

City of Surrey  
PLANNING & DEVELOPMENT REPORT

Application No.: 7919-0264-00

Planning Report Date: May 4, 2020

**PROPOSAL:**

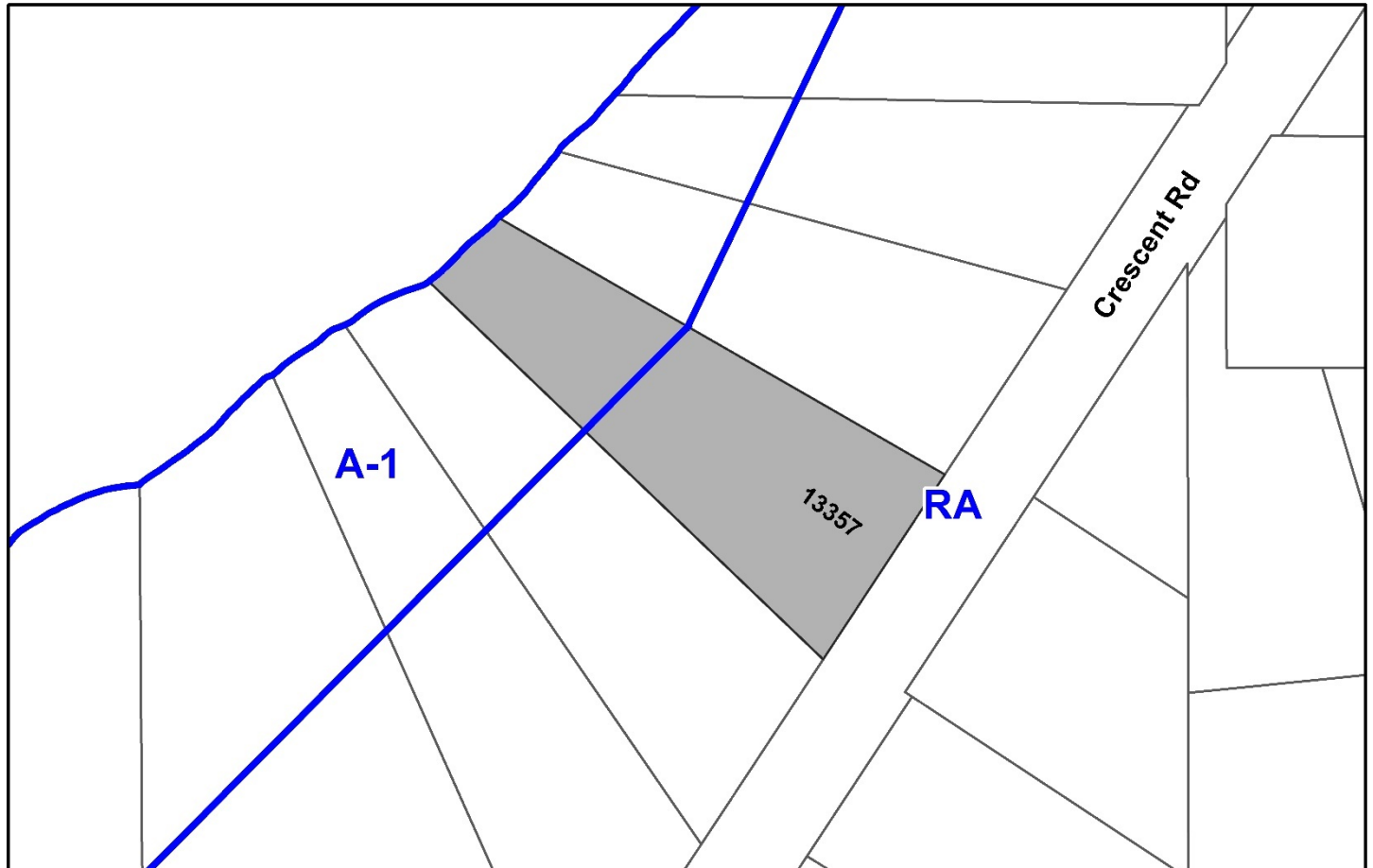
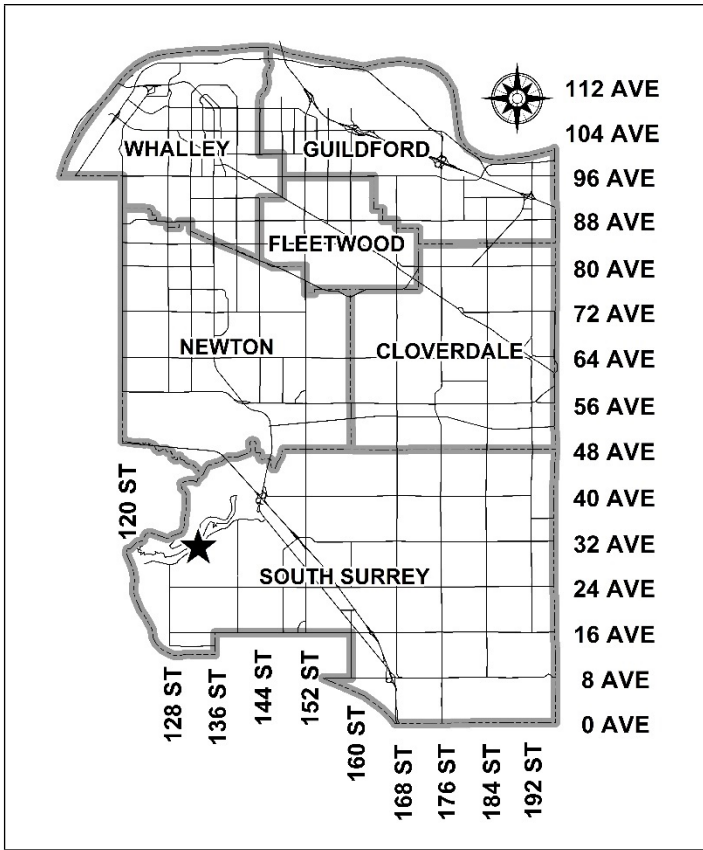
- **Development Variance Permit**
- **Development Permit**

