



Wildfire Development Permit Areas

A non-technical guide for FireSmart Coordinators in British Columbia

Updated 2024

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Introduction

Building policies and recommendations are administered by federal, provincial, and local governments in Canada. At the local government level, development permit areas (DPAs) are designated areas where special guidelines apply to achieve a particular goal or set of objectives for new and existing developments.

At the federal level, the model National Building Code (NBC) focuses on establishing minimum standards for design and construction of buildings to ensure safety, health, accessibility, and environmental sustainability. While the NBC addresses aspects related to structure fire safety, these standards are typically not sufficient to address the increasing threat of wildfire to communities. The British Columbia Building Code (BCBC) is based on the NBC. A new edition of the NBC is typically released every five years with subsequent adoption by the provinces and territories thereafter.

In British Columbia, local governments can establish DPAs in their Official Community Plans (OCPs) and DPA guidelines in their OCPs or zoning bylaws to consider wildfire threats at the planning stage of construction. This opportunity to enable policy related to development in wildfire prone areas allows regions and communities to introduce tailored development guidelines for their community.

This document is designed to equip FireSmart BC Coordinators and local government planning staff with information and guidance to enable a better understanding of how to implement a DPA for a wildfire hazard in their jurisdiction. When used in conjunction with other FireSmart services, including the FireSmart Canada Neighbourhood Recognition Program, private land FireSmart rebates, the FireSmart plant program, education programs, and FireSmart home assessments, Wildfire DPA's (WDPA) offer an important additional feature to support community wildfire prevention, preparedness and mitigation.

Wildfire Development Permit Areas

Wildfire DPAs establish development guidelines for areas susceptible to wildfires or their impacts. These guidelines generally cover components such as subdivision layouts, fire-resistant building materials, and landscaping and vegetation guidelines. By establishing a WDPA in an Official Community Plan (OCP) and integrating the guidelines into the OCP or zoning bylaw, local authorities aim to enhance wildfire resilience in their communities.

Found in Division 7 of the Local Government Act S. 488 (1) (b) and specifically in s. 491 (2) [Local Government Act](#)

Building Cost Rationalization

Headwaters Economics (2022) and the Institute for Catastrophic Loss Reduction (ICLR, 2021) have each written studies to estimate the benefit cost ratios of wildfire-resilient construction. The studies used data from previous Wildfire Urban Interface (WUI) fire losses, estimates of construction costs from industry database RSMeans, a sample of “archetypal” homes from several WUI communities, and guidance from their respective building codes, California’s Chapter 7A (California Building Code) and the Canadian National Guide for Wildland-Urban Interface Fires, to calculate benefit-cost ratios for meeting or exceeding building code recommendations.

According to Headwaters and ICLR, initial building and retrofitting material costs for wildfire-resilient construction are higher than those for less resilient materials. While exact costs vary widely between locations and type of construction, new homes that follow the National Guide for Wildland-Urban Interface Fires cost an estimated \$4,000-\$11,000 (CAD) more to build in moderate- and high-risk WUI areas. Retrofitting an existing home to meet the National Guide standards costs an estimated \$9,000-\$21,000 (CAD). The most significant costs for developers and homeowners are those with significant impact on a home’s ignition potential, such as siding, roofing, decking materials, and non-combustible landscaping.

For new builds, wildfire-resilient material costs average to approximately \$6 more per square foot compared to typical building materials. For retrofitting, the cost more than doubles to \$14 more per square foot. However, the cost effectiveness of this construction bears out in two ways. Firstly, a home built to the National Guide’s standards is less likely to be destroyed or damaged by wildfire, thus avoiding future costs to rebuild or repair it. Secondly, wildfire-resilient materials often have significantly longer lifespans compared to more inexpensive alternatives and may avoid some regular maintenance costs. When combined with vegetation management practices, the benefit-cost ratio increases dramatically, and building material costs stay at the lower end of the ICLR’s estimates.

