

City of Maple Ridge

TO: Her Worship Mayor Nicole Read
and Members of Council
FROM: Chief Administrative Officer
SUBJECT: **Wildfire Development Permit Update**
First Reading
Official Community Plan Amending Bylaw No. 7187-2015
Development Procedures Amending Bylaw No. 7233-2016

MEETING DATE: July 25, 2016
FILE NO: 2015-346-CP
MEETING: COW

EXECUTIVE SUMMARY:

On October 28, 2014, Council approved *Official Community Plan Amending Bylaw No. 7101-2014* and *Development Procedures Amending Bylaw No. 7102-2014* for the Wildfire Development Permit Guidelines. At that time, there was also a commitment made to report back to Council one year after adoption. Since the adoption of the bylaws, several development applications have been subject to the Wildfire Development Permit and staff and the consultants have had an opportunity to further evaluate the program. For the most part, the Wildfire Development Permit has been successful; however, there have been some challenges in applying the Wildfire Development Permit Guidelines as they were originally written. Specifically, the guidelines refer to compliance with the National Fire Protection Association (NFPA) standards, which have proven to be significantly restrictive, resulting in potential reductions to development potential within the Wildfire Development Permit Area and substantially increased construction costs.

The following report provides an update on the Wildfire Development Permit and includes recommendations intended to fine-tune the policy. *Official Community Plan Amending Bylaw No. 7187-2015* and *Development Procedures Amending Bylaw No. 7233-2016* are intended to amend the recently adopted bylaws to remove the references to the NFPA Standards and make the Development Procedures Schedule J consistent with the other schedules within the bylaw.

RECOMMENDATIONS:

1. That Official Community Plan Amending Bylaw No. 7187-2015 be given first reading;
2. That Official Community Plan Amending Bylaw No. 7187-2015 be considered in conjunction with the Capital Expenditure Plan and Waste Management Plan;
3. That it be confirmed that Official Community Plan Amending Bylaw No. 7187-2015 is consistent with the Capital Expenditure Plan and Waste Management Plan;
4. In respect of Section 475 of the *Local Government Act*, requirement for consultation during the development or amendment of an Official Community Plan, Council must consider whether consultation is required with specifically:
 - i. The Board of the Regional District in which the area covered by the plan is located, in the case of a Municipal Official Community Plan;
 - ii. The Board of any Regional District that is adjacent to the area covered by the plan;

- iii. The Council of any municipality that is adjacent to the area covered by the plan;
- iv. First Nations;
- v. Boards of Education, Greater Boards and Improvements District Boards; and
- vi. The Provincial and Federal Governments and their agencies.

and in that regard it is recommended that additional consultation be required with the Urban Development Institute and Greater Vancouver Home Builders Association via the Maple Ridge UDIGVHBA Liaison Committee, and the Maple Ridge Builders' Forum prior to second reading, in addition to the early posting of the proposed Official Community Plan amendments on the City's website, together with an invitation to the public to comment, and;

5. That Development Procedures Amending Bylaw No. 7233-2016 be given first and second reading.

DISCUSSION:

a) Background Context:

In 2004, the Provincial Government recommended that all communities undertake a Community Wildfire Risk Assessment and funding was established to help municipalities pay for this work.

A Maple Ridge Wildfire Risk Assessment and a Wildfire Protection Plan were produced for the City in 2007. These documents discussed the risk of wildfire in Maple Ridge and the Plan provided the following context in the executive summary:

"The District of Maple Ridge is embedded within the forest; approximately 60% of the community is forested. This region of the Province is susceptible to both lightning and human caused fires. Overall, the community could be classified with a fire risk profile described by a low to moderate fire probability and high to extreme consequences based on the values at risk."

The Community Wildfire Protection Plan provided 21 recommendations on:

- Risk assessment;
- Education and communication;
- Structure protection;
- Emergency response;
- Training
- Fuel management; and
- Post fire rehabilitation.

On July 10, 2007, Council passed the following resolution:

"That the recommendations contained in the Community Wildfire Protection Plan be adopted in principle pending the development of a detailed implementation plan with an associated financial plan which will be brought back to Council for their consideration and adoption; and

That staff be instructed to make application to the Union of British Columbia Municipalities for grant funding to develop an implementation plan for the Community Wildfire Protection Plan recommendations."

In the Fall of 2007, Maple Ridge was awarded a grant for the development of municipal wildfire legislation. At that time, a staff working group was formed with representatives from Fire, Planning, Engineering, Operations, Building, and Parks and Leisure Services Departments to develop a draft Wildfire Development Permit. During that time, staff worked together to ensure the draft incorporated:

- risk mitigation measures;
- a process that would work concurrently and in concert with existing related regulations; and
- built-in flexibility to allow for alternative options that effectively mitigate risk.

