

DP3

DEVELOPMENT PERMIT GUIDELINES:

SENSITIVE ECOSYSTEMS

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The Sensitive Ecosystems Development Permit Guidelines are intended to be used to protect two distinct classifications of the natural environment: Streamside Areas and Green Infrastructure Areas.

Streamside Areas: represent the area adjacent to and setback from a stream that links aquatic and terrestrial ecosystems. These areas also include riparian area vegetation and the adjacent upland vegetation that exerts an influence on the stream.

Green Infrastructure Areas: are those areas identified in Surrey's *Biodiversity Conservation Strategy* as both the Biodiversity Management Areas and the Green Infrastructure Network .

In order to provide further clarification of the guidelines within this section, pictures or graphic images are provided; and where a particular guideline is graphically illustrated, the notation “(illustr)” appears.

Where a property falls within additional Secondary Plan Areas, policies and development requirements identified in those documents shall be taken into consideration in conjunction with the Guidelines listed here.



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DP3 Sensitive Ecosystem Guidelines User Guide:

The following User Guide provides the main components required for each Sensitive Ecosystem Development Permit application:

1. REVIEW and CONSIDER

- A. Definitions for Further Clarification
- B. Development Restrictions
- C. Development Guidelines

2. SUBMIT COMPLETE APPLICATION

(Exact submission requirements to be confirmed by Staff)

D. Submit an Ecosystem Development Plan

(applies to either a Green Infrastructure Area or Streamside Area)

- i) Provide Qualifications of all Professionals
- ii) Identify Protection Areas:
 - Streamside
 - Green Infrastructure
- iii) Determine On-going Safeguarding of Protection Areas
- iv) Detail Existing, Pre-Development Site Conditions
- v) Detail the Proposed Development

E. Submit an Impact and Mitigation Plan (if required)

(Applies to Streamside Areas only)

Note: Development Permit Area boundaries, objectives and exemptions are provided under Section II (d): Implementation Instruments: Development Permit Areas of this Official Community Plan.

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A. Definitions

For development in the Sensitive Ecosystem Development Permit Area, **REVIEW** and **CONSIDER** the following Definitions as follows:

Streamside	Green Infrastructure
Ecosystem Development Plan: A compilation of detailed reports as prepared by Qualified Environmental Professionals (QEP) which evaluates the appropriateness of a development.	
n/a	Green Infrastructure Areas: Existing or potential areas comprised of environmentally sensitive and/or unique natural areas that are consistent with the Biodiversity Management Areas and Green Infrastructure Network and corresponding conditions and recommendations required for management as identified in Surrey’s Biodiversity Conservation Strategy. (illustr.)
Impact Mitigation Plan: A compilation of detailed reports as prepared by Qualified Environmental Professionals (QEP) used in conjunction with a Development Variance Permit Application in determining the appropriateness of reducing the Streamside Protection Area as defined in Section 7a of the Zoning Bylaw, as amended.	n/a
Sensitive Ecosystem Area: Comprised of riparian or green infrastructure areas that are environmentally sensitive or unique natural areas such as streams, watercourses, cliffs, escarpments, forests, geological formations, wildlife habitat and wetlands.	
Species-At-Risk: Schedule 1, Federally-protected <i>Species-At-Risk Act</i> or Provincial Red- or Blue-Listed plant or animal species and their critical habitats and any species or habitat features identified as requiring year-round protection as identified in the <i>Provincial Wildlife Act</i> .	
Stream: Any of the following that provides fish habitat: (a) a watercourse, whether it usually contains water or not; (b) a pond, lake, river, creek, brook or a natural or channelized stream; (c) a ditch, spring or wetland, that is connected by surface flow to any item referred to in a) or b) above; or (d) a channelized, connected wetland, constructed channel or ditch, lake, swamp, gulch, ravine or natural stream.	
Streamside Areas: Existing or potential areas comprised of streambeds, water, trees, and grasses that border streams, lakes and watersheds and that link water to land and directly influence or provide fish habitat. (illustr.)	n/a



