

Staff Report

Date: January 9, 2024
To: Chief Administrative Officer
From: James van Hemert, Consulting Planner
Re: **Application for a Natural Hazards Lands (wildfire) Development Permit for 124 and 130 Elk Road, legally described as Lot A and Lot B, Section 5, Renfrew District Plan 30829**



APPLICATION

The applicant requests a **Development Permit** in accordance **with Development Permit Area 2 –Natural Hazards, Subsection 6.3.8 Wildfire Hazards Guidelines--** to allow for a subdivision comprising twelve residential lots with a mix of residential dwelling types: single detached, duplex, triplex, and multi-unit.

BACKGROUND

A Development Permit for this land is required in accordance with the Town of Lake Cowichan Official Community Plan (2019) and the BC Local Government Act. The relevant Development Permit Area is DPA 2 –Natural Hazard Lands.

The subject property is zoned R-3 Urban Core.

A portion of the subject property received preliminary **subdivision** approval in 2021 for three lots fronting Elk Road.



Proposed subdivision would create 12 lots on Elk Road.

Figure 1 Location of subject land

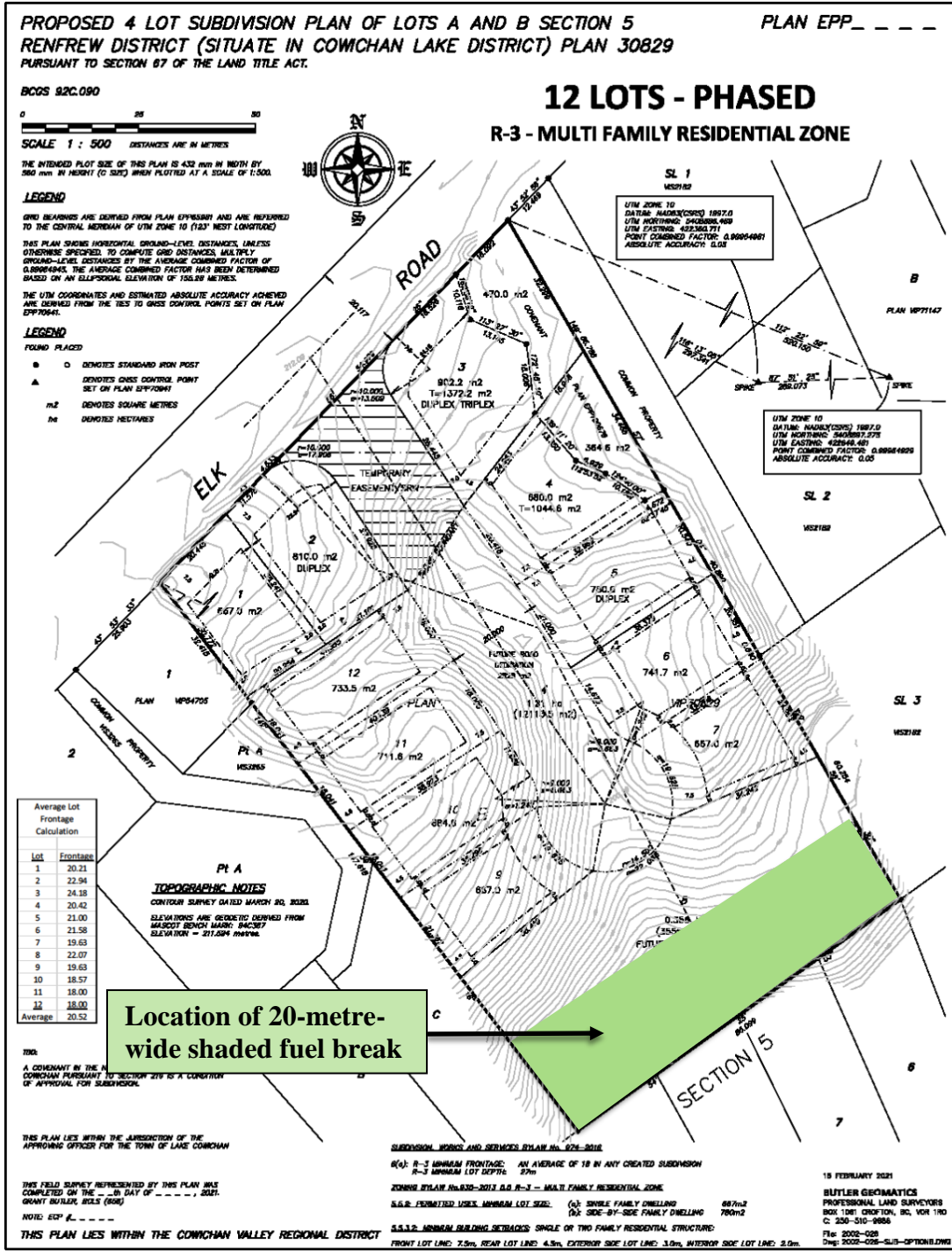


Figure 2 Plan of subdivision and location of required 20-metre-wide shaded fuel break.

SITE CONDITIONS

The subject proposal occupies a forested moderately sloping hillside on the lower side of Elk Road. There are currently no structures on the site.

WILDFIRE HAZARD PROFESSIONAL ASSESSMENT REPORT

A Wildfire Hazard Assessment was conducted by Strathcona Forestry Consulting dated July 29, 2021, in accordance with the guidelines of the Official Community Plan's Development Permit Area 2 –Natural Hazards, Subsection 6.3.8 Wildfire Hazards.

Scoring from the FireSmart assessment and fire behavior analyses determined the subject property currently has a Moderately High Fuel Assessment rating contributing to a Moderately High Local Wildfire Threat Rating. Factors contributing to the elevated rating include continuity and extent of fuel loading in the general area; potential for delayed response; sloping topography and warm aspect; lack of current fire flow¹ throughout the site; and intermix >1 structure/ha. Threat ratings must be low/moderate to ensure an area and/or structure(s) are safe.

Scoring from the wildfire hazard assessment and fire behavior analyses determined the subject property currently has a Moderate Fuel Assessment rating and a *Moderate to slightly High local wildfire threat rating*.

