Tree Conservation Report 37 Wildpine Court, Stittsville, Ottawa

Draft Report

December 23, 2020

KILGOUR & ASSOCIATES LTD.

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List of Acronyms and Abbreviations

CRZ - Critical root zone

DBH – Diameter at breast height

ESA – Endangered Species Act

KAL – Kilgour & Associates Ltd.

MNRF - Ministry of Natural Resources and Forestry

SAR - Species at risk

SARA - Species at Risk Act

TCR - Tree Conservation Report



1.0 INTRODUCTION

Kilgour & Associates Ltd. (KAL) was retained by Wildpine Trails Inc. to provide a Tree Conservation Report (TCR) for the proposed development of 37 Wildpine Court in Stittsville, Ottawa (herein the "Site"). The purpose of a TCR is to demonstrate how tree cover will be retained on sites subject to development using a "design with nature approach" to planning and engineering. A design with nature approach incorporates natural features of a site into the design and engineering of a proposed development. This TCR has been prepared following the City of Ottawa's guidelines (2018a). This report identifies and describes tree cover on the project site prior to its proposed development.

A TCR is required for all Plans of Subdivision, Site Plan Control Applications, Common Elements Condominium Applications, and Vacant Land Condominium Applications where there is a tree of 10 cm in diameter at breast height (DBH) or greater on a site and/or if there is a tree on an adjacent site that has a critical root zone (CRZ) extending onto a development site. A "tree" is defined as any species of woody perennial plant, including its root system, which has reached or can reach a minimum height of at least 450 cm at physiological maturity. The CRZ is calculated as DBH x 10 cm.

The removal of trees on a project site cannot occur until written approval of the TCR has been granted through a tree permit as per the City of Ottawa's Tree Protection By-law. The approval of the TCR will come in the form of a letter (the tree permit) from the General Manager¹ with conditions specific to the site, tree retention, and associated tree protection and tree removal. The approved TCR is a requirement for the approval of the development applications listed above. A copy of the report must be available on-site during tree removal, grading, construction, or any other site alteration activities, and for the duration of construction on the site.

2.0 PROPERTY INFORMATION

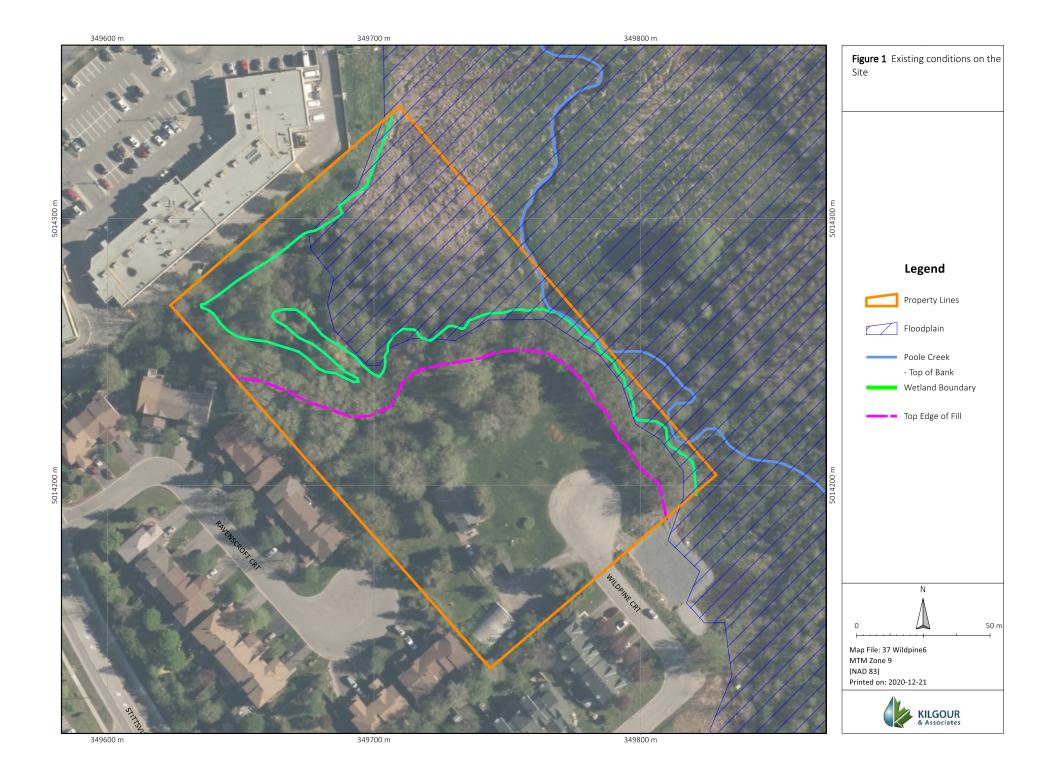
The Site is owned by Wildpine Trails Inc. It is approximately 2 ha and is zoned as R3XX[1046] – Residential Third Density Zone. At the time of writing this report, the Site was dominated by wooded areas including those part of the Stittsville Wetland Complex (not a provincially significant wetland). It also contained open lawn space, a paved cul de sac, a single detached home with a separate garage and shed, a small portion of Poole Creek, and regulated floodplain of Poole Creek (Figure 1).

The Site is surrounded by:

- A shopping plaza, a stormwater management pond, and the Stittsville Wetland Complex to the north.
- Poole Creek and the Stittsville Wetland Complex to the east.
- A residential community on Wildpine Court to the south.
- A residential community on Ravenscroft Court to the west.

