



Natural Environment Development Permit Guidelines

Application Guide for Non-Agricultural Uses

August 2026

DISCLAIMER

This is not a legal document.

This guide does not outline all applicable municipal, provincial, or federal regulations. Rather, it provides a summary of many of the regulations and processes that applicants should consider when exploring development within or nearby Natural Areas.

Any contradiction, dispute, or difference between the contents of this document and applicable provincial law or City bylaws, plans, policies, or guidelines will be resolved by reference to the law, bylaws, or other official documents.



FOREWORD

Abbotsford's residents are justifiably proud of the majestic beauty of their city which includes natural vistas of mountain ranges and a City nestled amongst productive agricultural fields, tranquil streams, and forested slopes. Abbotsford is home to a wide variety of habitat, including second growth and old growth forest, steep escarpments, sandstone rock faces, forested slopes, dry bluffs, creeks, riparian areas, and wetlands. There is an abundance of wildlife in our city; from large mammals such as cougars and black bears to salmon that spawn in our local streams. Many endangered species of animals and plants are found here, including over 40 species at risk that are listed on the federal Species at Risk Act. Over 30 of these species at risk are located on Sumas Mountain, well-known both regionally and provincially as a biodiversity hotspot.

Over several decades and as more people want to experience life in the Fraser Valley, there has been an increased community awareness of the need to conserve, protect, restore, and enhance the natural environment. Maintaining high levels of biodiversity supports ecosystem services and social benefits. Natural ecosystem processes and services include things such as maintenance of air quality, contribution to climate stability, soil earthworks, stormwater management, water purification, pollination, and erosion prevention. Social benefits include spiritual, cultural, recreational and aesthetic values. The cost of replacing these ecosystem services is extremely expensive and are often unable to be replicated. It therefore makes economic and development sense to move towards sustainability and conservation of these features, rather than lose these ecosystem services forever.

Management of natural areas and wildlife habitat in Canada is under the jurisdiction of municipal, provincial, and federal governments. While the City of Abbotsford (City) does not have direct jurisdiction for wildlife or some stream processes, the City has a responsibility and interest in ensuring development/activities are consistent with best management practices (BMPs) and guidelines as this ensures development/activities align with the City's Official Community Plan (e.g. Policy 4.6 – Improve Natural & Built Systems) and senior government legislation. Moreover, completion of Environmental Assessment Reports and incorporating recommendations of environmental professionals in development planning demonstrates due diligence in ensuring that natural areas and wildlife habitat are suitably addressed.

To ensure natural areas are protected for use by fish, wildlife, and the public, the City requires applicants to demonstrate they have suitably addressed environmental requirements and expectations of Council-approved Policies and senior government. Assurances may include the proponent providing the City with copies of senior government approvals, copies of correspondence with senior government regulatory agency staff (if applicable), or statements from Qualified Environmental Professionals (i.e. RPBio, RBTech) accepting responsibility for the proposed development or activity with respect to legislative compliance, impact, mitigation etc. The above information requirements will be addressed in an Environmental Assessment (EA) Report submitted to City staff. City staff will review information from the qualified professional for the above-noted assurances and ensure it is consistent with the City's Official Community Plan (OCP) and Council-approved Policies for protecting natural environment areas.

"In the country, Abbotsford's cherished natural areas will be enhanced. Habitat will provide space for wildlife to thrive, recreational areas will provide residents access to nature close to home, and ecosystems will provide Abbotsford with clean land, air, and water."

- City of Abbotsford Official Community Plan



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1 INTRODUCTION

The City of Abbotsford 2050 Official Community Plan (OCP) adopted December 16, 2025 intends to “protect and maintain ecosystems, habitat and habitat corridors, and environmental quality within the city”. The OCP and its Natural Environment Development Permit (NEDP) Guidelines provide policies and guidelines to allow land to be used for its intended purposes, while:

- *Implementing the requirements of the provincial Riparian Areas Protection Regulation (RAPR) and establishing the requirements to accommodate development in a manner that protects fish and fish habitat;*
- *Establishing requirements to protect species at risk and their habitat; and*
- *Protecting other unique ecological and biodiversity assets.*

This document provides information about developing adjacent to or within ecological and biodiversity assets, such as riparian areas associated with streams, ditches and wetlands and terrestrial wildlife habitat areas, such as isolated wetlands, wildlife corridors, and critical habitat areas.

The City encourages all development to comply with the full Streamside Protection and Enhancement Areas (SPEAs) and buffers established in the NEDP Guidelines or to minimize negative impacts by reducing the buffer of the SPEA. However, there may be occasions when a permanent loss of SPEA area is required due to limited site developability (e.g. the lot will otherwise be sterilized, no ability to re-configure the development due to irregular lot dimensions, etc.) and where it can be demonstrated that the Mitigation Hierarchy has been utilized to avoid and mitigate impacts.



OCP Policy 4.6 Goal

"Protect and maintain ecosystems, habitat and habitat corridors, and environmental quality within the city and enhance it by increasing the urban tree canopy, embracing integrated stormwater and invasive species management practices, and creating new greenways throughout the city."

Riparian areas are referred to as a Streamside Protection and Enhancement Area (SPEA): they include both existing and potential streamside vegetation and are critical for healthy streams, providing the following benefits:

- *provides a buffer between streams and anthropogenic disturbances;*
- *provides food and nutrients for fish;*
- *provides fish with hiding places away from predators;*
- *moderates the water temperature during the hot summer months;*
- *stabilizes stream banks and prevents excessive erosion;*
- *protects water quality by filtering runoff;*
- *protects property from floods and slope failure as the soils soak up excess water and release it slowly; and*
- *provides habitat and corridors for wildlife, including birds, mammals, amphibians, and reptiles.*

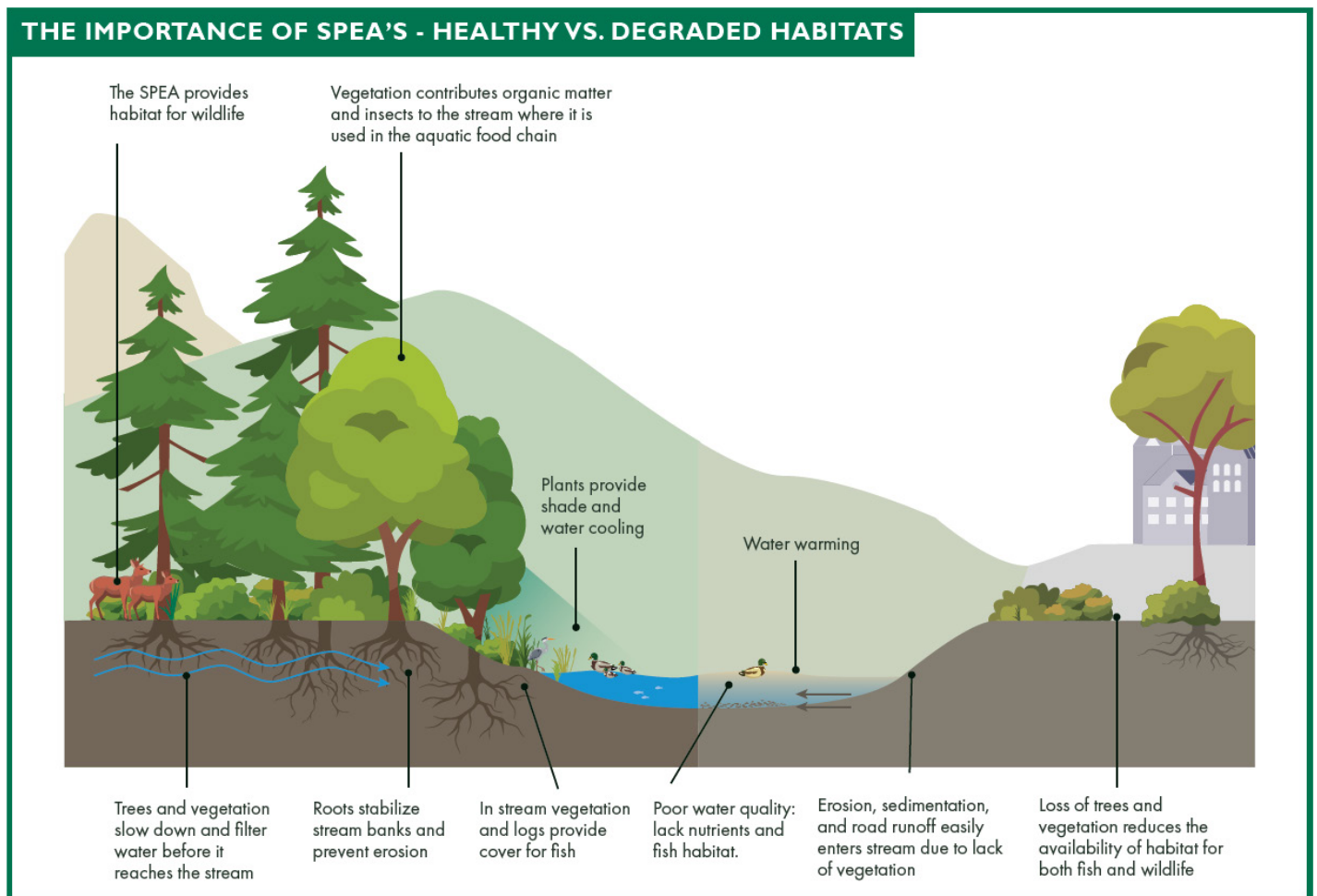


Figure 1. Ecosystem Services and Value of the SPEA.

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ENVIRONMENTAL LEGISLATION

Natural environment areas are protected under several municipal, provincial, and federal regulations, from wildlife to watercourses. The following legislation are particularly relevant during most development applications and shall be adhered to during development where appropriate.

Any non-agricultural development within 30 m of a stream top of bank must comply with federal, provincial and municipal legislation. While the City has the primary authority outside of the Riparian Areas Protection Regulation (RAPR) setback, the City shares authority with Fisheries and Oceans Canada (DFO) and the Province (the Ministry) over the activities that occur from the RAPR setback to the stream's natural boundary. The area within the stream (below the natural boundary) is the jurisdiction of DFO and the Ministry; consequently, any works below the natural boundary must be approved by both DFO and the Ministry.

2.1 Municipal Legislation

2.1.1 Zoning Bylaw

The City governs building setbacks from watercourses and general development through its Zoning Bylaw. The Floodproofing Provisions of the Zoning Bylaw (s.140.7) state that no building shall be constructed within the minimum setback area from the natural boundary of a watercourse. The objective of this setback is to ensure protection of the floodway. Setbacks under the Zoning Bylaw are generally 15 m from watercourses, and 7.5 m for ditches, and apply to all structures, regardless of use. Section 130.9 of the Zoning Bylaw states that any development within a development permit area requires a Permit.

2.1.2 Official Community Plan's Natural Environment Development Permit Guidelines

The NEDP Guidelines are 2-fold; they outline development standards for both riparian and sensitive ecosystems. The Riparian Areas Protection Regulation (RAPR) requires local governments to require setbacks that "meet or beat" the requirements of the RAPR. The OCP's NEDP Guidelines prescribe watercourse setbacks which applies to all residential, commercial and industrial development, but does not apply to bonafide agricultural activities (NE1 of the Guidelines). The riparian watercourse setbacks do not apply to watercourses that are not connected by surface flow to fish habitat.

The NEDP Guidelines also apply areas that are identified as a sensitive ecosystem, and may include areas such as young and mature coniferous forest, wetlands, and old fields. Development within mapped sensitive ecosystems as depicted in Map 13 of the OCP are applicable under the NEDP Guidelines, and typically warrant further environmental assessment.

2.1.2.1 Exemptions

Some types of development are exempted from the NEDP Guidelines because of their scale or because other processes are in place to address environmental impacts. The NEDP generally does not apply in the following circumstances:

- Agricultural activities within the Agricultural Land Reserve that support legitimate agricultural operations;
- Interior renovations and non-structural exterior renovations (i.e. those renovations that do not expand the footprint of an existing building);
- Development confirmed to be outside the SPEA and buffer area established in NE1;
- Approved ecological restoration;
- Emergency actions required to prevent, control or reduce an immediate unacceptable threat to human life, the natural environment, or public or private property (restoration may be required once the area is safe and stable);
- Where prior City or Senior Government approval was granted and the development remains consistent with those approvals;
- Use of private roads, parking areas, landscaping, or outdoor commercial or industrial storage that existed prior to the adoption of the Riparian Areas Regulation (RAR) on March 31, 2005; and
- Renovation of permanent structures that existed prior to the adoption of the RAR. Permanent structures include any building or structure that was lawfully constructed, placed or erected on a secure and long lasting foundation on land in accordance with any City bylaw in effect at the time of construction. These structures are legacied until the site is redeveloped. For a list of Permanent Structures, please refer to the RAPR Technical Manual, as amended.

Detailed information on the NEDP Guidelines is provided in **Section 3**.



2.2 Provincial Legislation

2.2.1 Riparian Areas Protection Regulation

The RAPR requires local governments to protect riparian areas during residential, commercial and industrial development. The RAPR provides for the protection of the many and varied features, functions and conditions that are vital for maintaining stream health and productivity.

RAPR setbacks are determined by a Qualified Environmental Professional (QEP) under methodology described by the RAPR. The City does not have a formalized process for approving setbacks below the RAPR without senior government authorization (i.e., DFO).

2.2.3 Water Sustainability Act & Regulations

The Water Sustainability Act (WSA) provides for the allocation and management of streams and groundwater. The WSA defines a “stream” as a natural watercourse, whether or not the stream channel has been modified, or a natural source of water supply. Bodies of water described by the term “stream” can include a lake, pond, river, creek, spring, ravine, gulch, or wetland, whether or not usually containing water. A WSA “stream” does not need to be connected by surface flow to fish habitat, as such it applies to isolated wetlands and disconnected natural channels.

The WSA applies to all “changes in and about a stream”, which include:

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

As such, all development below the top of bank and all instream works must be approved by the Ministry through a Licence, Use Approval, Change Approval or Order; or you have an accepted Notification. Of these approval types, the most common are Change Approvals and Notifications. A Change Approval is a written authorization for changes in and about a stream that are typically for high-risk projects that may propose significant, permanent changes to streams and therefore require professional oversight and/or design. Notifications are typically used for standardized, low-risk works that do not involve any permanent diversion of water, may be completed within a short period of time and will have minimal impact on the environment or third parties. Applications for Change Approvals and Notifications are completed online through FrontCounter BC.

