>
Pacific bleeding heart	<i>Dicentra formosa ssp. formosa</i>	Yellow <sup>1</sup>
Pacific water parsley	<i>Oenanthe sarmentosa</i>	Yellow <sup>1</sup>
Red columbine	<i>Aquilegia formosa</i>	Yellow <sup>1</sup>
Sedge sp.	<i>Carex sp</i>	--
Siberian miner's lettuce	<i>Claytonia sibirica</i>	Yellow <sup>1</sup>
Skunk cabbage	<i>Lysichiton americanus</i>	Yellow <sup>1</sup>
Slough sedge	<i>Carex obnupta</i>	Yellow <sup>1</sup>
Starflower	<i>Lysimachia latifolia</i>	Yellow <sup>1</sup>
Stinging nettle	<i>Urtica dioica</i>	Yellow <sup>1</sup>
Sword fern	<i>Polystichum munitum</i>	Yellow <sup>1</sup>
Vanilla leaf	<i>Achlys triphylla</i>	Yellow <sup>1</sup>
INVASIVE SPECIES AND EXOTIC SPECIES		
Canada thistle	<i>Cirsium arvense</i>	<b>Invasive;</b> Exotic
Cut-leaf blackberry	<i>Rubus laciniatus</i>	Exotic
Hairy cat's ear	<i>Hypochaeris radicata</i>	Exotic
Scotch broom	<i>Cytisus scoparius</i>	<b>Invasive;</b> Exotic
BRYOPHYTES		
Coastal leafy moss	<i>Plagiomnium insignne</i>	Yellow <sup>1</sup>
Electrified cat's-tail moss	<i>Rhytidiadelphus triquetrus</i>	Yellow <sup>1</sup>
Flat-moss	<i>Buckiella undulata</i>	Yellow <sup>1</sup>
Haircap moss	<i>Polytrichum piliferum</i>	Yellow <sup>1</sup>
Oregon beaked moss	<i>Kinbergia oregana</i>	Yellow <sup>1</sup>
Step moss	<i>Hylocomium splendens</i>	Yellow <sup>1</sup>
Tree ruffle liverwort	<i>Porella navicularis</i>	Yellow <sup>1</sup>

<sup>1</sup> BC CDC 2023b



The property provides abundant and varying wildlife habitat. The property's mature trees provide nesting, roosting and foraging habitat for forest songbirds, owls and woodpeckers. The shrubs in the understory provide nesting and foraging habitat for water-associated birds and mammals, security habitat for ungulates, and terrestrial habitat for amphibians and reptiles. A list of the animal species observed during the field visit is provided in Table 5.

Table 5. Wildlife Species Observed at Parcel B Appaloosa Way

COMMON NAME	SCIENTIFIC NAME	SPECIES STATUS
<b>BIRDS</b>		
American robin	<i>Turdus migratorius</i>	Yellow <sup>1</sup>
Chestnut-backed chickadee	<i>Poecile rufescens</i>	Yellow <sup>1</sup>
Crow	<i>Corvus brachyrhynchos</i>	Yellow <sup>1</sup>
Dark-eyed junco	<i>Junco hyemalis</i>	Yellow <sup>1</sup>
Marsh wren	<i>Cistothorus palustris</i>	Yellow <sup>1</sup>
Pacific wren	<i>Troglodytes pacificus</i>	Yellow <sup>1</sup>
Pileated woodpecker	<i>Dryocopus pileatus</i>	Yellow <sup>1</sup>
Song sparrow	<i>Melospiza melodia</i>	Yellow <sup>1</sup>
Swainson's thrush	<i>Catharus ustulatus</i>	Yellow <sup>1</sup>
Varied thrush	<i>Ixoreus naevius</i>	Yellow <sup>1</sup>
<b>MAMMALS</b>		
Black bear	<i>Ursus americanus</i>	Yellow <sup>1</sup>
Black-tailed deer (scat)	<i>Odocoileus hemionus columbianus</i>	Yellow <sup>1</sup>
Cougar	<i>Puma concolor</i>	Yellow <sup>1</sup>
Red squirrel	<i>Tamiasciurus hudsonicus</i>	Yellow <sup>1</sup>
Roosevelt elk	<i>Cervus elaphus roosevelti</i>	Blue <sup>1</sup>
<b>AMPHIBIANS AND REPTILES</b>		
Northern red-legged frog	<i>Rana aurora</i>	Blue <sup>1</sup> ; Special Concern <sup>2</sup>
Northwestern gartersnake	<i>Thamnophis ordinoides</i>	Yellow <sup>1</sup>
Pacific tree frog	<i>Pseudacris regilla</i>	Yellow <sup>1</sup>
Western toad	<i>Anaxyrus boreas</i>	Yellow <sup>1</sup> ; Special Concern <sup>2</sup>

<sup>1</sup> BC CDC 2023b

Western toad movement encompasses adult movement to and from breeding ponds in the spring and summer, terrestrial movement during the remainder of the year, and en-masse juvenile dispersal from breeding ponds in summer. No western toads were observed in the vicinity of either proposed access road during any of the multiple site visit.

