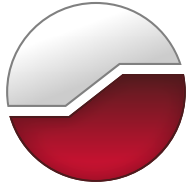




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**Tree Conservation Report
Proposed Condominium Development
1518-1526 Stittsville Main Street
Ottawa, Ontario**



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Submitted to:
McIntosh Perry
115 Walgreen Rd., R.R. #3
Carp, Ontario
K0A 1L0

**Tree Conservation Report
Proposed Condominium Development
1518-1526 Stittsville Main Street
Ottawa, Ontario**

August 11, 2020
Project: 65062.08

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1.0 INTRODUCTION

GEMTEC Consulting Engineers and Scientists Limited (GEMTEC) was retained by McIntosh Perry, to carry out a Tree Conservation Report (TCR) for the property located at 1518-1526 Stittsville Main Street, in the City of Ottawa, Ontario, hereafter referred to as the “subject property”. The site location is illustrated on Figure A.1 in Appendix A.

1.1 Purpose

The proponent is proposing to construct a new condominium development, for the properties located at 1518, 1524 and 1526 Stittsville Main Street, in the City of Ottawa, Ontario. The project involves the demolition of the existing buildings on-site and the construction of a new 4-storey and 2-storey condominium that will have one level of underground parking.

In preparation for Site Plan Approval, a Tree Conservation Report (TCR) is required to identify trees to be retained and protected under future development scenarios and, where feasible, identify opportunities to offset the loss of trees that cannot be retained or contribute to the City’s forest cover targets.

A detailed site layout and the proposed development plan is provided on Figure A.2 in Appendix A.

1.2 Definitions

Terms and abbreviations used throughout the remainder of this report are summarized below.

Diameter at Breast Height (DBH), is defined as the diameter of the tree trunk measured at a height of 1.2 metres above ground surface for trees of 10 centimetres in diameter and greater.

Critical Root Zone (CRZ), is defined as the ground area within a circumference around the tree trunk calculated as 10 centimetres from the trunk of the tree for every one centimetre of tree trunk diameter at breast height.

Distinctive Tree, a distinctive tree within the City of Ottawa is defined as any tree with a trunk calculated as 10 centimetres in diameter at breast height.

2.0 METHODOLOGY

2.1 Desktop Review

To complete the TCR, digital color air photos of the site available from GeoOttawa were reviewed from 1976 to 2017 to identify natural features, including historical trees, present on-site and in the vicinity of the site.

2.2 Field Investigations

In addition to the completion of a desktop review of historical air photos, two site investigations were completed. Conditions during the site investigations are summarized in Table 2.1 below.

Table 2.1 Summary of Field Investigations

Date	Time	Weather Conditions	Purpose
May 28, 2020	06:45-09:00	19°C, partly cloudy, Beaufort 4, no precipitation	Tree Inventory; Species at Risk Screening Assessment
June 9, 2020	14:00-14:45	21°C, partly sunny, Beaufort 2, no precipitation	Butternut Health Assessment

Site photographs taken during the field investigations are provided in Appendix B.

3.0 RESULTS

3.1 Existing Conditions

The site is comprised of three land parcels, municipally addressed as 1518, 1524, and 1526 Stittsville Main Street. Parcels 1524 and 1526 are currently vacant, while existing development occurs on 1518 Stittsville Main Street. Existing development includes a residential building along the north property boundary with an approximate footprint of 110 m² and a barn building in the centre of the property with an approximate footprint of 197 m². The remainder of the property consists of vacant urban vegetation. The existing site layout is illustrated on Figure A.2 in Appendix A.

The proposed development includes the demolition of the existing buildings on-site and the construction of a new 4-storey and 2-storey condominium that will have one level of underground parking. The proposed development plan is illustrated on Figure A.2 in Appendix A.

Numerous trees are present on the property, primarily along the north and west property boundary and within the hedgerow between 1518 and 1524 Stittsville Main Street. A summary of all trees surveyed on-site is provided in Section 3.2 below.

The vicinity of the site is characterized by residential dwellings and businesses. The nearest significant natural feature is the Goulbourn Wetland Complex Provincially Significant Wetland (PSW) located approximately 700 m west of the property. No other natural features were identified on-site or adjacent to site.

Based on a review of historical air photos, the site and surrounding areas have undergone some alterations since 1976. The following alterations were noted during review:

- 1976: Barn and house and additional building in northeast corner present on parcel 1518, building present on parcel 1524, two buildings present on parcel 1526. Hedgerows along north property line and between parcel 1518 and parcel 1524 are present. Some development present others beginning in broader surrounding area.
- 1991: No changes to buildings or site. Continued development in the surrounding area.
- 1999: No major changes to buildings, site or surrounding area.
- 2002: Building on parcel 1524 and one building on 1526 demolished. No changes to parcel 1518. Surround area becoming more built-up.
- 2005: Last remaining building on parcel 1526 demolished. No changes to parcel 1518 or surrounding area.
- 2008: No major changes to buildings, site or surrounding area.
- 2011: No major changes to buildings, site or surrounding area.
- 2014: No major changes to buildings, site or surrounding area.
- 2017: Building in northeast corner of parcel 1518 demolished. Site at present day layout.

3.2 Tree Inventory Summary

A tree inventory was conducted on May 28, 2020. Trees within the proposed development area on-site were identified, enumerated and assessed for visual signs of distress and disease. Table C.1 in Appendix C provides a summary of all tree specimens surveyed whose DBH was greater than 10 cm. CRZ values for trees with DBH greater than 10 cm are also present in Table C.1 in Appendix C. Critical Root Zones were not calculated for dead trees. For trees with multiple stems greater than 10 cm DBH, the largest DBH was used to calculate the CRZ. All trees with a DBH greater than 10 cm and their CRZ are illustrated on Figure A.3, in Appendix A. In general, the tree community assemblage can be described as containing a few semi-mature and immature opportunistic trees.

Per the City of Ottawa By-law No. 2009-200, no distinctive trees (DBH > 50 cm) were identified on-site.

Two butternut trees were identified within the study area, adjacent to the site (tree number 53 and 66); butternut trees are listed as endangered under the provincial Endangered Species Act.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Based on a review of the information summarized in Section 3.2, Table C.1 in Appendix C and the proposed development concept illustrated on Figure A.3, the following conclusions are provided:

- A total of 47 trees were identified as non-retainable under the proposed development concept with an additional 7 trees with a possible critical root zone conflict;
- No distinctive trees, meeting the City of Ottawa By-Law No. 2009-200 requirements, were identified on-site;
- Trees on-site are of a typical urban and opportunistic or early successional species;
- Forty-four trees are in good/healthy condition, five trees are moderately healthy, twelve are in poor health condition and five trees are dead, dying or poor condition;
- Two butternut trees were observed on the adjacent property/along the property boundary, a Butternut Health Assessment was completed and both trees were found to be Category 1 Trees (poor health). The Butternut Health Assessment is provided in Appendix D; and
- None of the 66 trees present on-site represent exceptional native tree specimens, nor do they provide any conservation value.

4.1 Tree Conservation Recommendations

Opportunities exist along the perimeter of the proposed development, to offset the loss of trees that are not retainable under the proposed development concept. Trees identified as possible conflict that are removed during construction should also be accounted for in the landscape plan for offsetting. In effort to offset the effect of vegetation clearing, consideration should be given to landscape planting with native tree species indicative of the Great Lakes – St. Lawrence Forest Region, such as white cedar, white spruce, red maple and red oak.

4.2 Recommended Mitigation Measures

4.2.1 Butternut

As indicated above, two butternut trees were observed in the adjacent property to the north of the project site. As the minimum setback distance of 25 m around each butternut cannot be avoided due to the proposed development, a Butternut Health Assessment (BHA) was completed for both trees. The BHA was completed on June 9, 2020 and submitted to the Ministry of Environment, Conservation and Parks on June 22, 2020. The BHA concluded that both butternut trees were assessed to be Category 1 trees. Category 1 trees may be killed, harmed, or taken after a 30-day period following BHA submission to the MECP has elapsed, unless otherwise instructed by the MECP. As the 30-day BHA submission window has elapsed, construction activities may proceed as planned within the 25 m radius of both butternut trees and no further permitting or action is required to address butternut.

The Butternut Health Assessment is provided in Appendix D.

4.2.2 General Mitigation Measures

The following mitigation measures and best practice recommendations are provided by GEMTEC in order to minimize and eliminate negative impacts to trees identified in Appendix C as retainable. Construction contractors shall apply the following measures below to prevent damages to trees identified to be retained in the redevelopment plan for the site;

- All trees identified to be retained should be clearly marked and the CRZ delineated with fencing to prevent encroachment and damage during construction;
- Tree protection should follow the specifications established by the City of Ottawa and provided in Appendix E;
- If existing pavement surface around trees to be retained is going to be removed than temporary fencing should be installed to delineate the CRZ of each tree;
- If trees to be removed overlap with the CRZ of trees to be retained, cut roots at the edge of the retained CRZ and grind down stumps after tree removal, do not pull out stumps. If roots must be cut, roots 20 cm or larger should be cut at right angles with clean, sharp, horticultural tools, without tearing, crushing, or pulling;
- Do not place any material or equipment within the CRZ of any tree identified to be retained;
- Do not attach any signs, notices or posters to any tree identified to be retained;
- Do not damage the root system, trunk, or branches or any tree identified to be retained;
- Ensure that exhaust fumes from all equipment are directed away from tree canopy; and
- Tree removal shall occur outside of the key breeding bird period (typically April 15 to August 15) as identified by Environment Canada for the protection of migratory birds and to avoid contravention of the Migratory Bird Convention Act. If vegetation clearing activities must take place outside of the aforementioned timing window than a nest survey shall be conducted by a qualified professional.

5.0 CLOSURE

This letter and the work referred to within it have been undertaken by GEMTEC Consulting Engineers and Scientists Limited (GEMTEC), and was prepared for McIntosh Perry and is intended for the exclusive use of McIntosh Perry. This report may not be relied upon by any other person or entity without the express written consent of GEMTEC and McIntosh Perry. 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 report 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

6.0 REFERENCES

Ottawa, City of (Ottawa). 2003. City of Ottawa Official Plan. May

Ottawa, City of (Ottawa), By-law No. 2009-200, *Tree Conservation – Urban* (Updated June 2018).