At the January 7, 2013 Council Workshop, Council raised concerns with the technical aspects of the boundaries of the Wildfire Development Permit Area and the potential costs that would be incurred by the development community and referred the Wildfire Development Permit back to staff. A peer review was conducted and it was determined that the methodology used to prepare the Wildfire Development Permit Area was sound and that the forests around Whonnock Lake and Webster's Corner should also be included in the Wildfire Development Permit Area.

Over the course of developing the Wildfire Development Permit Area Guidelines, four consultation events occurred in 2012, and one in 2014 when the boundaries were revised to include the forests around Whonnock Lake and Webster's Corner. On May 27, 2014, Council passed a resolution directing staff to prepare the bylaws for the Wildfire Development Permit Area Guidelines. A Public Hearing for the *Official Community Plan Amending Bylaw No. 7101-2014* was held on October 21, 2014. The *Official Community Plan Amending Bylaw No. 7101-2014* and *Development Procedures Amending Bylaw No. 7102-2014* received third and final reading on October 28, 2014. The areas included within the Wildfire Development Permit Area are not proposed to change as a result of this report.

b) Update:

The Wildfire Development Permit Guidelines were originally written to be as flexible as possible with built-in exemptions and options if the requirements were not feasible. The requirements to meet the National Fire Protection Association (NFPA) standards referenced made it difficult to develop within the Wildfire Development Permit Area without significantly reducing the developable area or significantly increasing the cost of building. This was not the intent of the Wildfire Development Permit Guidelines.

In addition, staff have identified concerns with the NFPA standards, noting that they often conflict with the Official Community Plan Silver Valley Area Plan, which was developed through extensive public consultation in 1994 and adopted in 1996. Examples of Development Principles from the Silver Valley Area Plan that conflict with the NFPA and FireSmart principles include:

- Plan compact housing clusters as a solution to preserving natural environments and significant vegetation.
- Promote patterns and forms of development that allow for retention of existing mature trees and vegetation.
- Adopt road and street types and standards that limit speed, fit to topography and minimize impervious areas.
- Utilize reduced road width to achieve traffic calming, reduced site consumption, and maintenance of the desired rural character.
- Encourage unpaved, shared driveways and narrow paved lanes to housing clusters to minimize paved areas.

Since the Wildfire Development Permit Area Guidelines were adopted on October 28, 2014, twelve Wildfire Development Permit applications have been received and three have been approved. Of the twelve Wildfire Hazard Assessment reports that have been provided by consultants to the City, 9 have been prepared by Diamond Head Consultants Ltd. and 3 have been prepared by B.A. Blackwell and Associates. Both consultants have expressed concern with preparing Wildfire Hazard Assessment reports in accordance with the NFPA standards.

The main examples of NFPA code requirements that conflict with the Silver Valley Area Plan Development Principles and/or *Zoning Bylaw No. 3510-1985* siting regulations include the following:

Building Separation:

Issue

During the Development of the Wildfire Development Permit Guidelines, there was always an awareness that establishing separation distances in the bylaw could be problematic. NFPA 1141 requires that any building shall be separated from another building by at least 9.1 metres (30 ft.) and shall be set back at least 9.1 metres (30 ft.) from a property line.

The *FireSmart Protecting Your Community from Wildfire* manual requires a minimum of 15 to 20 metres of space separating dwellings to minimize the spread of fire. Current Zoning Bylaw siting requirements are as follows:

Zone	Interior Side Setback	Front Setback	Rear Setback
R-1 Residential District	1.2 m (4 ft.)	5.5 m (18 ft.)	8.0 m (26 ft.)
R-2 Urban Residential District	1.2 m (4 ft.)	3.0 m (10 ft.)	8.0 m (26 ft.)
R-3 Special Amenity Residential District	1.2 m (4 ft.)	3.0 m (10 ft.)	6.0 m (20 ft.)

The Fire Chief at the time had indicated a comfort in using his discretion when considering alternatives to the NFPA standards. However, when reviewing the Wildfire Hazard assessments, concerns with variances and liability have since arisen from staff and the consultants.

Recommendation

The proposed alternative to the siting requirements is to manage the building construction materials at wildfire interfaces and provide landscaping treatment within the different priority zones. This is addressed through the proposed revisions to the Wildfire Development Permit Area Guidelines (see Appendix A). The *FireSmart Homeowner’s Manual* provides guidance for how to reduce the risk of wildfire hazard with respect to building construction and landscaping treatments.

Access:

Issue

NFPA 1141 requires a minimum clear width of 3.7 metres (12 ft.) for each lane of travel, excluding shoulders and parking, which conflicts with the Road Cross Sections identified in the *Maple Ridge Supplementary Standard Detail Drawings*. The typical lanes of travel for arterial and collector roads range from 3.4 metres (11 ft.) in typical areas, to 3.1 metres (10 ft.) in Silver Valley areas. In addition, when vehicles are parked on both sides of a local road, the width does not accommodate the ability for two vehicles to pass and requires drivers to yield to oncoming vehicles.