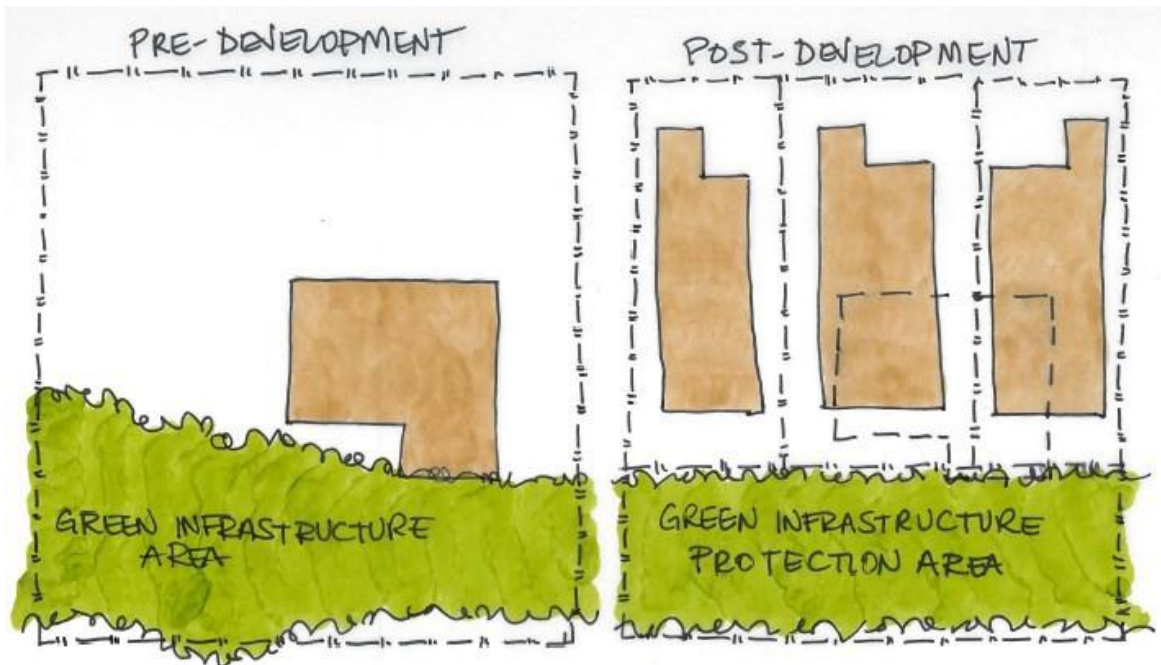
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B. Development Restrictions

For development in the Sensitive Ecosystem Development Permit Area, **REVIEW** and **CONSIDER** the following Development Restrictions as follows:

Streamside	Green Infrastructure
<p>1a. Any requirements specified in Riparian Areas Regulation, B.C. Reg. 376/2004, as amended, take precedence over any guidelines listed in this Section.</p>	<p>1b. Where a Green Infrastructure Area has been identified, development shall be adjusted to accommodate and be sensitive to the Biodiversity Management Areas, Green Infrastructure Network and the specific conditions and recommendations for protection listed within Surrey’s Biodiversity Conservation Strategy.</p>
<p>2a. Construction and post-construction access into a Streamside Protection Area is strictly prohibited, except where permitted by the City of Surrey.</p>	<p>2b. No development shall occur within a Green Infrastructure Protection Area that has not been identified, addressed and reviewed by a QEP to the satisfaction of the City of Surrey or that is not consistent with the submitted and approved Ecosystem Development Plan. <i>(illustr.)</i></p>



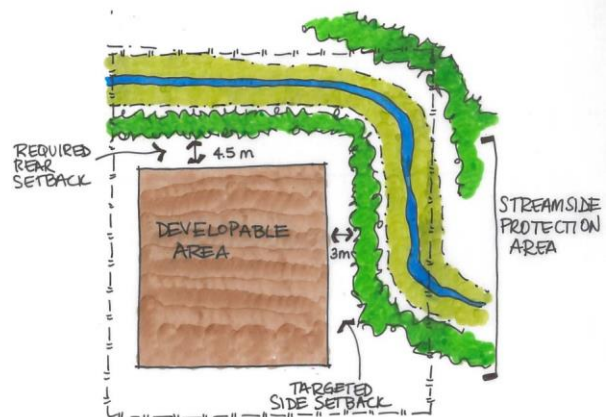
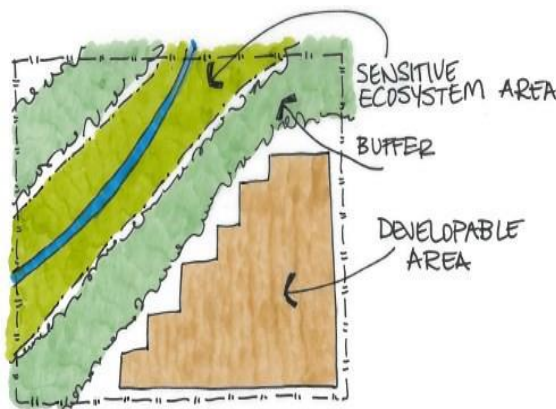
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C. Development Guidelines

For development in the Sensitive Ecosystem Development Permit Area, **REVIEW** and **CONSIDER** the following Development Guidelines as follows:

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Streamside	Green Infrastructure
<p>3a. Overall Site:</p> <ul style="list-style-type: none"> a) Plan and design on-site development roadways and connections to minimize habitat fragmentation and minimize disruption and impedance to wildlife travel. <input type="radio"/> b) Minimize encroachment into Protection Areas by adjusting building construction and site layouts adjacent to a Streamside or Green Infrastructure Area. c) Building, roadways, parking areas and driveways shall be located away from a Protection Area. d) Create functional yards by having a minimum of 4.5 m for rear yards and aiming for a 3.0 m side yard adjacent to a Streamside or Green Infrastructure Protection Area. 	
<p>4. Overall Site: Establish buffers large enough to protect the ecological integrity of Sensitive Ecosystem Areas. <i>(illustr.)</i></p> <p><input type="radio"/></p>	
<p>5a. Overall Site: Avoid locating infrastructure corridors adjacent to or within Streamside Protection Areas. Where it can be demonstrated that alternatives are not possible, design crossings that are narrow and perpendicular, and that minimize disturbance to Streamside Protection Areas.</p> <p><input type="radio"/></p>	<p>5b. Overall Site: Avoid locating infrastructure corridors adjacent to or within Green Infrastructure Protection Areas. Where it can be demonstrated that alternatives are not possible, design crossings that are narrow and perpendicular, and that minimize disturbance to Green Infrastructure Protection Areas.</p> <p><input type="radio"/></p>
<p>6. Overall Site: Determine buffer locations and sizes using contemporary Best Management Practices with the main goal of protecting Sensitive Ecosystem Areas from the effects of development and to retain the integrity of the Sensitive Ecosystem as a habitat and/or riparian area.</p> <p><input type="radio"/></p>	
<p>7a. Overall Site: Any development adjacent to or within (for approved works and services installations only) a Streamside Protection Area requires the monitoring of conditions, both on-and off-site, by a QEP prior to, and during construction.</p> <p><input type="radio"/></p>	<p>7b. Overall Site: Any development adjacent to or within (for approved works and services installations only) a Green Infrastructure Protection Area requires the monitoring of conditions, both on-and off-site, by a QEP prior to, and during construction.</p> <p><input type="radio"/></p>
<p>8. Building and Construction: Minimize impervious surfaces to improve stormwater absorption by using permeable materials and techniques, including permeable pavers and structural grassfields.</p> <p><input type="radio"/></p>	



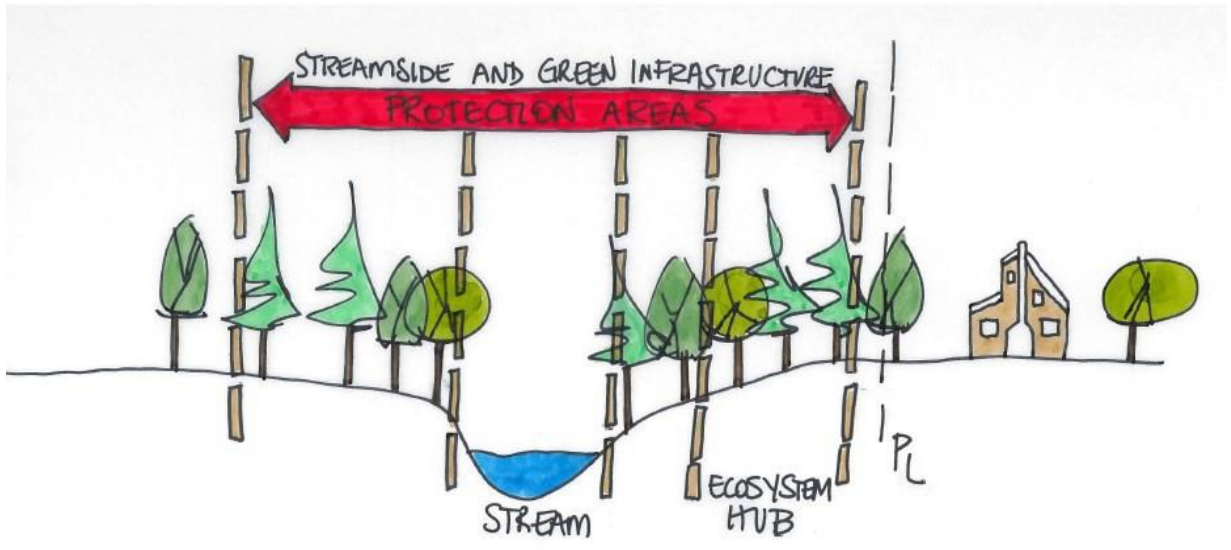
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C. Development Guidelines (cont.)

For development in the Sensitive Ecosystem Development Permit Area, **REVIEW** and **CONSIDER** the following Development Guidelines as follows:

Streamside	Green Infrastructure
<p>9. Trees and Vegetation: Create continuous vegetated corridors, wherever possible, by linking tree retention areas from within the development to that of adjacent Streamside Protection Areas or Green Infrastructure Protection Areas. (<i>illustr.</i>)</p>	
<p>10. Trees and Vegetation: In addition to the Areas of Protection, retain as much existing native vegetation and as many trees as possible during site development or redevelopment. Ensure tree replacement ratios are consistent with the requirements identified in Surrey’s Tree Protection Bylaw, as amended.</p>	
<p>11. Trees and Vegetation: Protect trees or existing vegetation within the development site and any trees on adjacent City of Surrey property and/or boulevards, before and during construction, in accordance with Surrey’s Tree Protection Bylaw, as amended.</p>	
<p>12. Trees and Vegetation: Landscape the setback areas created between buildings, roadways, parking and driveways and the edge of the Streamside Protection Area or Green Infrastructure Protection Area using native plantings (e.g. trees, shrubs and groundcover) where appropriate. Landscaping should be complementary and supportive of the habitat types and ecosystem values found within the adjacent Streamside Protection Area or Green Infrastructure Protection Area as documented within the Ecosystem Development Plan and/or the Impact and Mitigation Plan.</p>	
<p>13. Habitat: Design sites to mitigate light pollution to reduce impacts on those habitat areas reliant on darkness.</p>	
<p>14. Habitat: Prevent disturbance of animal and bird nesting sites and breeding areas by preserving adequate animal habitat through the retention of appropriate trees and vegetation and by timing construction activity to avoid bird breeding windows.</p>	