Porter, K.A., Scawthorn, C.R., and Sandink, D. (2021). An Impact Analysis for the National Guide for Wildland-Urban Interface Fires. Prepared for the National Research Council of Canada. Institute for Catastrophic Loss Reduction, Toronto, ON, 136 p

Barrett, K., Quarles, S.L., and Gorham, D.J. (2022, July 27). Construction Costs for a Wildfire-Resistant Home: California Edition. Retrieved from Headwaters Economics: <https://headwaterseconomics.org/natural-hazards/wildfire-resistant-costs-california/>

Home Insurance Considerations

Multiple insurance companies have taken action to play their part in wildfire resiliency by offering education to clients, rebates, and policy reductions.

Insurance carriers may offer a discount off home insurance following the completion of the recommendations outlined in a Home Partners Program (HPP) Assessment [Home Partners Program Hub | FireSmart BC](#). Depending on where you live or who your home insurance carrier is, this may or may not be available to you. The guidelines provided on page 5 in this document closely mirror mitigation recommendations found in the HPP assessment.

FireSmart BC Guidelines to Include

Choosing what to include in your Wildfire DPA will depend on unique community considerations such as geography, wildfire risk classification, alignment with other guiding documents (OCP's, Hazard, Risk, and Vulnerability Analysis, Community Wildfire Resiliency Plans, etc.), political and social appetite/acceptance, as well as current and planned infrastructure. The list below can be used as a selection of criteria that may be an appropriate fit for your community. The list is based on the [FireSmart - Home Ignition Zone](#) mitigation strategies which are research-based strategies, proven to reduce wildfire threat to homes, neighbourhoods and communities.

In order to introduce a new Wildfire DPA in your community, a focus on implementing building and landscaping augmentations that are likely to be adopted with the greatest likelihood of success should be prioritized. Once implemented, the list can be updated to further fit your community's needs.



[FireSmart - Home Ignition Zone](#)

DPA Criteria Considerations

Terminology in an Official Community Plan regarding Wildfire DPAs should mirror those found in [Division A of the BC Building Code](#).

DISCLAIMER: These guidelines and justification are examples of ones commonly seen in official community plans in British Columbia. Further review for technical accuracy and confirmation of legislative authority is recommended before they can be used for community planning purposes.

Building Materials		
Guideline	Justification	Example guideline text
Roof Material	Roofs catching fire are the number one cause of building losses during a wildfire event. The roof presents a large, flat area that fire embers can land on. 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 that meet the requirements, include composite (asphalt and fiberglass) shingles, concrete or clay tile, metal roofing, and factory treated wood shake roofing.	Roof coverings should conform to Class A or B fire resistance as defined in the BCBC or materials meeting CAN/ULC-S114, “test for determination of non-combustibility in building materials”
Gutter Material	Installation of non-combustible gutters will limit the risk of ember produced fires spreading from debris in the gutters, to the gutters and roof.	Gutters should be constructed out of non-combustible material.
Vents	Unscreened vents can allow embers to enter a building. With the exception of dryer vents, install non-combustible vents with 3 mm metal screening in order to limit embers from accessing the home. Ensure dryer vents are clean and operational.	All vents should be screened with corrosion resistant, minimum 3-millimetre non-combustible wire mesh (excluding dryer vents).
Eaves	Open eaves create vulnerabilities to embers and radiant heat. Consider enclosing eaves with properly fitted soffits and fascia to reduce the risk of embers and heat from reaching the wooden rafters of the home.	All eaves should be enclosed with properly fitted soffits and fascia. Soffits should be non-combustible.

Building Siding	<p>Siding material is one of the major vulnerable areas of the building 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 in combination, cause the side of a building to catch fire</p>	<p>Any material used for exterior wall finishes should be non-combustible such as stucco, metal siding, brick, cement shingles, or non-combustible cladding.</p>
Windows	<p>Single pane glass windows are highly vulnerable to breakage from radiant heat exposures, direct flame and impacts that can occur during wildland fires. Multi-pane windows are less vulnerable while tempered glass windows are superior.</p>	<p>All windows should be tempered, double paned or greater.</p>
Deck and Porch	<p>As with roofs, decks present a large horizontal surface where embers and fire brands can land and ignite. It is important to consider the vulnerability of decks to fire from both above and below the undersurface of decks can be another fuel source for fires. (The storage of combustible materials on or under decks further contributes to the risk.)</p>	<p>Decks should be constructed of non-combustible, Class A or B fire-rated materials.</p>
Unenclosed Spaces	<p>Open areas under decks, porches and houses can contribute to a building's vulnerability in a wildfire event. Sheathing the base of the decks, balconies and houses with fire-resistant material such as fibre-cement board or metal screening can reduce the risk of sparks and embers igniting the structure.</p>	<p>Open areas under decks, porches and manufactured homes should be skirted with a fire-resistant material.</p>

