

NO: R046

COUNCIL DATE: March 12, 2018

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## REGULAR COUNCIL

TO: **Mayor & Council** DATE: **March 8, 2018**  
FROM: **General Manager, Planning & Development** FILE: **3900-01**  
SUBJECT: **Hazardous Lands Updates: Zoning By-law and Building Bylaw Amendments**

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## RECOMMENDATION

The Planning & Development Department recommends that Council:

1. Receive this report for information;
2. Approve amendments to *Surrey Zoning By-law, 1993, No. 12000*, as generally described in this report and detailed in Appendix “I;”
3. Approve amendments to *Surrey Building Bylaw, 2012, No. 17850*, as generally described in this report and detailed in Appendix “II;” and
4. Authorize the City Clerk to bring forward the necessary bylaws for the required readings.

## PURPOSE

The purpose of this report is to obtain Council approval to amend *Surrey Zoning By-law, 1993, No. 12000* (“Zoning By-law”) to simplify the regulations for development in flood prone areas, and to amend *Surrey Building Bylaw, 2012, No. 17850* (“Building Bylaw”) to provide more direction for development within hazardous areas, including both flood prone areas and steep slopes. These changes are required to ensure Surrey’s development regulations are consistent with Provincial legislation and with Surrey’s Hazard Lands Development Permit Area.

## BACKGROUND

In 2004, the Provincial government prepared the “Flood Hazard Area Land Use Management Guidelines” to assist local governments in drafting flood management related policies and bylaws in flood hazard areas. The guidelines, used in conjunction with the BC Flood Hazard Maps, provide recommended minimum requirements for land use management in flood hazard areas in British Columbia. The Province updated these guidelines, effective on January 1, 2018, to include considerations for sea level rise into the determination of building setbacks and flood construction levels in coastal areas.

Surrey’s current Floodproofing Section of the Zoning By-law is out of date and inconsistent with Provincial standards and regulations. This report outlines proposed changes to both the

Zoning By-law and the Building Bylaw to ensure consistency with Provincial legislation and requirements for development within flood hazard areas.

A review of the floodproofing regulations was undertaken by Planning, Building, Engineering and Legal Services staff. During that review, several edits, additions and deletions were recommended for the Zoning By-law and Building Bylaw in order to simplify the language and provide better guidance for development. During this review, it was determined that the content in the Zoning By-law that references the Building Code was better located in the Building Bylaw. In addition, a Hazardous Lands Section is proposed to be added to the Building By-law. The specific changes are described below.

## DISCUSSION

### Zoning By-law

The following changes are proposed to the Floodproofing Section of the Zoning By-law (further detailed in Appendix "I").

1. Remove the reference to Surrey Zoning By-law, 1979, No. 5942  
There are a few leftover regulations that are still in effect from Zoning By-law No. 5942. Now that new regulations are proposed for the existing Zoning By-law, any historical references to that older by-law should be removed.
2. Remove the "Watercourse" definition  
A new definition for "Watercourse" was recently added to the main definitions section of the Zoning By-law in conjunction with the addition of the Streamside Protection Measures. The "Watercourse" definition in the Floodproofing Section should be removed so that there is only one definition in the entire Zoning By-law.
3. Remove Floor Elevation references  
The existing references to floor elevation are no longer consistent with existing Provincial legislation and should therefore be removed.
4. Move the "Natural Boundary" definition  
The definition for "Natural Boundary" is currently located within the "Floodproofing" section of the Zoning By-law, and it is proposed to be moved to the "Definitions" section so that it is easier to find and so that it sits with the other water-related definitions.
5. Add a new "Qualified Environmental Professional (QEP)" definition  
Adding this new definition is not related to the topic of Floodproofing, but is an amendment that is proposed to ensure that the zoning regulations listed under "Streamside Protection" that refer to the use of a "QEP" are clear and concise. It is a housekeeping amendment added to this report for convenience.
6. Move Regulations to the Building Bylaw  
The current floodproofing regulations detailing placement of electrical gear and calculation of floor elevation and habitable space are more appropriately dealt with at the Building Permit stage, and are therefore proposed to be removed from the Zoning By-law and added to the Building Bylaw.

## Building Bylaw

The following section outlines the proposed changes for the Building Bylaw (further detailed in Appendix “II”). These regulations are intended to apply to both steep slope and floodplain hazards as part of a Building Permit application.

1. Add a new “Hazardous Lands” definition

This definition is proposed to clarify within the Building Bylaw what constitutes a hazard. In this case, as defined in *Surrey Official Community Plan Bylaw, 2013, No. 18020* (“OCP”), Hazardous Lands include both steep slopes and flood prone areas.