## POTENTIAL ENVIRONMENTAL IMPACTS

The disturbance from the preliminary development of the property may have impacts on the environment (Table 6), specifically:

- Disturbance in sensitive ecosystem areas, such as terrestrial western toad habitat,
- Loss of vegetation,
- Spread of invasive and exotic plant species,
- Change in wildlife habitat availability and wildlife mortality risk, and
- Sediment movement in the project area that may impact wetlands and watercourses.

Table 6. Potential impacts of road building activities at Parcel B

POTENTIAL IMPACT	MECHANISMS OF IMPACT
Disturbance in sensitive ecosystem areas (e.g., western toad habitat)	Road construction can increase mortality risk for western toads as vehicles can kill toads crossing the road, as causing habitat fragmentation, which can disrupt migration and breeding patterns (Environment and Climate Change Canada 2016).
Loss of vegetation	The effects of tree 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 in the riparian area immediately adjacent to cleared areas may experience changes to the canopy structure and understory plant species due to windthrow and increased light and moisture penetration.
Spread of invasive plant 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 monopolizing open spaces and occupying habitats.
Change in wildlife habitat availability and wildlife mortality risk,	Habitat loss and alteration from vegetation clearing can cause displacement of wildlife, use of less suitable habitat, reduced foraging ability, increased energy expenditure and lower reproductive success.
Sediment movement in the project area towards wetlands and watercourses.	Removal of vegetation can expose soils to erosion and can result in the movement of sediment. Sediment may enter aquatic ecosystems, causing changes in light penetration, pH and turbidity. Damage or degradation of soil surfaces can result in loss of soil structure, increased erosion, and soil compaction, which can negatively affect reclamation efforts. As all work will occur at least 30m from aquatic environments, no direct impacts to sensitive ecosystems will occur.

## RECOMMENDED MITIGATION MEASURES

The residual environmental impacts of the previous and planned activities on the property will be reduced by the implementation of the mitigation and restoration measures recommended in the sections below. Mitigation measures were developed according to the mitigation hierarchy: 1) avoid, 2) minimize, and 3) restore (BC Ministry of Environment 2014) and include provincial best management practices (BC MOE 2014, BC Ministry of Water, Land and Air Protection 2004a, b).

### Protection of Riparian Areas

The 30m Riparian Assessment Area (RAA) boundary should be flagged by a QEP to ensure that no encroachment will occur as no DP for riparian areas will be in place. These areas must be clearly marked prior to the commencement of any activities on the site. This fencing will ensure that neither the SPEA nor RAA will be encroached upon during road construction.

### Invasive Weeds

Invasive weed control is difficult for established populations. 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. Following removal, re-seed bare soil with desirable, competing native vegetation.

Vegetation spoil and soil contaminated with scotch broom should be handled separately from other materials. Scotch broom plants should be cut below the root crown using loppers or a pruning saw and then bagged and disposed of properly in a landfill. Soil from scotch broom infested areas should be transported in dump trucks with heavy tarpaulins that cover the top, sides and back of the box to ensure that soil, seeds and fragments have no chance of escaping and are not spread.

Mitigation measures to control and minimize the spread of invasive weeds on the site include:

- Clean all machinery before arrival onto the site to ensure that weed seeds and other propagules (e.g. pieces of root) are not brought into the project area. Clean all machinery at the end of the project to reduce spread from the site to other environments.
- Use clean fill and soil. If fill or topsoil is imported from external areas, ensure that it is from a weed-free source.

Areas disturbed by road building that are not part of the permanent road footprint should be seeded with native seed mix (e.g., clover, Coastal Revegetation Mix by Pacific Premier, or equivalent). Native vegetation species that could also be considered for revegetation include sword ferns, nootka rose, salmonberry and salal. The purpose of using native species is to not require irrigation in the future. The optimal time for revegetation is in the fall, prior to the wet winter season. However, planting at any time of the year (with irrigation as needed) is acceptable to prevent invasive species.



