

Biophysical Assessment- Montrose Park

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Cc:	CVRD Planning Department	Project:	2444

RE: BIOPHYSICAL ASSESSMENT – CVRD Montrose Park, Courtenay, BC

This letter report, prepared by Current Environmental Ltd., describes the outcomes of a biophysical assessment completed on August 12, 2025, for Montrose Park in the Kilmarnock neighbourhood of Royston, BC. The assessment was undertaken to provide the Comox Valley Regional District (CVRD) Parks Department with updated information on site conditions, to identify environmental constraints, and to present park development options that balance ecological values with potential community park uses.

This report builds on the previous biophysical assessments prepared for the site by Current Environmental Ltd (D. Silvester and J. Bain, December 2024), which documented riparian features and environmentally sensitive areas in support of CVRD’s engineering and planning needs. The present assessment updates those findings with a focus on wildlife trees, stand health, and potential recreational integration, and is intended to meet the requirements of CVRD Bylaws 337 and 520 for biophysical assessments within a Freshwater Development Permit Area (DPA).

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1 INTRODUCTION

This letter report is intended to inform the Comox Valley Regional District (CVRD) of the current biophysical state of Montrose Park in Royston, BC and delineate Environmentally Sensitive Areas (ESA) as well as potentially developable areas. There is a Freshwater DPA on the subject property relating to an unnamed stream and wetland that runs along the south side of the property. The CVRD Bylaw 520¹ requires a Biophysical Assessment to be conducted by a Registered Professional Biologist for development within the 30 m Freshwater DPA.

The objectives of this biophysical assessment are to:

1. Identify sensitive habitats and species on the property that require protection.
2. Provide mitigation measures to protect these values during potential park development.
3. Delineate developable areas to minimize impacts to sensitive features.
4. Provide a range of conceptual park development options (low, moderate, and higher impact).
5. Prescribe habitat enhancements where applicable.

2 BACKGROUND

The subject property is located near the intersection of Montrose Drive and Kilmarnock Drive in Royston, BC, and is approximately 1.1 hectares in size. The lot is located in the Comox Valley Regional District (CVRD) and is zoned Country Residential One (CR-1). The property is forested throughout.

Previous biophysical assessment work on the property (Current Environmental, 2024) was commissioned by CVRD Engineering to evaluate the potential for sanitary sewer infrastructure associated with the CVRD South Region Royston Union Bay Sewer Extension. While that assessment identified riparian features, wildlife trees, and developable polygons, the present study seeks to advance existing research by considering specific park development opportunities.

¹ CVRD (2019). Rural Comox Valley Zoning Bylaw 520. Development permit guidelines.
<<https://www.comoxvalleyrd.ca/sites/default/files/2023-11/520%20Zoning%20Bylaw%20CONSOLIDATED%2020231017.pdf>>

3 METHODS

3.1 BACKGROUND REVIEW

Background information on Environmentally Sensitive Areas (ESAs) located within or in proximity to the subject property was obtained from the following sources:

1. Comox Valley Regional District (CVRD) iMap²
2. Conservation Data Center (CDC) iMap³
3. Sensitive Ecosystems Inventory (SEI)⁴
4. Wildlife Tree Stewardship Atlas (WiTS)⁵
5. Great Blue Heron (GBHE) Management Team Atlas⁶
6. Habitat Wizard⁷
7. Sensitive Habitat Inventory Mapping (SHIM)⁸
8. Aerial imagery
9. Current Environmental's 2024 Biophysical Assessment of Montrose Park (Silvester & Bain, 2024).

3.2 FIELD ASSESSMENT

Ground-level assessments of aquatic and terrestrial habitats and species were conducted on August 12, 2025. The site assessment involved a danger tree assessment, surveying wildlife trees, and potential ESAs. The following sections provide additional detail on specific inventory methods.

3.2.1 Aquatic Habitats and Species

Criteria for determining and describing aquatic ESAs was based primarily on measures described in BC Ministry of Environment *Develop with Care: Environmental Guidelines for Urban and Rural Land Development in British Columbia*, the Resources Inventory Committee of British Columbia *Reconnaissance (1:20,000) Fish and Fish Habitat Inventory: Standards and Procedures Version 1.1*⁹, the Rural Comox Valley *Official Community Plan*, and from the project biologist's previous experience in dealing with local government, Federal, and Provincial agency staff.

Criteria for Riparian Areas Protection Regulation (RAPR) applicability of watercourses was based primarily on the *Riparian Areas Protection Regulation Technical Assessment Manual*¹⁰. Wetland identification and delineation followed provincial guidelines and used the United States Army Corps of Engineers (USACE) wetland identification and classification system¹¹.

² Comox Valley Regional District (2024). CVRD iMap 2.2. Accessed from <<https://mapviewer.imaptoo.ca/secure/>>

³ B.C. Conservation Data Centre: CDC iMap (2025). Ministry of Environment, Victoria, B.C. Accessed from <<http://maps.gov.bc.ca/ess/hm/cdc/>>

⁴ Sensitive Ecosystems Inventory (2024). Georgia Basin Habitat Atlas. Accessed from <<https://cmnmaps.ca/GBHA/>>

⁵ Wildlife Tree Stewardship (WiTS) Program (2025). Nest Tree Report. The Community Mapping Network. Accessed from <<http://www.cmnmaps.ca/wits/>>

⁶ Great Blue Heron (GBHE) Management Team (2025). The Community Mapping Network. Accessed from <<http://cmnmaps.ca/GBHE/>>

⁷ Ministry of Environment and Parks (2025). Habitat Wizard. Accessed from <<https://maps.gov.bc.ca/ess/hm/habwiz/>>

⁸ Sensitive Habitat Inventory Mapping Atlas (2025). Community Mapping Network. Accessed from <<http://www.cmnmaps.ca/SHIM/>>

⁹ <<https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/nr-laws-policy/risc/recce2c.pdf>>

¹⁰ Ministry of Forests (2019). Riparian Areas Protection Regulation Technical Assessment Manual. Accessed from: <https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/fish-fish-habitat/riparian-areas-regulations/rapr_assessment_methods_manual_for_web_11.pdf>

¹¹ <<https://www.epa.gov/wetlands/classification-and-types-wetlands#undefined>>

3.2.2 Terrestrial Habitats and Species

Survey methods for terrestrial elements and ESAs were directed in part by those outlined in *Environmental Best Management Practices for Urban and Rural Land Development in British Columbia*¹², and the *Field Manual for Describing Terrestrial Ecosystems*¹³. Vegetation on the subject property was identified with the assistance of *Plants of Coastal British Columbia*¹⁴.

3.2.3 Danger Tree Assessment

The Danger Tree Assessment was conducted in accordance with the *Wildlife Danger Tree Assessor's Course: Parks and Recreation Module*. All trees were assessed based on a "Level of Disturbance 3", consistent with WorkSafeBC expectations for sites involving active construction, including the use of heavy equipment such as rubber-tired backhoes. This level of disturbance accounts for potential impacts to tree root systems and stability due to soil excavation and mechanical activity.

Trees were assessed for structural defects, species-specific failure patterns, evidence of decay, lean, crown condition, and proximity to targets (e.g., trails, infrastructure, work zones). Observations were recorded visually from the ground without the use of invasive tools.

The intention of this assessment was to identify which trees could be safely retained as habitat features and which may require modification or removal to support future park uses.

3.2.4 Species and Ecosystems at Risk and Avian Nesting

An office-based assessment of Species at Risk occurrences on the subject property was completed using the *CDC BC Species and Ecosystems Explorer*, the *Wildlife Tree Stewardship Atlas*, and the *Great Blue Heron Atlas*. The on-site assessment of Species at Risk was completed concurrent with the other inventory efforts mentioned above and was based primarily on methods outlined in *Develop with Care – Environmental Guidelines for Urban and Rural Land Development in British Columbia*.