Application of the following recommendations will reduce the risk of wildfire at the proposed mixed residential subdivision at Elk Road. These recommendations should be carried forward as conditions of approval of the development permit.

Vegetation Management

General Precautions During Land Clearing and Construction

1. As per the BC Wildfire Act, if a high risk activity (i.e., land clearing) is taking place between 1 April and 31 October, the operator must keep at the activity site fire fighting hand tools, in a combination and type to properly equip each person who works at the site with a minimum of one firefighting hand tool, and an adequate fire suppression system (onsite portable water tanker and firefighting tools – shovels, pulaskis, portable water backpacks). In addition, efforts must be made to maintain an adequate fire break between any high-risk activity and areas of continuous forest to ensure a fire originating at the site does not escape the site.
2. During land clearing, develop an Emergency Plan of Action, listing key contact information in case of fire and/or another emergency at the site.
3. Hazard abatement (removal of slash/disposal of debris piles) must take place in compliance with Town of Lake Cowichan bylaws.
4. Ensure construction workers are made aware of the risk of fire in the interface zone, especially during dry summer weather.

Fire Smart Zones

Specific recommendations with respect to the following zones:

1. Immediate Zone 1a: - 0 to 1.5 metres.

¹ Piped municipal water with sufficient pressure to fight fire.

- a. A noncombustible surface should extend for 1.5 metres around structures, homes, and accessory structures, and any attachments, such as decks.
 - b. Landscape with noncombustible materials, such as gravel, brick, or concrete.
 - c. Avoid woody shrubs, trees, or tree branches.
2. Intermediate Zone 1—0 to 10 metres
- a. Low-density fire-resistant plants and shrubs.
 - b. Nonflammable hardscapes.
 - c. Limb (prune) trees 1.5 to 2 metres from the ground.
 - d. Avoid using woody debris, including bark mulch.
3. Extended Zone 2—10 to 30 metres
- a. Thin and prune evergreen trees.
 - b. Regularly clean up accumulations of fallen branches, dry grass.
4. Priority Zone 3—30 to 100 metres (where applicable)
- a. Create fire breaks by creating spaces between trees.
 - b. Prune trees located up to 10 m from homes.

Slope Protection

Plan to install split rail fencing along any “natural” boundaries to limit damage to native vegetation retained around the site.