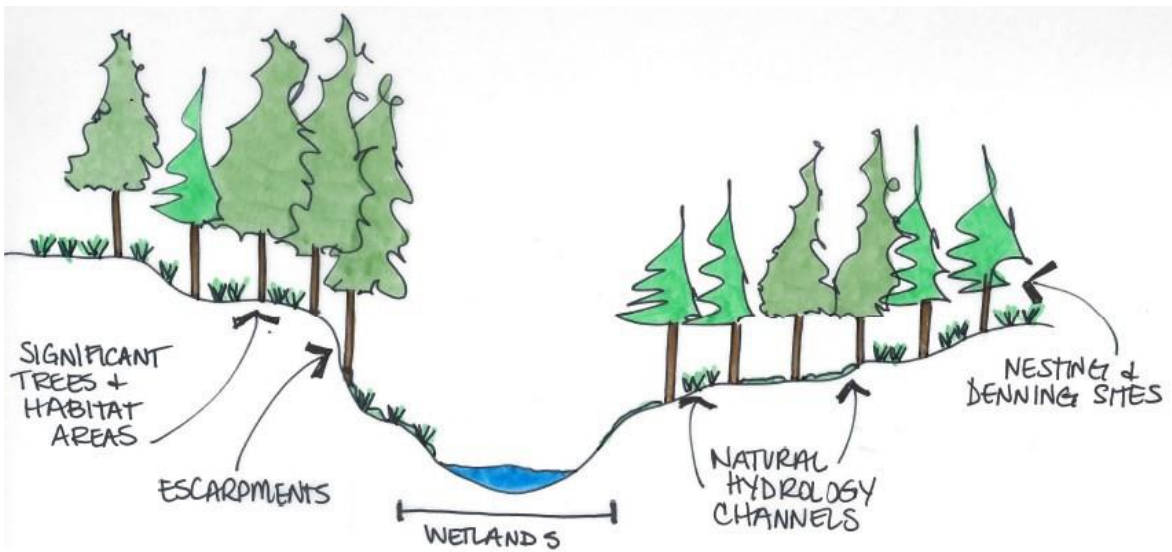
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C. Development Guidelines (cont.)

For development in the Sensitive Ecosystem Development Permit Area, **REVIEW** and **CONSIDER** the following Development Guidelines as follows:

Streamside	Green Infrastructure
<input type="radio"/>	15. Habitat: Retain intact aquatic and terrestrial ecosystems and their connectivity to other Sensitive Ecosystem Areas. Preserve large tracts of wildlife habitat or long, continuous corridors in order to facilitate safe and unencumbered movement of wildlife from one place to another. Maintain natural hydrologic cycles in wetlands, ponds, streams and seepage areas to retain biodiversity. (<i>illustr.</i>)
<input type="radio"/>	16. Habitat: Reconnect fragmented ecosystems, where practical and necessary, by establishing and restoring corridors and protecting habitats for isolated species or populations, as shown in Surrey’s Biodiversity Conservation Strategy.
<input type="radio"/>	17. Habitat: Plan and design development in order to:
<input type="radio"/>	a) Protect endangered, threatened, vulnerable species or Species-at-Risk plant and animal communities. Plan, design and implement land development and subdivisions to protect Sensitive Ecosystem Areas. Prioritize protection for habitats that provide for at-risk species, at-risk ecological communities and keystone species. Minimize impacts on significant, rare or unique vegetation, wildlife and wildlife habitat.
<input type="radio"/>	b) Retain and enhance ecosystem features such as significant trees, hedgerows or windbreaks, with enough undisturbed space around them to protect root systems.
<input type="radio"/>	c) Retain natural landforms such as escarpments, ravines, rock croppings, bluffs, hilltops or cliffs.
<input type="radio"/>	d) Design and implement artificial habitat features, such as nesting boxes or spawning beds, where natural features are not present or practical.



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C. Development Guidelines (cont.)