¹ General Manager of the Public Works & Environmental Services Department or the General Manager of the Planning, Infrastructure and Economic Development Department of the City of Ottawa, or their designate.





2.1 Property Owner and Applicant Contact Information

Table 1 Organization, role, contact person, phone number, and email address for property owner and applicant

Organization	Role	Contact Person	Phone Number	Email Address
Wildpine Trails Inc.	Property Owner and Applicant	Carmine Zayoun	(305) 607-8749	carmine.zayoun@gmail.com

2.2 Arborist Contact Information and Qualifications

Table 2 Organization, role, contact person, phone number, and email address for arborists

Organization	Role	Contact Person	Phone Number	Email Address
KAL	Biologist	Katherine Black, MSc	(613) 260-5555	kblack@kilgourassociates.com
KAL	Biologist	Anthony Francis, PhD	(613) 260-5555	afrancis@kilgourassociates.com
KAL	Biologist	Robert Hallett, Tech. Dipl.	(613) 260-5555	rhallett@kilgourassociates.com

Katherine Black (MSc) has over six years of comprehensive field, laboratory, and report-writing experience in biology. She has worked in a variety of field settings, including natural environments, construction sites, and greenhouses. Ms. Black's background is predominantly in vegetation ecology; she has performed vegetation surveys in a variety of natural and disturbed environments, including wetland, tundra, field, and forest environments. Since joining KAL in 2019, Ms. Black has contributed to numerous Environmental Impact Statements and TCRs. Ms. Black is also a certified Butternut Health Assessor (BHA #731).

Anthony Francis (PhD) is a Senior Ecologist with 20 years' consulting experience to both government agencies and private industry. He has worked on a diversity of projects relating to species at risk (SAR), invasive species, terrestrial and aquatic habitat, environmental effects monitoring and mitigation, and fate/effects of contaminants. Within each of these subject areas, Dr. Francis has completed projects addressing specific site concerns and broader policy initiatives. Dr. Francis' academic background is in spatial ecology with a focus on tree species diversity. As a Senior Ecologist at KAL, he regularly completes TCRs, Environmental Impact Statements, and Integrated Environmental Reviews for land development projects throughout Ottawa and eastern Ontario. He is also a certified Butternut Health Assessor (BHA #104).



Robert Hallett (Tech. Dipl.) has a broad background in monitoring both terrestrial and aquatic environments. Rob has 10 years of experience conducting tree surveys in support of TCRs and is a certified Butternut Health Assessor (BHA 546).

2.3 Additional Planning Applications

Not applicable.

3.0 EXSITING CONDITIONS

3.1 Tree Inventory

A detailed inventory of all trees on the Site was performed on June 19, 2020 following the City of Ottawa's TCR guidelines (2018a):

- Clusters and hedgerows of trees of the same species were demarcated as such. The number of
 individuals within a cluster/hedgerow was counted and the size range in diameter at breast height
 (DBH) of trees within a cluster/hedgerow was determined.
 - "Distinctive" trees (i.e., those with DBH ≥ 50 cm), uncommon species, and protected species that occurred within a cluster or hedgerow were individually mapped and not counted in the aggregate metrics for the cluster/hedgerow.
- All other trees (i.e., not in clusters or hedgerows of all the same species) with DBH ≥ 10 cm were
 individually mapped.
- Butternut trees (listed as Endangered under the Endangered Species Act (ESA) and Species at Risk Act
 (SARA)) were specifically searched for. The health of live Butternuts that fell within 50 m of the
 proposed development footprint were assessed by a qualified Butternut Health Assessor².

The detailed results of the tree inventory are presented in Appendix A and are shown in Figure 2. In general, 197 trees with DBH \geq 10 cm were identified on the Site, with the most dominant species being Manitoba Maple (*Acer negundo*), Eastern White Cedar (*Thuja occidentalis*), and Bitternut Hickory (*Carya cordiformis*; Table 3). Eleven distinctive trees (DBH \geq 50) cm were identified.

² For most activities that would involve killing or harming a Butternut, a person's eligibility for an exemption under Ontario Regulation 242/08 under the ESA is dependent on the category to which a tree is assigned following a Butternut health assessment and the details of the proposed activity (e.g., the number of trees to be affected; MNR, 2014).