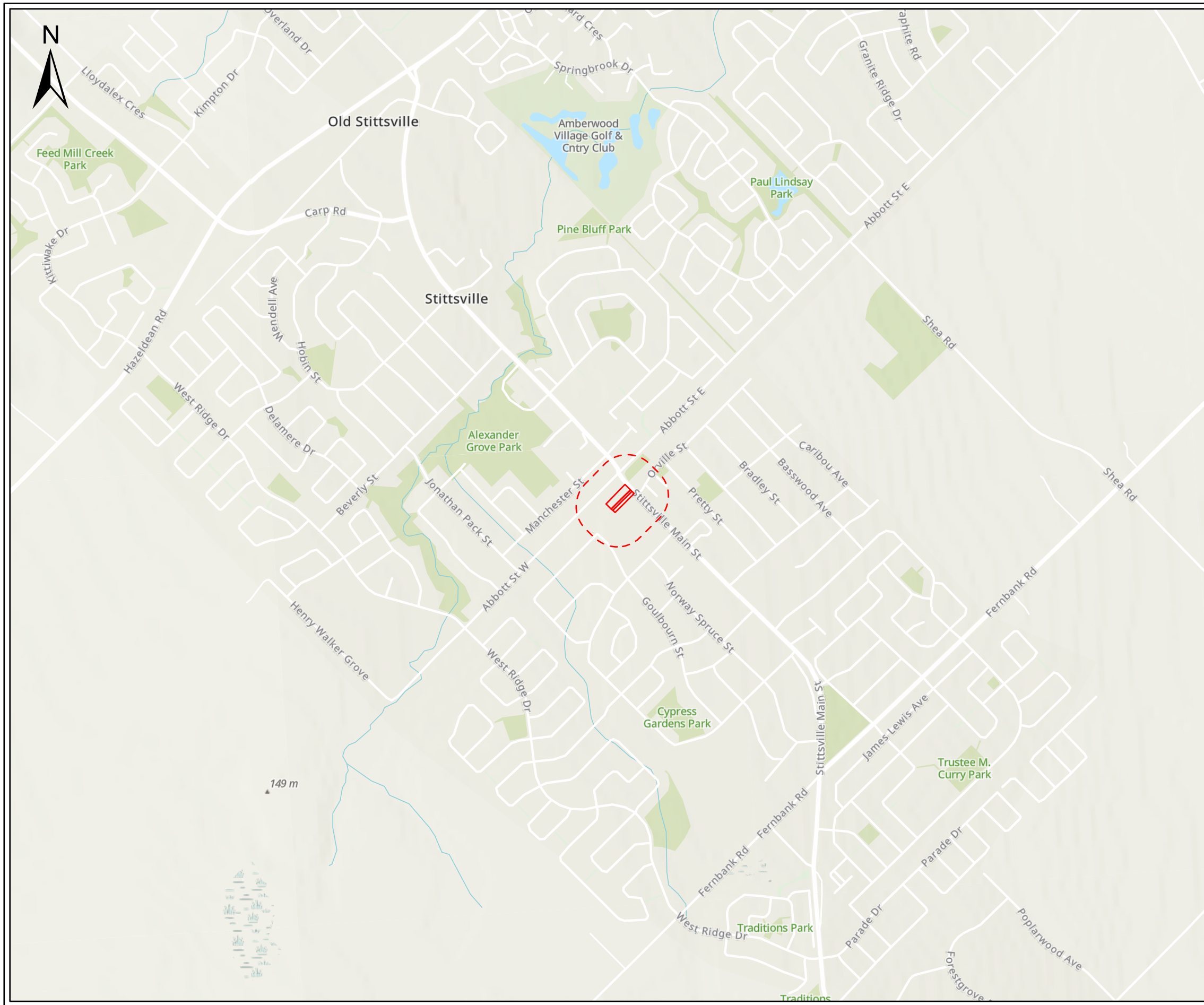
APPENDIX A

Report Figures

Figure A.1 – Site Location

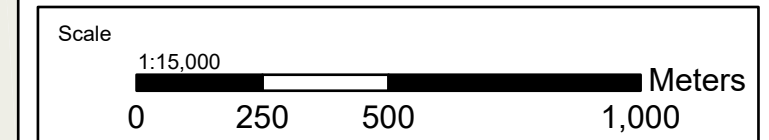
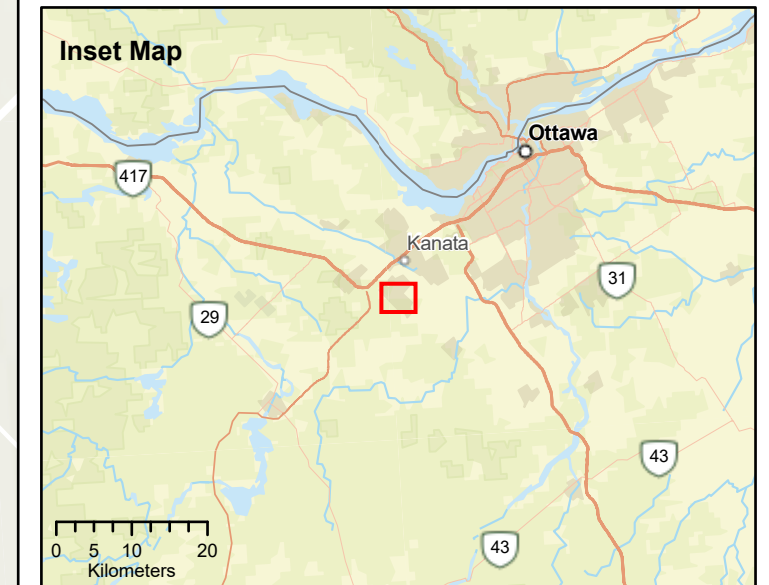
Figure A.2 – Site Layout

Figure A.3 – Tree Inventory



Legend

- Study Area
- Property Boundary



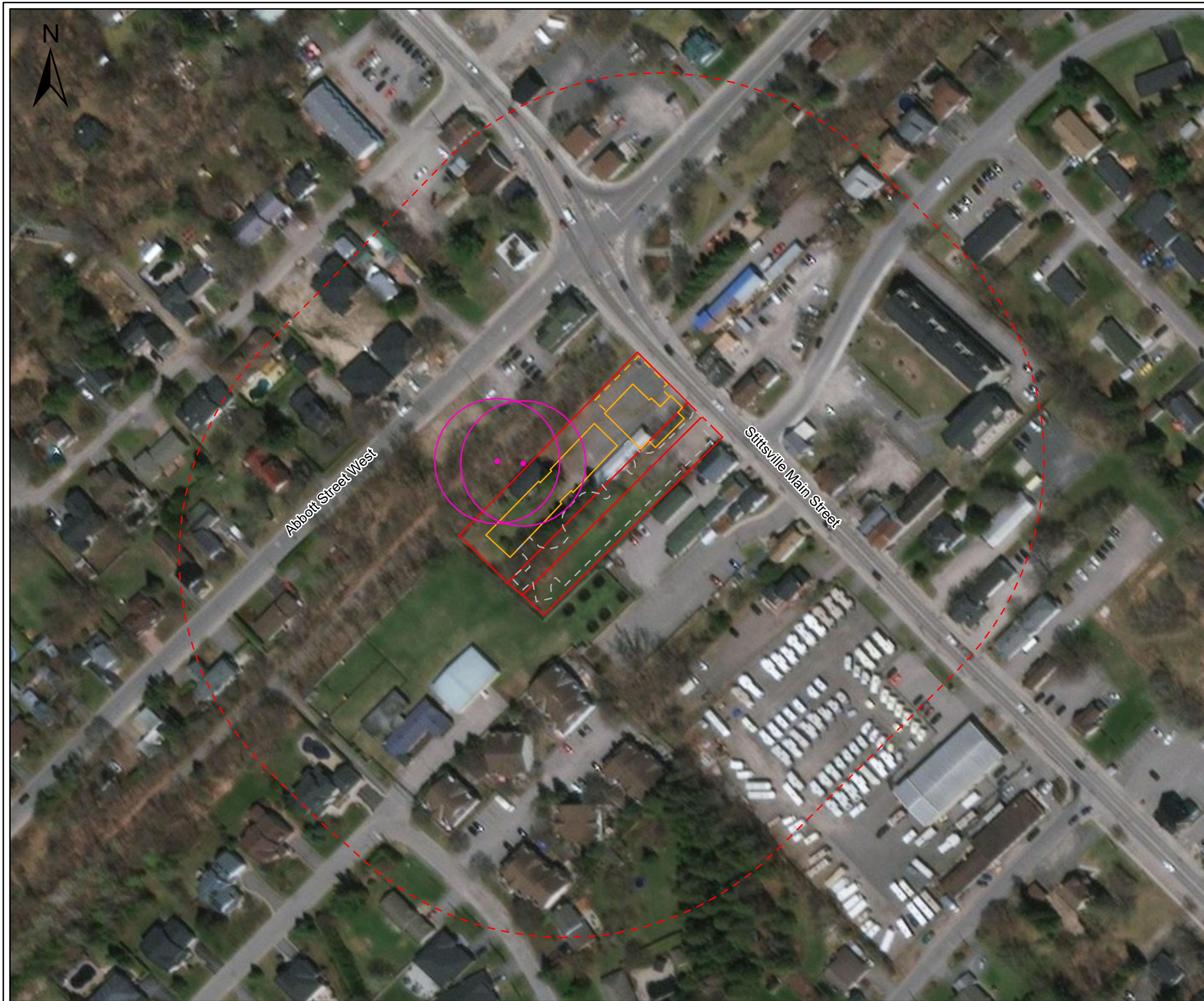
 <p>GEMTEC CONSULTING ENGINEERS AND SCIENTISTS</p>	<p>32 Steacie Drive, Ottawa, ON K2K 2A9 T: (613) 836-1422 www.gemtec.ca ottawa@gemtec.ca</p>
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Client:	McIntosh Perry	Project:	65062.08
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Location	1518-1526 Stittsville Main Street Ottawa, Ontario
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Drwn By:	Chkd By:	Site Location
TW	DP	

