Wildfire Hazard Assessment

Pinnacle Ridge Hillside

Village of Anmore, BC

May 12, 2026

Submitted by:

Blackwell Consulting Ltd.
270 – 18 Gostick Place
North Vancouver, BC V7M 3G3
Phone: 604-986-8346
Email: bablackwell@bablackwell.com

Submitted to:

Aaron Baerg
EKISTICS Town Planning
201 – 103 West 6th Avenue
Vancouver, BC V5Y 1K3
Phone: 604-739-7532
Email: abaerg@ekistics.ca

BLACKWELL

EXECUTIVE SUMMARY

Blackwell Consulting Ltd. (the Consultant) were retained by Philip Pincus (Trez Capital), Mohammad Basefat (Anmore Gate Ltd. Partnership), and Tony Barone (Bella Terra Invest. 2 Inc.) [the Clients] to provide a wildfire hazard assessment and report for the Pinnacle Ridge Hillside development within the Village of Anmore, BC. At the time this report was prepared, the site plan for the development was in the preliminary phase. The wildfire prevention measures outlined in this report adhere to FireSmart guidelines for communities within the wildland-urban interface.

It has been found that during extreme wildfire events, most home destruction has been a result of low-intensity surface fire flame exposures, usually ignited by flying embers (firebrands). Firebrands can be transported long distances ahead of the wildfire, across fire guards and fuel breaks, and accumulate in densities that can exceed 600 embers per square meter. Combustible materials found on the exterior of, and surrounding homes (the FireSmart Home Ignition Zone) combine to provide fire pathways allowing spot surface fires ignited by embers to spread and carry flames or smoldering fire into contact with structures.

Because ignitability of structures and landscaping vegetation is the main factor driving structure loss, the intensity and rate of spread of wildland fires beyond the community has not been found to necessarily correspond to loss potential. For example, FireSmart compliant homes with low ignitability may survive high-intensity fires, whereas highly ignitable homes may be destroyed during lower intensity surface fire events. Increasing ignition resistance will reduce the number of homes simultaneously on fire; extreme wildfire conditions do not necessarily result in WUI fire disasters.[1] It is for this reason that the key to reducing fire structure loss in the wildland-urban interface is to reduce structure ignitability.

A total of 23 recommendations are presented in Table 1 and are more thoroughly discussed in their respective sections within the report. Ultimately, these recommendations should be considered as a toolbox of options to help reduce the wildfire risk and consequence to the development. The clients will need to further prioritize the implementation of recommendations based on available resources, strengths, and constraints.

[1] Calkin, D., J. Cohen, M. Finney, M. Thompson. 2014. *How risk management can prevent future wildfire disasters in the wildland-urban interface*. Proc Natl Acad Sci U.S.A. Jan 14; 111(2): 746-751. Accessed online 1 June, 2016 at http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3896199/

Table 1. Pinnacle Ridge Hillside wildfire hazard assessment recommendations

Item #	Recommendation
Section 3.1.2	
1	Adhere to FireSmart guidelines when selecting exterior construction materials for structures.
Section 3.1.3	
2	All structures that are forest interface should be setback 10 metres from vegetation on all sides facing the forest edge. The setback for structures (including all attachments such as decks, eaves, etc.) may be reduced to an absolute minimum of 5 metres, subject to the installation of exterior roof-top sprinkler systems and adherence to all FireSmart exterior construction guidelines for these structures (roof-top sprinkler systems discussed further in Section 3.6). See Appendix C – Covenant and Registered Building Scheme for the requirements that property owners and/or builders must follow for any structures that encroach past the recommended 10 metre setback from the forest interface (to an absolute minimum setback of 5 metres).
Section 3.1.4	
3	Establish and maintain an Immediate Zone around each structure (including any outbuildings).
4	Within the Intermediate Zone: • Remove all conifer ladder fuels within the Intermediate Zone. • Within the Intermediate Zone, prune any retained mature conifers to a height of at least 3 metres (ground to branch tip) and at least 5 metres away from any structures. Ensure they are sufficiently spaced (3 metres or more between crowns of adjacent conifers). • Maintain grass to a height of 10 centimetres or less within the Intermediate Zone. • Combustible materials should be moved out of the Intermediate Zone and into the Extended Zone and stored in non-combustible structures. • Combustible structures should be moved out of the Intermediate Zone and into the Extended Zone. • Accumulations of fine woody debris should be removed from the Intermediate Zone.
5	Within the Extended Zone: • Remove all conifer ladder fuels (except if open grown; *i.e.,* not under dripline of retained conifer) within the Extended Zone. • Accumulations of fine woody debris should be removed from the Extended Zone. • Within the Extended Zone, prune retained conifers to a height of at least 3 metres (ground to branch tip). Ensure there is 3 metres of spacing between crowns of adjacent conifers. Mature conifer crowns should also be maintained to be at least 5 metres away from any structures in the future.
6	Avoid planting coniferous vegetation within the Home Ignition Zone (*i.e.,* within 30 metres of structures).

Item #	Recommendation
7	The HIZ of each property should be regularly maintained following FireSmart guidelines and recommendations noted in Section 3.1.4.
Section 3.3	
8	Create another alternate access/egress route for the development.
9	Ensure all roads are wide enough with large enough turnarounds for fire trucks and other suppression equipment to easily drive and turnaround in the event of a wildfire.
10	Regularly inspect and maintain all access and egress routes in the development.
11	Create a comprehensive map of the existing (and proposed) trail network. Identify the usage (motorized, non-motorized, or both), and collect attributes (width, surface type, and clearance) for all trails to determine their suitability as surface fuel breaks and equipment access routes. Share this information with relevant agencies that may find it useful for suppression or planning purposes.
12	To reduce the chance of accidental ignitions and associated fire spread, as well as to act as a fuel break for surface fires, trailside conifers should be pruned to a minimum of 3 metres from the ground. Also, conifer ladder fuels and pockets of fine woody debris that are immediately adjacent to the edge of trails should be removed.
13	Perform a tree risk assessment to reduce the risk of tree failure during wildfires.
14	Remove all debris resulting from pruning, thinning, or trail maintenance from the site.
Section 3.4	
15	There should be an adequate number of fire hydrants in the development, and all fire hydrants should be inspected and maintained as per their inspection schedule.
16	Continue the underground cable network to supply electrical power to the development.
Section 3.5.1	
17	Retain a QEP if any proposed development is expected to occur adjacent to streams or riparian areas.
18	The removal of fuel within the SPEA of riparian areas should be done by hand and any soil disturbance that may cause sediments to enter riparian areas should be avoided.
Section 3.5.2	
19	It is recommended that all invasive plants on each respective parcel are removed, and the roots dug out. Invasive plants should not be planted in any of the parcels.
Section 3.6	
20	Consider installing exterior roof-top sprinkler systems in interface areas throughout the development. This should be a requirement for buildings that don't have 10 metre setbacks from the adjacent forest edge.
21	Exterior roof-top sprinkler systems should be tested prior to the fire season. They also should be independent of the internal water system.
22	Exterior roof-top sprinkler systems should have alternate power (*i.e.,* generator) and water sources.
Section 3.7	

Item #	Recommendation
23	The following recommendations should be implemented throughout the community: • Ensure all roads and trails have a unique name and visible signage. • Home addresses should be located close to the road. • A “Fire Danger Rating” sign should be installed and updated throughout the fire season. • Interpretive signage should be installed throughout trail networks to educate residents and visitors about wildfire risk.

TABLE OF CONTENTS

LIST OF MAPS

LIST OF FIGURES

1.0 INTRODUCTION

Blackwell Consulting Ltd. (the Consultant) were retained by Philip Pincus (Trez Capital), Mohammad Basefat (Anmore Gate Ltd. Partnership), and Tony Barone (Bella Terra Invest. 2 Inc.) [the Clients] to provide a wildfire hazard assessment and report for the Pinnacle Ridge Hillside development within the Village of Anmore, BC. To assist the proposed development in falling within an acceptable range of risk from wildfire for the intended use as a residential development, the objectives of this project are to:

1. Increase the effectiveness of fire suppression and emergency response,
2. Reduce the potential impacts and losses to homes from wildfire,
3. Evaluate egress and evacuation routes for the development, and
4. Provide FireSmart guidelines for construction and vegetation management.

1.1 QUALIFICATIONS

Bruce Blackwell, MSc, RPF (#2073) has over 30 years of experience in fire and forest ecology, and fire and fuels management. Mr. Blackwell is a recognized wildfire risk analyst and planning specialist in BC and has managed numerous innovative projects related to fire risk identification and mitigation for the public and private sectors on both large and small scales. Mr. Blackwell has also been on the leading edge of developing large urban forest strategies for communities in BC, Alberta, and Ontario. Max Catt, RPF (#5687), BSF in Forest Resource Management, will lead the assessment and development of the report. Ali Rahi, RPF (#5215), ISA Certified Arborist, will provide field assistance and relevant research to the project. Both Ali and Max hold Local FireSmart Representative status with Partners in Protection – FireSmart Canada.

1.2 PROVIDED DOCUMENTS

The following documents were reviewed for the purpose of this assessment and report:

- Preliminary concept plan, prepared by EKISTICS Town Planning, dated June 27, 2024
- Revised preliminary concept plan, prepared by EKISTICS Town Planning, dated April 22, 2025
- Revised preliminary concept plan, prepared by EKISTICS Town Planning, provided to Blackwell Consulting Ltd. on May 26, 2025
- Revised preliminary concept plan, prepared by EKISTICS Town Planning, dated July 3, 2025
- Revised preliminary concept plan, prepared by EKISTICS Town Planning, dated July 16, 2025
- Revised preliminary concept plan, prepared by EKISTICS Town Planning, dated November 3, 2025
- Revised preliminary concept plan, prepared by EKISTICS Town Planning, dated December 12, 2025
- Legal topographic survey, prepared by Papove Professional Land Surveying Inc., dated August 20, 2024

2.0 SITE DESCRIPTION

The Area of Interest (AOI) is the Pinnacle Ridge Hillside development, situated within the southeastern extent of the Village of Anmore's municipal boundary. The AOI consists of three parcels; A, B, and C (see Figure 1). 'Parcel A' consists of PID # 028-861-256. 'Parcel B' consists of PID #s 027-687-309 and 002-811-626. 'Parcel C' consists of PID # 028-856-589. The total area of the AOI is 30.29 hectares in size.

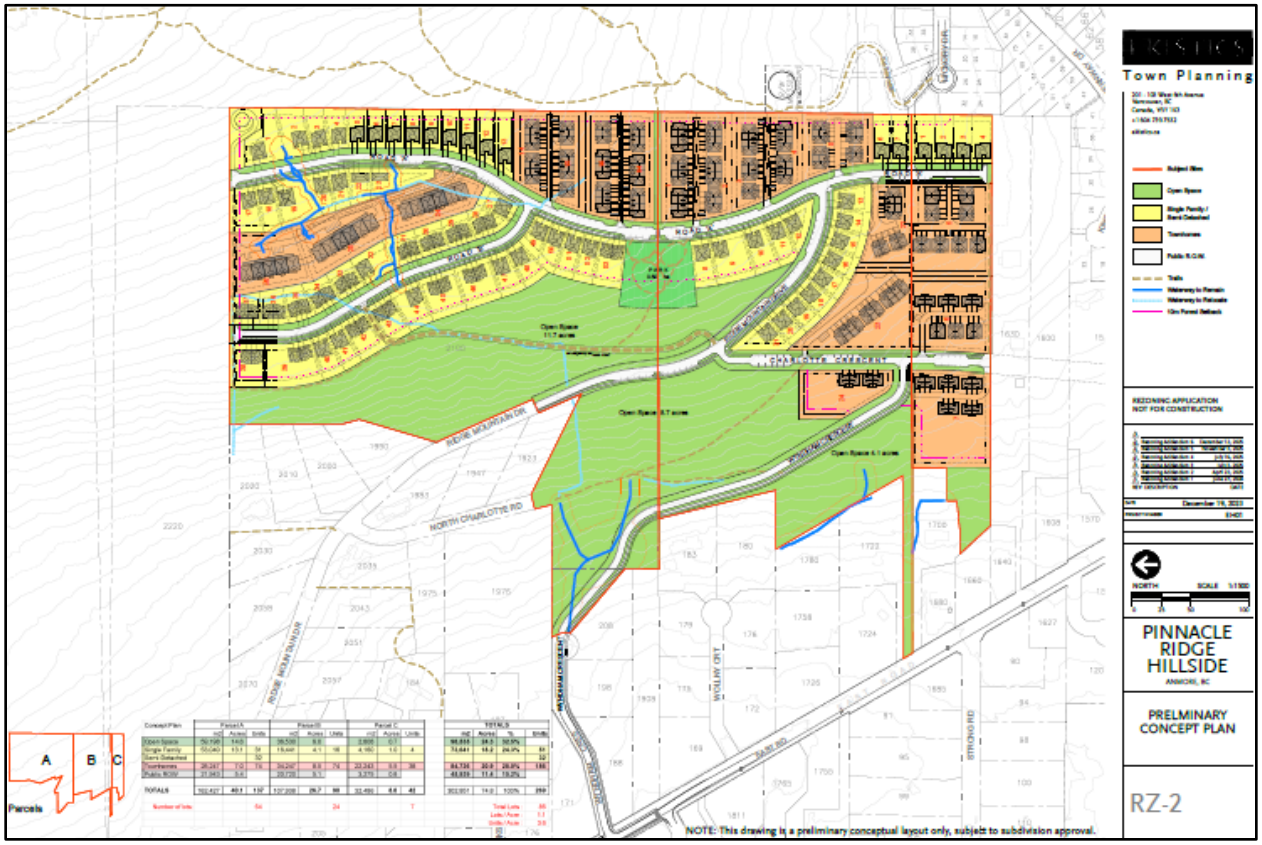


Figure 1. Revised preliminary concept plan for the Pinnacle Ridge Hillside development

The AOI is located within the Coastal Western Hemlock (CWH) zone as defined by the Biogeoclimatic Ecosystem Classification (BEC) system of British Columbia.[2] The site falls within the Dry Maritime (CWHdm) subzone, which is defined by wet winters, relatively dry and mild summers. The site ranges from ~200 - 350 metres in elevation, and the slope is generally quite steep with a western aspect. The AOI contains conifer dominated stands consisting primarily of Douglas fir (*Pseudotsuga menziesii*), western redcedar (*Thuja plicata*), and western hemlock (*Tsuga heterophylla*), as well as deciduous stands consisting primarily of red alder (*Alnus rubra*) and bigleaf maple (*Acer macrophyllum*). Mixed stands containing both conifer and deciduous trees are also present.

