



April 9, 2021  
TDB Project Number: 5088

Marius Veldtman  
Edmonton, AB T8A 3C1

**FUEL HAZARD AND ABATEMENT ASSESMENT  
PID 005850355, PRINCE GEORGE, BC**

TDB Consultants Inc. (TDB) was contracted by Mr. Marius Veldtman to complete a fuel hazard and abatement assessment to assess the hazard of fuels on a property near the junction of Tyner and Ospika Boulevards in Prince George, BC. This assessment is required as part of the development permit process with the City of Prince George. The PID assigned to this property is 005850355. The purpose of the fuel hazard and abatement assessment was as follows:

- 1) Determine the hazard of the remaining forest fuels
- 2) Determine if fire hazard abatement is necessary

**FIELD ASSESSMENT:**

TDB conducted a site visit on April 5, 2021 to visually inspect the site and the fuels that exist.

**SITE OBSERVATIONS:**

The property is a wedge shape between Ospika and Tyner Boulevards. Significant gullies exist on the south and west portions of the property. Slope varies between 5 to 25% and aspect is generally to the SE. The property has recently had an access trail cleared to ready the property in conjunction with residential development. The trees along the access trail were pushed to the side of the access trail. The cleared access trail is approximately 3 meters wide, constructed down to mineral soil and exists near the future north portion of the planned residential development. Most merchantable trees have not been cut and are still on site. The merchantable stems are mostly deciduous (birch and aspen), with a minor coniferous (spruce/Douglas-fir) component scattered within the stand.



Photo 1 is representative of the debris that remains found along the cleared access trail. The debris is mostly large woody debris lying flat on the ground. Photos 2, 3, and 4 are representative of the merchantable trees on site.



Photo 1: Typical Debris Remaining Along Access Trail



Photo 2: Existing Stand Composition





Photo 3: Existing Stand Composition



Photo 4: Existing Stand Composition



### **Discussion and Recommendations:**

The property is located in an area designated as being at severe risk for potential fire hazard. Currently, the debris that exists along the cleared access trail is minor in nature and is lying flat. This debris may be abated at the discretion of the property owner.

Significant future land clearing, however, will be required as part of the property development. The trees and debris created from this land clearing will be excessive in volume and exist within a residential neighbourhood. Therefore, the future fuel hazard on this property will be significant and must be abated. This is especially important if land clearing begins this summer with the associated higher fire danger. Because of City of Prince George Bylaw No. 8266, **no** open burning of land clearing debris may occur within the City of Prince George. It is recommended that merchantable stems be moved off-site to biofuel and sawmill facilities. Tops and branches should be chipped and moved off-site also for disposal.

### **Closure and Limitations:**

This letter has been prepared by TDB for the benefit of Marius Veldtman and the City of Prince George for the specified application described within. This letter is based on direct field observations of the property as noted. The information contained herein represent TDB's best professional judgment in light of the knowledge and information available to TDB at the time of preparation. Except as required by law, this letter and the information and data contained herein are to be treated as confidential and may be used and relied upon only by the client, its officers and employees.

TDB accepts no responsibility whatsoever to other parties who may obtain access to this report for any injury, loss or damage suffered by such parties arising from their use of, or reliance upon, this document or any of its contents without the express written consent of TDB and the client.

This document was prepared in accordance with generally accepted guidelines related to fuel hazard and abatement assessment guidelines. No other warranty, expressed or implied, is made.

Please do not hesitate to contact the undersigned should you have any questions or comments.

Respectfully submitted,

TDB Consultants Inc.





Attachments:

