

Development Permit Area G1 – G12 – Ecological Greenway Areas

<p>Category:</p>	<p>A – Natural Environment, Ecosystems and Biodiversity</p>
<p>Area: Ecological Greenways</p>	<p>Development Permit Area No. G1– G12, as shown on map ‘Schedule No. 2.4’.</p> <p>For these areas, Development Permit Area boundaries and Ecological Greenways shall be established as follows:</p> <p>G1 – Grandon Creek G2 – Lower Beach Creek G3 – Upper Beach Creek G4 – Beach Creek Tributaries</p> <p>a) Development Permit area boundaries for Areas G1, G2, G3 and G4 shall include the Riparian Assessment Area required by the Riparian Area Regulation (RAR) adjusted to include any nest tree of an eagle, peregrine falcon, gyrfalcon, osprey, heron or burrowing owl, plus nest tree buffers, as recommended by a Registered Professional Biologist.</p> <p>b) Within the Development Permit Area boundaries, Aquatic Habitat Greenways shall be defined to include the Streamside Protection and Enhancement Areas (SPEAs), as defined under the RAR, plus the nest trees and associated buffers.</p> <p>G5 – Little Qualicum/Laburnum</p> <p>The Development Permit Area boundaries for Area G5 shall include sensitive land in one of four types:</p> <p>a) The Riparian Assessment Areas required by the RAR. Within the Development Permit Area boundaries, Aquatic Habitat Greenways shall be defined to include the Streamside Protection and Enhancement Areas (SPEAs) as defined under the RAR.</p> <p>b) Aquatic Habitat Greenways that encompass all wetlands, which means all areas of land that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs, fens, vernal pools and estuaries, plus wetland buffers, as recommended by a Registered Professional Biologist.</p> <p>c) Upland Habitat Greenways that encompass sloping terrain plus 3m from the top of sloping terrain and 3m from the toe of sloping terrain.</p> <p>d) Upland Habitat Greenways that encompass any nest tree of an eagle, peregrine falcon, gyrfalcon, osprey, heron or burrowing owl, plus nest tree buffers, as recommended by a Registered Professional Biologist.</p> <p>G6 – Estate Slopes</p> <p>Development Permit Area G6 shall include Upland Habitat Greenways that encompass sloping terrain plus 3m from the top and bottom of sloping terrain, adjusted to include any nest tree of an eagle, peregrine falcon, gyrfalcon, osprey, heron or burrowing owl, plus nest tree buffers, as recommended by a Registered Professional Biologist.</p>

G7 – Shore Cliffs

Development Permit Area G7 shall include Upland Habitat Greenways that encompass sloping terrain plus 3m from the top of sloping terrain and 3m from the toe of the sloping terrain, adjusted to include any nest tree of an eagle, peregrine falcon, gyrfalcon, osprey, heron or burrowing owl, plus nest tree buffers, as recommended by a Registered Professional Biologist. In areas of new commercial, multi-unit or resort development, the width of the Upland Habitat Greenway shall be the area of undisturbed land remaining after regrading required by a geotechnical engineer to accommodate building development, but in no cases shall the Upland Habitat Greenway be less than 10m wide.

G8 – Marine Shoreline

The Development Permit Area G8 applies to all lands within an area that extends 15m inland from the natural boundary of the ocean and seaward to the Municipal boundary. These shoreline areas have high ecological values. Due to their physical and biological characteristics and situation, they need to be carefully managed to avoid potential negative impacts of development and construction. Residential development, and associated shoreline improvements or protection measures, can threaten the ecological and physical integrity of the foreshore and valuable upland.

G9 – Aspen Sedge Wetland (SEI 0411)

G10 – Claymore Forested Wetland (SEI 0409)

G11 – Bog Wetland (SEI 0421)

Development Permit Area G9, G10 and G11 shall encompass all wetlands including associated buffers. Within these Development Permit areas, Aquatic Habitat Greenways shall be maintained on all watercourses, including all areas of wetlands, which means all areas of land outside watercourses that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs, fens, vernal pools and estuaries, plus wetland buffers, as recommended by a Registered Professional Biologist. Development Permit area boundaries shall be adjusted to include any nest tree of an eagle, peregrine falcon, gyrfalcon, osprey, heron or burrowing owl, plus nest tree buffers, as recommended by a Registered Professional Biologist.

