

**Tree Inventory and Preservation Plan Report
51, 53, 55, & 75 Bradford Street and 20 Checkley Street
City of Barrie, Ontario**

prepared for

**Barrie Lakeshore Developments
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prepared by



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KUNTZ FORESTRY CONSULTING Inc. Project P2234

Introduction

Kuntz Forestry Consulting Inc. was retained by Barrie Lakeshore Developments to complete a Tree Inventory and Preservation Plan Report in support of a development application for the property situated at 51, 53, 55, and 75 Bradford Street and 20 Checkley Street in Barrie, Ontario. The property is located at the southeast corner of Bradford Street and Simcoe Street, west of Lakeshore Drive in Barrie.

The work plan for this study included the following:

- Prepare field mapping;
- Prepare inventory of all tree resources 10 cm in diameter and larger occurring on subject property, within the road allowance, and on neighbouring property adjacent to the subject property;
- Evaluate potential tree saving opportunities based on proposed site plans; and,
- Document the findings in a Tree Inventory and Preservation Plan report.

Methodology

Field assessments were conducted on 12 November 2019. Trees were located using the topographic survey, aerial imagery, and estimations made in-field. Trees perceived to be located on the property during field investigations were tagged using numbers 222-246. Trees perceived to be located on neighbouring properties were not tagged and were identified as Trees A-N. Four polygons (groups of trees) were identified as P1-P4. All tree resources included in the inventory were visually assessed for condition utilizing the following parameters:

Tree # - numbers assigned to trees that corresponds to Figure 1.

Species - common and botanical names provided in the inventory table (Table 1).

DBH - diameter (centimeters) at breast height, measured at 1.4 m above the ground.

Condition - condition of tree considering trunk integrity, crown structure and crown vigor. Condition ratings include poor (P), fair (F) and good (G).

Dripline – size of crown radius, as measured from the stem to the outermost reaches of the branches

Crown Dieback – the percentage of dead branches located in the crown.

Comments - additional relevant detail.

Existing Site Conditions

The subject site is comprised of vacant lands, remnant buildings, and paved areas formerly containing commercial buildings. A creek and wetland features exist along the southern edge of the property.

The tree inventory documented a total of 39 trees and four tree polygons (group of similar trees) located on and within six metres of the subject property. Trees were identified with the numbers 222-246, A-N, and P1-P4. Refer to Figure 1 for tree locations and Table 1 for the complete tree inventory.

Tree resources included in the inventory are comprised of Siberian Elm (*Ulmus pumila*), Manitoba Maple (*Acer negundo*), Willow species (*Salix sp.*), Eastern Cottonwood (*Populus deltoides*), Black Locust (*Robinia pseudoacacia*), Silver Poplar (*Populus alba*),

White Elm (*Ulmus americana*), Blue Spruce (*Picea pungens*), Eastern Red Cedar (*Juniperus virginiana*), Sugar Maple (*Acer saccharum*), and Red Maple (*Acer rubrum*).

Proposed Development

The construction of three residential and retail towers and one hotel is proposed for the subject property. Access will be provided from Bradford Street to the west, Checkley Street to the north, and Lakeshore Drive to the east. A network of private roads and pathways is proposed throughout the site. Refer to Figure 1 for the existing conditions and proposed site plan.

Discussion

The following sections provide a discussion and analysis of development impacts, tree removals and tree preservation relative to both concept plans.

Development Impacts/Tree Removals

The removal of Trees 222-246, A, E, F, and P1-P4 will be required to accommodate the proposed development.

Trees 231, 233, P1, E, and F are located partially or fully on the neighbouring properties. Permission from the property owners is required prior to their removal – it is our understanding that permission has already been obtained for the removal of Trees 233 and P1 and that trees along this property boundary (Trees 233, P1, and 234-241) have already been removed through coordination with the City and the condominium at 2 Toronto Street.

Trees 242-246 are located within the wetland buffer and will require removal to accommodate the proposed grading through this area. Tree P3 is located within the road right-of-way.

Refer to Figure 1 for the location of tree removals.