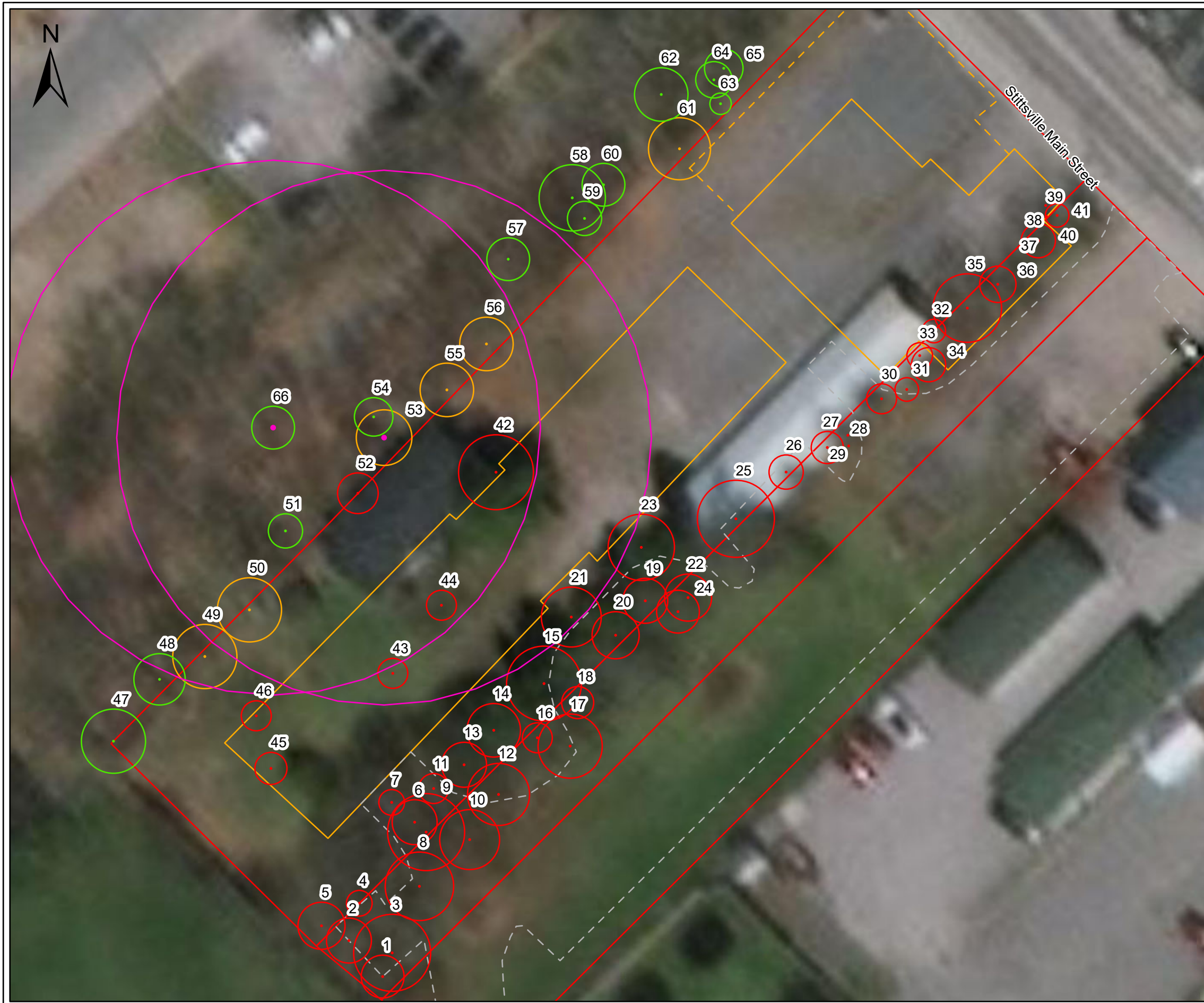
Date: August 2020	Rev.	Figure: A.1
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Legend

- Study Area
- Property Boundary
- Proposed Building
- Proposed Parking and Driveway
- Proposed Patio
- Butternut (25 m radius)

Scale		1:1,600	
		Meters	
		32 Steacie Drive, Ottawa, ON K2K 2A9 T: (613) 836-1422 www.gemtec.ca ottawa@gemtec.ca	
Client:		McIntosh Perry	Project:
		65062.08	
Location			
1518-1526 Stittsville Main Street Ottawa, Ontario			
Drwn By:	Chkd By:	Site Layout	
TW	DP		
Date: August 2020		Rev.	Figure: A.2
© Queen's Printer for Ontario		0	

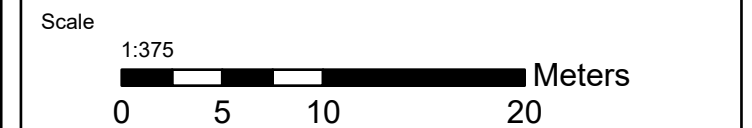


Legend

- Study Area
- Property Boundary
- Proposed Building
- Proposed Parking and Driveway
- Proposed Patio

Tree Inventory and Critical Root Zone

- Retainable
- Possible CZR Conflict
- Non-Retainable
- Butternut (25 m radius)



GEMTEC
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Client: McIntosh Perry	Project: 65062.08
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Location
**1518-1526 Stittsville Main Street
Ottawa, Ontario**

Drwn By: TW	Chkd By: DP	Tree Inventory
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Date: August 2020	Rev. 0	Figure: A.3
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APPENDIX B

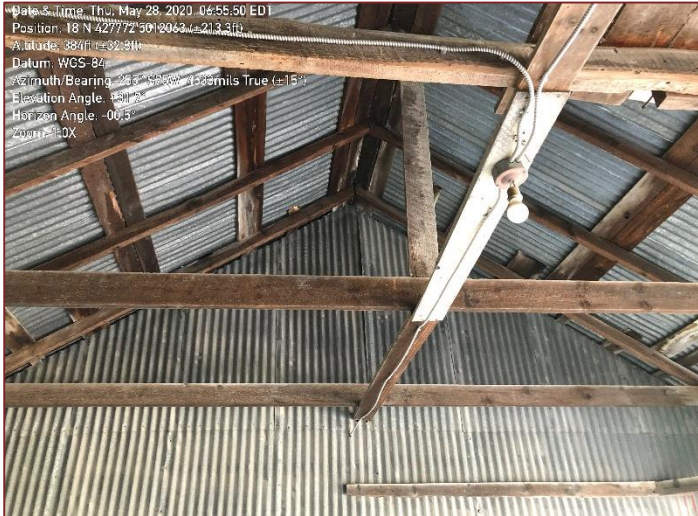
Site Photographs



Site Photograph 1 – Existing Development on 1518 Stittsville Main Street



Site Photograph 2 – Existing Development on 1518 Stittsville Main Street



Site Photograph 3 – Inside Roof of Barn Structure



Site Photograph 4 – Inside Roof of Barn Structure



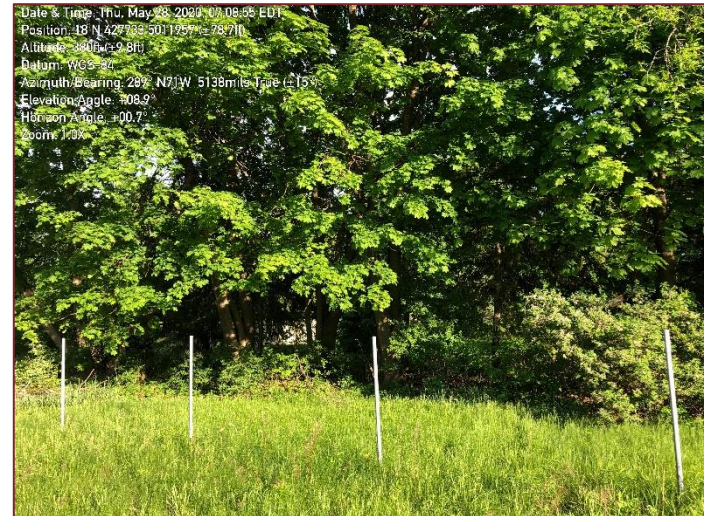
Site Photograph 5 – Existing Vegetation on 1518 Stittsville Main Street



Site Photograph 6 – Hedgerow between 1518 and 1524 Stittsville Main Street



Site Photograph 7 – Hedgerow along 1518 Stittsville Main and Neighbouring Property



Site Photograph 8 – Hedgerow between 1518 and 1524 Stittsville Main Street



Site Photograph 9 – Existing Vegetation on 1524 and 1526 Stittsville Main Street



Site Photograph 10 – Existing Vegetation on 1524 and 1526 Stittsville Main Street



Site Photograph 11 – Existing Vegetation non 1524 and 1526 Stittsville Main Street