[2] Field Guide for Site Identification and Interpretation for the Vancouver Forest Region https://www.for.gov.bc.ca/hfd/pubs/docs/lmh/lmh28.pdf

2.1 DEVELOPMENT PLAN

Based on the most recent revised preliminary concept plan, there will be a mixture of single family homes, semi-detached homes, and townhomes built within the AOI (see Figure 1). Throughout the entire AOI, there are a total of 51 single family homes, 32 semi-detached homes, and 186 townhomes proposed to be constructed.

This development is within the wildland-urban interface (WUI), where human development and the presence of structures are adjacent to contiguous forest land, compliance with FireSmart landscaping and constructure principles are integral to lower the risk of wildfire to the development. Figure 2 (below) displays the difference between intermix and interface developments. The Pinnacle Ridge Hillside development primarily consists of interface development.

1. Intermix development – where structures are embedded within the forest and surrounded by wildland on two or more sides.
2. Interface development – where structures are adjacent to continuous forest on at least one side.

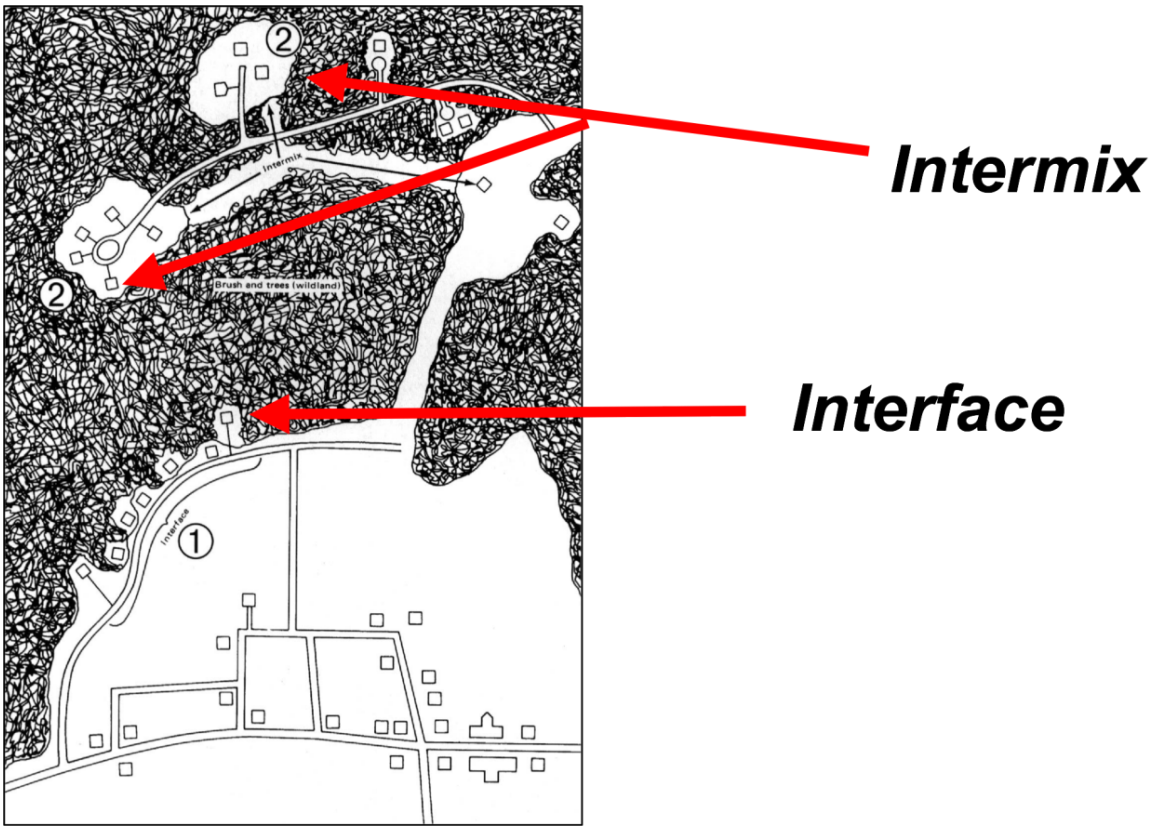


Figure 2. Illustrated example showing the difference between intermix and interface development

2.2 METHODOLOGY

Prior to the site visit, field maps were drawn based on the *initial* preliminary concept plan and legal topographic survey. Important features including orthophotography, topography, BEC zones, provincial fuel types, streams, and existing road networks were incorporated into the maps.

During the two-day site visit, the following data/information was collected:

- Wildfire threat assessment (WTA) plots/worksheets[3] completed in areas where there is no proposed development (*i.e.,* forest will remain)
    - To determine site-level wildfire threat throughout different parts of the AOI
- Fuel types updated/verified throughout the AOI
- Existing road networks evaluated and recorded
    - Potential access/egress routes discussed further with client
- General forest stand characteristics
- Presence of invasive species
- Water features (streams, reservoirs, fire hydrants)

The Canadian Forest Fire Behaviour Prediction (FBP) System outlines sixteen fuel types based on characteristic fire behaviour under defined conditions.[4] The fuel types were first identified in the office using available data from BC Data Catalogue.[5]

Results of the wildfire threat assessment (WTA) plots/worksheets were used to help guide recommendations for vegetation treatment (Section 3.1.4).

All recommendations regarding exterior construction materials for the new buildings and associated landscaping will be in accordance with FireSmart guidelines.[6] FireSmart™ is the leading program in the country aimed at reducing wildfire hazards to people, buildings and infrastructures through a series of science-based mitigation measures. It has been formally adopted by almost all Canadian provinces and territories, including British Columbia in 2000.

[3] Using the most recent 2020 WTA worksheets and methodology: https://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/wildfire-status/prevention/fire-fuel-management/fuels-management/2020-wildfire-threat-assesment-guide-final.pdf

[4] Forestry Canada Fire Danger Group. 1992. Development and Structure of the Canadian Forest Fire Behavior Prediction System: Information Report ST-X-3.

[5] https://catalogue.data.gov.bc.ca/

[6] https://firesmartbc.ca/wp-content/uploads/2021/04/FireSmartBC_LandscapingGuide_Web_v2.pdf

3.0 GENERAL FINDINGS AND GUIDELINES

Field work was conducted by Max Catt and Ali Rahi on February 20, 2025, and by Max Catt on February 26, 2025. During the site visits, the weather varied from overcast to sun and clouds, with highs of 12°C. The following sections discuss recommendations for new buildings/landscaping, fuel types/fuel modifications, roads/egress, water availability/fire suppression, and ecological values.

3.1 FIRESMART GUIDELINES FOR STRUCTURES AND LANDSCAPING

FireSmart strategies are intended to manage wildfire risk for development within the WUI by minimizing the chance of ignition and the spread of fire between the buildings and the surrounding forested areas. The area adjacent to homes/structures is referred to as the Home Ignition Zone (HIZ), and includes the structure itself and three concentric, progressively wider zones. For structures, FireSmart mitigation strategies typically focus on eliminating the use of combustible construction materials, which reduces the chance of fire igniting the building. An approaching wildfire would most likely spread to homes by means of spotting. Spotting is a process by which embers are carried aloft by thermal air currents and ignite flammable material beyond the advancing fire.

The three zones within the HIZ are based upon the distance from the structure: 0 - 1.5m (Immediate Zone), 1.5 - 10m (Intermediate Zone), and 10 - 30m (Extended Zone). These zones help guide risk reduction activities, with recommended FireSmart guidelines being stringent closest to the structure and constitute the “defensible space”: a buffer between the home and flammable vegetation that provides a safe space for firefighters to work.[7] In the event of a wildfire, firefighters may have to choose which homes they do or do not act on. Homes with defensible space are safer for firefighters to work at and are more likely to survive a fire event. These homes may be prioritized over homes without defensible space. Within the FireSmart Home Ignition Zone, mitigation measures typically involve landscaping, vegetation, and fuel management to become compliant with FireSmart guidelines and ultimately reduce wildfire risk immediately surrounding structures.

3.1.1 EXISTING BUILDINGS

No existing buildings were noted within the AOI during the site visits.

3.1.2 PROPOSED NEW BUILDINGS

As of the date of this report, no details regarding the construction materials for the new structures were provided. **Blackwell should be involved regarding the selection of exterior materials and design choices to ensure that all homes are compliant and will result in a community that is within an acceptable range of fire risk for its intended use. It is at the risk of the Clients to choose the design and exterior materials without input from Blackwell or another QP.**

[7] Cal Fire, Defensible Space: https://www.fire.ca.gov/programs/communications/defensible-space-prc-4291/

The below information provides guidelines for the use of FireSmart compliant materials with regards to the exterior of buildings. **These guidelines should be followed during the design of the new buildings.**

Recommendation 1: Adhere to the below FireSmart guidelines when selecting exterior construction materials for structures.

Cladding

Untreated flammable materials, such as wood, may not make up more than 20% surface area per exterior elevation. Up to 30% flammable materials per elevation may be used if sealed with Class A Fire Resistive sealant such as Flame Stop II or approved alternative. Cladding should have minimum 6" (15cm) clearance from the ground.

Class A fire resistance is defined by the following:

- The test must be extended for a 30-minute duration;
- Exhibits a flame spread index (FSI) of not more than 25;
- Shows no evidence of significant progressive combustion;
- Flame front does not progress more than 10.5ft (3.2m) beyond the centerline of the burn at any time during the test;
- Durability of material under exterior conditions; and
- Compatibility of fire test rating procedures and results acceptable to the Canadian Standards Association.

The fire resistive sealant product must be approved by Blackwell prior to application. If fire resistive sealant will be used, proof of purchase (a copy of the invoice) and photos of application are required to ensure compliance and to receive sign-off. Retardant requires re-application every 4-5 years.

Window and door trim, eaves, fascia, soffits, the underside of decks, and siding are included in the determination of 20% flammable surface area per elevation, while roofing and glazing (windows) are excluded.

Roofing

Roofing must be tested and rated Class A in accordance with American Society for Testing and Materials standards for fire tests of roof coverings (ASTM E 108)[8], or equivalent. The ASTM E 108 rating standard is used to determine the relative combustibility of roof coverings. Non-combustible materials such as asphalt shingles, torch-on membrane, and metal (except for aluminum) are acceptable.

Torch-on application should be avoided during the fire season, if possible, as the flames from torches have ignited nearby flammable material and been the source of house fires in the Lower Mainland in recent

[8] ASTM International https://www.astm.org/Standards/E108.htm

years. Construction fire watch will be used to reduce the risk from incidental ignitions associated with torch-on or other hot works construction if applied during the fire season.

Roofs and gutters should be cleaned periodically to prevent build-ups from occurring, preferably prior to the start of the typical wildfire season (May – October).

Soffits, Trim, and Windows

Soffits must be closed or have ventilation strips with openings less than 3mm in diameter and be made of an ignition-resistant material. Eaves may not be open. Windows should be tempered or multi-glazed glass to reduce heat and protect against wind and debris capable of breaking windows and allowing fire to enter the building.

Decking and Overhanging Projections

Balconies, decks, and porches must be sheathed in (no exposed joists) and made of an ignition-resistant[9] material (non-combustible or receiving a Class A fire rating). Acceptable materials include stone, tile, rated composites, and concrete. Exposed timber posts and beams must be a minimum of 4x4". The underfloor of all exposed floors (*i.e.* the underside of balconies, decks, open roof, patio, crawlspaces, etc.) and all exposed structural columns, beams, and supporting walls, must be enclosed or sheathed with a one-hour fire-rated construction material (such as 5/8" type x gypsum board), ignition resistant material, or non-combustible material. This eliminates areas for embers to accumulate underneath and get trapped (common interface ignition point).