For development in the Sensitive Ecosystem Development Permit Area, **REVIEW** and **CONSIDER** the following Development Guidelines as follows:

Streamside	Green Infrastructure
<p>18. Drainage: At a minimum, manage stormwater so that the quantity, quality and rate of stormwater input into receiving streams does not vary from that which existed pre-development. Install both temporary and permanent sediment/pollutant containment and erosion control measures for any development or redevelopment.</p>	
<p>19. Drainage: Manage site drainage in accordance with the Integrated Stormwater Management Plan (ISMP) relevant to the site location and with Surrey’s Erosion and Sediment Control and Stormwater Drainage Regulation and Charges Bylaws, as amended.</p>	
<p>20. Drainage: Implement measures that will prevent the release of silt or sediment-laden water into streams and Surrey’s drainage network during any activity involving soil disturbance. Manage and mitigate the quality and quantity of stormwater runoff to help protect and enhance aquatic habitat.</p>	
<p>21. Drainage: Incorporate rainwater Best Management Practices into development to ensure the post-development peak flows do not exceed pre-development peak flows by treating, storing, redirecting and slowly releasing rainwater from impervious surfaces back into natural hydrological pathways as much as possible, and by using systems such as green roofs, underground rainwater storage systems, rain gardens and rain barrels. Incorporate on-site stormwater management features into the development as required by the Surrey Stormwater Drainage Regulation and Charges Bylaw, as amended.</p>	
<p>22. Drainage: Construct wetlands and detention ponds to improve the quality of rainwater through bio-filtration and to maximize habitat creation. (<i>illustr.</i>)</p>	



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D. Submission Requirements—Ecosystem Development Plan

For either a Green Infrastructure Area or a Streamside Area, using plans, elevations and/or profiles at an appropriate scale, **SUBMIT** an **ECOSYSTEM DEVELOPMENT PLAN** which details, illustrates and describes the Development Proposal as follows:

i) Consultant Qualifications

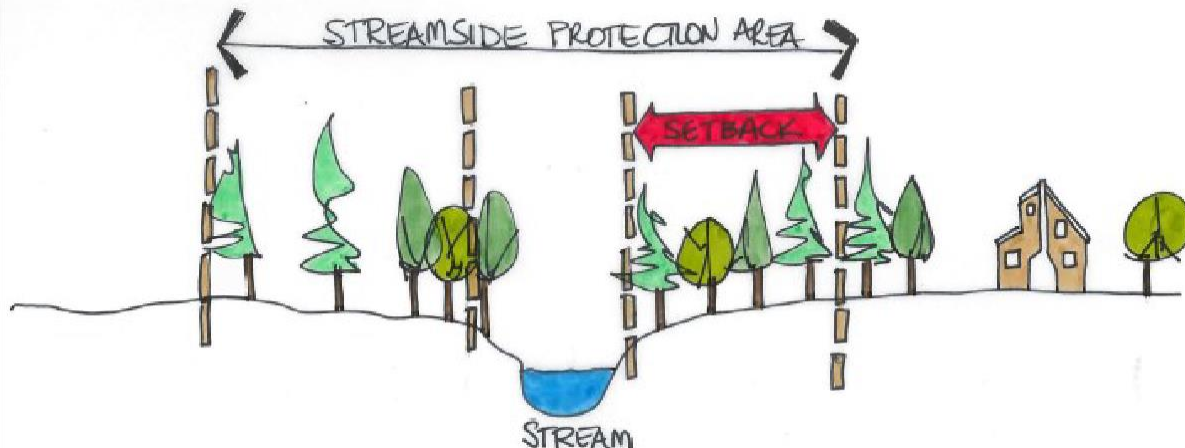
Provide qualifications for each separate consultant used per development proposal.

Streamside	Green Infrastructure
<input type="radio"/> 23. ALL registered professionals who will be involved in the development proposal, whether a Biologist, Geoscientist, Engineer, Forester, and/or Agrologist, shall have demonstrated education, expertise, accreditation and knowledge relevant to sensitive environments, ecosystems and/or streamside management.	
<input type="radio"/> 24. ALL Arborists who will be involved in the development proposal shall be registered and certified with the International Society of Arboriculture (ISA).	
<input type="radio"/> 25. Supply a list and written statement, including all documentation, verifying the qualifications of all Qualified Environmental Professionals (QEP) and/or ISA Certified Arborists responsible for preparing report submissions or involved in monitoring site conditions for Sensitive Ecosystems Development Permit applications.	
<input type="radio"/> 26. Where more than one Qualified Environmental Professional is needed, submit a written statement identifying THE PRIMARY QEP for the entire development and acknowledging their role to ensure: all required reports are prepared by qualified professionals and are coordinated both in content and in execution.; and that all relevant Development Permit Guidelines and requirements have been met and/or addressed in the application submission.	

ii) Protection Areas

Use the following documents to determine the Sensitive Ecosystem Area to be protected.

Streamside	Green Infrastructure
<input type="radio"/> 27a. Zoning Bylaw: Part 7a, Streamside Protection of Surrey’s Zoning Bylaw is to be used to determine the Area of Protection required for development adjacent to a stream. (<i>illustr.</i>)	<input type="radio"/> 27b. Biodiversity Conservation Strategy: the Biodiversity Management Areas, Green Infrastructure Network and Appendix J of the <i>Biodiversity Conservation Strategy</i> are to be used to determine the Area of Protection required for development within a Green Infrastructure Area.