G12 – French Creek Riparian and Steep Slopes

The Development Permit Area boundaries G12 shall include sensitive land of the following types:

- a) The Riparian Assessment Areas required by the RAR. Within the Development Permit Area boundaries, Aquatic Habitat Greenways shall be defined to include Streamside Protection and Enhancement Areas (SPEAs) as required under the Riparian Areas Regulation (RAR).

	<p>b) Upland Habitat Greenways encompass the sloping terrain plus 3m from the top of sloping terrain and 3m from the toe of sloping terrain.</p> <p>c) Upland Habitat Greenways that encompass any nest tree of an eagle, peregrine falcon, gyrfalcon, osprey, heron or burrowing owl, plus nest tree buffers, as recommended by a Registered Professional Biologist.</p>
<p>Justification:</p>	<p>Ecological Greenways are important habitats for fish, birds and wildlife, or are representative areas of native vegetation, ecosystems and biodiversity. As some of these areas contain bluffs rising from the Strait of Georgia, there is a need to ensure that development and other activities are carried out in accordance with best practices.</p> <p>The Development Permit designation on the property that contains the Ecological Greenway is necessary to allow development or redevelopment of adjacent properties in a manner that will conserve and restore fish and wildlife habitat, and allow flexibility in the form of the development adjacent to the Greenway.</p>
<p>Guidelines:</p>	<p>Development Permits issued for these areas shall be in accordance with the following general guidelines:</p> <p style="text-align: center;">Ecological Greenways</p> <ol style="list-style-type: none"> 1. Aquatic Habitat and Upland Habitat Greenways, and Marine Shoreline shall remain free of development, except in accordance with the Ecological Greenway Development Permit Area Guidelines. 2. Development adjacent to Aquatic Habitat and Upland Habitat Greenways, and Marine Shoreline shall be in accordance with the Ecological Greenway Development Permit Area Guidelines.

ECOLOGICAL GREENWAY DEVELOPMENT PERMIT AREA GUIDELINES

Ecological Greenway Types

The Ecological Greenways map 'Schedule 2.7' identifies the general location of three types of greenways:

Aquatic Habitat Greenways

Aquatic Habitat Greenways protect watercourses and the sensitive ecosystems around them. Protection of these areas is required under the federal *Fisheries Act*. The Aquatic Habitat Greenway designation brings local land use planning in line with this senior government law, and increases certainty about what areas require protection. The Provincial *Fish Protection Act* also applies to protection of Aquatic Habitat Greenway. The provisions in this OCP for riparian protection may be reviewed when the Riparian Area Regulation under the *Fish Protection Act* is implemented.

Upland Habitat Greenways

Upland Habitat Greenways include wooded areas, veteran trees and native thickets. These areas provide important habitat for eagles, herons, and song birds, as well as many small mammals and other species. Many patches of upland habitat exist on public lands in the urban areas of Qualicum Beach. Thoughtful private landowners have maintained habitat on their properties.

Marine Shoreline Development Permit Area

Marine Shoreline DP Area protects ecological and physical integrity of the foreshore while permitting public access.

These are referred to collectively as ecological greenways in the development permit guidelines. The Ecological Greenway Map shows the following:

green or aqua-coloured areas - representing graphically the approximate extent of the proposed ecological greenways, which are to remain free of development other than as permitted in this bylaw. For the purpose of partial relaxation of related land use regulations only, i.e. front and rear yard setbacks, all parcels which contain an ecological greenway designation shall be included in the development permit area.

Actions Not Requiring an Ecological Greenway Development Permit

The actions listed below will not require an Ecological Greenway Development Permit, provided they are designed and installed to resist erosion and avoid negative impacts on adjacent habitat areas.

