



**District of Invermere Wildfire Protection DPA
Fire Smart Home and Yard Assessment**

**Completed for:
HTH Contracting Ltd.
2525 – Ledge Rock Ridge – Castlerock Estates**

Assessment Completed by:
Wildlands Eco-Forestry Inc.
Box 723 Invermere, BC
V0A 1K0
250 688 4663
www.wildlands-inc.ca
Brad Munroe, President
Zone 1 Home Ignition Zone Assessor

1.0 INTRODUCTION

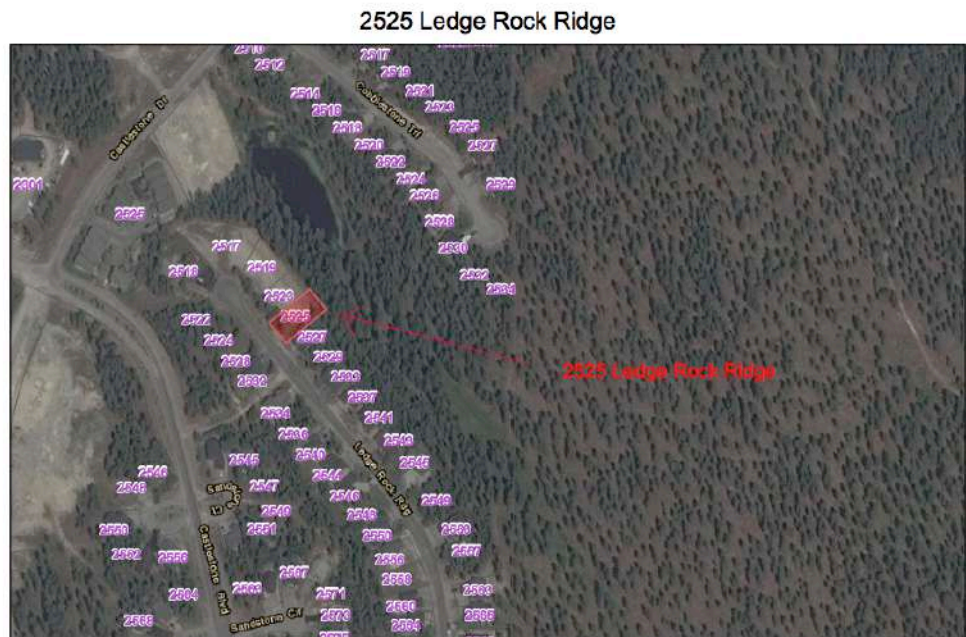
This report provides the findings and recommendations of a Firesmart Home and Yard Assessment completed for a new single family Residence proposed at 2525 Ledge Rock Ridge, Phase I of Castlerock Estates within the municipal boundary of Invermere, B.C. This assessment and report was completed by Brad Munroe of Wildlands Eco-Forestry Inc. at the request of HTH Contracting limited acting as the Property owner’s agent.

As it is understood by Wildlands Eco-Forestry Inc. that the District of Invermere requires a home and site evaluation (Appendix 1) and report addressing the requirements contained within the District of Invermere’s Official Community Plan Hazardous Lands Development Permit Area – Section 4.6 Wildfire Protection D.P.A. prior to issuance of a building permit.

The purpose of the assessment is to determine the Firesmart home and yard interface risk rating and to address the Wildfire Protection DPA requirements outlined in section 4.6.3 (3) of the OCP, (Appendix 3.)

2.0 SITE LOCATION DESCRIPTION

The proposed building site location is situated in a neighbourhood known locally as Phase one of Castlerock Estates in the District of Invermere. The site is located on the west side of the Rocky Mountain Trench upslope of the west shores of Windermere Lake.



4/8/2019, 9:33:01 PM

1:5,000
0 0.03 0.06 0.11 mi
0 0.04 0.09 0.17 km
Data, HERE, DeLorme, © OpenStreetMap contributors, Copyright DigitalGlobe

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Use of this data without verification from original source material is at your own risk. The geo-referenced location cannot be guaranteed and should not be used for navigational purposes.