Outdoor Burning Devices

Outdoor burning devices must not be fueled by wood, charcoal, or briquettes. All chimneys require approved spark arrestors.

Exterior Wall Vents

Vents must be accessible and screened with a metal 3mm wire cloth or mesh to avoid the entry of sparks and embers, which have the potential under extreme heat to ignite combustible materials within the wall assembly and to spread up and through the building. Standard exterior vent models typically have openings greater than 3mm and must therefore have screening attached post-installation as illustrated in Figure 3. Alternatively, vents with mobile flaps over the pipe outlet are also effective at eliminating the entry of sparks and embers into the building interior.

[9] NFPA 1144 Standard for Reducing Structure Ignition Hazards from Wildland Fire. 2013 Edition.

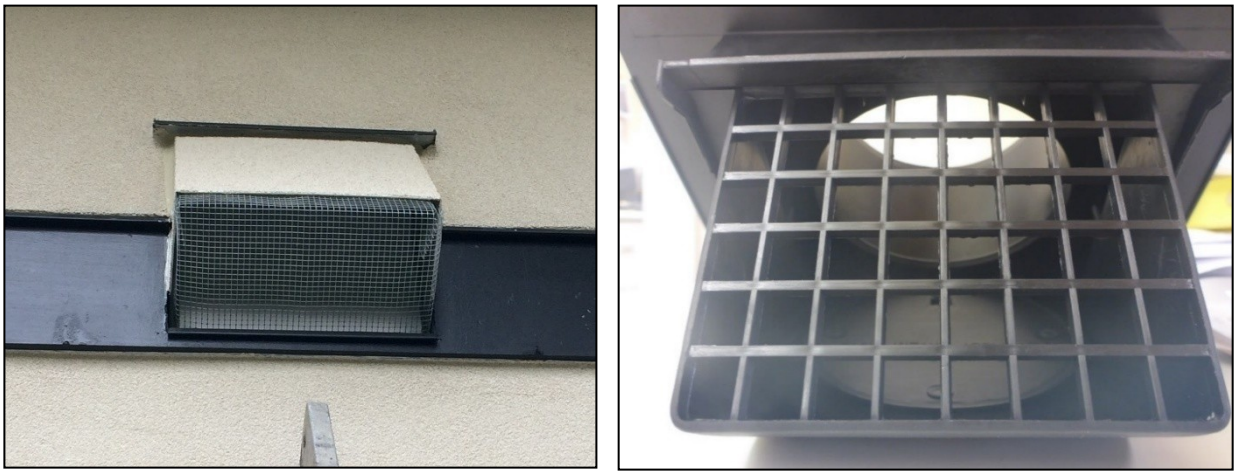


Figure 3. Standard exterior vent models. Left: Covered with 3mm wire mesh. Right: Vent with open flap (>3mm mesh)

Building design and construction should be 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.

Changes in building materials or design that increase susceptibility to fire are not permitted.

3.1.3 TOPOGRAPHY AND SETBACKS

Slope steepness influences a fire's trajectory and rate of spread, while slope position relates to the ability of a fire to gain momentum uphill. Other factors of topography that influence fire behaviour include aspect, elevation, and configuration of features on the landscape that can restrict (*i.e.,* water bodies, rock outcrops) or drive (*i.e.,* valleys, exposed ridges) the movement of a wildfire. Steep slopes can significantly accelerate the rate of fire spreading *uphill*, posing increased fire behavior challenges in those areas. Values located in the middle and upper slopes are also threatened by faster rates of fire spread due to the pre-heating of fuels from fire below and longer flame lengths reaching uphill.

As the entire development is located on steep ground with slopes often over 30%, setbacks should be implemented. Ideally, a single-story building should have a setback of at least 10 metres from the crest of the slope, while taller buildings should have a proportionately greater setback distance.[10] However, since there is a continuous slope and no slope crest within the AOI, all structures that are forest interface should be setback 10 metres from vegetation on all sides facing the forest edge.

Recommendation 2: All structures that are forest interface should be setback 10 metres from vegetation on all sides facing the forest edge. The setback for structures (including all attachments such as decks, eaves, etc.) may be reduced to an absolute minimum of 5 metres, subject to the

[10] https://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/wildfire-status/prevention/prevention-home-community/bcws_homeowner_firesmart_manual.pdf

installation of exterior roof-top sprinkler systems and adherence to all FireSmart exterior construction guidelines for these structures (roof-top sprinkler systems discussed further in Section 3.6).

See Appendix C – Covenant and Registered Building Scheme for the requirements that property owners and/or builders must follow for any structures that encroach past the recommended 10 metre setback from the forest interface (to an absolute minimum setback of 5 metres).

3.1.4 VEGETATION

Multiple studies have shown that the principal factors regarding home and structure loss to wildfire are the structure's characteristics and immediate surroundings. The area that determines the ignition potential of a structure to wildfire is referred to as (for residences) the Home Ignition Zone (HIZ).[11,12] The HIZ includes the structure itself and three concentric, progressively wider areas (the Immediate, Intermediate, and Extended Zones) that **extend 30 metres outwards from the structure** (Figure 4 below). Since ignitability of the HIZ is the main factor driving structure loss, the intensity and rate of spread of wildland fires beyond the community have not been found to necessarily correspond to loss potential. For example, FireSmart homes with low ignitability may survive high-intensity fires, whereas highly ignitable homes may be destroyed during lower-intensity surface fire events.[12] Increasing ignition resistance would reduce the number of homes simultaneously on fire; extreme wildfire conditions do not necessarily result in WUI fire disasters.[13] *It is for this reason that the key to reducing WUI fire structure loss is to reduce structure ignitability.*

[11] Reinhardt, E., R. Keane, D. Calkin, J. Cohen. 2008. *Objectives and considerations for wildland fuel treatment in forested ecosystems of the interior western United States*. Forest Ecology and Management 256:1997 - 2006. Retrieved from: Objectives and considerations for wildland fuel treatment in forested ecosystems of the interior western United States | Treesearch (usda.gov)

[12] Cohen, J. *Preventing Disaster Home Ignitability in the Wildland-urban Interface.* Journal of Forestry. p 15 - 21. Retrieved from: Preventing Disaster: Home Ignitability in the Wildland-Urban Interface | Journal of Forestry | Oxford Academic (oup.com)

[13] Calkin, D., J. Cohen, M. Finney, M. Thompson. 2014. *How risk management can prevent future wildfire disasters in the wildland-urban interface*. Proc Natl Acad Sci U.S.A. Jan 14; 111(2): 746-751. Accessed online 1 June, 2016 at http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3896199/

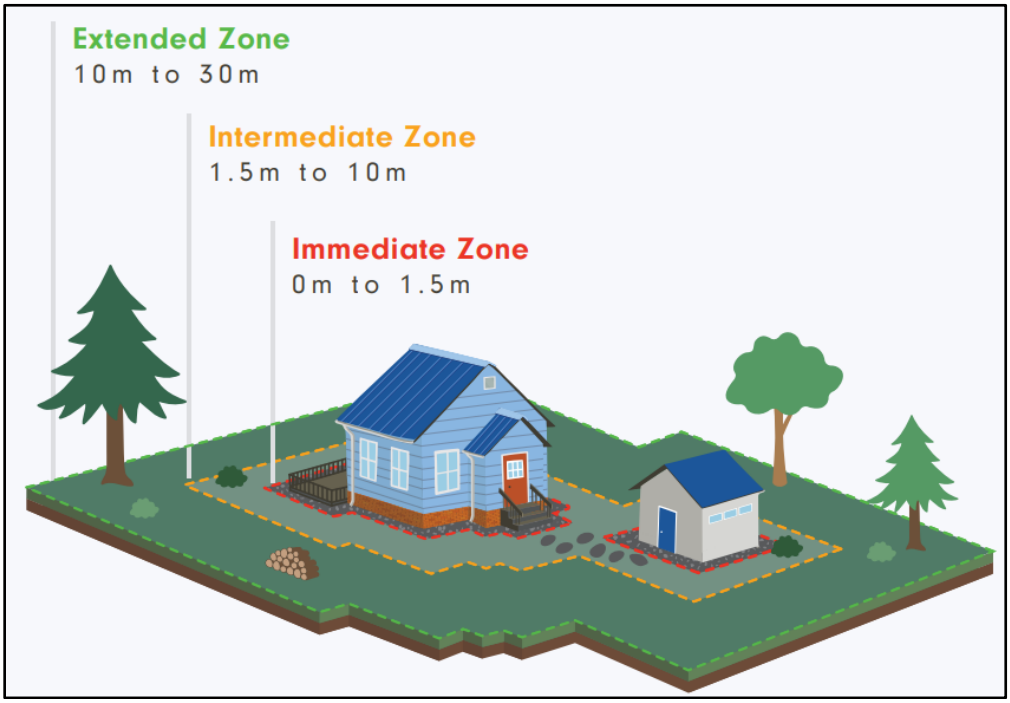


Figure 4. FireSmart Home Ignition Zone

The *Immediate Zone* is a 1.5 metre combustible-free zone around the structure. This zone should be free of any vegetation and flammable materials such as bark mulch. This zone should only include non-flammable landscaping materials such as gravel, brick, or concrete, and should be cleaned regularly to prevent accumulation of leaf litter or other combustible materials. Items such as construction materials, propane tanks, firewood, and combustible furniture should not be stored here.

Recommendation 3: Establish and maintain an Immediate Zone around each structure (including any outbuildings).

The *Intermediate Zone* extends from 1.5 to 10 metres from the structure and should be free of combustible debris and coniferous vegetation. This ensures that direct flame contact with the building is unlikely to occur and reduces the potential for radiative heat to ignite the building.[14] Combustible materials such as firewood, lumber, construction materials, wood patio furniture, and decorative pieces should not be stored in this zone. Trailers, recreational vehicles, storage sheds, and other combustible structures should be moved outside the Intermediate Zone and into the Extended Zone. Any combustible materials should be moved into the Extended Zone and stored within a non-combustible structure. Coniferous vegetation is highly flammable and should not be planted in this zone. Conifer ladder fuels (*i.e.,* understory trees that provide a pathway for a surface fire to move into the crown of the tree) should be removed. Mature coniferous trees can be retained if they are sufficiently spaced (3 metres between crowns) and also have a crown base height of at least 3 metres (ground to branch tip) to prevent a surface fire transitioning into the crown (can be achieved by pruning). Mature conifer crowns should also be at

[14] https://www.firesmartcanada.ca/wp-content/uploads/2022/01/FireSmart-Protecting-Your-Community.pdf

least 5 metres away from any structures. Any accumulations of fine woody debris (*i.e.,* less than 7 centimetres in diameter) should be removed from this zone. Lawns should be maintained to 10 centimetres height or less to minimize fire intensity and rate of spread.

Recommendation 4:

- Remove all conifer ladder fuels within the Intermediate Zone.
- Within the Intermediate Zone, prune any retained mature conifers to a height of at least 3 metres (ground to branch tip) and at least 5 metres away from any structures. Ensure they are sufficiently spaced (3 metres or more between crowns of adjacent conifers).
- Maintain grass to a height of 10 centimetres or less within the Intermediate Zone.
- Combustible materials should be moved out of the Intermediate Zone and into the Extended Zone and stored in non-combustible structures.
- Combustible structures should be moved out of the Intermediate Zone and into the Extended Zone.
- Accumulations of fine woody debris should be removed from the Intermediate Zone.

The *Extended Zone* extends from 10 metres to 30 metres from the structure. In this zone, deciduous species should be favoured over coniferous vegetation as deciduous trees have much lower flammability. Retained conifer trees should have a minimum of 3 metres of spacing between mature crowns and be pruned to at least 3 metres from ground to branch tip. Mature conifer crowns should also be maintained to be at least 5 metres away from any structures in the future. Any accumulations of fine woody debris (*i.e.,* less than 7 centimetres in diameter) should be removed from this zone. Conifer ladder fuels should be removed.

Recommendation 5:

- Remove all conifer ladder fuels (except if open grown; *i.e.,* not under dripline of retained conifer) within the Extended Zone.
- Accumulations of fine woody debris should be removed from the Extended Zone.
- Within the Extended Zone, prune retained conifers to a height of at least 3 metres (ground to branch tip). Ensure there is 3 metres of spacing between crowns of adjacent conifers. Mature conifer crowns should also be maintained to be at least 5 metres away from any structures in the future.

Up until 2023, the HIZ included an additional area that extended out to 100 metres from the structure, but this zone was removed as radiant heat is unlikely to ignite a structure at 30 metres and beyond. More details on FireSmart zones can be found in the FireSmart Manual.[15]

It is recognized that in urban settings, homeowners have little or no influence or control over fuels and/or landscaping beyond their property boundaries, though it may influence the fire hazard of their property. The HIZ of one property often extends into neighbouring properties. Recommendations in this report are limited to actions that can be implemented on the subject properties.