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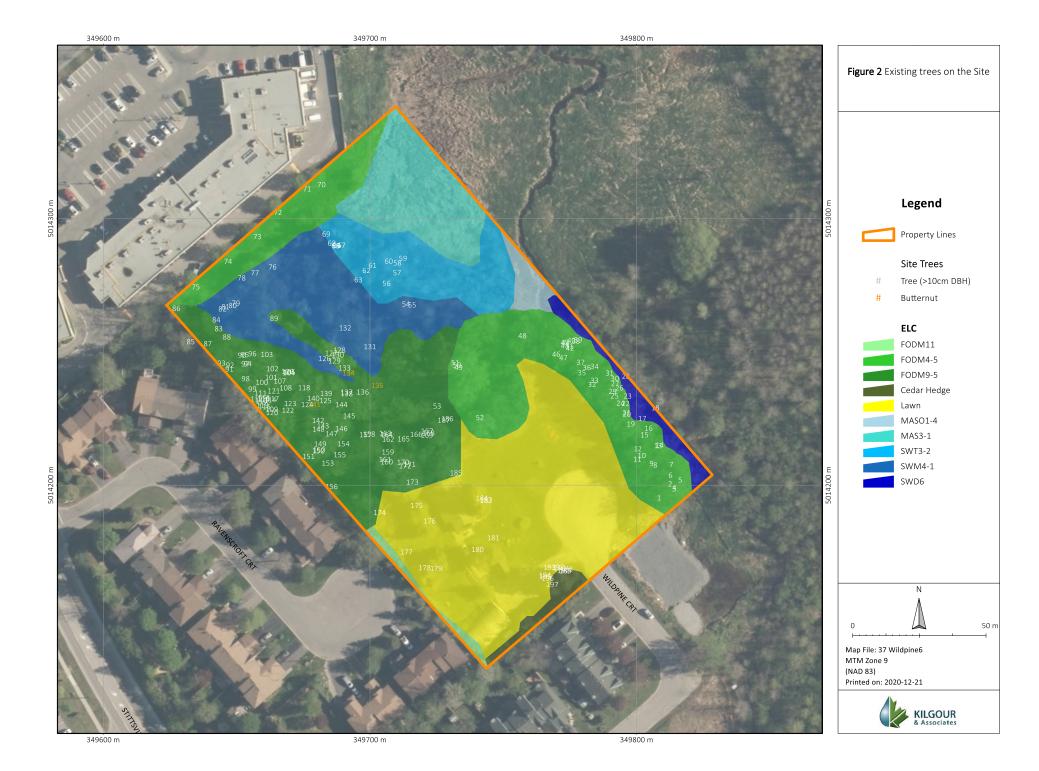


Table 3 Tree species count and percent composition for the Site

Species	Count	Percent Composition
American Elm (Ulmus americana)	14	7.1
Basswood (Tilia americana)	9	4.6
Bitternut Hickory (Carya cordiformis)	43	21.8
Black Ash (Fraxinus americana)	9	4.6
Butternut (Juglans cinerea)	3	1.5
Crack Willow (Salix fragilis)	5	2.5
Eastern Cottonwood (Populus deltoides)	3	1.5
Eastern White Cedar (Thuja occidentalis)	44	22.3
Ironwood (Ostrya virginiana)	5	2.5
Manitoba Maple (Acer negundo)	45	22.8
Siberian Elm (<i>Ulmus pumila</i>)	2	1.0
Silver Maple (Acer saccharinum)	1	0.5
Sugar Maple (Acer saccharum)	5	2.5
Trembling Aspen (Populus tremuloides)	5	2.5
White Oak (Quercus alba)	1	0.5
White Pine (Pinus strobus)	1	0.5
White Spruce (Picea glauca)	1	0.5
Yellow Birch (Betula alleghaniensis)	1	0.5
SUM	197	100.0

3.1.1 Ecological Significance of Trees on the Site

The Site contains three Butternuts (two dead and one live), a federally and provincially significant tree species that is listed as Endangered under the ESA and SARA. The live Butternut was assessed as a Category 3 Butternut, meaning that it exhibited evidence that it may be resistant to or tolerant of infection by Butternut canker (*Ophiognomonia clavigignenti-juglandacearum*). Category 3 trees are especially important to the recovery of Butternut because they may be useful in determining sources of resistance to Butternut canker (MNR, 2014).

The Site also contains one White Oak (*Quercus alba*) and one Siberian Elm (*Ulmus pumila*), both of which are regionally significant (rare) species in the Ottawa area (Brunton, 2005), though Siberian Elm is non-native.

Ecological functions of the trees on-site include:

- Providing terrestrial and riparian habitat for wildlife such as common mammals and birds.
- Providing a vegetated buffer between Poole Creek and the Stittsville Wetland Complex and the adjacent developed areas, including:
 - o Regulation of relative humidity and other microclimatic variables.
 - o Sequestration of carbon.



- o Removal of pollutants.
- Wind-shielding.
- Shading and reduction of urban heat island effects.

3.2 Other Natural Environment Elements

3.2.1 Surface Water Features

The Site includes a portion of the Stittsville Wetland Complex. The total wetland area on the Site is approximately 0.6 ha and consists of several types of wetland: meadow marsh (Ecological Land Classification code MASO1-4), cattail marsh (MAS3-1), deciduous thicket (tall shrub) swamp (SWT3-2), mixed swamp (SWM4-1), and deciduous swamp (SWD6; Figure 2). The upland edge of the wetland on the Site contains a considerable amount of fill that extends approximately 15 m out from the wetland. This upland edge of the wetland is degraded as indicated by the presence of rubble, trash, and non-native and/or invasive species.

The southeastern corner of the Site contains a small portion of the channel of Poole Creek and the eastern edge of the Site contains floodplain associated with Poole Creek.

Mitigation measures to prevent impacts to these surface water features are provided in the Environmental Impact Statement prepared for the project (KAL, 2020).

3.2.2 Steep Slopes

The Site does not contain any steep slopes, valleys, or escarpments.

3.2.3 Valued Woodlots

The Site does not contain any woodlots designated as Urban Natural Features or Natural Environment Areas, areas evaluated in the *City of Ottawa Urban Natural Areas Environmental Evaluation Study* (UNAEES; Muncaster Environmental Planning Inc. and Brunton Consulting Services, 2005), or other areas that meet the criteria used in the UNAEES.

3.2.4 Significant Woodlands

The Site does not contain any significant woodlands per the City of Ottawa's significant woodland guidelines (2018b).

3.2.5 Greenspace Linkages

The Site does not contain any greenspace linkages identified in the Greenspace Master Plan (City of Ottawa, 2016) or as may occur in the larger landscape.

3.2.6 Distinctive Trees

The Site contains 11 distinctive trees (Appendix A).