2.2.2 Wildlife Act

The provincial Wildlife Act provides protection for most vertebrates, including mammals, birds, reptiles, amphibians, and fish, with the exception of alien species. In some cases, the habitat is protected even if the animal is not using it (e.g., bald eagle and heron nests). A Wildlife Salvage permit will be required where wildlife are proposed to be removed from a project area, and relocated to a suitable location. Species protected under the Wildlife Act may also be protected under additional legislation, such as the Species at Risk Act or the Migratory Birds Convention Act.

2.3 Federal Legislation

2.3.1 Fisheries Act

The Fisheries Act provides the legislative authority for the management and regulation of fish and fish habitat and is administered by the Department of Fisheries and Oceans (DFO). Project Reviews must be submitted to DFO if work is proposed that might cause serious harm to fish, such as instream works. If serious harm is unavoidable, an Authorization under the Fisheries Act from DFO is required. All development below the provincial RAPR Detailed Assessment Methodology setback ('RAPR setback') must be reviewed by DFO and approved through an Authorization.



Photo: Bill Beatty

2.3.2 Migratory Birds Convention Act

The Migratory Birds Convention Act (MBCA) provides protection for migratory birds that seasonally inhabit Canada. Under the MBCA, it is an offense to harm or destroy the bird themselves, its egg, or its nests. Some species nests are protected even if the nest is not in use (e.g. pileated woodpecker). Prior to development, nest surveys should be completed to identify the presence of birds or their nests to prevent impacts and contravention of the MBCA.

2.3.3 Species at Risk Act

The Species at Risk Act (SARA) outlines the protection for species identified as extirpated, endangered, or threatened under the Act, and their critical habitat. It applies to aquatic and terrestrial species, including plants and fungi, and is intended to prevent the further decline of these species and promote their recovery. Several species protected under SARA have a formal Recovery Strategy or Management Plan that should be implemented and practiced during development to avoid harming an individual. Additional consideration and management strategies apply where species at risk or their critical habitat occurs on a property.



OCP Policy 4.6.6

"Protect terrestrial habitat, particularly areas with species at risk, and mitigate areas of habitat loss."

3

NATURAL ENVIRONMENT DEVELOPMENT PERMIT AREA

The NEDP Guidelines apply to any landowner seeking to undertake development within the 'blue' (aquatic) or 'green' (terrestrial) NEDP areas identified in Map 13 of the OCP. The NEDP Guidelines also apply to non-agricultural uses even if the development is in the Agricultural Land Reserve.

3.1 NEDP Area Mapping

Together, the blue (aquatic) and green (terrestrial) areas make up the NEDP area. This NEDP area is presented in Map 13 of the OCP, and is viewable online on the City's WebMap. A visual example of the NEDP areas is below in **Figure 2**.

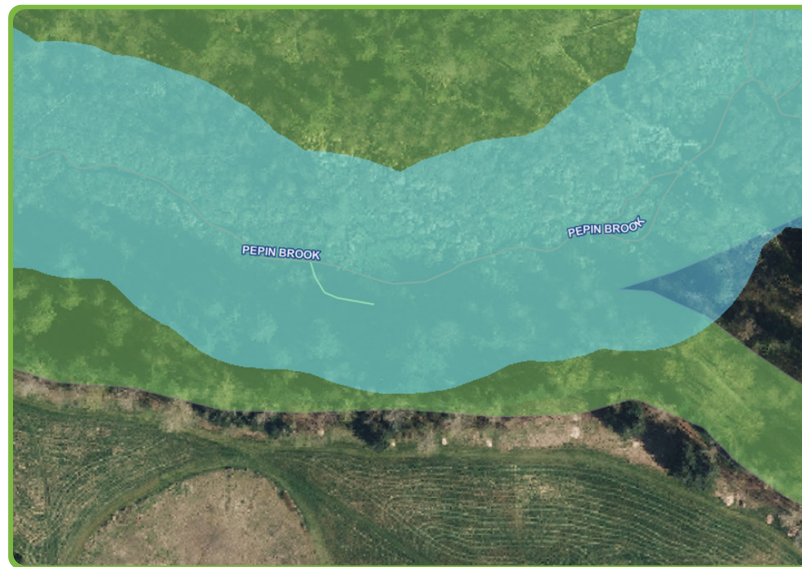


Figure 2. Map of the Blue and Green NEDP Areas from the City WebMap.



OCP Policy 4.6.1

"Enhance and restore ecological links between existing natural areas and public open spaces, increasing connections between isolated habitats."

3.2 Blue NEDP Area

The aquatic, blue NEDP area is based off of a LiDAR-interpreted Top of Bank (TOB), associated watercourse classification (i.e., permanency and fish-bearing status), and an additional buffer (10 m for all watercourses, except 3 m for non-fish bearing ditches) to provide further protection of riparian features, forms, and conditions, and use for both aquatic and terrestrial wildlife.

NE1 establishes the blue NEDP area, and summarizes the watercourse classifications, SPEAs, and additional protective buffer of watercourses within the City. Watercourse classifications are based on SHIM data, information collected onsite from QEP environmental assessments, and historical data from the City.

Watercourse permanency, fish-bearing status, or location may change over time which will impact its classification and therefore its associated SPEA and NEDP area. Updates to our data are welcomed where they are supported by a QEP working within their area of practice.

The NEDP area (and SPEAs) under NE1 are measured from the TOB, and are described in **Table 1**.



Table 1. Watercourse Classifications, SPEAs, and NEDP Areas under NE1 of the NEDP Guidelines.

Classification	Description	SPEA	Buffer	NEDP Area
Class A (red)	Permanent streams* that have fish present or potentially present	30 m	10 m	40 m
Class B1 (orange)	Non-permanent streams that have fish present or potentially present and provide water, food, and nutrients to a fish-bearing stream or water body	30 m	10m	40 m
Class B2 (yellow)	Non-permanent streams that are not inhabited by fish but provide water, food, and nutrients to a fish-bearing stream or water body	15 m	10m	25 m
Class C1 (green)	Constructed ditches* that have fish present or potentially present	10 m	10 m	20 m
Class C2 (dashed-green)	Constructed ditches with no documented fish presence	2 m	3 m	5 m
Ravine	Where stream banks maintain a grade of 3:1 or greater and are 60 m or more in width (excluding stream floodplain)	10 m	10 m	20 m
Wetland*	As defined in the Riparian Areas Protection Regulation, where connected by surface flow to a watercourse or body of water	30 m	10 m	40 m
Unclassified (blue)	Streams for which the permanency, presence of fish, or value in providing nutrients has not yet been determined	30 m	10 m	40 m

*as defined in the RAPR and Technical Assessment Manual, as amended.

3.2.1 Streams

Streams and their respective SPEAs and buffers within the City are classified based on their permanency, fish presence, and whether they are natural or constructed features. This classification is based on the RAPR Simple Methodology presuming Vegetation Category 1 as described by the RAPR Assessment Methods.

Streams have SPEAs ranging from 15-30 m depending on its permanency and fish presence.



What is a Stream?

A stream includes a watercourse or source of water supply, whether usually containing water or not, a pond, lake, river, creek, brook, ditch, and a spring or a wetland that is integral to a stream and provides fish habitat. Streams may still be fish habitat despite being channelized and/or being dry during portions of the year. A Qualified Environmental Professional can determine if a stream is fish habitat or not.

3.2.2 Wetlands

Under the NEDP Guidelines, wetlands connected through surface flow to downstream fish habitat have 30 m SPEAs. As noted in RAPR Assessment Methods, wetlands are always considered to have permanent flow. In BC, wetlands are classified and delineated by their hydrology, soils, and vegetative expression.

Wetlands include swamps, marshes, fens, bogs, and shallow open water ecosystems.



Photo: Austin Lymburner



What is a Wetland?

A wetland is an area inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support vegetation typically adapted for life in saturated soil conditions. It includes swamps, marshes, fens, bogs, and shallow open water ecosystems.

3.2.3 Ditches

While ditches primarily serve to provide drainage, they can also provide valuable fish habitat and facilitate the movement of nutrient-rich water and food to downstream fish populations. Most ditches, unless they are designed to retain water for irrigation, only flow during rainfall events.

For the purposes of the NEDP Guidelines, a 'ditch' has the same definition as defined in the RAPR and Technical Assessment Manual, as amended. These setbacks vary from 2-10 m and are measured from the top of ditch bank. The City may require a report by a QEP to support the re-classification of a watercourse as a ditch.



Photo: Christy Jones



What is a Ditch?

A ditch is different from a channelized stream in that it has the following characteristics:

- ***Is artificially constructed rather than being formed through natural processes,***
- ***Is designed primarily for the purpose of draining property, agricultural land, or roadways, and***
- ***Is not fed by natural headwaters, springs, or groundwater sources.***

3.2.4 Ravines

Where a watercourse is located within a ravine that is greater than or equal to 60 m wide (excluding the stream channel), the setback is 10 m from top of ravine bank (see **Figure 3**). If the ravine is less than 60 m wide, then the SPEA is as per the Class A though B system in NE1. Note that additional geotechnical setbacks may be applicable that may exceed watercourse setbacks.

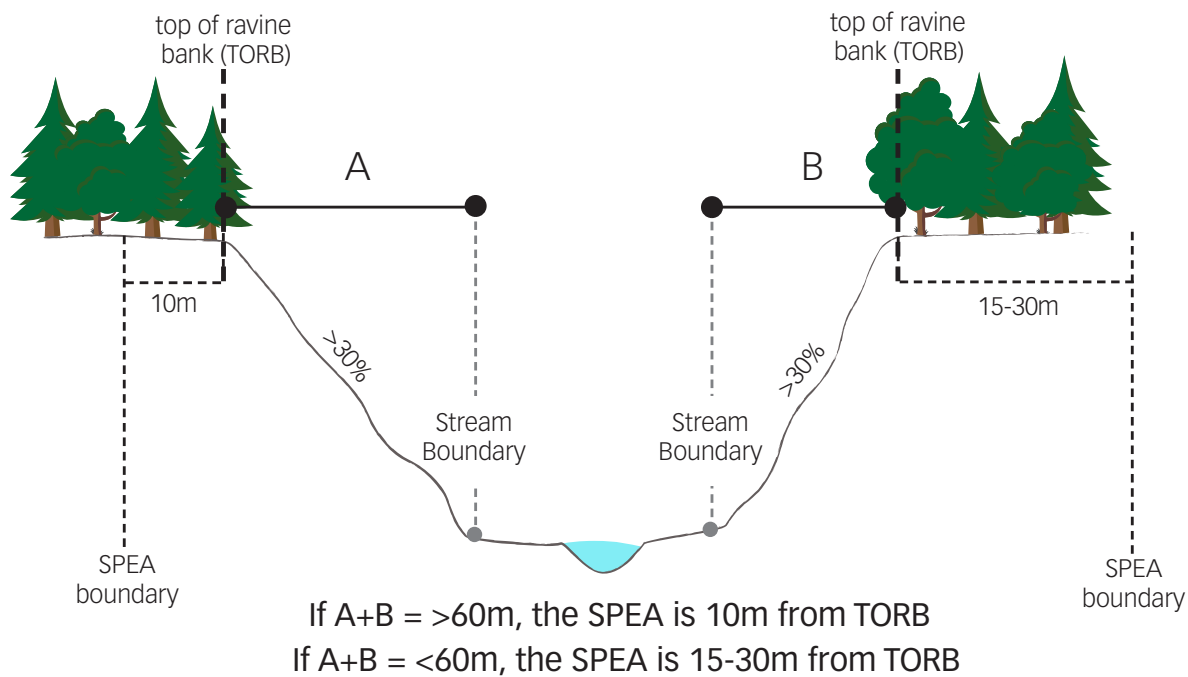


Figure 3. How to determine if a ravine is greater than 60 m in width

3.2.5 Unclassified

Watercourses that have not yet been classified have a default 30 m SPEA. Unclassified watercourses can be assessed by a QEP to determine its appropriate classification under NE1.

Note that in order to support a watercourse's classification, sufficient data must be collected to support the watercourse's permanency and fish status. If unsure, always default to the most conservative classification.

3.2.6 Buffers to the SPEA

In order to provide further protection to the SPEA, an additional buffer to the SPEA is provided to each watercourse to prevent accidental intrusions or impacts to the features, functions, and conditions of the riparian vegetation and aquatic feature. Together, the SPEA and its buffer form the NEDP Area which represents the trigger for an NEDP, should development be proposed within it. The buffer of a SPEA may be reduced through a development application if it can be demonstrated that the SPEA will not be impacted by development.



OCP Policy 4.6.5

"Protect, restore, and enhance riparian habitat through the Natural Environment Development Permit Guidelines. Streams and riparian areas should be restored to improve the quality of urban streams in particular, including the potential for day-lighting some streams."

3.3 Green NEDP Area

The terrestrial, green NEDP area includes unique and sensitive ecosystems, wildlife corridors, and intact wildlife habitats. It ranges from mature, coniferous forests to riparian areas, and the mapped areas are based off the results of a Sensitive Ecosystem Inventory (SEI) mapping exercise completed in 2013. Examples of such ecosystems are provided in **Table 2**.



Table 2: Ecosystems identified in Abbotsford through SEI mapping exercise, adopted from the SEI for Metro Vancouver & Abbotsford (2014).

