

Development Permit Area DRAFT

The Village of New Denver

Wildfire Hazard Development Permit Area

February 2023

Prepared for: The Village of New Denver

These DPA Guidelines are based in part on: *The Regional District of Central Kootenay
DRAFT Development Permit Guideline Options & Template
Wildfire Development Permit Area*

DRAFT

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SAMPLE OFFICIAL COMMUNITY PLAN TEXT

Purpose

The Wildfire Hazard Development Permit Area is established for the protection of development from hazardous conditions associated with wildfires.

Application

Lands designated as Wildfire Hazard Development Permit Area are shown on Schedule A – Wildfire Hazard Development Permit Area Map. The Wildfire Hazard Development Permit Area establishes objectives for the protection of *development* from wildfire, pursuant to Section 488(1)(b) of the Local Government Act.

Justification

A Community Wildfire Protection Plan for RDCK Area H North (New Denver / Silverton) was prepared by the Slocan Integral Forestry Cooperative (SIFCo) in 2020 to address wildfire threat and identified a significant amount of land as forested or adjacent to forest land and posing a risk from wildfire. Because the municipality of the Village of New Denver interfaces with densely forested areas, wildfire is an ever-present threat. Wildfire can spread quickly and burning debris can be thrown up to two kilometers ahead of a wildfire where it may ignite materials and structures.

Development within and abutting forested areas of moderate to high wildfire hazard could expose people, infrastructure, and property to elevated risk if the design of the proposed development does not effectively mitigate adverse impacts from wildfire.

The adverse impact that wildfire poses to the environment, people, and property can be managed and mitigated through appropriate development policy, education, and continual management efforts. Successful strategies for mitigating the adverse impacts from wildfire are often multi-layered, with requirements and guidance for new development at the time of rezoning, subdivision, or building permit playing a key role in building wildfire resilience for new development. This Wildfire Hazard Development Permit Area and its guidelines are considered a minimum in relation to subdivision, construction of new homes, and certain property modifications. The accumulation of guidelines will contribute to the mitigation of the adverse impacts of wildfire. This Development Permit Area is only one of the tools necessary to address wildfire risk in the Village of New Denver. Hazard mitigation guides such as the FireSmart BC Homeowner’s Manual should also be utilized.

Objectives

The Wildfire Hazard Development Permit Area is established to:

1. Ensure that development within the Wildfire Hazard DPA is managed in a way that:
 - a. Mitigates the risk of personal injury and property damage or loss from wildfire hazards;
 - b. Promotes activities to reduce wildfire hazards while addressing environmental issues; and
 - c. Increases the community’s resilience to wildfire hazards and climate change.
2. Proactively manage conditions affecting potential fire behaviour, thereby increasing the probability of successful fire suppression and containment.

The following definitions are used for the purpose of defining the development permit area above:

‘Development’ means any activity referred to in section 489 of the Local Government Act and includes alteration or development of land for residential, commercial, industrial, institutional, service or utility uses or activities, to

the extent that these uses or activities are subject to local government powers under the *Local Government Act* **'Wildfire Mitigation Specialist'** A professional that has specialized training in wildfire mitigation. Training could include a diploma in or equivalent experience in the following; Forest Technology, Natural Resource Management, Structural Firefighting, and/or Wildland Firefighting and has completed the FireSmart Wildfire Mitigation Specialist Training.

Development Requiring a Permit

A Development Permit is required prior to any development within the Wildfire Hazard Development Permit Area, except where exempt under **Section XX** (Exemptions) below. Where not exempted, development requiring a development permit includes:

1. Subdivision of land where the number of parcels is increased; and
2. Construction of, or alteration of, a building or other structure.

