

**Tree Inventory and Preservation Plan and Report
55 Kerr Street
Cambridge, Ontario**

prepared for

**50 Shade Street Investments Inc.
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prepared by



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KUNTZ FORESTRY CONSULTING INC Project P1988

1.0 Introduction

Kuntz Forestry Consulting Inc. (KFCI) was retained by 50 Shade Street Investments Inc. to complete a Tree Inventory and Preservation Plan and Report in support of a development application for two residential multi-unit apartments with associated above and below ground parking and amenity areas. The subject property is located southwest of Dundas Street North and Beverly Street in Cambridge, Ontario.

The work plan for this study included the following:

- Print aerial imagery, topographic survey and site plan for use in field;
- Prepare inventory of tree resources for all trees over 10cm DBH on and within six meters of the subject properties and trees of all sizes within the road allowance;
- Evaluate tree saving opportunities based on proposed site plan; and
- Document the findings in a Tree Inventory and Preservation Plan and Report.

2.0 Existing Site Conditions and Proposed Development

The subject property is composed of an open field. Tree resources exist as landscape trees and naturally regenerated trees. The proposed development includes two multi-unit, high-rise apartments with access from Kerr Street and Shade Street, above and below ground parking, and amenity areas. Refer to Figure 1 for the existing conditions and the proposed site plan.

3.0 Tree Inventory and Preservation Plan and Report

3.1 Policy Framework

The subject properties are subject to the provisions of the City of Cambridge's City Trees By-law #71-06. The purpose of this by-law is to regulate the planting, propagation, preservation and removal of trees on lands owned by the municipality.

In the absence of tree preservation guidelines in the City of Cambridge, tree preservation standards utilized by the City of Toronto were applied during the tree preservation planning process. These tree preservation standards indicate a minimum distance at which the root zone must be protected. This minimum distance is based on the diameter of the tree and is referred to as the minimum Tree Protection Zone (mTPZ) distance.

The mTPZ distances allow for maximum development potential while providing sufficient space to ensure the tree is not subject to any long-term adverse effects due to the impacts of development. Refer to Table 1 for these distances.

Where encroachment is required within an mTPZ, there is the potential to impact tree roots and mitigation measures may be required to ensure there are no adverse long-term impacts to tree.

Table 1. Minimum tree protection zone distances.

DBH (cm)	Minimum Tree Protection Distance (m)
	Radius*
< 10	1.2
10 – 29	1.8
30 – 40	2.4
41 – 50	3.0
51 – 60	3.6
61 – 70	4.2
71 – 80	4.8
81 – 90	5.4
91 – 100	6.0
>100	6cm protection for each 1 cm diameter

* distance in meters as measured from the base of the tree.

3.2 Methodology

Tree resources were assessed utilizing the following parameters:

Tree # - trees were identified with numbers that correspond to Figure 1.

Species - common and botanical names provided in the inventory table.

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).

Comments - additional relevant detail.

Field assessments were conducted on 26 October 2018 to complete the tree inventory. Trees were located by topographic survey or located approximately by aerial photo interpretation and estimations made in the field. Tree polygons are identified for the prefix 'P'. Refer to Table 2 for the detailed tree inventory table.

The results of the evaluation are provided below.

3.3 Tree Resources

The inventory documented 67 individual trees and one tree polygon on and within 6m of the subject property. Refer to Table 2 for the full tree inventory and Figure 1 for the location of the trees reported in the tree inventory.

Tree resources included in the inventory are comprised of Trembling Aspen (*Populus tremuloides*), Russian Olive (*Elaeagnus angustifolia*), Manitoba Maple (*Acer negundo*), Siberian Elm (*Ulmus pumila*), Norway Maple (*Acer platanoides*), Black Walnut (*Juglans nigra*), Pear

Species (*Pyrus spp.*), Eastern Cottonwood (*Populus deltoides*), White Mulberry (*Morus alba*), Black Locust (*Robinia pseudoacacia*), Green Ash (*Fraxinus pennsylvanica*), Basswood (*Tilia americana*), and Sugar Maple (*Acer saccharum*).

3.4 Tree Removals and Preservation Discussion

The following sections provide a discussion and analysis of development impacts, tree removal requirements, and tree preservation relative to the proposed development and existing conditions.

3.4.1 Development Impacts/Tree Removals

The proposed development will preclude the retention of 65 trees and one tree polygon. Removals include Trees 45-100, 279-287, and P1. Trees 48, 50, 51, and 53-57 are located on or shared with neighbouring property owners and will require permission from the neighbouring property owner prior to removal. Trees 97-289 and P1 are located on or shared with the City of Cambridge road right-of-way and will require permission from the City of Cambridge prior to removal. Refer to Figure 1 for the location of the proposed tree removals.