to reduce the minimum streamside setback to permit a retaining wall.

**LOCATION:** 13357 - Crescent Road

**ZONING:** RA and A-1

**OCP DESIGNATION:** Suburban (Density Exception Area)



**RECOMMENDATION SUMMARY**

- Approval for Development Variance Permit to proceed to Public Notification.
- Approval to draft Development Permit for Hazard Lands and Sensitive Ecosystems.

**DEVIATION FROM PLANS, POLICIES OR REGULATIONS**

- The applicant is seeking a variance to reduce the minimum distance (setback) from top of bank for a Class A watercourse in Part 7A of the Zoning By-law.

**RATIONALE OF RECOMMENDATION**

- The previous owner of the subject property replaced a wooden retaining wall on the site in September 2018 without the necessary permits. The applicant has applied for a Development Variance Permit and Development Permit seeking to bring the subject site into compliance.
- The geotechnical report dated May 23, 2018 submitted by the applicant confirms the previous wooden retaining wall on the subject site was in poor condition. The mechanically stabilized earth (MSE) replacement pisa stone retaining wall was confirmed feasible by the applicant's Geotechnical Engineer, provided certain recommendations are adhered to.
- The recommendations set out by the May 23, 2018 geotechnical report will be captured through the planting requirements associated with the Sensitive Ecosystem Development Permit.
- The applicant's Qualified Environmental Professional (QEP) confirms the MSE retaining wall provides improved delineation between the subject property and the Streamside Protection Area (SPA) that will minimize encroachment from the subject property into the Streamside Protection Area (SPA).
- The proposed Riparian Restoration Plan to offset the wall footprint will result in a net increase to the ecological function of this area. Further, soils, trees and vegetation, habitat, and drainage were not negatively impacted during the retaining wall replacement.