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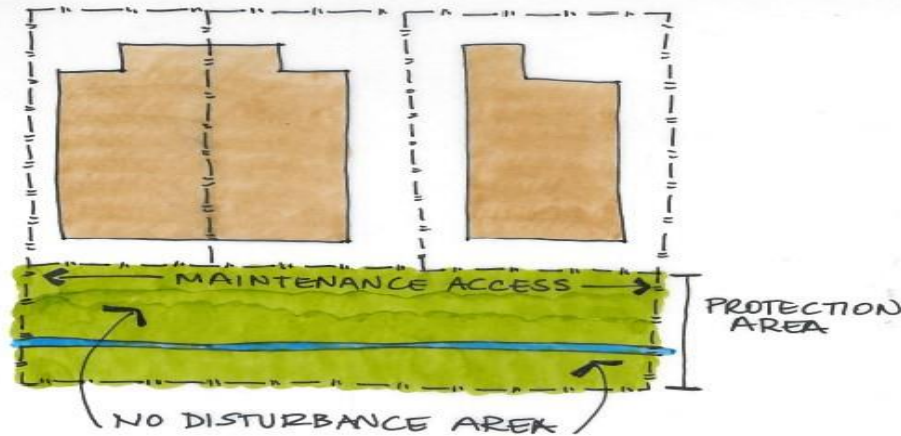
D. Submission Requirements—Ecosystem Development Plan (cont.)

For either a Green Infrastructure Area or a Streamside Area, using plans, elevations and/or profiles at an appropriate scale, **SUBMIT** an **ECOSYSTEM DEVELOPMENT PLAN** which details, illustrates and describes the Development Proposal as follows:

iii) Levels of Safeguarding

Indicate which level of safeguarding is proposed to be applied to the development.

Streamside	Green Infrastructure
<p>28. Maximum Safeguarding: conveyance of the Protection Area to the City of Surrey. Where conveyance is chosen, the applicant is not responsible for the additional ecological restoration or on-going maintenance of the Protection Area as detailed and described below under the Minimum Safeguarding option.</p>	
<p>29a. Minimum Safeguarding: registration of a combined Restrictive Covenant/Right-of-Way against the property to ensure safeguarding and maintenance of the Protection Area in perpetuity that shall include:</p> <ol style="list-style-type: none"> 1) identified “no disturbance” and “maintenance access” areas; (<i>illustr.</i>) 2) provisions for post-construction on-going management of the Protection Area for a minimum of five years, including any required rehabilitation, restoration and/or conservation of any areas identified by the project-managing QEP; 3) provisions for yearly monitoring and reporting; and identification of the Principal QEP responsible for providing yearly monitoring reports during the minimum five-year maintenance period; and 4) a compensation plan and cost estimate for all items listed in this section. This will also be used to determine landscape bonding and security requirements for installation and maintenance purposes. 	<p>29b. Minimum Safeguarding: registration of a Restrictive Covenant against the property to ensure safeguarding and maintenance of the Protection Area in perpetuity that shall include:</p> <ol style="list-style-type: none"> 1) identified “no disturbance” areas; (<i>illustr.</i>) 2) provisions for post-construction on-going management of the Protection Area for a minimum of five years, including any required rehabilitation, restoration and/or conservation of any areas identified by the project-managing QEP; 3) provisions for yearly monitoring and reporting; and identification of the Principal QEP responsible for providing yearly monitoring reports during the minimum five-year maintenance period; 4) a compensation plan and cost estimate for all items listed in this section. This will also be used to determine landscape bonding and security requirements for installation and maintenance purposes.



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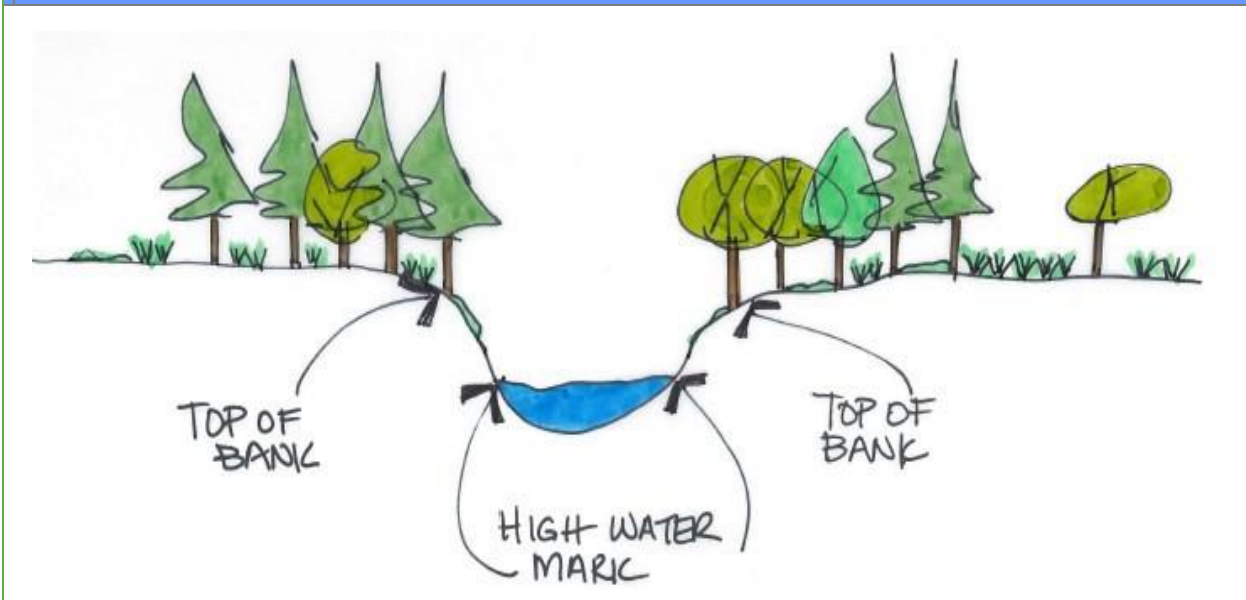
D. Submission Requirements—Ecosystem Development Plan (cont.)