Exemptions

A Wildfire Hazard Development Permit is not required for:

- Development on lands subject to a Section 219 Restrictive Covenant that is registered in favor of the Village for the protection of development from wildfire hazard;
- Interior renovations to existing buildings;
- The construction of, or alterations to, accessory buildings or structures that are not in excess of 9.33 square meters (100 sq. ft);
- Additions to existing approved buildings that are not in excess of 25% of the existing gross floor area;
- A new roof or a complete roof replacement using material that conforms to Class A or B fire resistance when tested in accordance with ASTM E108 or UL 790;
- Any development comprised entirely of non-flammable materials such as metal, stone, or concrete;
- Addition of rooftop equipment (e.g. HVAC);
- Addition of canopies or other decorative roof structures;
- Other minor works, as determined by the Corporate Officer or their designate;
- Boundary adjustments between two lots when no new additional properties are created; or
- Public works or infrastructure, including roads, bridges, sewer, and water infrastructure, and electrical distribution systems.

Guidelines

The following sections have been divided as per FireSmart BC's guidelines.

Building Materials

Roofing Materials

Roofs catching fire are the number one cause of building losses during a wildfire event. Sparks and burning embers from a wildfire can travel long distances and quickly ignite flammable roofing material and/or combustible debris on the roof or in the gutters. Roofing material has several classifications with Class A being the most fire resistant. Some materials that either fall within the rating system or, can be obtained in forms that meet Class A or B requirements, include composite (asphalt and fiberglass) shingles, concrete or clay tile, and metal roofing.

- The roof covering shall conform to Class A or B fire resistance when tested in accordance with ASTM E108 or UL 790.

- Gutters should be made of metal.
- Screen or close gutters to prevent the accumulation of leaves or needles using 3mm noncombustible wire mesh.
- The following landscaping guidelines apply to green roofs:
 - grasses that will grow over 20 cm are not supported; and
 - juniper, cedar, and yew are not supported.

Exterior Cladding

Second only to the roof material, siding material is the part of the building most prone to ignite in a wildfire event. The intense heat of the fire itself, fire embers, and burning vegetation at the base of the wall, can individually or all together cause the side of a building to catch fire.

- Ground to siding junction should have a minimum of 15cm non-combustible material separation.
- Fire-resistant siding materials such as; stucco, metal, brick, cement, stone, fiber cement, logs or heavy timber, and rock as defined in the BC Building Code should be used.
- The use of flammable siding such as vinyl and wood shingle as primary siding material should be avoided.
- Manufactured homes should be skirted with non-combustible material a minimum 15cm high.

Overhanging Projections

Many homes have attached decks, which can spread fire directly to the home when ignited during a wildfire. The materials used to build the deck, combustible materials stored on and under the deck, and the vegetation around it all contribute to how vulnerable a deck will be to ignition during a wildfire.

- The area under deck surfaces should use non-combustible materials such as gravel, mineral soil, or sand that is free of flammable debris.
- Balconies, decks, and porches should be sheathed in (no exposed joists) and made of an ignition-resistant material (non-combustible, Class A, or Class B fire resistance as referenced in the current BC Building Code).
- Structural components (post & beam) of decks, balconies, and porches should be heavy timber construction as defined in the current BC Building Code, or should be clad with fire-resistant material (non-combustible, Class A, or Class B fire resistance as referenced in the current BC Building Code).

Exterior Doors and Windows

Glass can be shattered by the heat of a fire and exterior doors can ignite and create openings for fire and burning debris to enter the building. It is highly unlikely that an interior will ignite from thermal radiation through intact glass. A single pane thickness of glass is most susceptible to collapse.

- Use double or triple-paned glass or tempered exterior windows and glazing.
- Construct exterior doors and garage doors of non-combustible materials.

Eaves, Soffits, and Vents

Vents are important for the healthy air exchange and moisture escape required in a building. They also are ready-made accesses into a building. Unprotected eaves can allow burning embers to enter and also allow flames that are spreading up a wall to penetrate into the roof structure.

- Close eaves and soffits so no joists are exposed.
- Cover ventilation openings in exterior walls, roofs, eaves, and soffits with corrosion-resistant 3 mm non-combustible wire mesh. Wall-mounted exterior vents are exempt from having wire mesh with 3

mm openings if vents with mobile flaps are used (subject to venting requirements in the BC Building Code).