## RECOMMENDATION

The Planning & Development Department recommends that:

1. Council approve Development Variance Permit No. 7919-0264-00 (Appendix II) varying the following, to proceed to Public Notification:
  - (a) to reduce the minimum setback distance from the top of bank for a Class A (red-coded) stream from 15 metres to 0 metres at its narrowest point, measured from the top of bank to the east lot line;
2. Council authorize staff to draft Development Permit No. 7919-0264-00 for Hazard Lands (Steep Slopes) and Sensitive Ecosystems (Streamside Areas and Green Infrastructure Areas) generally in accordance with the attached drawings (Appendix I) and the finalized Ecosystem Development Plan/Geotechnical Report.
3. Council instruct staff to resolve the following issue prior to final approval:
  - (a) registration of a Section 219 Restrictive Covenant to ensure development of the site in accordance with the recommendations in the approved geotechnical report; and
  - (b) submission of the Landscape Security in the amount of \$18,988.20, to the satisfaction of the Planning and Development Department.

## SITE CONTEXT & BACKGROUND

Direction	Existing Use	OCP Designation	Existing Zone
Subject Site	Single Family Residential	Suburban Density Exception Area	RA/A-1
North:	Single Family Residential	Suburban Density Exception Area	RA/A-1
East (Across Crescent Road):	Single Family Residential	Suburban Density Exception Area/One Acre	RA
South:	Single Family Residential	Suburban Density Exception Area	RA/A-1
West:	Nicomekl River	NA	NA

### Context & Background

- The subject property, located at 13357 – Crescent Road, is 5,452 square metres in area. The property is split zoned "One-Acre residential Zone" (RA) and "General Agricultural Zone" (A-1). The site is designated "Suburban" in the Official Community Plan (OCP) and is also located within a "Suburban Density Exception Area" which restricts density to a maximum of 5 units per hectare.

- In July 2014, Council endorsed the Biodiversity Conservation Strategy and implementation measures to protect Surrey's streamside areas, natural habitats, and sensitive ecosystems. This document identifies the use of a Development Permit Area (DPA) as an effective means to protecting Surrey's natural environmental assets.
- On September 12, 2016, Council approved changes to the Official Community Plan (OCP) and the Zoning By-law to implement a Sensitive Ecosystem DPA and Streamside Protection Measures, collectively known as Surrey's Ecosystem Protection Measures, for the protection of the natural environment, including riparian areas. These changes were detailed in Corporate Report No. R188, which was approved by Council on July 25, 2016.
- The existing single family dwelling on the property was constructed in 2001 and setback approximately 19 metres from the top of bank of the Nicomekl River. A Restrictive Covenant for Slope Stability was registered on title through Building Permit No. B-01-008028-0-0.
- The property previously contained a wooden retaining wall which was placed along the top of bank which is at the crest of the slope down to the Nicomekl River. The wooden retaining wall was observed by the applicant's Geotechnical Engineer to be in poor condition with significant deformations on May 23, 2018.
- The previous owner of the property removed the wooden retaining wall in September 2018 and installed a 0.9 metre mechanically stabilized earth (MSE) pisa stone retaining wall in its place. A building permit was not required for the new retaining wall as the height was under 1.2 metres. However, the proposed retaining wall triggered the requirement for a Development Permit for Hazard Lands (Steep Slopes) and Sensitive Ecosystem (Streamside Areas and Green Infrastructure Areas). Due to the wall's location, a Development Variance Permit would have been required to reduce the minimum streamside setback measured from the top of bank. The wall was constructed without the necessary Development Permit and Development Variance Permit in place.

## **DEVELOPMENT PROPOSAL**

### **Planning Considerations**

- The applicant is proposing a Development Variance Permit to reduce the minimum setback distance from the top of bank for a Class A (red-coded) stream from 15 metres to 0 metres and a Development Permit for Hazard Lands (steep slopes) and Sensitive Ecosystems (Streamside Areas and Green Infrastructure Areas) to permit a retaining wall.
- The applicant submitted a detailed Ecosystem Development Report (EDP) prepared by Hemmera Envirochem Inc. dated March 3, 2020 which detailed the site conditions and rationale for the proposed variance to the Streamside By-law setback requirements. A riparian restoration planting plan has been proposed through the EDP report for areas around the retaining wall.