Sensitive Ecosystems (relatively undisturbed ecosystems with significant value)	
Old Forest	Coniferous or mixed stands >250 years old
Mature Forest	Coniferous, mixed, or broadleaf stands between 80 and 250 years old
Woodland	Coniferous or mixed stands on dry, shallow soil sites with an open canopy
Riparian	Vegetated areas adjacent to aquatic ecosystems, including all structural stages
Wetland	Areas frequently saturated by water to influence soil and vegetative expression
Sparsely Vegetated	Low vegetative cover (<10%), and usually dominated by mosses and lichens
Freshwater Lakes and Ponds	Freshwater bodies that lack floating vegetation, and generally include lakes and ponds
Modified Ecosystems (modified by humans but contain significant ecological value)	
Seasonally Flood Agricultural Fields	Low-lying agricultural fields frequently subjected to a high water table and poor drainage; commonly associated with historic wetlands, deltas, and streams
Mature Forest	Coniferous, mixed, or broadleaf stands between 80 and 250 years old
Young Forest	Coniferous, mixed, or broadleaf stands between 30 and 80 years old
Old Field	Lands previously used for agriculture but have been abandoned
Freshwater Reservoir	Freshwater bodies that have been modified for anthropogenic use, typically for water storage

4 APPROVALS FOR DEVELOPMENT WITHIN THE NEDP AREA

Depending on the nature of the proposed development, the approval process for work within an NEDP area will result in requiring either a Development Permit (DP) or DP Exemption. See **Figure 4** below for a summary of when a DP may be required. The flow chart on page 33 provides assistance in determining which approval type will be required for your proposed development. The approval types are explained in detail in Sections 4.1 to 4.3.

Generally, as long as the entire footprint of development (including both permanent and temporary impacts) occurs outside of an NEDP area, no DP is required.

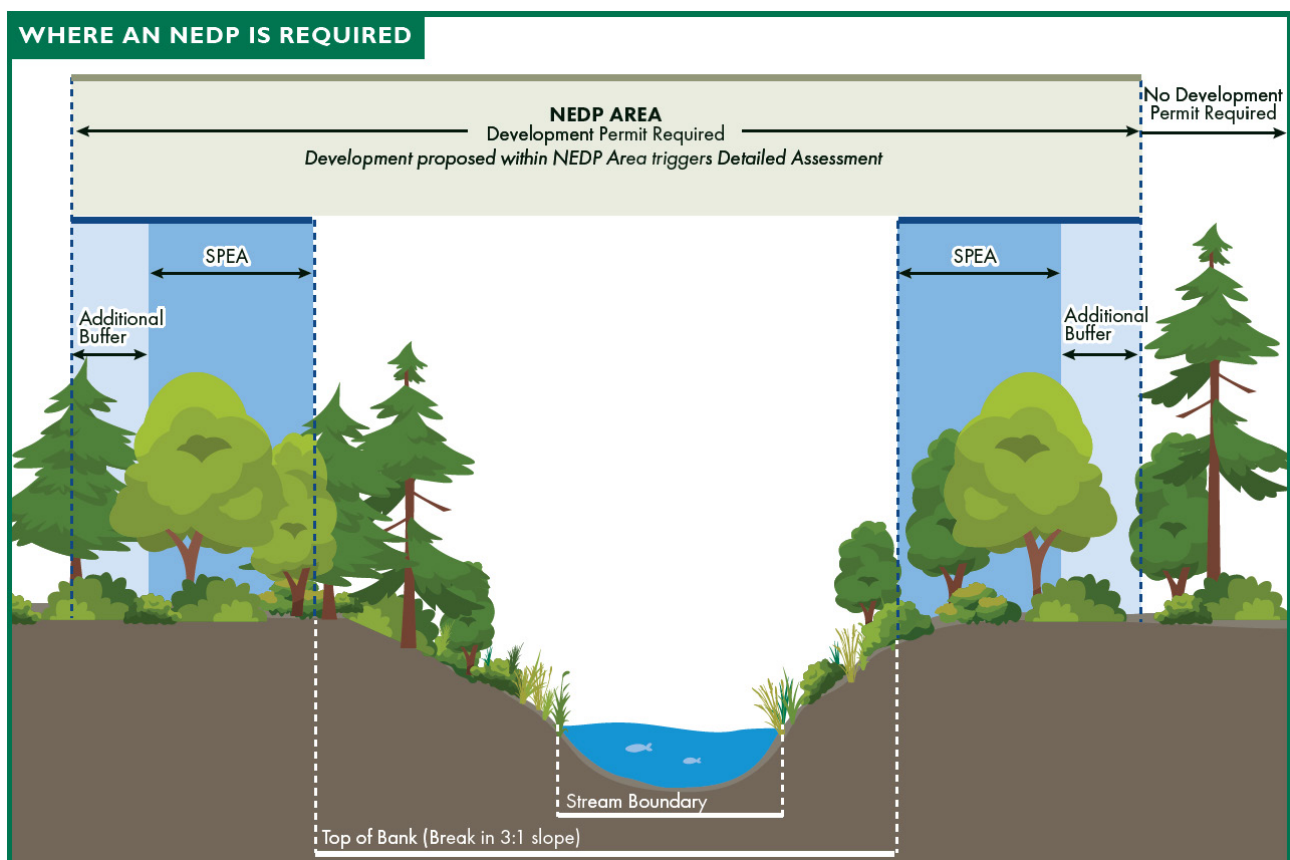


Figure 4. Summary of where an NEDP will be required.

4.1 Approvals for Development Outside the NEDP Area

Development that can occur outside of the NEDP area does not require a DP or a DP Exemption, and can proceed through a Building Permit or Soil Permit application.

4.2 Approvals for Development Outside the SPEA but Within the Buffer

Development that can occur completely outside of the full SPEA established by NE1, but is proposed to occur within the additional buffer may qualify for a DP Exemption. The following conditions may be required as part of the exemption:

- The development does not result in an impact to wildlife habitat located outside of the SPEA (may require the support from a QEP);
- The City receives a Letter of Undertaking from the applicant's solicitor for the registration of a Fisheries Protection Restrictive Covenant; and
- A permanent fence with signage is constructed along the boundary of the SPEA.

The DP exemption must be issued prior to issuance of any City Permits for development occurring outside of the SPEA (e.g. Building Permit, Soil Removal Permit, etc.).



What is development?

- ***Subdivision***
- ***Construction of commercial, residential, and industrial buildings and structures***
- ***Development associated with non-farm uses within the ALR***
- ***Removal, alteration, disruption or destruction of vegetation (e.g. tree/plant removal)***
- ***Removal, deposition or disturbance of soils***
- ***Creation of non-structural impervious or semi-impervious surfaces (e.g. driveways, patios, etc.)***
- ***Installation of flood protection works***
- ***Construction of roads, trails, docks, wharves and bridges***
- ***Installation and maintenance of sewer and water services***
- ***Development of drainage systems and utility corridors***

4.2.1 *Watercourse Reclassification and Lost Sensitive Ecosystem*

If you believe that a watercourse and its SPEA under NE1 are incorrectly classified, or a mapped sensitive ecosystem no longer exists, you may wish to hire a QEP to perform a detailed assessment. Otherwise, you can default to the pre-determined watercourse classification by the City, and its associated SPEA and buffer.

In order to determine the appropriate watercourse classification, the QEP must determine:

1. Whether it contains fish (at any time of year);
2. Whether it flows for more than 6 months a year; and
3. Whether it is a natural or constructed feature.

Watercourse re-classification requires a detailed assessment by the QEP that may include multiple site visits to determine flow permanency, fish sampling for fish presence, historical air photo review, and other methods to satisfy City staff. This information should be documented and presented to the City in the form of a letter/memo, or as part of an Environmental Assessment Report if seeking a DP. Please note that City staff do not have the authority to classify whether a watercourse is considered a 'stream' under the WSA; this determination must be made by the Ministry.

Note that if a watercourse is not classified as a 'stream' under the WSA, it may still be classified as a stream under RAPR and the NEDP Guidelines if it is connected through surface flow to downstream fish habitat, and therefore still has setbacks.

If you believe that a previously mapped sensitive ecosystem has been mapped incorrectly or partially lost due to a senior agency or City approval process, a QEP will be required to reassess its boundary.

4.3 **Approvals for Development Within the NEDP Area**

Development within the NEDP Area, either within the SPEA or sensitive ecosystem area (i.e., Natural Area), is authorized through a Director-approved DP. If development cannot be avoided within the Natural Area, an Environmental Assessment Report based on current site conditions is required to establish a modified Natural Area, together with any additional measures required to protect, enhance, restore, or mitigate impacts to the Natural Area, to the satisfaction of the City, to support a DP.

Once all of the application requirements are prepared, the application form can be submitted and the application fee paid. Application forms and fee schedule are available at the Planning Services Division (2nd Floor, City Hall) or online.

The application will be reviewed by the City's Development Application Review Team which includes relevant departments such as Engineering, Transportation, and Parks, Recreation and Culture. If other development applications are required for the property (e.g. rezoning, subdivision, Steep Slope DP, Form and Character DP, Agriculture DP, etc.), the DP process will run concurrent to those.

Once the application review is complete and the application is in alignment with the OCP and policies, the DP will be sent to the Director, Development Planning for Approval in Principle. A DP will be issued once all conditions of the DP are satisfied and the DP will be filed at the Land Title Office.

Typical NEDP conditions will include (but not necessarily be limited to) the following:

- Security for mitigation and restoration/enhancement works (including the cost of planting, monitoring, fencing, etc.);
- Registration of a Section 219 Restrictive Covenant over the Natural Area and applicable buffers or dedication of the Natural Area to the City;
- Five (5) year (or as required by senior government approval) maintenance and monitoring period;
- Senior government approvals (if applicable); and
- All recommendations of the QEP.

The DP is only applicable to the development application that initiated the DP and is valid for two years after its issuance, unless otherwise stated in the permit. Any future development or development not substantially completed or underway after two years will require independent assessment for compliance with bylaws and legislation of the day.



Zoning Bylaw Section 130.9 Requirement for Development Permit

- a) No person shall commence any development on lands within any development permit area without obtaining a valid development permit where required.**
- b) The development of land in contravention of the terms or conditions of a development permit that has been issued under Section 489 of the Local Government Act is prohibited.**

4.3.1 *Permanent Natural Area Losses*

The City encourages all development to comply with the NEDP Guidelines. However, there may be occasions when a permanent loss of Natural Area is required due to limited site developability (e.g. the lot will otherwise be sterilized, no ability to re-configure the development due to irregular lot configuration, etc.) and where it can be demonstrated that the Mitigation Hierarchy has been utilized to avoid and mitigate impacts. This will require the submission of an Environmental Assessment Report from a QEP providing detailed justification for the modification of the Natural Area, an impact assessment, a mitigation plan, and a restoration and enhancement plan.

The following factors may be considered when reviewing applications:

- Geotechnical and hydrological considerations
- Flooding and floodplain risk management
- Considerations of all options to minimize encroachment into the natural area (e.g. site reconfiguration, Zoning Bylaw variances, relaxations to road standards, density bonusing, lot averaging, etc.)
- Setbacks outlined in existing area/neighbourhood plans and Integrated Stormwater Management Plans
- Hazard tree and windthrow assessments
- The site's physical conditions, including the quality of the existing habitat
- Whether the anticipated impacts to fish and wildlife are sufficiently offset through restoration and enhancement
- Best management practices for wildlife buffers and corridors
- Location of existing buildings and other permanent structures
- Total area of configuration of the proposed natural area (e.g., no habitat panhandles, isolated islands, significant edge effects, etc.)
- Infrastructure requirements such as sewers, trails, utilities, roads, etc.

All site servicing (lot grading, drainage, sanitary, water, etc.) must be presented to understand the full scope of potential impacts to the Natural Areas, and mitigated and/or restored and enhanced where appropriate.

4.3.2 *Environmental Assessment Report*

The Environmental Assessment Report developed by the QEP must demonstrate adherence to relevant OCP Policies and implement the practices described by all of the NEDP Guidelines (NE1 through NE24), where applicable. The Environmental Assessment Report will be reviewed by an Environmental Coordinator and other City staff through the Development Application Review Team (DART) process in parallel with other supportive documentation provided for the application. The Environmental Assessment Report must address all project components as a whole and consider the recommendations and mitigation measures provided by other professional reports. For example, geotechnical setbacks and critical root zones of trees shall also be addressed in the EA Report when discussed in a Geotechnical Assessment or Arborist Report, respectively, as well as lot grading, access, and site servicing. Additional information and/or report edits may be required or requested when the EA Report does not contain sufficient information to understand or support the DP application.

The full list of NEDP Guidelines (NE1 through NE24) can be found starting at page 149 of the OCP:

<https://laws.abbotsford.ca/civix/document/id/coa/coabylaws/2025bschedulea>

A Terms of Reference for Environmental Assessment reports containing expected reporting criteria and tips for a successful application is provided in **Appendix A**.



4.3.2 The Mitigation Hierarchy

As per the NEDP Guidelines, the Mitigation Hierarchy seeks foremost to avoid negative impacts within naturalized areas, especially the SPEA, wildlife corridors, and species at risk Critical Habitat. For any impacts that cannot be avoided, mitigation measures shall be implemented, and, if necessary, habitat restoration and enhancement pursued.

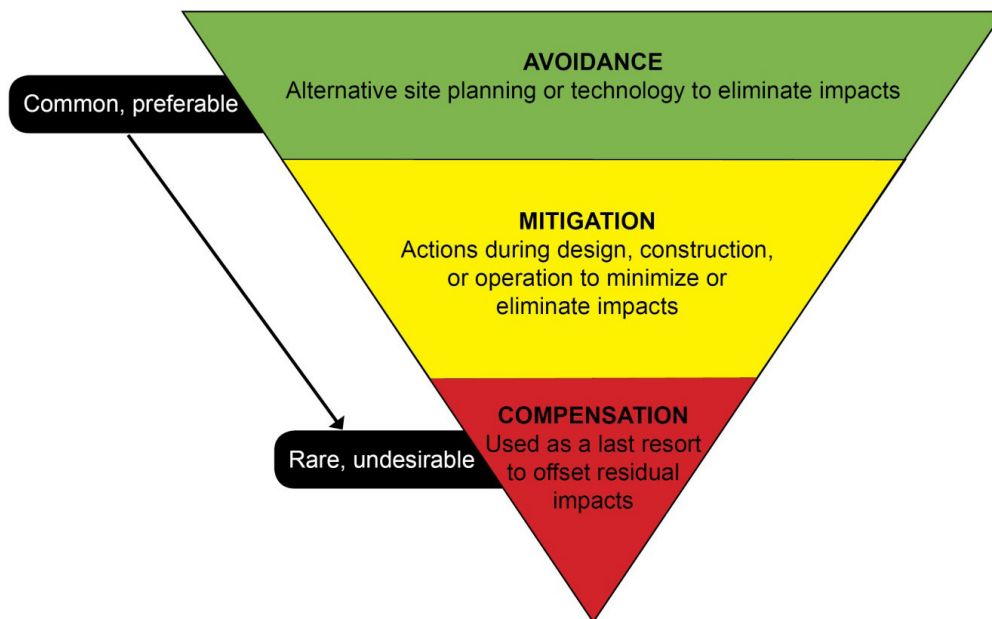


Figure 5. The Mitigation Hierarchy.

