515 ERBSVILLE ROAD, WATERLOO, ON.

JUSTIFICATION FOR WOODLAND REMOVAL

Prepared By:
WSP Canada Inc.
October 2021

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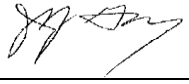	October 19, 2021
Jeff Gross, MSc., Senior Ecologist	Date

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1.0 INTRODUCTION

WSP has been retained to prepare an application for removal of a plantation on the subject property at 515 Erbsville Road, Waterloo, per Form 3 of the Permit to Cut Trees Pursuant to Regional By-Law No. 08-026 (Woodland Removal Permit). The owner intends to sell the property for future urban residential development consistent with existing development to the immediate north and south, including extension of servicing and road stubs at the north and south property limits.

The analysis presented herein is based on input from Regional staff and builds on previous work undertaken by WSP as documented in 515 Erbsville Road ELC Mapping and Plantation Memo (June, 2021). As noted in the June 2021 memo, the portion of the property subject to the application is a Black Walnut – White Pine Mixed Plantation (CUP2-1) established by the owner in the 1970s. This is distinct from the west portion of the property, a native deciduous forest characterized as a Dry-Fresh Sugar Maple – Beech Deciduous Forest (FOD5-2) and designated as a *Core Environmental Feature* (CEF) in the Regional Official Plan. There is a distinct and abrupt transition from the native forest to the plantation and these vegetation communities have very different floristic composition and ecological sensitivities.

More specifically, this analysis documents results of plot sampling for tree species, quantity, size, health and whether trees are planted or naturally occurring. These data were then used to calculate the total tree density per hectare and whether each plot meets the definition of a woodland per the Forestry Act and Regional Bylaw No. 08-026.

The analysis was applied to two key questions:

1. Does the plantation meet the definition of woodland comprised of native and naturally occurring (i.e., non-planted) species?

2. What is the trajectory of the plantation (i.e., would it develop into a native woodland community)?

2.0 METHODOLOGY

2.1 FIELD SURVEYS

2.1.1 Chronology

Field surveys were undertaken by qualified and experienced staff on the following dates:

- September 21, 2021 – Woodland Inventory
- September 23, 2021 – Woodland Inventory

2.1.2 Plot subsampling

Prior to the site visit, way point markers for fourteen (14) 15x15m study plots were set using Google Earth where at least one tree was present, with a target of approximately 10% coverage of the total area of the ELC unit (see Appendix A for vegetation community locations and Appendix B for plot locations):

- 12 study plots placed evenly throughout the mixed plantation (Vegetation Unit 3 per the June 2021 memo)
- Two plots in the adjacent native deciduous forest (Vegetation Unit 4, per the June 2021 memo)

WSP staff located the study plots using GPS and used marker flags and tape to physically measure out the fourteen (14) study plot areas. These 14 plots were sampled on September 21 & 23, 2021 to quantify tree density, floristic quality and percentage of plantation/regenerative specimens.

2.2 TREE DENSITY

A tree inventory was completed at each plot, which involved recording each tree species present, species abundance, size, quality and plantation/regeneration status. The diameter of each tree within the plots was measured at 1.37 m above the ground[1]; this measurement is commonly known as '"diameter at breast height" (dbh).

Live trees were recorded. Of those, Ash (*Fraxinus sp.)* were excluded from calculations as they were in decline from Emerald Ash Borer, a non-native beetle. Tree species found within the plots were

[1] per the Regional Municipality of Waterloo By-law Respecting the Conservation of Trees in Woodlands By-law Number 08-026

recorded, along with the number of each species present within each size class (e.g., under 5 cm dbh, 5-12 cm, 12 to 20 cm, >20 cm).

Each plot of 15 m x 15 m represents an area of 225 m^2 (0.0225 ha). The density per plot was then extrapolated to determine tree density per hectare. The tree density was then compared against the criteria outlined under Regional Municipality of Waterloo By-law Respecting the Conservation of Trees in Woodlands By-law Number 08-026 to determine if the trees on the subject property met the definition of "woodland.", as follows:

> "Woodland" means land that is located within the boundaries of The Regional Municipality of Waterloo that is at least one hectare or more in area with at least:
>
> i) 1,000 trees, of any size, per hectare;
>
> ii) 750 trees, measuring over five centimeters in diameter, per hectare;
>
> iii) 500 trees, measuring over 12 centimeters in diameter, per hectare; or
>
> iv) 250 trees, measuring over 20 centimeters in diameter, per hectare;
>
> But does not include a cultivated fruit or nut orchard or a plantation established for the purpose of producing Christmas trees.

3.0 RESULTS

3.1 Tree Density

Survey results are summarized below (including the extrapolated total tree density per hectare), with detailed tree inventory data presented in Table 1. For each plot, a statement is included re; whether it meets the definition of woodland per the Regional Municipality of Waterloo By-law Respecting the Conservation of Trees in Woodlands By-law Number 08-026.

Table 1. Density plot sampling results, 515 Erbsville Road, Waterloo

Plot #	Tree Species	Size Class Analysis (per 15 m x 15 m plot)				Health	Total # Trees Any Size	Planted Trees		# Naturally Regenerating Native Trees	
		<5 cm	5-12 cm	12-20 cm	>20 cm			# Trees	Meets definition of "woodland"	# Trees	Meets definition of "woodland"
1	Acer saccharum (Sugar Maple)		1			G			√	1	NO
	Juglans nigra (Black Walnut)				6	G		6			
	Total per 15 m x 15 m plot	**0**	**1**	**0**	**6**		**7**	**6**		**1**	
	Total per hectare	**0**	**44.44**	**0**	**266.64**		**311.08**	**266.64**		**44.44**	
2	Acer saccharum (Sugar Maple)			2		G		2	NO		NO
	Juglans nigra (Black Walnut)				3	G		3			
	Pinus strobus (White Pine)		1			P		1			
	Quercus sp. (Oak Species)		3	2		F		5			
	Total per 15 m x 15 m plot	**0**	**4**	**4**	**3**		**11**	**11**		**0**	
	Total per hectare	**0**	**177.76**	**177.76**	**133.32**		**488.84**	**488.84**		**0**	
3	Acer saccharum (Sugar Maple)	1		2		G			√	3	NO
	Juglans nigra (Black Walnut)				6	G		6			
	Pinus strobus (White Pine)		2		2	P		4			
	Quercus sp. (Oak Species)		2	2	2	F		6			
	Total per 15 m x 15 m plot	**1**	**4**	**4**	**10**		**19**	**16**		**3**	
	Total per hectare	**44.44**	**177.76**	**177.76**	**444.4**		**844.36**	**711.04**		**133.32**	
4	Juglans nigra (Black Walnut)				6	G		5	√	1	NO
	Pinus strobus (White Pine)		1	3	1	F		5			
	Quercus sp. (Oak Species)			2	2	G		4			
	Total per 15 m x 15 m plot	**0**	**1**	**5**	**9**		**15**	**14**		**1**	
	Total per hectare	**0**	**44.44**	**222.2**	**399.96**		**666.6**	**622.16**		**44.44**	
5	Acer saccharum (Sugar Maple)				1	G			NO	1	NO
	Juglans nigra (Black Walnut)			2	4	G		6			
	Total per 15 m x 15 m plot	**0**	**0**	**2**	**5**		**7**	**6**		**1**	
	Total per hectare	**0**	**0**	**88.88**	**222.2**		**311.08**	**266.64**		**44.44**	