- The applicant submitted a Geotechnical Slope Stability Assessment prepared by Geopacific Consultants Ltd. dated May 23, 2018 which detailed the deteriorating condition of the previous timber retaining wall and recommendations on installation of the new pisa block retaining wall. The applicant will be required to register a Section 219 Restrictive Covenant to register the Geotechnical Slope Stability Assessment prepared by Geopacific Consultants Ltd. on title.

### Referrals

- Engineering: The Engineering Department has no objection to the project subject to the completion of Engineering requirements as outlined in Appendix III.
- Parks, Recreation & Culture: The Parks Department has no objection to the project.
- Surrey Fire Department: No referral required.

### Natural Area Considerations

- The Nicomekl River is located immediately adjacent to the subject site. The Nicomekl River is a Class A watercourse (red-coded) which requires a 15 metre setback from the top of bank. A number of properties in this area along Crescent Road contain steep slopes down to the Nicomekl River. The applicant's Qualified Environmental Professional (QEP) confirmed the location of the top of bank at the crest of the steep slope area on the subject property.
- The steep sloped area immediately adjacent to the Nicomekl river is further protected through a Green Infrastructure Corridor (GIN) which extends a distance of 16 metres on the subject property, measured from the rear (west) property line.

## POLICY & BY-LAW CONSIDERATIONS

### Zoning By-law

#### Streamside Variance

- The applicant is proposing a Development Variance Permit to reduce the minimum setback distance from the top of bank for a Class A (red-coded) stream from 15 metres to 0 metres at its narrowest point, measured from the top of bank to the east lot line.
- The streamside variance is proposed to bring the unpermitted MSE replacement retaining wall into compliance. The wall is located along the top of bank at the crest of the steep slope area. The location falls within the 15 metre streamside setback area, which is measured from the top of bank as confirmed by the applicant's QEP.
- The March 3, 2020 EDP Report prepared by the applicant's QEP has provided the following rationale for support of the proposed variance to reduce the streamside setback to 0 metres:

- The location of the replacement MSE retaining wall required minimal regrading; relocating the wall would require additional regrading, which could lead to additional environmental impacts.
- The proposed Riparian Restoration Plan to offset the wall footprint will result in a net increase to the ecological function of this area. Further, soils, trees and vegetation, habitat, and drainage were not negatively impacted during the retaining wall replacement.
- The MSE retaining wall provides improved delineation between the subject property and the Streamside Protection Area (SPA) to the north with a functional gain of 2 metres of riparian area between the previous wooden retaining wall and the new structurally sound MSE retaining wall that will minimize encroachment from the subject property into the SPA.
- The Geotechnical Report dated May 23, 2018 submitted by the applicant confirms that the previous wooden retaining wall on the subject property was in poor condition with a number of deformations. The applicant replaced the former retaining wall with an MSE pisa stone retaining wall. The May 23, 2018 report confirmed the feasibility of the design of the replacement retaining wall and that the applicant's Geotechnical Engineer performed periodic field reviews over the course of the wall's installation.
- Staff support the requested variances to proceed for consideration.

## DEVELOPMENT PERMITS

### **Sensitive Ecosystems (Streamside Areas & Green Infrastructure Areas) Development Permit Requirement**

- The subject property falls within the Sensitive Ecosystems Development Permit Area (DPA) for Streamside Areas in the OCP, given the location of an existing Class A (red-coded) watercourse, the Nicomekl River, which is adjacent to the west property line. The Sensitive Ecosystems (Streamside Areas) Development Permit is required to protect aquatic and terrestrial ecosystems associated with streams from the impacts of development.
- The subject property falls within the Sensitive Ecosystems DPA for Green Infrastructure Areas in the OCP, given the location of a Biodiversity Conservation Strategy (BCS) Green Infrastructure Network (GIN) Corridor located along the rear property line adjacent to the Nicomekl River. The Sensitive Ecosystems (Green Infrastructure Areas) Development Permit is required to protect environmentally sensitive and unique natural areas from the impacts of development.
- The City of Surrey Biodiversity Conservation Strategy (BCS) Green Infrastructure Network (GIN) map, adopted by Council on July 21, 2014 (Corporate Report No. R141; 2014), identifies a Regional BCS Corridor within the subject site, in the Serpentine/Nicomekl BCS management area, with a High ecological value. The MSE replacement retaining wall is located 17 metres east of the BCS corridor at its closest point.