The proposed building site is on the top of a ridge formation above a gentle eastern aspect slope encompassing a large natural area below which has had extensive FireSmart forest fuel management. The property is located on upper bench lands with a slope that descends southeast to Windermere Lake and is situated on the southern edge of the District of Invermere municipal boundary.



3.0 DESCRIPTION OF FORESTED LANDS:

The proposed parcel is located within the Interior Douglas fir Biogeoclimatic classification system, specifically within a Douglas fir ecosystem that naturally maintains attributes associated with open forest types by way of frequent, low intensity wildfires.

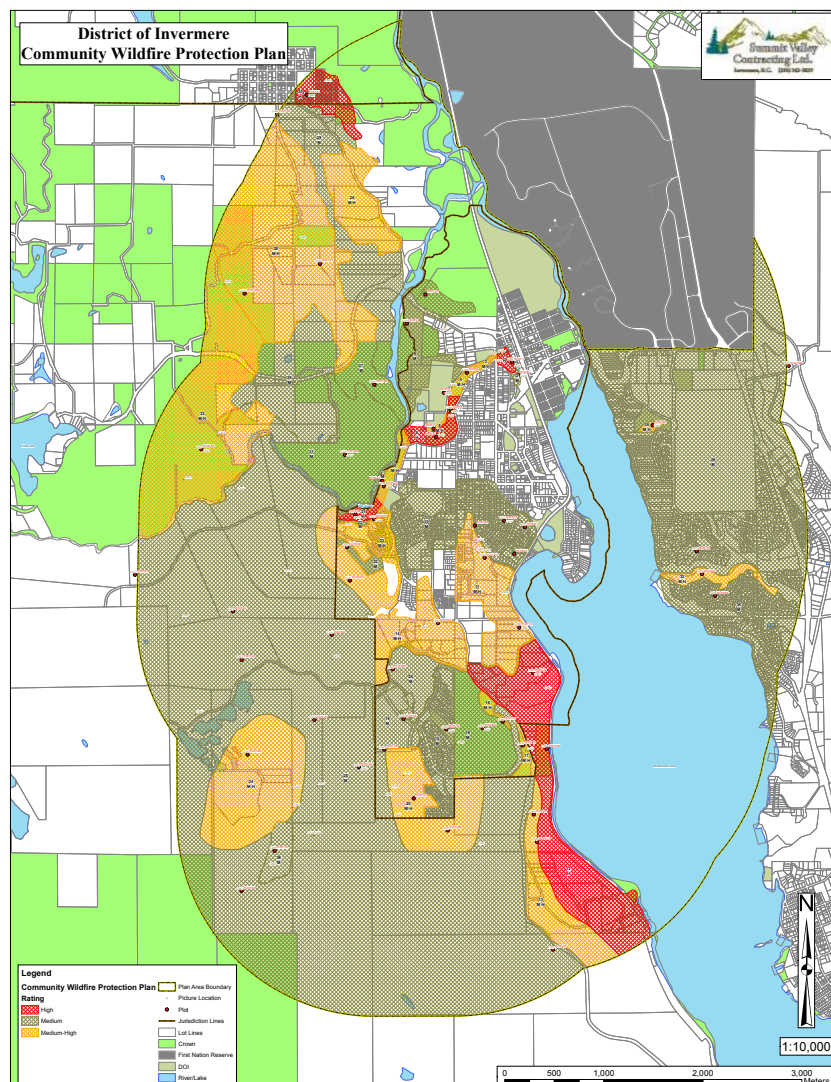
Under the BC Natural Disturbance Regime classification system, this area falls with the open forest Natural Disturbance Type: NDT-4 (ecosystems with frequent stand-maintaining fires). Fire suppression and forest management activities inside the District lands, within the surrounding local Crown lands and the adjacent private lands have altered this cycle creating forests with greater fuel loads than would historically occur.

