157 ARDAGH ROAD RESIDENTIAL DEVELOPMENT

TREE INVENTORY, ANALYSIS, AND PRESERVATION PLAN

157 ARDAGH ROAD

CITY OF BARRIE, ONTARIO, COUNTY OF SIMCOE

DECMEBER 2021

OUR FILE: LA 590-21

MUNICIPAL FILE: D28-058-2021

PREPARED BY:

LANDMARK
ENVIRONMENTAL GROUP LTD

LANDSCAPE ARCHITECTURE & CONSULTING ARBORISTS
606-55 CEDAR POINTE DRIVE,
BARRIE, ONTARIO L4N 5R7
TELEPHONE: 705-796-1122
Email: info@LEGroupLtd.com Website: www.LEGroupLtd.com

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1.0 Scope/Assignment:

The Landmark Environmental Group Ltd. (LEGroup) (Jim Hosick, OALA, ISA Arborist # 1098A) is retained by Mr. Michael Lato (hereafter referred to as the Applicant) to provide Consulting Arboriculture services to lands generally west of Highway 400 and north of Essa Road in the City of Barrie, municipally known as 157 Ardagh Road. The assignment is to prepare a Tree Inventory, Analysis, and Preservation Plan in support of a residential redevelopment. LEGroup is requested to create a tree inventory, assessment and preservation plan report to assess the existing trees on the subject site, indicate those trees that can be preserved and the methods for protecting the same. Further, those trees that cannot be preserved either by poor or declining health, structural deficiencies or to facilitate the proposed development on the site, are indicated to be removed. Any trees that are removed to facilitate the new development is to be preserved in accordance with City of Barrie Tree Protection policies.

Specifically, LEG was assigned to provide the following services:

- Review site data including survey, and engineering plans, to provide for a site visit and correspond with City staff (File: D28-058-2021) and the Lake Simcoe Region Conservation Authority (LSRCA) as applicable;

- Conduct a field review to inventory tree specimens, tree groupings, boundary trees visually assessing and identifying the type, location, size and quality of any trees on site within the developable area and indicating the presence of any Butternut (in accordance with the *Endangered Species Act 2007*);

- Provide a Tree Inventory, Analysis and Preservation Report that sets out the methodology, observations, criteria, analysis and conclusions of our review and area conditions;

- Indicate on a Tree Inventory and Protection Plan, those trees that are suitable for preservation or removal and providing the methods of protecting the same;

It is the intent in the undertaking of this Report, to comply with the City of Barrie Tree Preservation policies and any requirements of the Lake Simcoe Region Conservation Authority.

2.0 Proposed Development:

The subject site is located on the south side of Ardagh Road, east of Ferndale Drive South and legally described as Lot 12, Registered Plan 914 in the City of Barrie, Ontario (see **Survey in Appendix A**) The Owners are proposing to sever the site into two approximately equal lots along the entire length of the property where there is currently only an accessory building on the lot.

The limits of the Arborist study were confined to the subject property limits of the proposed development.

This Tree Inventory, Analysis & Preservation Report is submitted in support of and intended to accompany those documents submitted to the City of Barrie for their approval for the development of the site.

Below, is an air photo illustrating the location of the subject site (red lines show the site boundaries):

Figure 1: Airphoto of Subject Site (Boundary Highlighted) and Surrounding Area (courtesy Simcoe County GIS)

3.0 Method:

A summary of the inventory, observations and assessments that were determined in the field can be found in **Appendix C** at the end of this Report.

The tree assessments were identified in accordance with the detailed typical criteria used in best arboricultural practices to indicate the merits of tree preservation including the species (*Latin* and common names), size diameter at breast height (DBH), maturity, biological health, structural concerns (if any), condition rating and recommendations for preservation or removal of existing specimen trees.

Condition ratings applied to overall tree assessments using the above-noted criteria range from 1 (poor) to 5 (excellent). Typically, those trees being assessed a condition rating of 1-3 are recommended for removal while those trees being assessed a condition rating of 4-5 are recommended for preservation unless there are extenuating circumstances regarding the development of the site. The criterion is also applied to assist in assessment of their potential for survival in-situ post construction.

