Village of Lytton

BUILDING BYLAW AMENDMENT BYLAW NO. 711, 2022

A Bylaw to Provide for Wildland/Urban Interface Fire Protection for Buildings and Accessibility for Life Safety

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GIVEN that the Village Council

A. may by bylaw regulate, prohibit, and impose requirements in relation to buildings and structures under section 8(3)(g) and (l) of the *Community Charter* for the health, safety, or protection of persons or property under section 53(2) and 63 of that statute;

B. may by bylaw regulate, prohibit, or impose requirements in relation to trees and shrubs under section 8(3)(c) of that statute and section 527 of the *Local Government Act*;

C. is enacting this bylaw to amend *Building Bylaw No. 710, 2022* in accordance with approvals of the Province of British Columbia respecting:

   (a) wildland/urban interface fire protection;

   (b) structure ignition zones;

   (c) vegetation management for fire protection; and

   (d) accessibility and life safety;

D. the Province has approved the provisions of this Bylaw that require such approval under the *Building Act* and *Building Act General Regulation 131/2016*; and

E. has engaged trained building officials for the purposes of this bylaw;

NOW THEREFORE the Council of the Village of Lytton enacts as follows:

Citation

1. This bylaw may be cited as "BUILDING BYLAW AMENDMENT BYLAW NO. 711, 2022".

Amendment of Building Bylaw No. 710, 2022

2. BUILDING BYLAW NO. 710, 2022 is amended by adding the following:

   (a) Parts 21, 22, 23 and 24 after Part 20; and

   (b) Appendices M, N, and O after Appendix L.

PART 21: FIRE SAFETY

Protection of Construction Against Wildland Urban Interface Fire

21.1 *Construction* of new Part 3 and Part 9 *buildings* shall comply with Appendix M. Appendix M is the current Chapter 3 of the *NRC WUI Fire Guide,* which is incorporated by reference in this Bylaw as Appendix M, as amended in Appendix M and from time to time by the National Research Council of Canada.

PART 22: STRUCTURE IGNITION ZONES

22.1 Appendix N applies to the maintenance of existing *buildings*.

PART 23: VEGETATION MANAGEMENT

23.1 Every new *building permit* application is subject to submission to the *building official* of a vegetation management plan described under Appendix O.

23.2 Without limiting section 23.1, every new *building permit* application is subject to submission to the building official of a fuel management plan for the parcel in respect of which the *owner* has applied for a building permit, in accordance with Appendix O.

PART 24: ACCESSIBILITY STANDARDS

24.1 Chapter 7 of the B651-18 National Standard of Canada, as amended from time to time, is incorporated by reference in this Bylaw.

24.2 *Construction* of new Part 3 and Part 9 *buildings* shall comply with Appendix P. Appendix P comprises *SAFERhome Standards*.

APPENDIX M – WILDLAND URBAN INTERFACE FIRE PROTECTION FOR BUILDINGS

Scope

Despite any other enactment, every *building* and *structure* shall be constructed in accordance with this Bylaw, including sections 3.3.2 through 3.3.10 of the *NRC WUI Fire Guide*, as amended from time to time.

APPENDIX N - STRUCTURE IGNITION ZONES

1. Definitions

In this Appendix N:

Exposed building face means that part of the exterior wall of a building that faces one direction and is located between ground level and the ceiling of its top storey, as well as, for the purposes of this Bylaw, the roof above that part of the exterior wall;

Firebreak means the barrier to fire spread built by clearing or significantly thinning fuels on a strip of strategically located land;

Fuel break means the trench dug down to mineral soil that stops surface fire spread;

Non-combustible material means the [in relation to building materials] meets the acceptance criteria of CAN/ULC-S114, "Test for Determination of Non-Combustibility in Building Materials," (NRC WUI Fire Guide) *or* material that used under the conditions anticipated, will not ignite, burn, support combustion, or release combustible vapours when subjected to fire or heat (NFPA 1144);

NRC WUI Fire Guide is: Bénichou N., Adelzadeh M., Singh J., Gomaa I., Elsagan N., Kinateder M., Ma, C., Gaur A., Bwalya A., and Sultan M. (2021). National Guide for Wildland-Urban Interface Fires. National Research Council Canada: Ottawa, ON. 192 pp., available from https://nrcpublications.canada.ca/eng/view/object/?id=3a0b337f-f980-418f-8ad8-6045d1abc3b3;

Structure Ignition Zone means the zone around a building or other point source where specific fuel management measures are used;