- In accordance with Part 7A Streamside Protection setbacks of the Zoning By-law, a Class A (red-coded) watercourse requires a minimum streamside setback of 15 metres, as measured from the top of bank. The proposed setbacks do not comply with the requirements outlined in the Zoning By-law. The applicant has elected to apply for a Development Variance Permit to reduce the minimum setback distance of 15 metres to 0 metres.
- An Ecosystem Development Plan (EDP), prepared by Kyle Routledge., *R.P. Bio.*, of Hemmera Envirochem Inc. and dated March 3, 2020 was reviewed by staff and found to be generally acceptable. The finalized report and recommendations will be incorporated into the Development Permit.
- Under the submitted EDP report, the applicant proposes a riparian restoration planting plan which includes remediation of areas down slope and above the MSE replacement retaining wall. The applicant is required to submit a landscape security amount of \$18,988.20 which covers native species plantings, invasive species removal and monitoring.

### **Hazard Lands (Steep Slope) Development Permit Requirement**

- The subject property falls within the Hazard Lands (Steep Slope) Development Permit Area (DPA) in the OCP, given that the site contains steep slopes in excess of 20% gradient. The Hazard Land (Steep Slope) Development Permit is required to protect developments from hazardous conditions.
- The site is located adjacent to a relatively steep slope to the north-west which slopes down to the Nicomekl River. The long-term stability of the slope is highly dependent upon the presence of vegetation and control of groundwater.
- A geotechnical report, prepared by Kevin Bodnar P. Eng., of GeoPacific Consultants Ltd. and dated May 23, 2018, was peer reviewed by Jairo Prada P. Eng., of Fraser Valley Engineering Ltd. and found to be generally acceptable by the peer reviewer. The report and peer review were reviewed by staff and found to conform to the OCP Development Permit guidelines for Hazard Lands. The finalized geotechnical report will be incorporated into the Development Permit.
- The geotechnical report investigated issues related to slope stability and natural storm water drainage, from a geotechnical perspective, to determine the feasibility of the proposed replacement retaining wall on site and proposing recommendations to ensure the ongoing stability of the slope.
- The consultant has determined that the construction of the MSE replacement retaining wall is feasible provided that the recommendations in their report are incorporated into the overall design of the site, including revegetation of the slope, removal of all organics in the slope area, and repairment of a broken pipe.
- GeoPacific Consultants Ltd. confirmed in a letter dated March 31, 2020 that the broken pipe mentioned in the May 23, 2018 report was repaired. The letter provides confirmation that GeoPacific completed periodic field reviews of the MSE replacement retaining wall during its installation and confirms that water travelling towards the slope will divert to a drainpipe. Further, the letter confirms that water flows from the retained area are not expected to flow onto the slope area.

- Registration of a Section 219 Restrictive Covenant that requires the owner to develop the site in accordance with the conditions in the geotechnical report is required as a condition of final approval.

### INFORMATION ATTACHED TO THIS REPORT

The following information is attached to this Report:

Appendix I.	Site Plan
Appendix II.	Development Variance Permit No. 7919-0264-00
Appendix III.	Engineering Summary