Site Plan

Wildfire Threat Assessment Worksheets



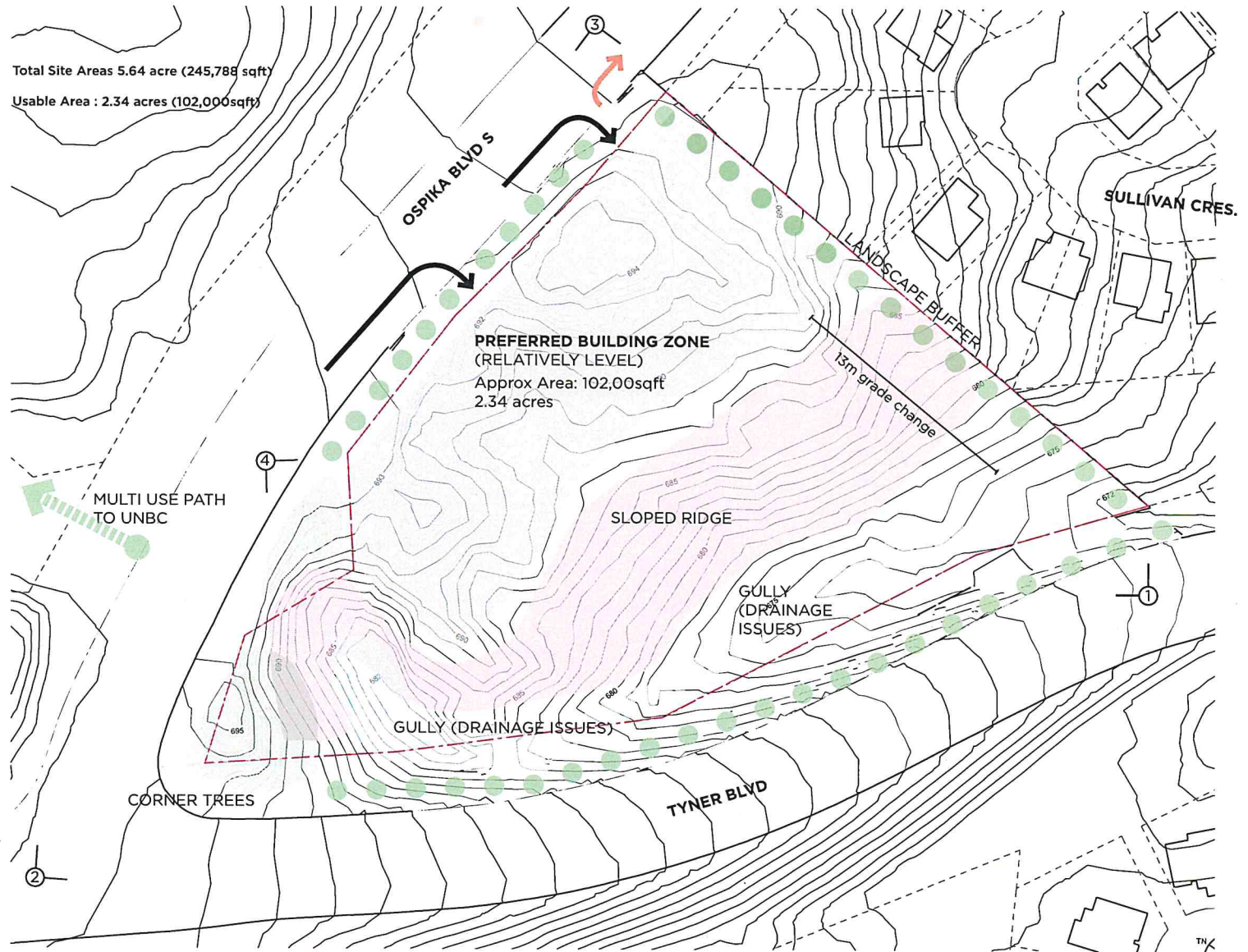
## SITE ANALYSIS

The site is a triangular shape with two sides fronting large boulevards and the third side adjacent to a single family neighbourhood. The site has a number of topographic features including a deep gully at the far south, a relatively flat area at the north-west and a very sloped section that bisects the site. The south and south-east is a natural valley allowing storm water drainage from Ospika Blvd., the site and Tyner Blvd. After considering these features, the design team selected the relatively flat zone to the north-west as the most appropriate location for a student residence. It is also a suitable location for access from Ospika Blvd. and is on the high side of the site nearest to UNBC.

Other notable features include a cluster of large trees near the south point of the site and on either side of the valley, and a knoll at the north end of the site.

The design aims to leave as much of the site undisturbed and seeks to nestle the building and its amenities, paths and gathering space into the existing forest.

A bus stop (connection to UNBC campus) is located at the Westernmost tip of the site on Tyner Boulevard.



# Wildfire Threat Assessment Guide and Worksheets 2020

Updated March 2017

## Wildfire Threat Assessment Worksheet – Priority Setting Scoring (complete one for entire proposed treatment area)

Location: PID 005850355 Date: April 6/21 Assessor: Mark Carlson  
 Coordinates (Lat/Long – Degrees/Decimal Minutes): 53°52.201' N / 122°47.380' W  
 PSTA Threat: No data - private land FBP Fuel Type: M-1/2  
 Assessor's FBP Fuel Type: No data - private land Ownership:  
 Assessor's Fuel Type Rationale<sup>2</sup>: Deciduous (birch/aspen) leading fuel, with scattered coniferous (spruce/Douglas-fir)

Value Description (include type of value and distance to the value from the proposed treatment area):

Surrounded by residential neighbourhood < 50m from property boundary.