Structure Ignition Zone 1A means a Priority Zone that is immediately adjacent to a building and extends to 1.5m outward in all directions from the furthest projection of the building;

Structure Ignition Zone 1 means a Priority Zone that is beyond 1.5m and extends to 10m outward in all directions from the furthest projection of the building. Note 1 to entry: The main objective of the management of vegetation and combustible material in this zone is to create an environment that will not support fire of any kind;

Slope means the upward or downward inclination of the earth's surface (i.e. the deviation in terrain from level or flat ground). Slope is most commonly expressed as a percentage calculated as the vertical rise or fall in elevation divided by the horizontal distance and then multiplied by 100;

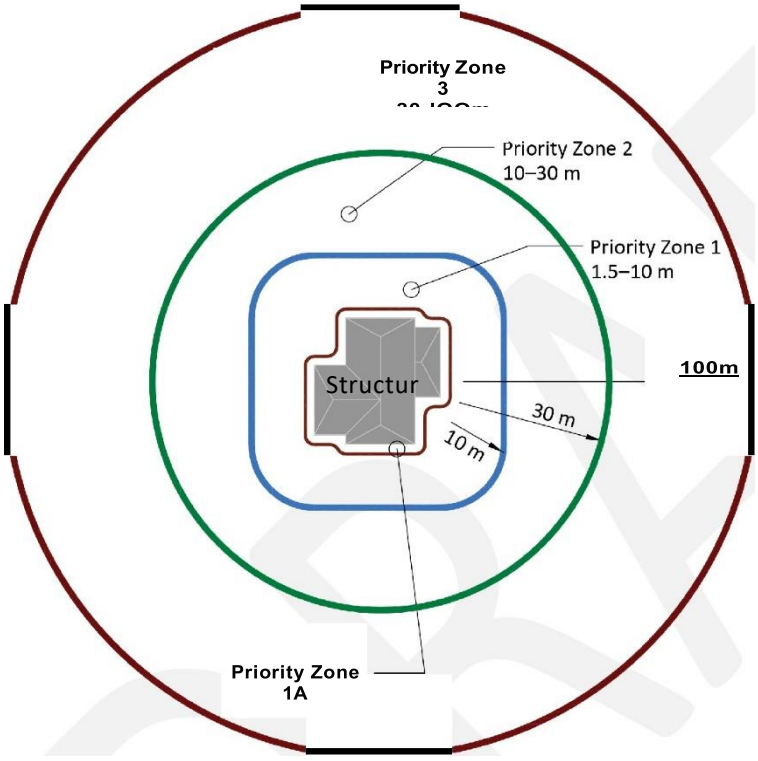
Structure Ignition Zone means an area in Priority Zones 1A to 3 around a specific structure and associated accessory structures, including all vegetation that constitutes potential fuel for ignition;

2. Structure Ignition Zones

In addition to the construction measures prescribed in Appendix M, fuel shall be managed in zones within a certain radius of the *structure*, which are called *Structure Ignition Zones.*

Figure 1, which is based on the FireSmart zone concept, shows a definition of the *Structure Ignition Zone*, which includes *Priority Zones 1A to 3.*

Figure 1 The *Structure Ignition Zones* extend outward in all directions within the indicated distances from the furthest projection of the *building*. Note that zone radii are not to scale.



3. Structure Ignition Zones Requirements

a. Structure Ignition Zone 1A

i. Within a zone of not more than 1.5m extending outward in all directions from the furthest projection of the *building,* the following measures shall be used:

1. Vegetation and *combustible* material, including woody shrubs, trees and tree branches, shall be completely removed down to mineral soil, and

2. *Non-combustible* materials, such as gravel, brick, and concrete, shall be used for landscaping features

b. Structure Ignition Zone 1

i. Within a zone beyond 1.5m and not more than 10m extending outward in all directions from the furthest projection of the *building*, the following measures shall be used:

1. over-mature, dead, and dying trees with potential to ignite and carry fire shall be removed,

2. highly flammable species of trees with potential to ignite and carry fire shall be removed,

3. vegetation shall be thinned and pruned to prevent a fire from being carried toward or away from the *building,*

4. remaining vegetation shall be converted to less fire-prone species if compatible with ecological considerations;

5. *combustible* debris and items, including firewood piles, construction materials, furniture, decorative items, trailers, recreational vehicles, storage sheds, and ancillary or *accessory structures* that are not in compliance with Appendix M, shall not be present, and