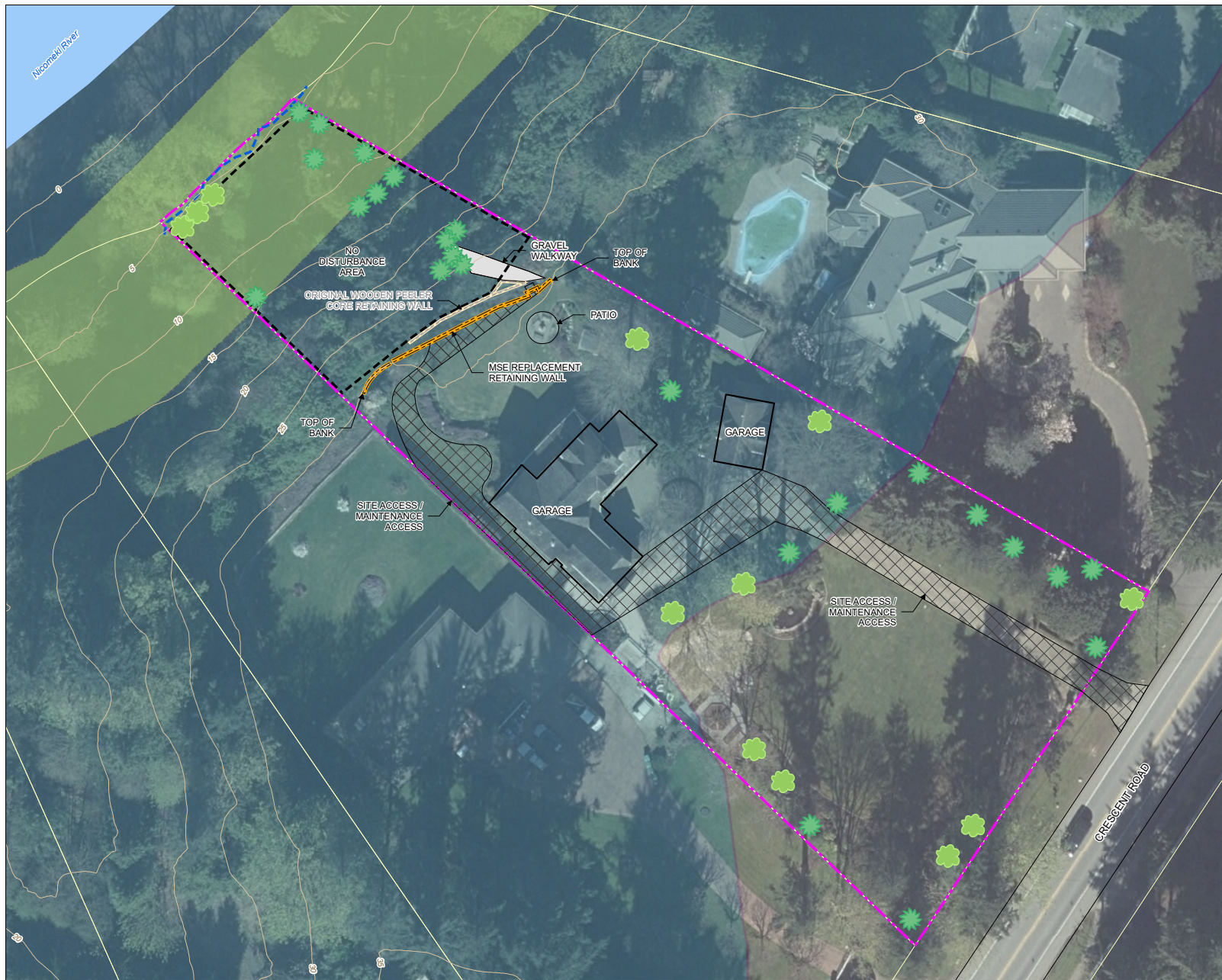
*approved by Shawn Low*

Jean Lamontagne  
General Manager  
Planning and Development

WS/cm



## Subject Property Location of Riparian Restoration Plan



### Legend

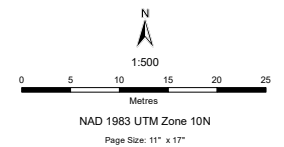
Current High Water Mark	Subject Property
Elevation Contour (5m)	Site Access / Maintenance Access
MSE Replacement Retaining Wall (Top of Bank)	Gravel Walkway
Original Wooden Peeler Core Retaining Wall	Building
No Disturbance Area	Site Feature
Streamside Protection Area (SPA)	Property Line
Green Infrastructure Network (GIN)	Nicomekl River (Class A Watercourse)
	<b>Protected Trees</b>
	Approximate Deciduous Tree Location
	Approximate Coniferous Tree Location

### Notes

1. All mapped features are approximate and should be used for discussion purposes only.
2. This map is not intended to be a "stand-alone" document, but a visual aid of the information contained within the referenced Report. It is intended to be used in conjunction with the scope of services and limitations described therein.