Plot #	Tree Species	Size Class Analysis (per 15 m x 15 m plot)				Health	Total # Trees Any Size	Planted Trees		# Naturally Regenerating Native Trees	
		<5 cm	5-12 cm	12-20 cm	>20 cm			# Trees	Meets definition of "woodland"	# Trees	Meets definition of "woodland"
6	Acer saccharum (Sugar Maple)				3	G		3	√		NO
	Juglans nigra (Black Walnut)				3	F		3			
	Pinus strobus (White Pine)				4	P		4			
	Quercus sp. (Oak Species)			3	3	G		3		3	
	Total per 15 m x 15 m plot	**0**	**0**	**3**	**13**		**16**	**13**		**3**	
	Total per hectare	**0**	**0**	**133.32**	**577.72**		**711.04**	**577.72**		**133.32**	
7	Acer saccharum (Sugar Maple)	6	4			G			√	10	NO
	Juglans nigra (Black Walnut)		1	1		F		2			
	Pinus strobus (White Pine)			3	6	P		9			
	Quercus sp. (Oak Species)				3	G		3			
	Total per 15 m x 15 m plot	**6**	**5**	**4**	**9**		**24**	**14**		**10**	
	Total per hectare	**266.64**	**222.2**	**177.76**	**399.96**		**1066.56**	**622.16**		**444.4**	
8	Acer saccharum (Sugar Maple)				2	G			√	2	NO
	Juglans nigra (Black Walnut)				1	G		1			
	Pinus strobus (White Pine)				8	F		8			
	Quercus sp. (Oak Species)			1	3	G		3		1	
	Total per 15 m x 15 m plot	**0**	**0**	**1**	**14**		**15**	**12**		**3**	
	Total per hectare	**0**	**0**	**44.44**	**622.16**		**666.6**	**533.28**		**133.32**	
9	Juglans nigra (Black Walnut)	3	2		8	G		13	√		NO
	Pinus strobus (White Pine)			1	2	P		3			
	Total per 15 m x 15 m plot	**3**	**2**	**1**	**10**		**16**	**16**		**0**	
	Total per hectare	**133.32**	**88.88**	**44.44**	**444.4**		**711.04**	**711.04**		**0**	
10	Acer saccharum (Sugar Maple)				1	G		1	√		NO
	Juglans nigra (Black Walnut)			1	5	G/F		6			
	Pinus strobus (White Pine)			1	5	F		6			
	Total per 15 m x 15 m plot	**0**	**0**	**2**	**11**		**13**	**13**		**0**	
	Total per hectare	**0**	**0**	**88.88**	**488.84**		**577.72**	**577.72**		**0**	

Plot #	Tree Species	Size Class Analysis (per 15 m x 15 m plot)				Health	Total # Trees Any Size	Planted Trees		# Naturally Regenerating Native Trees	
		<5 cm	5-12 cm	12-20 cm	>20 cm			# Trees	Meets definition of "woodland"	# Trees	Meets definition of "woodland"
11	Juglans nigra (Black Walnut)			1	11	G		7	√	5	
	Total per 15 m x 15 m plot	**0**	**0**	**1**	**11**		**12**	**7**		**5**	
	Total per hectare	**0**	**0**	**44.44**	**488.84**		**533.28**	**311.08**		**222.2**	
12	Acer saccharum (Sugar Maple)	1				G			√	1	**NO**
	Cornus sp. (Dogwood Species)	1				G				1	
	Juglans nigra (Black Walnut)		1	1	5	G		4		3	
	Pinus strobus (White Pine)		1	1	1	F		2		1	
	Total per 15 m x 15 m plot	**2**	**2**	**2**	**6**		**12**	**6**		**6**	
	Total per hectare	**88.88**	**88.88**	**88.88**	**266.64**		**533.28**	**266.64**		**266.64**	
13	Acer saccharum (Sugar Maple)		2		16	G			√	18	√
	Fagus grandifolia (American Beech)	3		1	11	G				15	
	Total per 15 m x 15 m plot	**3**	**2**	**1**	**27**		**33**	**0**		**33**	
	Total per hectare	**133.32**	**88.88**	**44.44**	**1199.88**		**1466.52**	**0**		**1466.52**	
14	Acer saccharum (Sugar Maple)			2	5	G			√	7	√
	Fagus grandifolia (American Beech)		2	9	11	G				22	
	Total per 15 m x 15 m plot	**0**	**2**	**11**	**16**		**29**	**0**		**29**	
	Total per hectare	**0**	**88.88**	**488.84**	**711.04**		**1288.76**	**0**		**1288.76**	

Plot 1 (mixed plantation):

Total number of trees of any size per hectare is 311[2], not meeting the woodland threshold of 1000. However, 266 planted trees with DBH larger than 20cm were present (the majority of which are planted) meeting the woodland threshold of 250 trees >20cm per hectare. Only 44 naturally occurring native trees are present.

- **Meets woodland** definition for planted trees
- **Does not meet woodland** definition for naturally occurring native trees

Plot 2 (mixed plantation):

Total number of trees of any size per hectare is 488, NOT meeting the woodland threshold of 1000. The density of trees measuring 5-12cm, 12-20cm, and >20cm also does not meet the woodland threshold. No naturally occurring native trees are present.

- **Does not meet woodland** definition for planted trees
- **Does not meet woodland** definition for naturally occurring native trees

Plot 3 (mixed plantation):

Total number of trees of any size per hectare is 844, not meeting the woodland threshold of 1000. However, 444 planted trees with DBH larger than 20cm were present (the majority of which are planted) meeting the woodland threshold of 250 trees <20cm per hectare. Only 133 naturally occurring native trees are present.