2. Add a new “Hazardous Lands” Section

The new section is proposed to have the following regulations:

- That the property owner is required to register a hazardous lands Restrictive Covenant (applies to flood prone or steep slope areas) against the property identifying that the City is not liable for damages incurred by property owners as a result of their constructing in a hazardous area;
- That the property owner is required, in writing, to illustrate their understanding of the risks that come with constructing in a hazardous area;
- That the property owner is not to create additional hazardous conditions on the property;
- Demonstrate how building elevations are calculated when determining Flood Construction Level (FCL) in flood prone areas;
- Demonstrate where habitable space shall be located in a building in the floodplain; and
- Demonstrate where electrical and heating and cooling equipment in flood prone areas will be located.

## LEGAL SERVICES

Legal Services has reviewed the proposed amendments to both the Zoning By-law Floodproofing Section, and the new sections proposed to be added to the Building Bylaw, and have no concerns.

## POLICY CONSIDERATIONS

This report connects with the following policy considerations.

### Official Community Plan

**Policy D2.2** – Where developing or building in areas subject to natural hazards is unavoidable, permit such development only where effective protective measures are taken.

**Policy D2.9** – Permit development in areas subject to flooding hazards only when it is demonstrated by a Qualified Professional that the proposal meets current flood protection requirements at the time of development, with respect to proposed uses, building materials, and required building elevations. A Save Harmless Covenant indemnifying the City is required for all development within flood prone areas.

**Policy D2.10** – Consider and prepare for the projected impacts of climate change on flood hazard areas due to sea level rise and flood risk.

### Climate Adaptation Strategy

#### **Flood Management and Drainage Goal**

Update planning and development standards for floodplains.

#### **Flood Management and Drainage Action**

Review and revise regulatory and design standards to account for and minimize the impacts of climate change.

### **SUSTAINABILITY CONSIDERATIONS**

This report connects to the following Desired Outcomes (DO) and Strategic Directions (SD) in the Sustainability Charter 2.0.

#### **Built Environment and Neighbourhoods**

**DO4:** Exposure to natural hazards is minimized through appropriate location and design of development.

**DO9:** All aspects of planning, design and construction include climate change impacts, greenhouse gas (GHG) mitigation, adaptation and resiliency strategies.

#### **Public Safety**

**SD6:** Promote development types and locations that will be minimally impacted by natural disasters.

#### **Infrastructure**

**DO6:** The city anticipates changing weather patterns and sea level rise as a result of climate change, and implements appropriate infrastructure, land use planning and emergency response solutions that will be resilient over the long term.

**SD8:** Address long term sea level rise and related climate impacts in Surrey's lowlands and affected communities.

### **CONCLUSION**

Based on the information contained in this report, the Planning & Development Department recommends that Council:

- Receive this report for information;
- Approve amendments to *Surrey Zoning By-law, 1993, No. 12000*, as generally described in this report and detailed in Appendix "I;"
- Approve amendments to *Surrey Building Bylaw, 2012, No. 17850*, as generally described in this report and detailed in Appendix "II;" and

- Authorize the City Clerk to bring forward the necessary bylaws for the required readings.

*Original signed by*  
Jean Lamontagne  
General Manager, Planning & Development

CS/PH/ss

Appendix "I" Proposed amendments to *Surrey Zoning By-law, 1993, No. 12000*  
Appendix "II" Proposed amendments to *Surrey Building Bylaw, 2012, No. 17850*

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## Surrey Zoning By-law, 1993, No. 12000

The following proposed amendments to the Zoning Bylaw, are presented and highlighted in the order the sections appear in the bylaw, as follows:

### **Part 1, Definitions**

1. Add a new definition for “Natural Boundary” as follows:

#### **“Natural Boundary**

means the visible high water mark of any lake, river, *stream* or other body of water where the presence and action of the water are so common and usual, and so long continued in all ordinary years, as to mark on the soil of the bed of the body of water a character distance from that of its banks, in vegetation, as well as in the nature of the soil itself.”

2. Add a new definition for “Qualified Environmental Professional (QEP)” as follows:

#### **“Qualified Environmental Professional (QEP)**

means a professional Biologist, Geoscientist, Engineer, Forester and/or Agrologist registered by their professional association to practice in British Columbia, with demonstrated education, expertise, accreditation and knowledge relevant to sensitive environments, ecosystems and/or riparian/streamside management.”

### **Part 8, Floodproofing**

2. Delete the words “This Part is included for convenience only. Refer to Part VIII Floodproofing of “Surrey Zoning By-law, 1979, No. 5942”.
3. Delete Section “A. General” and replace it with a new Section “A. General” as follows:

#### **“A. General**

1. For the purpose of this Part, floodplain shall mean all areas of land designated as floodplain by the Provincial Government.
2. All *buildings* or *structures* constructed in the floodplain are subject to regulations set out in this Part, except as indicated in Section A.4 of this Part.
3. Elevations specific for floodproofing purposes are based on the Geodetic Survey of Canada.
4. This Part shall not apply to:
  - (a) The interior renovation of an existing *building* or *structure* which does not increase floor area;
  - (b) An addition to a *building* or *structure* of less than ten percent (10%) of the total floor area;

- (c) That portion of a *building* or *structure* designed or intended for parking, including a carport or garage;
- (d) That portion of a *building* or *structure* designed as an area beneath a floor (crawlpace) that is less than 1.8 metres in height;
- (e) A non-habitable *accessory building* or *structure*;
- (f) Loading ramps or work bays; or
- (g) Open-walled covered work areas.”