4 REGULATORY SETTING

Development in Montrose Park is subject to multiple layers of environmental regulation across federal, provincial, and local jurisdictions. These frameworks govern activities affecting riparian areas, wildlife habitat and potential site access through watercourses. The main applicable regulations include:

1. Canada Fisheries Act
2. Migratory Birds Convention Act (MBCA)
3. Species at Risk Act (SARA)
4. BC RAPR
5. BC Wildlife Act
6. BC Water Sustainability Act (WSA)
7. BC Environmental Management Act (EMA)
8. BC Weed Control Act
9. CVRD Rural Regional Official Community Plan (Bylaw 337) & Zoning Bylaw 520
10. CVRD Freshwater DPA

¹² BC Ministry of Water, Land, and Resource Stewardship. (2004). *Environmental Best Management Practices for Urban and Rural Land Development in British Columbia*. Accessed from: http://www.env.gov.bc.ca/wld/documents/bmp/urban_ebmp/EBMP%20PDF%201.pdf

¹³ BC Ministry of Environment and Parks. (2010). *Field Manual for Describing Terrestrial Ecosystems, 2nd Edition*. <https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/conservation-data-centre/field_manual_describing_terrestrial_ecosystems_2nd.pdf>

¹⁴ Pojar, J. and A. MacKinnon. (1994). *Plants of Coastal British Columbia (Revised, 2004)*. Lone Pine Publishing.

4.1 FEDERAL REGULATIONS

4.1.1 Fisheries Act

The federal *Fisheries Act*¹⁵ applies throughout all jurisdictions, including provincial and municipal lands. An updated version of the *Fisheries Act* was introduced on 21 June 2019 with additional provisions that came into force on 28 August 2019. The *Fisheries Act* is intended to ensure works are carried out in a manner that avoids resulting in the harmful alteration, disruption, or destruction of fish habitat and prevents pollution of water frequented by fish as described in the following notable sections:

1. No person shall carry on any work, undertaking or activity that results in the harmful alteration, disruption or destruction of fish habitat (Section 35).
2. It is prohibited to deposit or permit the deposit of a deleterious substance of any type in water frequented by fish or in any place under any conditions where the deleterious substance or any other deleterious substance that results from the deposit of the deleterious substance may enter any such water (Section 36(3)).
3. Provisions for flow and passage (Section 20 and 21).
4. A framework for regulatory decision-making (Section 6 and 6.1).

These provisions are intended to reduce threats to habitat (degradation or loss), flow alteration, aquatic invasive species, overexploitation of fish, and pollution of many kinds that may adversely affect water quality and fish health.

When conducting a project near water it is the responsibility of the person or proponent conducting the work to ensure they avoid causing a “harmful alteration, disruption or destruction (HADD) of fish habitat” in compliance with the *Fisheries Act*. The Fisheries and Oceans Canada (DFO) document entitled “*Measures to Protect Fish and Fish Habitat*”¹⁶ applies to all project types and is intended to assist compliance with fish and fish habitat protection provisions of the *Fisheries Act* by incorporating measures to avoid causing the death of fish and HADD of fish habitat.

4.1.2 Migratory Birds Convention Act

The *Migratory Birds Convention Act* (MBCA) protects migrating birds as populations and individual birds, including their eggs and nests. Among a number of prohibitions, this act prohibits the disturbance of the nests or eggs of migratory birds without a permit from the Minister. As well, the deposition of a substance “in waters or an area frequented by migratory birds or in a place from which it may enter such waters or such an area — that is harmful to migratory birds”¹⁷ is also prohibited.

Under the *Migratory Birds Regulations* (MBR; 2022), some species’ nest trees have been granted extra protection. For example, pileated woodpecker nest trees are protected for three years after notification to the Abandoned Nest Registry (Environment and Climate Change Canada) that the nest tree is unoccupied by any migratory species, not only pileated woodpeckers.

No permitting is required unless a tree identified as a nest tree protected under the MBR is to be removed; mitigation measures provided in this assessment and other environmental management plans to be prepared for this project, if properly employed, should prevent contraventions to the MBCA.

¹⁵ Government of Canada. (1985). *Fisheries Act*. Accessed from: <<https://www.laws-lois.justice.gc.ca/eng/acts/F-14/>>

¹⁶ Government of Canada. (2023). *Measures to protect fish and fish habitat*. Accessed from: <<https://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures-eng.html>>

¹⁷ Government of Canada. (1994). *Migratory Birds Convention Act*. Accessed from: <<https://laws-lois.justice.gc.ca/eng/acts/m-7.01/>>

4.1.3 Species at Risk Act

The *Species at Risk Act* (SARA) ¹⁸ is a federal law with three main goals:

1. Prevent endangered or threatened species from becoming extinct or extirpated.
2. Help in the recovery of endangered, threatened and extirpated species.
3. Manage species of special concern to help prevent them from becoming endangered or threatened.

For those species listed as extirpated, endangered or threatened under the *Species at Risk Act* (SARA), it is illegal to:

1. Kill, harm, harass, capture or take an individual.
2. Possess, collect, buy, sell or trade an individual or any part of an individual.
3. Damage or destroy the residence of one or more individuals.

4.2 PROVINCIAL REGULATIONS

4.2.1 Wildlife Act

The British Columbia *Wildlife Act* is the primary provincial legislation for protecting wildlife, including rare or endangered species, and their habitat in the province of BC. The recommended mitigation work described in this report provides consideration for the disturbance of birds, their nests, and eggs where habitat such as trees, shrubs, buildings, or other human derived structures may be impacted. Section 34 of the *Act* states that:

A person commits an offence if the person, except as provided by regulation, possesses, takes, injures, molests or destroys:

1. a bird or its egg;
2. the nest of an eagle, peregrine falcon, gyrfalcon, osprey, heron or burrowing owl; or
3. the nest of a bird not referred to in paragraph (b) when the nest is occupied by a bird or its egg.¹⁹

Generally, “no build” and “construction noise” buffers are employed as Best Management Practices to mitigate development-related impacts to raptor nests.

4.2.2 Water Sustainability Act

Section 11 of the Provincial *Water Sustainability Act* requires an approval be granted by the Ministry of Water, Land and Resource Stewardship (MWLRS) for “changes in and about a stream” defined as²⁰:

1. any modification to the nature of a stream, including any modification to the land, vegetation and natural environment of a stream or the flow of water in a stream; or
2. any activity or construction within a stream channel that has or may have an impact on a stream or a stream channel.

Notifications are relevant to low-risk changes, such as culvert installations, that will have a minimal impact on the environment and third parties.

4.2.3 Environmental Management Act

The *Environmental Management Act*²¹ regulates release of municipal, industrial, and hazardous waste into the environment. Contaminated sites and remediation are also regulated under this act.

¹⁸ Government of Canada. (2002). *Species at Risk Act*. Accessed from: <<https://laws.justice.gc.ca/eng/acts/s-15.3/FullText.html>>

¹⁹ Government of BC. (1996). *Wildlife Act*, Section 34. Accessed from: <https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/96488_01>

²⁰ Government of BC. (2014). *Water Sustainability Act*, Section 11. Accessed from: <<https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/14015>>

²¹ Government of BC. (2003). *Environmental Management Act*. Accessed from: [Environmental Management Act \(gov.bc.ca\)](https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/03015)

4.2.4 Weed Control Act

The *Weed Control Act*²² requires land occupiers to control noxious weeds growing on their land. Note that Himalayan blackberry is not classified as provincially noxious; however, it is still an invasive species that is known to inhibit the growth of native riparian shrubs and trees and should be removed/controlled wherever possible from a park setting.

4.3 REGIONAL REGULATIONS

4.3.1 CVRD Development Permit Areas and Bylaws

Montrose Park falls within the Freshwater DPA as defined under the CVRD Rural Official Community Plan (Bylaw 337) and Zoning Bylaw 520. Within this DPA, a biophysical assessment by a Qualified Environmental Professional is required prior to development within 30 m of a stream or wetland.

The intent of the DPA is to ensure sensitive riparian features are protected, consistent with the Regional Growth Strategy and provincial RAPR.