Site Photograph 12 – Butternut Tree on Adjacent Property



APPENDIX C

Tree Inventory Summary Table

Tree Number	Common Name	Scientific Name	Diameter (cm DBH)	Critical Root Zone (cm)	Condition	Retainable or Conflict	Significant Tree (> 50 cm)	Wildlife Tree
1	Norway Maple	<i>Acer platanoides</i>	13, 19 & 20	200	Multi-stem (3), healthy	Non-retainable	No	No
2	Norway Maple	<i>Acer platanoides</i>	21	210	Healthy	Non-retainable	No	No
3	Manitoba Maple	<i>Acer negundo</i>	29, 32 & 36	360	Multi-stem (3), moderately healthy, leaning, one dead trunk	Non-retainable	No	No
4	Norway Maple	<i>Acer platanoides</i>	12	120	Moderately healthy, some trunk damage	Non-retainable	No	No
5	White Ash	<i>Fraxinus americana</i>	22	220	Healthy	Non-retainable	No	No
6	Norway Spruce	<i>Picea abies</i>	21	210	Healthy	Non-retainable	No	No
7	Norway Spruce	<i>Picea abies</i>	12	120	Healthy	Non-retainable	No	No
8	Norway Maple	<i>Acer platanoides</i>	21, 27 & 32	320	Multi-stem (3), healthy	Non-retainable	No	No
9	Norway Maple	<i>Acer platanoides</i>	13, 18, 20 & 36	360	Multi-stem (4), healthy	Non-retainable	No	No
10	Norway Maple	<i>Acer platanoides</i>	9, 27 & 28	280	Multi-stem (3), healthy	Non-retainable	No	No
11	Norway Spruce	<i>Picea abies</i>	14	140	Poor health, dying limbs and crown	Non-retainable	No	No
12	Norway Maple	<i>Acer platanoides</i>	29	290	Multi-stem (2), healthy	Non-retainable	No	No
13	Norway Spruce	<i>Picea abies</i>	21	210	Moderately healthy, some dead/dying limbs	Non-retainable	No	No
14	Balsam Fir	<i>Abies balsamea</i>	25	250	Healthy	Non-retainable	No	No
15	Norway Spruce	<i>Acer platanoides</i>	35	350	Healthy	Non-retainable	No	No
16	Manitoba Maple	<i>Acer negundo</i>	12, 13 & 14	140	Multi-stem (3), poor health, leaning, dead limbs	Non-retainable	No	No
17	Manitoba Maple	<i>Acer negundo</i>	17 & 30	300	Multi-stem (2), poor health, dead trunk	Non-retainable	No	No
18	Manitoba Maple	<i>Acer negundo</i>	14 & 15	150	Multi-stem (2), poor health, dying limbs	Non-retainable	No	No
19	Manitoba Maple	<i>Acer negundo</i>	14, 20 & 21	210	Multi-stem (3), poor health, dying limbs	Non-retainable	No	No
20	Balsam Fir	<i>Abies balsamea</i>	22	220	Healthy	Non-retainable	No	No
21	Norway Spruce	<i>Picea abies</i>	28	280	Healthy	Non-retainable	No	No
22	Manitoba Maple	<i>Acer negundo</i>	15, 17, 19 & 22	220	Multi-stem (4), poor health, leaning, dying limbs	Non-retainable	No	No
23	Norway Spruce	<i>Picea abies</i>	31	310	Healthy	Non-retainable	No	No
24	Manitoba Maple	<i>Acer negundo</i>	20	200	Healthy	Non-retainable	No	No
25	Manitoba Maple	<i>Acer negundo</i>	33 & 36	360	Multi-stem (2), poor health, one dead trunk	Non-retainable	No	No
26	American Elm	<i>Ulmus americana</i>	16	160	Healthy	Non-retainable	No	No
27	Manitoba Maple	<i>Acer negundo</i>	15	150	Poor health, dying limbs	Non-retainable	No	No
28	American Elm	<i>Ulmus americana</i>	14	140	Dead	Non-retainable	No	No
29	American Elm	<i>Ulmus americana</i>	11	110	Dead	Non-retainable	No	No
30	American Elm	<i>Ulmus americana</i>	14	140	Moderately healthy	Non-retainable	No	No
31	Manitoba Maple	<i>Acer negundo</i>	11	110	Healthy	Non-retainable	No	No
32	Staghorn Sumac	<i>Rhus typhina</i>	11	110	Healthy	Non-retainable	No	No
33	Staghorn Sumac	<i>Rhus typhina</i>	12	120	Healthy	Non-retainable	No	No
34	Manitoba Maple	<i>Acer negundo</i>	16	160	Healthy	Non-retainable	No	No
35	Manitoba Maple	<i>Acer negundo</i>	12, 14 & 32	320	Multi-stem (3), poor health, main trunk dead	Non-retainable	No	No
36	Manitoba Maple	<i>Acer negundo</i>	10, 12, 13 & 17	170	Multi-stem (4), healthy	Non-retainable	No	No
37	American Elm	<i>Ulmus americana</i>	16	160	Dead	Non-retainable	No	No
38	American Elm	<i>Ulmus americana</i>	13	130	Dead	Non-retainable	No	No
39	American Elm	<i>Ulmus americana</i>	16	160	Dead	Non-retainable	No	No
40	Manitoba Maple	<i>Acer negundo</i>	10 & 16	160	Multi-stem (10), healthy	Non-retainable	No	No
41	Manitoba Maple	<i>Acer negundo</i>	11	110	Healthy	Non-retainable	No	No
42	White Spruce	<i>Picea glauca</i>	35	350	Healthy	Non-retainable	No	No
43	unknown horticultural sp.	--	14	140	Healthy	Non-retainable	No	No
44	Plum sp.	<i>Prunus sp.</i>	13 & 14	140	Multi-stem (2), poor health, limbs dead/dying	Non-retainable	No	No
45	White Spruce	<i>Picea glauca</i>	15	150	Healthy	Non-retainable	No	No
46	unknown horticultural sp.	--	14	140	Multi-stem (3), healthy	Non-retainable	No	No

Tree Number	Common Name	Scientific Name	Diameter (cm DBH)	Critical Root Zone (cm)	Condition	Retainable or Conflict	Significant Tree (> 50 cm)	Wildlife Tree
47	Manitoba Maple	<i>Acer negundo</i>	21 & 30	300	Multi-stem (5), moderately healthy, on property line/adjacent property	Retainable	No	No
48	Norway Maple	<i>Acer platanoides</i>	24	240	Healthy, on adjacent property	Retainable	No	No
49	Manitoba Maple	<i>Acer negundo</i>	30	300	Healthy, on property line/adjacent property	CRZ Conflict	No	No
50	Manitoba Maple	<i>Acer negundo</i>	30	300	Healthy, on property line/adjacent property	CRZ Conflict	No	No
51	Norway Maple	<i>Acer platanoides</i>	16	160	Healthy, on adjacent property	Retainable	No	No
52	Norway Maple	<i>Acer platanoides</i>	19	190	Healthy, on adjacent property	Non-retainable	No	No
53	Butternut	<i>Juglans cinerea</i>	26	260	Poor health (Category 1 Tree), on property line/adjacent property	CRZ Conflict	No	No
54	Norway maple	<i>Acer platanoides</i>	18	180	Healthy, on adjacent property	Retainable	No	No
55	Norway Maple	<i>Acer platanoides</i>	25	250	Healthy, adjacent property	CRZ Conflict	No	No
56	Norway Maple	<i>Acer platanoides</i>	23 & 25	250	Healthy, on adjacent property	CRZ Conflict	No	No
57	Manitoba Maple	<i>Acer negundo</i>	20	200	Healthy, on adjacent property	Retainable	No	No
58	Manitoba Maple	<i>Acer negundo</i>	31	310	Healthy, on adjacent property	Retainable	No	No
59	Manitoba Maple	<i>Acer negundo</i>	16	160	Healthy, on adjacent property	Retainable	No	No
60	American Elm	<i>Ulmus americana</i>	20	200	Healthy, adjacent property	Retainable	No	No
61	Manitoba Maple	<i>Acer negundo</i>	18 & 29	290	Multi-stem (2), healthy, on adjacent property	CRZ Conflict	No	No
62	Manitoba Maple	<i>Acer negundo</i>	13, 18 & 25	250	Multi-stem (3), healthy, on adjacent property	Retainable	No	No
63	Manitoba Maple	<i>Acer negundo</i>	10	100	Healthy, on adjacent property	Retainable	No	No
64	Manitoba Maple	<i>Acer negundo</i>	17	170	Multi-stem (3), healthy, on adjacent property	Retainable	No	No
65	Manitoba Maple	<i>Acer negundo</i>	15, 17 & 18	180	Multi-stem (3), healthy, on adjacent property	Retainable	No	No
66	Butternut	<i>Juglans cinerea</i>	20	200	Poor health (Category 1 Tree), on adjacent property	CRZ Conflict	No	No



APPENDIX D

Butternut Health Assessment

June 22, 2020

File: 65062.08

Inverness Homes
38 Auriga Drive, Suite 200
Nepean, Ontario
K2E 8A5


Attention: Josh Laginski

**Re: Butternut Health Assessment - Lyle Campbell
Township of Beckwith, Ontario**

Mr. Laginski, please accept this letter and its enclosures as the Butternut Health Assessment completed in support of the proposed development for 1518 Stittsville Main Street in Stittsville, Ontario. A copy of this report has been submitted to the Ministry of Environment, Conservation and Parks through the centralized reporting centre via email (SAROntario@ontario.ca).

If following your review, you have any questions, comments or concerns, please do not hesitate to contact the undersigned.

Sincerely,



Drew Paulusse, B.Sc.,
Senior Biologist

Enclosures
Butternut Health Assessment Report
Field Data Forms
Excel BHA Tree Analysis
Figure 1
Photolog

Ministry of Natural
Resources and Forestry

Ministère des Richesses
naturelles et des Forêts

Species At Risk
P.O. Box 7000, 300 Water Street
Peterborough ON K9J 8M5

Espèces en péril
C.P. 7000, 300, rue Water
Peterborough ON K9J 8M5



The enclosed Butternut Health Assessor's Report documents the results of the Butternut health assessment that was conducted by the designated Butternut Health Assessor (BHA) identified in the top section of the report. If there are other Butternut trees (of any size or age) at the site that may be affected by the activity and they are not identified in the enclosed BHA Report, they too must be assessed by a designated BHA.

Butternut is listed as an endangered species on the Species at Risk in Ontario List, and as such, it is protected under the *Endangered Species Act, 2007* (ESA) from being killed, harmed, or removed. If you are planning to undertake an activity that may affect Butternut, you may be eligible to follow the requirements set out in section 23.7 of Ontario Regulation 242/08 under the ESA, or you may need to seek an authorization under the ESA (e.g., a permit).

Please visit e-laws at the link provided below for the legal requirements of eligible activities under section 23.7 of Ontario Regulation 242/08 and conditions that must be fulfilled. Information about Butternut is also available at: <http://www.ontario.ca/environment-and-energy/butternut-trees-your-property>.

If you are eligible to kill, harm or take Butternut under section 23.7 of the regulation, your first step is to submit the BHA Report and the original data forms enclosed in this package to the local Ministry of Natural Resources and Forestry (MNRF) District Manager. Note that MNRF cannot accept photocopies or scanned electronic copies of the data forms.

Note regarding changes:

If the enclosed BHA Report does not identify which Butternut tree(s) are proposed to be killed, harmed, or taken in Table 1 (i.e., if "unknown" is indicated in the second last column of Table 1), or, if the information in the last two columns of Table 1 has changed since the date this BHA Report was produced, **do not make any edits to the BHA Report**. Instead, please attach a cover letter that identifies which Butternut tree(s) are proposed to be killed, harmed, or taken (by referencing the tree identification numbers) when you submit the enclosed BHA Report to the local MNRF District Manager.

The BHA Report must be submitted at least 30 days prior to registering an eligible activity to kill, harm, or remove a Butternut tree. During this 30 day period, no Butternut trees (of any category) may be killed, harmed, or removed, and MNRF may contact you for an opportunity to examine the trees. If MNRF chooses to examine the trees, a representative of MNRF will contact you using the information you supplied when you submitted the BHA Report.

If you are eligible to follow the rules in regulation under section 23.7, you may register your activity using the “Notice of Butternut Impact” form on the [MNRF Registry](#) **after the 30 day period has elapsed.**

If you are **not** eligible to follow the rules in regulation under section 23.7, please contact the local MNRF district office to determine whether you will need to seek an authorization (e.g., a permit). A link to the directory of MNRF offices is provided below.

Note that municipal by-laws and legislation other than the ESA may also be applicable to the removal or harming of trees.