- **Meets woodland** definition for planted trees
- **Does not meet woodland** definition for naturally occurring native trees

[2] Note that 'total number of trees' as presented for all plots is equivalent to the extrapolated total numbers based on plot density results

Plot 4 (mixed plantation):

Total number of trees of any size per hectare is 666 trees, not meeting the woodland threshold of 1000. However, 399 trees with DBH larger than 20cm were present (all but one of which are planted) meeting the woodland threshold of 250 trees <20cm per hectare. Only 44 naturally occurring native trees are present.

- **Meets woodland** definition for planted trees
- **Does not meet woodland** definition for naturally occurring native trees

Plot 5 (mixed plantation):

Total number of trees of any size per hectare is 311, NOT meeting the woodland threshold of 1000. The density of trees measuring 5-12cm, 12-20cm, and >20cm also does not meet the woodland threshold.

- **Does not meet woodland** definition for planted trees
- **Does not meet woodland** definition for naturally occurring native trees

Plot 6 (mixed plantation):

Total number of trees of any size per hectare is 711, not meeting the woodland threshold of 1000. However, 577 trees with DBH larger than 20cm were present (the majority of which are planted) meeting the woodland threshold of 250 trees <20cm per hectare. Only 133 naturally occurring native trees are present.

- **Meets woodland** definition for planted trees
- **Does not meet woodland** definition for naturally occurring native trees

Plot 7 (mixed plantation):

Total number of trees of any size per hectare is 1066, meeting the woodland threshold of 1000. Only 444 naturally occurring native trees are present.

- **Meets woodland** definition for planted trees
- **Does not meet woodland** definition for naturally occurring native trees

Plot 8 (mixed plantation):

Total number of trees of any size per hectare is 666, not meeting the woodland threshold of 1000. However, 622 trees with DBH larger than 20cm were present (the majority of which are planted) meeting the woodland threshold of 250 trees <20cm per hectare. Only 133 naturally occurring native trees are present.

- **Meets woodland** definition for planted trees
- **Does not meet woodland** definition for naturally occurring native trees

Plot 9 (mixed plantation):

Total number of trees of any size per hectare is 711, not meeting the woodland threshold of 1000. However, 444 trees with DBH larger than 20cm were present (all of which are planted) meeting the woodland threshold of 250 trees <20cm per hectare. No naturally occurring native trees are present.

- **Meets woodland** definition for planted trees
- **Does not meet woodland** definition for naturally occurring native trees

Plot 10 (mixed plantation):

Total number of trees of any size per hectare is 577, not meeting the woodland threshold of 1000. However, 488 trees with DBH larger than 20cm were present (all of which are planted) meeting the woodland threshold of 250 trees <20cm per hectare. No naturally occurring native trees are present.

- **Meets woodland** definition for planted trees
- **Does not meet woodland** definition for naturally occurring native trees

Plot 11 (mixed plantation):

Total number of trees of any size per hectare is 533, not meeting the woodland threshold of 1000. However, 488 trees with DBH larger than 20cm were present (the majority of which are planted) meeting the woodland threshold of 250 trees <20cm per hectare. Only 222 naturally occurring native trees are present.

- **Meets woodland** definition for planted trees
- **Does not meet woodland** definition for naturally occurring native trees

Plot 12 (mixed plantation):

Total number of trees of any size per hectare is 533, not meeting the woodland threshold of 1000. However, 266 trees with DBH larger than 20cm were present (all of which are planted) meeting the woodland threshold of 250 trees <20cm per hectare. Only 266 naturally occurring native trees are present .

- **Meets woodland** definition for planted trees
- **Does not meet woodland** definition for naturally occurring native trees

Plot 13 (native deciduous forest):

Plot 13 is located in the native deciduous forest, Vegetation Unit 4. This plot was sampled to compare floristic composition, quality and quantity of the forest to trees in the mixed plantation. Total number of trees of any size per hectare is 1466, meeting the woodland threshold of 1000. All are naturally occurring native trees.

- **Meets woodland** definition for naturally occurring native trees

Plot 14 (native deciduous forest):

Plot 14 is located in the native deciduous forest, Vegetation Unit 4. This plot was sampled to compare floristic composition, quality and quantity of the forest to trees in the mixed plantation. Total number of trees of any size per hectare is 1288, meeting the woodland threshold of 1000. All are naturally occurring native trees.

- **Meets woodland** definition for naturally occurring native trees

4.0 DISCUSSION & RECOMMENDATIONS

4.1 Summary of Density Calculations

None of the sampled plots within the plantation meets the definition of woodland for naturally occurring native species. Ten of the twelve sampled plots in the plantation meet woodland definition for planted species. Overall, regenerative native species are young/immature and not abundant - not of significant quantity / size to meet the definition of a woodland.

The plantation and adjacent native deciduous forest in the CEF are distinctly different with respect to understory species and density, tree species, tree size and health, and abundance of naturally occurring vs planted trees. In general, the forest is of much higher ecological quality and sensitivity than the plantation. For both sampled plots in the forest, naturally occurring native species meet the definition of woodland.

4.2 Plantation Trajectory

The mixed plantation was established by the current owner for personal use, including harvesting for financial purposes. There is no intent to actively manage the plantation for ecological succession. Without that type of active management, it is unlikely that the existing plantation would develop into a native forest community of similar character to the adjacent native CEF forest to the west, based on the following: .

- the plantation layout of planted rows of trees;
- the poor health of the regenerative White Pine and Oak (*Quercus* sp.) trees present;
- different tree species composition; and
- overall sparse native species understory.

Rather, it is anticipated that the plantation would become dominated by Black Walnut, thus lacking diversity and similarity to the CEF forest which is dominated by Sugar Maple and American Beech. Moreover, with ongoing senescence of the canopy trees (White Pine & Oak Species) and Ash dieback, it is expected that non-native species such as Common Buckthorn (currently widespread through the plantation), would further proliferate. Even with future management, successful establishment of a native forest would be uncertain, given existing conditions.

4.3 Planning Justification

A detailed assessment of applicable planning policies and justification for proposed land use has been completed, as documented in the Policy and Land Use Analysis (IBI Group, October 2021), included as Appendix C.

In brief, the report concludes that:

1. Development of the plantation portion of the subject property is consistent or in conformity with relevant policies at the municipal, Regional and Provincial levels

2. The approval of the Woodland Removal Permit is required to implement the reference public policies and permit the development of the plantation portion of the subject property.

5.0 CONCLUSIONS & RECOMMENDATIONS

The subplot sampling did not reveal woodland of significant quality. In fact, the subject property woodland can only be defined as such because of the existence of plantation trees. It differs greatly in botanical quality and species composition from the adjacent CEF forest.