5 RESULTS

A ground-level biophysical survey and wildlife/danger tree assessment was conducted on August 12, 2025, to update site conditions and inform potential park development options. The following sections summarize aquatic and terrestrial habitats, species observations, and constraints.

5.1 AQUATIC HABITATS AND SPECIES

Two unnamed channelized streams (Streams 1 and 2) and one wetland (Wetland 1) are located on the property (Figure 1). These features converge at the northeast corner of the lot and drain toward Argyle Creek, a known fish-bearing stream. Below is a list of previously inventoried aquatic habitat:

1. Stream 1 flows northeast along the southeast property boundary of Montrose Park before entering Wetland 1.
2. Stream 2 flows southeast along the northeast property boundary of Montrose Park before entering Wetland 1.
3. Wetland 1 is approximately 800 m² area located at the eastern corner of the property that connects with Streams 1 and 2 during high-flow. Dominant vegetation includes scouring rush (*Equisetum hyemale*), red-osier dogwood (*Cornus sericea*) and Pacific ninebark (*Physocarpus capitatus*).
4. Northwest Depression is a smaller ~180 m² low area containing wetland-associated vegetation, though it did not meet USACE thresholds for wetland status.

Under RAPR, Streams 1 and 2 receive a 10 m Streamside Protection and Enhancement Area (SPEA), and Wetland 1 receives a 15 m SPEA (Figure 1).

5.2 TERRESTRIAL HABITATS AND SPECIES

The property supports a maturing mixed forest dominated by bigleaf maple (*Acer macrophyllum*), grand fir (*Abies grandis*), and western redcedar (*Thuja plicata*). Much of this interior stand is in poor condition, with widespread infection by the fungal pathogen *Kretschmaria deusta* affecting bigleaf maples and resulting in a high density of structurally compromised stems. In many areas, the overstory is collapsing, and vegetation is now dominated by red-osier dogwood (*Cornus sericea*) and other understory species, with scattered remnant overstory trees.

In contrast, a more intact upland forest strip occurs along the western property line, extending approximately 25–30 m into the site adjacent to Island Highway South (Figure 2). This mixed Coastal Douglas-fir forest, characterized by Douglas-fir (*Pseudotsuga menziesii*) and bigleaf maple, maintains a taller, more continuous

²² Government of BC. (1996). *Weed Control Act*. Accessed from: [Weed Control Act \(gov.bc.ca\)](http://www.gov.bc.ca)

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canopy compared to the interior portions of the site. While *K. deusta* is also present in maples within this strip, the overall stand structure is more stable, with a vertical canopy profile and mature conifer presence that provide greater long-term ecological value than the largely degraded interior. The relative value of this upland stand is based primarily on canopy cover, structural diversity, and the presence of longer-lived conifers that contribute to stand resilience.

A total of 22 wildlife trees (WT1–WT14, plus additional mapped stems) were assessed on the site for danger tree status along with habitat value (Table 1). Most exhibited advanced decay or dangerous characteristics. However, standing dead danger trees commonly provide Wildlife Tree values such as nesting, roosting, and foraging habitat through features including cavities, sloughing bark, broken tops, or hollow stems.

Several notable examples were recorded during the August 12, 2025 survey as shown on Figure 2:

1. Grand firs such as Tree #270 (58 cm DBH) and Tree #272 (55 cm DBH) contained feeding cavities and hollow stems, suggesting use by cavity-excavating birds. Tree #289 (97 cm DBH) showed potential pileated cavities near the top of the east stem. Tree #290 (61 cm DBH) exhibited loose bark suitable for bat roosting.
2. Bigleaf maples provided additional features, including Tree #271 (39 cm DBH) with a potential pileated cavity ~10 m above ground, Tree #273 (66 cm DBH) with a possible nest cavity at ~7 m, and Trees #278 (47 cm DBH) and #281 (93 cm DBH) with feeding cavities at mid-canopy heights.

Many other maples were severely compromised by *K. deusta* decay, including Trees #274, 275, 282, 283, and 286. *K. deusta* is a soft rot fungus that preferentially degrades cellulose, often resulting in a brittle tree structure prone to sudden failure. As such, these stems are structurally unstable and considered dangerous depending on proximity to targets. While such trees may retain some short-term foraging or cavity value, their long-term habitat contribution is limited, and retention should only be considered in low-use areas where public safety risks are minimal.

The locations and characteristics of these wildlife trees have been considered in recommending park use/site modification options presented in Section 5.

Invasive species are also present within the park. Himalayan blackberry (*Rubus armeniacus*) was recorded in dense patches along Montrose Drive and in interior openings where canopy cover is limited. Recommendations for their maintenance are discussed in Section 6.

5.3 SPECIES AT RISK AND AVIAN NESTING

A review of the CDC iMap and Habitat Wizard showed no known occurrence of species at risk (SAR) in proximity to the subject property. However, several wildlife features were identified during field assessment:

1. Pileated Woodpecker: Several potential cavity trees were observed (Trees #271, 273, 289). Nest trees are protected under the *Migratory Birds Regulations* for three years after abandonment.
2. Bats: Tree # 290 contained loose bark with bat roosting potential. Several bat SAR are known to occur in the region.
3. Other passerine birds: Cavity and feeding opportunities are present across several wildlife trees on site.
4. Owls: While no owl nests were observed, suitable cavities exist in several declining maples, and owls are known to occur in the region. Under Section 34 of the *BC Wildlife Act*, nests would be protected year-round if present.
5. Great Blue Heron: Tree #280 contained an inventory plaque, though no nests were observed. This is a historical record that should not constrain work on site if no contemporary nests are present.
6. Raptors: The closest known bald eagle nest (BAEA-106-099) is ~250 m west of the site and does not constrain development.

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Table 1. Results of the wildlife/danger tree assessment conducted at Montrose Park on August 12, 2025.

Tree ID	Previously Mapped Wildlife Tree #	Species		DBH (cm)	Height (m)	Comments	Dangerous?*(Y/N)	Potential Wildlife Uses (CN, F)
		Common	Scientific					
269	WT10	Grand fir	<i>Abies grandis</i>	86	21	No cavities observed.	Y	-
270	-	Grand fir	<i>Abies grandis</i>	58	10	Feeding cavities, hollow trunk.	N	F
271	-	Bigleaf maple	<i>Acer macrophyllum</i>	39	12	<i>K. deusta</i> at base, potential pileated cavity approx. 10 m above ground.	Y	CN
272	WT11	Grand fir	<i>Abies grandis</i>	55	18	Feeding cavities.	Y	F
273	WT12	Bigleaf maple	<i>Acer macrophyllum</i>	66	8	<i>K. deusta</i> at base, Possible pileated nest in east stem approximately 7 m above ground.	Y	CN
274	WT5	Bigleaf maple	<i>Acer macrophyllum</i>	89	7	<i>K. deusta</i> at base, crumbling, dangerous depending on targets.	Y	-
275	WT9	Bigleaf maple	<i>Acer macrophyllum</i>	72	15	<i>K. deusta</i> at base, no cavities, half of tree has previously failed, dangerous depending on targets.	Y	-
276	WT6	Bigleaf maple	<i>Acer macrophyllum</i>	48	10	No nesting potential	N	-
277	-	Western redcedar	<i>Thuja plicata</i>	75	17	95% dead, no cavities.	N	-
278	WT8	Bigleaf maple	<i>Acer macrophyllum</i>	47	15	<i>K. deusta</i> at base, potential feed cavities approximately 8 m above ground.	Y	F
279	-	Bigleaf maple	<i>Acer macrophyllum</i>	90	20	Severe decline, next to Hwy 19A, no cavities.	Y	-
280	-	Bigleaf maple	<i>Acer macrophyllum</i>	50	14	<i>K. deusta</i> at base, cavity on trunk approximately 1 m above ground, "great blue heron inventory 178," no heron nests present.	Y	-
281	WT7	Bigleaf maple	<i>Acer macrophyllum</i>	93	20	<i>K. deusta</i> at base, main stem lost top at 12 m, large cavity at top, unsuitable habitat for pileated woodpecker, dangerous depending on targets.	Y	F
282	-	Bigleaf maple	<i>Acer macrophyllum</i>	58	20	<i>K. deusta</i> at base, failed top at 14 m, dangerous depending on targets.	Y	-
283	-	Bigleaf maple	<i>Acer macrophyllum</i>	115	15	<i>K. deusta</i> at base, main stem top blew out at 10 m, 10 cm deep crack between main trunk and secondary stem, dangerous depending on targets.	Y	-
284	WT4	Grand fir	<i>Abies grandis</i>	47	7	Feeding cavity tree, very punky, close to falling.	Y	-
285	WT3	Western hemlock	<i>Tsuga heterophylla</i>	59	10	20 degree lean to the NE, dangerous depending on targets.	Y	-
286	-	Bigleaf maple	<i>Acer macrophyllum</i>	50	16	<i>K. deusta</i> at base, largely dead with the exception of lower epicormic growth.	Y	-
287	WT1	Douglas-fir	<i>Pseudotsuga menziesii</i>	46	9	Spongy, no nesting value.	Y	-
288	WT2	Bigleaf maple	<i>Acer macrophyllum</i>	41	10		Y	-
289	WT14	Grand fir	<i>Abies grandis</i>	97	25	East stem dead with potential pileated cavities near top, west stem 60% with dead top.	Y	CN
290	WT13	Grand fir	<i>Abies grandis</i>	61	21	Loose bark for bat habitat	Y	CN