Please retain this information and a copy of the BHA Report (including copies of all data forms) for your records, along with any other documentation you may receive from MNRF should an examination of the trees occur. If you have any questions, please contact your local MNRF district office.

Links:

Endangered Species Act, 2007:

http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_07e06_e.htm

Ontario Regulation 242/08 (refer to section 23.7):

http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_080242_e.htm

MNRF Office Locations:

<https://www.ontario.ca/government/ministry-natural-resources-and-forestry-regional-and-district-offices>

Butternut Health Assessor's Report Number: ###-### (6 digits, to be assigned by BHA using format: 3 digit BHA ID#, followed by BHA's own 3 digit report numbering system)

Drew Paulusse, 691
 32 Steacie Drive
 Ottawa, Ontario
 K2K 2A9
 613-222-2592
 drew.paulusse@gemtec.ca

Inverness Homes
 38 Auriga Drive, Suite 200
 Nepean, Ontario
 K2E 8A5
 613-818-5140

Site location: 1518 Stittsville Main Street, Stittsville, Ontario, K2S 1N9.

Date(s) of Butternut health assessment: June 9, 2020
 Date BHA Report prepared: June 22, 2020

Map datum used: X NAD83 WGS84

Total number of trees assessed in this BHA Report: 2

The assessed trees were numbered on site using white tree marking paint. The numbers at the site correspond to the tree numbers referenced in this report.

This BHA Report includes the following tables:

- Table 1: Butternut Trees Assessed
- Table 2: Trees Determined by BHA to be Butternut Hybrids
- Table 3: Summary of Assessment Results

Table 1: Butternut Trees Assessed

Tree #	UTM coordinates	Category ¹ (1, 2, or 3 ²)	dbh ³ (cm)	Cultivated? (Y/N)	Proposed to be: (enter one: unknown ⁴ , killed, harmed or taken)	If tree is proposed to be killed, harmed, or taken, indicate reason tree is proposed to be killed, harmed or taken:
1	4120625, 5013403	1	26	N	Harmed	Potential interference with critical root zone.

¹ The extent to which the tree is affected by Butternut Canker is presented in the Excel document titled, "BHA Tree Analysis" that accompanies this BHA Report.

² Category 3 trees are not eligible to be killed, harmed or taken under section 23.7 of Ontario Regulation 242/08.

³ dbh: diameter at breast height, rounded to nearest cm (if tree is shorter than breast height, enter zero)

⁴ In this column, "unknown" indicates that at the time of assessment, there are no proposals to kill, harm or take this tree that are known to the BHA.

Tree #	UTM coordinates	Category ¹ (1, 2, or 3 ²)	dbh ³ (cm)	Cultivated? (Y/N)	Proposed to be: (enter one: unknown ⁴ , killed, harmed or taken)	If tree is proposed to be killed, harmed, or taken, indicate reason tree is proposed to be killed, harmed or taken:
2	4120625, 5013403	1	20	N	Harmed	Potential interference with critical root zone.

Table 2: Trees Determined by BHA to be Butternut Hybrids

Tree #	UTM coordinates	Method used (genetic testing or field identification):

Table 3: Summary of Assessment Results

Result:	Total #:	Important information for persons planning activities that may affect Butternut:
Category 1	2	<ul style="list-style-type: none"> A Category 1 tree is one that is affected by butternut canker to such an advanced degree that retaining the tree would not support the protection or recovery of butternut in the area in which the tree is located; and is considered “non-retainable”. During the 30 day period that follows your submission of this BHA Report to the MNRF District Manager, no Butternut trees (of Category 1, 2, or 3) may be killed, harmed, or taken, and MNRF may contact you for an opportunity to examine the trees. Category 1 trees may be killed, harmed or taken after the 30 day period that follows submission of this BHA Report to the MNRF District Manager, unless the results of an MNRF examination indicate that the assessment has not been conducted in accordance with the document entitled “Butternut Assessment Guidelines: Assessment of Butternut Tree Health for the Purposes of the <i>Endangered Species Act, 2007</i>”.
Category 2	0	<ul style="list-style-type: none"> A Category 2 tree is one that is not affected by Butternut Canker, or is affected by Butternut Canker but the degree to which it is affected is not too advanced and retaining the tree could support the protection or recovery of butternut in the area in which the tree is located, and is considered “retainable”. During the 30 day period that follows your submission of this BHA Report to the MNRF District Manager, no Butternut trees (of Category 1, 2, or 3) may be killed, harmed, or taken, and MNRF may contact you for an opportunity to examine the trees. Activities that may kill, harm or take up to a maximum of ten (10) Category 2 trees may be eligible to follow the rules in section 23.7 of Ontario Regulation 242/08, in accordance with

Result:	Total #:	Important information for persons planning activities that may affect Butternut:
		<p>the conditions and requirements set out in the regulation.</p> <ul style="list-style-type: none"> Refer to e-Laws for the legal requirements of eligible activities under section 23.7 of Ontario Regulation 242/08 and conditions that must be fulfilled: http://www.e-laws.gov.on.ca/html/regis/english/elaws_regs_080242_e.htm Activities that may kill, harm or take more than ten (10) Category 2 trees are not eligible to follow the rules in section 23.7 of Ontario Regulation 242/08. Contact the local MNRF district office for information on how to seek an ESA authorization (e.g., a permit) or consider an alternative that would be eligible for the regulation.
Category 3	0	<ul style="list-style-type: none"> A Category 3 tree is one that may be useful in determining sources of resistance to Butternut Canker, and is considered “archivable”. Category 3 trees are not eligible to be killed, harmed or taken under section 23.7 of Ontario Regulation 242/08. Contact the local MNRF district office for information on how to seek an ESA authorization, or consider an alternative that will avoid killing, harming or taking any Category 3 trees.
Cultivated	0	<ul style="list-style-type: none"> An activity that involves killing, harming, or taking a cultivated Butternut tree that was not required to be planted to fulfill a condition of an ESA permit or a condition of a regulation, may be eligible for the exemption provided by subsection 23.7 (11) of O. Reg. 242/08. Prior to undertaking the activity, the owner or occupier of the land on which the Butternut is located (or person acting on their behalf) will need to determine whether the exemption for cultivated trees is applicable by determining whether or not the tree was cultivated as a result of the requirements for an exemption under O. Reg. 242/08 or a condition of a permit issued under the ESA. This information can be accessed by contacting the local MNRF district office. The owner or occupier of the land on which the Butternut is located (or person acting on their behalf) is encouraged to append the details regarding whether the tree was planted to satisfy a requirement (e.g., the permit number or registration number) to this BHA Report for their records.
Hybrid	0	<ul style="list-style-type: none"> Hybrid Butternut trees are not protected under the ESA, but their removal may be subject to municipal by-laws and other legislation.

Butternut Health Assessor’s Comments:

Trees are located on the property and/or property line located to the north of the subject property (1518 Stittsville Main Street).

This concludes the summary of the BHA Report. A complete BHA Report must also include:

1. All original (hard copy) data forms (i.e., all completed sets of Form 1 and Form 2), and
2. Electronic and printed copies of the Excel data analysis spreadsheet.



ATTACHMENT A

Field Data Sheets

Butternut Data Collection FORM 2 (2010 Edition)

(PLEASE USE BLOCK LETTERS)

Fill when Form 1 indicates canker is well established. The information on Form 2 must be filled out for all trees when doing a Butternut Health Assessment.

Shaded fields are mandatory for Butternut Health Assessments

Site Code(A,B,...Z, AA...) **Surveyor ID or BHA #** 0691

Date (dd/mm/yyyy)
09 - 06 - 2020

Surveyor Last Name PAULUSSE

Tree ID Numbering: 1,2,3,...Starting from 1 for each site

Tree # 001 **Zone** 18 **Easting** 912062 **Northing** 5013403

Crown Class 80 **Live Crown %** 8 **Main Stem Length(m) Below crown** 9

Twig Dieback Branch Dieback Defoliation Discolouration

#Stems 1 **DBH(cm)** 26

Butternut Origin Natural Planted Unknown

Seed Signs Male Flowers Female Flowers Seed Set None

Assess below live crown

#Epic-Live 3 #Epic-Dead 3

#Open 1 #Sooty 6

Bark Type = <2m 5 7

Callused Wounds >2m 7 12

Metres from badly cankered tree < 40 > 40 None Found

Competing Species

Handwritten: Norway maple, Manitoba maple, White Elm

Tree # 002 **Zone** 18 **Easting** 912062 **Northing** 5013403

Crown Class 100 **Live Crown %** 17 **Main Stem Length(m) Below crown** 14

Twig Dieback Branch Dieback Defoliation Discolouration

#Stems 1 **DBH(cm)** 20

Butternut Origin Natural Planted Unknown

Seed Signs Male Flowers Female Flowers Seed Set None

Assess below live crown

#Epic-Live #Epic-Dead

#Open 1 #Sooty 1

Bark Type = <2m 5 11

Callused Wounds >2m 1 3

Metres from badly cankered tree < 40 > 40 None Found

Competing Species

Handwritten: Norway Maple, Manitoba Maple, White Elm

Tree # **Zone** 1 **Easting** **Northing**

Crown Class **Live Crown %** **Main Stem Length(m) Below crown**

Twig Dieback Branch Dieback Defoliation Discolouration

#Stems **DBH(cm)**

Butternut Origin Natural Planted Unknown

Seed Signs Male Flowers Female Flowers Seed Set None

Assess below live crown

#Epic-Live #Epic-Dead

#Open #Sooty

Bark Type = <2m

Callused Wounds >2m

Metres from badly cankered tree < 40 > 40 None Found

Competing Species

Tree # **Zone** 1 **Easting** **Northing**

Crown Class **Live Crown %** **Main Stem Length(m) Below crown**

Twig Dieback Branch Dieback Defoliation Discolouration

#Stems **DBH(cm)**

Butternut Origin Natural Planted Unknown

Seed Signs Male Flowers Female Flowers Seed Set None

Assess below live crown

#Epic-Live #Epic-Dead

#Open #Sooty

Bark Type = <2m

Callused Wounds >2m

Metres from badly cankered tree < 40 > 40 None Found

Competing Species

Tree # **Zone** 1 **Easting** **Northing**

Crown Class **Live Crown %** **Main Stem Length(m) Below crown**

Twig Dieback Branch Dieback Defoliation Discolouration

#Stems **DBH(cm)**

Butternut Origin Natural Planted Unknown

Seed Signs Male Flowers Female Flowers Seed Set None

Assess below live crown

#Epic-Live #Epic-Dead

#Open #Sooty

Bark Type = <2m

Callused Wounds >2m

Metres from badly cankered tree < 40 > 40 None Found

Competing Species

Please enter matching page link code on forms 1 and 2

Page Link 501403

(Contact Information follows all applicable privacy policies and guidelines)

Please return forms to:
 Forest Gene Conservation Association
 Suite 233, 266 Charlotte St.
 Peterborough, ON, K9J 2V4
 www.fgca.net

49731





ATTACHMENT B

Excel BHA Tree Analysis

BHA Tree Analysis (version: December 2013)

This table is to be completed by a designated Butternut Health Assessor (BHA).