For the purposes of this Report, only those trees over 10cm DBH were captured. No shrubs or low understory perennials were captured in the data.

Each on-site/boundary tree was assigned a key number (Tree Nos. 1-69) and offsite trees assigned a key letter (A-B) and observations relating to each tree were tabulated in the Tree Inventory (**Appendix C**). LEGroup staff provided tree locations and data to coincide with current City of Barrie Tree Protection policies. Each tree was is located on a Tree Inventory and Preservation Map corresponding to the number assigned and can be seen in the Tree Inventory, Assessment and Preservation Plan (**EX-1**) as shown in **Appendix B**.

4.0 Observations

On October 6th 2021, B. Bell (Consulting Arborist; BScF & Forestry Technician) and L. Orlovski (Consulting Arbor Assistant) visited the subject site with the intent to review the trees to create an inventory/assessment of the individual tree specimens present within the proposed development at 157 Ardagh Road, Barrie. LEGroup staff also made a cursory review of existing trees exterior to the subject property to visually assess the quality of the vegetation.

LEGroup staff observed sixty-nine (69) trees at a DBH greater than 10cm on the subject site (Tree Nos. 1-69) of those, five (7) potential boundary trees were recorded. LEGroup also reviewed two (2) offsite trees and one (1) boundary hedge. All trees and woody plant material can be seen in the **Tree Inventory and Assessment Table (Appendix C)**.

LEGroup staff noted that the site has slope toward Ardagh Road with a northerly aspect.

The following woody plant species were observed on the subject site during fieldwork that gives an indication of the species make-up of the site:

Latin Name	Common Name	% Of Total Species
Acer negundo	Manitoba Maple	7.4%
Acer saccharum	Sugar Maple	1.5%
Betula papyrifera	Paper Birch	1.5%
Fraxinus pennsylvanica	Green Ash	4.4%
Juglans nigra	Black Walnut	1.5%
Pinus resinosa	Red Pine	5.9%
Pinus sylvestris	Scots/Scotch Pine	35.3%
Populus tremuloides	Trembling Aspen	7.4%
Prunus serotina	Black Cherry	5.9%
Quercus rubra	Red Oak	1.5%
Tilia americana	Basswood	25.0%
Ulmus pumila	Siberian Elm	1.5%
Ulmus rubra	Red or Slippery Elm	1.5%
Total (Subject to Rounding)		**100.0%**

Table 1 List of Observed Woody Plant Species on the Subject Site

As shown in **Table 1** above, the most frequently encountered tree species in the site inventory is Scots Pine at 35%.3, followed by Basswood (25%), Manitoba Maple (7.4%), Trembling Aspen (7.4%), Red Pine (5.9%), Black Cherry (5.9%), Green Ash (4.4%), Sugar Maple (1.5%), White Birch (1.5%), Black Walnut (1.5%), Red Oak (1.5%), Siberian Elm (1.5%) and Red Elm (1.5%).

Staff observed that the Scots Pine on the site (Trees Nos. 18, 20, 31, 33-41, 51-54, 56-58, 60-63) have lower branch dieback, one-sided branching, twisted trunks and small live crowns typical of trees in forested conditions (**see Photo B, Appendix D**). Staff also noted significant needle drop and bark beetles (suspected to be Pine Engraver) causing decline in the Scots and Red Pine on site.

Many of the Basswood (Trees Nos. 4, 6, 9, 13, 14, 16, 21-24, 27-30, 32, 42, 45 & 55) exhibited characteristics found in forest conditions such as lower branch dieback, included (weakened) bark, multiple leaders and cracking/twisted trunks. Such defects were found to be affecting the structural integrity of the trees which is reflected in the assessment given for each tree (**Tree Inventory and Assessment Table, Appendix C**).

