

February 20, 2020

File: 62649.03

Luc Belisle  
1384 Baker Road  
Casselman, Ontario  
K0A 2W0

Attention: Mr. Steve Smith

**Re: Wildland Fire Risk Assessment in Support of a Proposed Plan of Development  
1384 Baker Road, Casselman, Ontario**

Please accept this letter as the GEMTEC Consulting Engineers and Scientists Limited (GEMTEC) wildland fire risk assessment for the proposed plan of development, located at 1384 Baker Road, Casselman, Ontario. This document addresses the concerns raised by the presence of Wildland Fire Risk Area, as identified on Appendix 1 of the United Counties of Prescott Russell Official Plan, Appendix 1.

**BACKGROUND**

The property owner is seeking to create four property parcels from an existing 6.2 hectare (ha) property for future residential development purposes. As the subject property contains woodlands, the United Counties of Prescott Russell identified the need to consider wildland fire risks for the subject property, in relation to the proposed development.

The wildland fire policy was introduced in the 2014 Provincial Policy Statement to ensure communities consider and plan for avoiding and mitigating losses to their communities due to wildland fire. As outlined in the Provincial Policy Statement, "*Development shall generally be directed to areas outside of lands that are unsafe for development due to the presence of hazardous forest types for wildland fire. Development may however be permitted in lands with hazardous forest types for wildland fire where the risk is mitigated in accordance with wildland fire assessment and mitigation standards*".

To assist planning authorities in implementing the policy, the MNRF has produced general wildland fire hazard mapping based on the most current Forest Resource Inventory and LandSat data, and provides fuel type categories established by the Canadian Forest Fire Behaviour Prediction system. The UCPR Official Plan Appendix 1 mapping for the subject property indicates that the hazard classification for the woodlands on-site is 'High'. This

memorandum provides the evaluation of the on-site woodlands in relation to wildland fire hazard level.

## **Site Level Assessments**

The MNRF Wildland Fires Risk Assessment Guideline (2016) recommends a two-step process for site level wildland fire assessments. In all cases, site assessments should take place during snow-free conditions to better assess the potential risks of lands being assessed.

### **Level 1 Site Assessment**

The level 1 site assessment consists of a desktop screening of sites for the presence and/or type of forest cover in the area, and may include the review of aerial photography, Make a Map: Natural Heritage Areas mapping application, and site investigations. The results of the Level 1 Site Assessment will determine the presence/absence of forest cover on-site and, if forest cover is determined to be present, a Level 2 Site Assessment is required to further assess wildland fire risk. If forest cover is not present on-site a Level 2 Site Assessment is not required. Lands that are not forested, agricultural areas, lands that are dominated by hardwood/deciduous species and wetland areas are examples of lands that would not require a Level 2 Site Assessment.

### **Level 2 Site Assessment**

A Level 2 Site Assessment is used to evaluate the forest characteristics present on-site and assess the risk for wildland fires to occur. The Level 2 Site Assessment should consider the following factors for the subject property and surrounding area:

- Forest composition and predominant vegetation (fuel types), particularly those that are associated with the risk of high to extreme wildland fire;
- Forest condition (e.g. presence of disease, storm or insect damage);
- Forest arrangement and density; and
- Presence of ladder fuels and ground fuel accumulation.

Following the Level 2 Site Assessment, if hazardous forest types for wildland fire are present, measures to minimize wildland fire risk should be mitigated, and applied before permitting development.

## RESULTS

### Level 1 Site Assessment

Following review of available background data, aerial imagery and based off the MNRF Fire Hazard Mapping provided in the UCRP Official Plan for the subject property, vegetation on-site has a 'high' potential for the presence of hazardous fuel types, providing a risk of wildland fire and the woodlands on-site require a Level 2 Site Assessment to further examine their potential risk level for wildland fire.

### Level 2 Site Assessment

To further characterize the woodlands on-site, a Level 2 Site Assessment was conducted to determine the forest characteristics of the on-site woodlands. Development on-site is proposed to front to Baker Road, and corresponds with the following vegetation community: green ash – hardwood lowland deciduous forest (ELC code FODM7-2). Table 1 below presents the characteristics of the on-site vegetation community where development is proposed, and its associated wildland fire risk level.

**Table 1 Summary of On-site Forest Characteristics and Wildland Fire Risk Level**

Forest Characteristic	Site Characteristic	Wildland Fire Risk
Forest Composition and Predominate Vegetation	Green Ash – Hardwood Lowland Deciduous Forest (FODM7-2) dominated by green ash and red maple. Lesser constituents included yellow birch, white birch, basswood, trembling aspen, sugar maple, white ask, black cherry and red oak.	Low
Forest Condition	No to low presence of disease, storm or insect damage in forest community on-site.	Low
Forest Arrangement and Density	The forest community on-site is not tightly arranged and is of a low density canopy and understory. Conifer trees are not present within the community.	Low
Presence of Ladder Fuels and Ground Fuel Accumulation	Ladder fuels and ground fuel accumulations are minimal or not present within the area of proposed development.	Low

Following review of Table 1, the characteristics of the on-site woodlands indicate that the risk level for wildland fires to occur is low.

## CONCLUSIONS

The UCPR Hazardous Forest Types for Wildland Fire (Appendix 1) of the Official Plan, identified a portion of the woodlands on-site as having a 'High' potential to have hazardous fuel types present, requiring an evaluation to determine their potential fire hazard classification. Following a Level 2 Site Assessment, as outlined in the MNR Wildland Fire Risk Assessment and Mitigation Guidebook, the woodlands on-site have been determined to have a low risk for wildland fire. As such, no further mitigation measures are required for the proposed residential development.

## CLOSURE

This memorandum and the work referred to within it have been undertaken by GEMTEC Consulting Engineers and Scientists Ltd. (GEMTEC), and was prepared for Luc Belisle, and is intended for the exclusive use of Luc Belisle. This report may not be relied upon by any other person or entity without the express written consent of GEMTEC and Luc Belisle. Nothing in this report is intended to provide a legal opinion.

The investigation undertaken by GEMTEC with respect to this report and any conclusions or recommendations made in this report reflect the best judgements of GEMTEC based on the site conditions observed during the investigations undertaken at the date(s) identified in the report and on the information available at the time the report was prepared.

This letter has been prepared for the application notes and it is based in part, on visual observations made at the site, all as described in the report. Unless otherwise states, the findings contained in this report cannot be extrapolates or extended to previous or future site conditions or for portions of the site that were unavailable for direct investigation.

Should new information become available during future work, or other studies, GEMTEC should be requested to review the information and, if necessary, re-assess the conclusions present herein.

We trust this memorandum provides sufficient information for your present purposes. If you have any questions concerning this report, please do not hesitate to contact our office.

Sincerely,



Taylor Warrington, B. Sc.  
Biologist



Drew Paulusse, B.Sc.  
Senior Biologist

## REFERENCES

Ontario Ministry of Municipal Affairs and Housing. 2014. Provincial Policy Statement – Under Planning Act, Toronto. April.

Ontario Ministry of Natural Resources and Forestry. 2016. Wildland Fire Risk Assessment and Mitigation: A Guidebook in support of the Provincial Policy statement, 2014 - DRAFT. April 2016.