3.2.7 Unique Ecological Features

The Fresh-Moist Deciduous Bitternut Hickory Deciduous Forest (FODM9-5; Figure 2) on the Site is Significant Wildlife Habitat for Special Concern and Rare Wildlife Species (MNRF, 2015a) due to an observation of Eastern Wood-pewee (*Contopus virens*; Special Concern under ESA and SARA) here by KAL in 2020. All treed communities on-site are candidate Significant Wildlife Habitat for Bat Maternity Colonies because they are treed ecosites in which more than 10 Big Brown Bats (*Eptesicus fuscus*) and five adult female Silver-Haired Bats (*Lasionycteris noctivagans*) may occur (MNRF, 2015a). Big Brown Bats and Silver-Haired Bats were detected on the Site via acoustic monitoring by KAL in 2020, but the number and/or gender of each bat species could not be discerned from the acoustic data. It is therefore possible that Significant Wildlife Habitat for Bat Maternity Colonies exists on the Site but this cannot be confirmed with the acoustic data that were collected (KAL, 2020).

The Site does not contain other unique ecological features as may be identified in the Natural Heritage Information Centre (MNRF, 2020), Ecological Land Classification (Lee et al., 1998), or other Ministry of Natural Resources and Forestry data.

3.2.8 Species at Risk

The potential for SAR to occur on the Site and interact with the proposed development was assessed based on KAL's review of existing information, Ecological Land Classification (in-field habitat assessment), and field surveys conducted in 2020 (KAL, 2020). A total of ten species were assessed as having a moderate to high potential to interact with the proposed development (Table 4). Mitigation measures to prevent impacts to SAR listed as Endangered and Threatened are provided in the Environmental Impact Statement prepared for the project (KAL, 2020).

Table 4 Summary of species at risk assessed as having a moderate to high potential to interact with the proposed development (KAL, 2020)

Species Name (Taxonomic Name) Status under ESA		Status under Schedule 1 of SARA	Potential to Interact with Development of the Site
Birds			
Barn Swallow (Hirundo rustica)	Threatened	Threatened	Moderate
Eastern Wood-pewee (Contopus virens)	Special Concern	Special Concern	High
Rusty Blackbird (Euphagus carolinus)	Special Concern	Special Concern	Moderate
Wood Thrush (<i>Hylocichla</i> <i>mustelina</i>)	Special Concern	Threatened	Moderate
Reptiles			
Blanding's Turtle (<i>Emydoidea</i> <i>blandingii</i>)	Threatened	Threatened	High



Species Name (Taxonomic Name)	Status under ESA	Status under Schedule 1 of SARA	Potential to Interact with Development of the Site	
Milksnake (Lampropeltis triangulum)	Not Listed	Special Concern	Moderate	
Snapping Turtle (Chelydra serpentina)	Special Concern	Special Concern	Moderate	
Mammals				
Little Brown Myotis (Myotis lucifugus)	Endangered	Endangered	Moderate	
Arthropods				
Monarch (Danaus <i>plexippus</i>)	Special Concern	Special Concern	Moderate	
Vascular Plants				
Butternut (Juglans cinerea)	Endangered	Endangered	High	

4.0 PROPOSED DEVELOPMENT

The proposed development is limited to the southern half of the Site and consists of 29 single detached houses with front and rear yard space (Figure 3). The proposed development also includes extending Wildpine Court to connect with Ravenscroft Court.

Development will respect a setback of 15 m from wetland areas. It will also respect a 30 m setback from the top of bank of Poole Creek, except for the rear lot lines of four units to be located at the southeast corner of the Site. These four units require their rear lot lines to extend up to 2 m beyond the 30 m setback to permit a minimal yard length of 4 m. At their closest point to the creek, these rear lot lines are 28 m from the top of bank, but will be situated along the existing paved edge of the cul de sac on the Site. These proposed setbacks were determined in consultation with the City of Ottawa and Mississippi Valley Conservation Authority.

Site preparation is anticipated to begin in the spring of 2021 with building construction anticipated to begin in mid-2021. Site preparation would require the removal of all vegetation within the proposed development footprint, including 42 trees with DBH \geq 10 cm (3 of which are distinctive trees with DBH \geq 50 cm; Appendix A).

The pathway to the northwest corner of the Site is proposed to be an unpaved trail. The final route for the pathway will be established as part of the detailed design and Site landscape plan, but will adjusted as required to avoid removing trees. Worn foot paths are currently present within that portion of the Site.





5.0 MITIGATION MEASURES

5.1 Site Preparation and Construction

To effectively minimize impacts on site trees, the following mitigation measures must be applied during site preparation and construction (City of Ottawa, 2018a; City of Ottawa, 2015):