Removal of the plantation on the subject property (with the exception of a buffer to the CEF as discussed below) is recommended as the preferred and appropriate use based on the following:

1. Limited naturally occurring native woodland attributes within the plantation (per results of the plot monitoring)

2. Overall tree health is poor, native species regeneration is limited and the plantation is unlikely to develop into a native forest community without active management (which is not planned).

3. No significant or sensitive attributes of the adjacent forest community would be eliminated with plantation removal. This is an anthropogenically disturbed habitat type common in the Region.

4. Urban development consistent with adjacent lands to the north and south would comply with applicable planning policies and represents good planning as development of an infill area between existing residential areas.

Further, it is recommended that:

1. Best efforts are made to retain planation trees where possible on the subject property and where removals are not required for future development. Given the challenging topography, servicing needs and existing road stub locations, opportunities for tree retention are limited to those immediately adjacent to the property boundaries in some locations.

2. A 10 m buffer is established at the west end of the planation adjacent to the CEF forest. Given the limited tree density in this area (an informal lane occupies much of the area), it is recommended that the buffer be enhanced with native tree and shrub species plantings to increase diversity and provide better edge protection for the adjacent forest.

3. To compensate for removal of the naturally occurring native species in the plantation, it is recommended that the existing CEF forest be enhanced via:

    a. Establishment of the 10m buffer and enhancement via native species plantings

    b. Invasive species control within the 10m buffer and adjacent 30m zone within the forest. Target species are Common Buckthorn and Garlic Mustard.

4. Woodland removals should be undertaken in compliance with the Migratory Birds Convention Act (MBCA), ideally during the non-breeding winter period.

It is the opinion of WSP that the plantation removal to facilitate future infill urban development meets the general intent and purpose of the Woodland Conservation By-Law, based on the assessment included herein and with proper implementation of the recommended measures.

APPENDIX

A ELC MAPPING


Google Earth 2016 Aerial
515 Erbsville Road
Legend
Blue Beech Blvd
White Birch Ave
Wild Ginger Ave
Regional Road
approx seepage area
culvert
UNIT 2
CUM1-1
UNIT 1
MAS2-1
UNIT 3
CUP2-1
RESIDENTIAL
UNIT 4
FOD5-2
Butternut Ave
White Elm Blvd
N
200 m
Google Earth

APPENDIX

B STUDY PLOTS LAYOUT PLAN

KEY MAP

LEGEND

- STUDY PLOT LOCATION
- APPROXIMATE PROPERTY LINE
- APPROXIMATE CORE ENVIRONMENTAL FEATURE EDGE
- 10m PROTECTED BUFFER

NO	DATE	REVISION/ISSUED	BY	APPD
1	2021-10-05	FIRST SUBMISSION	JB	BV

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CLIENT:
NAME
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PROJECT TITLE:
ERBSVILLE ROAD
WOODLAND ASSESSMENT

SITE ADDRESS:
515 ERBSVILLE ROAD
WATERLOO, ON

DRAWING TITLE:
STUDY PLOT LAYOUT PLAN

STAMP
NOT FOR CONSTRUCTION

STAMP

DESIGNED	DRAWN	CHECKED
JB	JB	BV

SCALE 1:1000
DATE OCTOBER 2021

PROJECT NUMBER
211-07136-00

DWG. NUMBER
L-300

APPENDIX

C PLANNING JUSTIFICATION

FINAL

Policy and Land Use Analysis
515 Erbsville Road, Waterloo

Prepared for Russ Howald
by IBI Group
October 19, 2021

Document Control Page

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Figure 4 Excerpt from Schedule A4 Natural Systems City of Waterloo Official Plan 4

Figure 5 Source from the City of Waterloo Official Plan District Boundaries 5

Figure 6 Source from the City of Waterloo Zoning By-Law 7

1 Overview

In support of the request for approval of an application for a Woodland Removal Permit to Cut Trees Pursuant to Regional By-law No. 98-026, this Policy and Land Use Analysis has been prepared. The purpose of this review and analysis is to inform the Committee that the public planning policies that are approved and to be considered demonstrate the conformity of fully municipally serviced urban residential land uses in a planned design.

The property known municipally as 515 Erbsville Road has been planned to provide for the completion and connection of existing municipal streets, the extension of municipal infrastructure (water, sanitary and storm), to provide for the extension of pedestrian connections through trails and sidewalks and to complete the neighbourhood. In many ways this property is the “hole in the donut” as lands to the south and north have developed as provided by the approved public policies for fully municipally serviced urban residential land uses within a planned design. The land use designations and the policy framework that guided the development of the lands to the south and north is the same as what applies to the subject lands. It is our understanding that at the time of the development of the lands to south or to the north that the landowner did not wish to pursue development approvals. The lands are currently developed with an existing single detached residence with access to Erbsville Road.

The properties to the north and south are developed in accordance with the approved planning policies through a road pattern and residential development and density associated with greenfield development. From a topography perspective, the lands generally slope from west to east and north to south. The western portion of the lands are part of a larger natural area identified as an Environmentally Sensitive Policy Area. The remainder of the area has been characterized as a plantation based on field investigations by WSP in 2021 as well a review of historical aerial photography. There is a chain link fence around the perimeter of the property limiting access.

At the northern property limit, White Birch Avenue and Wild Ginger Avenue terminate with a temporary road connecting the two streets to address second access limitations. At the southern property limit, Royal Fern Street terminates in a temporary cul-de-sac.

Associated with the existing street terminations, temporary road and temporary turning circle there are seven (7) lots restricted from development together with parts of lots that could be developed through the extension of existing streets and the removal of the temporary street features.

2 Public Planning Controls

2.1 Provincial Policy Statement and Growth Plan for the Greater Golden Horseshoe

It is acknowledged that the Province in 2020 approved a new Provincial Policy Statement (PPS) and Growth Plan for the Greater Golden Horseshoe (GP). These policy changes are not reflected in the approved Regional Official Plan and the Waterloo Official Plan. The Region is undertaking the Municipal Comprehensive Review of the Regional Official Plan with the intent to adopt a new plan before the end of the year or early 2022.

It is noted that to provide for the development of the lands that both the Draft Plan of Subdivision and the Zoning By-Law Amendment which would be required to implement the planned

development would have to demonstrate that they are “consistent with” the PPS and be in conformity with the GP. We do not anticipate that this would be a concern and can be achieved.

The approved Regional Official Plan designates the subject property on:

- Map 3a - Urban Area within the Urban Area and as Built-Up Area;
- Map 4 - Greenlands Network a portion of the property as Core Environmental Features:
- Map 5a - Regional Transit Network, Erbsville Road as Existing Transit Corridors:
- Map 5b - Existing, Planned and Proposed Road’s and Corridors, Erbsville Road as an Existing Regional Road;
- Map 5c - Regional Cycling Routes, Erbsville Road as an Existing Cycling Routes; and
- Map 6a - Urban Area Source Water Protection Areas as Wellhead Protection Areas as WPSA-8.