6. *firebreaks* shall be provided as described in Clause 3(g) Firebreaks and Fuel Breaks, where

a. a *slope* increases the *WUI fire risk* to the *building* or the *subdivision, or*

b. the *building* is located adjacent to a *slope* without the setback required by Clause 3(f).

c. Structure Ignition Zone 2

i. Except as described in Sentence (2), within a zone beyond 10m and not more than 30m extending outward in all directions from the furthest projection of the *building*, the following measures shall be used

1. fuel shall be reduced through selective removal of coniferous trees to maintain a horizontal separation not less than 3m between single and grouped *tree crowns*,

2. branches located up to a height not less than 2 m from the ground shall be removed from the remaining trees, and

3. accumulation of fallen branches, dry grass, and needles shall be removed to the greatest extent reasonably practicable.

ii. The outer radius of the zone described in Sentence (1) shall be adjusted for *slope* as described in Clause L.3.5. Slope Adjusted Priority Zones.

d. Structure Ignition Zone 3

i. Except as described in Sentence (2), within a zone beyond 30 m and not more than 100 m extending outward in all directions from the furthest projection of the *building*, the measures of Clause 3(b)(i)(c) shall be used.

ii. The outer radius of the zone described in Sentence 3(d)(1) shall be adjusted for *slope* as described in Clause 3(e) Slope-Adjusted Priority Zones.

Note: Structure Ignition Zone 3 may managed by a forest professional through the development of a fuel management prescription.

e. Slope-Adjusted Priority Zones

i. Except as described in Sentence (ii), the outer radii of *Priority Zones 2 and 3* shall be adjusted for *slope* as described in Sentences (iii) and (iv).*

ii. The adjustment for *slope* described in Sentence (i) need not apply where the effects of *slope* in *Priority Zone 3* and Exposure Zone 4 are considered through the use of the detailed method to assess the *Exposure Level* of the *building*, as described in Chapter 2 of the *NRC WUI Fire Guide*.

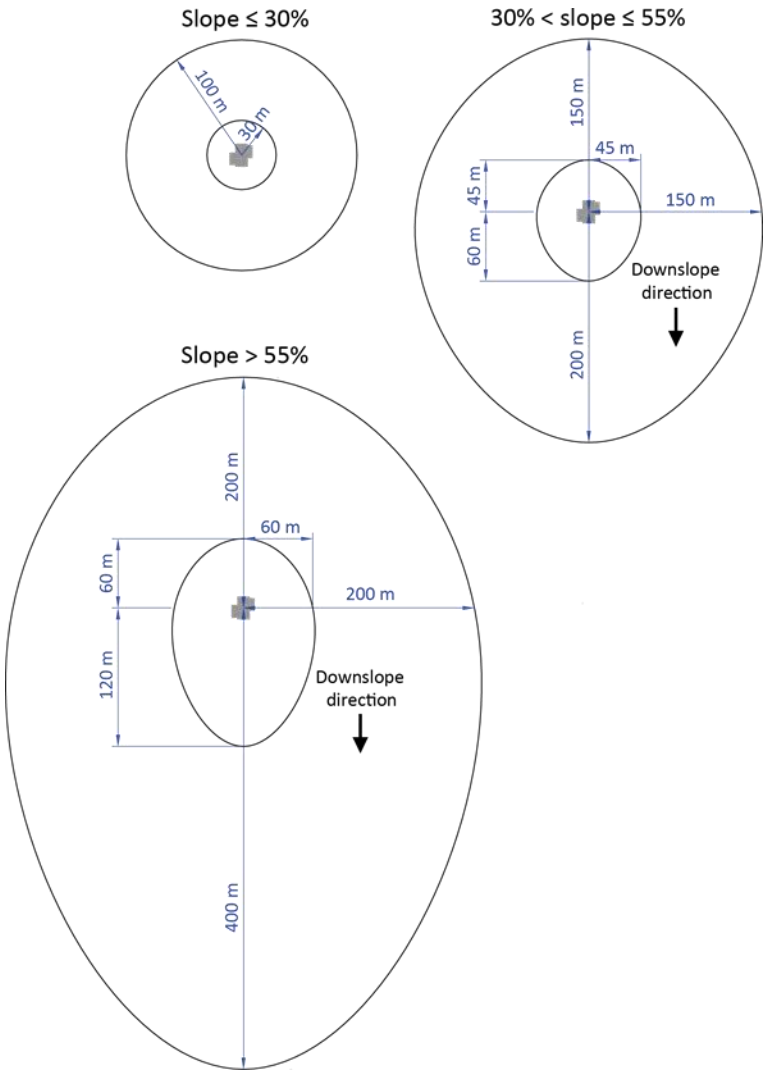
iii. Where the *slope* of *Priority Zone 2 and 3* is greater than 30% and less than or equal to 55%, the outer radius of the zone shall be increased (see Figure 2) by