Construction

Use fire-retardant roof covering assemblies rated Class A, B, or C (i.e., metal, tile, ULC rated asphalt) and feature non-combustible siding materials (i.e., stucco, metal siding, brick, cement shingles or cementitious materials, poured concrete, or ULC-rated wood siding) on new structures.

Use FireSmart guidelines for window and door glazing, eaves, vents, and decking.

A Land Title Act Section 219 Wildfire Hazard Covenant shall be placed upon the land to address the specific recommendations of the Wildfire Hazard Assessment, particularly with respect to Fire Smart Zones and construction materials.

TOWN BYLAW REVIEW & ANALYSIS

I. Official Community Plan

Development Permit Area Development Permit Area 2 –Natural Hazards, Subsection 6.3.8 Wildfire Hazards Guidelines

The guidelines are cited below. A staff review concludes that the subdivision design, specific recommendations made by Strathcona Forestry Consulting, and the requirements of the Town's Wildfire Hazard Covenant, satisfies the guidelines.

Site Design

- 1) To an extent that is reasonable and feasible, new buildings and structures shall be located away from any contiguous undeveloped forested areas or areas containing hazardous forestry fuel types or accumulations.
- 2) Subdivision and neighbourhood design shall consider incorporating fire breaks or fuel breaks adjacent to residential areas, which may be in the form of fuel-reduced borders, roads, or trails.
- 3) FireSmart design standards, as identified in the latest version of "FireSmart: Protecting Your Community" shall be applied to all fire breaks, fuel breaks, and infrastructure design.
- 4) The Subdivision, Works and Services Bylaw establishes design standards for streets and infrastructure that minimize the risks to public safety due to wildfire hazards.
- 5) All development applications shall be jointly reviewed with and assessed by the Fire Department.



Figure 22
Fire Break with no vegetation next to a house

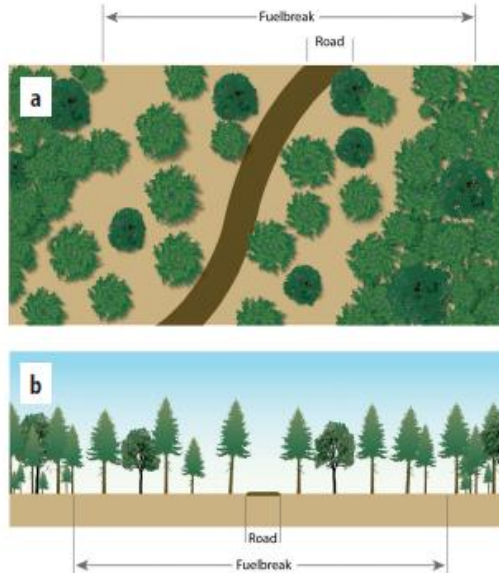


Figure 23

Shaded fuel break:
 diagram 'a' is the plan view;
 diagram 'b' is the profile view.

Building and Infrastructure Materials

- 6) The following fire resistive materials and construction practices are required:
 - a) Class A fire retardant roofing materials, such as asphalt or metal;
 - b) decks, porches, and balconies sheathed with fire resistive materials;
 - c) all eaves, attics, roof vents and openings under floors screened to prevent the accumulation of combustible material, using 3mm, noncombustible wire mesh, and vent assemblies with fire shutters or baffles;
 - d) exterior walls sheathed with fire resistive materials such as poured concrete, stucco, brick, and fiber cement boards/panels;
 - e) portions of exterior walls facing away from forested edges may use fire resistive wood, subject to a report by a qualified professional;
 - f) fire-resistive decking materials, such as solid composite decking materials or fire-resistive treated wood;
 - g) all windows tempered or double-glazed to reduce heat and protect against wind and debris that can break windows and allow fire to enter the new building or structure;
 - h) all chimneys and wood-burning appliances with approved spark arrestors; and
 - i) building design and construction consistent with the highest current wildfire protection standards published by the National Fire Protection Association or any similar, successor or replacement body that may exist from time to time.
- 7) Security in connection with such removal.