3.4.2 Tree Preservation

Preservation of 2 trees, including Trees 288 and 289 may be possible with the use of appropriate tree protection measures as indicated on Figure 1. Tree protection measures will have to be implemented prior to construction to ensure tree resources designated for retention are not impacted by the development. Tree 289 is located away from the proposed development and will not require dedicated tree protection fencing, assuming the proposed works remain within the subject property boundaries and/or sediment and erosion control fencing is present.

Refer to Figure 1 for the location of required tree preservation fencing, tree preservation notes and the fence detail.

4.0 Summary

Kuntz Forestry Consulting Inc. (KFCI) was retained by 50 Shade Street Investments Inc. to complete a Tree Inventory and Preservation Plan and Report in support of a development application for two multi-storey, multi-unit apartment buildings with associated parking and amenity areas. The subject property is located southwest of Dundas Street North and Beverly Street in Cambridge, Ontario.

The findings of the tree inventory indicate a total of 67 individual trees and one tree polygon on and within 6m of the subject property. The removal of 65 trees and one tree polygon will be required to accommodate the proposed development including earth works and construction. The remaining two trees can be saved provided appropriate tree protection measures are installed prior to development.

The following recommendations are suggested to minimize impacts to trees identified for preservation. Refer to Figure 1 for additional tree preservation plan notes and the tree protection fence detail.

- Tree protection barriers and fencing should be erected at locations prescribed on Figure 1.
- Tree protection measures will have to be implemented prior to construction phase to ensure the trees identified for preservation are not impacted by the development.
- Branches and roots that extend past prescribed tree protection zones that require pruning must be pruned by a qualified Arborist or other tree professional. 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 mitigation measures are implemented.

Respectfully Submitted,

Kuntz Forestry Consulting Inc.

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Table 2. Detailed Tree Inventory

Location: 55 Kerr Street, Cambridge

Date: 26 October 2018 Surveyors: KH

Tag #	Common Name	Scientific Name	DBH	TI	CS	CV	CDB	DL	Comments	Owner	Action
45	Trembling Aspen	<i>Populus tremuloides</i>	12, 10	F	G	F/G		2	Co-dominance at 0.2m with included bark (M), canker (L)	Client	Remove
46	Russian Olive	<i>Elaeagnus angustifolia</i>	~15, 15, 10, 10	P/F	F	F		4	Union at base and 1.2m, sweep (M), lean (H), epicormic branches (H)	Client	Remove
47	Trembling Aspen	<i>Populus tremuloides</i>	~25	G	G	F/G		3		Client	Remove
48	Manitoba Maple	<i>Acer negundo</i>	15.5, 12.5	F	F	F	15	5	Union at base, crook (M)	Neighbouring	Remove
49	Siberian Elm	<i>Ulmus pumila</i>	14	P/F	F	F		4	Lean (L), lost leader at 4m, epicormic branches (H)	Client	Remove
50	Siberian Elm	<i>Ulmus pumila</i>	11.5, 7	F/G	G	F/G		3	Union at 0.6m	Neighbouring	Remove
51	Siberian Elm	<i>Ulmus pumila</i>	~16, 14, 13, 12	F/G	G	F/G		4	Union at base	Neighbouring	Remove
52	Siberian Elm	<i>Ulmus pumila</i>	15	F/G	G	F/G		4	Crook (L), union at 1.4m, asymmetrical crown (L), bow (L)	Client	Remove
53	Siberian Elm	<i>Ulmus pumila</i>	18	F/G	G	F/G		4	Union at 2.5m	Shared with Neighbouring	Remove
54	Manitoba Maple	<i>Acer negundo</i>	13, 8	F	F/G	F		3	Union at 0.6m, stem wound (M), crook (M)	Neighbouring	Remove
55	Norway Maple	<i>Acer platanoides</i>	10	F/G	G	F/G		2	Co-dominance at 1.6m, tar spot (L)	Neighbouring	Remove
56	Manitoba Maple	<i>Acer negundo</i>	14	F/G	G	F/G		3	Crook (L)	Shared with Neighbouring	Remove
57	Manitoba Maple	<i>Acer negundo</i>	23, 22, 12	F	F/G	F		5	Union at base, crook (M), pruning wounds (M)	Shared with Neighbouring	Remove
58	Manitoba Maple	<i>Acer negundo</i>	~24, 16, 16	P	P	P	60	4	Union at base (5 stems) but 2 stems dead, growing beside concrete retaining wall, included fence (H), dead leader	Client	Remove
59	Manitoba Maple	<i>Acer negundo</i>	18, 12, 10, 10	F	F	F		4	Lean (M), sweep (M), pruning wounds (M), union at base, included fence (L)	Client	Remove
60	Manitoba Maple	<i>Acer negundo</i>	21, 19	P/F	P/F	P/F	20	5	Union at base, stem wound (M), fruiting bodies (L), included fence (M)	Client	Remove
61	Siberian Elm	<i>Ulmus pumila</i>	12	F/G	G	F/G		3	Bow (L)	Client	Remove
62	Manitoba Maple	<i>Acer negundo</i>	13	G	G	F/G		3	Lean (L)	Client	Remove
63	Manitoba Maple	<i>Acer negundo</i>	13	F	F	F		3	Union at 0.3m but smaller stem dead, crook (M)	Client	Remove
64	Manitoba Maple	<i>Acer negundo</i>	10	F/G	G	F/G		3	Bow (L)	Client	Remove
65	Manitoba Maple	<i>Acer negundo</i>	10	F	P	P	75	2	Union at base (4 stems) but 3 stems dead, dead leader	Client	Remove
66	Norway Maple	<i>Acer platanoides</i>	22	P	F/G	F/G	10	3	Included fence (H), tar spot (L), crook (L)	Client	Remove
67	Norway Maple	<i>Acer platanoides</i>	21, 20, 17	F	F/G	F	15	4	Union at base, sweep (L), tar spot (L), wilt (L)	Client	Remove
68	Manitoba Maple	<i>Acer negundo</i>	20.5, 14, 12	P/F	F	F	20	6	Union at base and 0.5m, included fence (H), bow 9H) to northwest	Client	Remove
69	Manitoba Maple	<i>Acer negundo</i>	~30, 22, 15, 12, 11	P	F	F	10	6	Union at base, bow (M) to northwest, included fence (M), stem wound (H) at base with rot	Client	Remove
70	Manitoba Maple	<i>Acer negundo</i>	12	F	F/G	F		6	Lean (M) to northwest	Client	Remove
71	Norway Maple	<i>Acer platanoides</i>	22	P/F	F	F	15	4	Included fence (M)	Client	Remove