1. a factor of 2 in the downslope direction, and
2. a factor of 1.5 in the horizontal direction

iv. Where the *slope* of *Priority Zone 2 and 3* is greater than 55%, the outer radius of the zone shall be increased by

1. a factor of 4 in the downslope direction, and
2. a factor of 2 in the horizontal direction

*the location of the inner radius of Zone 3 shifts to coincide with the new position of the outer radius of Zone 2 after any adjustment.



f. Setbacks

i. Except as described in Sentence (ii), *buildings* in *Structure Ignition Zone 1* must be located at a distance not less than 10 m from the crest of any hill (see Figure 3).

ii. Where a setback as described in Sentence (i) is not possible, the *Construction Class* of the *exposed building face* facing the downslope shall be taken as CC1(FR).

Note: The Current iteration of Appendix M provides construction requirements in compliance with CC1(FR). L.2.6 applies only where other construction classes, as outlined in the *NRC WUI Fire Guide*, are applied.

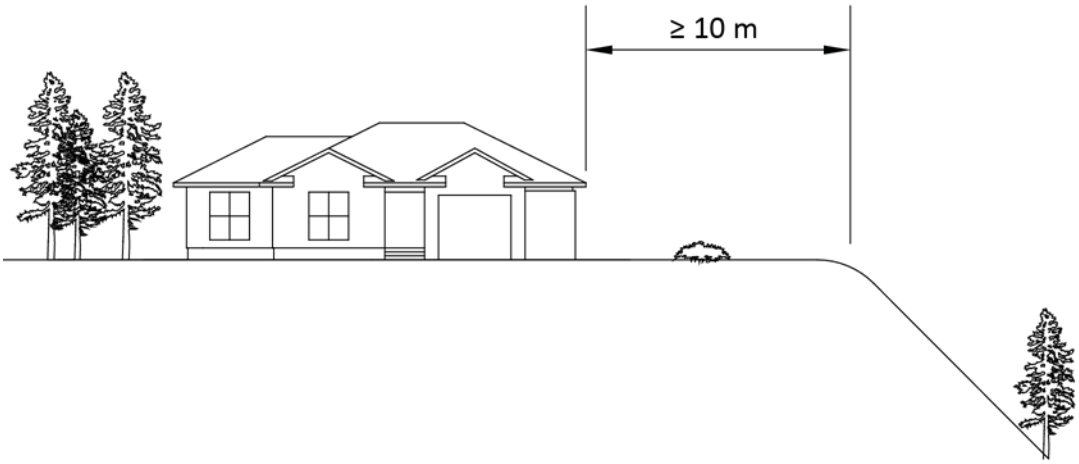


Figure 3: Example setback, as described in Setbacks

g. Firebreaks and Fuel Breaks

The minimum width of the *firebreak* described in Clause O.3.2(f) shall be

i. based on the magnitude of the *slope* in accordance with Table O.1.

Table L.1: Minimum Width of Firebreaks

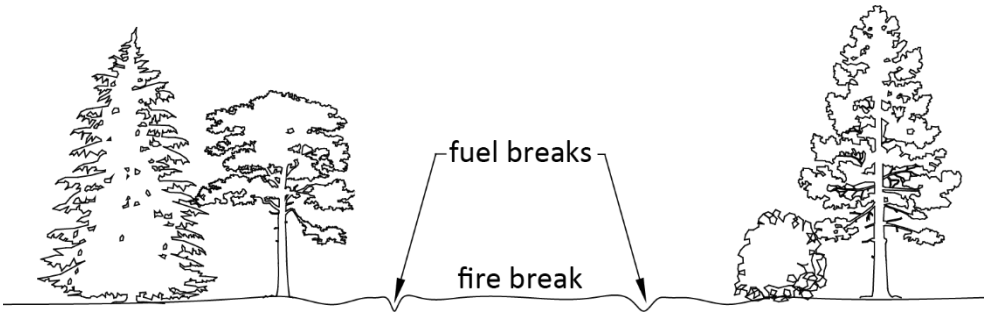
Slope, %	Minimum Width of Firebreak, m
≤ 5	30
> 5 and ≤ 15	40
> 15	50

ii. *Fuel breaks* shall be provided on both sides of the *firebreak* referred to in Sentence (1) (see Figure O.4)

iii. Vegetative fuels shall be completely removed down to mineral soil from the *fuel breaks* referred to in Sentence (2).

iv.