4. Delete Section “B. Determination of Minimum Floor Elevation” and replace it with a new Section “B. Determination of Minimum Floor Elevation” as follows:

**“B. Determination of Minimum Floor Elevation**

- 1. No *building* or *structure* shall be constructed, reconstructed, moved or extended to have a minimum floor elevation less than the minimum flood and building elevations, as specified by the Provincial Government and in the Surrey Building Bylaw, as amended.”

5. Delete Section “C. Minimum Floor Elevation Requirements” and replace it with a new Section “C. Fixed Equipment” as follows:

**“C. Fixed Equipment**

- 1. The installation of major electrical switchgear, furnaces or other fixed equipment susceptible to damage by floodwater must be at or above the designated flood elevation.”

6. Delete Section “D. Minimum Setback Requirements” and replace it with a new Section “D. Minimum Setback Requirements” as follows:

**“D. Minimum Setback Requirements**

- 1. Despite any other provision of this Bylaw, *buildings* or *structures*, or any part thereof, shall be located a minimum of:
  - (a) 15 metres from the *natural boundary* of the sea;
  - (b) 30 metres from the *natural boundary* of the Fraser River;
  - (c) 30 metres from the *natural boundary* of the Nicomekl, Serpentine or Little Campbell rivers, or any other watercourse; and/or
  - (d) 7.5 metres of a dyke Right-of-Way.”

### Surrey Building Bylaw, 2012, No. 17850

The following proposed amendments to the Building Bylaw, are presented and highlighted in the order the sections appear in the bylaw, as follows:

#### Table of Contents

1. Under the words “Part 18 – Moving of a Building” add a new row with the words “Part 18A – Hazardous Lands”

#### Part 1, Introductory Provisions

2. Section 2, Definitions, by adding a new definition for “hazardous lands” as follows:

##### “hazardous lands”

means one or more of the following:

- (a) all areas of land designated as floodplain by the Provincial Government; or
- (b) any lot or portion of a lot containing land within steep slopes that are a minimum of twenty percent (20%) gradient or greater; or
- (c) any lot or portion of a lot that falls horizontally within 30 m of the top or within 10 m of the bottom of a steep slope that is a minimum of twenty percent (20%) gradient or greater.”

#### Part 18A, Hazardous Lands

3. By adding a new “Part 18A, Hazardous Lands”, as follows:

##### “Part 18A Hazardous Lands

- 94.1 Prior to the issuance of a building permit for work within *hazardous lands*, where the proposed work constitutes a subdivision, land alteration or land clearing activity, or construction of, addition to, or alteration of, *buildings* or *structures*, the owner shall:
  - (a) provide a copy of any required Hazard Land Development Permit; and
  - (b) register and provide a copy of any required covenants, pursuant to Section 219 of the *Land Titles Act*, ensuring any issues regarding construction on steep slopes or in floodplains are addressed and are acceptable to the City of Surrey.
- 94.2 Notwithstanding Section 94.1, it is the responsibility of the property owner to ensure that *buildings* or *structures* will be safe from water, including, but not limited to, any infiltration or water action caused by surface runoff or underground seepage etc.



- 94.3 Notwithstanding Section 94.1, it is the responsibility of the owner to ensure that *buildings* or *structures* will be safe from unstable slope conditions, either above or below the proposed development, and whether caused by development or not.
- 94.4 No habitable *building* shall be constructed, reconstructed, moved or extended so as to have a minimum floor elevation of less than 0.3 metres (0.98 feet) above the 100 year return hydraulic grade level (as determined by a registered member of the Association of Professional Engineers and Geoscientists (APEG) of British Columbia) of the storm sewer, ditch, pond or other drainage facility to which it drains.
- 94.5 The minimum elevation of a *building* or *structure* shall be taken at the underside of the lowest floor joists or the top of slab elevation for slab-on-grade construction, or whichever is lower, supporting any space or room, that is used for:
- (a) habitable purposes:
  - (b) public assembly; or
  - (c) business.
- 94.6 For buildings housing livestock, the following regulations apply:
- (a) open-sided livestock *buildings* or *structures*: do not require floodproofing by elevation; and
  - (b) closed-sided livestock *buildings* or *structures*: shall be located with the underside of the wooden floor system or the top of the pad no lower than one metre (1.0 m) above the natural ground elevation surrounding the building or structure.
- 94.7 The installation of major electrical switchgear, furnaces or other fixed equipment susceptible to damage by water must be at or above the floodplain elevation, as designated by the Provincial Government.”