Site Considerations & Building Location

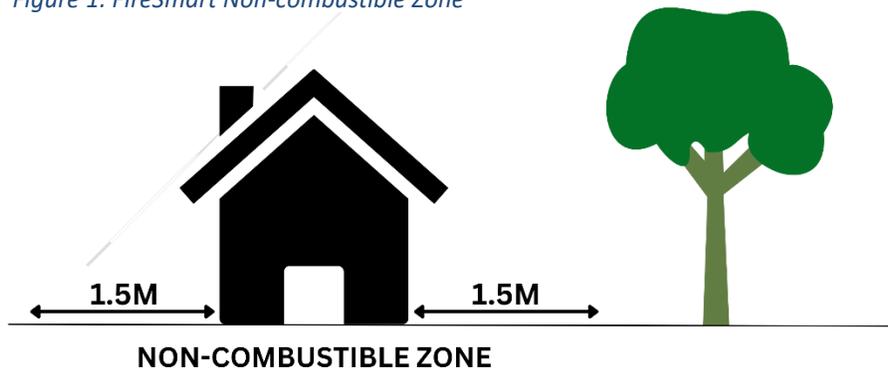
- Design subdivisions so building sites are located on the flattest areas of the property. Avoid gullies or draws that accumulate fuel and funnel winds.
- Site buildings and design road accesses in a way that accommodates fire fighting vehicles and equipment.
- Create a defensible space of at least 10 metres between development and the top of ridgelines, cliffs, ravines or slopes, with the goal of reducing risks from approaching wildfire.
- Locate fuel tanks 10 metres or more from buildings wherever possible.

Landscaping

The goal of landscaping requirements and vegetation management is to create a fuel-reduced buffer between structures and flammable vegetation to reduce the intensity and rate of spread of wildfire approaching or the spread of hot embers from a nearby wildfire.

- All areas within 1.5 meters of principal buildings should be free of the following:
 - Coniferous or flammable vegetation;
 - Wood, bark, or leaf mulches;
 - Any stored flammable materials; and
 - Other accumulated flammable debris.
- No bark, wood mulch, or any other flammable material should be located within Zone 1 (1.5-10m) of the outer edge of principal building.
- Any fencing built with combustible materials should be at least 1.5 metres from any dwellings.

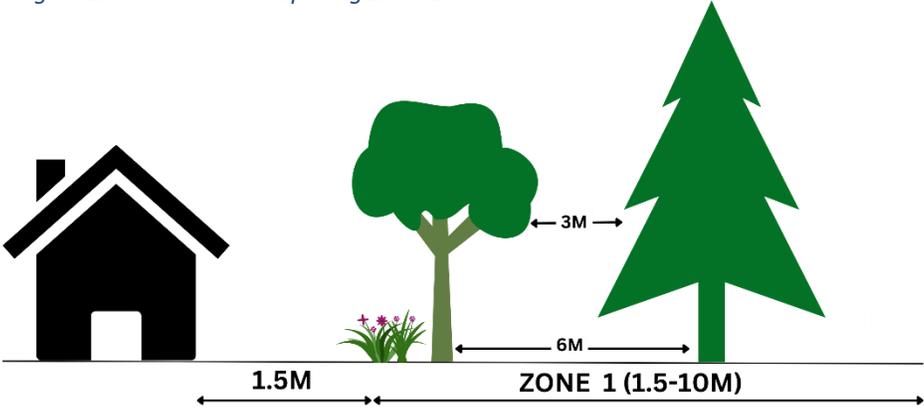
Figure 1: FireSmart Non-combustible Zone



- Exterior building surfaces, including deck surfacing, roofing, and cladding, that is situated under or within 6 metres of coniferous vegetation should be non-flammable materials such as stone, metal, concrete, masonry or fiber-cement.
- Firewood piles, and other combustible materials:
 - Must be a minimum of 10 metres or greater from any dwelling, or
 - When located within 10 metres of a dwelling must be stored in a fully wildfire mitigated building that has followed all the guidelines in the Wildfire Hazard DPA.