### Wildlife and Wildlife Habitat

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

- Vegetation and tree removal should be completed outside of the migratory bird window (March 7 to August 15; Government of Canada 2023).
- If vegetation and tree clearing is scheduled within the sensitive time period for breeding birds, a QEP should conduct nest search surveys prior to the start of activities to identify any nesting birds that may be potentially impacted by the project. The survey must be completed within 5 days of the planned clearing/disturbance, and the results are valid for 5 days. If an active nest is discovered during nest search or site preparation activities, the nest will be subject to site-specific mitigation measures (e.g. protective buffer around the nest) until the young have naturally fledged.
- A raptor nest survey should be completed by a QEP prior to development activities. If nesting raptor activity is detected, then the QEP will recommend the appropriate mitigation, such as protective buffers.
- In the event that an amphibian or reptile is encountered during clearing or construction, the QEP will recommend the appropriate mitigation, such as avoidance or relocation. All salvage must be done by the QEP and with the appropriate wildlife permit.

### Erosion and Sediment Control

Erosion controls, including the recommendations listed below, are recommended to be maintained for the duration of the activities to minimize the potential effects of the road construction on the natural environment. The measures below, in addition to all work being conducted outside of well-marked 30m buffers on aquatic ecosystems, will ensure protection of sensitive environments on the properties.

- Store materials and soils in dry, flat areas.
- Heed weather advisories and scheduling work to avoid wet and rainy periods that may result in high surface water flow volumes, increase erosion and sedimentation, and/ or rutting and soil compaction.
- Regularly monitor the environment for signs of sedimentation during all phases of the work, undertaking or activity and taking corrective action if required.
  - If overland drainage or sediment movement is observed in the work area following clearing and grading for road construction, install silt fencing on the downslope edge of the cleared area to capture sediment laden water and to allow sediment to settle. Silt fencing should be keyed into the ground (buried) at least 15 cm and checked regularly for integrity and to remove sediment build up.
- Minimize amount of time soils are exposed by seeding and planting as soon as disturbance is complete. Cover exposed soil areas with tarps or mulch if for a prolonged period or during rainfall events.

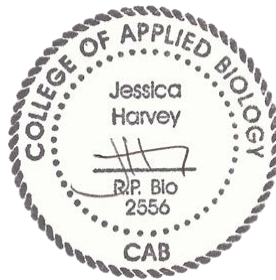
## CONCLUSION

The observations from the site visits to the property have been detailed in this report. No permanent habitat features (e.g. bat roosts in rocky outcrops, raptor stick nests) were observed in the vicinity of the proposed access roads. The riparian and aquatic ecosystems on the properties are extensive, but all activities for the proposed access roads will occur outside of the 30m Riparian Assessment Areas. These areas must be clearly marked prior to the commencement of any activities on the site.

During the development at Parcel B Appaloosa Way, implementation of the mitigation measures recommended in this report, including the prevention of the spread of invasive species, will minimize the impacts of the proposed access road installation on the environment.

Sincerely,

Jessica Harvey, M.Sc., R.P. Biol.  
Principal and Senior Biologist  
Asio Environmental Consulting Inc.  
403.200.8236



## PROFESSIONAL CERTIFICATION

This report has been prepared with the best information available at the time of writing, including the Official Community Plan, communications with the client, site visits, and review of other documentation relevant to the project. This report 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.

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## PHOTOS

Photo 1. Upland forest and existing old road typical of where new proposed access roads will be constructed.



Photo2. Scotch broom infested opening typical of existing disturbed areas on the properties.





June 22, 2023

Attn: Richard Buchan  
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Land Use Services Department  
Cowichan Valley Regional District  
175 Ingram Street, Duncan BC V9L 1N8  
Email: [richard.buchan@cvrd.bc.ca](mailto:richard.buchan@cvrd.bc.ca)

### LETTER OF ENGAGEMENT FOR DP23E05

This letter of engagement is to confirm that Asio Environmental Consulting Inc. will be providing environmental monitoring services as needed for the development at PID 009-845-119 and PID 009-849-637, as per Development Permit DP23E05.

Our team of QEPs will be overseeing the monitoring of site activities at the subject property, and ensuring the environmental conditions are met for the DP. Site activities will be monitored throughout the course of tree falling, clearing and driveway construction for compliance with the DP. Asio will work with the landowner and contractors throughout each phase of the project to meet the requirements of the DP. This includes:

- Flagging/temporary fencing of the 30m Riparian Assessment Area Boundary Prior to the commencement of any land-clearing activities;
- Provide guidance on invasive species removal and seeding with native seed mix following disturbance;
- Conduct a raptor nest survey;
- Conducts nest search surveys if required; and
- Supervise regularly monitoring the site for signs of sedimentation during all phases of the work.

Please contact me with any questions or comments.

Sincerely,

Jessica Harvey, M.Sc., R.P. Biol.  
Principal and Senior Biologist  
Asio Environmental Consulting Inc.  
403.200.8236