### Sources

- Contains information licensed under the Open Government Licence - British Columbia, City of Surrey
- Site Features: Murray & Associates, 2019
- Green Infrastructure Network (GIN) and Streamside Protection Area (SPA): City of Surrey Mapping Online System (COSMOS)
- Aerial Image: City of Surrey, 2016
- Inset Basemap: ESRI World Topographic Map



CITY OF SURREY

(the "City")

**DEVELOPMENT VARIANCE PERMIT**

NO.: 7919-0264-00

Issued To:

(the "Owner")

Address of Owner:

1. This development variance permit is issued subject to compliance by the Owner with all statutes, by-laws, orders, regulations or agreements, except as specifically varied by this development variance permit.
2. This development variance permit applies to that real property including land with or without improvements located within the City of Surrey, with the legal description and civic address as follows:

Parcel Identifier: 002-580-951  
Lot 83 Section 20 Township 1 New Westminster District Plan 24506  
13357 - Crescent Road

(the "Land")

3. Surrey Zoning By-law, 1993, No. 12000, as amended is varied as follows:
  - (a) In the table in Section B.2 of Part 7A "Streamside Protection", the minimum distance from top of bank for "Streams" is reduced from 15 metres to 0 metres measured to the eastern property line of the Land, to permit a retaining wall.
4. This development variance permit applies to only the portion of the Land as shown on Schedule A which is attached hereto and forms part of this development variance permit.
5. The Land shall be developed strictly in accordance with the terms and conditions and provisions of this development variance permit.

6. This development variance permit shall lapse if the Owner does not substantially start any construction with respect to which this development variance permit is issued, within two (2) years after the date this development variance permit is issued.
  
7. The terms of this development variance permit or any amendment to it, are binding on all persons who acquire an interest in the Land.
  
8. This development variance permit is not a building permit.

AUTHORIZING RESOLUTION PASSED BY THE COUNCIL, THE      DAY OF      , 20 .  
ISSUED THIS      DAY OF      , 20 .

