

Staff Report

Date: September 23, 2023
To: Chief Administrative Officer
From: James van Hemert, Consulting Planner
Re: Application for a Natural Hazards Lands (wildfire)
Development Permit for the development of lands legally
described as:



Parcel K, & Lot 16 lying w/i Sec 6 bounded on E by W Bndy of said DL 16 & bounded on NW & SW by Cowichan Lake Highway Ex Plan 28610 & NW of NWly bndy of Cowichan Lake Highway through PCL K, (P.I.D 003-337-804);

Lot C, DL 16, Cowichan Lake District, Plan 27479, Except part in Plan VIP83577, P.ID. 002-103-109); and

Lot 1, DL 16, Cowichan Lake District, Plan VIP27794 (PID: 002-213-061)

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 10 residential lots.

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-5 Single Detached Duplex residential.

The subject property received preliminary **subdivision** approval from the Approving Officer. The plan proposes 22 lots for single detached homes.

WILDFIRE HAZARD PROFESSIONAL ASSESSMENT REPORT

A Wildfire Hazard Assessment was conducted by Strathcona Forestry Consulting port, dated July 21, 2023, 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 proposal currently has a **Moderate (to somewhat High) Fuel Assessment rating** and a **Moderate (to somewhat High) Local Wildfire Threat Rating**.

Main contributing factors are: fuel loading (dense invasive brush); and intermix >1 structure/ha.

The following 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 other 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.

Parkland Protection

5. Install split rail cedar fence along the perimeter of the park adjoining lot boundaries.
6. Install signage along the park perimeter, educating residents about best management practices for forest parks and streams.

Fire Smart Zones

Specific recommendations are made with respect to the following zones:

1. Immediate Zone 1a: - to 1.5 metres
 - 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
 - a. Create fire breaks by creating spaces between trees
 - b. Prune trees located up to 10 m from homes

Construction

5. Use fire-retardant roof covering assemblies rated Class A/ B, or C (i.e., metal/ tile/ ULCrated 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. Metal, clay tile, and rated asphalt shingles are the most fire resistant roofing materials.
6. Siding materials such as stucco/ metal, brick and concrete offer superior fire resistance to wildfire. Logs and heavy timbers are less effective/ while wood and vinyl siding offer very little protection.
7. Follow FireSmart guidelines for design/ construction/ and maintenance of window and door glazing, eaves and vents, and decking. Install noncombustible material for all vents (should be 3 mm screening or ASTM fire rated vents). Metal products are recommended for vents and vent flashing. <https://www.firesmartcanada.ca/> .
8. Ensure structures are equipped with working smoke alarm(s).
9. Sheath in the base of decks, balconies and homes with fire-resistant material to reduce the risk of sparks and embers igniting the home. Use metal railings or tempered glass for decks and balconies. Select noncombustible patio furniture and decorations.
10. If a wood fence is installed, ensure at least a 1.5 m noncombustible break between the fence and a structure (i.e./ a metal gate with a stone wall to break up combustible fence).

WILDFIRE HAZARD COVENANT

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

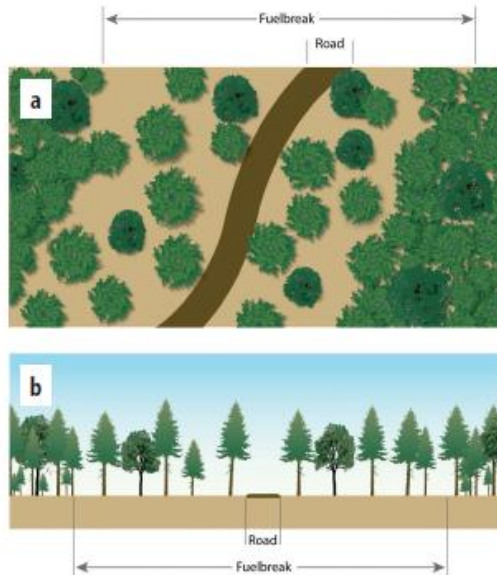


Figure 23

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 generally 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.

SUBJECT PROPERTY AND NEIGHBOURING PROPERTY CHARACTERISTICS

The site is located at the northeast corner of South Shore Road and the Old Cowichan Lake Road.

Land use on the eastern edge is a single detached residential subdivision and riparian area of a southerly draining stream.

Land to the south, across the Old Cowichan Lake Road, is the Cowichan Valley Trail.

Land to the west and northwest, across the South Shore Road is a motel and the rear yards of a residential neighbourhood.

RECOMMENDATION & APPROVAL CONDITIONS

Staff recommend approval of a a Natural Hazards Lands (wildfire) Development Permit for the development of lands legally described as

Parcel K, & Lot 16 lying w/i Sec 6 bnded on E by W Bndy of said DL 16 & bnded on NW & SW by Cowichan Lake Highway Ex Plan 28610 & NW of NWly bndy of Cowichan Lake Highway through PCL K, (P.I.D 003-337-804);

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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 other 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.

- f. Install split rail cedar fence along the perimeter of the park adjoining lot boundaries.
 - g. Install signage along the park perimeter, educating residents about best management practices for forest parks and streams.
- 3) 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.
- 4) 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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