

# M Wildfire Hazard Report

## Master Requirement SPE115



### DISTRICT OF NORTH VANCOUVER

## Purpose

The *Wildfire Hazard Report (Report)* assesses the wildfire risk for a proposed development located in the *Wildfire Hazard Development Permit Area (Wildfire Hazard DPA)* and outlines conditions that may be required to reduce and manage the potential wildfire risk for the proposed development. Applicants can check which areas are included in the *Wildfire Hazard DPA* on Geoweb on the District's website [Dnv.org/maps-and-open-data-geoweb](https://dnv.org/maps-and-open-data-geoweb)

## Background

In 2007 (updated 2019), the District of North Vancouver (DNV or District) retained BA Blackwell & Associates to assist in the development of a *Community Wildfire Protection Plan* that quantifies wildfire risk in the District. As part of a coordinated response to reduce wildfire risk, the District has implemented many of the recommendations in this report including fuel treatments, public education and improving wildfire suppression response. The *Wildfire Hazard DPA* was established to encourage activities that reduce the risk from wildfire hazards to people, property and the District's forests and ecosystems in the context of environmental protection.

## Requirements

A Wildfire Hazard Report will be required when:

- the development is a new building that contains a habitable space for which a building permit is required pursuant to the District's *Building Regulation Bylaw*;
- and the development occurs in the Wildfire Hazard DPA as designated in the DNV Official Community Plan - Schedule B, Map 2.1.

A building permit application will be accepted on the condition that:

- the *Report* has been submitted and signed off by a qualified professional with the appropriate credentials (see below).
- the *Report* must follow the format and address all the requirements identified in the *Wildfire Hazard Report - Terms of Reference* below. Incomplete reports will not be accepted and will result in delays in permit approvals.

## Content: Wildfire Hazard Report – Terms of Reference

- **Qualified professional credentials:** *Reports* are to be performed by and/or signed off by a Registered Forest Professional in good standing and qualified by training or with a minimum of 2 years' experience in fuel management prescription development and mitigation of wildfire hazards in British Columbia. The credentials and experience of the signing qualified professional must be cited within the report.
- **For sites located within multiple Hazard DPAs:** a coordinated approach between the respective qualified professionals will be required to ensure recommended prescriptions do not conflict and the overall project objectives are successfully met.
- **Background Information:** *Reports* shall include a review of the available background information and meet current industry best practices. Further information can be found on the District of North Vancouver website [Dnv.org/development-permit-areas](http://Dnv.org/development-permit-areas) As well, the following reference materials are recommended:
  - i. *FireSmart Canada Home Development Guide* (<https://www.firesmartcanada.ca/>)
  - ii. The NFPA 1144 *Standard for Reducing Structure Ignition Hazards from Wildland Fire* (2018 Edition updated from time to time) ( <http://www.nfpa.org/>)
  - iii. NFPA Wildfire Research Fact Sheets – Roofing Materials, Decks & Attic and Crawl Space Vents <http://firewise.org/wildfire-preparedness/teaching-tools.aspx>
  - iv. Ministry of Forests *The Home Owners FireSmart Manual* 2003 (<http://www.bcwildfire.ca/FightingWildfire/safety/pamphlets/FireSmart-BC4.pdf>) and *FireSmart Homeowners Manual* 2016 <http://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/wildfire-management/prevention/for-your-home-community>
  - v. *Wildland Urban Interface Wildfire Threat Assessments in B.C.* <http://fness.bc.ca/wp-content/uploads/2015/09/swpi-WUI-WTA-Guide-2012-Update.pdf>
  - vi. The District of North Vancouver *Community Wildfire Protection Plan* (B.A. Blackwell & Associates Ltd, 2007) ([Dnv.org/reducing-wildfire-risk-district](http://Dnv.org/reducing-wildfire-risk-district) )
- **Property Description:** *Reports* shall include both legal and street addresses of the subject property, and also a plan showing the location of the property relative to the wildland urban interface. A description of the intended use of the land is required. Any existing covenants relative to land use or natural hazards shall be identified and attached to the report.