[15] Available for download here: FireSmartBC_HomeownersManual_Printable.pdf

FireSmart Landscaping

Landscaping choices within the Intermediate and Extended Zones (1.5 – 30 metres from structures) should be limited to plant species with low flammability (deciduous vegetation). Coniferous vegetation such as juniper, cypress, yew, and cedar should not be planted within these zones, as these species are considered highly flammable under extreme fire hazard conditions.

Figure 5. Examples of common coniferous vegetation planted within the urban landscape

In addition to choosing species with low flammability, other factors such as sun exposure, hardiness zone, available space, water usage, and ease of maintenance should also be considered in the landscaping design and plans.

It is best to discuss options with a professional landscaper for aesthetics of the landscape design, suitability for the climate and site, and fire resistance. Plants that are fire resistant generally have the following characteristics:

- Foliage with high moisture content (moist and supple),
- Little dead wood and do not tend to accumulate dry and dead foliage or woody materials, and
- Sap that is water-like and without a strong odor.

Recommendation 6: Avoid planting coniferous vegetation within the Home Ignition Zone (*i.e.,* within 30 metres of structures).

Maintenance of Property

To ensure that a low fire hazard rating is maintained throughout the development, landscaping should be properly maintained in low hazard conditions for each property. This may require periodic maintenance including crown raising and/or reduction of trees (thinning). Crowns of coniferous trees should be kept at a minimum of 3 metres from the ground and 5 metres from structures, and also have a minimum spacing of at least 3 metres from adjacent conifer trees. All pruning should be completed by

an ISA Certified Arborist to meet industry standards. The roof and gutters should be kept clean of combustible debris to reduce the potential for spotting embers igniting these materials during a wildfire event. Dead woody material should be removed periodically, ideally before the fire season.

FireSmart guidelines[16] and recommendations for each zone mentioned in Section 3.1.4 should be followed.

Grass, shrubs, and herbs should be maintained in a state that reduces fire hazard by maintaining foliar moisture content. This can be accomplished by:

- Choosing plant species that are well-adapted to the site (microclimate and soil conditions of the parcel),
- Incorporating a landscape design where shrubs, herbs, and grasses are planted in discrete units manageable by hand watering, and/or
- Installing irrigation.

It should be recognized that relying on irrigation to maintain landscaping in a healthy state is limiting and may actually increase the fire hazard on the parcel, particularly in times of drought and watering restrictions. Lack of irrigation in times of watering restrictions may create a landscape that is unhealthy and unsightly, as well as dead, dry, and highly flammable.

Recommendation 7: The HIZ of each property should be regularly maintained following FireSmart guidelines and recommendations noted in Section 3.1.4.

3.2 FUEL TYPES

The Canadian Forest Fire Behaviour Prediction (FBP) System outlines sixteen fuel types based on fire behaviour characteristic under defined conditions.[17] In general, fuel types are defined based on overall vegetation structure (*e.g.,* conifer vs. deciduous forest), dominant species, and understory, ladder fuel, and forest floor characteristics. Each respective fuel type varies in the type of wildfire behaviour demonstrated under high wildfire danger levels (see Appendix A – Fuel Type Descriptions). The AOI primarily consists of C-5 and M-1/2 fuel types, with lesser parts D-1/2 fuel types (Map 1).

C-5 fuel types within the AOI are characterized by mature Douglas fir stands, with lesser parts western hemlock and western redcedar. Surface fuel loading is fairly low, but areas with higher surface fuel accumulations are present due to deadfall in the understory/codominant layers. Horizontal continuity of conifer ladder fuels is generally discontinuous, but there are some more dense areas present especially where higher amounts of light is coming through the canopy (roadside, deadfall areas). Crown base

[16] https://firesmartbc.ca/wp-content/uploads/2021/04/FireSmartBC_LandscapingGuide_Web_v2.pdf

[17] Forestry Canada Fire Danger Group. 1992. Development and Structure of the Canadian Forest Fire Behavior Prediction System: Information Report ST-X-3.

heights on mature conifer trees are generally quite high. This fuel type is typically associated with low hazard but has a moderate potential for active crown fire when wind-driven.

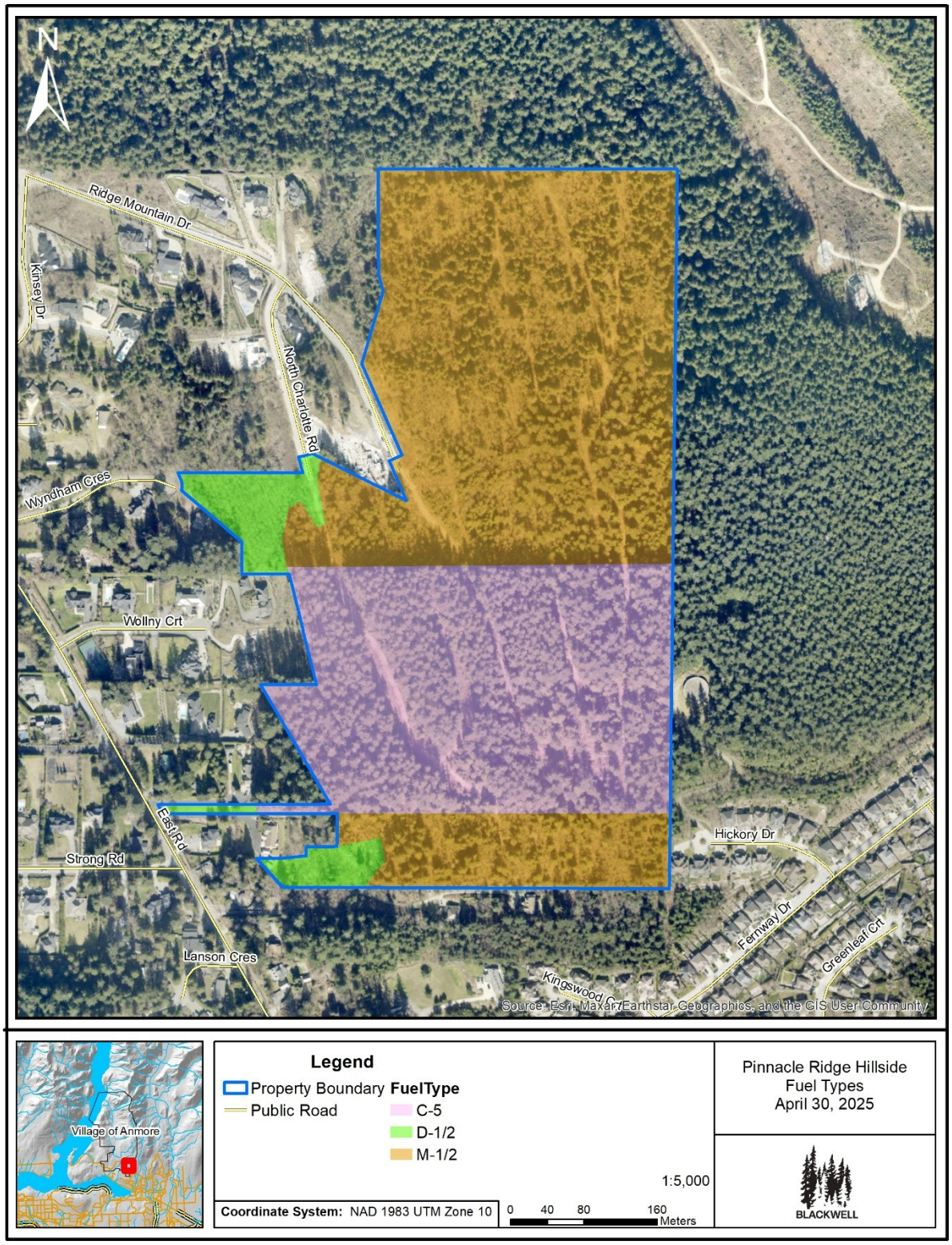
Figure 6. General C-5 characteristics in the AOI (left); higher amounts of surface fuel loading (right)

M-1/2 fuel types within the AOI are characterized by a mix of coniferous and deciduous species, to varying degrees. Surface fuel loading is typically low, but like some of the C-5 areas, higher surface fuel accumulations are present in spots due to deadfall in the understory/codominant layers. Although the crown base heights on some mature conifers are low, the horizontal continuity of conifer ladder fuels is generally discontinuous. An M-1/2 fuel type can sometimes be considered hazardous, depending on the proportion of conifers within the forest stand; conifer fuels include those in the overstory, as well as those in the understory.

Figure 7. General M-1/2 stand characteristics in the AOI

D-1/2 fuel types within the AOI are characterized by deciduous dominated stands. Surface fuel loading is low, conifer ladder fuel horizontal continuity is low, and the presence of overstory conifers is minimal. This fuel type is generally considered as the least hazardous forest type as a result of deciduous trees' higher moisture content and general lack of flammable ladder fuels. However, the hazard of a D-1/2 stand can greatly increase if there is an accumulation of surface fuels or flammable ladder fuels/shrubs.

Figure 8. General D-1/2 stand characteristics in the AOI

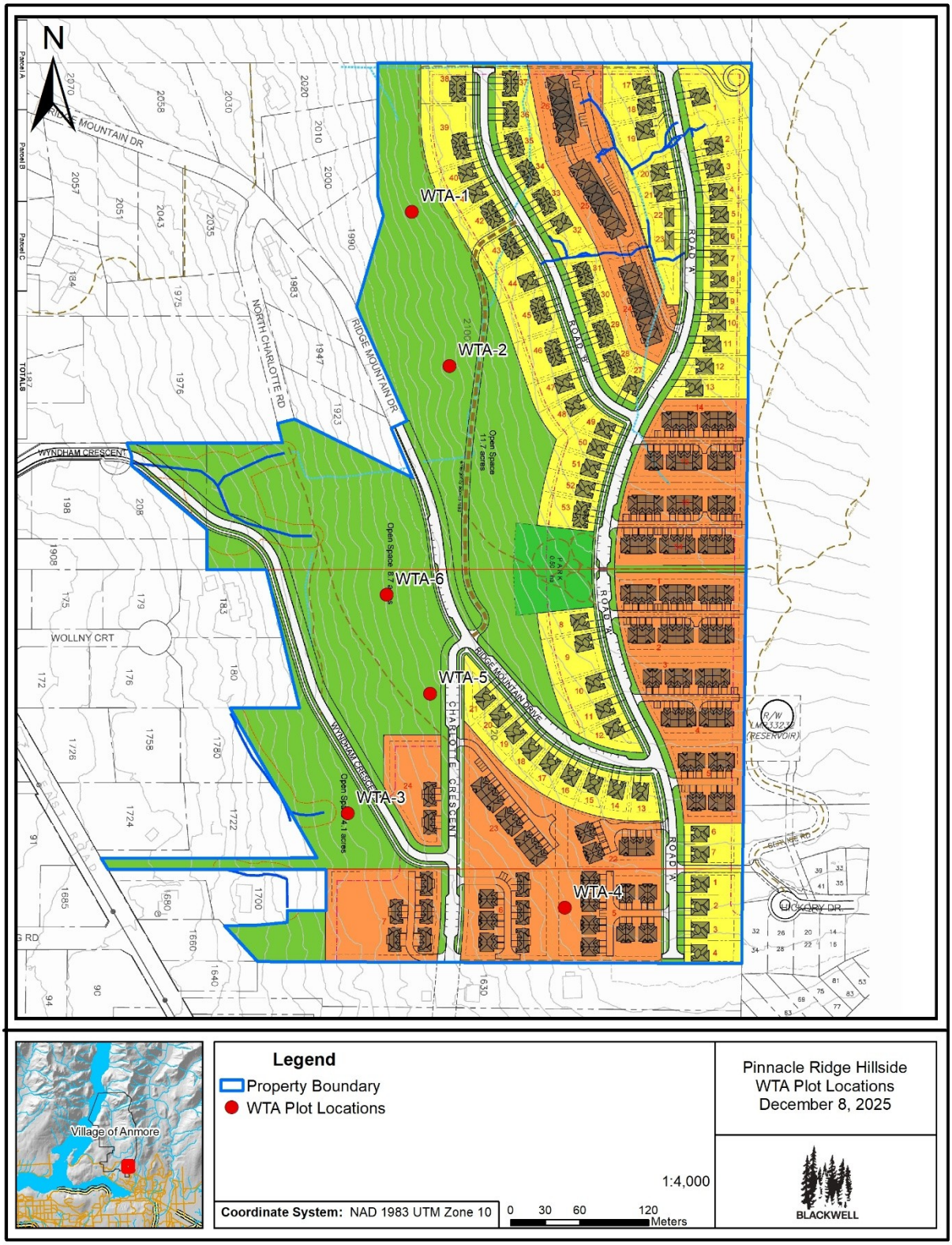


Map 1. Current fuel types within the Area of Interest (AOI)

Wildfire Threat Assessment Plots

A total of 6 Wildfire Threat Assessment (WTA) plots/worksheets were completed throughout the AOI. The WTA plots were recorded in interface areas where natural forest is expected to remain (based on the *initial* preliminary concept plan) in order to determine the current wildfire threat (see Map 2).[18] At least 1 WTA plot was completed in each respective fuel type. The results of the WTA worksheets can be seen in Appendix B – WTA Plot Forms.