AVOIDANCE

The best option is to avoid impacts to the Natural Area by making adjustments to the location and/or construction techniques of development, or by not proceeding with a particular part of the development. Examples include:

- Moving the development outside of the Natural Area;
- Changing the footprint/layout (e.g. moving a driveway, changing the size or configuration of the building, etc.);
- Requesting Zoning Bylaw variances in order to move the building or reduce the size of the impacts (e.g. varying front yard setbacks, reducing parking requirements, etc.);
- Using different technology (e.g. directional drilling, green walls, etc.).

MITIGATION

After all measures to fully avoid impacts have been considered, mitigation measures should be employed to reduce the spatial scale, duration, or intensity of any residual impacts. Mitigation can occur through:

- Modifying construction techniques (e.g. not allowing trenching, discharging storm water over the ground at the edge of the setback rather than at a point at the stream edge, etc.).
- Applying best management practices (e.g. fencing, creating windfirm edges, protecting trees, establishing restrictive covenants, preparing spill protection plans, etc.).
- Installation of protective infrastructure or performing activities to prevent wildlife impacts (e.g. site isolations, wildlife crossings, salvages, etc.)

COMPENSATION

Restoration and enhancement is used as a last resort if avoidance or mitigation have not eliminated all of the impacts. Ideally compensation occurs on-site, but when on-site compensation has been maximized, then off-site compensation may also be considered. Compensation may include restoration and enhancement of remaining portions of the habitat by supplementing existing vegetation, revegetating bare or thin areas, or widening the habitat in other portions of the site not affected by development, removing invasive species and similar work, as outlined in Policy NE21 of the NEDP Guidelines. Staff will evaluate the compensation strategy based on the quality of habitat being impacted, the level of mitigation being employed, and the proposed enhancements. Additional examples of habitat enhancements include:

- Placement of coarse woody debris and other terrestrial habitat features
- Installation of nest boxes for bats, owls, and avian species
- Instream improvements for fish and fish habitat
- Creation of wildlife trees
- Soil amendments (mulch, organics, etc.)
- Species-specific habitat improvements, particularly species at risk
- Removal of invasive or competing non-native species

4.3.3 *Riparian Areas Protection Regulation Submission*

Where the NE1 SPEA is proposed to be modified and development is proposed within the Riparian Assessment Area (as defined by the RAPR), the City requires to receive notice from the Ministry that the RAPR Assessment Report meets the assessment and reporting criteria for the RAPR. The RAPR Report is a standardized document that is completed by a QEP and submitted for provincial review.

In addition, if the Ministry determines that a Condition and Impact Assessment (CIA) is required, the City cannot approve a DP until notice is received from the Ministry that the CIA is accepted.

4.4 Approvals for Instream Impacts

If your project creates instream impacts, then DFO and Ministry approvals are required, under the Fisheries Act and the Water Sustainability Act, respectively. The City advises property owners to hire a QEP to prepare the applications in order to obtain the necessary approvals or submit the appropriate notifications. Once the approvals are received, copies must be submitted to the City.

As part of the DP applications, works completed under a Notification or authorized Change Approval from the Ministry or Authorization from DFO are exempt from the NEDP, but are expected to be completed in accordance with the authorization(s).



What are instream impacts?

Instream impacts are any works in or about a stream, including its floodplain. Examples include:

- ***Watercourse crossings***
- ***Bank stabilization***
- ***Watercourse re-alignment***
- ***Stormwater outfalls***
- ***Installation of drain tile outlets***
- ***Pipeline crossings***

Where development is proposed that is completely under the jurisdiction of the Ministry and associated with a Notification or authorized Change Approval in accordance with the Water Sustainability Regulation (i.e., works occurring only below the TOB), the development may be approved via a DP exemption. This will require the submission of a copy of the Notification's acceptance or approved Change Approval and subsequent related correspondence with the Ministry and the QEP.

Note that the Ministry and DFO reserve the right to require additional mitigation or compensation measures as part of their authorizations that exceed the City's. In these cases, the City will default to the measures outlined by senior government.

4.5 Approvals for Development within Critical Habitat

4.5.1 Aquatic Critical Habitat

Critical Habitat for aquatic species at risk is federally protected under SARA on all properties and is regulated by DFO. Development that is proposed to impact mapped Critical Habitat for aquatic species (i.e., Salish Sucker and Nooksack Dace) must be permitted through an Authorization under the Fisheries Act, and will typically have conditions under SARA.

4.5.2 Terrestrial Critical Habitat

Critical Habitat for terrestrial species at risk is federally protected under SARA on federal lands and the MBCA for avian species and are regulated by Environment and Climate Change Canada (ECCC). Development should consider the recommendations in the federal Recovery Strategies and Management Plans to avoid and mitigate against loss of Critical Habitat and the individuals themselves.



What is Critical Habitat?

The Species at Risk Act defines Critical Habitat as:

"The habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species' critical habitat in the recovery strategy or in an action plan for the species."

4.6 When is a QEP Required?

Prior to starting your project, we recommend you contact a City Environmental Coordinator (contact details at the end of this document) for assistance in determining if your project requires a QEP to potentially save you time and project costs.

4.6.1 *Aquatic and Riparian*

If development is proposed within a SPEA (i.e, the blue NEDP area), a QEP will be required to inform professional recommendations to protect the SPEA for the NEDP. Additionally, you will be required to hire a QEP to support a watercourse/SPEA reclassification, as described in Section 4.2.1.

If development can be planned to occur entirely outside of the SPEA, a QEP may not be required. See the flowchart on page 30 for assistance of when a QEP should be retained.

4.6.2 *Terrestrial*

If development is proposed within a sensitive ecosystem (i.e., the green NEDP area), a QEP may be required to inform professional recommendations to protect the integrity of the Natural Area with considerations for wildlife, particularly species at risk.

A QEP will be required to describe the sensitive ecosystem through an Environmental Assessment Report and the demonstrate the implementation of the Mitigation Hierarchy if development is proposed within the sensitive ecosystem.



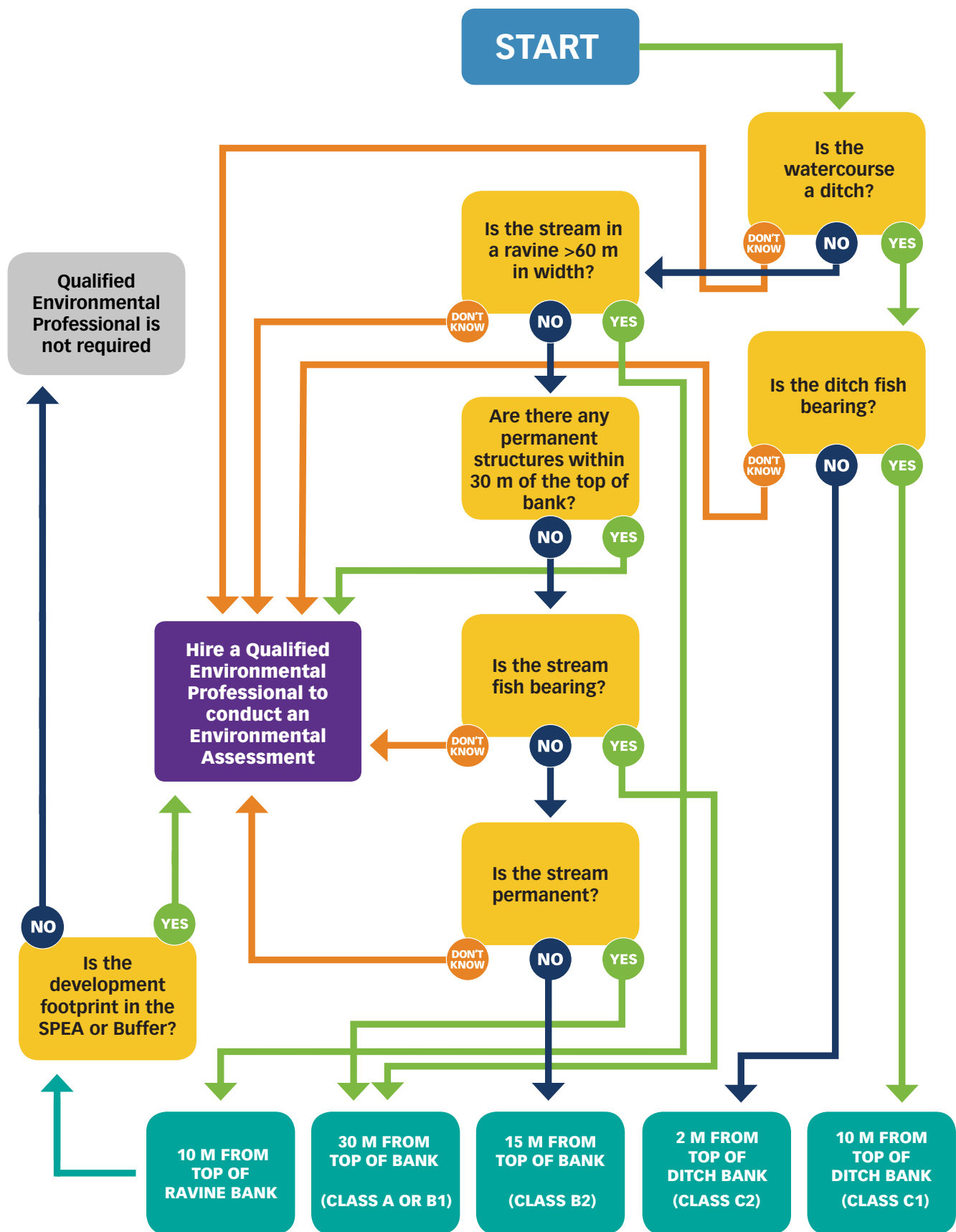


Figure 6. How to determine if your project near aquatic and riparian areas needs a QEP.

The flow chart on the previous page will assist property owners in determining the required SPEA and when a QEP should be retained to provide professional support for projects near aquatic and riparian areas. Please contact a City Environmental Coordinator to see if information is available to answer any of the questions in the flow chart. If no information exists, you can either default to the more conservative SPEA or hire a QEP to complete an Environmental Assessment.



What is a Qualified Environmental Professional (QEP)?

A QEP is an applied scientist or technologist who practices in a relevant applied sciences field including without limitation, the field of agrology, forestry, biology, engineering, geomorphology, geology, hydrology, hydrogeology, or landscape architecture, whether acting alone or together with another qualified environmental professional, if:

- a) the individual is registered and in good standing in British Columbia with an appropriate professional organization constituted under the Professional Governance Act, acting under that association's code of ethics and subject to disciplinary action by that association,***
- b) the individual's area of expertise is recognized in the assessment methods as one that is acceptable for the purpose of providing all or part of an assessment report in respect of that development proposal, and***
- c) the individual is acting within that individual's area of expertise.***

5

PROTECTING THE NATURAL AREA DURING AND AFTER CONSTRUCTION

Special care must be taken to protect Natural Area both during and after site development. The following measures should be taken:

Buffers from the Natural Area for permanent structures: Given that existing and future trees within the Natural Area have roots and branches that extend into the developable portion of the property, the City recommends that all permanent structures (e.g. buildings, roads, parking lots, etc.) be situated a minimum of 5 m away from the Natural Area to ensure that there is adequate space for:

- building construction (e.g. excavation of the foundation, installation of perimeter drains and rock pits, etc.)
- construction workers and their equipment (e.g. bobcats, excavators, scaffolding, ladders, etc.)
- access for building maintenance and repairs (e.g. painting, gutter cleaning, foundation repairs, etc.)
- tree retention/establishment
- a formal yard area where they can establish a garden/landscaping area, fire pit, swing set/trampoline, etc.

The City will consider requests for reductions in this buffer if the QEP can demonstrate that a smaller buffer can effectively protect the longterm health of the Natural Area. A restrictive covenant may be required to ensure this buffer is maintained.

Long term protection: Once the boundary of the Natural Area is approved, it must be flagged by the QEP, surveyed by a BC Land Surveyor (BCLS) and protected through measures such as dedication to the City, establishing a Section 219 Restrictive Covenant, and/or rezoning (as per the policy contained in the Official Community Plan). This surveyed Natural Area boundary must be shown on all drawings associated with the project.

Temporary Protection Fencing: The Natural Area boundary is to be physically located on the ground by a BCLS prior to site disturbance. Before construction starts, high-visibility temporary protection fencing (i.e., snow fence) must be placed along the Natural Area boundary to ensure that vegetation is not damaged during construction. The City will request confirmation from your QEP that the temporary fencing has been installed prior to giving the development notice to proceed. The fence must be located beyond the drip lines of any trees located within the Natural Area. Where trees within the Natural Area require protection, fencing must be in conformance to the specifications included in the Tree Management Bylaw. Fencing must be maintained in good condition throughout the construction period.

Permanent Protection Fencing: Once construction is complete a permanent fence must be erected along the Natural Area boundary (as per NEDP Guideline NE23). The fence guidelines are as follows:

- **For urban development where the Natural Area is owned by the City:** the fence shall be at least 1.8m (6') high and black vinyl chain link
- **For urban residential development where the Natural Area is privately owned and protected by a RC:** the fence shall be at least 1.8m high (6'). The fence can be chain link, post and rail with wire mesh affixed to the back of the fence, or cedar panels.
- **For industrial or commercial development** the fence shall be at least 1.8m high (6') and black vinyl chain link.
- **For rural developments,** the City prefers that the fence be at least 1.8m (6') high; however, given the rural nature of the development, the City is willing to accept a minimum 1.2m (4') fence. The fence can be any type appropriate to the site's use, such as chain link, post and rail, split cedar, barbed wire, etc. In order to reduce wildlife conflicts, opt for a taller fence with wire mesh affixed to the back of the fence.
- **For public spaces (e.g. roads, playgrounds) abutting a Natural Area owned by the City,** the fence shall be at least 1.2m high (4') and can be either chain link or post and rail with wire mesh affixed to the back of the fence.