- Farm practices protected by the *Farm Practices Protection (Right to Farm) Act*.
- Regular landscape maintenance of existing manicured landscape, including existing golf course landscaping and pruning of native vegetation. This includes the pruning of limbs up to 10cm in diameter for view corridors in accordance with the *Tree Pruning Guidelines* provided that all cut trees and branches are disposed of in a way that is not detrimental to the stability of the slope, e.g. cut trees and branches must not be left on sloping terrain.
- Planting and maintenance of new landscape or habitat enhancements which follow the *Naturescape Guidelines*, including both native and ornamental trees and shrubs.
- Trail or viewpoint construction, when such construction removes no trees, and when it impacts the vegetation of less than 5% of the greenway corridor on the parcel, and the surfacing is pervious (e.g. soil, gravel, mulch or spaced wood deck).
- Tree removal within the following maximums per calendar year, other than significant trees, provided that for each removed tree at least one replacement tree is installed, in accordance with the requirements for habitat landscape:
 - In all aquatic habitat greenways – only hazard trees may be removed;
 - In upland habitat greenways:
 - on parcels smaller than 1 Ha – only hazard trees may be removed;
 - on parcels 1 Ha or larger – hazard trees plus up to 3 other trees may be removed;
- A significant tree may not be removed without a permit. Significant tree means a tree identified by one of the following criteria:
 - A veteran or older growth tree in excess of 100 years old;
 - A wildlife tree, meaning a tree that supports eagle roosting or nesting, heron rookeries, cavity dwellers or red- or blue-listed species;
 - A Garry Oak, Arbutus or Pacific Dogwood tree.
- Management of invasive, non-native plants such as Himalayan Blackberry, Scotch Broom or Purple Loosestrife.
- Removal of Alder as a part of a vegetation management scheme to promote establishment of other long-living native trees.
- Subdivision of land or construction of a building or other structure or the structural alteration of, or addition to, an existing building or other structure where the Subdivision Approving Officer or the Building Inspector, pursuant to Section 56 of the Community Charter, can require the owner of land to provide the Building Inspector or Subdivision Approving Officer with a report certified by a qualified professional that the land may be used safely for the use intended and that the activity complies with all the requirements of all applicable Development Permit Areas.

Disputable Exemptions

In cases where exemption from an Ecological Greenway Development Permit is unclear, or where the terms of the bylaw or a permit are not being met, the Town's Bylaw Enforcement Officer or Building Inspector may issue a stop work order and require the applicant to submit a letter from a certified arborist containing sufficient information to clarify the intent of the bylaw.

Ecological Development Permit Areas – General

In this development permit, the Ecological Greenway Diagrams, Definitions, and References apply.

Other than excluded in "Actions Not Requiring an Ecological Greenway Development Permit", no alteration of land or vegetation within the Aquatic Habitat or Upland Habitat Development Permit Areas shall be undertaken:

- a) without a permit issued pursuant to this bylaw; or
- b) contrary to the terms of a permit issued pursuant to this bylaw.

The *aquatic habitat greenway* or *upland habitat greenway* shall be conserved in a vegetated state, free of development of *structures* or *paving*.

In all *ecological greenways*, natural or planted vegetation shall be maintained.

Owners are encouraged to enhance vegetation in greenways in accordance with the Habitat Landscape Guidelines in this section.

Management of Streamside Protection and Enhancement Areas (SPEAs) in aquatic habitat greenways shall be in accordance with the Riparian Area Regulation. If the provisions of the Riparian Areas Regulation and this bylaw conflict, the provisions of the Riparian Areas Regulation shall apply to actions within SPEAs.

In Aquatic or Upland Greenway areas outside SPEAs that fall within Ecological Development Permit Areas, the guidelines in this bylaw shall apply.

Application Information

An owner that wishes to take action that alters land or vegetation within an Ecological Greenway Development Permit Area that is not exempt under "Actions Not Requiring an Ecological Greenway Development Permit" section must first obtain a Development Permit and may require supporting documentation such as site layout, topographic features, habitat information and development plans as deemed necessary by the Town.

Aquatic Habitat Greenway Guidelines

The following describes some of the features of an aquatic habitat greenway that should be maintained under the terms of the development permit designation.

All watercourses, including permanent or intermittently wetted streams, wetlands, springs, back channels or floodplain, as well as other areas that contribute to summer base flows, winter refuge, and sources of cool water.

Vegetation overhanging the water. This vegetation maintains cooler water temperatures by providing shade, and is a source of leaf litter and fallen insects to support the aquatic food web.

Dense vegetation in riparian zones which provides erosion control along banks and steep slopes, filters pollutants from runoff approaching the stream, and provides barriers to human disturbance of the stream.

Sloping terrain or ravines, which form the banks of the watercourse. These areas are often highly susceptible to erosion or landslip if their vegetation is removed. Setbacks from the top of bank are established as a part of the watercourse leave area to provide protection for the vegetation that helps keep these steep slopes stable.