4.0 COMMUNITY WILDFIRE PROTECTION PLANNING:

The District of Invermere has adopted and acted upon a Community Wildfire Protection Plan, (CWPP) addressing the community internally as well as a 2km treatment perimeter surrounding the District’s municipal boundaries. Critical components of this CWPP development consisted of the following aspects; an overview evaluation of the overall local wildfire risk, establishing risk rating zones and using this information to lead the Wildfire DPA designation.

The wildfire risk to Lot 2525 Ledge Rock Ridge generated in this evaluation process is inserted below and specifies a number of High-risk polygons within the plan area and within the Castlerock Estates development itself.

CWPP map and adjacent hazard rating below. (The District of Invermere has a larger map available for viewing at: (<https://invermere.civicweb.net/document/28880>)





5.0 OFFICIAL COMMUNITY PLAN SECTION 4.6 WILDFIRE DPA REQUIREMENTS:

a) Identification of Wildfire Hazards

The following assessment is based on the Firesmart Homeowners Assessment Guidelines combined with a site evaluation completed April 5th, 2019 and without having the proposed property development site plans. Consultation and input was also received from Kyle Moll of HTH Contracting and Rory Hromadnik, Development Services, District of Invermere. The assessment results indicated:

Zone 1 Home Assessment score	6 (assuming FS Zone 1 building recommendations)
Zone 1 Yard assessment Score is	30
Zone 2 yard assessment Score is	30

Total Zone 1 Firesmart score and Hazard level: 6 - LOW

b) Mitigation requirements to reduce Wildfire Hazards

No mitigation requirements are required for the proposed Structure. It is recommended that the proposed structure development parcel follow District of Invermere building guidelines referring to Section 4.6 Wildfire Protection DPA of the DOI's Official Community Plan; "subdivision and building plan schemes should incorporate 'FireSmart' principles as outlined in FireSmart, Protecting Your Community from Wildfire (July 2003)".

Vegetative controls within the 10m distances from the home will need to be implemented. There are a couple of mature Douglas fir trees within the property. If there are conifers retained within the 10 m zone 1 at completion of landscaping they must meet FireSmart recommendations including pruning of main bole to minimum of 2m above ground and no limbs within 3m of any structures.

There is no Zone 2 Yard assessment required to evaluate with this parcel and development plan. A completed Zone 2 Yard assessment is submitted for reference.

c) Proposed use of the Subject lot.

Single Family Residential development.

d) Proposed location of structures

The Single Family residence parcel for development was evaluated based on a single structure proposal which (will) meet the Residential Zone 1 setback requirements for the District of Invermere:



The rear of the property (east) is above a forested natural area within the community that has had previous FireSmart vegetative treatment. Additional clearing to FireSmart guidelines at the property line is recommended.



No additional buildings are proposed.



e) Landscaping

No landscaping plan is required with the building permit. It is recommended that the landscaping consist of non-coniferous species and the best practice Yard consideration recommendations within the Firesmart Home Owner's assessment Appendix 2.

f) Access and traffic circulation

Principle access is provided by way of Lakeview Rise and Brewer Ridge Rise. Gravel access off of the west edge of Brewer Ridge Rise provides a loop access from an emergency ingress and egress perspective during the spring through fall fire seasons. Castlerock Estates overall development has alternative access points off of Johnston Road and Castlestone Boulevard.

g) Location of fire protection infrastructure.

Hydrants are strategically located curbside throughout the community. The District of Invermere Fire Department is approximately 5.8 km's north of Lot 2525.

Location Map - 2525 Ledge Rock Ridge



The Castlerock Estate community is located outside of the District of Invermere's 10 minute fire response zone and will be evaluated for building code compliance based on this limitation. There is no impact on the Firesmart assessment procedure.