- Tree removal should be limited to that which is necessary to accommodate construction.
- Tree and vegetation clearing should not take place during sensitive times of the year for wildlife (breeding season; early spring throughout summer) unless mitigation measures are implemented and/or the habitat has been inspected by a qualified biologist.
 - The Migratory Birds Convention Act, 1994 protects the nests and young of migratory breeding birds in Canada. No clearing of vegetation shall occur during the breeding bird window (April 15 and August 15) to prevent impacts to birds. Combining the breeding bird window with the bat roosting season (May to September; MNRF, 2015b), no clearing of vegetation shall occur between April 15 and September 30 inclusive to prevent impacts to both birds and bats. If vegetation clearing is to occur between April 1 and 15, a pre-clearing survey for active stick nests and cavity nests must be conducted to identify and protect earlynesting owls and raptors.
- To minimize impacts to remaining trees during development:
 - Erect a fence beyond the critical root zone (CRZ; equivalent to ten times the diameter of trunk) of retained trees that have roots that may extend into the project area. The fence should be highly visible (orange construction fence) and paired with erosion and sediment control fencing. Pruning of branches is recommended in areas of potential conflict with construction equipment;
 - Do not place any material or equipment within the CRZ of trees unless otherwise approved by the General Manager;
 - Do not attach any signs, notices, or posters to any trees unless otherwise approved by the General Manager;
 - Do not raise or lower the existing grade within the CRZ of trees unless otherwise approved by the General Manager;
 - Do not extend any hard surface or significantly change landscaping within the CRZ of trees unless otherwise approved by the General Manager;
 - Do not damage the root system, trunk, or branches of any remaining trees unless otherwise approved by the General Manager;
 - Use tunneling or boring when digging within the CRZ of a tree; and



o Ensure that exhaust fumes from equipment are not directed towards any tree's canopy.

5.2 Tree Planting Recommendations

To offset vegetation loss, native tree and shrub species must be planted, with a minimum of one tree per lot. Landscaping plans must be prepared to the satisfaction of the City of Ottawa. The following tree and shrub species are recommended for planting and should be used to direct the development of the landscape plan for the Site. These species are appropriate given site conditions and are native and non-invasive: Alternate-leaf Dogwood (Cornus alternifolia), American Beech (Fagus grandifolia), Balsam Poplar (Populus balsamifera), Basswood (Tilia americana), Bitternut Hickory, Black Cherry (Prunus serotina), Black Walnut (Juglans nigra), Bur Oak (Quercus macrocarpa), Chokecherry (Prunus virginiana), Eastern White Cedar, Hawthorns (Crataegus spp.), Ironwood (Ostrya virginiana), Largetooth Aspen (Populus grandidentata), Maple-leaf Viburnum (Viburnum acerifolium), Nannyberry (Viburnum lentago), Northern Bush-honeysuckle (Diervilla lonicera), Peachleaf Willow (Salix amygdaloides), Pin Cherry (Prunus pensylvanica), Red Maple, Red Oak (Quercus rubra), Serviceberries (Amelanchier spp.), Silver Maple, Sugar Maple (Acer saccharum), Tamarack (Larix laricina), Trembling Aspen (Populus tremuloides), White Birch (Betula papyrifera), Yellow Birch (Betula alleghaniensis), White Oak, White Pine (Pinus strobus), and White Spruce (Picea glauca).

6.0 CLOSURE

Respectfully submitted,

This report was prepared for exclusive use by Wildpine Trails Inc. and may be distributed only by or in accordance with the express instructions of Wildpine Trails Inc. Questions relating to the data and interpretation can be addressed to the undersigned.

KILGOUR & ASSOCIATES LTD.							
Katherine Black, MSc Biologist	Anthony Francis, PhD Project Director and Senior Ecologist						
Ed Malindzak, MSc Senior Biologist							



7.0 LITERATURE CITED

- Brunton, D.F. 2005. City of Ottawa Urban Natural Areas Environmental Evaluation Study Appendix A Vascular Plants of the City of Ottawa, with Identification of Significant Species. Available online at: https://app06.ottawa.ca/calendar/ottawa/citycouncil/ec/2005/05-24/AppendixA%20-%20OTTAWA%20FLORA%20(APR%2005).htm
- City of Ottawa. 2015. Environmental Impact Statement Guidelines. Available online at: https://documents.ottawa.ca/sites/documents/files/documents/eis guidelines2015 en.pdf
- City of Ottawa. 2016. Greenspace Master Plan. Available online at: https://ottawa.ca/en/planning-development-and-construction/official-plan-and-master-plans/greenspace-master-plan
- City of Ottawa. 2018a. By-law No. 2009-200. Available online at: https://ottawa.ca/en/living-ottawa/laws-licences-and-permits/laws/law-z/tree-conservation-urban-law-no-2009-200
- City of Ottawa. 2018b. Significant Woodlands: Guidelines for Identification, Evaluation, and Impact Assessment. Available online at: http://ottwatch.ca/meetings/file/572913
- Government of Canada. 1984. *Migratory Birds Convention Act*, 1994 (S.C. 1994, c. 22). Available online at: https://laws-lois.justice.gc.ca/eng/acts/m-7.01/
- Government of Canada. 2002. *Species at Risk Act*. 2002. S.C. 2002, c. 29. Available online at: https://laws.justice.gc.ca/eng/acts/S-15.3/
- Government of Ontario. 2007. *Endangered Species Act*. 2007. S.O. 2007, c.6. Available online at: https://www.ontario.ca/laws/statute/07e06
- Lee, H.R., W. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig, and S. McMurray. 1998. Ecological Land Classification for Southern Ontario: First Approximation and its Application. Ontario Ministry of Natural Resources, North Bay.
- Ministry of Natural Resources. 2014. Butternut Assessment Guidelines Assessment of Butternut Tree Health for the Purposes of the *Endangered Species Act*, 2007. Available online at: https://www.ontario.ca/document/2019-review-progress-towards-protection-and-recovery-ontarios-species-risk/butternut
- Ministry of Natural Resources and Forestry. 2015a. Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E. OMNRF Regional Operations Division: Southern Region Resources Section, Peterborough, Ontario. 39 pp.
- Ministry of Natural Resources and Forestry. 2015b. Technical Note: Species at Risk (SAR) Bats. OMNRF Regional Operations Division. 37 pp.
- Ministry of Natural Resources and Forestry (MNRF). 2020. Natural Heritage Information Centre: Make Natural Heritage Map. Available online at: https://www.ontario.ca/page/make-natural-heritage-area-map