Figure 4. Fuel breaks on both sides of a firebreak, as described in Clause 3(g)(ii)



4. Structure Ignition Maintenance

a. Priority Zone 1A

i. For raised or elevated buildings, combustible materials shall not be stored underneath the building and the accumulation of combustible debris underneath the building shall be prevented by the installation of non-removable mesh or guard made of corrosion-resistant, non-combustible material, per Appendix M, Clause C.6.7(2).

b. Structure Ignition Zone 1

i. Within a zone beyond 1.5m and not more than 10m extending outward in all directions from the furthest projection of the building, the following measures shall be used:

1. Annual grasses shall be mowed to a height of not more than 10cm, and

2. Ground litter and downed trees shall be removed at a frequency not less than annually.

APPENDIX O - VEGETATION MANAGEMENT

Vegetation management plans shall be submitted to the *building official* for review and approval as part of the plans required for a *building permit*.

Plan Content

Vegetation management plans shall describe all actions that will be taken to prevent a fire from being carried toward or away from the building. A vegetation management plan shall include the following information:

(a) a copy of the site plan;

(b) methods and timetables for controlling, changing or modifying areas on the property; elements of the plan shall include removal of slash, snags, vegetation that may grow into overhead electrical lines, other ground fuels, ladder fuels and dead trees, and the thinning of live trees; and

(c) a plan for maintaining the proposed fuel-reduction measures.

Fuel Modification

To be considered a fuel modification for purposes of this Bylaw, the *owner* must continuously maintain the clearance.

APPENDIX P – SAFERHOME STANDARDS

Every *owner constructing* a new residential *building* must comply with the following standards as a condition of *building occupancy*.

	STRUCTURE & DESIGN	
Criteria	**Standard**	**Description**
1	Exterior Thresholds	All exterior thresholds are flush.
2	Interior Thresholds	All interior thresholds meet minimal code constraints (eg. shower entrance).
3	Doors (& pinch points)	All doors and pinch points are a minimum of 34″ but ideally 36″ wide.
4	Hallways	All hallways are a minimum of 40″ but ideally 42″ wide.
5	Washroom Wall Reinforcements	Reinforced with 2″x12″ solid lumber in all washroom tub, shower, and toilet locations.
6	Wall Reinforcements (Top of the Stairs)	At the top of all stairs, walls are reinforced with 2″x12″ solid lumber at 36″ to centre.
7	Multistory Connection Provision	Either an allowance for an elevator options in stacked closets or build all staircase(s) with a minimum width of 42″.
8	Sink Cabinets	Cabinets underneath each sink are easily removed.
	ELECTRICAL & TELECOM	
Criteria	**SAFERhome Standard**	**Description**
9	Light Switch Positioning	All switches positioned at 42″ to the centre of the electrical box from the finished floor.
10	Electrical Outlet Positioning	All outlets positioned at 18″ to the centre of the electrical box from the finished floor.
11	Electrical Outlet Placement Locations	Beside windows, especially where draperies or blinds may be installed; Bottom of staircases; Beside the toilet; Above external doors (inside); On front face of kitchen counter.
12	Four-Plex Outlet Locations	Placed in master bedroom, home office, garage, and recreation room.

	PLUMBING	
Criteria	**Standard**	**Description**
13	Bath and Shower Control Positioning	All controls are offset from centre, roughly 1/2 way between the historic centre location and the outside edge of the shower or tub enclosure.
14	Waste Pipes	All pipes are brought in no higher than 14″ to the centre of the pipe from floor level.
15	Pressure/Temperature Control Valves	Control valves are installed on all shower faucets.

In Force

This amendment bylaw comes into force on adoption.

READ A FIRST TIME this 11th, day of May, 2022.

READ A SECOND TIME this 8th, day of June, 2022.

READ A THIRD TIME this 13th, day of July, 2022.

RESCINDED AT THIRD READING this 12th, day of October, 2022

READ A THIRD TIME AS AMENDED this 12th, day of October, 2022.

APPROVED BY PROVINCE OF BRITISH COLUMBIA this ___ day of _____, 2022

ADOPTED this ___ day of _____, 2022.

Mayor _____ Corporate Officer_____