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72	Black Walnut	<i>Juglans nigra</i>	26	P/F	F/G	F/G		5	Included fence (M), co-dominance at 1.8m, bow (M) to northwest, seam (L)	Client	Remove
73	Manitoba Maple	<i>Acer negundo</i>	14, 12	P/F	F	F	15	4	Crook (H), bow (L), co-dominance at 1.2m	Client	Remove
74	Manitoba Maple	<i>Acer negundo</i>	10	F	P/F	P/F	40	4	Union at 0.3m smaller stem dead, lean (M) to northwest, epicormic branches (M)	Client	Remove
75	Manitoba Maple	<i>Acer negundo</i>	12, 8	P/F	F	F	15	6	Union at base, lean (H) to northwest, sweep (M)	Client	Remove
76	Black Walnut	<i>Juglans nigra</i>	22	F	G	F/G		4	Included fence (M)	Client	Remove
77	Manitoba Maple	<i>Acer negundo</i>	10, 9	F	F	F		6	Union at base, bow (M) to northwest	Client	Remove
78	Pear Species	<i>Pyrus spp.</i>	12	F/G	F	F	15	3	Included fence (H), dead branches (M), union at 1.5m but smaller stem dead	Client	Remove
79	Manitoba Maple	<i>Acer negundo</i>	19.5, 19, 14, 10	P/F	F	F	15	6	Union at base, lean (M), included fence (M)	Client	Remove
80	Manitoba Maple	<i>Acer negundo</i>	18	P/F	F/G	F		4	Included fence (M), sweep (L)	Client	Remove
81	Manitoba Maple	<i>Acer negundo</i>	13, 9	P/F	F	F	10	5	Union at base, included fence (M), lean (M) to northwest	Client	Remove
82	Eastern Cottonwood	<i>Populus deltoides</i>	14.5, 13	F/G	G	F/G		3	Co-dominance at base	Client	Remove
83	Pear Species	<i>Pyrus spp.</i>	5-15 (avg. 11)	F/G	G	F/G		4	Union at base (~15 stems)	Client	Remove
84	Black Walnut	<i>Juglans nigra</i>	11, 6	F/G	G	F/G		3	Union at base, larger stem growing on the other side of fence, included fence (L)	Client	Remove
85	Manitoba Maple	<i>Acer negundo</i>	10, 9, 6	F	F	F		4	Lean (M), sweep (L), coppice growth from stump	Client	Remove
86	Black Walnut	<i>Juglans nigra</i>	11.5	G	G	G		3		Client	Remove
87	Manitoba Maple	<i>Acer negundo</i>	14	F	F/G	F/G		5	Lean (M)	Client	Remove
88	White Mulberry	<i>Morus alba</i>	3-12 (avg. 7)	F	F	F		4	Coppice growth from stump (~15 stems)	Client	Remove
89	Black Walnut	<i>Juglans nigra</i>	11	G	G	G		3	Crook (L)	Client	Remove
90	Black Locust	<i>Robinia pseudoacacia</i>	~20, 18	F/G	G	F/G		4	Co-dominance at 0.2m with included bark (M)	Client	Remove
91	Black Walnut	<i>Juglans nigra</i>	11	F/G	G	F/G		2	Crook (L)	Client	Remove
92	Pear Species	<i>Pyrus spp.</i>	5-10 (avg. 8)	F/G	G	F/G		3	Union at base (5 stems)	Client	Remove
93	Pear Species	<i>Pyrus spp.</i>	10.5, 10	F/G	G	F/G		3	Co-dominance at 0.2m	Client	Remove
94	Black Walnut	<i>Juglans nigra</i>	13.5	G	G	G		3		Client	Remove
95	Norway Maple	<i>Acer platanoides</i>	15	G	G	F/G		3	Crook (L), tar spot (L)	Client	Remove
96	Pear Species	<i>Pyrus spp.</i>	~12, 12	F	F	F/G		3	Union at 1.2m, bow (M) to northwest	Client	Remove
97	Manitoba Maple	<i>Acer negundo</i>	15, 8, 6	F	F	F	15	3	Union at base and 0.2m, crook (L)	Shared with City of Cambridge	Remove
98	Green Ash	<i>Fraxinus pennsylvanica</i>	9	F/G	G	F/G		2	Co-dominance at 1.6m	City of Cambridge	Remove
99	Pear Species	<i>Pyrus spp.</i>	9, 9, 6, 6	F	F/G	F/G		4	Union at base, bow (L)	City of Cambridge	Remove
100	Black Walnut	<i>Juglans nigra</i>	12	G	G	G		3	Crook (L)	Shared with City of Cambridge	Remove
279	Black Locust	<i>Robinia pseudoacacia</i>	12	F	G	F/G		3	Stem wound (L), crook (L)	Client	Remove
280	Pear Species	<i>Pyrus spp.</i>	11, 9	F	F	F		3	Union at base, included fence (M)	City of Cambridge	Remove
281	Norway Maple	<i>Acer platanoides</i>	11, 4	F/G	G	F		3	Tar spot (L), included fence (L), union at base	City of Cambridge	Remove