Fencing	Combustible fencing materials can ignite from direct flame, radiant heat, or embers. Combustible fencing provides a fuel pathway that can enter a home or structure	Fencing within 1.5 metres of a structure should be constructed with non-combustible material.
Building Separation	Buildings ignited within 10 metres of another building can create enough radiant heat, direct flame contact, or embers to ignite neighbouring structures.	Where possible, outbuildings should be located 10 meters or more away from residential buildings or primary structures.
Vegetation - Immediate Zone (0-1.5 metres)		
Guideline	Justification	Example guideline text
Vegetation	Reduce the chance of wind-blown embers igniting materials near the home. A non-combustible surface should extend around the structure and any attachments such as decks. Flammable materials and vegetation such as grass or plants (deciduous or coniferous) should not be present in this zone.	A 1.5 metre non combustible surface should extend around the structure and any attachments such as decks. Vegetation and other flammable materials should not be present in this zone.
Vegetation Intermediate Zone (1.5-10 metres)		
Guideline	Justification	Example guideline text
Coniferous Trees	Coniferous trees provide a pathway for fire to spread vertically and horizontally. Individual conifer trees may be present in the Intermediate Zone provided: <ul style="list-style-type: none"> • The tree is limbed up to 2 metres • The tree is standing alone, and not within 6 meters (measured trunk to trunk) of other conifer species or the home. 	Coniferous trees can be present in this zone provided they are limbed up to two metres from branch to ground, there are no shrubs or heavy accumulation of vegetation below the drip line, and the siding of the home is non-combustible. If this cannot be accomplished, coniferous trees should not be present in this zone.

	<ul style="list-style-type: none"> Exterior cladding of the building facing the tree is non-combustible 	*Juniper and Cedar hedges guidelines can be found under 'Spacing, Slope Setback, and Other Items'
Vegetation Extended Zone (10-30 metres)		
Guideline	Justification	Example guideline text
Coniferous Trees	Spacing coniferous trees at least 3 metres apart (where ecologically appropriate) from crown-to-crown will reduce the risk of tree-to-tree fire transmission. b. Removing all coniferous branches within 2 metres from the ground will help prevent surface fires from moving into the treetops.	Coniferous trees can be present in this zone provided there is pruned to 2 metres, and crown spacing is greater than 3 metres (where ecologically appropriate)
Spacing and Slope Setback and Other Items		
Guideline	Justification	Example Guideline Text
Outbuildings and Sheds	If outbuildings or sheds are ignited and within 10 meters of the home, radiant heat can be severe enough to ignite the home.	Build outbuildings and sheds to FireSmart guidelines or build outside the Intermediate and Immediate zone. (0-10 metres)
Juniper and Cedar Hedges	Due to the extreme radiant heat and ember production from juniper and cedar hedges, these species should not be planted within any of the 3 zones (Immediate, Intermediate, Extended zones)	Juniper and cedar hedges should not be planted in any of the 3 zones.
Bark Mulch	Due to the high susceptibility of ignition and extreme ember shower risk, bark mulch should be avoided and at minimum free from the Immediate and Intermediate zone.	Bark mulch should be avoided and at minimum should not be present in the immediate and intermediate zone.