*Depending on targets

CN – Cavity Nest

F – Feeding

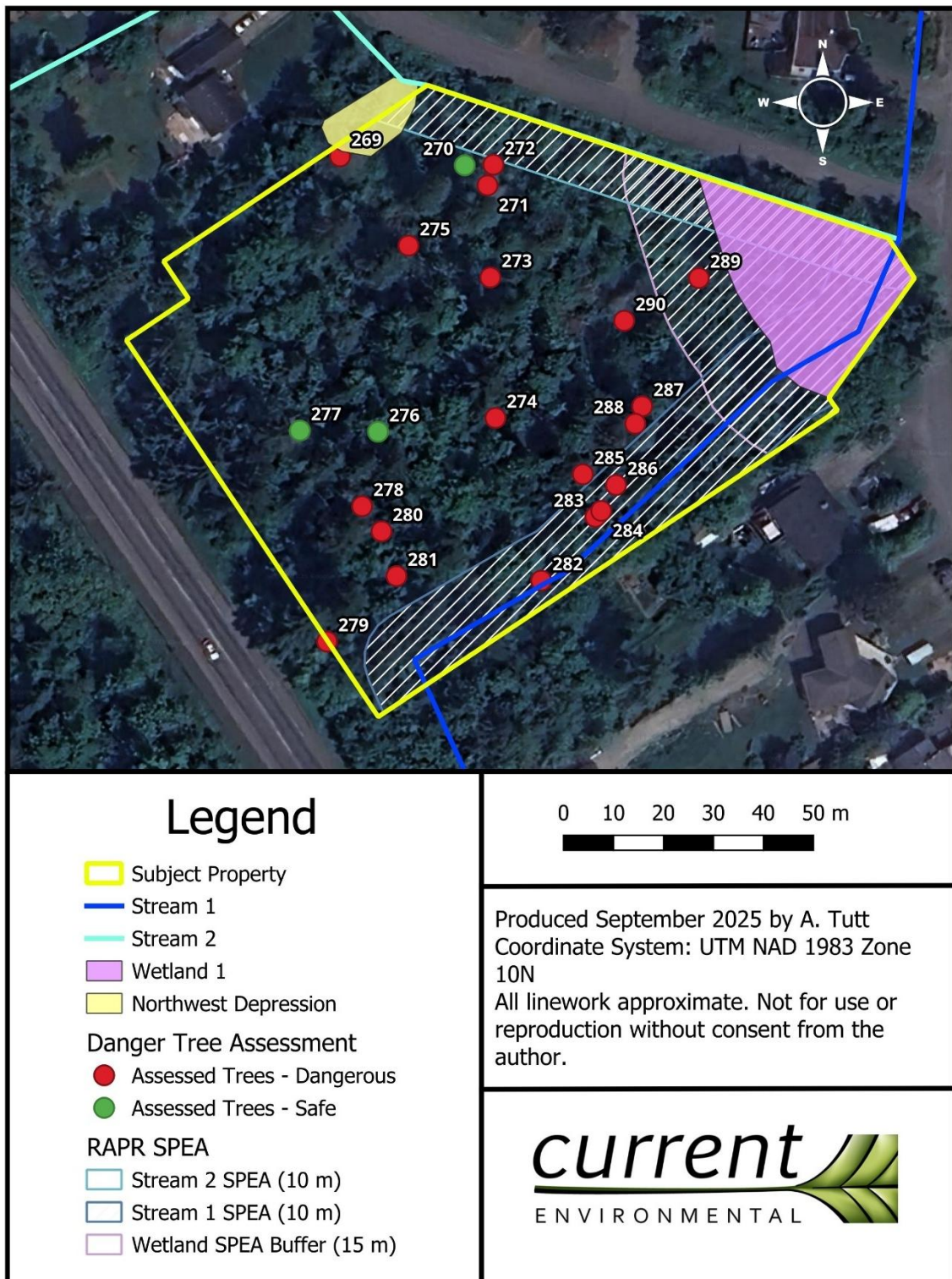


Figure 1. Montrose Park map showing results of Danger Tree Assessment conducted August 12, 2025. Trees represented by a red circle have been categorized as “dangerous” under the *Wildlife Danger Tree Assessor’s Course: Parks and Recreation Module* assessment methods.