Signage: During construction, signage must be placed along the temporary protection fence to inform construction personnel of the sensitive habitat beyond the fence. Upon completion of construction, permanent signs should be placed every 15 m along the permanent fence (see **Appendix B** for additional information regarding signage requirements).



Erosion and Sediment Control: During construction do not allow any soil, cement, grout, oil, grease or other contaminants to enter the stream or storm drains in the street. ESC facilities are not permitted within Natural Areas. Under the ESC Bylaw, a formal ESC Plan is required if the development footprint is $>2,000 \text{ m}^2$.

Stormwater Management: Stormwater management facilities are not typically permitted within SPEAs. All efforts should be made to ensure post-development stormwater mimics its pre-disturbance flow. Note that as per the RAPR, when open stormwater ponds are connected by surface flow to downstream fish habitat, they are considered 'streams,' and therefore have an applicable SPEA.

Timing of Site Clearing: Site clearing is not permitted until Natural Areas have been finalized, covenanted, fenced off, and senior government approvals in place. To protect migratory bird nests, wildlife, and avoid contravention of senior agency legislation, clearing should not occur unless a nesting/wildlife survey has been completed by a QEP. Wildlife activity is usually at their peak during the spring and summer months.

Monitoring: The proponent must engage a QEP during construction to ensure that all environmental standards are complied with. Long-term monitoring (i.e., 5 years upon completion of required works) will be required where planting is approved under a DP in order to assess plant survival, Natural Area integrity, and other factors. If the project also requires senior government authorization (i.e., WSA Change Approval), a lengthened monitoring period may be required.

Construction Environmental Management Plans: For larger projects or those adjacent to sensitive habitat, Construction Environmental Management Plans (CEMPs) may be requested to summarize applicable mitigation measures for construction personnel. This information may also be contained within an Environmental Assessment Report if it is developed as part of the application. The CEMP should, at a minimum:

- Inform the actions of the Contractor and all hired subcontractors in maintaining environmental features, scheduling works, and generally upholding pertinent municipal, provincial, and federal guidelines;
- Define the role of the Environmental Monitor (EM) to oversee environmentally responsible construction practices during all phases of the development, including methodology and reporting requirements;
- Define the specifications that must be adhered to during construction of all works, including ESC guidance from DFO (Planning for land-based erosion and sediment control); and cleaning, foundation repairs, etc.)
- Be adaptively managed during construction to address specific issues and changing conditions at the site.



6

FREQUENTLY ASKED QUESTIONS

6.1 How does the repeal of the Streamside Protection Bylaw impact development proposals and watercourse setbacks?

The previous Streamside Protection Bylaw described watercourse setbacks (SPEAs) for development and permitting requirements. With its repeal, SPEA information has been incorporated under NE1 of the NEDP Guidelines, and the permitting requirement mechanism has been added to the Zoning Bylaw (Section 130.9): development proposed within a DP area as identified in the OCP requires a DP prior to works occurring. Proposed changes to Natural Areas are approved through a DP by the Director or Planning Services.



NEDP Guideline NE4

"Design a project to fit the site rather than altering the site to fit the project."

6.2 Can the setback determined under the Detailed Assessment Methodology of the RAPR be used instead of those under NE1?

Development within the SPEA described in NE1 may occur, however, restoration and enhancement of the remaining SPEA or other suitable areas onsite are expected in order to maintain environmental integrity and improve habitat quality.

For example, where there are already impacts to the SPEA due to past permitted or historical (since March 31, 2005) uses, there will be greater opportunities to demonstrate how protection or enhancement of the remaining SPEA and restoration of some previously impacted areas will result in an improved Natural Area.

Deviations from NE1 must be supported by a comprehensive Environmental Assessment Report by a QEP. New development should use the mitigation hierarchy to protect and improve the integrity, ecological health and biodiversity of Abbotsford's natural features and ecosystems. Additional setbacks may be applicable to development, such as geotechnical or floodproofing provisions. Restoration and enhancement shall be completed in accordance with the NEDP Guidelines.

6.3 Can I remove trees from the SPEA?

Healthy trees cannot be removed from the SPEA without prior permission from the City Planning department. However, it is recognized that hazard trees within a SPEA may pose an unacceptable risk to human life and/or property and require treatment or removal. Therefore, hazard trees (include standing dead trees that are vertical or lean towards the development area), as well as some live trees with large dead branches or tops may be removed subject to City approval. If you are concerned that a tree poses a hazard to people or property, please hire a Certified Arborist to undertake a Hazard Tree Risk Assessment and submit this to an Environmental Coordinator for review to determine if a DP or DP exemption is applicable. Removal of both hazardous and healthy trees within the SPEA will require replacement trees.



6.4 Do I have to assess all of the trees on my property for the Arborist Report?

The trees assessed in the Arborist Report can be limited to the trees within the development footprint as well as all trees within striking distance of the proposed development.



NEDP Guideline NE12

"Conserve specimen trees and trees in stands (groups of trees along with their associated understory) to preserve long term health and stability of trees. Wildlife linkages within and beyond the development to be maintained or incorporated into the development to the extent possible."

6.5 Can I construct infrastructure in the Natural Area?

Any construction of infrastructure (e.g. roads, sewers, sediment control facilities, lot grading) within a SPEA must be reviewed by the City, and may require mitigation along with a DP. Construction of stormwater features (e.g. rain gardens, infiltration areas, wet ponds, etc.) will not be supported within the SPEA, with the exception of outfall systems. Note that as per the RAPR, when open stormwater ponds are connected by surface flow to downstream fish habitat, they considered 'streams,' and therefore have an applicable SPEA.

6.6 Can I construct trails in the SPEA?

Trails constructed as part of the approved trail network for recreation may be permitted within NE1 SPEA setbacks but are not permitted within the setback determined by the Detailed Assessment Methodology of the RAPR. However, trails may cross through RAPR setbacks perpendicular to a watercourse crossing and riparian losses require compensation. Trails proposed within the RAPR SPEA will require authorization under the provincial WSA and federal Fisheries Act.

6.7 What is required for new watercourse crossings?

Crossings in watercourses with fish habitat value require DFO and Ministry approval/notification in accordance with the Fisheries Act and the Water Sustainability Act, respectively. A Notification or Change Approval application must be submitted to FrontCounter BC, the Ministry's online portal for natural resource applications. Works completed under a Notification or authorized Change Approval from the province or Authorization from DFO can be approved via a DP exemption. If the crossing is on City property (i.e. road Right-of-Way), a Highway Excavation Permit is also required from the City's Engineering and Regional Utilities department.

6.8 What is required for using existing watercourse crossings?

If there's an existing watercourse crossing on the property that was constructed with a City Permit, then the crossing is legaced. If any modifications are required to the existing crossing (i.e. culvert extensions, widening of access road, utility/ service installations within the access road, etc.) then further information will be required. This may trigger the need for senior government approvals as well as a DP or DP Exemption.

6.9 What approvals are required for piping or relocating a watercourse?

Piping or relocating watercourses with fish habitat value require DFO and Ministry approvals in accordance with the Fisheries Act and the Water Sustainability Act, respectively. Works completed under a Notification or authorized Change Approval from the province or Authorization from DFO can be approved via a DP exemption.

6.10 Are institutional uses exempt from the NEDP?

Institutional uses are subject to the NEDP depending on the development, however, are exempt under RAPR. The provincial Water Sustainability Act and federal Fisheries Act apply to all development activities and may impose minimum setbacks or other conditions.

6.11 Can I place fill in the Natural Area?

Within the ALR, the deposition of fill for residential development is considered a non-farm use, and as such the NEDP Guidelines apply. Any non-agricultural fill placement within a Natural Area is not permitted unless a DP is obtained.

6.12 Can I demolish an existing building and rebuild within the SPEA?

On older, previously developed properties, it may be very difficult to locate building envelopes while still respecting the SPEA. Development may proceed as a DP exemption if the development footprint is contained within the footprint of the previous structure. In many cases, it is highly unlikely that development will be permitted to be closer to the SPEA than previously without a DP. The applicant should work on a site layout that maximizes the SPEA. Variances of applicable zoning regulations (e.g. lot line setbacks, parking requirements, etc.) should be considered to prevent the loss of habitat within the SPEA.

6.13 Can I replace a building that was damaged?

If a legally-constructed building or structure was damaged or destroyed to the extent of 75% or more of its assessed value above the foundation, the re-constructed building or structure will need to comply with the NEDP Guidelines and Zoning Bylaw. If the proposed replacement building or structure is located within a SPEA, it may meet the conditions of a DP exemption. Notwithstanding this, preference would be for the replacement building or structure to be set back from the stream as much as feasible on the property. Undamaged buildings or illegally constructed buildings may not be allowed to be reconstructed in the same location.

6.14 Can I plant my Replacement Trees as required by the Tree Management Bylaw in the SPEA?

If you propose to plant your Replacement Trees (as required by the Tree Management Bylaw) within the SPEA, the City will accept smaller stock in larger numbers. The intent is to avoid the use of machinery within the Natural Area that would normally be required in order to install Replacement Trees as per the Tree Management Bylaw (i.e. minimum 2 m tall conifers, and 5 cm caliper deciduous).

The objective is to achieve an equivalent amount of trunk caliper/biomass to the Tree Management Bylaw requirements. You must work with your QEP in order to determine if the required replacement trees can be planted on the property within the SPEA, and if it is possible, to identify proposed locations and species.

6.15 What if the watercourse is not connected to fish habitat?

When there are wetlands and/or watercourses that are not connected by surface flow to downstream fish habitat (i.e. the water infiltrates into the ground), the City's NEDP Guidelines do not apply; however, it may be habitat for terrestrial species and a WSA Change Approval may be required to facilitate the proposed development. When the proposed development is in the NEDP Area, prior to the issuance of a NEDP or DP exemption, the following will need to be confirmed:

1. If the wetland and/or watercourse in question are still/were present. This must be determined by a QEP with wetland expertise and have a corresponding report with justification (e.g. soil pits, vegetation, and other field data) submitted for review to both City Environmental Staff and the Ministry. It is recommended that wetlands be assessed as per the standardized methodology prepared by the Ministry.
2. If the QEP determines that the wetland and/or watercourses still exist, then appropriate setbacks must be determined by the QEP (such as by utilizing the RAPR Detailed Assessment Methodology or some other defensible, scientifically determined setback, such as based on use by a species), or default to the City's watercourse classification (if classified). Once an appropriate setback has been agreed upon, Staff will be able to proceed with the NEDP or DP exemption as long as the proposed development is consistent with the agreed upon setbacks.



NEDP Guideline NE7

"Plan, design, and implement land development activities in a manner that does not disturb or fragment wetland ecosystems, including wetland vegetation and structure, rare animals, plants and ecosystems, or soils and soil conditions. Where unconnected wetlands are located in a Natural Environmental Area and are to be retained, setbacks will be determined by the consulting QEP."

3. Alternatively, if the proposed development is not consistent with the agreed upon setbacks, the QEP must apply to the Ministry for a WSA Change Approval to conduct instream work (i.e., any infill or alteration of the wetland). Until a Change Approval has been received, the Applicant can choose to submit a development application that assumes the watercourse will be retained and a DP can be issued based on this development layout. If the Ministry issues a Change Approval, Staff will be able to issue an amendment to the NEDP or DP exemption. Alternatively the Applicant can choose to delay the development application until such time as the Change Approval is issued.

The QEP must prepare an Environmental Assessment Report to address all aspects of the NEDP Guidelines and policies identified within the OCP, such as NEDP Guidelines NE2 (fish and wildlife assessment), NE6 and NE9 (species at risk), NE7 (wetlands) NE8, NE20, NE21, and NE23 (long-term protection fencing), NE16, NE17, NE21 and NE22 (habitat restoration and enhancement). The QEP will need to provide clear policy that development will not result in negative impacts to the features, forms, and conditions of the watercourse, and other environmental values (i.e., species at risk, wildlife). If the proposal involves the removal of habitat within the SPEA, restoration and enhancement work is expected on other areas onsite to conform with the NEDP Guidelines and OCP policies. This may include supplemental planting, removal of invasive species, and other measures prescribed by the QEP. See Section 4.3.2 and **Appendix A** for more information on reporting criteria for Environmental Assessment Reports.



Photo: Tanya Bettles

6.16 Can I infill a wetland or relocate a watercourse to farm?

In BC, wetlands and some watercourses may be classified as 'streams' under the provincial WSA, and have protection. Watercourses containing fish or fish habitat are also protected under the Fisheries Act. Even in the ALR, areas below the TOB are under jurisdiction of the WSA and Fisheries Act and require approval prior to work occurring, regardless if the work is agricultural or not.

Prior to any work within a wetland (i.e., infilling), authorization must be obtained from the Ministry through a Change Approval for instream work under the WSA. Often, approval requires habitat compensation onsite (such as instream improvements or vegetation planting), and a detailed plan developed by a QEP. Approval from the Agricultural Land Commission to undertake agricultural improvements does not constitute as approval for or relieve requirements for approval under other legislation.



OCP Policy 4.7.9

"Ensure agricultural activities support and respect human health, air quality, natural environments and groundwater resources in farming areas, particularly in relation to agricultural waste management, composting, anaerobic digestion, and incineration on farms."