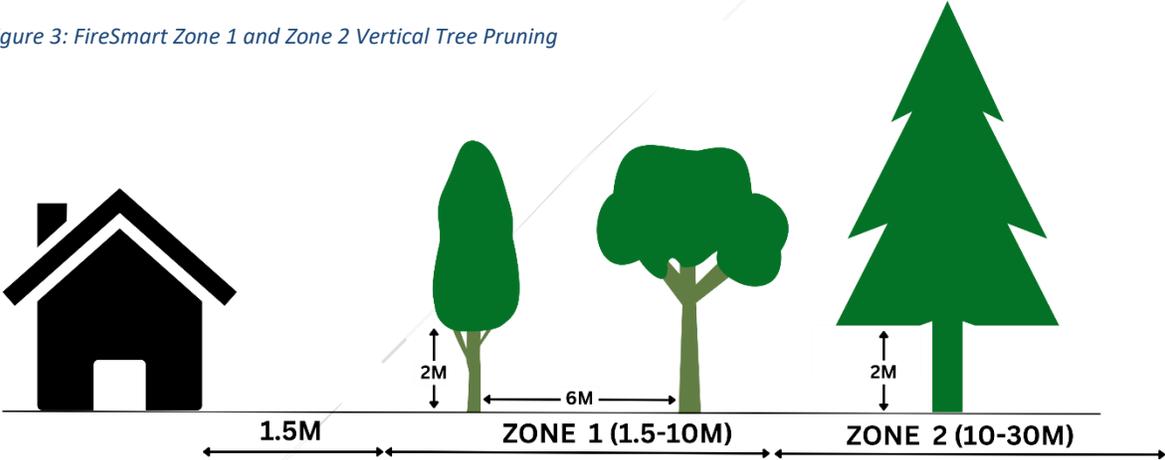
- Fire-prone coniferous plants, in particular Juniper, Cedar, and Yew, should not be used in landscaping.

Figure 2: FireSmart Tree Spacing Zone 1



- Trees located in Zone 1 (1.5m – 10m) and Zone 2 (10m – 30m) from principal building should maintain a 6 metres trunk to trunk spacing, or 3 metres horizontal canopy spacing between trees.
- Mature trees in Zone 1 (1.5m – 10m) and Zone 2 (10m – 30m) should be pruned a minimum height of 2 meters from the ground.

Figure 3: FireSmart Zone 1 and Zone 2 Vertical Tree Pruning



Subdivision

When subdivision is proposed for properties within the Wildfire Hazard DPA, a Wildfire Hazard Assessment must be prepared in accordance with the Village of New Denver’s **Terms of Reference for Wildfire Hazard Assessments**. The Wildfire Hazard Assessment and plan of subdivision on parcels of land adjacent to wildland areas or forested zones, shall address the following guidelines:

- Development locations should be set back a minimum of 10m from property lines adjacent to forests and sensitive environmental areas to ensure new development can comply with these Wildfire Hazard DPA guidelines.
- Provide firefighting and emergency access to adjacent forested areas (such as through an access encircling the development, periodic access to the forest edge, or by placing access adjacent to forested areas). Consider, where the subdivision abuts forested areas, placing accesses so that they act as fuel breaks to protect the development and buildings;