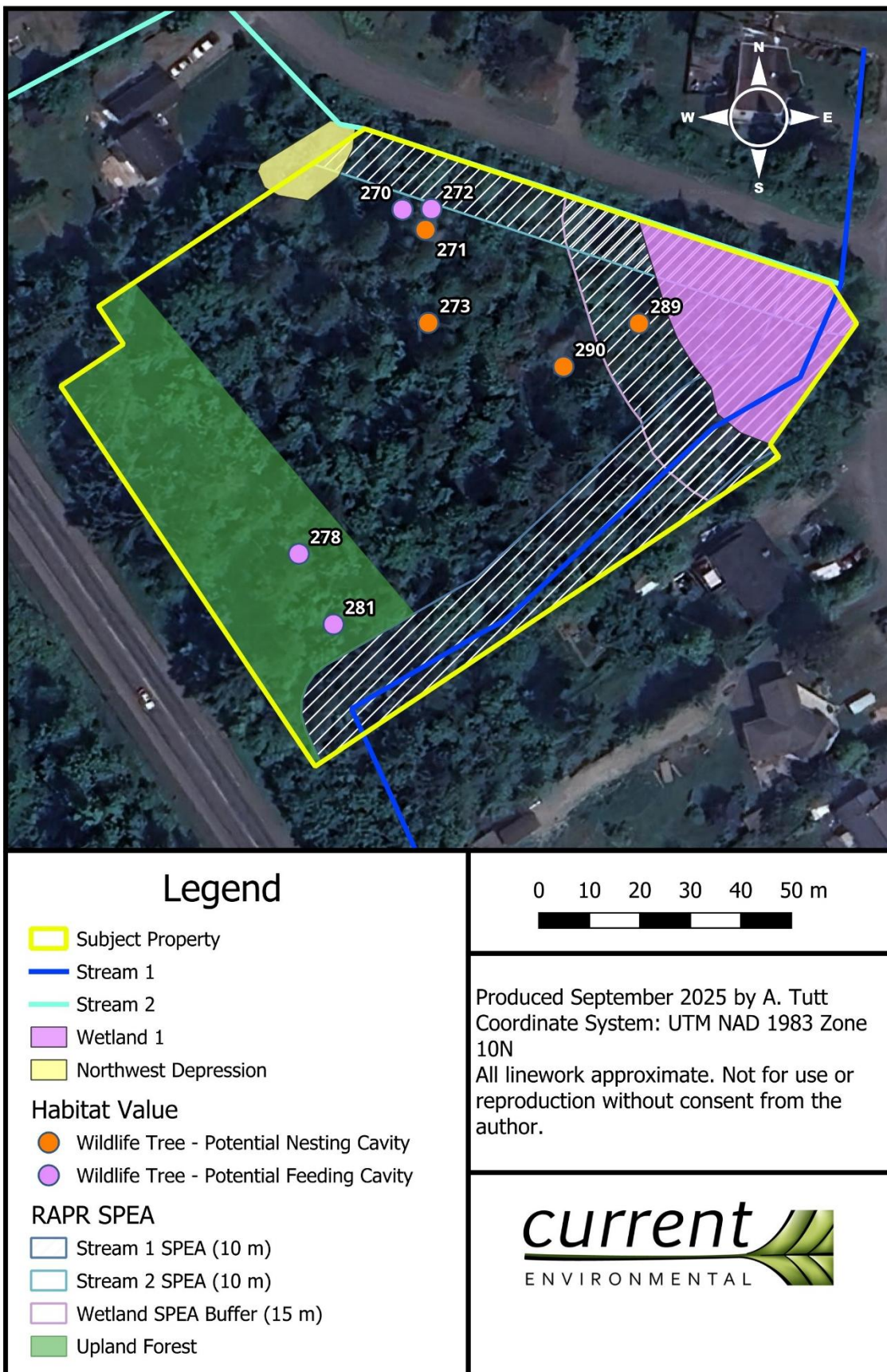


Figure 2. Montrose Park map showing results of Tree Habitat Assessment conducted August 12, 2025. Nesting vs feeding cavities have been differentiated as they are subject to different levels of protection under provincial and federal acts and regulations.

6 DISCUSSION/RECOMMENDATIONS

This section synthesizes biophysical and danger tree assessment findings to inform potential park planning options at Montrose Park. The site contains riparian features (two streams and one wetland), a declining interior stand dominated by bigleaf maple with widespread *K. deusta* infection, and a higher-value upland Douglas-fir dominated strip along the western boundary adjacent to Highway 19A. Together, these features create both ecological opportunities and development constraints.

Table 2, found at the end of this section, provides a summary of options.

6.1 KEY CONSTRAINTS

Three primary constraints should guide park planning (ranked in terms of priority):

- 1) Riparian Protection Areas
 - a. 10 m SPEAs for Streams 1 and 2.
 - b. 15 m SPEA for Wetland 1.
 - c. No development or vegetation removal should occur within these zones other than invasive removal and restoration works (e.g., native vegetation planting/enhancement).
- 2) Protected Trees and Habitat Features
 - a. Trees potentially supporting pileated woodpeckers, owls, or bats (e.g., Trees #271, #273, #289, #290) must be retained if occupied as they are protected under the BC *Wildlife Act* and *Migratory Birds Regulations*.
 - b. Retention of the 25–30 m upland forest strip along Highway 19A is also recommended. This zone provides long-term ecological stability, wildlife habitat, and visual buffering from the highway. Constructing a trail through this forest is considered low impact.
- 3) Optional Buffer for Northwest Depression
 - a. A 15 m vegetated buffer around the northwest depression would provide additional shade and help sustain hydrophytic vegetation.
 - b. While not required by regulation, this buffer would support habitat diversity and may be desirable for park aesthetics and ecological enhancement. This is considered entirely optional.

6.2 OPTION 1 – LOW IMPACT (NATURE TRAIL PARK)

The first option emphasizes habitat retention and low disturbance. Development would be limited to a simple gravel trail loop with benches, routed to avoid SPEAs (Figure 3).

Option 1 is characterized by the following approach:

- 1) Most wildlife trees would be retained, except those posing direct hazards to trails. If a trail or clearing occurs within 1.5 times the height of an assessed danger tree, and the tree is not protected under the BC *Wildlife Act* or federal *MBCA* (i.e., unoccupied), the tree would be removed or reduced (e.g., coronet pruned) to a safe height so that failure would not affect users.
- 2) Mitigation would include pre-clearing nest checks for birds and bats.
- 3) Invasive species are recommended for removal and replacement with native species.
 - a. In areas of dense invasive species growth (such as along the edge of Montrose Drive), an intensive but brief effort at removal may best be accomplished by grubbing soils with small machinery and replacing with native species that form a thicket to help compete with invasive reestablishment. An application of coarse bark mulch can also aid in suppressing invasive regrowth.
 - b. Individual invasive plants encountered throughout the site removed by hand tools. This can be achieved opportunistically during other works or during a short, concerted effort by CVRD staff.
- 4) Pedestrian access into riparian areas should be discouraged by establishing a low split-rail fence, or similar barrier, along the edge of the existing pathway, in particular along the south and east sides of the site.

This option represents the least intrusive approach, maintaining ecological integrity and minimizing infrastructure costs, but providing fewer recreational amenities to the community.

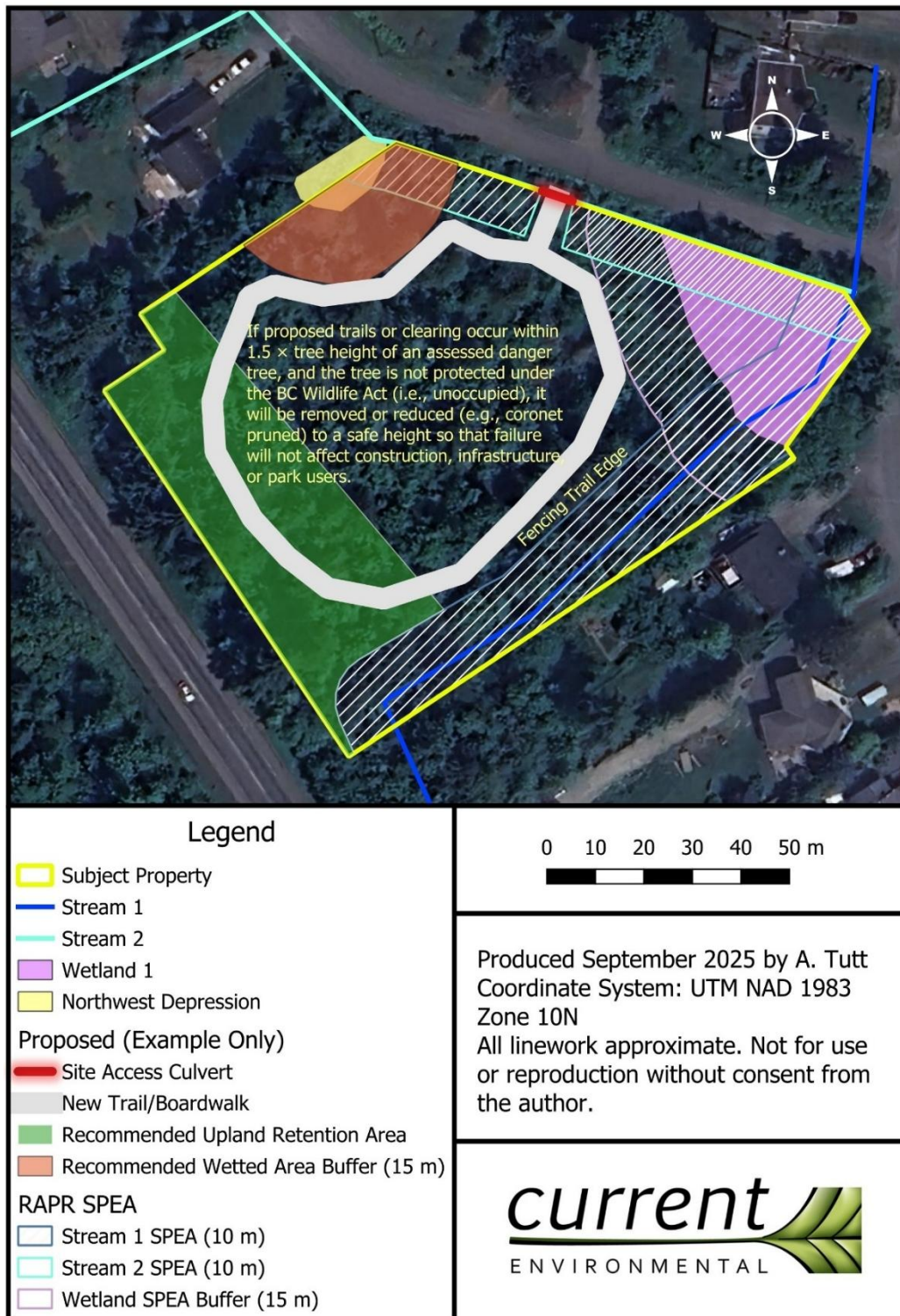


Figure 3. Option 1 – Low Impact (Nature Trail Park). Conceptual layout showing a simple gravel trail loop outside riparian protection areas. Most wildlife trees are retained, with hazard mitigation (e.g., coronet pruning) applied where trails overlap with tree hazard zones.

