Tree Inventory and Preservation Plan Report
340 and 334 Ardagh Road
City of Barrie, Ontario

prepared for

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prepared by

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KUNTZ FORESTRY CONSULTING Inc. Project P3539

Introduction

Kuntz Forestry Consulting Inc. was retained by Eugene Sturino. to complete a Tree Inventory and Preservation Plan Report as part of a development application for the properties located at 340 and 334 Ardagh Road in Barrie, Ontario. The properties are located at the northwest and northeast corners of Ardagh Road and Neva Road in Barrie, within a residential area.

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, and trees of all sizes within the road right-of-ways or on neighbouring 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 22 November 2022. Trees were located using the topographic survey, aerial imagery, and estimations made in-field. Trees located on the subject property and within the road right-of-ways were tagged using numbers 849 - 861 and trees located on neighbouring properties and those that could not be tagged were identified with the letters A-J and P1.

Tree locations are shown on TP - 1. See Table 1 for the results of the inventory and Appendix A for images of the trees.

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 TP-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 at 334 Ardagh Road is currently occupied by 1-storey house with a gravel driveway and amenity space. The subject site at 340 Ardagh Road is currently occupied by a 1-storey house, an asphalt driveway, detached garage, and amenity space. Tree resources exist in the form of landscape and self-seeded trees.

The tree inventory documented a total of 23 trees and one (1) polygon located on and within six metres of the subject property. Refer to Figure TP-1 for tree locations and Table 1 for the complete tree inventory.

Tree resources included in the inventory are comprised of Manitoba Maple (*Acer negundo*), Thornless Honey Locust (*Gleditsia triacanthos 'inermis'*), Norway Spruce (*Picea abies*), Cottonwood (*Populus deltoides*), Black Cherry (*Prunus serotina*), White Spruce (*Picea glauca*), Silver Maple (Acer saccharinum), White Cedar (*Thuja occidentalis*), White Pine (*Pinus strobus*), Red Pine (*Pinus resinosa*), Staghorn Sumac (*Rhus typhina*), and Basswood (*Tilia americana*).

Proposed Development

The demolition of the existing buildings and the construction of four townhome blocks is proposed for the subject property. Access will be provided from Neva Road. Refer to Figure TP-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 849 – 861, D, G - J and P1 will be required to accommodate the proposed development. Tree 849, 854, 857 – 861 and P1 conflict with the proposed buildings. Tree 856 conflicts with a proposed driveway and porch. Tree 853 and 855 are located in proximity to proposed demolition works such that the tree would be unlikely to tolerate this level of disturbance. Trees 850-853, D, and G-J conflict with proposed swales along the property boundary. Tree 856 is located within the Ardagh Road right-of-way. Tree D, and G-J are located on adjacent property and P1 is shared between the subject site and an adjacent neighbour. Written consent must be attained from the neighbours before any of these trees are removed.

The removal of Tree 856 is recommended regardless of the site plan due to it's condition. A large, dead, overextended branch is leaning towards the existing building.

Refer to Figure TP-1 for the location of tree removals.

Tree Preservation

The preservation of Trees A-C, E, and F will be possible with appropriate tree protection measures as indicated on Figure TP-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 where possible. All grading and other disturbance should be kept outside of the TPZ's.

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

Trees A-C

Encroachment into the driplines of Trees A-C will be required to accommodate a proposed swale. The following mitigation measures must be implemented prior to construction to ensure the trees respond well to construction.

1. Under the supervision of a Certified Arborist, air-spading technology shall be utilized to excavate a trench at the proposed excavation limits within the driplines of trees A-C as shown in TP-1.
2. Exposed roots are to be pruned within the trench in accordance with Good Arboricultural Standards.
3. The trench is to be back filled with loam soil.
4. Vertical tree protection fencing is to be installed directly east of the excavation limits as shown in TP-1.

Refer to Figure TP-1 for the location of prescribed tree protection fence locations and Figure TP-2 for the tree protection fence detail and further tree preservation plan notes.

Summary and Recommendations

Kuntz Forestry Consulting Inc. was retained by Eugene Sturino to complete a Tree Inventory and Preservation Plan Report as part of a development application for a property situated at 340 and 334 Ardagh Road 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 23 trees and one (1) polygon situated on and adjacent to the subject property. The removal of 17 trees and one (1) polygon will be required to accommodate the proposed development. The removal of one (1) tree is recommended regardless of the site plan due to it's condition.