Appendix 1
Firesmart Home and Yard Hazard Score Evaluation
2525 – Ledgerrock Ridge

 **FIRESMART SCORE CARD**

Assess Your Risk from Wildfire

Answer the questions below to see what changes will make the greatest difference in reducing your home's risk from wildfire.

HOME / 10 metres		ZONE 1	
What type of roofing material do you have?	Metal, clay tile, asphalt shingle or ULC-rated shakes (may be affected by the condition of your roof)	0	0
	Unrated wood shakes	30	
How clean is your roof?	No needles, leaves or other combustible materials	0	0
	A scattering of needles and leaves	2	
	Clogged gutters and extensive leaves	3	
What is the exterior of your home built of?	Non-combustible material stucco, metal siding or brick	0	0
	Logs or heavy timbers	1	
	Wood, vinyl siding or wood shakes	6	
How fire resistant are your windows and doors?	Tempered glass in all doors/windows	0	0
	Double-pane glass - Small/medium (<1 metre x 1 metre)	1	
	Double-pane glass - Large (>1 metre x 1 metre)	2	
	Single-pane glass - Small/medium (<1 metre x 1 metre)	2	
	Single-pane glass - Large (>1 metre x 1 metre)	4	
Are your eaves closed up and vents screened?	Closed eaves, vents screened with 3 millimetre wire mesh	0	0
	Closed eaves, vents without mesh	1	
	Open eaves, vents not screened	6	

**Appendix 1
Firesmart Home and Yard Hazard Score Evaluation
2525 – Ledgerrock Ridge**

HOME / 10 metres		ZONE 1	
Have you sheathed-in the underside of your balcony, deck, porch or open foundation?	Sheathed with fire-resistant materials	0	0
	Sheathed with combustible materials	2	
	Not sheathed	6	
Is your home set back from the edge of a slope?	Building is located on the bottom or lower portion of a hill	0	6
	Building is located on the mid to upper portion or crest of a hill	6	
HOME SCORE			6
YARD / Within 10 metres of home		ZONE 1	
Where is your woodpile located?	More than 10 metres away from any building	0	0
	Less than 10 metres away from any building	6	
What type of forest grows within 10 metres of your home? <i>Potential mature DF trees retained as Feature trees - individuals</i>	TREES		30
	Deciduous (i.e. poplar, birch)	0	
	Mixed wood (both conifer and deciduous)	30	
	Conifer (i.e. spruce, pine, fir, cedar)	30	
What kind of surface vegetation and combustible materials are within 10 metres of your home and outbuildings?	Well-drained lawn or non-combustible landscaping material	0	0
	Uncut grass or shrubs	30	
	Twigs, branches and tree needles on the ground	30	
YARD (within 10 metres of home) SCORE			30

Appendix 1
Firesmart Home and Yard Hazard Score Evaluation
2525 – Ledgerrock Ridge

YARD / 10 metres - 30 metres **ZONE 2**

What kind of surface vegetation grows within 10 - 30 metres of your home?	TREES		10
	Deciduous (i.e. poplar, birch, cottonwood)	0	
	Mixedwood (both conifer and deciduous)	10	
	CONIFER (i.e. spruce, pine, fir, cedar) <i>See illustration below*</i>		10
	Separated	10	
	Continuous	30	
	TWIGS, BRANCHES AND NEEDLES ON THE GROUND		5
	Scattered	5	
	Abundant	30	
	Are there shrubs and low branches (within 2 metres of the ground) in the surrounding forest?	Uncut grass or shrubs	5
None within 10 metres - 30 metres		0	5
Scattered within 10 metres - 30 metres of buildings		5	
Abundant within 10 metres - 30 metres of buildings	10		
YARD (10 metres - 30 metres) SCORE			30



SEPARATED
Trees are widely spaced and crowns do not touch or overlap



CONTINUOUS
High stand density where trees are tightly spaced and crowns frequently touch or overlap

Appendix 2
Firesmart Home Owners Assessment Summary & Considerations
2525 – Ledgerrock Ridge