Slope Position	<p>When fire moves upslope, it preheats fuels much quicker, allowing them to burn faster than on flat terrain. Generally, wildfire rates of spread double for every 10 degrees of upward slope. The effects of slope on fire spread become greater as the slope increases. Double the Immediate Zone (from 0-1.5 metres to 3 metres) and Intermediate Zone size to accommodate for slope below or adjacent to a structure.</p>	<p>Construction of homes or decks and attachments should not be directly abutting slopes greater than 10 degrees. The immediate and intermediate zone distances should be doubled if abutting a slope greater than 10 degrees.</p>
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Implementation of Wildfire DPAs

This guideline provides a non-technical, high-level overview intended to offer information on using DPAs to mitigate the wildfire hazard risk. All implementation details and specific actions should be managed by the authority having jurisdiction and where appropriate, by qualified professionals. Qualified professionals must ensure that all procedures comply with relevant local, provincial and federal legislation and regulation.

Steps local authorities should take to implement Wildfire DPA's.

- Identify hazardous area
- Establish development permit area in Official Community Plan
- Include Guidelines for development in Official Community Plan or zoning bylaw
- Determine what triggers a development permit
- Efficient approval process

Note that this is a non-technical overview of the implementation process. Local authorities should work with qualified professionals to ensure accuracy of the process.

Funding for WDPA Implementation: Community Wildfire Resiliency (CRI) Program

The CRI program was introduced in 2018 by the provincial government with the goal of reducing wildfire risks and impacts for Indigenous and non-Indigenous communities. Communities are provided with funding and support to complete FireSmart™ initiatives including planning development considerations.

Eligible activities under the CRI FireSmart Community Funding and Supports (FCFS) grant include:

- Amendment of Official Community Plans, Comprehensive Community Plans and/or land use, engineering and public works bylaws to incorporate FireSmart principles.
- Revision to landscaping requirements in zoning and development permit documents to incorporate FireSmart principles.
- Establishment or revision of Development Permit Areas for Wildfire Hazard to incorporate FireSmart principles.
- Amendment to referral processes for new developments to ensure multiple departments, including the fire department and/or emergency management personnel, are included.

For the most up to date information refer to the [FSFC Program and Application Guide](#).

Additional Considerations

Local governments need to be diligent in enforcing their bylaws, especially regarding Wildfire DPAs. While the establishment of a Wildfire DPA is a good first step, ensuring compliance is equally important. Local governments may want to consider enforcing Wildfire DPAs at subdivision and upon construction.

Wildfire DPA guidelines and exemptions should align with neighbouring jurisdictions. Consideration should be given to unifying the guidelines, as well as the maximum building footprint required for an exemption within areas of high fire risk across jurisdictions.

Building FireSmart communities requires a significant level of behavioural change through education. Public understanding uptake is key to success.

Wildfire DPA Examples

Research completed in 2024 showed that of the **189** local governments (municipalities and regional districts) in BC, only **48** had implemented a Wildfire DPA.

Community Name	DPA Documentation (typically found in Official Community Plan)
Central Kootenay Regional District	https://www.rdck.ca/EN/main/services/community-planning/wildfire-development-permit-area.html
Central Okanagan Regional District	https://www.rdco.com/en/business-and-land-use/development-permit-areas.aspx
Cowichan Valley Regional District	https://www.cvrd.ca/3484/Application-Forms
East Kootenay Regional District	https://www.rdek.bc.ca/departments/development_services/planning/applications/dpa/
Squamish-Lillooet Regional District	https://www.slrd.bc.ca/planning-building/planning-development-services/development-application-forms-guides-fees/application-forms-guides
Campbell River	https://www.campbellriver.ca/planning-building-development/green-city/reports-studies/sustainable-official-community-plan
Chetwynd	https://www.gochetwynd.com/2022/draft-official-community-plan-2/2022-draft-district-of-chetwynd-official-community-plan/
Clinton	https://village.clinton.bc.ca/local-government/village-reports-plans/official-community-plan/
Colwood	https://www.colwood.ca/city-hall/plans-reports/official-community-plan
Coquitlam	https://www.coquitlam.ca/616/Citywide-Official-Community-Plan
Creston	https://www.creston.ca/development-permits
Cumberland	https://cumberland.ca/development-permits/
Fruitvale	https://fruitvale.ca/wp-content/uploads/2022/08/835-Official-Community-Plan-Bylaw.pdf