Tree Preservation

The preservation of Trees B-D and G-N will be possible with appropriate tree protection measures as indicated on Figure 1. Tree protection measures will have to be implemented prior to the commencement of construction to ensure that trees identified for preservation are not impacted by the proposed development. Trees will be hoarded at their dripline. All grading and other disturbance should be kept outside of the TPZ's.

Where tree protection hoarding falls outside of and/or coincides with any prescribed ESC or construction hoarding, designated tree protection fencing may not be required.

Any crown pruning required should occur by a certified Arborist according to Good Arboricultural Standards.

Refer to Figure 1 for the location of prescribed tree protection fence locations, the tree protection fence detail and further tree preservation plan notes.

Summary and Recommendations

Kuntz Forestry Consulting Inc. was retained by Barrie Lakeshore Developments to complete a Tree Inventory and Preservation Plan Report in support of a development application for a property situated at 51, 53, 55, and 75 Bradford Street and 20 Checkley Street in Barrie, Ontario. A tree inventory was conducted and reviewed in the context of the proposed site plan.

The findings of the study indicate a total 39 trees and four tree polygons situated on and adjacent to the subject property. The removal of 32 trees and tree polygons will be required to accommodate the proposed development. All other trees can be preserved with appropriate tree protection measures.

The following recommendations are suggested to minimize impacts to trees identified for preservation. Refer to Figures 1 for the location of tree preservation fence, further tree protection plan notes and the tree preservation fence detail.

- Tree protection barriers and fencing should be erected at locations as prescribed on Figure 1. All tree protection measures should follow the guidelines as set out in the tree preservation plan notes and the tree preservation fencing detail on Figure 1.
- Tree protection measures are to be implemented prior to the demolition phase to ensure the trees identified for preservation are not impacted by the development.
- Branches and roots that extend beyond prescribed tree protection zones that require pruning must be pruned by a qualified Arborist or other tree professional as approved by the City of Barrie. All pruning of tree roots and branches must be in accordance with good arboricultural standards.
- Site visits, pre, during and post construction is recommended by either a certified consulting arborist (I.S.A.) or registered professional forester (R.P.F.) to ensure proper utilization of tree protection barriers. Trees should also be inspected for damage incurred during construction to ensure appropriate pruning or other measures are implemented.

Respectfully Submitted,

Kuntz Forestry Consulting Inc.

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Limitations of Assessment

Only the tree(s) identified in this report were included in the inventory. The assessment of the trees presented in this report has been made using accepted arboricultural techniques. These may include a visual examination taken from the ground of all the above-ground parts of the tree for structural defects, scars, external indications of decay such as fungal fruiting bodies, evidence of attack by insects, discoloured foliage, the condition of any visible root structures, the degree of lean (if any), the general condition of the trees and the identification of potentially hazardous trees or recommendations for removal (if applicable). Where trees could not be directly accessed (ie. due to obstructions, and/or on neighbouring properties), trees were assessed as accurately as possible from nearby vantage points.

Locations of trees provided in the report are determined as accurately as possible based on the best information available. If official survey information is not provided, tree location in the report may not be exact. In this case, if trees occur on or near property boundaries, an official site survey may be required to determine ownership utilizing specialized survey protocol to gain precise location.

Furthermore, recommendations made in this report are based on the site plans that have been provided at the time of reporting. These recommendations may no longer be applicable should changes be made to the site plan and/or grading, servicing, or landscaping plans following report submission.

Notwithstanding the recommendations and conclusions made in this report, it must be recognized that trees are living organisms, and their health and vigor constantly change over time. They are not immune to changes in site conditions or seasonal variations in the weather conditions. Any tree will fail if the forces applied to the tree exceed the strength of the tree or its parts.

Although every effort has been made to ensure that this assessment is reasonably accurate, the trees should be re-assessed periodically. The assessment presented in this report is valid at the time of inspection.