LEGroup staff observed Manitoba Maples (Tree Nos. 1, 2, 10, 15) and Black Cherry (12, 43, 50 & 59) in marginal condition and showing characteristics commonly found in wooded areas such as corrected leans, one sided canopies, trunk wounds, offset canopies and dieback (**Photo A, Appendix D**).

The remaining trees observed included Sugar Maples, Paper Birch, Green Ash, Black Walnut, Red Pine Trembling Aspen, Oak and Elm were found scattered throughout the site, noted to be in poor to marginal condition and also exhibited characteristics found in forested conditions as noted above (**see Photos A & B in Appendix D**).

Regarding boundary tree vegetation, LEGroup staff observed eight trees (Tree Nos. 1, 2, 10, 13, 46, 67-69) that are considered boundary trees as they have trunks crossing over the property line. Tree 69 is an Eastern White Cedar hedge located along the east property line with a portion of its canopy found to be crossing the property line (see **TP-1 & TP-2**).

LEGroup staff did not identify any Butternut (*Juglans cinerea*) on the subject parcel during the on-site inventory in accordance with the requirements of the *Endangered Species Act, 2007.*

5.0 Study Criteria

Tree observations were recorded individually, as set out in the Tree Inventory and Assessment Table (**Appendix C**), in accordance with the criteria established by common arboricultural practice including:

- ✓ Latin/Common Name of tree;
- ✓ Size (mm cal);
- ✓ Condition/Comments; and
- ✓ Recommendation for Preservation or Removal

Tree locations are on the Tree Inventory and Preservation Plan were recorded and adjusted however, the locations are approximate as shown on **Drawing ARB-1 in Appendix B**.

6.0 Analysis and Recommendations

The following analysis criteria were generally applied to measure the merits of tree preservation:

- Species (including native & non-native)
- Size/Maturity
- Structure
- Health
- Location
- Areas of proposed development.

These criteria were applied to the tree assessments to determine the extent of preservation and removal. In addition, the criterion is applied to assess of their potential for survival in-situ post construction.

LEGroup staff found the existing trees onsite are in poor to marginal condition with form defects such as significant leans, structural issues and were to be generally in declining health. The Scots and Red Pine are in decline due to insect infestation, and the deciduous trees onsite have poor form causing possible structural concerns as a result of being located in a forested area.

LEGroup recommends the removal of Tree No. 1, 2, 10, 13, (boundary trees) that are in poor condition, possess the potential to fail due to their leans (can be seen by their offset canopy on **TP-1**), and are of limited aesthetic/intrinsic value. Tree No. 46, 68 & 69 (boundary trees) that are in poor to marginal condition are also recommended to be removed due their decline in health from bark beetles, and low intrinsic value.

The applicant has acquired the consent to remove these trees along the east property line from the owner of 153 Ardagh Road. The recommendations for removal noted above can be reviewed in **TP-1 & TP-2, Appendix B**.

LEGroup are of the opinion that Tree No. 67 (*Ulmus pumila*, boundary tree) is in poor condition, and is of limited aesthetic/intrinsic value due to its introduced status. The applicant has acquired the consent to remove this tree along the east property line from the owner of 159 Ardagh Road. The recommendations for removal noted above can be reviewed in **TP-1 & TP-2, Appendix B**.

Therefore, due to the above-noted defects, LEGroup staff recommends a total of sixty-nine (69) trees (Tree Nos. 1-69) to be removed to accommodate the development and to improve the health of the retained City of Barrie delineated wooded area to the south. The two (2) offsite trees (Tree A & B) located along south property line are recommended to be preserved in-situ with tree preservation fencing placed around the dripline of canopy as seen in **TP-1 & TP-2** (**Appendix B**).

6.1 Summary and Recommendations

In summary, as a result of a proposed residential development at 157 Ardagh Road, the City of Barrie requires that the Applicant submit a Tree Inventory, Assessment and Preservation Plan along with their application for a severance, for their review (File: D28-058-2021).