BHA Report #	005	Assessment Date(s)	09-Jun-20	Total # Butternut Trees in BHA Report	2
BHA ID #	691	BHA Name	Drew Paulusse		
Landowner / Client Name					
Property Location		1518 Stittsville Main Street, Stittsville, Ontario			

input field data										automatic calculations from field data						Categories: 1: non-retainable, 2: retainable, 3: archivable										
Tree #	Live Crown %	Tree dbh (cm)	# bole cankers				# root flare (RF) cankers		Y or N <40 m from cankered tree?	Circ. (cm) = Pi x dbh	total bole canker width (sooty x 2.5 + open x 5)	total RF canker width (sooty x 2.5 + open x 5)	bole canker % of circ.	RF canker % of circ.	total bole & root canker % of 2xCirc	LC% >= 50 & BC% = 0	LC% >70 & BRC% <20	LC% >70 & BC% <20	Preliminary tree call	FINAL TREE CALL a Cat 2, dbh>20cm <40m from a Cat 1						
			sooty (S) (will be assigned 2.5 cm per canker)		open (O) (will be assigned 5 cm per canker)		RF S	RF O													Circ (cm)	BC (cm)	RC (cm)	BC%	RC%	BRC%
			S <2 m	S >2 m	O <2 m	O >2 m																				
1	80	26	7	12	5	7	6	1	Y	81.64	107.5	20.0	131.7	24.5	78.1	1	1	1	1	1						
2	100	20	11	3	5	1	1	1	Y	62.8	65.0	7.5	103.5	11.9	57.7	1	1	1	1	1						
3										0	0.0	0.0	#####	#####	#####	#####	###	###	###	##	#DIV/0!					
4										0	0.0	0.0	#####	#####	#####	#####	###	###	###	##	#DIV/0!					
5										0	0.0	0.0	#####	#####	#####	#####	###	###	###	##	#DIV/0!					
6										0	0.0	0.0	#####	#####	#####	#####	###	###	###	##	#DIV/0!					
7										0	0.0	0.0	#####	#####	#####	#####	###	###	###	##	#DIV/0!					
8										0	0.0	0.0	#####	#####	#####	#####	###	###	###	##	#DIV/0!					
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27										0	0.0	0.0	#####	#####	#####	#####	###	###	###	##	#DIV/0!					
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29										0	0.0	0.0	#####	#####	#####	#####	###	###	###	##	#DIV/0!					
30										0	0.0	0.0	#####	#####	#####	#####	###	###	###	##	#DIV/0!					



ATTACHMENT C

Figure 1 – Site Layout



Tree #1

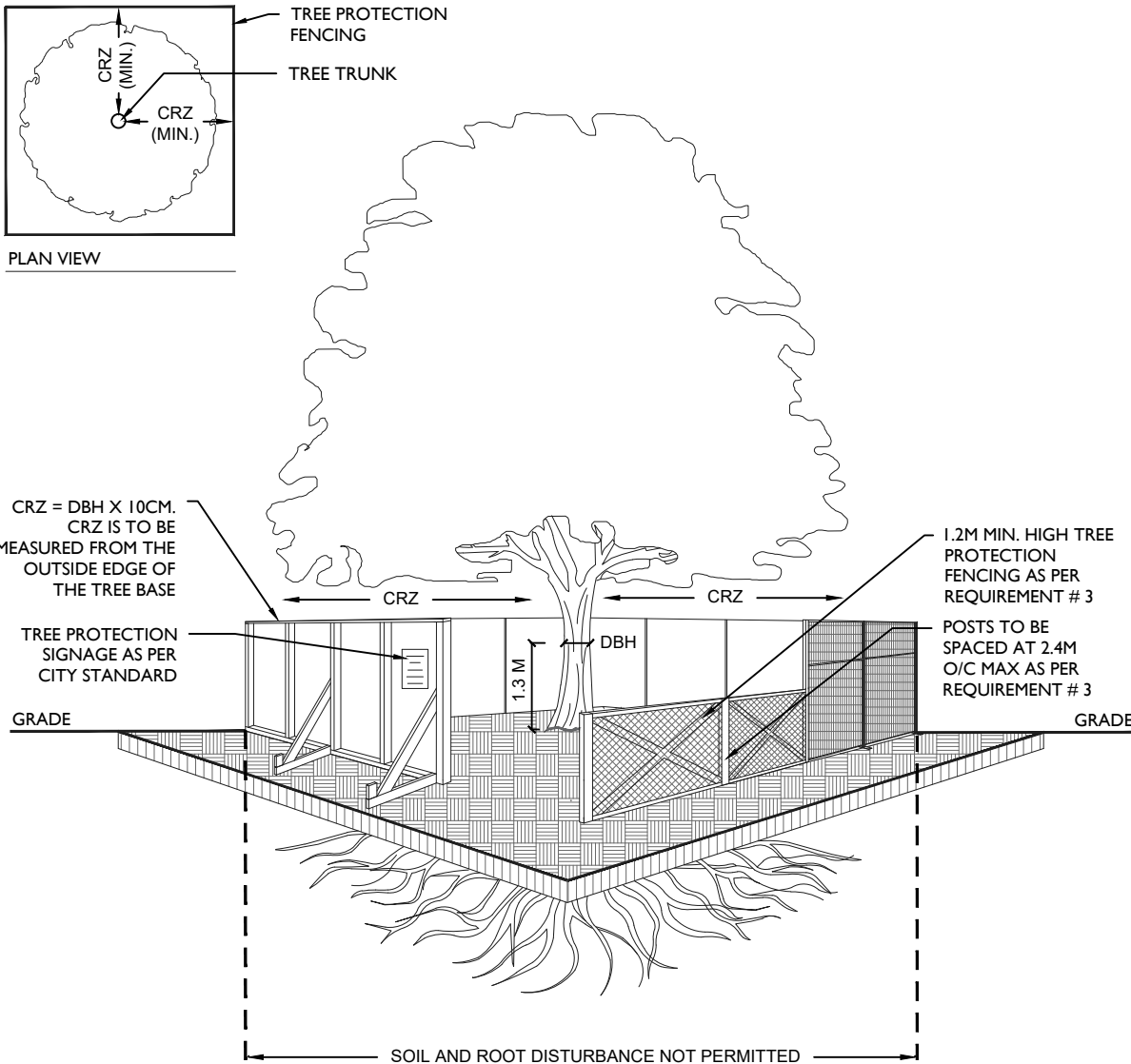


Tree #2



APPENDIX E

City of Ottawa Tree Protection Specification



TREE PROTECTION REQUIREMENTS:

1. PRIOR TO ANY WORK ACTIVITY WITHIN THE CRITICAL ROOT ZONE (CRZ = 10 X DIAMETER) OF A TREE, TREE PROTECTION FENCING MUST BE INSTALLED SURROUNDING THE CRITICAL ROOT ZONE, AND REMAIN IN PLACE UNTIL THE WORK IS COMPLETE.
2. UNLESS PLANS ARE APPROVED BY CITY FORESTRY STAFF, FOR WORK WITHIN THE CRZ:
 - DO NOT PLACE ANY MATERIAL OR EQUIPMENT - INCLUDING OUTHOUSES;
 - DO NOT ATTACH ANY SIGNS, NOTICES OR POSTERS TO ANY TREE;
 - DO NOT RAISE OR LOWER THE EXISTING GRADE;
 - TUNNEL OR BORE WHEN DIGGING;
 - DO NOT DAMAGE THE ROOT SYSTEM, TRUNK, OR BRANCHES OR ANY TREE;
 - ENSURE THAT EXHAUST FUMES FROM ALL EQUIPMENT ARE NOT DIRECTED TOWARD ANY TREE CANOPY.
 - DO NOT EXTEND HARD SURFACE OR SIGNIFICANTLY CHANGE LANDSCAPING
3. TREE PROTECTION FENCING MUST BE AT LEAST 1.2M IN HEIGHT, AND CONSTRUCTED OF RIGID OR FRAMED MATERIALS (E.G. MODULOC - STEEL, PLYWOOD HOARDING, OR SNOW FENCE ON A 2"x4" WOOD FRAME) WITH POSTS 2.4M APART, SUCH THAT THE FENCE LOCATION CANNOT BE ALTERED. ALL SUPPORTS AND BRACING MUST BE PLACED OUTSIDE OF THE CRZ, AND INSTALLATION MUST MINIMISE DAMAGE TO EXISTING ROOTS. (SEE DETAIL)
4. THE LOCATION OF THE TREE PROTECTION FENCING MUST BE DETERMINED BY AN ARBORIST AND DETAILED ON ANY ASSOCIATED PLANS FOR THE SITE (E.G. TREE CONSERVATION REPORT, TREE DISCLOSURE REPORT, ETC). THE PLAN AND CONSTRUCTED FENCING MUST BE APPROVED BY CITY FORESTRY STAFF PRIOR TO THE COMMENCEMENT OF WORK.
5. IF THE FENCED TREE PROTECTION AREA MUST BE REDUCED TO FACILITATE CONSTRUCTION, MITIGATION MEASURES MUST BE PRESCRIBED BY AN ARBORIST AND APPROVED BY CITY FORESTRY STAFF. THESE MAY INCLUDE THE PLACEMENT OF PLYWOOD, WOOD CHIPS, OR STEEL PLATING OVER THE ROOTS FOR PROTECTION OR THE PROPER PRUNING AND CARE OF ROOTS WHERE ENCOUNTERED.

BY-LAWS

ALL CITY-OWNED TREES ARE PROTECTED UNDER THE MUNICIPAL TREES AND NATURAL AREAS PROTECTION BY-LAW (2006-279). WITHIN THE URBAN AREA, PRIVATELY-OWNED TREES GREATER THAN 50CM DIAMETER ON LOTS 1HA IN SIZE OR LESS, AND TREES GREATER THAN 10CM DIAMETER ON LOTS >1HA, ARE PROTECTED UNDER THE URBAN TREE CONSERVATION BY-LAW (2009-200).