Sources of large organic debris (large fallen wood and logs). To ensure a long-term source of large organic debris, the riparian vegetation should be multi-aged – with trees of many ages. This large organic debris is a critical component of fish habitat, providing shade and cover from predators for fish, and also contributing to the creation of pools, riffles, and stable stream hydraulics.

Vegetation variety in the riparian zone – including groundcover, low and tall shrubs, low and tall trees, deciduous and coniferous, young and old. This variety of vegetation is resilient to change and offers a variety of habitats for birds and other species. A thicket of vegetation also provides a buffer to minimize disturbance of fish in the stream, particularly by people, and cover for fish from predators.

Veteran and standing dead wildlife trees. These are important for eagles, and for cavity nesters and woodpeckers. However, they are also a source of large organic debris for the stream in the medium-term.

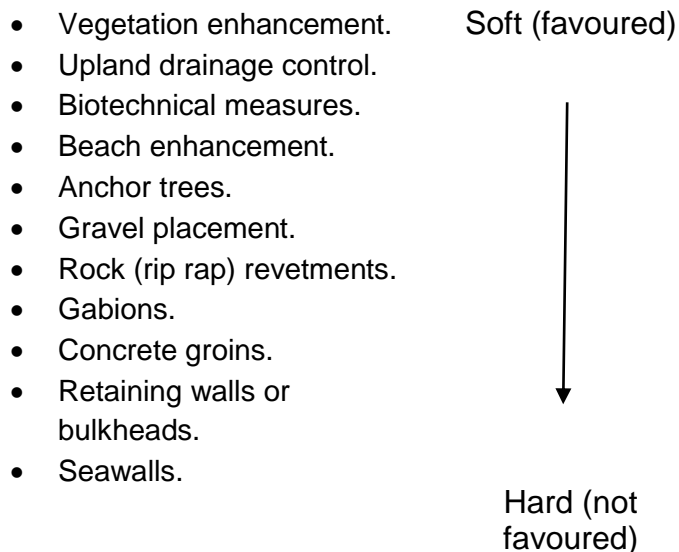
The above *Watercourse Leave Areas* are fish habitat protected by the federal *Fisheries Act* and the provincial *Fish Protection Act* or are wetlands that are important for many species, including amphibians and reptiles. These development permit guidelines will be updated periodically to make them consistent with senior government regulations.

To function ecologically, disturbance to aquatic habitat needs to be minimized. For this reason, it is important that greenway plans show *access envelopes* which define the limit of disturbance of any access development – like road crossings, trails, overlooks, or utilities. Alignment and locations minimizing impact on the greenway will be preferred. Legal dedication of *watercourses* below the *natural boundary* shall be made to the local government, or return to Crown.

Marine Shoreline Guidelines

1. Development of the shoreline area should not negatively impact the ecological health of the immediate area or impede public access.
2. Shoreline protection measures should be limited to that necessary:
 - a. To prevent damage to existing structures or established uses on adjacent upland; or
 - b. To prevent damage to a proposed public land use.
3. New upland or shoreline structures or additions should be located and designed to avoid the need for shore protection works. Only if all options to locate and design without the need for shore protection measures are exhausted should such works be considered.
4. When required:
 - a. Apply the 'softest' possible shore protection measure that will still provide satisfactory protection; and
 - b. Limit the size of shore protection measures to the minimum necessary.
5. All structural shore protection measures should be installed within the property line or upland of the natural boundary, whichever is further inland. "Soft" shoreline protection measures that provide restoration of previously damaged ecological functions may be permitted seaward of the natural boundary, subject to obtaining necessary approvals from the provincial and federal governments.
6. Proposals for shoreline protection should be evaluated using the Engineering and Environmental Framework from the 2016 Waterfront Master Plan. Approvals for harder shoreline protection shall not be approved unless all softer measures have been evaluated.

In general, the harder the construction measure (see below), the greater the impact on shoreline processes - including sediment transport, geomorphology, and biological functions. Structural shoreline stabilization also often results in vegetation removal and damage to nearshore habitat and shoreline corridors.



In accordance with the 2016 Waterfront Master Plan, the Town will explore opportunities to facilitate shoreline improvement and protection projects involving multiple property owners.