[18] Plot WTA-4 was completed in a location where natural forest was expected to remain; however, the preliminary concept plan was revised post field work.



Map 2. WTA plot locations

3.3 ACCESS AND EGRESS

Access and egress during a wildfire emergency often happen simultaneously and road networks should have the capacity to handle both. Having multiple access/egress routes is the number one subdivision FireSmart consideration for decreasing loss of life in a wildfire emergency. In general, road networks serve three functions during a wildfire:[19, 20]

- As access routes for emergency responders and their vehicles and equipment. Access routes should be wide enough to deal with large, heavy equipment and vehicles (*e.g.,* 20 tonne firetrucks),
- As evacuation (or egress) routes for residents, and
- As firebreaks to interrupt or slow the progress of the fire and assist firefighting efforts.

Currently, there are two access/egress routes available to vehicles; Ridge Mountain Drive and Wyndham Crescent. Having multiple access/egress routes can help prevent severe congestion issues in the event of an evacuation. However, if any point on these routes becomes completely impassible, then air is the only other means of evacuation. Evacuation via air can be challenging due to the amount of time and resources required. Having several access/egress routes is extremely important as it can lead to increased evacuation efficiencies and emergency response in the event of a wildfire.

The following location is the ideal option for adding another alternate access/egress route to the development, based on discussions with Mohammad Basefat of Anmore Gate Ltd. Partnership and Steven Beyer of Ekistics Town Planning:

1) The spur off of Ridge Mountain Drive (Charlotte Crescent) should be extended to the south, outside of the development, and intersect with the southern part of Charlotte Crescent.

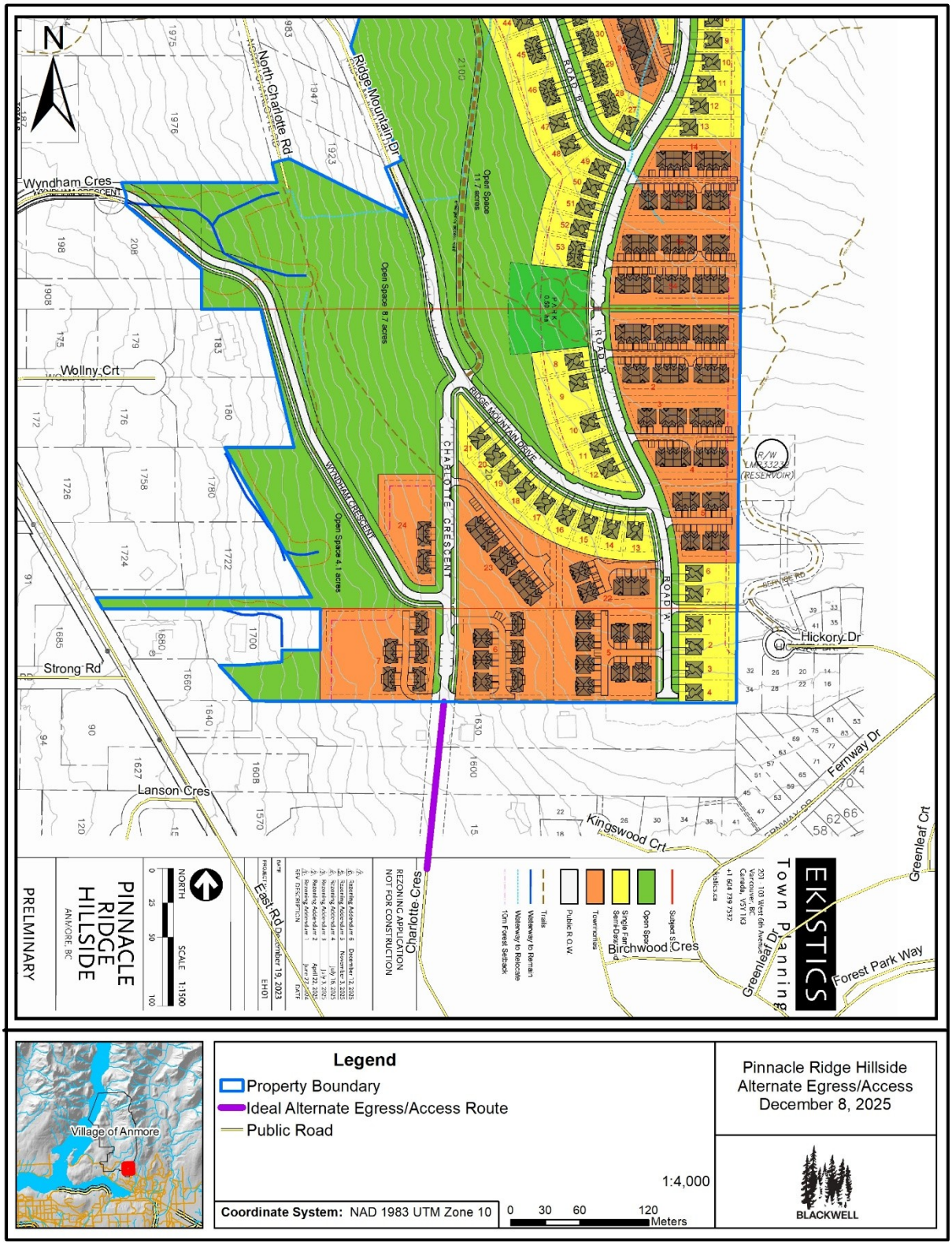
This alternate access/egress route is highly recommended in order to further increase evacuation efficiencies and emergency response in the event of a wildfire. Also, as per communications with Aaron Baerg of Ekistics Town Planning, another emergency access route at the east side of the property is being considered, connecting Road ‘A’ to Hickory Drive.

This ideal option for the alternate access/egress route requires consultation with respective property/landowners in areas where the proposed road extends outside of the Pinnacle Ridge Hillside development’s property line.

Map 3 below displays the potential location of the ideal option for the alternate access/egress route (purple).

Recommendation 8: Create another alternate access/egress route for the development.

[19] https://www.crd.bc.ca/service/fire-and-emergency-programs/ssi-emergency-program
[20] https://nrc-publications.canada.ca/eng/view/ft/?id=3a0b337f-f980-418f-8ad8-6045d1abc3b3



Map 3. Alternate access/egress route for the development

Maintenance of Access and Egress Routes

Easy access to all parts of the development plays an important role in increased suppression efficiencies and access of fire trucks to structures.[21] All roads should be wide enough with large enough turnarounds for fire trucks and other suppression equipment to easily drive and turnaround.

Recommendation 9: Ensure all roads are wide enough with large enough turnarounds for fire trucks and other suppression equipment to easily drive and turnaround in the event of a wildfire.

All access and egress routes in the development should be maintained year-round. Lessons learned from past wildfires have highlighted the need for orderly and efficient evacuation during a wildfire event, and the difficulties of conducting evacuations during extreme wildfire events. This requires the development of adequate planning for evacuation and egress during wildfire events. Grading of any gravel access and egress routes should be periodically inspected and maintained to keep the surface in good shape, particularly prior to the fire season. Drainage structures such as water bars, ditches, and culverts should also be regularly inspected along all access and egress routes to ensure substantial damage to roads during heavy rain events does not occur. Downed logs and debris in ditches, as well as brush along edges of roads should be cleared.

Recommendation 10: Regularly inspect and maintain all access and egress routes in the development.

Trail Management

All of the existing (and proposed) trails within the development and their use (motorized, non-motorized, or both) should be identified. It should be recognized that trails can act as effective fuel breaks for surface fires and, depending on width, clearance, and surfacing, can provide access for equipment and control lines for suppression efforts. Comprehensive mapping of the trail network should be completed, including an inventory of attributes of each trail serving for suppression planning purposes such as width, surface type, and clearance, which could be used to determine accessibility as well as utility as a surface fire fuel break. Additionally, comprehensive mapping could be useful in the event of trail closures or evacuations in a wildfire event. This information should be available to relevant agencies who may find it useful for suppression or planning purposes (*e.g.,* BCWS, Village of Anmore, and Sasamat Volunteer Fire Department).

Recommendation 11: Create a comprehensive map of the existing (and proposed) trail network. Identify the usage (motorized, non-motorized, or both), and collect attributes (width, surface type, and clearance) for all trails to determine their suitability as surface fuel breaks and equipment access routes. Share this information with relevant agencies that may find it useful for suppression or planning purposes.

[21] https://catalog.extension.oregonstate.edu/sites/catalog/files/project/supplemental/pnw618/pnw618-chapter5.pdf

To reduce the chance of accidental ignitions and associated fire spread, as well as to act as a fuel break for surface fires, trailside conifers (~5 metres from edge of trails) should be pruned to a minimum of 3 metres from the ground. Also, conifer ladder fuels and pockets of fine woody debris (<7 centimetres diameter) that are immediately adjacent (~5 metres) to the edge of trails should be removed. As mentioned above, trails should be reviewed and prioritized for their suitability to act as surface fuel breaks and points of access.

Recommendation 12: To reduce the chance of accidental ignitions and associated fire spread, as well as to act as a fuel break for surface fires, trailside conifers should be pruned to a minimum of 3 metres from the ground. Also, conifer ladder fuels and pockets of fine woody debris that are immediately adjacent to the edge of trails should be removed.

To minimize the risk of tree failure and blockage of the access and egress roads during a wildfire, it is recommended to conduct a tree risk assessment on both sides of the roads. Depending on the tree length and slope, the area of assessment should extend up to 1.5 times the length of the tallest trees. This will result in an area that covers all trees that may hit the target (*i.e.*, access and egress roads).

Recommendation 13: Perform a tree risk assessment to reduce the risk of tree failure during wildfires.

It is important to note that trail building and maintenance should not result in residual fuels and an increase in fire hazard, especially in high use areas where the ignition potential is higher. Moderate and coarse woody debris (>7 centimetres diameter) can be scattered at a distance of more than 5 metres from the trail as long as individual pieces are not touching and nor elevated. All fine woody debris resulting from pruning, thinning, or trail maintenance operations should be removed off-site. Small amounts of biomass may be chipped and spread, but moderate to large accumulations should be removed due to the increase in fuel loading and potential ecological impacts. Fuels, if left to accumulate from trail work, can significantly increase the chance of ignition and increase the potential fire behaviour should an accidental ignition occur, such as from an errant cigarette butt or other human-caused ignition.

Recommendation 14: Remove all debris resulting from pruning, thinning, or trail maintenance from the site.

3.4 FIRE SUPPRESSION, WATER, AND ELECTRICAL POWER

In case of a fire within the development, the Sasamat Volunteer Fire Department will provide the initial fire suppression. Reliable water supply should be available during the entire fire season. It should be accessible by firefighters and capable of sustaining water demands during interface fire events with power outages. During the site visits, fire hydrants were noted all the way up until the start of the new development. The fire hydrant network should continue into the new development with an adequate number of hydrants. Having working fire hydrants is critical in allowing for fast suppression of house fire events, and aiding fire departments/BCWS with the suppression of wildfires. If applicable, high-volume community wells or irrigation systems can be considered available if they are accessible for quick hookup by firefighters. Residential wells and seasonal creeks should not be considered to be reliable water supply.

Recommendation 15: There should be an adequate number of fire hydrants in the development, and all fire hydrants should be inspected and maintained as per their inspection schedule.

Field visits noted that electrical power to the adjacent development is supplied by BC Hydro through a network of underground cables. This is ideal as there is a lower probability of power outages during a wildfire event due to the lack of wooden poles and overhead power lines. The underground cable network should be continued into the Pinnacle Ridge Hillside development.

Recommendation 16: Continue the underground cable network to supply electrical power to the development.

3.5 ECOLOGICAL VALUES

3.5.1 STREAMS/RIPARIAN AREAS

During the site visits, several streams were noted in the AOI (Figure 9). A qualified environmental professional (QEP) should be retained for any development that is expected to occur adjacent to streams or riparian areas.

Recommendation 17: Retain a QEP if any proposed development is expected to occur adjacent to streams or riparian areas.

If required, the removal of fuel (vegetation and woody debris) within the Streamside Protection and Enhancement Area (SPEA)[22] of riparian areas should be done by hand and any soil disturbance that may cause sediments to enter riparian areas should be avoided.

Recommendation 18: The removal of fuel within the SPEA of riparian areas should be done by hand and any soil disturbance that may cause sediments to enter riparian areas should be avoided.

Figure 9. Streams within the AOI

[22] https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/fish-fish-habitat/riparian-areas-regulations/rar_assessment_methods.pdf

3.5.2 INVASIVE PLANT MANAGEMENT

It was noted during site visits that several areas throughout the property, mostly in places that have been disturbed, are overrun with invasive species. The most prominent invasive plant species noted were Himalayan blackberry (*Rubus armeniacus*), English ivy (*Hedera helix*), and common holly (*Ilex aquifolium*) [see Figure 10 below]. To prevent the further spread of these plants, it is recommended that all invasive plants on each respective parcel are removed, and the roots dug out. All of the vegetation parts should be disposed of off-site at an approved green waste disposal facility; dumping onto adjacent land is not acceptable.