6.3 OPTION 2 – MODERATE IMPACT (HYBRID PARK)

The second option balances community use and ecological constraints. It envisions a cleared recreation lawn or mowed open space adjacent to Montrose Drive, combined with a perimeter trail system (Figure 4).

Option #2 is characterized by the following approach:

- 1) Potential nest trees would be surveyed to confirm or deny their use by protected species.
- 2) Tree removal would follow hazard tree guidelines: if proposed trails or clearing occur within 1.5 times the height of an assessed danger tree, and the tree is not protected under the BC *Wildlife Act* or federal *MBCA*, the tree would be removed or reduced (e.g., coronet pruned) to a safe height.
- 3) A new trail system would be constructed throughout site, with alignments chosen to avoid SPEAs and dangerous occupied wildlife trees.
- 4) An approximately 3,500 m² cleared recreation lawn would be created to accommodate flexible community use.
- 5) Mitigation would include replacement planting (see Appendix B), and installation of nest or bat boxes where wildlife habitat features are lost.
- 6) Invasive species would be removed throughout and replaced with native vegetation, following the same methods outlined under Option 1.

This hybrid approach offers the community gathering space and open area requested, while still maintaining significant habitat values, riparian buffers, and the Highway 19A forest strip.

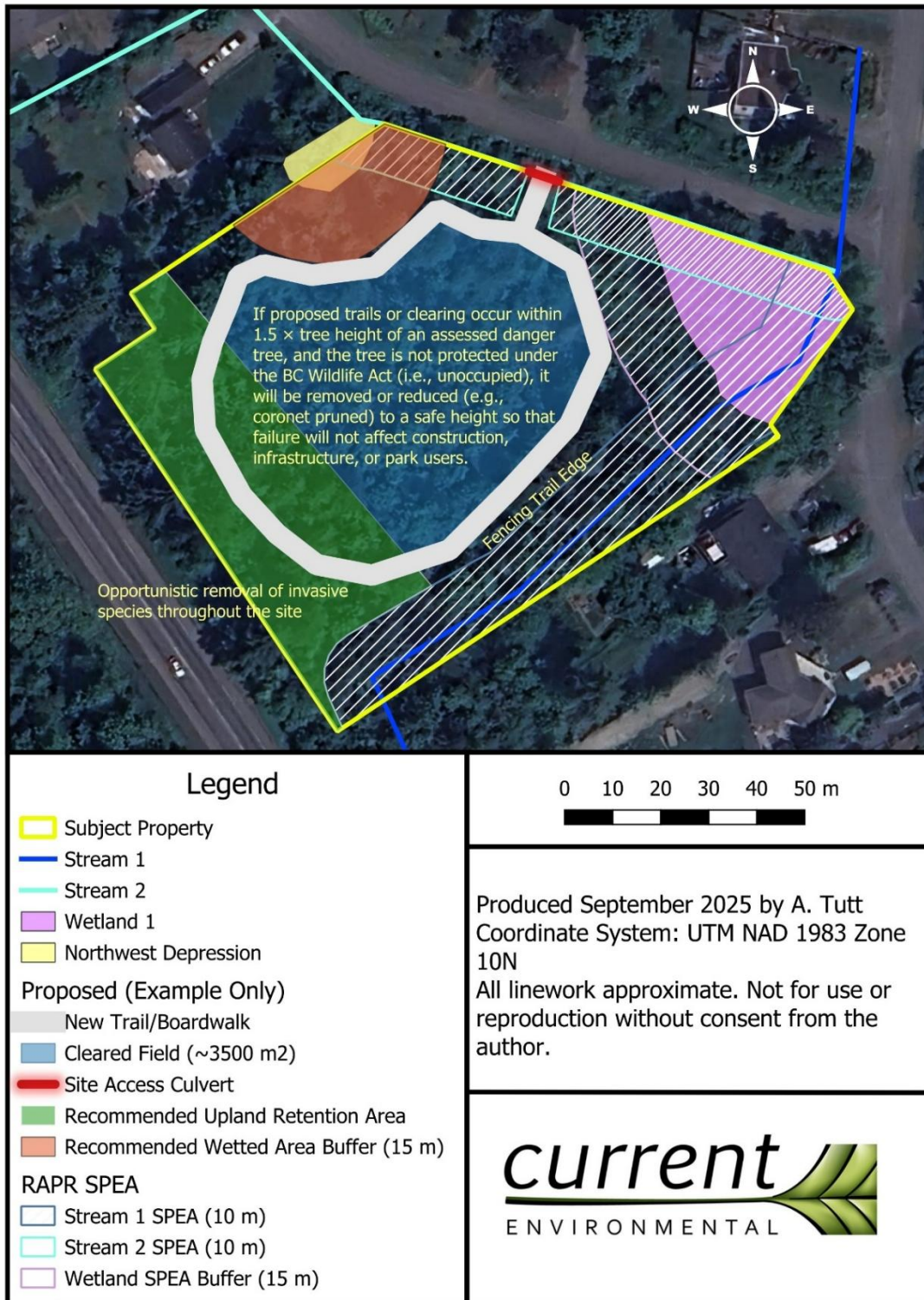


Figure 4. Option 2 – Moderate Impact (Hybrid Park). Conceptual layout showing a combination of a ~3,500 m² recreation lawn near Montrose Drive (shaded blue) and a perimeter trail system. Hazardous maples in high-use zones are removed, while the Highway 19A buffer strip is retained (shaded green).

6.4 OPTION 3 – HIGH IMPACT (RECREATION-FOCUSED PARK)

This option would allow the CVRD discretion to pursue park development, subject to mandated SPEA and wildlife habitat protections. Amenities such as a playground, gazebo or pergola, public washrooms, and formal trail network could be developed based on community priorities (Figure 5).

- 1) Extensive vegetation removal would occur throughout the park interior, with retention primarily limited to riparian buffers and occupied wildlife trees.
- 2) Mitigation would be more intensive, including rigorous pre-clearing wildlife surveys, installation of replacement bat and bird boxes, and replanting at ratios consistent with BC Tree Replacement Criteria (see Appendix B).

This option would maximize recreation opportunities and flexibility for the community but would carry the greatest ecological cost, permitting requirements, and long-term maintenance commitments.

6.5 MITIGATION MEASURES

It will be important to implement mitigation measures to prevent any impacts to adjacent ESAs during all construction on the subject property. The primary concerns during construction include SPEA encroachment, wildlife tree impacts and introducing deleterious substances to the aquatic habitats adjacent to the development site such as sediment, fuel, and other hazardous construction materials. Mitigation measures to be adhered to during construction are provided in Appendix A.

6.6 ANTICIPATED PERMITTING

Regardless of the option pursued, site access is expected to require a culvert crossing of Stream 2. This would trigger a Section 11 Notification under the *Water Sustainability Act* (WSA) and possibly a Ministry of Transportation and Transit (MoTT) permit for works in proximity to Montrose Drive. The necessity of the latter would be determined in consultation with MOTT.