7

APPENDICES

Detailed information on the report requirements, development mitigation, fencing, signage, and cost estimate templates are available in the documents listed below. The NEDP application procedure is available on the City's website at

<https://www.abbotsford.ca/business-development/application-forms-fees>

APPENDIX A: Environmental Assessment Report Terms of Reference

- Reporting Criteria
- Development within the SPEA
- Mitigation, Compensation, Monitoring and Maintenance
- Environmental Securities
- Helpful Resources and References

APPENDIX B: Signage for Environmentally Sensitive Areas

APPENDIX C: Example of a Costing Sheet for Environmental Securities



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APPENDIX A: Environmental Assessment Report Terms of Reference

INTENTION AND PURPOSE

This document is intended to provide Terms of Reference (TOR) for Qualified Environmental Professionals (QEPs) and Applicants on the expected contents of Environmental Assessment (EA) Reports to expedite the application review process and ensure alignment of the application with the City of Abbotsford 2050 Official Community Plan (OCP), Neighbourhood Plans, and Council-approved Policies. The professional(s) completing the EA Report should have experience working in the region, only provide services within their professional area of practice, and be familiar with all applicable inventory standards and modern, published BMPs.

This TOR and reporting criteria are based on OCPs, NEDP Guidelines, and BMPs described by provincial guidelines, manuals, and assessment methodologies, including the Province's Develop With Care Environmental Guidelines for Urban and Rural Land Development in BC and the Riparian Areas Protection Regulation (RAPR) Technical Assessment Manual. Additional BMPs may develop or change over time and QEPs are expected to practice due diligence and adopt these BMPs into their EA Report assessment methodologies, mitigations, and overall report contents.

Where the Applicant proposes development within a Natural Environment Development Permit (NEDP) area identified in Map 13 of the OCP, an EA Report completed by a QEP is required. In accordance with NE2, the EA Report must include a detailed assessment of aquatic, riparian, and terrestrial features onsite and should summarize:

1. the proposed development and construction footprint;
2. the results of the aquatic, riparian, and terrestrial assessment;
3. the Streamside Protection and Enhancement Area (SPEA) as per NE1, any proposed modified SPEA, and setback required by the RAPR;
4. mitigation measures to protect the features, forms, and functions of the SPEA, watercourses, species at risk, and any identified environmentally valuable resources;
5. the proposed restoration and enhancement of the SPEA; and
6. any potential hazards created by the proposed development to natural features, functions, or conditions in the SPEA that support the life processes of protected fish.

The results of the EA Report and/or SPEA may also be informed by the:

1. Arborist Report
2. Geotechnical Report
3. Hydrological Assessment
4. Civil Design, including but not limited to servicing and lot grading
5. Erosion and Sediment Control Plan
6. Habitat Compensation Plan
7. Other report and plans developed by Qualified Professionals

ENVIRONMENTAL ASSESSMENT REPORT CRITERIA

The following section provides an example of the reporting structure and details that should be included within the EA Report where appropriate. Note that some sections/information may not be applicable to every project and should be adapted depending on the proposed scope of work.

It is recommended to contact a City Environmental Coordinator first to see if an EA Report is required, and the expected scope; in some cases, the submission for RAPR review may be all that is required.

Section 1: Title Page & Executive Summary

Title Page: Include the name of the EA Report, subject property, applicant, date, and QEPs who authored the report.

Executive Summary: The Executive Summary shall be presented at the forefront of the report and include an overview of the following information:

- Basic description of the development and study area
- Summary of aquatic, riparian, and terrestrial resources (i.e., the Natural Area), and SPEAs
- Summary of permanent and temporary impacts and compensation plan
- How the Mitigation Hierarchy has been applied
- How Natural Area will be permanently protected
- Summary of maintenance and monitoring program, including survivorship requirements
- Environmental security cost estimate

The EA Report is ultimately a Schedule of the DP and registered on Title so a reviewer should be able to read the Executive Summary and understand the proposed project and core results of the environmental assessment.

Section 2: Introduction

Statement of Qualification by all QEPs: The QEP(s) shall provide a statement of qualification that demonstrates how they are qualified to perform the scope of work of the EA. Consider a statement such as: X is <<a Registered Professional Biologist (RPBio) or Registered Biology Technologist (RBTech)>> with the BC College of Applied Biologists (BC CAB), legally entitled, experienced, and working within their area of practice to provide advice or services that are based on biological science to aquatic and terrestrial ecosystems or living organisms, habitats, or processes of those ecosystems (i.e. for a biology purpose).

Project Description: Include a description of the proposed scope of the project and nature of the development (i.e., residential, commercial, industrial), and the rationale for the EA report. If civil design is not completed, then it will need to be conceptually considered.

Site Description: Include a description of the biotic and abiotic features within the study area of the scope of EA, such as mapped watercourses, sensitive ecosystems, past and current land uses, and existing structures.

Section 3: Methodology

Desktop Assessment: Provide a summary of the desktop resources used to complete the bio-inventory and the determine the results. A list of common resources is provided in **Table 5**. The desktop assessment shall also include a description of the history of the site, any changes in land use/conditions that are relevant to the EA, and consider current site conditions. City Environmental Coordinators are able to share unpublished environmental data and local context.

Field Assessment: The field assessment must document existing onsite conditions within the study area and nearby offsite areas, and shall include an assessment of aquatic, riparian, and terrestrial resources. Provide a description of the methodology/ standards used to complete the field assessment(s), date of the site visit(s), weather conditions, equipment used, survey intensity, and any limitations. Assessment methodology shall be scientifically defensible and completed in the appropriate survey window dependent on the environmental values being assessed. Where recognized standards were not followed (i.e. timing, intensity, etc.) provide a justification for not requiring further inventory, or a recommendation for additional surveys.

Section 4: Results

Aquatic Resources: Provide a description of the aquatic resources and fish habitat within or adjacent to the study area (streams, wetlands, ditches, etc.). The description must include:

1. Physical characteristics: channel width, gradient, substrate, morphology, and anthropogenic features.
2. Hydrology: connectivity to up and downstream tributaries, permanence, catchment area, general flow regime.
3. Vegetation: existing and potential vegetation within the watercourse and riparian area.
4. Fish presence and habitat: identification of fish observed or documented within the watercourse, potential for fish, fish barriers, and existing habitat provided (i.e., spawning, rearing, over-wintering).

A summary of the watercourse classifications and SPEAs as per NE1 of the NEDP Guidelines, RAPR, and proposed SPEA with an additional buffer must be provide, such as per the example **Table 1** below:

Table 1. Example of Aquatic Resources Assessment Results and SPEAs.

Watercourse	Classification	NE1 SPEA(a)	RAPR SPEA(b)	Proposed SPEA*	Additional Buffer
Tributary 1	Permanent/Fish bearing	30 m	15 m	varies 20-23 m	5 m
Tributary 2	Non-permanent/Non-fish bearing	15 m	10 m	15 m	5 m
Ditch 1	Fish bearing Ditch	10 m	5 m	7 m	2 m

(a) measured from the Top of Bank (TOB)

(b) measured from the Stream Boundary (SB)

*Proposed SPEAs should be no less than other variables which may also limit development, such as floodproofing setbacks, geotechnological setbacks, critical root zones of trees, Critical Habitat areas, etc.

Terrestrial Resources: Identification and description of terrestrial habitat and environmentally valuable resources (EVRs) that exist within and adjacent to the study area. Include a completed Table B-1 from Appendix B of the 2014 Develop With Care document:

Table 2: List of Environmentally Valuable Resources adopted from Table B-1 Develop With Care (2014).

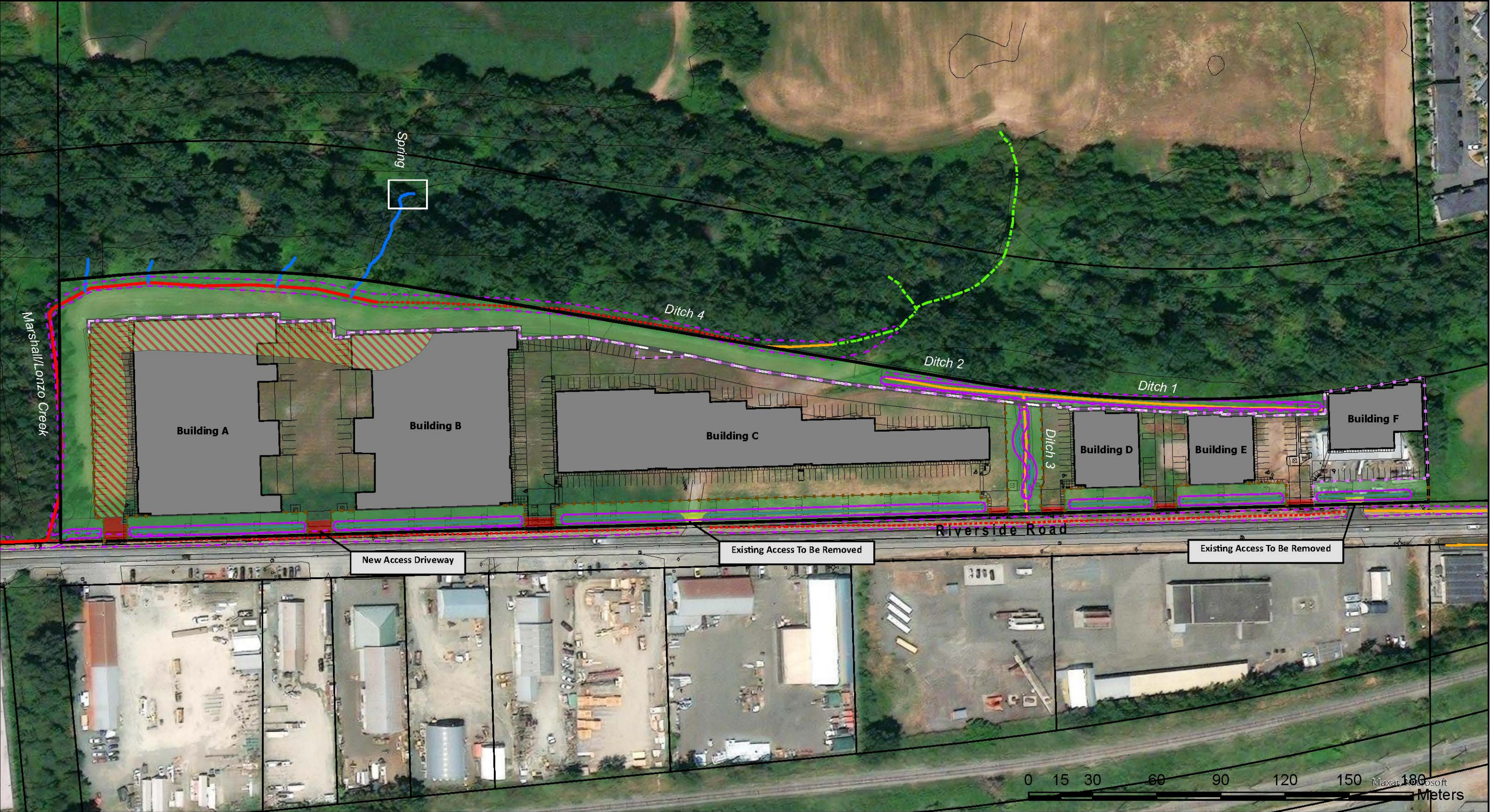
Environmentally valuable resources on or near development site	
Terrestrial ecosystems in relatively unmodified state: • conifer-dominated older forests or mature forests (>100 years old) • conifer-dominated second growth forests (60-100 years old) • grasslands/shrub /herb communities • deciduous woodlands • coastal bluffs • sparsely vegetated (e.g., sand dunes) • cliffs/rock faces/talus slopes	Aquatic or riparian ecosystems: • seasonal or permanent watercourses (streams, creeks, rivers, ditches) • seasonal or permanent wetlands • groundwater springs and seepages, or vernal pools • lakes or ponds • riparian ecosystems beside these aquatic ecosystems • vegetated gullies
Ecosystems at risk: • ecological communities on Conservation Data Centre Red or Blue Lists • sensitive ecosystems (ecosystem types identified by Sensitive Ecosystems Inventories) • areas identified as environmentally sensitive areas by local governments	Significant habitat features, e.g.: • wildlife trees • rotting logs and other coarse woody debris • caves • cliffs and rocky outcrops • seasonally flooded fields • hedges and shelterbelts • old buildings potentially used by bats or birds
Species at risk and their habitats: • species at risk identified by COSEWIC • species on provincial Red and Blue lists • regionally significant species • habitats for any of these species	Areas of significant use by wildlife, e.g.: • wildlife travel corridors • ungulate winter ranges; spring forage sites • den sites (badger, snake, etc) • perch trees, raptor or heron nest sites

Wildlife/Species at Risk: Provide a summary of the wildlife and species at risk found, documented, and with potential to exist within the study area. Assessment should consider existing and historical habitat onsite as well as on adjacent parcels.

Site Plan: A detailed figure(s) of the study area presenting the results of the desktop and field assessments, depicting the aquatic and terrestrial resources within the study area. The figure(s) must show, when appropriate:

- Study area
- Surrounding topographic and built features
- Location watercourses identified during the EA
- Location of the SPEA as per NE1, the RAPR Detailed Assessment setback, and proposed modified SPEA and additional buffer
- Location of all EVRs known to occur on or near (within 100 m) of the study area, alongside potential wildlife habitat (e.g. feeding, watering, nesting/roosting, etc.) and corridors.
- Any existing and proposed development on the parcel(s) including locations and dimensions of buildings, driveways, parking areas, utilities, retaining walls and landscaping.
- Cross-sections through the site at key locations, in various directions, to clearly demonstrate the extent of grading, land clearing and height of retaining walls or slopes and how this interfaces with the Natural Area.
- All trees and their critical root zones within the Natural Area, highlighting vegetation that will be affected or removed by the proposed development
- Legal survey of the top of bank, top of ravine bank, stream boundary, and any trees potentially impacted by the proposed development or within 10 m of the proposed SPEA boundary
- Location of any Geotechnical or Floodproofing setbacks, if applicable
- Location of any retained or proposed trails
- The site of the proposed habitat compensation, in both size (square meters) and location
- The location of the temporary and permanent fencing, along with the location of any gates to provide access to compensation areas during the maintenance period
- The portion of the Natural Area that may be temporarily impacted due to clearing, grading, and other construction-related activities, in both size (square meters) and location
- A legend which includes:
 - A complete and accurate legal description
 - Title, scale bar and north arrow
 - Date

Examples of acceptable site plans are presented below.