ACCESSIBLE FORMATS AND COMMUNICATION SUPPORTS ARE AVAILABLE, UPON REQUEST



TREE PROTECTION SPECIFICATION

TO BE IMPLEMENTED FOR RETAINED TREES, BOTH ON SITE AND ON ADJACENT SITES, PRIOR TO ANY TREE REMOVAL OR SITE WORKS AND MAINTAINED FOR THE DURATION OF WORK ACTIVITIES ON SITE.

SCALE: NTS

DATE: MAY 2019

DRAWING NO.: 1 of 1



APPENDIX F

CVs for Key Personnel



GEMTEC

Drew Paulusse, B.Sc.

Senior Biologist / Manager of Environmental Services

Mr. Paulusse has over 12 years of experience in the environmental consulting industry, providing private industry and municipal and federal government clients with cost effective solutions to manage environmental constraints associated with land development proposals and infrastructure projects. Mr. Paulusse's expertise, as it relates to land development proposals and infrastructure projects is field assessment and regulatory permitting associated with species at risk, fish habitat and wetlands.

Education

- B.Sc., Biology, Trent University, 2007
- Environmental Technician, Fleming College, 2004

Professional Experience

2018-date	GEMTEC Consulting Engineers and Scientists Limited <i>Manager of Environmental Services</i>	Ottawa, Ontario
2011-2018	Geofirma Engineering Limited <i>Senior Biologist</i>	Ottawa, Ontario
2007-2011	INTERA Engineering Limited <i>Biologist</i>	Ottawa, Ontario
2007	Canadian Wildlife Service, Environment Canada <i>Wetland Conservation Officer</i>	Burlington, Ontario
2005	Centre for Inland Waters, Environment Canada <i>Junior Marine Technologist</i>	Burlington, Ontario

Professional Affiliations and Technical Training

- Canadian Society of Environmental Biologists
- Ontario Association for Impact Assessment
- MTO/DFO/MNRF Protocol for Protecting Fish and Fish Habitat on Provincial Transportation Undertakings. Ministry of Transportation. 2018
- Ontario Wetland Evaluation System Certification Course. Ministry of Natural Resources and Forestry. 2017
- Headwater Drainage Feature Assessment Training Course. Rideau Valley Conservation Authority. 2017





GEMTEC

- Ecological Land Classification System Certification Course. Ministry of Natural Resources and Forestry. 2015
- Ontario Benthic Biomonitoring Network Certification Course. Ministry of Environment, Conservation and Parks. 2011

Project Highlights

- ***DFO Self-Assessment and Preparation of Tender Special Provisions, Osceola Culvert Replacement, County of Renfrew, Ontario (2019):*** Project manager and technical lead responsible for the evaluation of the significance of fish habitat and species at risk, and completion of a DFO self-assessment. Work included aquatic habitat assessments, pathway of effects evaluation, culvert design recommendations and reporting.
- ***Biological Inventory, Ontario Power Generation Incorporated, Bath, Ontario (2018):*** Project manager and technical lead responsible for conducting a three-season inventory of avian and amphibian species at the Lennox Provincially Significant Wetland. Work included conducting presence and abundance surveys following the Canadian Wildlife Service marsh monitoring protocol and Bird Studies Canada breeding bird surveys, statistical analysis of species data trends and reporting.
- ***Wetland Management Plan, Ontario Power Generation Incorporated, Bath, Ontario (2018):*** Project manager and technical lead responsible for the development of an adaptive wetland management plan for the Lennox Provincially Significant Wetland. Work included a synthesis of historical data, statistical analysis of data trends, vegetation assessment, air photo interpretation, development of short-term and long-term management objectives and development of a standardized monitoring program.
- ***Environmental Compliance Monitoring, Petrie Island Causeway Rehabilitation Project, Ottawa, Ontario (2018):*** Project manager and technical lead responsible for monitoring constructor compliance with various Department of Fisheries and Oceans, Ministry of Natural Resources and Conservation Authority permit conditions during the Petrie Island Causeway Rehabilitation Project within the Ottawa River. Work included species at risk surveys, fish salvage, exclusion fence inspection, monitoring of sediment and erosion control measures, turbidity monitoring, regulatory agency consultation and weekly reporting.
- ***Wetland Delineation and Wetland Function Assessment, National Capital Commission, Ottawa, Ontario (2018):*** Project manager and technical lead responsible for the delineation of wetland pockets within the LeBreton Flats Redevelopment Area and the assessment of wetland function for the purpose of evaluating compensation requirements. Work was completed following both the federal and provincial wetland evaluation frameworks.





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- ***Environmental Impact Statement, Code Drive Development, Smiths Falls, Ontario (2018):*** Project manager and technical lead responsible for the completion of an Environmental Impact Statement in support of a severance application for the creation of eight residential lots within a significant woodland and adjacent to a large local wetland. Work included targeted surveys for species at risk, breeding amphibians and marsh birds, impact assessment, development of lot-specific mitigation measures and agency consultations.
- ***Tree Conservation Report, Royal LePage Team Realty, Ottawa, Ontario (2018):*** Mr. Paulusse completed an inventory of all trees located on an urban commercial lot for the purpose of identify significant retainable trees and trees in conflict with the proposed site redevelopment. Work included, site inventory, tree removal permit preparation and reporting.
- ***Environmental Compliance Monitoring, Airport Parkway Culvert Rehabilitation Project, Ottawa, Ontario (2018):*** Project manager and technical lead responsible for monitoring constructor compliance with Ministry of Natural Resources and Conservation Authority permit conditions. Work included species at risk surveys, exclusion fence inspection, monitoring of sediment and erosion control measures and weekly reporting.
- ***Tier I and II Natural Environment Report, Crain's Construction, Ottawa, Ontario (2018):*** Project manager and technical lead responsible for completing an inventory of site flora and fauna, completion of species at risk surveys, regulatory agency consultation, impact assessment and reporting.
- ***Species at Risk Assessment, National Capital Commission, Gatineau, Quebec (2018):*** Project manager responsible for the completion of avian species at risk surveys to determine the presence or absence of chimney swift and barn swallows at a contaminated site. Work was undertaken to support an Ecological Risk Assessment.
- ***Fish Habitat Assessment, Various Culvert Replacements, Ottawa, Ontario (2018):*** Project manager and technical lead responsible for the evaluation of the significance of fish habitat at three culvert crossings in rural Ottawa. Work included aquatic habitat assessments, pathway of effects evaluation, culvert design recommendations and reporting.
- ***Environment Effects Evaluation Assessment, Britannia Wall Rehabilitation Project, Ottawa, Ontario (2018):*** Project manager and technical lead responsible for completing a comprehensive tree inventory, wetland boundary delineation, significant wildlife habitat assessment and evaluation of effects associated with the rehabilitation of the Britannia Wall, a 600-metre-long community flood protection structure.
- ***Environmental Compliance Monitoring, Petrie Island Beach Head Rehabilitation Project, Ottawa, Ontario (2018):*** Project manager and technical lead responsible for monitoring constructor compliance with various Department of Fisheries and Oceans, Ministry of Natural Resources and Conservation Authority permit conditions during the Petrie Island





GEMTEC

Beach Head Rehabilitation Project within the Ottawa River. Work included species at risk surveys, exclusion fence inspection, monitoring of sediment and erosion control measures, and reporting.

- ***Provincially Significant Wetland Boundary Evaluation and Mitigation Plan, Town and County Chrysler, Smiths Falls, Ontario (2018):*** Project manager and technical lead responsible for revising the wetland boundary associated with a provincially significant wetland and development of a mitigation plan to enable the redevelopment of an adjacent commercial lot. Work included wetland vegetation delineation, regulatory technical document submissions, agency consultations, mitigation measure development and reporting.
- ***Environmental Impact Statement and Headwater Drainage Feature Assessment, Swank Construction Limited, Morrisburg, Ontario (2017-2018):*** Project manager and technical lead responsible for the completion of an Environmental Impact Statement with Headwater Drainage Feature Assessment for a 100-lot residential subdivision. Work included ecological land classification, breeding bird surveys, impact assessment and a three season assessment of hydrological conditions and their contributions to downstream fish habitat.
- ***Natural Heritage Inventory and Environmental Impact Assessment, Combermere Lodge Limited, Barry's Bay, Ontario (2017-2018):*** Project manager and technical lead responsible for the completion of a Natural Heritage Inventory and Environmental Impact Assessment completed in support of a 54-lot condominium development located in an environmentally sensitive area. Work included wetland boundary delineation, identification of significant wildlife habitat, application of the significant wildlife habitat mitigation support tool, completion of a two-year survey of site flora and fauna, impact assessment and town hall presentations.
- ***Lake Capacity Assessment, Combermere Lodge Limited, Barry's Bay, Ontario (2017-2018):*** Project manager and technical lead responsible for the predictive assessment of septic effluent impacts relating to the operation of a 54-lot condominium development on three adjacent waterbodies. Work included limnological investigations over two seasons, application of the provincial lakeshore capacity model, hydrogeological investigations, mass flux analysis, mitigation measure development and reporting.
- ***Detailed Quantitative Ecological Risk Assessment, National Capital Commission, Gatineau, Quebec (2016 to 2018):*** Project manager and technical lead for the completion of a Detailed Quantitative Ecological Risk Assessment completed for a former landfill property located adjacent to the Ottawa River. Work included aquatic habitat assessment, benthic community characterization, species at risk surveys, terrestrial wildlife surveys and analysis of site-specific aquatic toxicity data.
- ***Environmental Compliance Monitoring, Carp Snow Dump, Ottawa, Ontario (2017):*** Project manager and technical lead responsible for monitoring constructor compliance with a Ministry of Natural Resources overall benefit permit for blanding's turtle associated with the





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construction of the Carp Snow Dump. Work included weekly exclusion fence inspection and weekly reporting to the contract administrator.