Figure 10. Himalayan blackberry (left) and common holly (right)

In the landscaped portion of each parcel, plant selections should be made carefully, ensuring that the plants are suitable for the available size and sun exposure at their location. **Rapidly spreading, invasive plants should be avoided in all locations.**[23] Invasive plants for sale in nurseries should be avoided and include, but are not limited to:

- English ivy (*Hedera helix*)
- English laurel (*Prunus laurocerasus*)
- Deadnettle (*Lamium sp.*)
- Common holly (*Ilex aquifolium*)
- Butterfly bush (*Buddleia davidii*)
- Periwinkle (*Vinca minor*)
- Morning glory (*Calystegia sepium*)

[23] Refer to the District of North Vancouver's Invasive Plant Management Strategy March 2015: https://www.dnv.org/sites/default/files/edocs/draft-invasive-plant-strategy.pdf

Recommendation 19: It is recommended that all invasive plants on each respective parcel are removed, and the roots dug out. Invasive plants should not be planted in any of the parcels.

3.6 ROOF-TOP SPRINKLER SYSTEMS

In forest interface areas, exterior roof-top sprinklers can play an important role in emergency response during WUI fires.[24] Roof-top sprinkler systems should be capable of creating a humid dome around the structure for at least 2 hours. The sprinkler systems are most effective when used on structures that are already FireSmart. Sprinkler systems should include robust sprinkler components (such as Rainbird) with limited plastic materials. Three main mounting types exist: temporary mounted sprinklers (fully removable), permanently mounted sprinklers, and permanent sprinkler mounts that sprinklers can then be attached to/removed from (Figure 11). Sprinkler systems should be tested prior to the fire season. The external sprinkler system must be independent of the internal water system to allow for manual use during wildfire. Also, an operational switch that is accessible from outside would assist firefighters to operate the sprinkler from outside of the building should the homeowner or resident be seasonal or evacuated from the premises.

Recommendation 20: Consider installing exterior roof-top sprinkler systems in interface areas throughout the development. This should be a requirement for buildings that don't have 10 metre setbacks from the adjacent forest edge.

Recommendation 21: Exterior roof-top sprinkler systems should be tested prior to the fire season. They also should be independent of the internal water system.

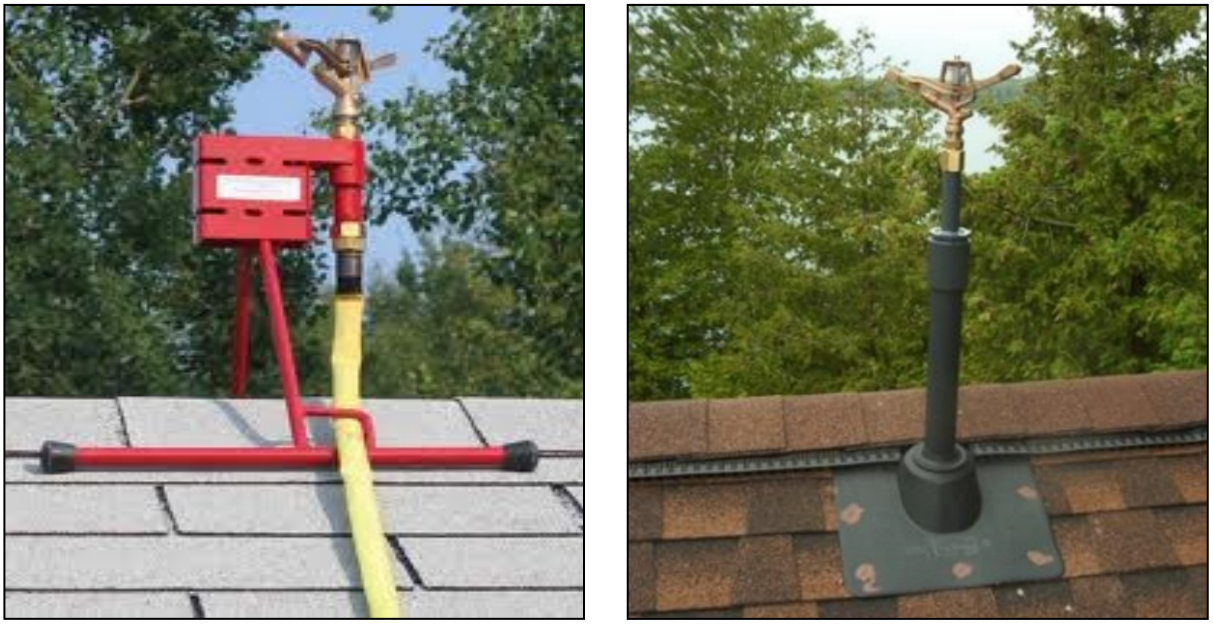


Figure 11. Examples of rooftop mounted sprinkler systems: temporary (left) and permanent (right)

[24] https://firesmartbc.ca/resource/structure-protection-sprinklers-and-water-usage/

In the event of a wildfire, exterior roof-top sprinklers should be turned on (if safe to do so) a minimum of two hours before the fire reaches the residence to wet the roof and adjacent forested vegetation. The use of sprinklers also raises the relative humidity around the residence. This will help reduce fire behaviour adjacent to the home by making fuels less flammable and reduce the probability of spotting igniting adjacent vegetation or structures.

Power supply to the property is vulnerable to disruption during a wildfire which has implications for water supply (*i.e.,* fire hydrants may not work). Also, to ensure that water supply for fire suppression is available, a designated alternate water source for use during a fire is essential.

Recommendation 22: Exterior roof-top sprinkler systems should have alternate power (*i.e.,* generator) and water sources.

3.7 GENERAL EVACUATION GUIDELINES

A master plan for evacuation should be prepared and be available to all residents in the Pinnacle Ridge Hillside development. All residents should be familiar with the evacuation procedure and the locations of muster areas. Routes to muster areas should be easy to navigate with signage that is visible in the dark and under heavy smoke conditions. The exact number of residents within the community should be known and periodically updated so that information can be relayed to emergency crews. There should also be a list of the names and contact numbers of residents. When a fire is detected, all residents should be warned and prepare for evacuation if necessary. A siren (loud noise-making device) should be installed to warn of wildfire. It should be installed in a central location so it can be heard from anywhere in the community.

Some important recommendations that should be implemented throughout the community are:

- All roads and trails should have a unique name that can be identified on the map and have visible signage. The signage should be visible in the dark or under heavy smoke during a wildfire.
- Each home address should be located close to the road to ensure it is visible in the dark or under heavy smoke during a wildfire.
- Install a “Fire Danger Rating” sign and update on a daily basis throughout the fire season. The rating should be provided with a chart outlining the restrictions on high-risk activities during “Moderate”, “High”, and “Extreme” fire danger classes.
- Install interpretive signage throughout trail networks to educate residents and visitors about wildfire risk within the wildland-urban interface.

Smoke, as well as elevated temperatures produced by fire, may lead to the risk of injury or even fatality. It’s important to note that smoke can be blown by wind well ahead of the fire front. Dealing with smoke is beyond the scope of this report.

Recommendation 23: The following recommendations should be implemented throughout the community:

- Ensure all roads and trails have a unique name and visible signage.
- Home addresses should be located close to the road.
- A “Fire Danger Rating” sign should be installed and updated throughout the fire season.
- Interpretive signage should be installed throughout trail networks to educate residents and visitors about wildfire risk.

3.8 CONCEPTUAL PHASING PLAN

On December 10, 2025, a conceptual phasing plan developed by EKISTICS Town Planning was provided to Blackwell for our review and input. In order for each phase to be viable on their own in terms of wildfire safety, the following must be followed:

- Each phase (phase #1-3) must have their associated secondary access/egress route built at the same time as the rest of the development, and these route(s) must be active prior to occupancy being given. The secondary access/egress routes noted in the conceptual phasing plan are as follows:
    - Phase 1 – Connection from Road ‘A’ to Hickory Drive
    - Phase 2 – Connection between Road ‘B’ and Ridge Mountain Drive
    - Phase 3 – Either the extension of Charlotte Crescent, or the construction of Wyndham Crescent
- Development for each phase (phase #1-3) must follow all recommendations laid out in this report and summarized in Table 1.

4.0 LIMITATIONS

This wildfire hazard assessment is based on site observations noted on the specified dates only. The project forester(s) have endeavored to use their skill, education, and knowledge to provide accurate representation. Every effort has been made to ensure that the opinions expressed are an accurate assessment of the current condition of the Pinnacle Ridge Hillside development. It is each of the property owner's responsibility to carry out recommendations stated in this report in accordance with all applicable Bylaws and regulations, and to obtain any required permits and/or written consent. This report is based only on the preliminary concept plans that were provided.

This report was prepared by Blackwell Consulting Ltd. for the Pinnacle Ridge Hillside development, and its' contents reflect the best assessment based on information provided. Any use that a third party makes from this report, or any decisions made based upon this report, are made at the sole risk of any such third party. Blackwell Consulting Ltd. accepts no responsibility for any damages or loss suffered by any third party or by the Client as a result of decisions made or actions based upon the use or reliance of this report by any such party.

Although every effort has been made to ensure that this assessment is accurate, the wildfire threat to the community should be periodically re-evaluated due to the constantly changing forest conditions and the potential impact of human-caused changes (such as development) on forest health and forest stand structure, which in turn may affect the wildfire threat.

Blackwell Consulting Ltd. accepts no responsibility for the implementation of any of the recommended mitigation work outlined in this report. Acceptance of this report and implementation of potential development in no way implies any inspection or supervisory role on the part of Blackwell Consulting Ltd.

This report shall be considered incomplete if any pages are missing. The original report has coloured illustrations. If the reader has a black and white copy the report shall be considered incomplete, and any interpretation of the report may be incorrect in the absence of a full colour copy. Blackwell Consulting Ltd. accepts no responsibility for any such misinterpretations.

Adjustments, assumptions, and the conclusions drawn in this report are based on the professional experience of Max Catt, RPF & Local FireSmart Representative, Ali Rahi, RPF & Local FireSmart Representative, and Bruce Blackwell, MSc, RPF of Blackwell Consulting Ltd. The opinions expressed are also based on written and verbal information supplied in part by other parties.

5.0 PROFESSIONAL REVIEW & SIGN-OFF

Project Forester

Max Catt, RPF, ISA Certified Arborist

Blackwell Consulting Ltd.

May 12, 2026

Reviewing Professional

Bruce Blackwell, MSc, RPF, RPBio

Blackwell Consulting Ltd.

May 12, 2026

APPENDIX A – FUEL TYPE DESCRIPTIONS

The fuel type descriptions below are examples from the AOI. Use this appendix as general guide and descriptor only.

Fuel Type	FBP / CFDDRS Description	Description in AOI	Wildfire Behaviour Under High Wildfire Danger Level	Fuel Type – Crown Fire / Spotting Potential
C-5	Red and white pine	Mature Douglas fir stands, with lesser parts western hemlock and western redcedar. Surface fuel loading is fairly low, but areas with higher surface fuel accumulations are present due to deadfall in the understory/codominant layers. Horizontal continuity of conifer ladder fuels is generally discontinuous, but there are some more dense areas present especially where higher amounts of light is coming through the canopy (roadside, deadfall areas). Crown base heights on mature conifer trees are generally quite high.	Moderate potential for active crown fire in wind-driven conditions. Under drought conditions, fuel consumption and fire intensity can be higher due to dead woody fuels.	Low*
M-1/2	Boreal mixedwood (leafless and green)	Mix of coniferous and deciduous species, to varying degrees. Surface fuel loading is typically low, but like some of the C-5 areas, higher surface fuel accumulations are present in spots due to deadfall in the understory/codominant layers. Although the crown base heights on some mature conifers are low, the horizontal continuity of conifer ladder fuels is generally discontinuous.	Surface fire spread, torching of individual trees, and intermittent crowning, (depending on slope and percent conifer).	<26% conifer (Very Low); 26-49% Conifer (Low); >50% Conifer (Moderate)
D-1/2	Aspen (leafless and green)	Deciduous stands. Surface fuel loading is low, conifer ladder fuel horizontal continuity is low, and the presence of overstory conifers is minimal.	Always a surface fire, low to moderate rate of spread and fire intensity.	Low

***C-5 fuel types can have a moderate potential for active crown fires when wind-driven.*

APPENDIX B – WTA PLOT FORMS

WTA-1

Wildfire Threat Assessment Worksheet – Fuel Assessment (Site Level) Plot # WTA-1

Location	Other (Specify in C	Date	2/20/25	Assessor/ Professional Designation	M. Catt	RPF
Coordinates (Lat/Long – Degrees/Decimal minutes):	49° 18'44.4" N, 122°50'14.0" W					
Crown Species Composition (species %)	Hw60Dr25Cw5Fd5Mb5					
Ladder Fuel Species Composition (species %)	Cw60Hw40					