Upland Habitat Greenway Guidelines

The following describes some important features of an upland habitat greenway that are encouraged to be maintained under the terms of the development permit designation.

Sloping terrain, with cover of natural vegetation.

Sensitive terrestrial ecosystems mapped under the Sensitive Ecosystems Inventory and shown on the RDN Environmentally Sensitive Areas atlas;

Unique or rare woodland communities (e.g. Arbutus, Garry Oak).

Mature and older forest, including veteran trees.

Native trees, woods and thickets, including older second growth, and especially habitat where red- or blue-listed plant or animal species have been identified and confirmed.

Cliffs, bedrock outcrops, coastal bluffs, points and rocky islets, and unique or rare herbaceous (wildflower) communities on sparsely-vegetated sites.

Marine foreshore and nearshore areas, seasonally-flooded sites and floodplains.

Eagle nesting or roosting trees, and heron rookeries, with wooded buffers.

Native standing dead trees, if naturally occurring, and if not a hazard to persons, public or property.

Wildlife cover on the ground, including shrub thickets, downed logs, brush piles or rock piles, and water sources for wildlife.

In considering the configuration of upland habitat greenways:

- Larger, undisturbed areas are better than small or narrow areas.
- Medium-sized habitat patches connected by habitat linkages are better than isolated habitat.
- Habitat linkages need to be wide enough to maintain the health of the trees and vegetation that they contain – e.g. 6m-radius minimum undisturbed root area around a moderate-sized tree.
- Habitat on one parcel, which is contiguous to habitat on another parcel, is preferred, with a target of 30m or more for a combined habitat linkage.
- Habitat in locations with least disturbance is preferred.
- Habitat with a variety of plant species, ages and multi-storey vegetation is preferred. Shrub and groundcover understory should be maintained or replanted under habitat trees.
- Habitat without barriers to wildlife passage is preferred.

Owners are encouraged to voluntarily provide supplementary wildlife food, water and shelter, e.g. bird feeders and waterers, amphibian ponds, nest boxes. See the *Naturescape Guidelines*.

To function ecologically, disturbance to upland habitat needs to be minimized. For this reason, it is important that greenway plans show *access envelopes* which define the limit of disturbance of any access development – such as road crossings, trails, overlooks, or utilities. Alignment and locations minimizing impact on the greenway will be preferred.

Partial Relaxation of Related Land Use Regulations

Conditions for relaxation of other bylaws applying to the parcel include:

- 1) Where the *aquatic habitat or upland habitat greenway* comprises up to 25% of the parcel area prior to any voluntary leave area dedication, no relaxation applies.
- 2) Where the *aquatic habitat or upland habitat greenway* is 25% or more of the parcel area prior to any voluntary leave area dedication setbacks may be varied up to the following maximum amounts:
 - a) rear yard setback will be reduced by up to 50%;
 - b) front yard setback will be reduced by up to 25%.
- 3) Where, prior to any voluntary leave area dedication, the permitted use would not be allowed on an existing parcel due to the *ecological greenway* size, the greenway area may be varied the minimum amount necessary to allow the use, but in no case shall the maximum allowable density of the site prior to any voluntary dedication of leave area be exceeded.
- 4) The partial relaxation of related land use regulations applies only to parcels existing at the date of adoption of this bylaw. New parcels shall be configured to allow the permitted land use without relaxation.

Habitat Landscape Guidelines

a) Habitat landscape shall be one of two types:

Type A: Existing native trees and ground cover, of sufficient density to provide shady conditions to watercourses and upland greenway areas. Selectively prune or remove hazardous trees only if necessary to protect a high-risk target, but leave wildlife snags if safe. Supplement existing trees and ground cover with planted stock to all bare or thin areas to meet the requirements of type B habitat landscape.