- ***Fish Habitat Assessment, Little Bark Bay Properties, Barry's Bay, Ontario (2017):*** Project manager and technical lead responsible for the identification and evaluation of significance of fish habitat within and adjacent to a proposed plan of subdivision. Work included aquatic habitat assessments, pathway of effects evaluation, application of the Department of Fisheries and Oceans self-assessment process and reporting.
- ***Species at Risk and Migratory Bird Screening Assessment, City of Ottawa, New Edinburg Park Redevelopment Project, Ottawa, Ontario (2017):*** Project manager and technical lead responsible for the completion of a species at risk and migratory bird screening assessment to assist in bid tender package preparation for the re-development of New Edinburg Park. Work included a general habitat assessment, a probability of occurrence assessment, follow-up pre-construction surveys and reporting.
- ***Fish Habitat Assessment, Highway 417 Culvert Replacement Project, Ottawa, Ontario (2017):*** Project manager and technical lead responsible for the evaluation of the significance of fish habitat at two culvert crossings Ottawa. Work included aquatic habitat assessments, pathway of effects evaluation, application of the Department of Fisheries and Oceans self-assessment process and reporting.
- ***Fish Habitat and Headwater Drainage Feature Assessment, Private Landowner, Ottawa, Ontario (2017):*** Project manager and technical lead responsible for the completion of a two-season hydrological assessment of on-site water courses and assessment of fish habitat. Work completed in support of a permit required to develop an unopened road allowance.
- ***Environmental Impact Statement and Wetland Boundary Assessment, Town and Country RV, Perth, Ontario (2016-2017):*** Project manager and technical lead responsible for delineation of a provincially significant wetland and impact assessment associated with the expansion of an existing commercial enterprise. Work included ecological land classification, identification of significant wildlife habitat, species at risk surveys, wetland vegetation assessment, impact assessment and development of site-specific mitigation measures.
- ***Environmental Impact Statement, Blueberry Creek Veterinary Clinic, Perth, Ontario (2016):*** Project manager and technical lead responsible for delineation of a provincially significant wetland and impact assessment associated with the development of a commercial lot. Work included ecological land classification, identification of significant wildlife habitat, species at risk surveys, wetland vegetation assessment, impact assessment and development of site-specific mitigation measures.





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Taylor Warrington, B.Sc.

Biologist

Ms. Warrington has 4 years of experience in the environmental consulting industry, providing private industry and municipal and federal government clients with cost effective solutions to manage environmental constraints associated with land development proposals and infrastructure projects.

Education

- B.Sc., Life Sciences, McMaster University, 2015
- Graduate Certificate, Ecosystem Restoration, Niagara College, 2016

Professional Experience

2020-date	GEMTEC Consulting Engineers and Scientists Limited <i>Biologist</i>	Ottawa, Ontario
2019-2020	GEMTEC Consulting Engineers and Scientists Limited <i>Junior Biologist</i>	Ottawa, Ontario
2017-2019	Geofirma Engineering Limited <i>Junior Biologist/Scientist</i>	Ottawa, Ontario
2016	Dillon Consulting <i>Junior Field Biologist</i>	Little Current, Ontario
2014	McMaster University <i>Laboratory-Research Assistant; URBAN Project Coordinator</i>	Hamilton, Ontario

Professional Affiliations and Technical Training

- Ottawa Conservation Partners Workshop: How to Prepare and Environmental Impact Statement. 2020.
- Class 2 Backpack Electrofishing Crew Leader Certification Course. June, 2019.
- Ontario Reptile and Amphibian Survey Course. Blazing Star Environmental, Natural Resource Solutions Inc., and Ontario Nature. 2018
- Ontario Benthic Biomonitoring Network Certification Course. Ministry of Environment, Conservation and Parks. 2016

Project Highlights

- **Tier I and II Natural Environment Report, Crain's Construction, Lanark County, Ontario.** Biologist responsible for completing on-going surveys in support of a proposed





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quarry application. Surveys include winter mammal and ungulate use surveys, bat maternity roost surveys, ecological land classification, breeding bird surveys, turtle basking surveys, amphibian breeding surveys and targeted species at risk surveys for American ginseng and eastern whip-poor-will.

- ***Botanical Surveys, Ontario Power Generation Incorporated, Hydroelectric Generating Stations throughout Central and Eastern Ontario.*** Biologist responsible for completing on-going botanical surveys at 12 hydroelectric generating stations to update existing records. Botanical surveys will include a combination of field survey protocols including random meander, transects and quadrant sampling methods to identify vascular plant species present at each site.
- ***Foresters Falls Dam Removal, Renfrew County, Ontario.*** Biologist responsible for conducting a species at risk screening assessment to identify the presence of species at risk within the project area and evaluate the potential impacts on SAR and their habitat if the dam is removed. On-going surveys including targeted turtle basking surveys, and terrestrial wildlife and vegetation surveys.
- ***Environmental Impact Statement, Subdivision Development, Lanark County, Ontario.*** Biologist responsible for the completion of an Environmental Impact Statement for a proposed 25-lot subdivision application. Work included ecological land classification surveys, targeted surveys for species at risk, breeding amphibians and birds, basking turtle surveys, bat maternity roost surveys, headwater drainage feature assessment, butternut health assessment, impact assessment, development of lot-specific mitigation measures and agency consultation.
- ***Wetland Evaluation and Significant Wildlife Habitat Surveys, Ontario Power Generation Incorporated, Bath, Ontario (2019).*** Biologist responsible for conducting a wetland evaluation and significant wildlife habitat surveys at the Lennox Provincially Significant Wetland. Work included conducting turtle basking surveys, reptile hibernacula surveys, targeting species at risk surveys for Least Bittern and a wetland evaluation following the MNRF's Ontario Wetland Evaluation System.
- ***Environmental Impact Statement, Proposed Subdivision Development, Hawksbury, Ontario (2019).*** Biologist responsible for the completion of an Environmental Impact Statement in support of a proposed 272-lot subdivision application. Work included ecological land classification surveys, targeted surveys for breeding birds, bat maternity roost surveys, headwater drainage feature assessment, impact assessment and development of lot-specific mitigation measures.
- ***Surface Water Impact Assessment, Green Lake Development, Barry's Bay, Ontario (2019):*** Biologist responsible for the completion of a surface water impact assessment supporting two residential lot severances. Work included a review of existing data on Green





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Lake, application of the provincial lakeshore capacity model, mitigation measure development and reporting.

- ***Biological Inventory, Ontario Power Generation Incorporated, Bath, Ontario (2018):*** Field Biologist responsible for conducting a three-season inventory of avian and amphibian species at the Lennox Provincially Significant Wetland. Work included conducting presence and abundance surveys following the Canadian Wildlife Service marsh monitoring protocol and Bird Studies Canada breeding bird surveys, statistical analysis of species data trends and reporting.
- ***Environmental Compliance Monitoring, Petrie Island Causeway Rehabilitation Project, Ottawa, Ontario (2018):*** Field biologist responsible for monitoring constructor compliance with various Department of Fisheries and Oceans, Ministry of Natural Resources and Conservation Authority permit conditions during the Petrie Island Causeway Rehabilitation Project within the Ottawa River. Work included species at risk surveys, fish salvage, exclusion fence inspection, monitoring of sediment and erosion control measures, turbidity monitoring, regulatory agency consultation and weekly reporting.
- ***Environmental Impact Statement, Code Drive Development, Smiths Falls, Ontario (2018):*** Field Biologist responsible for the completion of an Environmental Impact Statement in support of a severance application for the creation of eight residential lots within a significant woodland and adjacent to a large local wetland. Work included targeted surveys for species at risk, breeding amphibians and marsh birds, impact assessment, development of lot-specific mitigation measures and agency consultations.
- ***Tier I and II Natural Environment Report, Crain's Construction, Ottawa, Ontario (2018):*** Field biologist responsible for completing an inventory of site flora and fauna, completion of species at risk surveys, bat exit surveys, regulatory agency consultation, impact assessment and reporting.
- ***Species at Risk Assessment, National Capital Commission, Gatineau, Quebec (2018):*** Field biologist responsible for the completion of avian species at risk surveys to determine the presence or absence of chimney swift and barn swallows at a contaminated site. Work was undertaken to support an Ecological Risk Assessment.
- ***Environment Effects Evaluation Assessment, Britannia Wall Rehabilitation Project, Ottawa, Ontario (2018):*** Field Biologist responsible for completing a comprehensive tree inventory, wetland boundary delineation, significant wildlife habitat assessment and evaluation of effects associated with the rehabilitation of the Britannia Wall, a 600-metre-long community flood protection structure.
- ***Environmental Compliance Monitoring, Petrie Island Beach Head Rehabilitation Project, Ottawa, Ontario (2018):*** Field biologist responsible for monitoring constructor





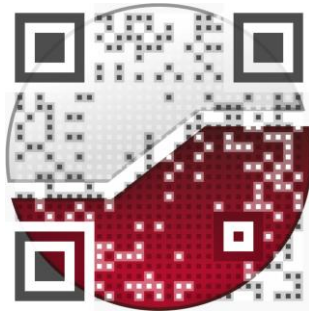
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compliance with various Department of Fisheries and Oceans, Ministry of Natural Resources and Conservation Authority permit conditions during the Petrie Island Beach Head Rehabilitation Project within the Ottawa River. Work included species at risk surveys, exclusion fence inspection, monitoring of sediment and erosion control measures, and reporting.

- ***Natural Heritage Inventory and Environmental Impact Assessment, Combermere Lodge Limited, Barry's Bay, Ontario (2017-2018):*** Field biologist responsible for the completion of a Natural Heritage Inventory and Environmental Impact Assessment completed in support of a 54-lot condominium development located in an environmentally sensitive area. Work included wetland boundary delineation, identification of significant wildlife habitat, application of the significant wildlife habitat mitigation support tool, completion of a two-year survey of site flora and fauna, and impact assessments.
- ***Species at Risk and Migratory Bird Screening Assessment, City of Ottawa, New Edinburg Park Redevelopment Project, Ottawa, Ontario (2017):*** Field biologist responsible for the completion of a species at risk and migratory bird screening assessment to assist in bid tender package preparation for the re-development of New Edinburg Park. Work included a general habitat assessment, a probability of occurrence assessment, follow-up pre-construction surveys and reporting.
- ***Post-Construction Windfarm Monitoring for Wildlife Impacts, Little Current, Ontario (2016):*** Field biologist responsible for the completion of post-construction monitoring of a windfarm for avian and mammalian fatalities. Work included fatality surveys, vegetation surveys, and wildlife scavenger surveys.
- ***Long-term Changes in Ecosystem Health, Frenchman's Bay, Pickering, Ontario (2015):*** Field biologist responsible for evaluating the long-term changes in ecosystem health of Frenchman's Bay. Work included: data review, analysis of data trends, watershed and land-use mapping, digitization of wetland vegetation cover and analysis of changes over time, reporting and symposium presentation.



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