

The proposal is subject to the Official Community Plan's Development Permit Area guidelines for Watercourse and Streamside Protection (DPA 1), Natural Hazard Lands (DPA 2), and to the rainwater management provisions of the Subdivision, Works and Services Bylaw.

RELEVANT TOWN BYLAWS

Official Community Plan, Development Permit Areas

Watercourse and Streamside Protection (DPA 1)

The guidelines establish a 30 m wide Riparian Assessment Area. (RAA) from all streams, within which a Streamside Protection Enhancement Area (SPEA) is determined by a qualified environmental professional (QEP).

Review and Comments

The subject property contains an ephemeral non-fish bearing watercourse named East Fork Maple Brook. Swordfern Environmental (a.k.a. Bob Crandall) identifies a 5 m wide SPEA on each side of the watercourse for the purpose of litter fall, insect drop, and shade. This watercourse falls across proposed Lot 2 and Lot 3, which contains an existing dwelling.

The drainage and SPEA are illustrated in Figure 2 following.

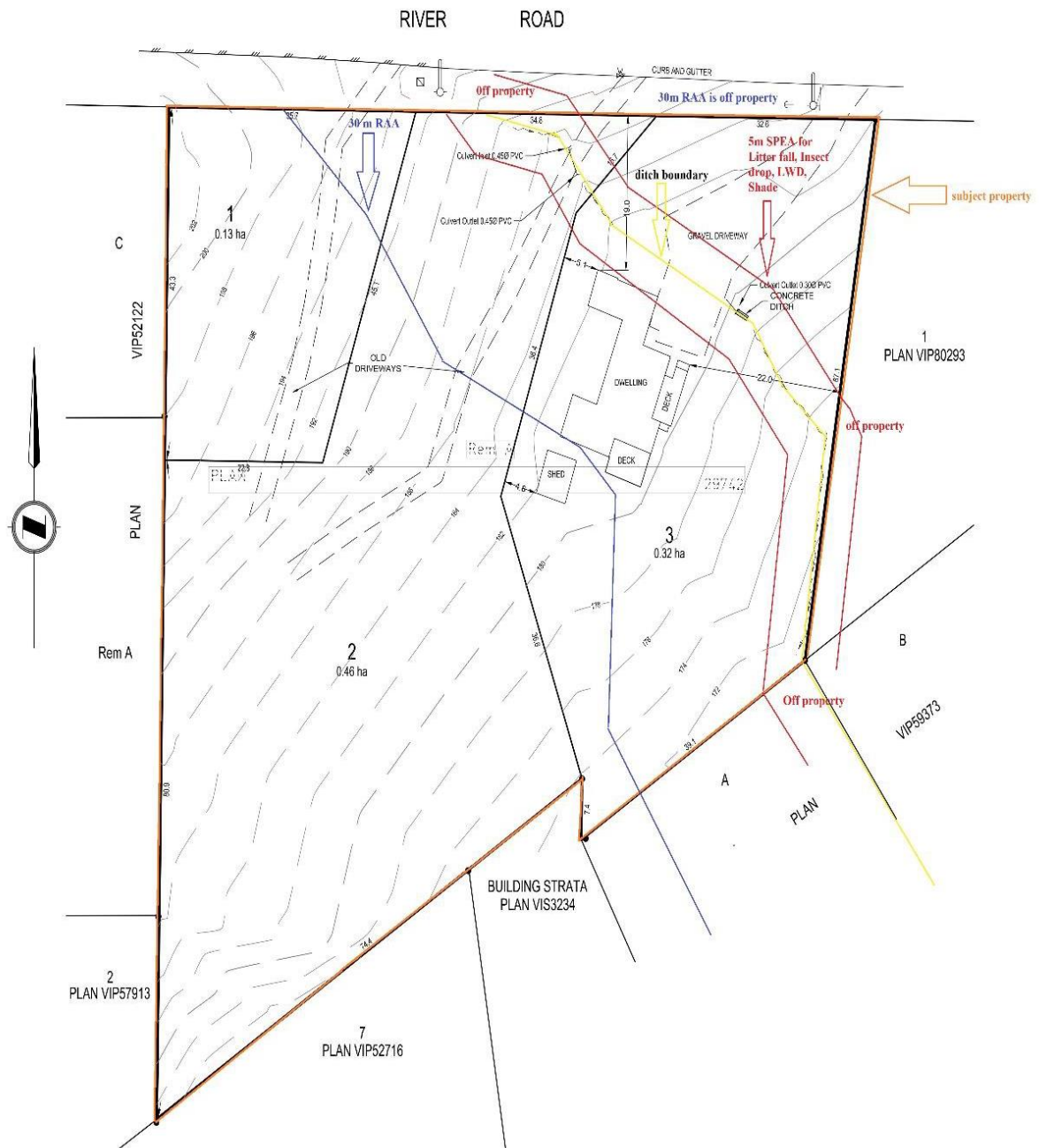


Figure 2 SPEA of 5 m for East Fork Maple Brook

The location and purpose of the 5 metre SPEA for the East Fork Maple Brook should be identified on the plan of subdivision.

Natural Hazard Lands DPA 2 guidelines.

Relevant guidelines are cited below, with a brief comment on the extent to which the proposal satisfies the guideline.

Guidelines for Natural Hazard Lands DPA 2

6.3.6

Steep slopes

a) Significant excavation or filling to accommodate buildings or structures or to alter existing slopes shall not be undertaken, nor shall any building or structure be erected, constructed or placed in areas subject to bank instability or potential damage from bank instability. To avoid areas subject to unstable slopes, buildings and structures shall be sited in accordance with building setbacks and other requirements as determined by a geotechnical engineer registered as a Professional Engineer in British Columbia.