Landscaping and Vegetation Management

- 8) The following landscape and service conditions are required:
 - a) firebreaks may be in the form of cleared parkland, roads, or utility rights-of way (see Figure 22);
 - b) fuel breaks may be in the form of shaded landscaping with dispersed tree plantings and no understory plantings (see Figure 23);
 - c) wildfire risk mitigation and landscaping should be designed and installed to protect, conserve, and enhance natural features of the site and adjacent ecosystems in accordance with Provincial and Town bylaws;
 - d) landscape plantings should be fire resistant, in accordance with the latest version of the FireSmart Guide to Landscaping;
 - e) if removal of trees or vegetation is deemed necessary by the Qualified Professional for the purpose of reducing wildfire risk, Town approval is required, and replacement trees or vegetation may be required;
 - f) if deemed necessary by the Qualified Professional for the purpose of reducing wildfire risk, a defensible space shall be established and managed around buildings and structures in accordance with the latest version of the FireSmart Homeowner's Manual;
 - g) establish and maintain a 1.5 metre non-combustible zone around buildings and any attachments (i.e., decks) in accordance with FireSmart Homeowner's Manual; and
 - h) the Town may enforce any FireSmart standards and recommendations of Qualified Professionals through a covenant at the time of development approval.
- 9) A tree assessment and retention or restoration plan by a Qualified Professional may be required.

SITE SPECIFIC LAND DEVELOPMENT DESIGN RECCOMENDATION

Given the site slope conditions and fire hazard rating, a shaded fuel break of 20 metres in width should be established at the lower end (southeast) of the development site, along the entire boundary adjacent to developed lots on North Shore Road. The design of the shaded fuel break shall be in accordance with figure 23--shaded fuel break--of the Official Community Plan (see illustration in this report). This will be established as no-build zone via the S. 219 covenant.

RECOMMENDATION & APPROVAL CONDITIONS

Staff recommend approval of a Development Permit, subject to conditions as described below.

That a Development Permit for land legally described as *Lot A and Lot B, Section 5, Renfrew District Plan 30829*, be approved with the following conditions:

- 1) Development must comply with all Town Bylaws, specifically including, but not limited to:
 - a. Zoning Bylaw
 - b. Subdivision, Works, & Services Bylaw
- 2) That development proceeds to the satisfaction of the Town in accordance with the recommendations of the Wildfire Hazard Assessment prepared by Strathcona Forestry Consulting, as follows:
 - a. As per the BC Wildfire Act, if a high risk activity (i.e., land clearing) is taking place between 1 April and 31 October, the operator must keep at the activity site firefighting hand tools, in a combination and type to properly equip each person who works at the site with a minimum of one firefighting hand tool, and an adequate fire suppression system (onsite portable water tanker and firefighting tools – shovels, pulaskis, portable water backpacks). In addition, efforts must be made to maintain an adequate fire break between any high-risk activity and areas of continuous forest to ensure a fire originating at the site does not escape the site.
 - b. During land clearing, develop an Emergency Plan of Action, listing key contact information in case of fire and/or another emergency at the site.
 - c. Hazard abatement (removal of slash/disposal of debris piles) must take place in compliance with Town of Lake Cowichan bylaws.
 - d. Ensure construction workers are made aware of the risk of fire in the interface zone, especially during dry summer weather.
 - e. Where safely practical, hazard trees could be modified (i.e., pruned, topped [deciduous trees] to provide wildlife habitat). As noted, tree cover has largely been removed from the subject proposal; surrounding perimeters should be checked for potential hazard trees prior to commencement of work.
- 3) A shaded fuel break of 20 metres in width shall be established at the lower end (southeast) of the development site, along the entire boundary adjacent to developed lots on North Shore Road. The design of the shaded fuel break shall be in accordance with figure 23--shaded fuel break--of the Official Community Plan. This will be established as no-build zone via the Land Title Act Section 219 covenant.

- 4) Install split rail fencing along any “natural” boundaries to limit damage to native vegetation retained around the site.
- 5) A Land Title Act Section 219 Wildfire Hazard Covenant shall be placed upon the land to address the specific recommendations of the Wildfire Hazard Assessment, particularly with respect to Fire Smart Zones and construction materials.
- 6) Approval of this Development Permit does not constitute approval of a Building Permit and any required sign permits.



James van Hemert, MCIP, RPP
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