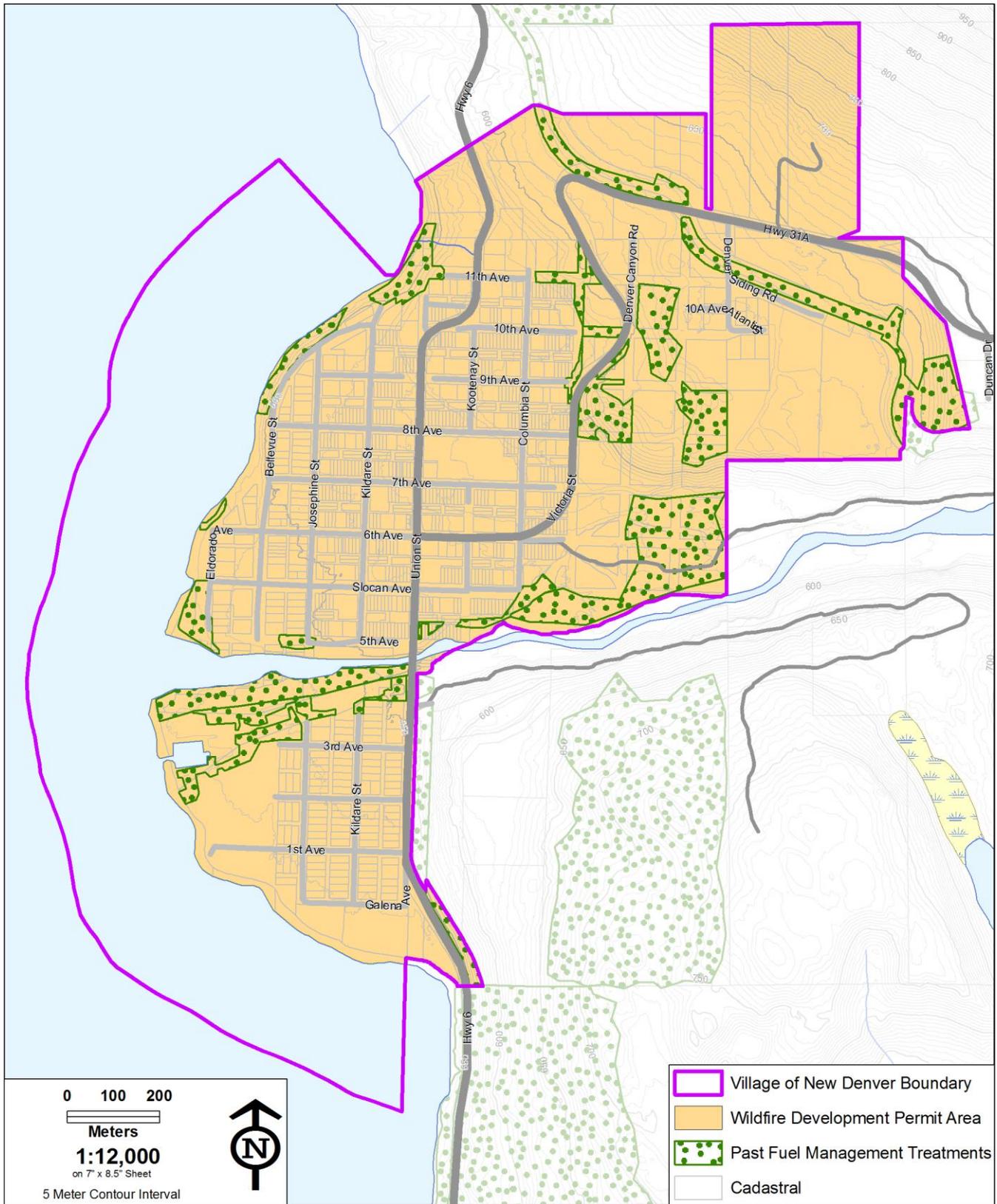
- Set development a minimum of 10m from the top of ridgelines, cliffs, ravines, or the top of slopes exceeding a 35% grade for a minimum horizontal distance of 10m. Variation of the setback may be considered if a Wildfire Hazard Assessment can justify a change in the setback;

Alternatives

- Where a Wildfire Mitigation Specialist or trained wildfire professional, specializing in wildfire risk and fuel hazard assessments and fuel management, has completed a report on the property or building in question that: indicates there is a low fuel hazard; and has provided recommendations for mitigating any existing or potential risk associated with the new development with provisions in place to ensure that development is carried out in accordance with the recommendations, the requirements noted in **Section XX and XX** may be amended with justification at the discretion of the CAO or their designate.
- Proposed deviations from the guidelines outlined in **Section XX and XX** can be submitted to the Village of New Denver as an alternative solution and will be considered if the applicant can verify that the expected level of performance meets or exceeds the level of fire safety conferred by the guidelines outlined in the Wildfire Hazard Development Permit Area.

Schedule A - Wildfire Hazards DPA Map

Figure 4: Village of New Denver Wildfire Hazards DPA Map



Schedule B - Wildfire Urban Interface Fire Risk Class Map

Figure 5: WUI Fire Risk Class Map