Type B: Planted stock as necessary to landscape all bare or thin areas. Planted stock shall be selected to suit the soil, light and groundwater conditions of the site:

- i) species shall be native to the area, or other species selected for fish and wildlife habitat values;
- ii) replacement trees shall be planted at an average spacing of 6m on centre or closer throughout the habitat landscape, and shall be a minimum of 2m height for conifers and 3 cm caliper for deciduous trees at time of planting;
- iii) a shrub layer shall be provided for a minimum of 50% of the area of the habitat landscape. Within shrub areas, shrubs shall be provided at a minimum average density of 1.0m on centre and shall be a minimum of #1 pot size at time of planting;
- iv) ground cover may be substituted for shrubs. If used, ground cover shall be one of brush layering on 2:1 or steeper slopes at 1.0m vertical on centre between layers

or closer spacing, or planted ground cover at maximum average spacing of 0.5m, with ground cover plants a minimum 10 cm pot size at time of planting;

v) areas not covered by shrubs or trees shall be seeded to a grass or legume or planted with native herbaceous ground cover.

b) Required habitat landscape shall be continuous, broken only by public walkways and road crossings, with utilities underground. Habitat landscape required under this bylaw shall not be supplanted by continuous roadway or walkway access.

c) The retention of native trees and ground cover is preferred.

d) The maximum sloping terrain in any planted habitat landscape shall be 33% slope. Steeper grades may be considered if a report from a professional engineer with experience in geotechnical engineering is submitted, and the conditions in the report are followed during construction.

e) All habitat landscape required by this bylaw shall be protected from intrusion by motor vehicles with a continuous concrete curb, if parking areas about the habitat landscape.

f) All landscape construction required by this Bylaw shall be maintained by the Owner to the 'background' maintenance level in the British Columbia Landscape Standard, at a minimum, for a period of 1 year from the date of substantial performance of the landscape work. Plant materials not in a healthy growing condition during the maintenance period will be replaced within 4 months of their rejection, in the next regular planting season.

Ecological Greenway Definitions

access envelope means an area of land which intrudes into or bisects an Ecological Greenway, on which trail, utility, road crossing or other access development exists or is proposed;

aquatic habitat greenway means the total area of the watercourse, the watercourse leave area and related access envelope;

drainage works include culverts, ditches, drains, rip rapped channels, and storm sewer systems, which discharge into, or collect, constrain or divert a watercourse;

ecological greenway means either an aquatic habitat greenway or upland habitat greenway as defined in this bylaw;

habitat landscape means the conservation, installation and maintenance of trees, shrubs, ground covers, herbaceous plants and related soil and water to repair site disturbance in a way that is conducive to use of the site by native species of fish and wildlife;

habitat linkages means a linear corridor of native vegetation or habitat landscape that provides continuous wildlife passage from habitat to habitat. Habitat linkages connect two or more sensitive terrestrial ecosystems together. These links provide critical corridors for species to move and mix with other populations, find food, or avoid predation. These linkages are important to maintenance of urban wildlife, and to biological diversity;

individual tree means a tree, other than a significant tree, growing in a location so that it does not meet the definition of woods;

natural boundary means the visible high-water mark of any watercourse, where the presence and action of the water are so common and usual, and so long continued in all ordinary years, as to mark upon the soil of the bed of the watercourse a character distinct from that of its banks, in respect to vegetation or in the nature of the soil itself;

professional consulting team means a group of professionals including a professional biologist or fish and wildlife technician, a professional engineer, and a landscape architect;

regular landscape maintenance means landscape maintenance activities described in the British Columbia Landscape Standard, but does not include the topping and removal of trees or removal of native shrub and herbaceous ground cover;

removed tree means a tree cut down, killed or removed by any means and, without limiting the generality of the foregoing, includes removal of the top of a tree or any branch or stem of a tree where the branch or stem removed or cut has a diameter of more than 10 centimetres;

Riparian Assessment Area – is defined in the same way as in the Riparian Areas Regulation, where it means:

(a) for a stream, the 30 metre strip on both sides of the stream, measured from the high water mark;

(b) for a ravine less than 60 metres wide, a strip on both sides of the stream measured from the high water mark to a point that is 30 metres beyond the top of the ravine bank; and

(c) for a ravine 60 metres wide or greater, a strip on both sides of the stream measured from the high water mark to a point that is 10 metres beyond the top of the ravine bank;

sensitive terrestrial ecosystem means land mapped under the Sensitive Ecosystems Inventory, as well as other lands which contain:

- Sloping terrain, with cover of natural vegetation;
- Unique or rare woodland communities (e.g. Arbutus, Garry Oak);
- Mature and older forest, including veteran trees;
- Native trees, woods and thickets, including older second growth, and especially habitat where red- or blue-listed plant or animal species have been identified and confirmed;
- Cliffs, bedrock outcrops, coastal bluffs, points and rocky islets, and unique or rare herbaceous (wildflower) communities on sparsely vegetated sites;
- Marine foreshore and nearshore areas, and seasonally-flooded sites and floodplains.
- Eagle nesting or roosting trees, and heron rookeries, with wooded buffers;
- Native standing dead trees, if naturally occurring, and if not a hazard to persons, public or property;
- Wildlife cover on the ground, including shrub thickets, downed logs, brush piles or rock piles, and water sources for wildlife;

significant tree means a tree identified by one of the following criteria:

- A veteran or older growth tree in excess of 100 years old;
- A wildlife tree, meaning a tree that supports eagle roosting or nesting, heron rookeries, cavity dwellers or red- or blue-listed species;
- A Garry Oak, Arbutus or Pacific Dogwood tree;

sloping terrain means land with slopes which average greater than 30% for a vertical distance of 3 metres or more, or slopes designated as hazard lands by a Professional Engineer with experience in geotechnical engineering;

Streamside Protection and Enhancement Area – is defined in the same way as in the Riparian Area Regulation, where it means 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;

surveyed means surveyed by a British Columbia Land Surveyor or a member of the Applied Science Technologists & Technicians of B.C. and with expertise in the land survey discipline;

tree means a woody perennial plant with a stem or stems each of which has a diameter of at least 10 centimetres measured at a height of 30 centimetres above the natural grade of the land, and includes the roots, branches, trunk, crown or any part of the tree;

top of bank of a watercourse means the closest top of slope adjacent to the natural boundary of a watercourse where two conditions are met:

- a) the grade is flatter than 3:1; and
- b) the land beyond the top of slope maintains a grade flatter than 3:1 for a minimum of 15 metres measured perpendicular to the watercourse. Slopes steeper than 3:1 but less than 1 metre in height shall not be considered in the determination of the 15 metre distance from the top of bank;

upland habitat greenway means the total area of a sensitive terrestrial ecosystem, related buffer, and habitat linkages;

watercourse means any natural depression with visible banks, or wetland with or without visible banks, which contains water at some time; and includes any lake, river, stream, creek, spring, swamp, gulch or surface source of water, whether containing fish or not; and includes intermittent streams; and includes surface drainage works which are inhabited by or provide habitat for fish;

watercourse leave area means the watercourse plus vegetated riparian areas on each side of the watercourse, which support fish, wildlife and ecological processes in the watercourse. Watercourse leave areas are equivalent to Streamline Protection and Enhancement Areas (SPEAs) in the Riparian Areas Regulation of the *BC Fish Protection Act*;

wetland means land which is inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal conditions supports, a prevalence of vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs and similar areas, and land above and within 7.5 metres, measured horizontally, of the land just described;

woods means an area which contains more than 10 trees where trees are closer than 5 metres from centre to centre of stem, and where native ground cover of shrubs and herbaceous plants remains. The line defining the edge of woods is defined by the outside of the tree trunks;

work means activities involved in cutting or removal of vegetation, removal of soil, deposit of soil or other material, construction of a building, structures or paving, or installation of drainage works, but does not include regular landscape maintenance of planted gardens or landscaping.

Ecological Greenway References

British Columbia Landscape Standard means the publication by the same name of the British Columbia Society of Landscape Architects and the British Columbia Nursery Trades Association, 2008 Edition.

Criteria for Managing Contaminated Sites in British Columbia means the publication of the same name, dated November 21, 1989, Draft 6, issued by the Ministry of Environment, Waste Management Program.

Land Development Guidelines means the Land Development Guidelines for the Protection of Aquatic Habitat, dated May 1992, or September 1993, published by the Ministry of Environment, Lands and Parks and the Department of Fisheries and Oceans.

Master Municipal Specification means the publication "Master Municipal Construction Documents – Volume II" published by the Master Municipal Construction Documents Association and amendments thereto.

Tree Pruning Guidelines means the publication "Tree Pruning Guidelines, 1994, Revised Edition, International Society of Arboriculture" and amendments thereto.

Naturescape Guidelines means the publication series "Naturescape British Columbia: Caring for Wildlife Habitat at Home" published by Naturescape British Columbia c/o the Ministry of Environment, Lands and Parks.