Subject Property Land Parcels Existing Top of Bank Future Top of Bank 6' High Chain Link Fence 4' High Wood Rail Fence Proposed Shotcrete Wall Proposed Setbacks Proposed Aquatic Proposed Buildings Streamside Protection Bylaw Variance Driveway Impacts Impact - New Driveway Offset - Existing Driveway To Be Removed Watercourse Classification Channelized Stream, Permanent Fish Bearing Ditch, Non Fish Habitat Ditch, Non Permanent Non Fish Bearing Ditch, Permanent Fish Bearing (Potential) Ditch, Permanent Non-Fish Bearing Natural Spring, Permanent Non-Fish Bearing Figure 3 Drawing Revisions: R2: 2022-10-26 Scale - 1:1,700 Proposed SPEA Setback Variance

Section 5: Discussion

Proposed modifications of the NE1 SPEA: A description of the proposed SPEA based on development footprint/construction requirements and details of the existing habitat quality of the SPEA that will be removed because of the proposed development. Proposed modifications of the NE1 SPEA must be accompanied by a summary of the stepwise application of the Mitigation Hierarchy and a rationale for the modification. Provide a determination of the RAPR SPEA with measures in accordance with the RAPR Detailed Assessment Methodology to ensure that the proposed setbacks meet the provincial minimum. An accepted RAPR report from the Ministry will be required as a condition of the NEDP.

Proposed modifications of a Sensitive Ecosystem: A description of the proposed modification based on development footprint/construction requirements and details of the existing habitat quality of the Natural Area that will be removed because of the proposed development.

Habitat restoration and enhancement: Where impacts to the NE1 SPEA or Natural Area are unavoidable, a habitat restoration and enhancement strategy is expected to demonstrate how the features, function, and conditions of the modified SPEA and aquatic habitat are restored and enhanced. Habitat restoration and enhancement may include but is not limited to, removal of invasive species or impervious surfaces, native replanting, soil amendments, widening of natural areas, instream habitat works, and addition of wildlife habitat structures (nest boxes, wildlife trees, etc.). The QEP shall demonstrate a qualitative improvement of the remaining natural areas, and must include a detailed description of all mitigation measures, such as:

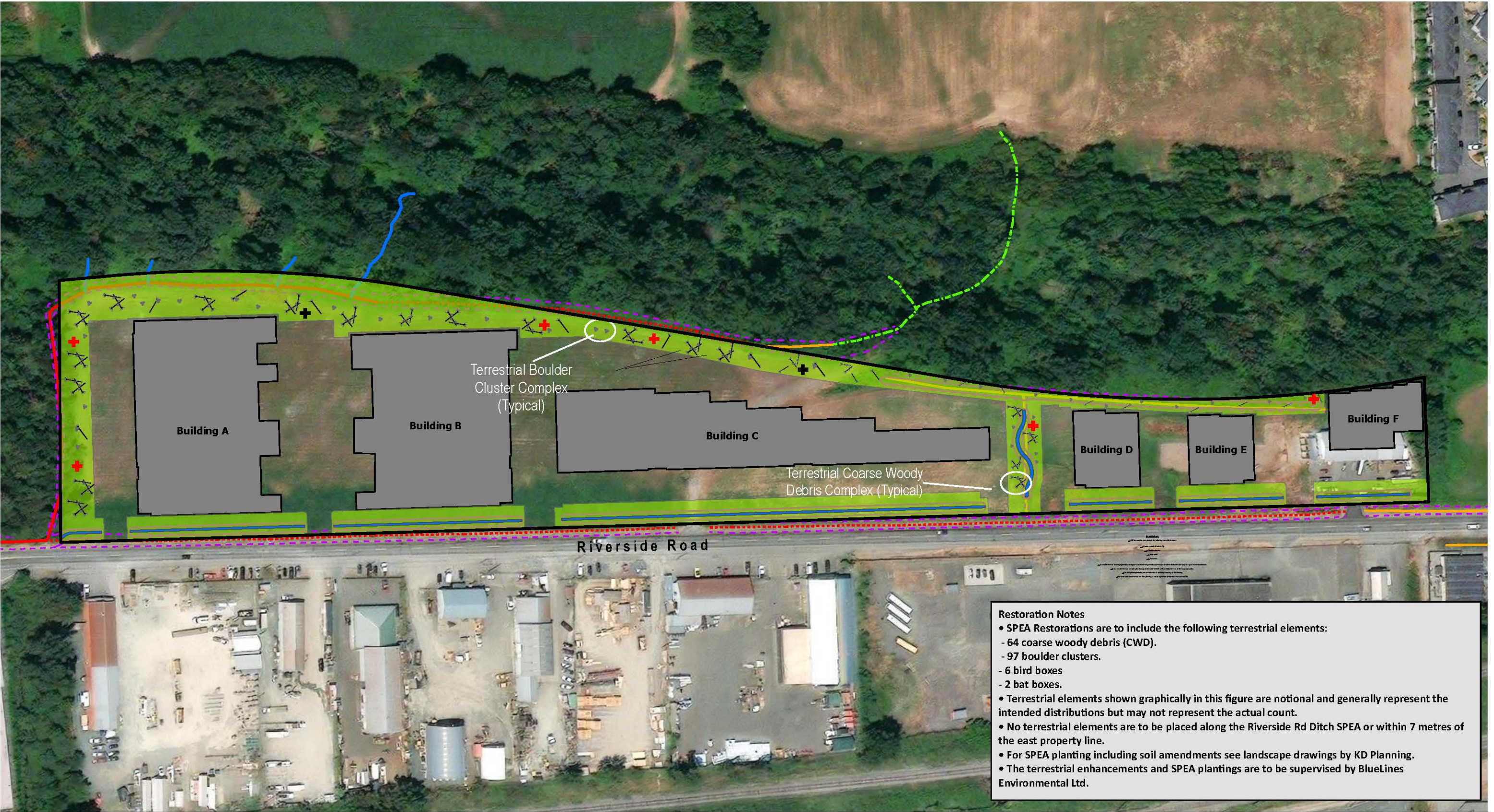
- tree protection
- measures to prevent encroachment (i.e., temporary and permanent fencing, signage, legal protection)
- specific construction designs and/or techniques
- building envelope covenants
- stormwater management plans (addressing both water quality and quantity)
- hazard tree/windfirm assessments and replacement plantings for any removals required
- replacement plantings for any hazard tree removals required
- invasive species management (including a map indicating where management will occur)
- wildfire setbacks
- erosion and sediment controls

The habitat restoration and enhancement strategy must also include a detailed description of all aspects of the strategy, such as:

- planting prescription (species, numbers, location, etc.)
- soil amendments
- mulching requirements
- large or coarse woody debris placement
- wildlife habitat (e.g., wildlife trees, rock piles, bird or bat boxes, etc.)
- construction timeline
- access during and after construction
- maintenance and monitoring during and after construction
- irrigation/watering
- survival rates (if deviating from the typical standard)
- cost estimate to implement the strategy

Survival rates should be 100% of trees and 80% of shrubs, or to acceptable scientific or senior agency standards and the maintenance and monitoring period must be a minimum of 5 years or per senior agency standards.

Provide a figure that summarizes the habitat restoration and enhancement strategy, and identifies and quantifies the locations of habitat losses and improvements. The figure shall also present the NE1 SPEA, minimum RAPR setback, proposed modified SPEA, other Natural Areas, trails, and vegetative buffer between the proposed development and the natural areas, such as per the figure below.



Provide a habitat balance table that summarizes the habitat losses and gains, such as the below:

Table 3: Example Habitat Balance Table.

Watercourse	Riparian		Aquatic		Net Riparian (m2)	Net Aquatic (m2)
	Loss (m2)	Gain (m2)	Loss (m2)	Gain (m2)		
Tributary 1	756	873	52	52	117	0
Tributary 2	49	68	0	13	19	13
Ditch 1	24	0	6	0	-24	-6
				Total:	112	7

Temporary impacts: Where only temporary impacts to the NE1 SPEA or the Natural Areas are proposed, provide a figure and description of construction activities (e.g. re-grading, utility installation, retaining wall construction, etc.), along with a mitigation/restoration strategy for these impacts.

Invasive plant species: Where noxious weeds defined within Schedule A of the Weed Control Regulation are identified within the study area, provide a management strategy for the removal/treatment of these species. Demonstrate how non-noxious weeds are to be managed such that native vegetation will not be out-competed by these species.

Terrestrial resources: Discuss the potential impacts to EVR(s) caused by proposed development, and how adverse impacts that cannot be avoided or mitigated will be compensated. Provide a description of the topography and physical characteristics of nearby sites which may be affected by the development (downstream and downslope habitats, wildlife travel corridors, habitat hubs, etc.).

Wildlife and species at risk: Discuss the potential impacts to wildlife and species at risk that occupy or may occupy the study area caused by proposed development. Provide recommendations for buffers based on BMPs, Recovery Plans, etc. or rationale indicating how an alternative buffer will effectively protect the species. Provide a monitoring strategy for prevention, mitigation, and compensation activities for the periods before construction, during construction and after construction, where appropriate.

Senior government authorization: Provide a summary of the senior government permits/authorizations that may be required for the proposed development. Include an appropriate timeline if able.

Environmental monitoring: Provide recommendations as to how both construction and post-construction activities related to the proposed development will be monitored including qualifications of the QEP. The QEP will confirm if restoration and enhancement might be best completed in early stages of site development (e.g. due to timing conflicts).

Environmental securities: Provide a security cost estimate based on the proposed compensation strategy and project mitigation works. An example costing sheet is provided in **Appendix C** of the NEDP Application Guide.

Construction schedule: Include a description of the proposed development, with complete work schedule from site preparation through post construction monitoring, such as per **Table 4**.

Table 4: Example construction schedule.

Activity	Estimated Completion Date
Temporary fencing (i.e. tree, ESC) installation	January 2026
Wildlife surveys and salvaging	January 2026
Tree clearing and grubbing	January 2026
Mass grading	February 2026
Building construction	December 2026
Restoration and enhancement works (i.e., permanent fencing, planting)	May 2027
Annual survivorship monitoring	2027 to 2032
Final monitoring and project completion	Fall 2032

Recommendation for additional assessment: Recommend whether additional surveys of the study area or assessment of development revisions are required and when they should occur. This is important when civil works are conceptual only.

Section 6: Closure

Limitations: Include a statement that identifies limitations to the EA Report, such as with the desktop/field assessments or project plans. Consider a statement that identifies the applicability of the EA Report before additional confirmatory surveys or assessments are required.

Professional sign off: For final versions of the EA Report, the professional seal and signature of the QEP(s) who contributed to the report must be included in accordance with the QEP(s) professional association sealing and signing standard. Where the development proposal required the expertise of more than one QEP, please indicate which sections of the report each QEP is responsible for and signing off on.

Site photographs: Include photographs of the study area that are representative of important points of interest to the EA.

REVIEW PROCESS

Development Permit Applications

If the EA Report is submitted alongside a DP application, it will be reviewed by an Environmental Coordinator and other City staff through the Development Application Review Team (DART) process in parallel with other supportive documentation provided for the application. The EA Report must address all project components as a whole and consider the recommendations and mitigation measures provided by other professional reports. For example, geotechnical setbacks and critical root zones of trees shall also be addressed in the EA Report when discussed in a Geotechnical Assessment or Arborist Report, respectively.

The EA Report contents will also be reviewed in accordance with the EA Report Requirements listed in this document and how it aligns with the NEDP Guidelines, and relevant OCP policies. Additional information and/or report edits may be required or requested when the EA Report does not contain sufficient information to understand or support the DP application.

Stand-Alone Reports

In some cases, an EA Report may not be provided as part of a DP application, but rather at the request of the City for more information to support a DP exemption or other City permit. The EA Report developed in these cases will not likely contain the full list of reporting criteria provided in this document, but rather focus on the specific information requested. For example, an EA Report may be requested by the City to determine a watercourse reclassification, and therefore will focus on aquatic resources and not contain a detailed inventory of terrestrial features. Another example may be an EA Report to support the modification of a SPEA buffer while keeping the SPEA intact.

Stand-alone EA Reports will be reviewed by an Environmental Coordinator and are not expected to contain all of the detailed information for a typical EA. The Environmental Coordinator will be able to provide more information on the reporting requirements and information requested based on the specific project: in some cases the required RAPR submission may suffice.

NEIGHBOURHOOD PLAN CONSIDERATION

If the study area exists within an area guided by a Neighbourhood Plan (NP), the EA Report must also consider and ensure that the proposed development aligns with the unique environmental policies described by that NP. Such environmental policies that may be applicable include:

- Conservation and expansion of the tree canopy
- Replanting with native species
- Protection of species at risk and their identified critical habitat
- Development designed to accommodate wildlife passage and reduce human-wildlife conflict

The QEP is expected to address and demonstrate adherence to the relevant environmental policies in the EA Report if the study area overlaps with any of the following NPs:

1. McKee Neighbourhood Plan
2. City Centre Neighbourhood Plan
3. UDistrict Neighbourhood Plan
4. Historic Neighbourhood Plan

MCKEE NEIGHBOURHOOD PLAN

The McKee Neighbourhood Plan (MNP) was adopted by Council in 2023 and outlines a development strategy for the McKee area, which occupies approximately 842 hectares on Sumas Mountain and contains a dynamic landscape of steep forested slopes and headwater tributaries. Amongst the many visions and policies in the strategy are environmental policies specific to guiding development in a manner that maintains McKee's environmental integrity. This includes the conservation of key wildlife habitat hubs, corridors, streams, riparian areas, and critical habitat for species at risk that are known to occupy the area.

If development is proposed within the McKee Neighbourhood, development is expected to also align with the MNP and its policies. As such, additional information to inform the EA Report may be requested by City staff due to the unique ecosystems and wildlife potential in the McKee Neighbourhood. The MNP may also impose unique development restrictions or identify planned development opportunities through its policies. The QEP and Applicant are expected to consult with the City and MNP through the planning process to ensure that development adheres to the applicable policies.