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Muncaster Environmental Planning Inc. and Brunton Consulting Services. 2005. City of Ottawa Urban Natural Areas Environmental Evaluation Study Final Report. A report prepared for the Environmental Management Division, Planning & Growth Management Department, City of Ottawa. Available online at: https://app06.ottawa.ca/calendar/ottawa/citycouncil/pdc/2005/05-24/Final%20Report_UNAEES.htm



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Appendix A Tree Inventory Table



Appendix A: Tree inventory table

Tree	Waypoint	Common Name	Latin Name	DBH (cm)	Notes	Fate
1	409	Manitoba Maple	Acer negundo	33	Multistemmed	Retained
2	410	Manitoba Maple	Acer negundo	21	Mulusterrined	Retained
3	411	Manitoba Maple	Acer negundo	20		Retained
4	412	Manitoba Maple	Acer negundo	24		Retained
5	413	Manitoba Maple	Acer negundo	20		Retained
6	414	Manitoba Maple	Acer negundo	42	Multistemmed	Retained
7	415	Manitoba Maple	Acer negundo	31	Multistemmed	Retained
8	416	Manitoba Maple	Acer negundo	26	Multistemmed	Retained
9	417	Manitoba Maple	Acer negundo	23	Multistemmed	Retained
10	418	Manitoba Maple	Acer negundo	20	Multistemmed	Retained
11	419	Manitoba Maple	Acer negundo	20	Multistemmed	Retained
12	420	Manitoba Maple	Acer negundo	38	Multistemmed	Retained
13	421	Manitoba Maple	Acer negundo	23		Retained
14	422	Manitoba Maple	Acer negundo	22	Multistemmed	Retained
15	423	Manitoba Maple	Acer negundo	23	Multistemmed	Retained
16	424	Manitoba Maple	Acer negundo	16	Multistemmed	Retained
17	425	American Elm	Ulmus americana	15		Retained
18	426	Black Ash	Fraxinus americana	15	Evidence of Emerald Ash Borer	Retained
19	427	Manitoba Maple	Acer negundo	30	Multistemmed	Retained
20	428	Manitoba Maple	Acer negundo	30		Retained
21	429	Manitoba Maple	Acer negundo	30		Retained
22	430	Manitoba Maple	Acer negundo	27	Multistemmed	Retained
23	431	Manitoba Maple	Acer negundo	20	Multistemmed	Retained
24	432	Manitoba Maple	Acer negundo	23	Multistemmed	Retained
25	433	Manitoba Maple	Acer negundo	20	Multistemmed	Retained
26	434	Manitoba Maple	Acer negundo	48		Retained
27	435	Manitoba Maple	Acer negundo	22		Retained
28	436	American Elm	Ulmus americana	28		Retained
29	437	Manitoba Maple	Acer negundo	13	Multistemmed	Retained
30	438	Manitoba Maple	Acer negundo	24	Multistemmed	Retained
31	439	Manitoba Maple	Acer negundo	37		Retained
32	440	Manitoba Maple	Acer negundo	29	Multistemmed	Retained
33	441	Manitoba Maple	Acer negundo	19	Multistemmed	Retained
34	442	Manitoba Maple	Acer negundo	22	Multistemmed	Retained
35	443	Manitoba Maple	Acer negundo	20	Multistemmed	Retained
36	444	Manitoba Maple	Acer negundo	20	Multistemmed	Retained
37	445	Manitoba Maple	Acer negundo	14	Multistemmed	Retained
38	446	Manitoba Maple	Acer negundo	21	Multistemmed	Retained
39	447	Manitoba Maple	Acer negundo	12	Multistemmed Multistemmed	Retained
40	448 449	Manitoba Maple	Acer negundo	12 20	Multistemmed	Retained
41	449	Manitoba Maple Manitoba Maple	Acer negundo	18	Multistemmed	Retained Retained
43	450	Manitoba Maple	Acer negundo Acer negundo	22	Multistemmed	Retained
43	451	Manitoba Maple	Acer negundo Acer negundo	18	Multistemmed	Retained
			·			+
45	453 454	Manitoba Maple Manitoba Maple	Acer negundo	22	Multistemmed	Retained Retained
47	454	Manitoba Maple	Acer negundo Acer negundo	30		Retained
48	455	American Elm	Ulmus americana	22		Retained
49	450	Eastern Cottonwood	Populus deltoides	55		Retained
50	457	Eastern Cottonwood	Populus deltoides	48		Retained
51	457	Eastern Cottonwood	Populus deltoides	40		Retained
52	458	Siberian Elm	Ulmus pumila	34	Some branch dieback	Removed
53	459	American Elm	Ulmus americana	18	Samo Braham diobdok	Removed
54	460	American Elm	Ulmus americana	10		Retained
55	461	Eastern White Cedar	Thuja occidentalis	40	Multistemmed; some dead stems	Retained
56	462	Eastern White Cedar	Thuja occidentalis	50	Multistemmed; some dead stems	Retained
57	463	Black Ash	Fraxinus americana	12	Evidence of Emerald Ash Borer	Retained
58	464	Black Ash	Fraxinus americana	18	Evidence of Emerald Ash Borer	Retained
59	465	Black Ash	Fraxinus americana	13	Evidence of Emerald Ash Borer	Retained
60	466	Black Ash	Fraxinus americana	15	Evidence of Emerald Ash Borer	Retained
61	467	Black Ash	Fraxinus americana	14	Evidence of Emerald Ash Borer	Retained
62	468	Eastern White Cedar	Thuja occidentalis	35	Exposed roots	Retained
63	469	Black Ash	Fraxinus americana	18	Evidence of Emerald Ash Borer	Retained