The approved Regional Official Plan would support residential development on full municipal services, provide for the protection of the natural environment areas and ensure that any sensitive land use adjacent to Erbsville Road would address the Region’s noise policies.

There are 3 key policy areas that would guide development:

2.1.1 Built Boundary

1. The subject property is located within the Built Boundary which primarily consists of established residential neighbourhoods and that any future development within or adjacent to these neighbourhoods will need to respect the existing physical character of the area.

   ROP Policy 2.C.2 requires that a minimum of 45 per cent of all new residential development within the Region as a whole will be constructed within the Built-Up Area. Therefore, the density target of “residents and jobs combined per hectare” does not apply to any Planning Act applications.

   Noting that the 2020 Growth Plan increases the per centage to 50% which will be reflected in the new ROP.

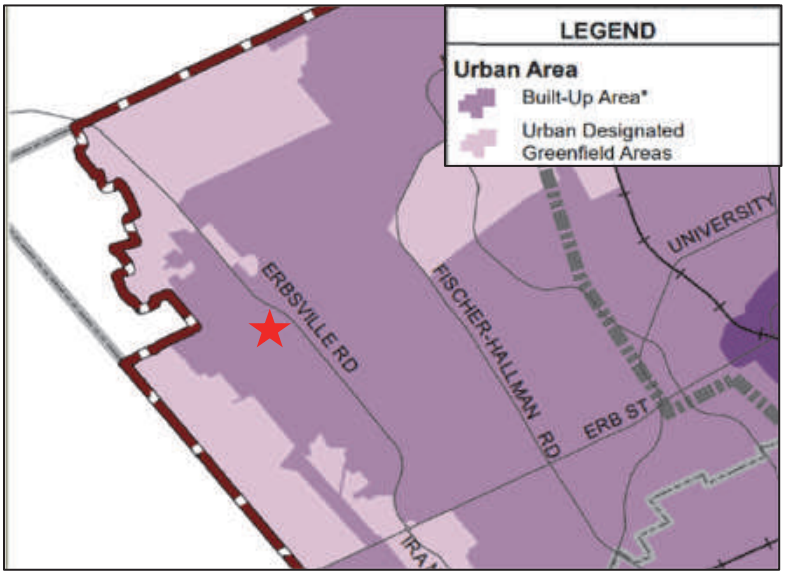

Figure 1 Excerpt Map 3A Urban Area Region of Waterloo Official Plan.

2.1.2 Natural Environment Protection

2. A portion of the subject property is part of the Major Urban Greenlands which is an important element of the planned community structure.

   ROP Policy 2.G.2 requires that long-term protection from inappropriate development be provided, requiring development applications on adjacent land to not have an adverse effect on the valued characteristics of Major Urban Greenlands, and facilitate public access.

   ROP Policies in Chapter 7 outline the process (ROP Policy 7.G - Environmental Impact Statements) to evaluate development applications and the role of Regional Ecological and Environmental Advisory Committee (ROP Policy 7.A.13).

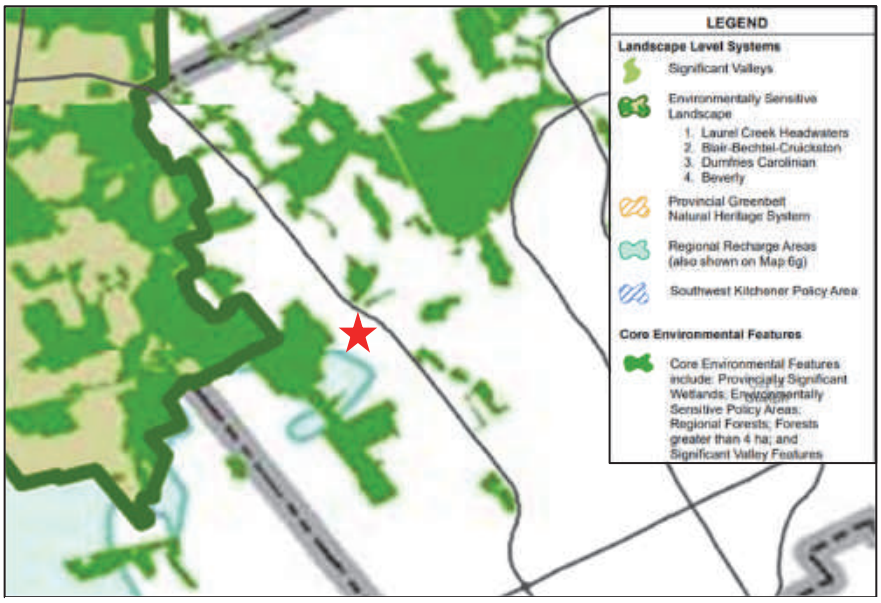

Figure 2 Excerpt Map 4 Greenlands Network the Region of Waterloo Official Plan.

2.1.3 Land Use Mix

3. ROP Policy 3.A.5 requires that given the potential development area is approximately 5 hectares the proposed development must provide for 30 per cent of the new residential units to be planned in forms other than single detached and semi-detached, such as townhomes and multi-unit residential buildings.

   It is my professional planning opinion that a Regional Plan Amendment is not required and the balance between the protection of the core natural environment feature and the lands for full municipally serviced development is demonstrated and the future residential development would be in conformity with the plan.

2.2 City of Waterloo Official Plan

The approved City of Waterloo Official Plan designates the subject property on:

- Schedule ‘A’ Land Use Plan as Low Density Residential and Open Space;
- Schedule ‘A3’ Open Space Land Uses a portion of the property as Parks and Other Green Spaces;
- Schedule ‘A4’ Natural System a portion of the property as Core Natural Features;
- Schedule ‘B3’ Designated Greenfield Areas as Built UP Area;

- Schedule ‘B4’ Source Water Protection Areas as Wellhead Protection Sensitivity Areas - WPSA-8;
- Schedule ‘C’ District Boundaries as Columbia Hills;
- Schedule ‘E’ Road Classification System - Erbsville Road as a Regional Arterial; and
- Schedule ‘F’ Active Transportation Framework - Erbsville Road as City-Wide Cycling and Multi- Use Routes.

The approved City Official Plan would support residential development on full municipal services, provide for the protection and good stewardship of the natural environment areas, promote good urban design, utilization of environmental (CPTED) principles, provide for the movement of pedestrians through trails and cycling and ensure that any sensitive land use adjacent to Erbsville Road would address the Region’s noise policies.