Such environmental policies under the MNP that are expected to be addressed in the EA Report include:

- Limiting development impacts to watercourses and riparian areas (Policies 3.29, 3.30, 3.31; Map 8)
- Identifying habitat potential and developing management plans for known species at risk in McKee, such as Phantom Orchid (Policy 3.35; Map 9), Mountain Beaver, Oregon Forestsnail, Northern Red-legged Frog, Pacific Water Shrew, and Peregrine Falcon (Policy 3.37)
- Conservation of identified habitat hubs (Policies 3.32, 3.33; Map 7)
- Conservation of identified wildlife linkages (Policies 3.34, 3.36; Map 10)
- Location of proposed and retained trails with respect to SPEAs (Policies 3.41 and 3.42)

REPORT RESOURCES AND REFERENCES

Below is a list of resources and references to assist QEPs in performing environmental assessments. Please note that information presented below may change over time. The City does not take accountability for information provided by third-party resources.

Table 5. Common resources and references for QEPs.

Type	Document and Source
City of Abbotsford Neighbourhood Plans and Policies	Official Community Plan Bylaw No. 2600-2016 https://laws.abbotsford.ca/civix/document/id/coa/coabylaws/2025bschedulea McKee Neighbourhood Plan https://www.abbotsford.ca/sites/default/files/2023-07/ADOPTED%203400-2023%20Official%20Community%20Plan%20Amendment%20Bylaw%20No.%20021.pdf General Bylaws https://laws.abbotsford.ca/civix/content/coa/coabylaws/?xsl=/templates/brows_e.xsl
Best Management Practices	Develop with Care (2014). Environmental Guidelines for Urban and Rural Land Development in British Columbia https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/laws-policies-standards-guidance/best-management-practices/develop-with-care Guidelines for Amphibian and Reptile Conservation during Urban and Rural Land Development in British Columbia (2014) https://www.env.gov.bc.ca/wld/documents/bmp/HerptileBMP_complete.pdf Guidelines for Raptor Conservation during Urban and Rural Land Development in British Columbia (2013) https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/best-management-practices/raptor_conservation_guidelines_2013.pdf
Fisheries Act	Projects Near Water https://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html Standards and Codes of Practice https://www.dfo-mpo.gc.ca/pnw-ppe/practice-pratique-eng.html Measures to Protect Fish and Fish Habitat https://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures-eng.html
Fish Presence and Habitat Information	Fisheries Inventory Data Queries (FIDQ) http://a100.gov.bc.ca/pub/fidq/welcome.do BC HabitatWizard https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/ecosystems/habitatwizard
Hydrology	City of Abbotsford Stormwater Management Plans https://www.abbotsford.ca/city-services/diking-drainage/stormwater-management Provincial Groundwater Wells and Aquifer (GWELLS) Map https://apps.nrs.gov.bc.ca/gwells/ FlowWorks – City of Abbotsford Precipitation Monitoring https://www.flowworks.com/network/hmiscreens/abbotsford_esc/abbotsford_esc.aspx

Type	Document and Source
Imagery and Geospatial Databases	City of Abbotsford WebMap • https://www.abbotsford.ca/city-services/mapping-data-analytics/webmap Community Mapping Network BC • https://www.cmnb.ca/atlas-gallery/ iMapBC Province of BC • https://www2.gov.bc.ca/gov/content/data/geographic-data-services/web-based-mapping/imapbc University of British Columbia Air Photo Collection • https://gic.geog.ubc.ca/aerial-photo-request/
Non-Government Organizations	South Coast Conservation Program • http://www.sccp.ca/ Fraser Valley Conservancy • https://fraservalleyconservancy.ca/ Fraser Valley Watersheds Coalition • https://fwwc.ca/
Qualified Professional Associations	College of Applied Biologists • https://cab-bc.org Engineers and Geoscientists BC • https://egbc.ca Forest Professional BC • https://fpbc.ca BC Institute of Agrologists • https://www.bcia.com/ Applied Science Technologists and Technicians of BC • https://asttbc.org
Species Recovery Strategies and Plans	Federal • https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/recovery-strategies.html Provincial • https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/species-ecosystems-at-risk/recovery-planning
Stream Assessment and Delineation Methods	RAPR Technical Assessment Manual (2019) V.1.1 • 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 RISC Reconnaissance (1:20,00) Fish and Fish Habitat Inventory: Standards and Procedures • https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/nr-laws-policy/risc/recce2c.pdf
Vegetation Identification	Pojar, J. and MacKinnon, A. (2016). Plants of Coastal British Columbia: Including Washington, Oregon, and Alaska • https://lonepinebooks.com/product/plants-of-coastal-british-columbia-3/ BC Wildlife Federation (2025). Wetland Plants of British Columbia: A Field Guide to Common Species. V3. • https://bcwfwatershedteam.ca/wetland_plants_of_bc/
Wetland Assessments	Resources Information Standards Committee (2025). British Columbia Wetland Identification and Delineation Manual – Draft Standard for Field Testing. • https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/nr-laws-policy/risc/bc_wetland_id_and_delineation_manual.pdf MacKenzie, W.H. and J.R. Moran. 2004. Wetlands of British Columbia: A Guide to Identification. • https://www.for.gov.bc.ca/hfd/pubs/Docs/Lmh/Lmh52.htm

Type	Document and Source
Water Sustainability Act & Regulation	Government of BC – Water Sustainability Act • https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/laws-rules/water-sustainability-act Ministry of Water, Lands, and Resource Stewardship (2026). A User's Guide for Changes In and About a Stream in British Columbia. • https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/working-around-water/wsa-cias-users_guide.pdf Government of BC (n.d.). WSA and RAPR: Application Clarity. • https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/fish-fish-habitat/riparian-areas-regulations/wsa_and_rapr_application_clarity.pdf
Wildlife Information and Occurrences	E-Flora BC • https://ibis.geog.ubc.ca/biodiversity/eflora/index.html E-Fauna BC • https://linnet.geog.ubc.ca/biodiversity/efauna/index.html BC Conservation Data Centre (CDC) iMap • https://maps.gov.bc.ca/ess/hm/cdc/ BC Species and Ecosystem Explorer • https://a100.gov.bc.ca/pub/eswp/ BC Frogwatch Atlas • https://maps.gov.bc.ca/ess/hm/bcfa/ iNaturalist • www.inaturalist.org/observations



APPENDIX B: Signage

SIGNAGE FOR ENVIRONMENTALLY SENSITIVE AREAS

City of Abbotsford requires signs to be attached to fencing along the boundaries of areas protected by restrictive covenant or otherwise designated as an Environmentally Sensitive Area. The signs must meet the following criteria unless otherwise specified by the City:

1. Dimensions must be 9 1/2 in x 5 in (24.13 cm x 12.5 cm) and the format and message must be as shown below.
2. Must be made from sign grade aluminum with a white reflective surface or a white enamel surface.
3. Dark lettering (e.g. black, dark blue) using either premium 7 year 2 mil vinyl lettering, or screen printed lettering. Font is Helvetica and blue is Pantone 7461, or similar. Production ready artwork can be requested from the City of Abbotsford.
4. Holes at the corners, or as otherwise required, so that they can be wired onto chain link fencing or nailed onto cedar fencing.
5. Altered to eliminate sharp corners.
6. One sign must be posted along the fence every 15 m (50 ft), or in the case of single family residential development, a minimum of one sign within each lot.
7. Signs must be readily visible to the users of the affected property.

Notes:

- Sign grade aluminum is the same type of aluminum that traffic signs are made from.
- Vinyl lettering tends to be used when only a few signs are required. When more than ten signs are required most sign companies screen print the lettering. Screen printing is recommended since screen printed lettering is more durable than vinyl lettering.
- If a sign company has already made up this sign template for screen printing for another customer, the cost of a screen printed sign may be less than a vinyl lettered sign.



APPENDIX C: Costing Sheet

COSTING SHEET FOR ENVIRONMENTAL SECURITIES

This costing sheet is provided for convenience to assist Qualified Environmental Professionals (QEPs) in ensuring that all tasks are identified and costed out for the implementation of the restoration and enhancement strategy. Where an item is not required please indicate 'n/a' along with a description. Please fill in details in the 'details/ calculated variable' column in order to simplify City staff review of the environmental security cost estimate. For an electronic copy of the sheet, please contact an Environmental Coordinator.

Task	Details / Calculated Variable	Cost per Unit	Number of Units	Est. Cost	Est. Cost plus 10%
Physical Work					
Site Preparation (a)					
invasive plant removal	N/A - no invasive plants <u>OR</u> x hrs @ \$x /hour			\$	\$
topsoil	N/A - good top soil on site, no excavation required <u>OR</u> x m3 (based on x m2 area by x mm average depth)			\$	\$
excavator and operator	N/A - no excavator work necessary <u>OR</u> x hrs @ \$x/hour			\$	\$
other	indicate variable			\$	\$
*Subtotal Site Preparation				\$	\$
Hardscaping Materials (b)					
temporary fencing	based on x m of fencing			\$	\$
permanent fencing	based on x m of fencing			\$	\$
signage	based on x signs			\$	\$
pest barriers	\$x / vole protector <u>OR</u> \$x / beaver guard			\$	\$
mulch	x m3 (based on x m2 area by x average depth)			\$	\$
habitat complexing (CWD, LWD)	average \$x / piece by x pieces <u>OR</u> \$x / x m2 area			\$	\$
wildlife passage (indicate type and length)	\$x / m by x m			\$	\$
wildlife passage inlet/outlet and interior structures	average \$x / piece by x pieces <u>OR</u> \$x / x m2 area			\$	\$
rock material (indicate what it is for)	x m3 of rock delivered			\$	\$
spawning gravel	x m3 of spawning gravel delivered			\$	\$
bat/bird box	\$x / box			\$	\$
other	indicate variable			\$	\$
*Subtotal Hardscaping Materials				\$	\$
Hardscaping Installation (c)					
fencing and signage installation	x hrs @ \$x /hour			\$	\$
mulch installation	x hrs @ \$x /hour			\$	\$
installation of habitat complexing (CWD, LWD)	x hrs @ \$x /hour			\$	\$
installation of wildlife passage, including associated structures	x hrs @ \$x /hour			\$	\$
installing instream habitat enhancements	x hrs @ \$x /hour			\$	\$
other	indicate variable			\$	\$
*Subtotal Hardscaping Installation				\$	\$

COSTING SHEET FOR ENVIRONMENTAL SECURITIES *continued*

Task	Details / Calculated Variable	Cost per Unit	Number of Units	Est. Cost	Est. Cost plus 10%
Softscaping Materials (d)					
trees (indicate pot size and total number)	average \$x / tree by # trees			\$	\$
shrubs (indicate pot size and total number)	average \$x / shrub by # shrubs			\$	\$
groundcover (indicate pot size and total number)	average \$x / groundcover by # groundcover			\$	\$
seed (indicate if hydroseed or hand-seed)	# bags/ x m2 @ x seed/x m2 coverage			\$	\$
other	indicate variable			\$	\$
*Subtotal Site Preparation				\$	\$
Softscaping Installation (e)					
plant installation	x hours @ \$x/hour			\$	\$
pest barrier installation	installed during planting <u>OR</u> x hours @ \$x/hour			\$	\$
other	indicate variable			\$	\$
*Subtotal Softscaping Materials				\$	\$
Restoration of Temporary Impacts (f)					
add rows for applicable items (e.g. topsoil, mulch, plants, guards, habitat complexing, etc)	indicate variable			\$	\$
*Subtotal Temporary Impacts				\$	\$
TOTAL PHYSICAL WORK (all Tasks a-f)				\$	\$
Monitoring and Reporting					
construction monitoring	x visits x hrs @ \$x /hour			\$	\$
prepare post-construction report	x hrs @ \$x /hour			\$	\$
post construction inspection with the City	x hrs @ \$x /hour			\$	\$
*Subtotal Construction				\$	\$
annual monitoring	x visits/year x #years of monitoring			\$	\$
prepare annual monitoring reports	x hrs @ \$x /hour x #years of monitoring			\$	\$
final inspection with the City	x hrs @ \$x /hour			\$	\$
other	indicate variable			\$	\$
*Subtotal Maintenance Period				\$	\$
TOTAL MONITORING AND REPORTING				\$	\$
Maintenance					
watering plants	every (daily/weekly/biweekly/monthly) during (add season) during periods of no rain: x hours @ \$x/hr x years			\$	\$
invasive plant removal	x hrs @ \$x /hour x years of maintenance			\$	\$
repairing or replacing pest barriers	x hrs @ \$x /hour			\$	\$
removing temporary fencing and/or ESC measures when site is stable	x hrs @ \$x /hour			\$	\$
other	indicate variable			\$	\$
TOTAL MAINTENANCE				\$	\$
TOTAL ESTIMATED ENVIRONMENTAL SECURITIES COST				\$	\$

COSTING SHEET FOR ENVIRONMENTAL SECURITIES *continued*

Following the issuance of the Natural Environment Development Permit (NEDP), portions of the environmental security are eligible to be released back to the Applicant based on work completed, as summarized below:

STAGE 1		
The completion of the initial construction works implementing the restoration and enhancement strategy, which includes the costs associated with: a. Site preparation b. Hardscaping Materials c. Hardscaping Installation d. Construction Monitoring and Post-Construction Reporting by the QEP	Total Cost of all BLUE cells in the above table	\$
Requirements prior to environmental securities being released: 1. The post-construction monitoring report completed by the QEP and accepted by the City 2. The completion of a post-construction site inspection by the City and to the satisfaction of the City		

STAGE 2		
The completion of the monitoring stage of the restoration and enhancement strategy, which includes the costs associated with: a. Softscaping Materials b. Softscaping Installation c. Restoration of Temporary Impacts d. Annual Monitoring and Reporting by the QEP e. Annual Maintenance of the Restoration and Enhancement Area	Total Cost of all GREEN cells in the above table	\$
Requirements prior to environmental securities being released*: 1. The post-maintenance monitoring report completed by the QEP and accepted by the City 2. The completion of a final site inspection by the City and to the satisfaction of the City		

*portions of the environmental security may be released annually at the request of the Applicant if annual reporting by a QEP is provided.

Once the City has received the appropriate monitoring reports by the QEP, completed the site inspection, and is satisfied with the condition of area as per the restoration and enhancement strategy, the City will process the release of the appropriate portion of the environmental security. Please note that the release of the securities will take several weeks to process. The City may withhold securities if restoration and enhancement works are not completed in accordance with the approved strategy as per the NEDP.