64	470	Eastern White Cedar	Thuja occidentalis	45	Exposed roots; some branch dieback	Retained
65	471	Eastern White Cedar	Thuja occidentalis	40	Exposed roots; some branch dieback	Retained
66	472	Eastern White Cedar	Thuja occidentalis	30	Exposed roots; some branch dieback	Retained
67	473	Eastern White Cedar	Thuja occidentalis	32	Exposed roots; some branch dieback	Retained
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68	474	Eastern White Cedar	Thuja occidentalis	50	Overturned roots	Retained
69	475	Eastern White Cedar	Thuja occidentalis	48		Retained
70	476	Manitoba Maple	Acer negundo	20	0	Retained
71 72	477 478	Sugar Maple Sugar Maple	Acer saccharum Acer saccharum	25 25	Over fence Over fence	Retained Retained
73	479	Sugar Maple	Acer saccharum	25	Over fence	Retained
74	480	Sugar Maple	Acer saccharum	20	Over fence	Retained
75	481	Sugar Maple	Acer saccharum	20	Over fence	Retained
76	482	Siberian Elm	Ulmus pumila	22	0.000 101100	Retained
77	483	Yellow Birch	Betula alleghaniensis	30	Multistemmed	Retained
78	484	Basswood	Tilia americana	20		Retained
79	485	Trembling Aspen	Populus tremuloides	18		Retained
80	486	Trembling Aspen	Populus tremuloides	15		Retained
81	487	Trembling Aspen	Populus tremuloides	20		Retained
82	488	American Elm	Ulmus americana	10		Retained
83	489	Trembling Aspen	Populus tremuloides	24		Retained
84	490	Trembling Aspen	Populus tremuloides	18		Retained
85	491	Silver Maple	Acer saccharinum	24		Retained
86	492	White Pine	Pinus strobus	10		Retained
87	493	Eastern White Cedar	Thuja occidentalis	44		Retained
88	494	Basswood	Tilia americana	36	Multistemmed	Retained
89	495	Crack Willow	Salix fragilis	66	Multistemmed; large cavities	Retained
90	496	Bitternut Hickory	Carya cordiformis	39		Retained
91 92	497 498	Basswood	Tilia americana	15	Multiptommod	Retained Retained
		Basswood American Elm	Tilia americana Ulmus americana	20	Multistemmed	
93 94	499 500	Basswood	Tilia americana	15 23	Multistemmed	Retained Retained
95	500	Ironwood	Ostrya virginiana	13	Mullisternmed	Retained
96	502	Bitternut Hickory	Carya cordiformis	26		Retained
97	503	Basswood	Tilia americana	28		Retained
98	504	Ironwood	Ostrya virginiana	14		Retained
99	505	Bitternut Hickory	Carya cordiformis	48	Multistemmed	Retained
100	506	Bitternut Hickory	Carya cordiformis	18		Retained
101	507	Bitternut Hickory	Carya cordiformis	22		Retained
102	508	Bitternut Hickory	Carya cordiformis	22		Retained
103	509	Bitternut Hickory	Carya cordiformis	36		Retained
104	510	Ironwood	Ostrya virginiana	10		Retained
105	511	American Elm	Ulmus americana	15		Retained
106	512	Ironwood	Carya cordiformis	18		Retained
107	513	Bitternut Hickory	Carya cordiformis	21		Retained
108	514	Bitternut Hickory	Carya cordiformis	26		Retained
109	515	Bitternut Hickory	Carya cordiformis	16		Retained
110	516	Bitternut Hickory	Carya cordiformis	15		Retained
111	517	Bitternut Hickory	Carya cordiformis	24		Retained
112	518	Bitternut Hickory	Carya cordiformis	20		Retained
113	519	Bitternut Hickory	Carya cordiformis	21		Retained
114	520	Bitternut Hickory Bitternut Hickory	Carya cordiformis	17		Retained
115	521	,	Carya cordiformis	19 33		Retained
116 117	522 523	Bitternut Hickory Bitternut Hickory	Carya cordiformis Carya cordiformis	10		Retained Retained
117	523	Bitternut Hickory	Carya cordiformis Carya cordiformis	24		Retained
119	525	Bitternut Hickory	Carya cordiformis	54		Retained
120	526	Bitternut Hickory	Carya cordiformis	12		Retained
121	527	Bitternut Hickory	Carya cordiformis	21		Retained
122	528	Bitternut Hickory	Carya cordiformis	24		Retained
123	529	Bitternut Hickory	Carya cordiformis	16		Retained
124	530	Bitternut Hickory	Carya cordiformis	20	Multistemmed	Retained
125	531	American Elm	Ulmus americana	16		Retained
126	532	Black Ash	Fraxinus americana	20	Evidence of Emerald Ash Borer	Retained
127	533	Crack Willow	Salix fragilis	22		Retained
128	534	Crack Willow	Salix fragilis	50		Retained
129	535	Black Ash	Fraxinus americana	18		Retained
130	536	Crack Willow	Salix fragilis	38		Retained
131	537	Basswood	Tilia americana	55	Multistemmed	Retained
132	538	Eastern White Cedar	Thuja occidentalis	46	Cavities	Retained
133	539	Crack Willow	Salix fragilis	33		Retained
134	540	Butternut	Juglans cinerea	8	Dead	Retained
135	541	Butternut	Juglans cinerea	59	Healthy crown; open and sooty cankers	Retained
136	542	Bitternut Hickory	Carya cordiformis	48		Retained
137	543	Bitternut Hickory	Carya cordiformis	12		Retained