Figure 3 Excerpt from Schedule A Land Use Plan City of Waterloo Official Plan

Figure 4 Excerpt from Schedule A4 Natural Systems City of Waterloo Official Plan

The Low Density Residential designation permits a range of residential land uses including single detached, semi-detached, duplex, triplex and townhouses, noting a number of unique sites may also be zoned to permit terrace dwellings or apartment units. The maximum height is 10 metres and maximum density is 150 bedrooms per hectare.

It is my professional planning opinion that a City of Waterloo Amendment is not required and the balance between the protection of the core natural environment feature and the lands for fully municipally serviced development is demonstrated and the future residential development would be in conformity with the plan.

2.3 Columbia Hills District Plan

As outlined within the Official Plan, the subject property is located within the Columbia Hills District Implementation Plan. The District Plan was approved in November 1996 and most recently was amended in February 2009. In general, the District Plan provides more detail with respect to the implementation of the Official Plan land use designations. Given the importance of the District Plan, a copy is attached for specific references.

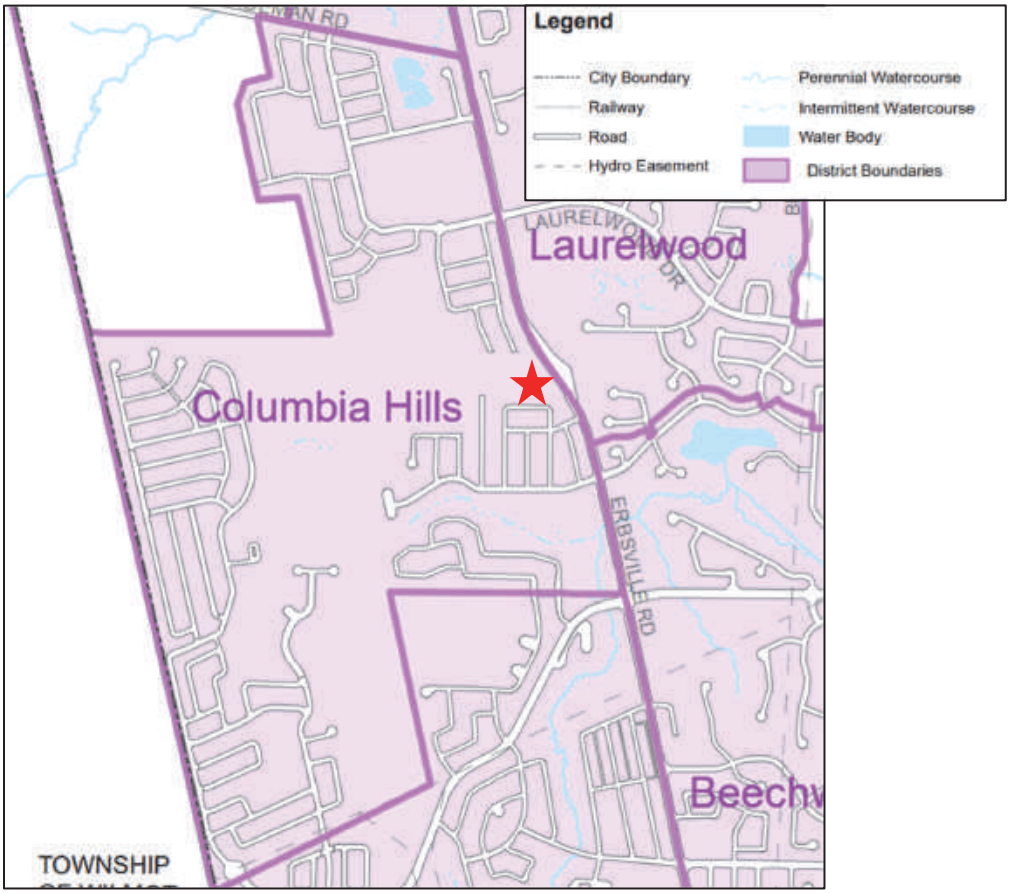

Figure 5 Source from the City of Waterloo Official Plan District Boundaries

The District Plan provides for a mix of housing for the entirety of the District Plan based upon 55% Low Density, 35% Medium Density and 10% High Density. There are policies providing direction related to the design of the housing.

Through our meeting with City staff it was discussed that the park matter would be addressed through land dedication or cash-in-lieu. At this time a decision had not been made for either approach. The District Plan provides guidance that a sub-neighbourhood or parkette should be located within 150 metres and a neighbourhood park within 400 metres. It is noted that there are existing parkettes along the northern and southern boundary adjacent to the core natural environment lands. This would be addressed through the preliminary concept design and formal Pre-Submission Consultation. If cash-in-lieu was the option, the monies would be utilized to improve and enhance existing park facilities.

Based upon the Sub-Watershed Plans (#309 and #313) the District Plan provides direction for developing within the Constraint Level Areas. The District Plan identifies the development portion of the property as Constraint Level Two.

The District Plan states for Constraint Level Two lands the following:

"6.13.8 ***Environmental Constraint Level Two Areas***

.1 It is a policy of this District Plan that an Environmental Constraint Level Two Area is a conservation area intended to preserve and maintain the area's existing (pre-development) ecological functions and processes;

.2 An Environmental Constraint Level Two Area shall be defined to include:

.1 groundwater infiltration/recharge areas identified and potential, to both the surface discharge (shallow)aquifer and the Regional water supply (deeper) aquifer;

.2 isolated wetlands which are located outside of the Sunfish Lake-Laurel Creek Provincially Significant Wetland Complex;

.3 Greenspace Secondary Supporting Areas which are generally of lower ecological quality vegetation (e.g. hedgerows) with more human disturbance compared to Environmental Constraint Level One Areas;

.4 Greenspace Secondary Links which are areas of lower ecological quality and are adjacent to or link Environmentally Significant Policy Areas and other Environmental Constraint Level One features;

.5 Environmental Rehabilitation Areas which are areas of degraded vegetation which could be important Greenspace Links upon rehabilitation and naturalization.

.6 Urban Green Areas which include public parklands and other recreational areas;

.3 Development may be permitted within Environmental Constraint Level Two Areas provided that the existing (pre-development) ecological functions and processes are protected and maintained during and after construction;

Environmental Constraint Level Two Area woodlands and wetlands may require an appropriate naturalized (non-manicured) vegetation buffer area as defined and determined on a site specific basis and set out in the Sub-Watershed Management Plan;"

It should be noted that other Constraint Level Two Areas within the District Plan have been developed for residential urban land uses given they demonstrated conformity with the District Plan. Through our meetings with the City and the Region it has been identified that additional work related to the Constraint Level Two lands would be warranted prior to the consideration of any tree removal. This is similar to the approach undertaken for the Owen Lands where additional fieldwork was undertaken to demonstrate that the lands which started as a plantation still function as a plantation. Other factors that should be considered are the temporary road

situations on adjacent lands and that approved and registered residential lots are temporarily ‘frozen” from development, and the extension and connection of public trails cannot be accomplished until the development of the lands. The resolution of this matter is critical in moving the lands forward with development applications.