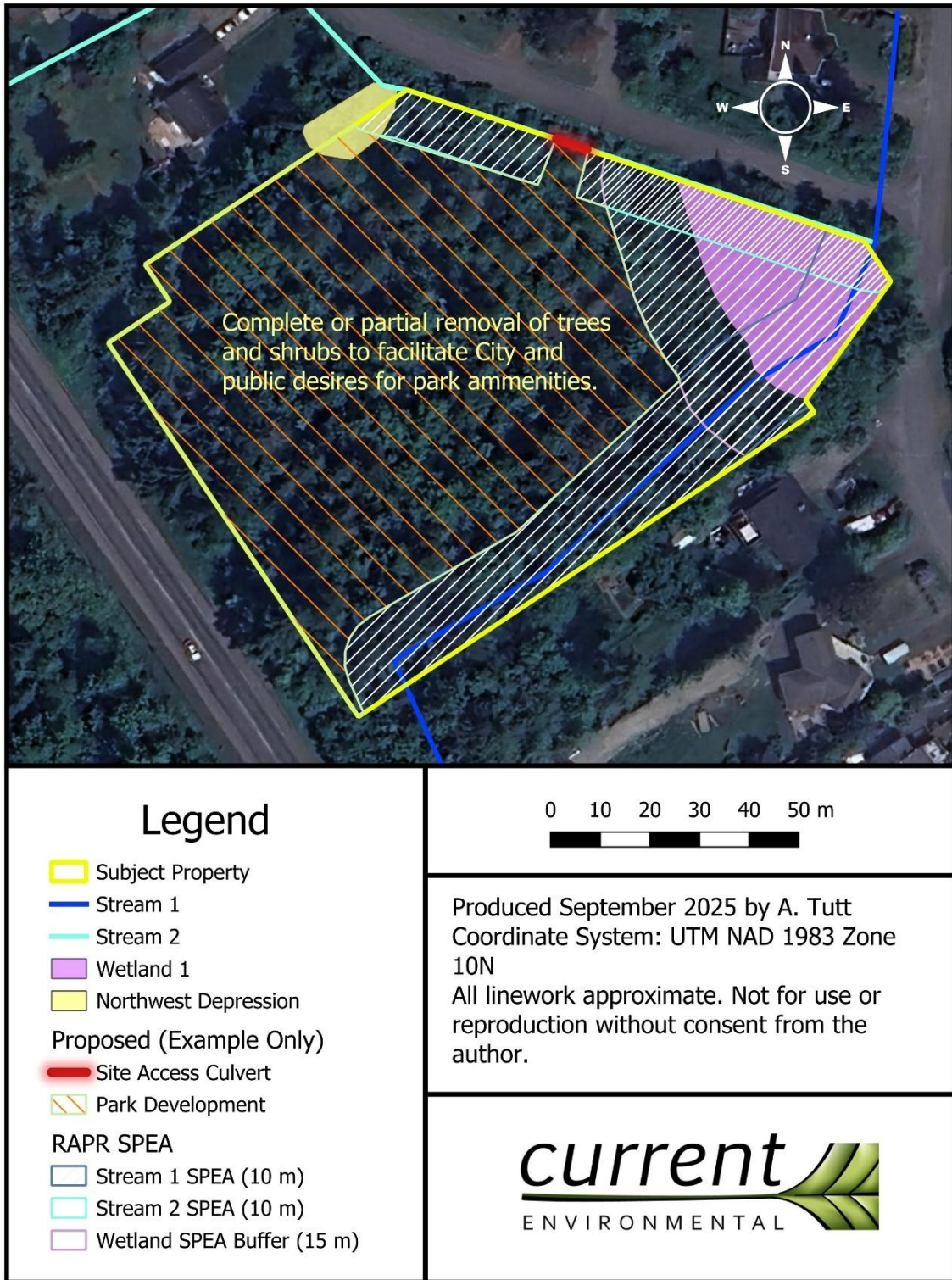


Figure 5. Option 3 – High Impact (Recreation-Focused Park). Conceptual layout showing playground and recreation amenities concentrated near Montrose Drive with an expanded trail network. Tree clearing could occur outside of mandated SPEA setbacks and where specific wildlife trees have not been identified for retention because of nesting activity of listed species.

Biophysical Assessment- Montrose Park

Table 2. Comparative summary of park development options for Montrose Park.

Option	Impact Level	Key Features	Ecological Protection	Community Amenities	Permitting Complexity	Maintenance Needs
Option 1: Nature Trail Park	Low	Gravel trail loop, benches, invasive species removal	High Most wildlife trees retained, riparian buffers untouched	Minimal Passive recreation only	Low Minimal disturbance, fewer permits	Low Trail upkeep, invasive control
Option 2: Hybrid Park	Moderate	Recreation lawn (~3,500 m ²), perimeter trail, nest/bat boxes	Moderate Key habitat features retained, some tree removal	Moderate Open space for gatherings, trails	Moderate Tree removal, habitat offsets	Moderate Lawn mowing, trail maintenance
Option 3: Recreation-Focused Park	High	Playground, gazebo, washrooms, expanded trail network	Low Extensive vegetation removal, habitat offsets required	High Full suite of amenities	High Section 11 Notification, MoTT permit, habitat mitigation	High Infrastructure upkeep, landscaping

7 CONCLUSION

The options presented in this report are intended to give the CVRD a range of development pathways, from minimal intervention to full recreational build-out, while ensuring compliance with regulatory requirements and consideration of ecological values. The site contains a combination of high-value riparian features, widespread structural decline in bigleaf maples caused by *Kretschmaria deusta*, and a more stable upland Douglas-fir forest strip along Highway 19A.

Within the interior stand, many maples pose long-term stability concerns and provide only limited, short-duration habitat value. However, several conifers and select cavity-bearing stems offer important ecological functions for bats, pileated woodpeckers, and other cavity-nesting birds. These features can be retained or offset depending on the park option chosen.

Ultimately, the extent of ecological protection and habitat retention will depend on the vision CVRD and the community choose for Montrose Park. Any of the three options described herein can be implemented within the regulatory framework provided riparian setbacks and wildlife tree protections are respected. This report has attempted to provide an objective suite of options to aide in the Montrose Park decision-making process.

8 CLOSURE

We trust that this assessment has satisfied the requirement for a biophysical assessment to determine the potential effects of proposed development on the adjacent sensitive habitats.

Please contact the undersigned if you have any questions or concerns.

Sincerely,



Dusty Silvester, R.P.Bio.

&

Aaron Tutt, B.Sc.,
ISA Certified Arborist

CURRENT ENVIRONMENTAL LTD.

DISCLAIMER

This report was prepared exclusively for the Comox Valley Regional District, (the "Client") by Current Environmental Ltd. The quality of information, conclusions, and estimates contained herein are consistent with the level of effort expended and is based on: i) information available at the time of preparation; ii) data collected by the authors and/or supplied by outside sources; and iii) the assumptions, conditions, and qualifications set forth in this report. This report is intended to be used by the Client only, subject to the terms and conditions of its contract or understanding with Current Environmental Ltd. Other use or reliance on this report by any third party is at that party's sole risk.

9 PHOTOS

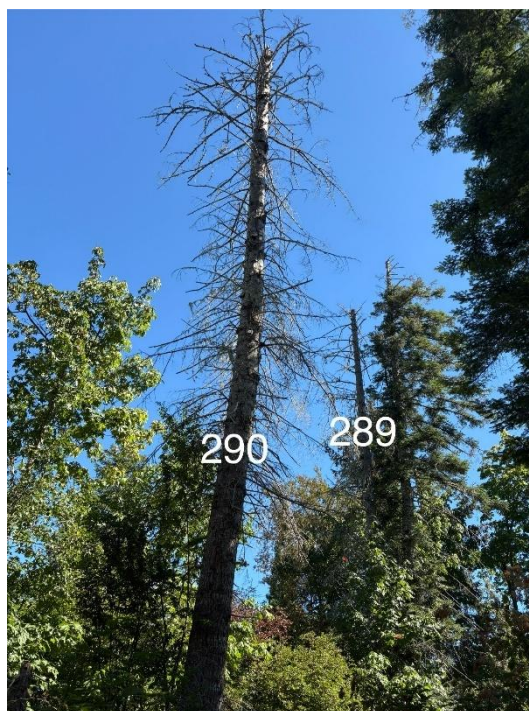


Photo 1. Trees #289 and #290 – Grand firs with notable habitat features. Tree #289 exhibits potential pileated woodpecker cavities near the top of the east stem, while Tree #290 displays loose bark that may provide roosting habitat for bats.