138	544	Bitternut Hickory	Carya cordiformis	20		Retained
139	545	Bitternut Hickory	Carya cordiformis	13		Retained
140	546	American Elm	Ulmus americana	13		Retained
141	547	Butternut	Juglans cinerea	16	Dead	Retained
142	548	Bitternut Hickory	Carya cordiformis	18		Retained
143	549	Bitternut Hickory	Carya cordiformis	24		Retained
144	550	Bitternut Hickory	Carya cordiformis	24		Retained
145	551	Ironwood	Ostrya virginiana	17		Retained
146	552	Bitternut Hickory	Carya cordiformis	26		Retained
147	553	Bitternut Hickory	Carya cordiformis	24		Retained
148	554	Basswood	Tilia americana	17		Retained
149	555	Bitternut Hickory	Carya cordiformis	22		Retained
150	556	Bitternut Hickory	Carya cordiformis	26		Retained
151	557	American Elm	Ulmus americana	12		Retained
152	558	American Elm	Ulmus americana	10		Retained
153	559	Eastern White Cedar	Thuja occidentalis	20	Multistemmed; cavities	Retained
154	560	Eastern White Cedar	Thuja occidentalis	24	Woodpecker holes	Retained
155	561	Bitternut Hickory	Carva cordiformis	24		Retained
156	562	Eastern White Cedar	Thuja occidentalis	26	Multistemmed; woodpecker holes	Removed
157	563	American Elm	Ulmus americana	12	, ,	Retained
158	564	American Elm	Ulmus americana	36	Dying crown	Retained
159	565	Bitternut Hickory	Carya cordiformis	16		Removed
160	566	Bitternut Hickory	Carya cordiformis	24		Removed
161	566	Bitternut Hickory	Carya cordiformis	22		Removed
162	567	Eastern White Cedar	Thuja occidentalis	22-28	Hedgerow	Removed
163	568	Eastern White Cedar	Thuja occidentalis	22-28	Hedgerow	Removed
164	569	Eastern White Cedar	Thuja occidentalis	22-28	Hedgerow	Removed
165	570	Eastern White Cedar	Thuja occidentalis	22-28	Hedgerow	Removed
166	571	Eastern White Cedar	Thuia occidentalis	22-28	Hedgerow	Removed
167	572	Eastern White Cedar	Thuja occidentalis	22-28	Hedgerow	Removed
168	573	Eastern White Cedar	Thuja occidentalis	22-28	Hedgerow	Removed
169	574	Eastern White Cedar	Thuja occidentalis	22-28	Hedgerow	Removed
170	575	Eastern White Cedar	Thuja occidentalis	26		Removed
171	576	Bitternut Hickory	Carya cordiformis	30		Removed
172	577	Bitternut Hickory	Carya cordiformis	43		Removed
173	578	Eastern White Cedar	Thuja occidentalis	38	Multistemmed	Removed
174	579	White Oak	Quercus alba	74	- Manuscommon	Removed
175	580	Eastern White Cedar	Thuja occidentalis	39		Removed
176	581	Eastern White Cedar	Thuja occidentalis	66		Removed
177	582	Eastern White Cedar	Thuja occidentalis	50		Removed
178	583	Eastern White Cedar	Thuja occidentalis	41	Multistemmed	Removed
179	584	Eastern White Cedar	Thuja occidentalis	36	Multistemmed	Removed
180	585	Eastern White Cedar	Thuia occidentalis	42	Multistemmed	Removed
181	587	Eastern White Cedar	Thuja occidentalis	38		Removed
182	588	Eastern White Cedar	Thuja occidentalis	42		Removed
183	589	Eastern White Cedar	Thuja occidentalis	42		Removed
184	590	Eastern White Cedar	Thuja occidentalis	44		Removed
185	591	Bitternut Hickory	Carya cordiformis	41		Removed
186	592	Basswood	Tilia americana	46		Removed
187	593	White Spruce	Picea glauca	46		Removed
188	594	Eastern White Cedar	Thuja occidentalis	20-30	Hedgerow; poor health	Removed
189	595	Eastern White Cedar	Thuja occidentalis	20-30	Hedgerow; poor health	Removed
190	596	Eastern White Cedar	Thuja occidentalis	20-30	Hedgerow; poor health	Removed
191	597	Eastern White Cedar	Thuja occidentalis	20-30	Hedgerow; poor health	Removed
192	598	Eastern White Cedar	Thuja occidentalis	20-30	Hedgerow; poor health	Removed
193	599	Eastern White Cedar	Thuia occidentalis	20-30	Hedgerow; poor health	Removed
194	600	Eastern White Cedar	Thuja occidentalis	20-30	Hedgerow; poor health	Removed
195	601	Eastern White Cedar	Thuja occidentalis	20-30	Hedgerow; poor health	Removed
196	602	Eastern White Cedar	Thuja occidentalis	20-30	Hedgerow; poor health	Removed
197	603	Eastern White Cedar	Thuja occidentalis	20-30	Hedgerow; poor health	Removed
131	003	Leastern willie Cedal	Triaja occidentaris	20-30	I loagelow, poor liealin	Internoved