	Component/ Sub Component	Levels/ Classes				
	Forest Floor and Organic Layer					
1	Depth of Organic layer (cm)	1–<2 (1)	2–<5 (3)	5–<10 (5)	10–20 (3)	>20 (2)
	Surface and Ladder Fuel (0.1 – 3.0 meters in height)					
2	Surface fuel composition	Moss, Herbs and Deciduous Shrubs (4)	Lichen, Conifer Shrubs (6)	Dead fines (Leaves, Needles or fine branch material) fuel (<1 cm) (8)	Pinegrass (10)	Sagebrush, Bunchgrass, Juniper Scotch broom (15)
3	Dead and Down material Continuity (<7cm)	Absent (0)	Scattered <10 coverage (4)	10 -25% coverage (8)	26-50% coverage (12)	>50% Coverage (15)
4	Ladder fuel composition	Deciduous (0)	Mixwood (5)	Other conifer (8)	Elevated dead fuel (10)	Spruce/ Fir/ Pine (15)
5	Ladder fuel horizontal continuity	Absent (0)	Sparse <10% coverage (2)	Scattered 10 – 39% coverage (8)	Patchy 40-60% coverage (10)	Uniform >60% coverage (15)
6	Stem/ha (understory)[3]	<500 (2)	501-800 (4)	801-1200 (6)	1201-1500 (8)	>1500 (10)
	Stand Structure and Composition (Dominant and Co- Dominate stems)					
7	Overstory Composition/ CBH (Crown Base Height)	Deciduous (< 25% conifer) (0)	Mixwood (% Conifer) 25% (0) 50% (2) 75% (3)	Conifer with high CBH (>10m) (3)	Conifer with moderate CBH (5-9M) (4)	Conifer with low CBH (<4m) (5)
8	Crown Closure	< 20% (0)	20 -40% (Or Deciduous) (1)	41-60% (2)	61-80% (5)	>80% (4)
9	Fuel Strata Gap[4] (m)		> 10 (0)	6-9 (1)	3-6 (3)	<3 (5)
10	Stems/ha live/ grn dom & codom (overstory)	<400 (0)	401-600 (2)	601-900 (3)	901-1 200 (4)	>1 200 (5)
11	Dead and Dying (% of dominant and co-dominant stems)		Standing Dead/ Partial down <20% (2)	Standing Dead/ Partial down 21-50% (5)	Standing Dead/ Partial down 51- 75% (8)	Standing Dead/ Partial down >75% (10)

Ecoprovince	Threat Assessment	WTA Total
Coast and Mountains, Georgia Depression (0/42/58/70)	Low	39

Comments:

Plot located in northwest portion of development, adjacent to proposed single family homes. Mixed stand. Fair amount of dead Hw in codominant layer. Hw have fairly low crown base heights. Surface fuels low but some patches from shedding branches and deadfall. Understory ladder fuels are present but not dense. Some dead ladder fuels. Understory dominated by deciduous herbs, primarily sword fern. Some invasives present on slope, mostly holly.

Low threat.

[3] Understory is considered ladder and suppressed stems in this category (distinct break between these stems and overstory)
[4] Fuel Strata Gap – Distance from top of ladder fuel to live crown base height of overstory

PROJECT: Pinnacle Ridge Hillside

PROJECT: Pinnacle Ridge Hillside

British Columbia Wildfire Service - Photo Guide

SITE INFORMATION Date Sampled: 2/20/25

Plot # WTA-1

General Location: Other (Specify in Con

Coordinates: 49°18'44.4" N, 122°50'14.0" W

FBP Fuel Type: M-1/2

Slope (%): 50

Aspect (deg.): 212

Elevation (m): 312

Canopy Closure (%): 50

Average Forest Floor Depth (cm): 7

Photo comment:

Theodolite

SURFACE FUELS:

Theodolite

LADDER FUELS

Photo Comment:

CROWN FUELS:

Theodolite

Photo Comment:

WTA 2

Wildfire Threat Assessment Worksheet – Fuel Assessment (Site Level) Plot # WTA-2

Location: Other (Specify in C) Date: 2/20/25 Assessor/ Professional Designation: M. Catt, RPF

Coordinates (Lat/Long – Degrees/Decimal minutes): 49°18'40.0" N, 122°50'12.4" W

Crown Species Composition (species %): Dr70Vb20Cw5Hw5(Fd)

Ladder Fuel Species Composition (species %): Dr70Cw20Fd5Hw5

	Component/ Sub Component	Levels/ Classes				
	Forest Floor and Organic Layer					
1	Depth of Organic layer (cm)	1–<2 1	2–<5 3	5–<10 5	10–20 3	>20 2
	Surface and Ladder Fuel (0.1 – 3.0 meters in height)					
2	Surface fuel composition	Moss, Herbs and Deciduous Shrubs 4	Lichen, Conifer Shrubs 6	Dead fines (Leaves, Needles or fine branch material) fuel (<1 cm) 8	Pinegrass 10	Sagebrush, Bunchgrass, Juniper Scotch broom 15
3	Dead and Down material Continuity (<7cm)	Absent 0	Scattered <10 coverage 4	10 -25% coverage 8	26-50% coverage 12	>50% Coverage 15
4	Ladder fuel composition	Deciduous 0	Mixwood 5	Other conifer 8	Elevated dead fuel 10	Spruce/ Fir/ Pine 15
5	Ladder fuel horizontal continuity	Absent 0	Sparse <10% coverage 2	Scattered 10 – 39% coverage 8	Patchy 40-60% coverage 10	Uniform >60% coverage 15
6	Stem/ha (understory)[3]	<500 2	501-800 4	801-1200 6	1201-1500 8	>1500 10
	Stand Structure and Composition (Dominant and Co- Dominate stems)					
7	Overstory Composition/ CBH (Crown Base Height)	Deciduous (< 25% conifer) 0	Mixwood (% Conifer) 25% 0 50% 2 75% 3	Conifer with high CBH (>10m) 3	Conifer with moderate CBH (5-9M) 4	Conifer with low CBH (<4m) 5
8	Crown Closure	< 20% 0	20 -40% (Or Deciduous) 1	41-60% 2	61-80% 5	>80% 4
9	Fuel Strata Gap[4] (m)		>10 0	6-9 1	3-6 3	<3 5
10	Stems/ha live/ grn dom & codom (overstory)	<400 0	401-600 2	601-900 3	901-1 200 4	>1 200 5
11	Dead and Dying (% of dominant and co-dominant stems)		Standing Dead/ Partial down <20% 2	Standing Dead/ Partial down 21-50% 5	Standing Dead/ Partial down 51- 75% 8	Standing Dead/ Partial down >75% 10

Ecoprovince: Coast and Mountains, Georgia Depression (0/42/58/70)

Threat Assessment: Low

WTA Total: 33

Comments:

Plot located in between Ridge Mountain Drive and proposed single family homes adjacent to Road 'B'. Deciduous stand with scattered conifers in overstory. Low surface fuel loading. Conifer ladder fuels present in understory, but sparse.

Low threat.

[3] Understory is considered ladder and suppressed stems in this category (distinct break between these stems and overstory)

[4] Fuel Strata Gap – Distance from top of ladder fuel to live crown base height of overstory

PROJECT: Pinnacle Ridge Hillside

PROJECT: Pinnacle Ridge Hillside

British Columbia Wildfire Service - Photo Guide

SITE INFORMATION Date Sampled: 2/20/25

Plot # WTA-2

General Location: Other (Specify in Con

Coordinates: 49°18'40.0" N, 122°50'12.4" W

FBP Fuel Type: D-1/2

Slope (%): 40

Aspect (deg.): 212

Elevation (m): 337

Canopy Closure (%): 30

Average Forest Floor Depth (cm): 7

Photo comment:

Theodolite

SURFACE FUELS:

Theodolite

LADDER FUELS

Photo Comment:

CROWN FUELS:

Theodolite

Photo Comment:

WTA 3

Wildfire Threat Assessment Worksheet – Fuel Assessment (Site Level) Plot # WTA-3

Location: Other (Specify in C) | Date: 2/20/25 | Assessor/ Professional Designation: M. Catt, RPF

Coordinates (Lat/Long – Degrees/Decimal minutes): 49°18'28.1" N, 122°50'16.6" W

Crown Species Composition (species %): 80Fd20Hw(Cw)

Ladder Fuel Species Composition (species %): 70Hw15Dead15Cw

	Component/ Sub Component	Levels/ Classes				
	Forest Floor and Organic Layer					
1	Depth of Organic layer (cm)	1–<2 (1)	2–<5 (3)	5–<10 (5)	10–20 (3)	>20 (2)
	Surface and Ladder Fuel (0.1 – 3.0 meters in height)					
2	Surface fuel composition	Moss, Herbs and Deciduous Shrubs (4)	Lichen, Conifer Shrubs (6)	Dead fines (Leaves, Needles or fine branch material) fuel (<1 cm) (8)	Pinegrass (10)	Sagebrush, Bunchgrass, Juniper Scotch broom (15)
3	Dead and Down material Continuity (<7cm)	Absent (0)	Scattered <10 coverage (4)	10 -25% coverage (8)	26-50% coverage (12)	>50% Coverage (15)
4	Ladder fuel composition	Deciduous (0)	Mixwood (5)	Other conifer (8)	Elevated dead fuel (10)	Spruce/ Fir/ Pine (15)
5	Ladder fuel horizontal continuity	Absent (0)	Sparse <10% coverage (2)	Scattered 10 – 39% coverage (8)	Patchy 40-60% coverage (10)	Uniform >60% coverage (15)
6	Stem/ha (understory)[3]	<500 (2)	501-800 (4)	801-1200 (6)	1201-1500 (8)	>1500 (10)
	Stand Structure and Composition (Dominant and Co- Dominate stems)					
7	Overstory Composition/ CBH (Crown Base Height)	Deciduous (< 25% conifer) (0)	Mixwood (% Conifer) 25% (0) 50% (2) 75% (3)	Conifer with high CBH (>10m) (3)	Conifer with moderate CBH (5-9M) (4)	Conifer with low CBH (<4m) (5)
8	Crown Closure	< 20% (0)	20 -40% (Or Deciduous) (1)	41-60% (2)	61-80% (5)	>80% (4)
9	Fuel Strata Gap[4] (m)		> 10 (0)	6-9 (1)	3-6 (3)	<3 (5)
10	Stems/ha live/ grn dom & codom (overstory)	<400 (0)	401-600 (2)	601-900 (3)	901-1 200 (4)	>1 200 (5)
11	Dead and Dying (% of dominant and co-dominant stems)		Standing Dead/ Partial down <20% (2)	Standing Dead/ Partial down 21-50% (5)	Standing Dead/ Partial down 51- 75% (8)	Standing Dead/ Partial down >75% (10)

Ecoprovince: Coast and Mountains, Georgia Depression (0/42/58/70)

Threat Assessment: Moderate

WTA Total: 44

Comments:

Plot located in southwest portion of development, adjacent to proposed townhomes along North Charlotte Road. C-5 stand. Surface fuels present, not super dense but jackpots exist throughout stand from deadfall. Deciduous shrub dominated understory, primarily salal. Ladder fuels present but fairly sparse. High crown base heights, but low fuel strata gap due to fairly continuous vertical continuity of ladder fuels.

Borderline Low/Moderate threat.

[3] Understory is considered ladder and suppressed stems in this category (distinct break between these stems and overstory)

[4] Fuel Strata Gap – Distance from top of ladder fuel to live crown base height of overstory

PROJECT: Pinnacle Ridge Hillside

PROJECT: Pinnacle Ridge Hillside

British Columbia Wildfire Service - Photo Guide

SITE INFORMATION Date Sampled: 2/20/25

Plot # WTA-3

General Location: Other (Specify in Con

Coordinates: 49°18'28.1" N, 122°50'16.6" W

FBP Fuel Type: C-5

Slope (%): 40

Aspect (deg.): 268

Elevation (m): 263

Canopy Closure (%): 65

Average Forest Floor Depth (cm): 4

SURFACE FUELS:

Photo comment:

Theodolite

Theodolite

LADDER FUELS

Photo Comment:

CROWN FUELS:

Theodolite

Photo Comment:

WTA 4

Wildfire Threat Assessment Worksheet – Fuel Assessment (Site Level) Plot # WTA-4

Location: Other (Specify in C) | Date: 2/26/25 | Assessor/ Professional Designation: M. Catt, RPF

Coordinates (Lat/Long – Degrees/Decimal minutes): 49°18'24.8" N, 122°50'07.9" W

Crown Species Composition (species %): 40Mb30Dr20Hw10Fd(Cw)