Photo 2. Trees #287 and #288 –Tree #287 (Douglas-fir) is spongy with no cavity value, while Tree #288 (bigleaf maple) is structurally compromised. Both present risk depending on proximity to targets.



Photo 3. Tree #286 – A declining bigleaf maple with *K. deusta* at the base and limited live crown. Structurally unstable with minimal long-term habitat value.



Photo 4. Trees #283 and #284 – Severely decayed stems. Tree #283 (maple) has a failed top and a deep longitudinal crack between stems, while Tree #284 (grand fir) is punky with cavity potential but nearing collapse.



Photo 5. *K. deusta* fruiting bodies observed at the base of Tree #283, illustrating the fungal pathogen responsible for widespread structural decline across the stand.



Photo 6. The upland forest along Highway 19A. Higher-value mixed Coastal Douglas-fir stand with stable canopy and long-term ecological value. This strip is recommended for retention as a buffer.



Photo 7. Showing Himalayan blackberry along the Montrose Drive ditch (foreground). Targeted removal and replacement with native shrubs is recommended.



Photo 8. Tree #280 with Great Blue Heron inventory tag (178). No nests were present.



Photo 9. An example of base failure associated with *K. deusta*, demonstrating the hazard profile of many maples within Montrose Park.



Photo 10. Tree #273 – Bigleaf maple with a potential pileated woodpecker cavity approximately 7 m above ground. A large vertical crack below the cavity suggests declining structural integrity, and therefore, short-term ecological value.

APPENDIX A: MITIGATION MEASURES DURING CONSTRUCTION

The following mitigation measures are recommended to guide construction and vegetation management activities at Montrose Park. These measures apply regardless of which park development option is pursued, and are intended to minimize environmental impacts, comply with regulatory requirements, and maintain public safety.

SPEA Encroachment

The Streamside Protection and Enhancement Areas (SPEAs) prescribed under the Riparian Areas Protection Regulation (10 m for Streams 1 and 2; 15 m for Wetland 1) must remain undisturbed throughout all phases of construction. Prior to land clearing or trail development, SPEAs should be clearly delineated in the field with temporary fencing (e.g., snow fencing or high-visibility rope tied between stakes).

Wildlife trees

Wildlife trees provide habitat for cavity-nesting birds, bats, and raptors, but many within the park are also structurally compromised.

1. Trees supporting confirmed nests of pileated woodpecker, owls, or other protected species are safeguarded under the BC Wildlife Act and Migratory Birds Regulations and must be retained.
2. Nesting activity must be assumed during the bird breeding window (late March to mid-August) unless surveys confirm otherwise.
3. Hazardous trees not protected under legislation may be removed or modified (e.g., topped or coronet pruned) where they pose a safety risk to trails, infrastructure, or workers. Where possible, felled wildlife trees should be left onsite as coarse woody debris to maintain habitat value.

Fuels and Hazardous Materials:

The accidental release of petroleum, oils, hydraulic fluids, lubricants, concrete additives, anti-freeze, or other hazardous materials onto land surfaces or into waterbodies is an offence under the Federal *Fisheries Act* and may result in degradation of habitat quality and could be a threat to human health.

Environmental protection procedures for handling and storage of fuels and hazardous materials shall include the following items:

- 1) A spill kit of appropriate capacity will be on hand at all times heavy machinery or gas-powered tools are in use during construction.
- 2) All identified spills will be cleaned up immediately, and contaminated soils and vegetation will be removed for appropriate disposal.
- 3) Refuelling of equipment is to occur only at designated fuelling stations and located at least 15 m from the watercourse.
- 4) All fuel, chemicals, and hazardous materials will be clearly marked.
- 5) Pumps and jerry cans are to be placed on poly sheeting and sorbent pads to contain spills.
- 6) All equipment maintenance with the potential for accidental spills (e.g., oil changes, lubrications) will be done on a designated area at least 30 m from the watercourse. Tarps should be laid down prior to commencement of work to facilitate clean up.
- 7) In the event of a spill, the following guidelines should be followed:
 - a. Spills to the receiving environment are to be reported to Emergency Management BC (1-800-663-3456) if they exceed the reportable limits (e.g. 100 litres of fuel or oil).
 - b. Apply sorbent pads and booms as necessary.
 - c. Dispose of all contaminated debris, cleaning materials, and absorbent material by placing in an approved disposal site.

Sediment and Erosion Control:

Specific measures to control sediment during construction will include:

- 1) Maintain/do not disturb vegetation within the prescribed SPEAs.
- 2) Where there is a potential for silt runoff in the proximity of the watercourse, control devices will be installed prior to construction activities commencing.
- 3) Filter fabric dams, rock check dams, and silt fencing will be used as needed on a site-specific basis to control erosion. Filtration should be accomplished using filter fabric keyed into substrates and banks and elevated using stakes or straw bales.
- 4) Excavation will be stopped during intense rainfall events or whenever surface erosion occurs affecting nearby waterbodies.
- 5) Soil stockpiles will be placed a minimum of 15 m from the watercourse and in a location where erosion back into the aquatic environment cannot occur and will not impede any drainage.
- 6) Soil stockpiles with the potential to erode into waterbodies are to be covered with poly sheeting. Other techniques, such as terracing or surface roughening can greatly reduce surface erosion on steeper slopes.
- 7) Clearing will take place immediately prior to excavation and earthworks to minimize the length of time that soils are exposed. Vegetation in adjoining areas will not be disturbed.

Invasive Species Management

Himalayan blackberry is widespread in the park, especially along Montrose Drive. Removal of invasive species should accompany trail or clearing works and be followed by replanting with native shrubs and trees to reduce recolonization potential. Application of coarse bark mulch and establishment of dense native thickets can further suppress invasive regrowth.

APPENDIX B: BC TREE REPLACEMENT CRITERIA



INFORMATION

November 1996

TREE REPLACEMENT CRITERIA:

The criteria below apply to the replacement of trees authorized for removal under the *Fisheries Act*, *Wildlife Act* or *Land Title Act* by BC Environment, Fish, Wildlife and Habitat Protection. Requests for authorization should be accompanied by a tree survey and replacement planting plans completed by a professionally certified environmental consultant and detailing numbers, sizes and species. Species suitable for replacement will be based on site specific conditions.

- | | |
|-----------------------------|---|
| • 0 mm - 151 mm (6") dbh* | 2 replacement trees (min height 1.5 m), or, 4 shrubs (for up to 50% of trees being replaced in this range); |
| • 152 mm - 304 mm (12") dbh | 3 replacement trees (min height 1.5 m); |
| • 305 mm - 456 mm (18") dbh | 4 replacement trees (min height 2.0 m); |
| • 457 mm - 609 mm (24") dbh | 6 replacement trees (min height >* 2.0 m); |
| • 610 mm - 914 mm (36") dbh | 8 replacement trees (min height > 2.0 m). |

Trees > 914 mm dbh (36") will require individual approval and replacement criteria prior to removal.

Every effort must be made to retain 20% of trees > 304 mm dbh (12") as wildlife snags at minimum height of 3 m.

- ♦ dbh = diameter breast height
- * > = greater than

For further information, please contact the following:

Ecosystem Planning & Protection
 BC Environment, Lower Mainland Region
 10470-152nd St.
 Surrey BC V3R 0Y3
 Phn: (604) 582-5235
 Fax: (604) 582-5305
 Web-site: <http://wlapwww.gov.bc.ca/sry>

THE GOVERNMENT OF BRITISH COLUMBIA IS AN "EMPLOYMENT EQUITY EMPLOYER"

Ministry of Environment,
Lands and Parks

BC Environment
Lower Mainland Region

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