b) All lands shown on Map 4 Natural Hazard Lands Development Permit Area (DPA 2) with slopes of greater than 10% shall be subject to slope stability studies to determine where hazardous conditions exist prior to any development being permitted. These studies shall include but not be limited to identifying areas of slope equal to or greater than 30%, areas of springs and seepage and organic soils, the 200-year flood plain, and any areas with a high-water table, and other studies as required. Reports shall be prepared, signed and sealed by a qualified practising engineer, licensed to practise in British Columbia. If fish habitat areas are potentially affected by the proposed development, a report prepared by a qualified fish biologist specifying how the proposal will meet all applicable Federal and Provincial regulations.

Review and Comments

A geo-hazard assessment was prepared by Madrone Environmental Services. It provides a geotechnical hazard assessment for flood water inundation, mountain stream erosion and avulsion, debris flows and floods, small-scale, localized landslide, snow avalanches, rock fall, massive catastrophic landslides, and river erosion and avulsion. The methodology included two machine dug test pits of greater than one metre in depth.

Except for a small-scale localized landslide, the assessment concluded that all the aforementioned geotechnical hazards are negligible.

With respect to small-scale localized landslide the assessment noted that future development may exacerbate instability and increase hazard probability. Accordingly, the report recommends the following:

1. For safe areas (all areas outside the 'no build' zone), approval with covenant and siting requirements.
2. No development within and a 15 metre setback from the steep slope 'no build' zone identified in figure 3, below.
3. Retain mature coniferous trees along the property's southern boundaries where slopes are greater than 30%.