The following recommendations are suggested to minimize impacts to trees identified for preservation. Refer to Figure TP-1 for the location of tree preservation fence and TP-2 for 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 TP-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 TP-2.

- 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,

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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: 340 and 334 Ardagh Road, Barrie Date: 22 November 2022 Surveyors: IB

Tree #	Common Name	Scientific Name	DBH	TI	CS	CV	CDB	DL	Comments	Owner	Action
849	Norway Spruce	*Picea abies*	43	G	G	G		2.5		Private	Remove
850	Cottonwood	*Populus deltoides*	31, 20	F	F	G		4.0	Union at 0.3m, asymetrical crown (L), poor form (L)	Private	Remove
851	Norway Spruce	*Picea abies*	11	G	G	G		1.5		Private	Remove
852	Norway Spruce	*Picea abies*	14	G	G	G		1.0		Private	Remove
853	Norway Spruce	*Picea abies*	16	G	G	G		1.5		Private	Remove
854	Norway Spruce	*Gleditsia triacanthos "inermis"*	53	G	G	G		3.5		Private	Remove
855	Norway Spruce	*Picea abies*	~13	G	G	G		1.0		Private	Remove
856	Cottonwood	*Populus deltoides*	81	G	F/P	F/P	40	7.0	Union at 2.2m, crown dieback (H). Large dead branch leaning towards house. HAZARD.	City	Remove (condition)
857	Thornless Honey Locust	*Gleditsia triacanthos "inermis"*	56	G	F	G		6.0	Union at 1.5m and 2.5m	Private	Remove
858	Black Cherry	*Prunus serotina*	20	G/F	F	G/F		3.0	Leaning south (L), asymetrical crown (M)	Private	Remove
859	White Spruce	*Picea glauca*	51	G	G	G		3.0		Private	Remove
860	Thornless Honey Locust	*Gleditsia triacanthos "inermis"*	26	G/F	G/F	G		4.0	Leaning west (L), asymetrical crown (L)	Private	Remove
861	Silver Maple	*Acer saccharinum*	94	G	F	G		11.0	Union at 2m, poor form (M)	Private	Remove
A	White Spruce	*Picea glauca*	~30	G	G/F	G		2.5	Asymetrical crown (L)	Neighbor	Injure
B	White Cedar	*Thuja occidentalis*	~22	G/F	F	F		2.0	Leaning west (L), asymetrical crown (M), poor vigor (M), poor form (L)	Neighbor	Injure
C	Silver Maple	*Acer saccharinum*	~31, 25, 26, 27, 32	F	G/F	G/F		4.0	Co-dominant at base, poor vigor (L)	Neighbor	Injure
D	White Pine	*Pinus strobus*	~55	G	F	G		5.0	Union at 4m, poor form (M)	Neighbor	Remove
E	Red Pine	*Pinus resinosa*	~25	G	F/P	F		4.0	Leaning south (L), asymetrical crown (H), poor form (M), poor vigor (H)	Neighbor	Preserve
F	Red Pine	*Pinus resinosa*	~30	G	F/P	F		4.0	Asymetrical crown (M), poor vigor (M)	Neighbor	Preserve
G	Manitoba Maple	*Acer negundo*	~10	F	F	F		3.5	Leaning south (M), poor form (M)	Neighbor	Remove
H	White Spruce	*Picea glauca*	~62	G/F	G/F	G		3.5	Poor form (L), bowed (L), leaning south (L)	Neighbor	Remove
I	Staghorn Sumac	*Rhus typhina*	~10	G/F	F	G		2.0	Union at 1.5m	Neighbor	Remove
J	Basswood	*Tilia americana*	~30, 30, 27	F	G/F	G		5.0	Co-dominant at base, leaning south (M), asymetrical crown (L)	Neighbor	Remove
P1	White Cedar	*Thuja occidentalis*	~5-15	G	G	G		2.0	38 stems. Average DBH 10cm	Private/ Neighbour	Remove

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		

Appendix A. Photographs of Site

Tree 849

Tree 850 and A-C

Tree 851-853

Tree 854

Tree 855

Tree 856


Tree 857


Tree 858


Tree 859

Tree 860-861

Tree D-F

Tree G-H

Tree I – J

P1