The District Plan provides for Infiltration targets that are implemented through the Zoning By-Law as a regulation affecting lot coverage. The lands to the north and the lands to the south have different infiltration zoning regulations (47.7 and 50) and therefore the zoning regulation for these lands would be identified through additional technical work.

Potential Street names are included within Schedule 2 and the primary roads to be extended through the subject property already have street names assigned to the existing adjacent roads (Royal Fern Street, White Birch Avenue, Wild Ginger Avenue).

The District Plan is a planning tool that is adopted by City Council resolution and can be modified by resolution as part of any planning approvals. It is my opinion, that the District Plan provides the opportunity to develop the Constraint Level Two lands and dedicate the Constraint Level One lands to the City.

It is my professional opinion that the protection of the core natural feature and the development of the Constraint Two lands are consistent with the Official Plan designations and supportive of residential development that provides for the extension of municipal roads and municipal services.

2.4 City of Waterloo Zoning By-Law

The subject property is zoned Future Determination ‘FD” and the natural environment areas as Conservation ‘OS3’ within the approved Zoning By-Law.

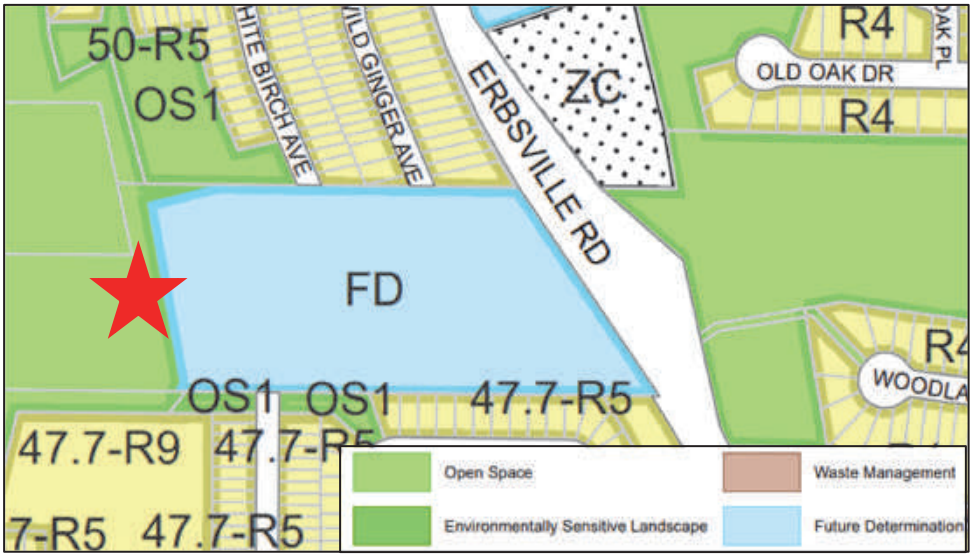

Figure 6 Source from the City of Waterloo Zoning By-Law

The Future Determination Zone recognizes the existing land use as of the day of passing of the Zoning By-Law and would require amendment to an appropriate zone to reflect the proposed development.

It is my professional opinion that a Zoning By-Law Amendment would be required and that the current zoning contemplates an amendment when a residential development plan is to be considered.

3 Summary

It is my professional opinion that the public land use framework provides for the protection of the natural environment features as mapped within the Regional Official Plan, the City Official Plan and the District Plan. It is further my opinion that the mapping within the Regional Official Plan, the City Official Plan, the District Plan and the Zoning By-Law provides for future municipally serviced residential lands. All of this is consistent with the previous development approvals and requirements for the lands to the south and north that have developed in a similar manner. The future development of the subject property has been accounted for in the determination of the land needs for the planning horizon as provided for in the Regional Plan.

It was a decision of the landowner to not proceed with the development of their lands at the time the lands to the south and north developed as the planning policies in that time period and also today supports the development for municipally service residential lands.

It should be recognized that when Regional and Municipal decisions were secured for the development of the lands to the south and to the north it was for good planning reasons to provide for the future provision to extend municipal streets, extend municipal servicing infrastructure, provide for pedestrian connectivity, complete the neighbourhood and to support registered residential lots and blocks that are currently "frozen" from development until the development of these lands is completed.

Therefore, it is my professional opinion that the development of 515 Erbsville Road, City of Waterloo would be consistent with the Provincial Policy Statement, in conformity with the Growth Plan for the Greater Golden Horseshoe, the approved Regional Official Plan, the approved City of Waterloo Official Plan, the District Plan and the Zoning By-Law.

The approval of the Woodland Removal Permit to Cut Trees Pursuant to Regional By-Law No. 98-026 is required to implement the public policies as demonstrated and should be approved in order to permit the opportunity for the development of the lands as provided by the public policies to be initiated and to proceed through the development review process of the Region, City and Agencies. Without clarity and support for the permissions for the tree removal, it would be challenging to provide for the implementation of the approved policy and land use policies of the Region and City. Given the location, design of the existing built municipal infrastructure (roads and water/sanitary services) together with the topographical conditions and the sensitivity of timing for tree removal the majority of the site would have to be approved for tree removal and completed over the late fall early winter. It may be appropriate that the perimeter trees remain in the interim until the implications of the grading of the site to implement the site specific development has been considered.

Respectfully Submitted

IBI GROUP

Douglas W. Stewart, MCIP, RPP
Associate – Manager, Urban and Regional Planning

DWS/baw

Douglas W. Stewart REGISTERED PROFESSIONAL PLANNER R.P.P.

I hereby certify that this Policy and Land Use Analysis was prepared by a Registered Professional Planner, within the meaning of the Ontario Professional Planner's Institute Act, 1994.

2021-10-19
Date

Douglas W. Stewart, MCIP, RPP

APPENDIX

D PERMIT APPLICATION

Region of Waterloo

REGIONAL MUNICIPALITY OF WATERLOO
Licensing & Regulatory Services
DOCS #522711

150 Frederick Street, 2nd Floor
Kitchener ON N2G 4J3
Phone (519) 575-4400
Fax (519) 575-4042
Mon.-Fri. 8:30-4:30

PERMIT TO CUT TREES PURSUANT TO REGIONAL BY-LAW NO. 08-026

The Woodland Conservation By-Law approved by Regional Council on June 18, 2008, 2008 requires a Permit for the following types of forest management activities:

a. Harvesting of trees of a species prescribed in the By-law resulting in the production of trees, logs or firewood, **unless** fewer than five trees per hectare of a species prescribed in the By-law are to be cut in any given year to a maximum of thirty (30) trees, for the registered owner of the woodland's own use; and
b. Woodland clearing.