Home and Yard Hazard Score

SITE		TOTAL SCORE
Zone 1 / Home and Yard	Home	6 (L)
	10 metres from the home	30 (H)
Zone 2 / Yard	10 metres - 30 metres from the home	30 (H)

HAZARD: Low: <21 Moderate: 21-29 High: 30-35 Extreme: >35

HOME CONSIDERATIONS

- Have you discussed wildfire damage and loss with your insurance provider?
- Is your roof in poor condition? A roof in poor condition will not provide protection from sparks and embers. Fire resistance deteriorates over time; check manufacturer guidelines to assess roof condition and potential fire resistance.
- Is your chimney clean? Does it have proper clearances, screens and spark arrestors?

YARD CONSIDERATIONS

- Is the area within 10 metres of buildings free of flammable trees, other vegetation and combustible materials?
- Are large capacity propane tanks within 10 metres of buildings? Are they clear of vegetation?
- Is fire suppression equipment readily available? Shovels, rakes, buckets and hoses should be easily accessible.
- Are burn barrels screened and at least 10 metres from combustible materials and buildings?
- Are overhead power lines clear of vegetation? Contact your service provider for assistance with removing trees in close proximity to utility lines.

**Appendix 3
Official Community Plan Wildfire Protection DPA
2525 – Ledgerrock Ridge**

4.6 Wildfire Protection DPA

4.6.1 Area Designation

Invermere is located within the Rocky Mountain trench, an area that historically experienced periodic wildfires resulting in open forest / grassland type ecosystems. In the past 100 years, fire suppression has enabled the local forest land to become overly dense, creating a high risk of intense wildfire threatening the community.

Structures located within these areas of forest land are prone to a significant threat from forest wildfire. In areas identified as having a Moderate-High, High or Extreme risk rating, treatments which reduce the fuel loading may be necessary to reduce the threat of wildfire to structures.

The areas outlined on the facing map, (and those shown on the District of Invermere Community Wildfire Protection Plan) are hereby designated as a Hazardous Area Development Permit Area under the Local Government Act. For development to occur on these sites, all applicants shall comply with the requirements contained within this chapter. In addition, subdivision and building plan schemes should incorporate "FireSmart" principles as outlined in FireSmart, Protecting Your Community from Wildfire (July 2003).

4.6.2 Justification & Objectives

There are areas within the community that contain a significant risk to wildfire due to excessive forestland fuel loading. It is in the District's and the public's interest to ensure that areas identified as containing a Moderate-High, High or Extreme classification have fuel loading reduced to lower the risk of property damage or loss of life from wildfire.

- The objectives are as follows:**
- To regulate development in the community in such a manner that protects against injury to persons and damage to property from wildfire.
 - To restore forest land to its natural (open) state.
 - To notify the public of the areas of higher wildfire risk within the District of Invermere.



4.6.3 Guidelines

1. Public areas and parkland in proposed subdivisions will have fuel reduction treatments completed as a condition of subdivision approval.
2. Established residences will be encouraged to complete modifications to property vegetation and structures to reduce the hazards posed by interface fire.
3. Prior to issuance of a development permit, the District will require that the applicants submit, at their expense, a detailed assessment that outlines and demonstrates adherence to the following:
 - a) Identification of the wildfire hazards.
 - b) Mitigation requirements to reduce wildfire hazards. This will include architectural controls as necessary to reduce the hazards.
 - c) The proposed use of the subject lot or building.
 - d) The location of buildings and other structures in relation to one another within the subject lot and in relation to buildings and structures on adjacent lots.
 - e) Landscaping, including buffering and screening where provided.
 - f) Access and internal traffic circulation.
 - g) Proposed exterior building materials.
 - h) The location of existing and proposed fire suppression infrastructure.

Appendix 3
Official Community Plan Wildfire Protection DPA
2525 – Ledgerrock Ridge



District of Invermere - Official Community Plan Update 2014 - 2015