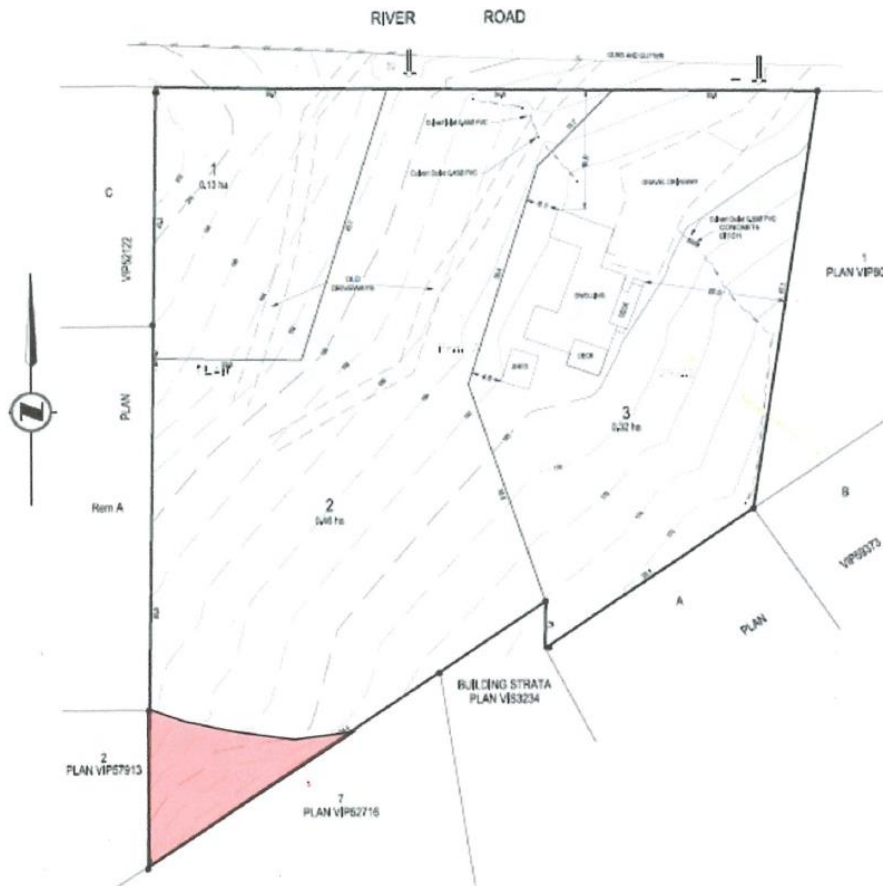


Figure 3 'No Build' steep slope zone identified in red colour

Subdivision, Works and Services Bylaw

Section 3 addresses integrated rainwater management and all development must be consistent with the standards of the supporting Integrated Rainwater Management Plan. Specific implementation methods are determined in consultation with the Town's building official.

Review and Comments:

A Stormwater Management Plan was prepared by Madrone Environmental Services on March 5, 2021, in accordance with the Town's integrated rainwater management standards.

The plan notes that the existing home on the property is not connected to the municipal storm drain and that the topography may not permit additional dwellings to hook up directly to the storm drains either.

The plan recommends the use of infiltration trenches to maximize infiltration of storm waters generated from impervious surfaces (e.g. roof runoff and driveways). Additionally, runoff may further be mitigated with the following recommendations:

1. Landscaping should fit development to the terrain and minimize land disturbance.
2. Soils on-site have the capacity to infiltrate large storm events naturally and should be preserved as much as possible.
3. Minimize impervious areas in landscape design.

4. Maintain natural drainage patterns.
5. Implement sediment and erosion control measures identified in Section 5.3 and Appendix E of the Stormwater Management Plan prepared by Madrone, dated March 5, 2021.

These recommendations are appropriate and should be carried forward as conditions of Development Permit approval.

RECOMMENDATION

Approval of a Development Permit for land described as Lot A Section 5, Renfrew District (Situated in Cowichan Lake District), Plan 29742 Except Plan VIP80293, with the following conditions:

- 1) The location and purpose of the 5 metre SPEA for the East Fork Maple Brook shall be identified on the plan of subdivision.
- 2) Identification of building envelopes in the plan of subdivision for Lots 1 and 2, including appropriate covenant text as may be required. No building envelope for a principal dwelling may be identified for the northern 45 metre portion of Lot 2, which is characterized by steep slopes.
- 3) No development may occur within the steep slope 'no build' zone identified for Lot 2 in Figure 3 and within a 15 metre setback from the zone. This shall be established by covenant in the plan of subdivision.
- 4) Retain mature coniferous trees along the property's southern boundaries where slopes are greater than 30%.
- 5) Landscaping and building design should fit the terrain and minimize land disturbance.
- 6) Soils on-site have the capacity to infiltrate large storm events naturally and should be preserved as much as possible.
- 7) Minimize impervious areas in landscape design.
- 8) Maintain natural drainage patterns.
- 9) Implement sediment and erosion control measures identified in Section 5.3 and Appendix E of the Stormwater Management Plan prepared by Madrone, dated March 5, 2021.
- 10) Prior to the issuance of building permits, an updated geotechnical site assessment shall be prepared for each proposed building site on Lots 1 and 2 for review and consideration by the town's building inspector.
- 11) Prior to the issuance of building permits, any retaining walls and structures higher than 1.0 metres must be designed by a professional geoscientist or structural engineer to the satisfaction of the town's building inspector and must be located entirely on the parcel. The height of retaining walls may not exceed 2 metres.



James van Hemert

Input from the CAO

It also needs to be clearly identified as a condition that the Development Permit is not be construed as approval to proceed to build where a building permit is required.
Further that the developer conforms to all the requirements above stated.

No written or verbal input has been provided thus far.



Joseph A. Fernandez