For either a Green Infrastructure Area or a Streamside Area, using plans, elevations and/or profiles at an appropriate scale, **SUBMIT** an **ECOSYSTEM DEVELOPMENT PLAN** which details, illustrates and describes the Development Proposal as follows:

iv) Pre-Development Site Conditions

Detail conditions of the development site prior to any development disturbance.

Streamside	Green Infrastructure
<input type="radio"/> 30. Building and Construction: Identify all existing on-site buildings, structures and developed areas, including paved and landscaped areas, and any other areas disturbed beyond its original condition.	
<input type="radio"/> 31. Soils: Perform a slope analysis and identify existing topographic features including geological and hydrogeological soil conditions, particularly areas of unstable or sensitive soils.	
<input type="radio"/> 32. Trees and Vegetation: Identify and detail existing vegetation and trees (including trees defined in the Surrey Tree Bylaw, as amended) and submit in an arborist’s assessment report.	
<input type="radio"/> 33. Habitat: Identify Schedule 1, Federally-protected <i>Species-At-Risk Act</i> or Provincial Red- or Blue-Listed plant or animal species and their critical habitats including shrub and ground cover communities and any species, or habitat feature, identified as requiring year-round protection as identified in the Provincial <i>Wildlife Act</i> .	
<input type="radio"/> 34. Drainage: Identify the Streamside Protection Area and stream locations, including top of bank (illustr.) and stream classification (as defined in Surrey’s Zoning Bylaw, as amended).	n/a
<input type="radio"/> 35. Drainage: Identify existing site drainage conditions in accordance with the Integrated Stormwater Management Plan (ISMP) relevant to the site location.	n/a
<input type="radio"/> 36. Drainage: Detail existing site drainage conditions including depth to ground water table, stormwater conveyance, infiltration and storage features, and stormwater channels and overland flow paths.	



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D. Submission Requirements—Ecosystem Development Plan (cont.)

For either a Green Infrastructure Area or a Streamside Area, using plans, elevations and/or profiles at an appropriate scale, **SUBMIT** an **ECOSYSTEM DEVELOPMENT PLAN** which details, illustrates and describes the Development Proposal as follows:

v) Proposed Development Conditions and Specifications

Detail the proposed development and post-site conditions.

Streamside	Green Infrastructure
37a. Overall Site: The identified Streamside Protection Area and how it is situated with the development. <input type="radio"/>	37b. Overall Site: The identified Green Infrastructure Protection Area and how it is situated with the development. <input type="radio"/>
n/a	38. Overall Site: Locate development where it is most sensitive to the objectives of the Biodiversity Management Areas, Green Infrastructure Network and corresponding conditions and recommendations required for management as identified in Surrey’s Biodiversity Conservation Strategy. (illustr.) <input type="radio"/>
39. Building and Construction: Detail construction specifications including materials, timing, technologies and techniques proposed as a means to mitigate and reduce the ecological impacts of development on the identified Streamside or Green Infrastructure Protection Area. <input type="radio"/>	
40. Building and Construction: Explain how the proposed development conforms to Surrey’s Drainage Regulation and Charges Bylaw, as amended, as well as policies in Secondary Plans, Integrated Stormwater Management Plans and the Zoning Bylaw, as amended; <input type="radio"/>	
41. Building and Construction: Detail the locations of all proposed buildings, structures and impervious surfaces. <input type="radio"/>	
42. Building and Construction: Detail the timing and scheduling of all proposed development activities. <input type="radio"/>	
43. Soils: Provide site grading plans illustrating the area and extent of soil disturbance including slope grades and any proposed retaining wall heights, locations and materials used. Detail how slope or soil stability will be ensured and how erosion and increased sedimentation risks will be reduced. <input type="radio"/>	



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D. Submission Requirements—Ecosystem Development Plan (cont.)

For either a Green Infrastructure Area or a Streamside Area, using plans, elevations and/or profiles at an appropriate scale, **SUBMIT** an **ECOSYSTEM DEVELOPMENT PLAN** which details, illustrates and describes the Development Proposal as follows:

v) Proposed Development Conditions and Specifications (cont.)

Detail the proposed development and post-site conditions.