- **Detailed or Preliminary Report:** A *Preliminary Assessment Report* may be submitted to the District for review only for Development Permit subdivisions where detailed design may not be known and each individual Lot will require a new street address.
- **Arborist Report:** While not required for the issuance of a Wildfire Development Permit (DP), it is recommended that the arboricultural impacts of the proposed development be undertaken at the same time, to ensure that trees slated for retention within the Wildfire Risk assessment can be practically protected within the expected scope of disturbance from the construction activities. An Arborist report will also identify all trees protected under the *Tree Protection Bylaw 7671* that require removal/pruning or protection within and adjacent to the site for the demolition and new construction. Tree permits will be required. Further information can be found on the District of North Vancouver website [Tree permit | District of North Vancouver \(dnv.org\)](https://www.dnv.org)
- **Building Setbacks:** Proposed building setbacks from hazardous fuel types must be clearly defined (including preliminary development permit applications).
- **Wildfire Hazards:** *Reports* shall include but are not limited to completing a *Structure and Site Hazard Assessment* pursuant to the *NFPA 1144 Standard for Reducing Structure Ignition Hazards from Wildland Fire (2013 Edition)*. This includes:
  - i. a clear assessment and quantitative description of surface, ladder, and crown fuels by type, species (where applicable), quantity, and distribution;
  - ii. an assessment of risk level for the proposed development based upon fuel loading, building design, landscaping, location specific concerns, and setbacks from forested edges;
  - iii. all factors contributing to fire hazard shall be detailed and discussed in the report;
  - iv. documentation shall include representative photographic examples of the site, and a map showing trees, proposed works, and building or structure footprint.
- **Proposed Wildfire Hazard Mitigation Works:** Proposed works shall be prescriptive in nature with sufficient detail to allow an appropriate contractor to successfully undertake the required works. All mitigation measures must be contained within or undertaken from the subject site area. Consideration will only be given to off-site works where a high or extreme fire risk exists which cannot be feasibly mitigated from within the site and land owners consent has been given. The following information shall be included in the *Report*:

- i. Mitigation objectives and methods;
  - ii. Tree species, size and location for all trees greater than 10 cm in diameter at breast height (dbh) (measured at 1.3 m from the high side of a tree);
  - iii. Count of all trees by species that are less than 10 cm dbh and greater than 1.3 m in height that are recommended for removal;
  - iv. Field marking of all trees proposed for removal;
  - v. Recommended pruning heights;
  - vi. Detail surface fuel cleanup requirements;
  - vii. Debris disposal methods;
  - viii. Pre- and Post-canopy closure estimates for the property;
  - ix. Windthrow assessment;
  - x. Hazard tree assessment;
  - xi. Recommendations to address hazards related to building material, other flammable materials and existing or planned vegetation with respect to landscaping;
  - xii. A topographical map showing trees, proposed works, and building or structure footprint.
- **Building Construction:** Building design shall be in accordance with Development Permit Area guidelines for the *Wildfire Hazard DPA* as outlined in the *DNV Official Community Plan – Schedule B*. The report requires reference to the building materials and footprint. Any changes to these may invalidate the report and require an amendment to be resubmitted to the District of North Vancouver for review.
  - **Roofing Materials:** Should be class A fire rated and the product meets ISO or ASTM testing standards. Where some roofing materials have a “by assembly” Class A fire rating the project engineer or architect must provide signed proof of assembly that the product has been installed as per manufactures specification.
  - **Landscaping:** Landscaping within 10 m of the building or structure must be clearly indicated and primarily comprised of species with low flammability. The FireSmart Canada website has a manual for landscape planting that can be downloaded free at: <https://www.firesmartcanada.ca/resources-library/firesmart-guide-to-landscaping>
  - **Maintenance Requirements:** *Reports* shall include a on site maintenance plan that outlines short-term and long-term maintenance requirements to ensure future wildfire risks are minimized to the extent possible.
  - **Report Submission:** *Reports* shall be sealed by a *qualified professional*.
  - **Report Sign Off:** At the completion of the development and before first occupancy, a *qualified professional* shall inspect, take photographs, note any deficiencies and

sign off that all prescribed mitigation measures have been satisfactorily undertaken pursuant to the *Report* and the *Wildfire Hazard DPA Schedule B guidelines*.

- **Peer Review: Where the District queries the findings of a *Report* or Sign and these are not resolved to the satisfaction of District staff**, the District may require, at the expense of the applicant, a peer review of the *Report* by an independent qualified professional consultant. Any concerns resulting from a peer review will be directed to the *Report* author and signing qualified professional for consideration. *Reports* will not be accepted until concerns arising from a peer review are satisfactorily resolved.
- **Tree Permit and Environmental approvals:** *Reports* shall consider ecological, environmental and amenity values that may be affected by fuel hazard mitigation activities. A rationale will be required for the removal, instead of pruning, of a “protected” tree or “large diameter tree”, as defined within the District *Tree Protection Bylaw 7671*.

For any hazard abatement work adjacent to top of bank of watercourses or waterfront or protection areas or on slopes greater than 30%, with respect to removal or modification of any vegetation, soil, or large woody debris, please refer to the District’s *Environmental Protection and Preservation Bylaw 6515*, and the Protection of the Natural Environment, Slope Hazard, Creek Hazard and Streamside Protection DPAs designated in the DNV Official Community Plan – Schedule B. [Development Permit Areas \(DPA\) | District of North Vancouver \(dnv.org\)](https://dnv.org)

## Contacts

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