Ladder Fuel Species Composition (species %): 50Decid25Cw25Hw

	Component/ Sub Component	Levels/ Classes				
	Forest Floor and Organic Layer					
1	Depth of Organic layer (cm)	1–<2 (1)	2–<5 (3)	5–<10 (5)	10–20 (3)	>20 (2)
	Surface and Ladder Fuel (0.1 – 3.0 meters in height)					
2	Surface fuel composition	Moss, Herbs and Deciduous Shrubs (4)	Lichen, Conifer Shrubs (6)	Dead fines (Leaves, Needles or fine branch material) fuel (<1 cm) (8)	Pinegrass (10)	Sagebrush, Bunchgrass, Juniper Scotch broom (15)
3	Dead and Down material Continuity (<7cm)	Absent (0)	Scattered <10 coverage (4)	10 -25% coverage (8)	26-50% coverage (12)	>50% Coverage (15)
4	Ladder fuel composition	Deciduous (0)	Mixwood (5)	Other conifer (8)	Elevated dead fuel (10)	Spruce/ Fir/ Pine (15)
5	Ladder fuel horizontal continuity	Absent (0)	Sparse <10% coverage (2)	Scattered 10 – 39% coverage (8)	Patchy 40-60% coverage (10)	Uniform >60% coverage (15)
6	Stem/ha (understory)[3]	<500 (2)	501-800 (4)	801-1200 (6)	1201-1500 (8)	>1500 (10)
	Stand Structure and Composition (Dominant and Co- Dominate stems)					
7	Overstory Composition/ CBH (Crown Base Height)	Deciduous (< 25% conifer) (0)	Mixwood (% Conifer) 25% (0) 50% (2) 75% (3)	Conifer with high CBH (>10m) (3)	Conifer with moderate CBH (5-9M) (4)	Conifer with low CBH (<4m) (5)
8	Crown Closure	< 20% (0)	20 -40% (Or Deciduous) (1)	41-60% (2)	61-80% (5)	>80% (4)
9	Fuel Strata Gap[4] (m)		> 10 (0)	6-9 (1)	3-6 (3)	<3 (5)
10	Stems/ha live/ grn dom & codom (overstory)	<400 (0)	401-600 (2)	601-900 (3)	901-1 200 (4)	>1 200 (5)
11	Dead and Dying (% of dominant and co-dominant stems)		Standing Dead/ Partial down <20% (2)	Standing Dead/ Partial down 21-50% (5)	Standing Dead/ Partial down 51- 75% (8)	Standing Dead/ Partial down >75% (10)

Ecoprovince: Coast and Mountains, Georgia Depression (0/42/58/70) | Threat Assessment: Low | WTA Total: 30

Comments:

Plot located in southern portion of development tucked in between proposed townhomes. Mixed stand, but deciduous dominated. Herb dominated understory, primarily sword fern. Minimal surface fuels. Low crowns on mature conifers, but conifer ladder fuels are sparse.

Low threat.

[3] Understory is considered ladder and suppressed stems in this category (distinct break between these stems and overstory)

[4] Fuel Strata Gap – Distance from top of ladder fuel to live crown base height of overstory

PROJECT: Pinnacle Ridge Hillside

PROJECT: Pinnacle Ridge Hillside

British Columbia Wildfire Service - Photo Guide

SITE INFORMATION Date Sampled: 2/26/25

Plot # WTA-4

General Location: Other (Specify in Con

Coordinates: 49°18'24.8" N, 122°50'07.9" W

FBP Fuel Type: M-1/2

Slope (%): 38

Aspect (deg.): 102

Elevation (m): 305

Canopy Closure (%): 30

Average Forest Floor Depth (cm): 8

SURFACE FUELS:

Photo comment:

Theodolite

Theodolite

LADDER FUELS

Photo Comment:

CROWN FUELS:

Theodolite

Photo Comment:

WTA 5

Wildfire Threat Assessment Worksheet – Fuel Assessment (Site Level) Plot # WTA-5

Location: Other (Specify in C) Date: 2/26/25 Assessor/ Professional Designation: M. Catt, RPF

Coordinates (Lat/Long – Degrees/Decimal minutes): 49°18'29.6" N, 122°50'12.4" W

Crown Species Composition (species %): 90Fd10Hw

Ladder Fuel Species Composition (species %): 40Hw30Cw30Dead

	Component/ Sub Component	Levels/ Classes				
	Forest Floor and Organic Layer					
1	Depth of Organic layer (cm)	1–<2 (1)	2–<5 (3)	5–<10 (5)	10–20 (3)	>20 (2)
	Surface and Ladder Fuel (0.1 – 3.0 meters in height)					
2	Surface fuel composition	Moss, Herbs and Deciduous Shrubs (4)	Lichen, Conifer Shrubs (6)	Dead fines (Leaves, Needles or fine branch material) fuel (<1 cm) (8)	Pinegrass (10)	Sagebrush, Bunchgrass, Juniper Scotch broom (15)
3	Dead and Down material Continuity (<7cm)	Absent (0)	Scattered <10 coverage (4)	10 -25% coverage (8)	26-50% coverage (12)	>50% Coverage (15)
4	Ladder fuel composition	Deciduous (0)	Mixwood (5)	Other conifer (8)	Elevated dead fuel (10)	Spruce/ Fir/ Pine (15)
5	Ladder fuel horizontal continuity	Absent (0)	Sparse <10% coverage (2)	Scattered 10 – 39% coverage (8)	Patchy 40-60% coverage (10)	Uniform >60% coverage (15)
6	Stem/ha (understory)[3]	<500 (2)	501-800 (4)	801-1200 (6)	1201-1500 (8)	>1500 (10)
	Stand Structure and Composition (Dominant and Co- Dominate stems)					
7	Overstory Composition/ CBH (Crown Base Height)	Deciduous (< 25% conifer) (0)	Mixwood (% Conifer) 25% (0) 50% (2) 75% (3)	Conifer with high CBH (>10m) (3)	Conifer with moderate CBH (5-9M) (4)	Conifer with low CBH (<4m) (5)
8	Crown Closure	< 20% (0)	20 -40% (Or Deciduous) (1)	41-60% (2)	61-80% (5)	>80% (4)
9	Fuel Strata Gap[4] (m)		> 10 (0)	6-9 (1)	3-6 (3)	<3 (5)
10	Stems/ha (overstory) live/ grn dom & codom	<400 (0)	401-600 (2)	601-900 (3)	901-1 200 (4)	>1 200 (5)
11	Dead and Dying (% of dominant and co-dominant stems)		Standing Dead/ Partial down <20% (2)	Standing Dead/ Partial down 21-50% (5)	Standing Dead/ Partial down 51- 75% (8)	Standing Dead/ Partial down >75% (10)

Ecoprovince: Coast and Mountains, Georgia Depression (0/42/58/70)

Threat Assessment: Moderate

WTA Total: 46

Comments:

Plot located adjacent to proposed townhomes, in between North Charlotte Road and Ridge Mountain Drive. C-5 stand. Fd dominated. Patchy surface fuel loading from Hw deadfall. Fairly dense in areas. Still some standing dead Hw in codom layer. Will contribute so surface fuel loading in future. High crown base heights, but multi-layered stand so low fuel strata gap. Ladder fuels present but fairly sparse.

Surface fuel removal (of fines, less than 7cm dbh) would be priority. Along with removing ladder fuels except those that are open grown (not under dripline of mature conifers).

Borderline Low/Moderate threat.

[3] Understory is considered ladder and suppressed stems in this category (distinct break between these stems and overstory)

[4] Fuel Strata Gap – Distance from top of ladder fuel to live crown base height of overstory

PROJECT: Pinnacle Ridge Hillside

PROJECT: Pinnacle Ridge Hillside

British Columbia Wildfire Service - Photo Guide

SITE INFORMATION Date Sampled: 2/26/25

Plot # WTA-5

General Location: Other (Specify in Con

Coordinates: 49°18'29.6" N, 122°50'12.4" W

FBP Fuel Type: C-5

Slope (%): 32

Aspect (deg.): 258

Elevation (m): 297

Canopy Closure (%): 70

Average Forest Floor Depth (cm): 9

SURFACE FUELS:

Photo comment:

Theodolite

Theodolite

LADDER FUELS

Photo Comment:

CROWN FUELS:

Theodolite

Photo Comment:

WTA 6

Wildfire Threat Assessment Worksheet – Fuel Assessment (Site Level) Plot # WTA-6

Location: Other (Specify in C | Date: 2/26/25 | Assessor/ Professional Designation: M. Catt

Coordinates (Lat/Long – Degrees/Decimal minutes): 49°18'32.2" N, 122°50'13.7" W | RPF

Crown Species Composition (species %): Fd90Hw10

Ladder Fuel Species Composition (species %): Hw50Cw40Dead10

	Component/ Sub Component	Levels/ Classes				
	Forest Floor and Organic Layer					
1	Depth of Organic layer (cm)	1–<2 (1)	2–<5 (3)	5–<10 (5)	10–20 (3)	>20 (2)
	Surface and Ladder Fuel (0.1 – 3.0 meters in height)					
2	Surface fuel composition	Moss, Herbs and Deciduous Shrubs (4)	Lichen, Conifer Shrubs (6)	Dead fines (Leaves, Needles or fine branch material) fuel (<1 cm) (8)	Pinegrass (10)	Sagebrush, Bunchgrass, Juniper Scotch broom (15)
3	Dead and Down material Continuity (<7cm)	Absent (0)	Scattered <10 coverage (4)	10 -25% coverage (8)	26-50% coverage (12)	>50% Coverage (15)
4	Ladder fuel composition	Deciduous (0)	Mixwood (5)	Other conifer (8)	Elevated dead fuel (10)	Spruce/ Fir/ Pine (15)
5	Ladder fuel horizontal continuity	Absent (0)	Sparse <10% coverage (2)	Scattered 10 – 39% coverage (8)	Patchy 40-60% coverage (10)	Uniform >60% coverage (15)
6	Stem/ha (understory)[3]	<500 (2)	501-800 (4)	801-1200 (6)	1201-1500 (8)	>1500 (10)
	Stand Structure and Composition (Dominant and Co- Dominate stems)					
7	Overstory Composition/ CBH (Crown Base Height)	Deciduous (< 25% conifer) (0)	Mixwood (% Conifer) 25% (0) 50% (2) 75% (3)	Conifer with high CBH (>10m) (3)	Conifer with moderate CBH (5-9M) (4)	Conifer with low CBH (<4m) (5)
8	Crown Closure	< 20% (0)	20 -40% (Or Deciduous) (1)	41-60% (2)	61-80% (5)	>80% (4)
9	Fuel Strata Gap[4] (m)		> 10 (0)	6-9 (1)	3-6 (3)	<3 (5)
10	Stems/ha live/ grn dom & codom (overstory)	<400 (0)	401-600 (2)	601-900 (3)	901-1 200 (4)	>1 200 (5)
11	Dead and Dying (% of dominant and co-dominant stems)		Standing Dead/ Partial down <20% (2)	Standing Dead/ Partial down 21-50% (5)	Standing Dead/ Partial down 51- 75% (8)	Standing Dead/ Partial down >75% (10)

Ecoprovince: Coast and Mountains, Georgia Depression (0/42/58/70) | Threat Assessment: Moderate | WTA Total: 50

Comments:

Plot located north of WTA-5, in between proposed townhomes. C-5 stand. Less surface fuel loading, but higher ladder fuel horizontal continuity than WTA-5. High crown base heights, but low fuel strata gaps. Displays the varying stand structures throughout C-5 areas of development.

Moderate threat.

[3] Understory is considered ladder and suppressed stems in this category (distinct break between these stems and overstory)

[4] Fuel Strata Gap – Distance from top of ladder fuel to live crown base height of overstory

PROJECT: Pinnacle Ridge Hillside

PROJECT: Pinnacle Ridge Hillside

British Columbia Wildfire Service - Photo Guide

SITE INFORMATION Date Sampled: 2/26/25

Plot # WTA-6

General Location: Other (Specify in Con

Coordinates: 49°18'32.2" N, 122°50'13.7" W

FBP Fuel Type: C-5

Slope (%): 35

Aspect (deg.): 255

Elevation (m): 300

Canopy Closure (%): 65

Average Forest Floor Depth (cm): 8

SURFACE FUELS:

Photo comment:

Theodolite

Theodolite

LADDER FUELS

Photo Comment:

CROWN FUELS:

Theodolite

Photo Comment:

APPENDIX C – COVENANT AND REGISTERED BUILDING SCHEME

For any structures that encroach past the recommended 10 metre setback from the forest interface (to an absolute minimum setback of 5 metres), the following FireSmart construction and vegetation guidelines are mandatory and must be followed. Property owners and/or builders will be required to show how they meet these conditions at the time of the building permit application. Additionally, the Village of Anmore will be required to sign off on each structure.

We would recommend that the following requirements be secured through a Section 219 Restrictive Covenant[25] and/or registered Building Scheme on title.

- Exterior roof-top sprinklers must be installed
- Roofing materials must be Class A fire-rated and approved by a qualified wildfire professional
- Cladding, trim, eaves, fascia, soffits, and decks/porches/balconies must be built with Class A fire-rated materials approved by a qualified wildfire professional
- Gutters must consist of Class A fire-rated materials approved by a qualified wildfire professional
- Windows must consist of tempered or multi-paned glass
- Eaves must be closed
- Soffits must be closed or have ventilation strips with openings less than 3 mm in diameter
- Balconies, decks, and porches must be sheathed in (no exposed joists) with a one-hour fire-rated construction material and constructed with Class A fire-rated materials approved by Blackwell
- Exterior wall vents must be closed or screened with a metal 3 mm wire cloth or mesh
- The FireSmart Immediate Zone (0 - 1.5 metres from structure) must be constructed with non-flammable materials such as gravel, brick, or concrete
- There must be no vegetation within 1.5 metres of structures
- There must be no coniferous vegetation within 5 metres of structures, including all attachments such as decks and eaves

[25] https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/96250_15