Streamside	Green Infrastructure
44. Trees and Vegetation: Identify how existing trees, shrubs and groundcover will be retained and protected including details and specifications on the replanting, restoration and management of vegetated areas and the maintenance of short- and long-term hydraulic regimes. <input type="radio"/>	
45. Trees and Vegetation: Identify individual tree retention and removal as well as areas of structured landscaping, including plant species, size and location. <input type="radio"/>	
46. Trees and Vegetation: Provide details as to how the Streamside or Green Infrastructure Area management of protection objectives will be met and monitored following the official completion of all construction activity. Where restoration work IS NOT required, maintenance and monitoring shall be for a minimum of ONE year; and where restoration work IS required, maintenance and monitoring shall be for a minimum of FIVE years. <input type="radio"/>	
47. Trees and Vegetation: Provide a restoration, maintenance and cost estimate plan consistent with the development requirements identified in the Ecosystem Management Plan and/or Impact Mitigation Plan to be used to determine landscape bonding and security requirements for installation, monitoring and maintenance purposes. <input type="radio"/>	
n/a	48. Habitat: Articulate how the proposed development meets the Objectives and Recommendations of the Biodiversity Management Areas and Green Infrastructure Network of the <i>Biodiversity Conservation Strategy</i> . <input type="radio"/>
n/a	49. Habitat: Detail how wildlife habitat will be protected and enhanced while taking into consideration wildlife movement and connectivity to adjacent sites. Focus on Schedule 1, Federally-protected <i>Species-At-Risk Act</i> or Provincial Red- or Blue-Listed plant or animal species and their critical habitats and how they may be affected by the proposed development, and indicate how proposed Best Management Practices may be used for the protection and preservation of that habitat. <input type="radio"/>
50. Drainage: Identify post-development drainage site conditions in accordance with the Integrated Stormwater Management Plan (ISMP) relevant to the site location. <input type="radio"/>	
51. Drainage: Detail how flooding risk and water quality degradation will be mitigated including specific measures that will be taken to prevent channel erosion and prevent the fouling of streams, wetlands or drainage conveyance corridors. <input type="radio"/>	

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E. Submission Requirements—Impact Mitigation Plan

For development adjacent to a Streamside Area, using plans, elevations and/or profiles at an appropriate scale, **SUBMIT** an **IMPACT MITIGATION PLAN** detailing, illustrating and describing the following:

52. An **IMPACT MITIGATION PLAN** is required to determine the appropriateness of requests to reduce the Streamside Protection Area (through the use of a Development Variance Permit) as defined in Surrey’s Zoning Bylaw, Part 7a. The **IMPACT MITIGATION PLAN**, where relevant to the site (determined by City of Surrey), shall include the following:

- Overall Site:** A detailed explanation why a variance is being sought and why the required Streamside Protection Area is not being met.
- Overall Site:** A detailed Riparian assessment report, following the Provincial methods specified in the Riparian Areas Regulation, B.C. Reg. 376/2004, identifying the regulatory Streamside Protection and Enhancement Area and associated measures.
- Overall Site:** An assessment report indicating any expected changes and modifications to streams and aquatic and riparian areas, including any expected water quality reductions, water quantity changes, or fish and wildlife habitat degradation, with a particular focus on salmonid habitat and healthy tree retention, as a result of the proposed Streamside Setback Area variance.
- Overall Site:** A restoration plan and cost estimate for the items submitted with the Impact Mitigation Plan. This restoration plan shall also be used to determine landscaping bonding and security requirements for installation, monitoring and maintenance purposes.
- Building and Construction:** Details demonstrating how the City of Surrey can reasonably access the stream to maintain drainage conveyance including illustrating the location of a required minimum 5 m wide access corridor that is geotechnically-stable and located outside of the Streamside Protection and Enhancement Area, as defined in Riparian Areas Regulation, B.C. Reg. 376/2004, as amended.
- Building and Construction:** Details on how public and maintenance access will be accommodated where there is a park trail proposed within the proposed adjusted Streamside Setback Area.
- Soils:** Provide a geotechnical report that assesses the impacts of the adjustments and recommends how to protect stream bank stability. The report will provide detailed information on stream hydraulics, erosion, sedimentation, and top of bank conditions (e.g. top loading or slope undercutting effects). The report will also include a seismic assessment addressing impacts for both structural and human usage.
- Trees and Vegetation:** A vegetation accounting report including the effects of any biomass and habitat removal, or any other disturbances as a result of the proposed Streamside Setback Area variance.
- Habitat:** A riparian restoration plan specifying the following: invasive species management; abatement of hazard trees; appropriate native species proposed to be used in any restoration work; details on any removal of anthropomorphic habitat debris; and how stream complexing and drainage conveyance will be undertaken (to the satisfaction of the City of Surrey).
- Drainage:** An assessment report on any expected flooding or increase in flooding or impacts, positive or negative, affecting groundwater as a result of the proposed Streamside Setback Area variance.
- Drainage:** An assessment report of the stream and how the proposed adjustment to the Streamside Setback Area will not create a vulnerability from beaver activities for the development site.
- Drainage:** Detail and identify post-development drainage site conditions in accordance with the Integrated Stormwater Management Plan (ISMP) relevant to the site location.