282	Manitoba Maple	<i>Acer negundo</i>	12, 8	F/G	G	F/G		2	Union at base	City of Cambridge	Remove
283	Green Ash	<i>Fraxinus pennsylvanica</i>	12	G	G	F/G	10	2		City of Cambridge	Remove
284	Manitoba Maple	<i>Acer negundo</i>	11, 10	F	F	F	15	4	Union at base, stem wound (M) at base	City of Cambridge	Remove
285	Black Walnut	<i>Juglans nigra</i>	17	G	G	G		4		City of Cambridge	Remove
286	White Mulberry	<i>Morus alba</i>	16, 12	F	F/G	F		4	Union at base, crook (L), spiral stems	City of Cambridge	Remove
287	White Mulberry	<i>Morus alba</i>	20	F/G	F/G	F/G		4	Union at 1.4m, asymmetrical crown (L)	City of Cambridge	Remove
288	Black Walnut	<i>Juglans nigra</i>	13	G	G	G		3		City of Cambridge	Retain
289	Manitoba Maple	<i>Acer negundo</i>	11	G	G	G		3		City of Cambridge	Retain
P1	-	-	<10	F/G	G	G		2	21 Black Walnut, 6 Manitoba Maple, 3 Norway Maple, 3 Green Ash, 3 Basswood, 2 Pear, 2 Sugar Maple	City of Cambridge	Remove

Legend		
DBH	Diameter at Breast Height	(cm); ~ = estimate
TI	Trunk Integrity	G=good, F=fair, P=poor
CS	Crown Structure	G=good, F=fair, P=poor
CV	Crown Vigor	G=good, F=fair, P=poor
CDB	Crown Die Back	(%)
mTPZ	Recommended minimum tree protection zone; radius from edge of tree (m)	
Comments	Relevant comments to health and condition of the tree (L) = light; (M) = moderate; (H) = heavy	
Action	Retain or Remove	