Failure to obtain a Permit when one is required is a contravention of the Woodland Conservation By-Law.

A permit is valid for one year from the date of issuance or for the period stipulated. Cutting that is to occur after the permit's expiration date will require an application for an extension or a new permit.

FEES

The required fees for Woodland Conservation By-law Permits are set in the Region's Fees and Charges By-law (By-law 08-027, as amended). The appropriate fee must be received with your application - we accept cash, cheque, debit, MasterCard or Visa – NO REFUNDS

- There is no fee for a Good Forestry Practices Permit
- The application fee for a Diameter Limit/Basal Area Permit is $55.00
- The application fee for a Woodland Removal Permit is $1000.00

A Permit is a mechanism by which the Region indicates approval of a planned woodland management operation. Limitations on the timing or implementation of harvesting activities may be indicated as conditions of the permit in order to ensure reasonable standards of management practice. The permit process is intended to ensure that landowners and forestry contractors are aware of the requirements of the Regional Woodland Conservation By-Law, and to prevent violations of the by-law. Permits provide an improved way of minimizing unsustainable harvesting resulting in a loss of woodlands and the benefits they provide to the natural and built ecosystems and environment.

APPLICATION PROCESS

Only one of the three permit forms needs to be completed depending on the nature of the permit sought.

An incomplete application will not be processed. Completed applications are to be submitted to the Licensing & Regulatory Services office of the Regional Municipality of Waterloo. A permit must be obtained before any tree cutting can take place, and a copy of the permit must be posted at either the entrance to the property or at the main landing area at the commencement of cutting activity.

FORM 1: Applications for Good Forestry Practices Permits will be processed as soon as possible, however, a permit must be obtained before cutting occurs. A Good Forestry Practices permit requires the preparation or approval of a statement of management goals and objectives and a silvicultural prescription by a Forester (i.e., Registered Professional Forester or Associate Member of the Ontario Professional Foresters' Association) **or** the approval of the Region. An inspection of the woodland may be carried out by a Municipal Law Enforcement Officer.

FORM 2: Applications for Diameter Limit/Basal Area Permits will require approximately **ten (10) business days** for processing. During that time, and before a Permit is issued, Regional staff may contact the landowner and/or any person(s) involved in the tree marking or tree removal to discuss the nature of the proposed harvest to ensure that it conforms to the requirements of the Woodland Conservation By-Law and may conduct an inspection of the woodland.

FORM 3: Applications for Woodland Removal Permits will require several weeks for processing as there is a need to issue notices to adjoining property owners and to arrange a meeting of the Region's Woodland Conservation By-Law Committee. Regional staff will keep applicants apprised as to the process of the application.

Right of Appeal. Anyone who has been denied a permit, or has objections to any conditions placed on a permit has the right to appeal to the Region's Tree By-law Committee within 15 days of permit denial or issuance. The Tree By-law Committee will review the applicant's concerns as well as the officer's reasons for denying or granting the permit. The Tree By-law Committee will decide whether to confirm or vary the denial or conditions imposed. There is no external appeal process pursuant to the *Municipal Act, 2001.*

Region of Waterloo	**REGIONAL MUNICIPALITY OF WATERLOO** **Licensing & Regulatory Services** **DOCS #522711**	150 Frederick Street, 2nd Floor Kitchener ON N2G 4J3 Phone: (519) 575-4400 Fax: (519) 575-4042 Mon.- Fri. 8:30-4:30

FORM 3: APPLICATION FOR A WOODLAND REMOVAL PERMIT

****The application fee for a Woodland Removal Permit is $1000.00****

PART A: Owner information. Fill out all applicable sections. Your signature indicates that you understand all of the requirements of the Woodland Conservation By-Law

OWNER

Surname: Howald First Name: Russ Signature: [redacted]

Municipal Address: 515 Erbsville Road

City: Waterloo Postal Code: N2V2V2

Phone Number: 519-886-0264 Fax _____ E-Mail: [redacted]lenehowald@gmail.com

Complete **municipal address** of property containing woodland (if different than above):

_____

Does the woodland form part of an Environmentally Significant Landscape (ESL), Environmentally Sensitive Policy Area (ESPA) or a Provincially Significant Wetland (PSW)?: **Y [ ] N [redacted] Not Sure [ ]**

If yes, please indicate which (name &/or number) _____

Location. Please draw a sketch map of the location of the woodland giving enough detail that the property can be readily located. Please indicate preferred entry points so that the Municipal Law Enforcement Officer can gain entrance to inspect the area.

PART B. Woodland Information (Woodland Removal Permit)

General Woodland description: Woodland Plantation, composed of White Pine, Sugar Maple, Oak Species and Black Walnut.

Total area of woodland: 150+ ha (including continguous woodland on adjacent lands)

Description of woodland area to be removed (if different than above) 10m Woodland Buffer to be preserved adjacent to core environmental feature

Area of woodland to be removed: 3.65 ha or 9.00 acres

Expected starting date of woodland removal: January - March 2022

Justification for Woodland Removal

Please attach documentation to this permit application that will enable the Region to evaluate your request for woodland removal. Your documentation may include, but is not limited to

- a complete description of the woodland in terms of tree cover, health, and future development with or without management;
- a statement regarding the intended use for the land once the woodland removal is complete;
- a statement indicating why the removal of the woodland (i.e. the injuring or destruction of the tree or trees) is desirable for the appropriate development or use of the property and the how the general intent and purpose of this By-law is maintained.
- plans for replacement or compensation in terms of woodland species, either on or off the specified property;

If approved, all operations must be in accordance with the provisions of Woodland Conservation By-Law 08-026 of the Regional Municipality of Waterloo and pursuant to all conditions attached to the permit.

Do you consent for the Region of Waterloo to carry out a pre-inspection? Y ■ N [ ]

I hereby certify that the contents of this permit application are correct:: _____
(owner or person authorized in writing by the owner)

For Office Use Only

PERMIT # _____

Fee Received: _____ (date) Method of payment _____

Permit Approved by: _____ Approval Date: _____

PRE - HARVEST INSPECTION

Site Inspected by: _____ Site Inspection date: _____

Comments: _____

_____

_____

Conditions of Permit: _____

_____

_____

_____

POST - HARVEST INSPECTION

Site Inspected by: _____ Site Inspection date: _____

Comments: _____

_____

_____

_____

_____