Table 1. Tree Inventory

Location: Bradford Street and Simcoe Road, Barrie

Date: 12 November 2019

Surveyors: CB

Tree #	Common Name	Scientific Name	DBH	TI	CS	CV	CDB	DL	mTPZ	Comments	Action
222	Siberian Elm	<i>Ulmus pumila</i>	23.5, 20.5, 20, 13	F	F	F		4.5	1.5	Union at 0.1m, included post (M), broken branches (L), pruning wounds (L)	Remove
223	Manitoba Maple	<i>Acer negundo</i>	9, 6, 10, 5	F-G	F	F-G		2.5	1.0	Union at base, epicormic branching (L)	Remove
224	Willow species	<i>Salix spp.</i>	28, 31, ~14, 32, 29, 32, 19	F	F	F		9	2.0	Union at 0.2m, epicormic branching (H), poor form (H), deadwood (L)	Remove
225	Eastern Cottonwood	<i>Populus deltoides</i>	26	G	G	G		4.5	2.0		Remove
226	Eastern Cottonwood	<i>Populus deltoides</i>	19	F-G	F-G	G		3	1.5	Lean (M) north	Remove
227	Eastern Cottonwood	<i>Populus deltoides</i>	17	F-G	F-G	F-G		3.5	1.5	Lean (L) north, asymmetrical crown (L)	Remove
228	Manitoba Maple	<i>Acer negundo</i>	8-32	F	F	F		6	2.0	Clump of 11 stems	Remove
229	Black Locust	<i>Robinia pseudoacacia</i>	15, 7, 18, 8.5	F-G	F-G	F-G		5	1.5	Union at base	Remove
230	Siberian Elm	<i>Ulmus pumila</i>	10.5	G	G	G		2	1.5		Remove
231	Siberian Elm	<i>Ulmus pumila</i>	14.5	F-G	G	G		3	1.5	Included fence (L)	Remove
232	Manitoba Maple	<i>Acer negundo</i>	~10, 10, 9, 9	F	F	F		2.5	1.0	Union at 1m, bowed (L), poor form (L)	Remove
233	Siberian Elm	<i>Ulmus pumila</i>	13.5	F-G	F-G	F-G		3	1.5	Union at 1.6m, asymmetrical crown (L)	Remove
234	Manitoba Maple	<i>Acer negundo</i>	9, 11, 12, 9, 8	F	F-G	F		4	1.5	Union at base, asymmetrical crown (L)	Remove
235	Silver Poplar	<i>Populus alba</i>	20	F-G	F-G	F-G		3	1.5	Bowed (L), asymmetrical crown (L)	Remove
236	Manitoba Maple	<i>Acer negundo</i>	14, 15	F	F-G	F-G		5	1.5	Union at base, bowed crown (M) south	Remove

Tree Inventory and Preservation Plan, 51, 53, 55, & 75 Bradford Street and 20 Checkley Street, Barrie, ON

