



DISTRICT OF NORTH VANCOUVER

Community Wildfire Protection Plan: Construction practice and materials requirements

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Source: Adobe Stock Photo

THE SCIENCE

Community Wildfire Protection Plans enable the execution of preventive strategies that reduce the risk of losses from wildfires. One aspect of such plans are special requirements for new development in locations referred to as Wildfire Hazard Development Permit Areas. These areas are characterized by certain physical features such as steep slopes, floodplains and forest cover, and coupled with their exposure to extreme weather, Permit Areas are susceptible to hazardous conditions, including wildfires.

Any new development within Permit Areas is managed to minimize the risk of loss of life from wildfires, protect the forests and respect environmental considerations. Permit Areas provide municipalities with the opportunity to proactively manage the conditions that determine fire behaviour, preserve ecosystem services and ecological assets of forests for future generations, and minimize adverse impacts of post-fire hazards such as landslides and debris flows. By offering guidance for construction and materials requirements for new developments, such plans help ensure that municipalities build stronger and safer neighbourhoods.

THE TRIGGER

Situated along the north shore of the Burrard Inlet along the base of the Coastal Mountain Range, the District of North Vancouver is approximately 161 square km of land area, with a population of more than 85,000 that is perched right at the doorstep of wildlands. The threat of wildfires is always present, especially during the summer. The District's Community Wildfire Protection Plan process was initiated after Kelowna's devastating wildfire of 2003, which resulted in extensive social, economic and environmental losses. This signalled a need for better risk management with regard to wildfires in the wildland urban interface. In 2005, the results of a Fuel and Fire Behaviour Analysis Study were incorporated into the District's Interface Fire Hazard Defensive Measures. So, the need for a wildfire protection plan was evident, and through a Metro Vancouver application to the Province, the District and other municipalities received funding to develop their plans. In 2006, B.A. Blackwell and Associates Ltd. were retained to help the District and eight other municipalities within the Greater Vancouver Regional District-GVRD develop their plans.

North Shore Emergency Management (NSEM), an inter-municipal agency in existence since 1978, supports the emergency management services for the City of North Vancouver, District of North Vancouver and District of West Vancouver. Interface fire preparedness falls under this disaster management system. A North Shore Interface Fire Working Group was then set up to ensure seamless communication and operational protocols are in place. The plan provides extensive detail on requirements for construction practice and materials for Wildfire Hazard areas in the district, which include areas in the wildland urban interface and some district park areas. The Wildfire Hazard permit is required for all new developments that involve home construction.



Figure 21: *Early stages of a recent wildfire in the forest surrounding the District of North Vancouver. (Source: District of North Vancouver Fire and Rescue Facebook Page)*

THE APPROACH

Development and implementation of the plan required collaboration across Fire, Planning, Engineering, Parks and Environment departments and stakeholder agencies such as First Nations NSEM, BC Hydro and Metro Vancouver. A major focus of this plan has been the adoption of the Permit Areas in 2012, which ensures that new residential houses adhere to FireSmart requirements, undertaking the treatment of 70+ hectares of high-risk fuel types to protect critical infrastructure and high-risk communities. Applicants may be required to present an assessment report and new structures should be sited as far away as possible from wildfire risk areas. In cases where new development is being proposed on a parcel located within a wildfire risk area, the applicant is allowed to proceed with the construction far away from undeveloped forested areas. There is a comprehensive list of fire resistive materials and construction practices required for all new development within the Permit Area. These include, but are not limited to, fire retardant materials for roofing, decks, exterior walls, tempered windows, and building design that meet wildfire protection standards approved by the National Fire Protection Association or similar bodies.

There is also the requirement that any new hydro servicing located within 10 metres of a wildfire area should be placed underground, and if this is not possible, poles made from non-combustible materials must be used. With regard to landscaping around development located in or within 10 metres of a wildfire risk area, there are expected landscape and service conditions such as firebreaks, replacement trees where they have been removed to reduce wildfire risk and defensible space of at least 10 metres, in order to reduce the likelihood of wildfire spread.

Key to the successful implementation of the construction and building materials requirements is public outreach and education, much of which has been made possible with partnership funding by the province through the Union of B.C. Municipalities. Although the Permit Area pertains to new construction, the Plan Update document recommends the creation of incentives to encourage the uptake of FireSmart renovations for existing buildings.

THE OUTCOME

Effective collaboration across District and provincial departments has enabled the adoption of progressive requirements for construction and building materials for new development that will help keep the community safe from wildfires. Looking ahead, the District is preparing to assess tangible outcomes of the development permit applications, as well as long-term compliance with its recommendations so that there can be ongoing improvements to the development permit process. The leadership demonstrated by this municipality has been acknowledged internationally, winning it the Sasakawa Award for leadership in disaster risk reduction and gaining recognition as a Role Model City with the United Nations' Resilient Cities campaign.

A WORD FROM THE DISTRICT OF NORTH VANCOUVER

The District's success in implementing construction practices and materials requirements as part of its Community Wildfire Protection Plan can be attributed to a collaborative approach to addressing the wildfire threat and an acknowledgement that pooling resources from different District and provincial departments is key to ensuring the success of such an undertaking. Collaboration is mandatory, because wildfires spread across jurisdictional boundaries and, therefore, require a multi-jurisdictional approach. The Fire Department is committed to and proud of its holistic approach to wildfire readiness and response.