Houston	https://www.houston.ca/official_community_plan
Kimberley	https://www.kimberley.ca/ocp/development-permit-areas
Lake Country	https://www.lakecountry.bc.ca/en/business-information/resources/Document-Manager/Bylaws/Official-Community-Plan-(2018-2038)-Bylaw-1065,-2018---CONSOLIDATED.pdf
Lantzville	https://www.lantzville.ca/cms.asp?wpID=478
Lillooet	
Lions Bay	https://www.lionsbay.ca/sites/2/files/docs/services/Planning/table_of_dpa_guidelines.pdf
Logan Lake	https://loganlake.ca/wp-content/uploads/2022/03/Official-Community-Plan-Bylaw-670-2010-c.pdf
Lumby	https://lumby.civicweb.net/document/1507/
Maple Ridge	https://www.mapleridge.ca/your-government/plans-strategies/official-community-plan-area-plans/official-community-plan
Merritt	https://www.merritt.ca/wp-content/uploads/2022/08/2022-07-19-OCP-FINAL_Combined.pdf
Mission	https://www.mission.ca/council-government/bylaws-policies/official-community-plan
Nanaimo	https://www.nanaimo.ca/property-development/land-use-bylaws/city-plan?utm_source=goto&utm_campaign=goto&utm_term=ocp&utm_medium=goto
Nelson	
New Denver	https://newdenver.ca/wildfire-hazard-dpa-review/
District of North Vancouver	https://www.dnv.org/business-development/development-permit-areas-dpa
Parksville	https://www.parksville.ca/cms.asp?wpID=505
Peachland	https://www.peachland.ca/official-community-plan

Pemberton	https://www.pemberton.ca/departments/development-services/development-permits
Penticton	https://www.penticton.ca/business-building/planning-land-use/official-community-plan
Pitt Meadows	https://www.pittmeadows.ca/homes-development/zoning-land-use/official-community-plan-0
Princeton	https://princeton.ca/p/ocp
Rosland	https://rosland.ca/planning/development-permits/
Saanich	https://www.saanich.ca/EN/main/local-government/development-applications/development-permit-guidelines.html
Salmo	https://salmo.ca/wp-content/uploads/2023/03/OCP-Sustainable-Salmo-2020-Final-1.pdf
Salmon Arm	https://www.salmonarm.ca/464/OCP2024
Sayward	https://www.sayward.ca/news-events/news-archives/draft-official-community-plan
Sechelt	https://www.sechelt.ca/en/business-and-development/development-permits.aspx
Sicamous	https://www.sicamous.ca/your-municipality/departments/development-services
Spallumcheen	https://www.spallumcheentwp.bc.ca/development_services.htm
Summerland	https://www.summerland.ca/planning-building/official-community-plan
Vernon	https://www.vernon.ca/government-services/bylaws/official-community-plan-2013-bylaw-5470
View Royal	https://www.viewroyal.ca/assets/Town~Hall/Projects/OCP~Review~2021/2023%2001%2031%20View%20Royal%20OCP%20Draft%20June%202022.pdf
West Kelowna	https://www.westkelownacity.ca/en/city-hall/official-community-plan.aspx
Whistler	https://www.whistler.ca/ocp/development-permit-areas/

Williams Lake<https://www.williamslake.ca/DocumentCenter/View/291/CHAPTER-7DEVELOPMENT-PERMIT-AREAS?bidId=>

Conclusion

A Wildfire DPA is an effective tool for addressing wildfire risk to new construction at the time of development or during retrofitting or renovations. While implementing a Wildfire DPA will contribute to the mitigation of the adverse impacts of wildfire on development, other tools and incentives should be explored for the on-going management and maintenance of structures and vegetation on private properties such as FireSmart™ grants and rebates, property maintenance bylaws, and obtaining covenants as a condition of rezoning or subdivision approvals.

For more information on implementing DPAs, visit the [Provincial website for DPAs: Development permit areas - Province of British Columbia.](#)