237	Silver Poplar	<i>Populus alba</i>	26	F	F	F-G		5	2.0	Pruning wounds (L), bowed (M), crook (H)	Remove
238	Silver Poplar	<i>Populus alba</i>	28.5, 23, 20	F	F-G	F-G		6.5	2.0	V-union at 0.2m, asymmetrical crown (M), pruning wounds (L)	Remove
239	Siberian Elm	<i>Ulmus pumila</i>	11.5	F-G	F-G	F-G		3.5	1.5	Asymmetrical crown (M)	Remove
240	Silver Poplar	<i>Populus alba</i>	15.5	F	P-F	F		4	1.5	Lost leader, asymmetrical crown (M), sweep (M), poor form (H)	Remove
241	Silver Poplar	<i>Populus alba</i>	31	F-G	F-G	G		6	2.0	Sweep (L), lean (L), asymmetrical crown (L)	Remove
242	Black Locust	<i>Robinia pseudoacacia</i>	13, 17	F	F-G	F-G		3	1.5	Previously tagged 1268, pruning wounds (L), poor form (L), broken branches (L)	Remove
243	Black Locust	<i>Robinia pseudoacacia</i>	14, 16	F-G	F-G	F-G		3	1.5	Union at 0.2m, sweep (L), stem wound (L)	Remove
244	Siberian Elm	<i>Ulmus pumila</i>	11.5, 12.5	F-G	G	G		2	1.5	V-union at 0.1m, previously tagged 1366 and 1367	Remove
245	White Elm	<i>Ulmus americana</i>	~24, 29	F	F-G	F		5	2.0	V-union at 1m, beaver damage (H), previously tagged 1365	Remove
246	Willow species	<i>Salix spp.</i>	~73, 75, 75	F	F-G	F		9.5	3.0	Previously tagged 1362, union at base, wrapped in fence	Remove
A	Manitoba Maple	<i>Acer negundo</i>	~14	F-G	F-G	F-G		3.5	1.5	Bowed (L), asymmetrical crown (L)	Remove
B	Manitoba Maple	<i>Acer negundo</i>	~36	F	F-G	F		4.5	2.0	1 pruned stem at base, bowed (L), union in crown with included bark (L)	Retain
C	Blue Spruce	<i>Picea pungens</i>	~18	G	G	G		2	1.5		Retain
D	Blue Spruce	<i>Picea pungens</i>	~17	G	G	G		2	1.5		Retain
E	Eastern Red Cedar (Juniper)	<i>Juniperus virginiana</i>	~12	G	G	G		1.5	1.5		Remove
F	Sugar Maple	<i>Acer saccharum</i>	~22	F-G	G	G		3	1.5	V-union at 2.5m with rot, poor form (L)	Remove
G	Sugar Maple	<i>Acer saccharum</i>	~12	P-F	F	P	50	2.5	1.5	Stem wounds (H), peeling bark	Retain
H	Sugar Maple	<i>Acer saccharum</i>	~23	G	G	G		3.5	1.5		Retain
I	Red Maple	<i>Acer rubrum</i>	9	G	F-G	F		1	1.0	Pruning wounds (L), epicormic branching (L)	Retain
J	Red Maple	<i>Acer rubrum</i>	8	G	F-G	F		1	1.0	Epicormic branching (L)	Retain
K	Red Maple	<i>Acer rubrum</i>	8.5	G	F-G	F-G		1.5	1.0	Epicormic branching (L)	Retain
L	Red Maple	<i>Acer rubrum</i>	9.5	G	F	F-G		1	1.0	Asymmetrical crown (L), epicormic branching (L)	Retain
M	Red Maple	<i>Acer rubrum</i>	8.5	G	F-G	F		1.5	1.0	Asymmetrical crown (L), epicormic branching (L), pruning wounds (L)	Retain
N	Siberian Elm	<i>Ulmus pumila</i>	~14, 13	F	F-G	F-G		3	1.5	V-union at 0.1m	Retain

Tree Inventory and Preservation Plan, 51, 53, 55, & 75 Bradford Street and 20 Checkley Street, Barrie, ON

P1	Manitoba Maple	<i>Acer negundo</i>	~8-11	F	F	F		2-5	1.5	7 trees >10cm, 3 <10cm, multi-stemmed trees	Remove
	Siberian Elm	<i>Ulmus pumila</i>	~12	G	G	G		1.5	1.5		
P2	Black Locust	<i>Robinia pseudoacacia</i>	~3-12	G	G	G		1-3	1.5	7 trees >10cm, ~35 trees <10cm, multi-stemmed	Remove
P3	Siberian Elm	<i>Ulmus pumila</i>	~3-10	G	G	G		1	1.0	7 trees	Remove
P4	Manitoba Maple	<i>Acer negundo</i>	~9-11	F	F	F		2-4	1.5	5 trees, 3 >10cm, multi-stemmed	Remove
	Poplar species	<i>Populus ssp.</i>	~7-9	G	G	G		0.5	1.0	27 trees	
	Siberian Elm	<i>Ulmus pumila</i>	~11	G	G	G		2	1.5	1 tree	

Codes		
DBH	Diameter at Breast Height	(cm)
TI	Trunk Integrity	(G, F, P)
CS	Crown Structure	(G, F, P)
CV	Crown Vigor	(G, F, P)
CDB	Crown Die Back	(%)
DL	Dripline	(metres)
~ = estimate; (VL) = very light; (L) = light; (M) = moderate; (H) = heavy		