Recommendation

As an alternative for developments with a single access, the Registered Professional Forester, in consultation with the Project Engineer, will be required to identify strategic locations to provide passing lanes within Wildfire Development Permit Areas. This is addressed through the proposed revisions to the Wildfire Development Permit Area Guidelines (see Appendix A).

Building Materials:

Issue

NFPA 1144 requires exterior vertical walls to “*meet the requirements for heavy timber construction, ignition-resistive material, fire-retardant-treated wood, or be a minimum 20 minute fire-rated assembly where walls are potentially exposed to a wildland fire*”. FireSmart recommends that “*any material used for siding purposes should be fire-resistant, such as stucco, metal siding, brick, cement shingles, concrete block, poured concrete and rock. Siding material should be at least 12 millimetres thick and extend from ground level to the roofline.*”

When the Wildfire Development Permit Guidelines were initially under review, developers had a concern with the additional cost of ignition-resistant or non-combustible materials for the exterior cladding. Since the adoption of the Wildfire Development Permit Guidelines, the option of using vinyl siding with external sprinklers has been considered and deemed unsuitable. Upon further review, the logistics of managing the external sprinklers and the lack of reference standards for installation of such sprinklers made the option unfeasible. It was also problematic to ensure there would be the capacity to run the external sprinklers without impacting the water pressure and storage capacity required for Fire Department suppression needs.

In the interim, serious wildfires in the country illustrated the importance of target-hardening buildings, noting that vinyl siding easily melts, exposing combustible building materials which catches fire.

Recommendation

It is recommended that exterior elevations exposed to the wildfire interface be constructed of ignition-resistant or non-combustible materials (i.e. stucco, metal siding, brick, cement shingles, cement board, concrete block, poured concrete, concrete composite, rock and logs or heavy timber). The approximate cost of installing vinyl siding ranges from \$2.40-\$3.10 per square foot. The approximate cost of installing non-combustible hardie board and rainscreen ranges from \$5.75-\$6.75 per square foot. A typical rear elevation of an R-1 sized home, minus the windows, is approximately 530 ft², so the difference in cost for this example could range from \$1,400.00 to \$2,300.00. This amount would vary, depending on the size of the home and number of elevations that are exposed to the wildfire interface.

Additional Proposed Revisions:

In addition to the revisions to the Wildfire Development Permit Area Guidelines described above, a minor revision to Section 8.4, *Development Permit Area Exemptions* is proposed to exclude a single-family home Building Permit from requiring a Wildfire Hazard Development Permit, as long as a restrictive covenant is registered on title, specifying the building design, siting, landscaping and open space requirements, as specified in the guidelines.

Schedule J of the *Development Procedures Bylaw No. 5879-1999* is also proposed to be amended to include the requirement for the application form and fee and to remove the details of the Wildfire Hazard Assessment report (see Appendix B) and to provide these details as a separate hand-out for

applicants. This practice is consistent with other technical report guidelines, such as Geotechnical Reports or Agricultural Impact Assessments.

c) Early and Ongoing Consultation:

In respect of Section 475 of the *Local Government Act* for consultation during an Official Community Plan amendment, it is recommended additional consultation is conducted with the Urban Development Institute and Greater Vancouver Home Builders Association via the Maple Ridge UDIGVHBA Liaison Committee, and the Maple Ridge Builders' Forum, prior to second reading, in addition to the early posting of the proposed OCP amendments on the City's website, together with an invitation to the public to comment.

CONCLUSION:

As with current City practice, this report represents a review of the Wildfire Development Permit that was adopted in 2014. Since that time, the City has reviewed twelve Wildfire Hazard Assessment Reports and has had an opportunity to review the Wildfire Development Permit Guidelines. For the most part, the Wildfire Development Permit has been successful; however, there have been challenges in applying the Wildfire Development Permit Guidelines as they were originally written. Specifically, the guidelines refer to compliance with the NFPA standards, which have proven to be significantly restrictive, resulting in potential reductions to development potential within the Wildfire Development Permit Area and substantially increased construction costs.

The proposed amendments to the Official Community Plan *Wildfire Development Permit Area Guidelines, Exemptions and Development Procedures Bylaw Schedule J* will help to reduce the difficulty in applying NFPA standards and provide greater flexibility when reviewing development applications, while still offering a satisfactory measure of risk management for wildfire events.

It is recommended that Council grant first reading to Official Community Plan Amending Bylaw No. 7187-2015 and first and second reading to Development Procedures Amending Bylaw No. 7233-2016.

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Concurrence: **E.C. Swabey**
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The following appendices are attached hereto:
Appendix A – OCP Amending Bylaw No. 7187-2015
Appendix B – Development Procedures Amending Bylaw No. 7233-2016