Landscape Assessment					
Proximity of fuel treatment area to value (m)	0-100 (25)	101-500 20	501-1,000 15	1,000-2,000 5	> 2,000 0
Existing Fuel Mgmt. treatment area in place between the proposed treatment area and the value(s)	Yes 5	No (0)			
Treatment Placement: using the predominant wind direction/ fire spread pattern, what is the treatment location in relationship to the value(s) location?		Downwind 0	270° offset to prevailing wind/ highest ISI values 7	90° offset to prevailing wind/ highest ISI values 10	Upwind/ highest ISI values (15)
Distance to nearest vehicle access (m)		0-200 (5)	201-400 3	401-1,000 1	> 1,000 0
Distance to non-fuel / treated <sup>1</sup> area near the assessment area (m)		0-200 (5)	201-400 3	401-1,000 1	> 1,000 0

Topographical Factors					
Topography: Slope	< 20% 0	21-30% (1)	31-45% 3	46-60% 4	> 60% 5
Topography: Aspect (> 20% slope)		North 0	East/Flat 3	West 4	South (5)
Slope position of value (only applies if slope is > 20%)		Bottom of slope/ valley bottom 0	Mid slope - bench 1	Mid slope - continuous 3	Upper 1/3 of slope (5)

Total Score: 61

### Comments:

See assessment report.

<sup>1</sup> Must include three photos for each plot (one of forest floor, one of surface and ladder fuel, one of overstory)  
<sup>2</sup> Fuel management type treatment where wildfire threat has been mitigated



# Wildfire Threat Assessment Guide and Worksheets 2020

## Appendix B – Wildfire Threat Assessment Worksheets

Wildfire Threat Assessment Worksheet - Fuel Assessment (Site Level) <sup>1</sup>	Plot #
Location: <i>PID 005850355</i>	Date: <i>Apr 16/21</i>
Assessor: <i>Mark Carlson</i>	Professional Designation: <i>RPF</i>
Coordinates (Lat/Long – Degrees/Decimal minutes): <i>53° 52.201' N / 122° 47.380' W</i>	

Component/ Sub-Component	Levels/Classes				
	<b>Forest Floor and Organic Layer</b>				
1 Depth of organic layer (cm)	1- < 2 1	2- < 5 <u>3</u>	5- < 10 5	10-20 3	> 20 2

Surface and Ladder Fuel (0.1 – 3.0 meters in height)						
2	Surface fuel composition	Moss, herbs, deciduous shrubs <u>4</u>	Lichen, conifer shrubs 6	Dead fines fuel <sup>1</sup> (<1 cm) 8	Pinegrass 10	Sagebrush, Bunch grass, Juniper, Scotch broom 15
3	Dead and down material continuity (< 7cm)	Absent 0	Scattered < 10 coverage 4	10-25% coverage <u>8</u>	26-50% coverage 12	> 50% coverage 15
4	Ladder fuel composition	Deciduous/ None 0	Mixwood <u>5</u>	Other conifer 8	Elevated dead fuel 10	Spruce, Fir, Pine 15
5	Ladder fuel horizontal continuity	Absent 0	Sparse < 10% coverage <u>2</u>	Scattered 10-39% coverage 8	Patchy 40-60% coverage 10	Uniform > 60% coverage 15
6	Stem/ha (understory) <sup>2</sup>	< 500 2	501-800 4	801-1 200 <u>6</u>	1 2501-1 5 000 8	> 1 500 10

Stand Structure and Composition (Dominant and co-dominant stems)						
7	Overstory composition/ Crown Base Height (CBH)	Deciduous (< 25% conifer) All CBH 0	Mixwood (% conifer) 25% 50% 75% <u>0</u> 2 3	Conifer with high CBH (> 10m) 3	Conifer with moderate CBH (5-9m) 4	Conifer with low CBH (< 4m) 5
8	Fuel strata gap <sup>6</sup> (m)		> 10 0	6-9 <u>1</u>	3-6 3	< 3 5
9	Stems/ha (overstory) <sup>7</sup>	< 400 0	401-600 2	601-900 3	901-1 200 <u>4</u>	> 1 200 5
10	Crown closure	< 20% 0	20-40% or Deciduous Overstory (any closure) <u>1</u>	41-60% 2	61-80% 5	> 80% 4
11	Dead and dying (% of dominant and co-dominant stems)		Standing dead/ Partial down < 20% <u>2</u>	Standing dead/ Partial down 21-50% 5	Standing dead/ Partial down 51-75% 8	Standing dead/ Partial down > 75% 10

Total Score <sup>8</sup> :	<i>36</i>
Eco Province scoring used:	<i>central Interior</i>
Fuel Assessment Rating: (low, high etc.)	<i>Low</i>

Comments:

*See assessment report.*