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Mayor – Doug McCallum

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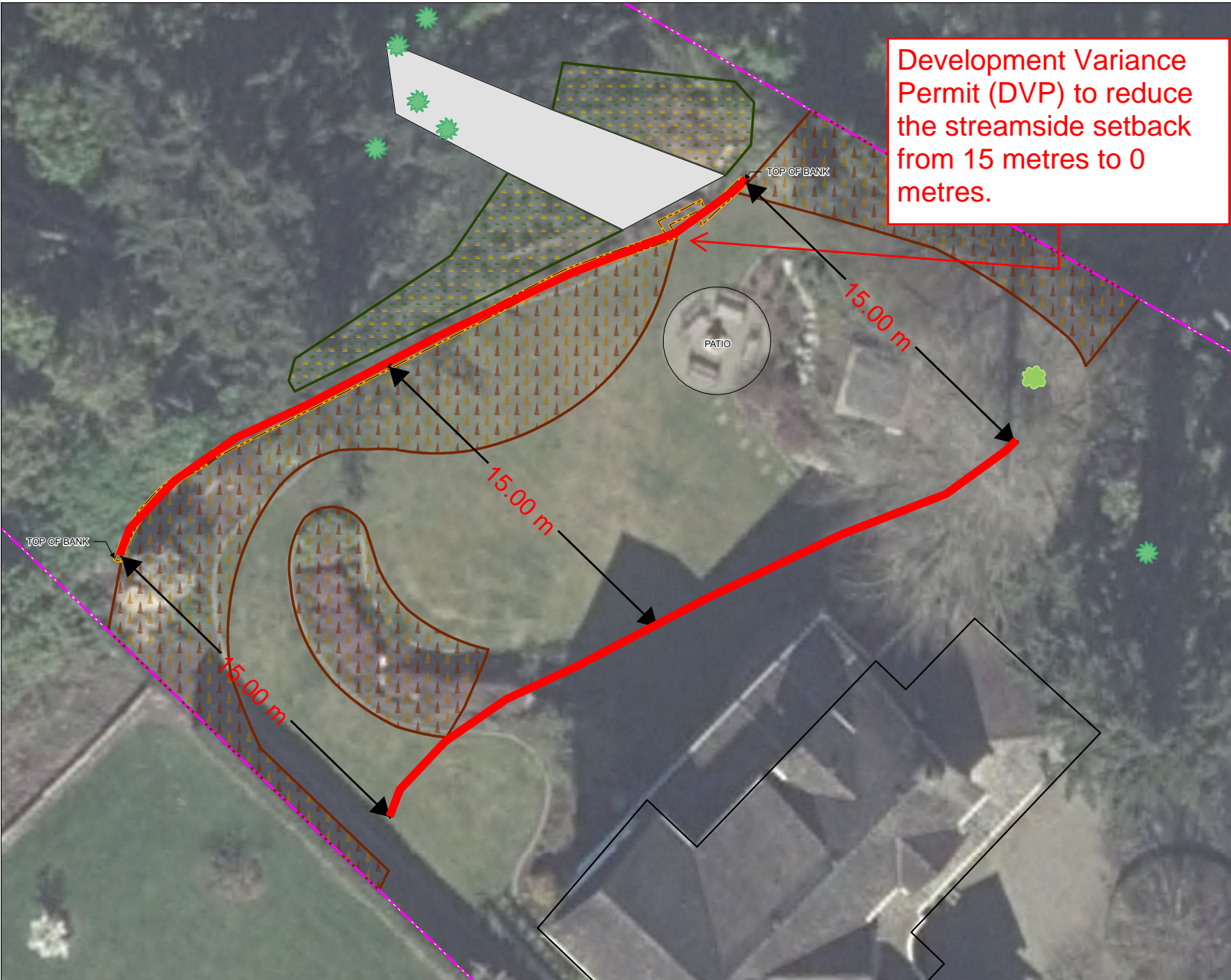
City Clerk – Jennifer Ficocelli

# Schedule A

Riparian Restoration Plan  
13357 Crescent Road, Surrey, BC

Approximate Location of  
Riparian Restoration Area

Development Variance Permit (DVP) to reduce the streamside setback from 15 metres to 0 metres.



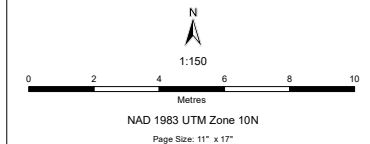
- Legend**
- Down Slope Restoration Area
  - Above Top of Bank Restoration Area
  - Gravel Walkway Remediation
  - MSE Replacement Retaining Wall (Top of Bank)
  - Subject Boundary
  - Building
  - Site Feature
  - Property Line
- Protected Trees**
- Approximate Deciduous Tree Location
  - Approximate Coniferous Tree Location

**Notes**

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- Aerial Image: City of Surrey, 2016



104407-01      Production Date: Apr 28, 2020      Figure 3

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# INTER-OFFICE MEMO

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**TO: Manager, Area Planning & Development  
- South Surrey Division  
Planning and Development Department**

**FROM: Development Engineer, Engineering Department**

**DATE: March 25, 2020**                      **PROJECT FILE: 7819-0264-00**

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**RE: Engineering Requirements  
Location: 13357 Crescent Road**

## **DEVELOPMENT PERMIT AND DEVELOPMENT VARIANCE PERMIT**

As a condition of the issuance of the Development Permit and Development Variance Permit no releases of the securities related to the Environmental Development Plan will be supported by Engineering until the following recommendations as listed within the Geotechnical Report are addressed and completed:

- Revegetate the slope area.
- Remove all organics from the slope area.
- Confirm the broken pipe on the slope that the Geotech (in 2018) said to fix immediately has been repaired.
- Ensure all onsite grading does not direct flows towards the slope area.



Jeff Pang, P.Eng.  
Development Engineer

CE4