The following is a summary of the recommendations contained in this Report:

- That sixty-nine (69) trees (Tree Nos. 1-69) are recommended for removal and two (2) offsite trees (Tree A & B) are recommended to be preserved on the subject site in accordance with the findings of this Report;
- Provide tree preservation fencing at the dripline of offsite trees (Tree A & B) which represents the tree preservation zone (refer to **TP-1 & TP-2, Appendix B**).
- Removal of Trees should occur outside of breeding bird season (April 1 – August 30), if not possible, consultation with an ecologist to provide a nesting survey is required 48 hours prior to clearing (*Migratory Birds Convention Act, 1994)*;
- That trees to be preserved are monitored during and post-construction to ensure continued health;
- No equipment storage or refueling is to take place within the tree preservation zone as established by the preservation fencing;
- Tree preservation fencing is to be removed only after construction on the site is complete and all equipment removed;
- Existing tree branching that interferes with the development works may be lightly pruned by qualified personnel;
- For other preservation methods, please refer to the Tree Preservation Notes on drawing LD-1 in Appendix B.

7.0 Arborist's Declaration

It is the policy of Landmark Environmental Group Ltd. to attach the following clause regarding the limitations:

The Consulting Arborist's visual assessment and recommendations, made in this Report, have been completed based on accepted arboricultural practices and represents a fair and accurate assessment of the number, type, size and condition of trees on the subject property. Such visual assessments of all tree components could include scars, bark damage, external decay, insect infestations, discoloured foliage, crown dieback, an excessive degree of lean from the vertical and above-ground root defects. In addition, environmental conditions, which could affect overall health of the trees such as damaging maintenance practices, have also been taken into consideration where appropriate. However, no tree was dissected, cored or rooting systems assessed through excavation.

We hereby certify that we, Brock Bell and Lauren Orlovski have:

- Conducted the visual inspection of the trees and property referred to in this letter report and have stated my findings accurately in accordance with accepted arboricultural practices without personal interest or bias;
- No current or prospective interest in the property that is the subject of this Report and have no personal interest or bias with respect to the parties involved;
- That our analysis, opinions and conclusions stated our own and based on commonly accepted arboricultural practices;
- That our compensation is not contingent on the reporting of a predetermined conclusion that favours the client; and
- That we are members in good standing with the International Society of Arboriculture (ISA).

We trust the above-noted recommendations are of assistance. If there are any questions regarding the 157 Ardagh Tree Inventory, Analysis, Preservation Report please do not hesitate to contact our Firm at (705) 796-1122.

Prepared by,

Brock Bell BScF
Consulting Arborist/Forest Technician
Landmark Environmental Group Ltd.

Lauren Orlovski
Consulting Arbor Assistant
Landmark Environmental Group Ltd.

Reviewed by,

Jim Hosick, OALA, RPP
Landscape Architect-Principal,
ISA Certified Arborist No. 1098-A
ArborCanada Qualified Appraiser #2164
Member, American Society of Consulting Arborists
Landmark Environmental Group Ltd.

8.0 Glossary of Arboricultural Terms

Arboriculture – practice and study of the care of trees and other woody plants in the landscape.

Bark Whitening – Bark of tree is flaking revealing lighter color underneath. Common in Ash trees and is usually a symptom caused by raptors foraging for bugs.

Beech Bark Disease – Fungal infection of beech trees often leads to mortality. Caused by the Beech Scale insect

Branch – stem arising from a larger stem. A subdominant stem.

Canopy – collective branches and foliage of a tree or a group of trees' crowns.

Canopy sweeping – Form of the tree is concave from the base of the tree to the top.

Co-dominant branches/stems (dual Leaders)– forked branches nearly the same size in diameter, arising from a common junction and lacking a normal branch union.

Crown – upper part of the tree, measured from the lowest branch, including all the branches and foliage.

DBH – acronym for tree diameter at breast height. Measured 1.4 meters above ground.

Dieback – condition in which the branches in the tree crown die from the tips toward the centre.

Drip-line – imaginary line defined by the branch spread of a single plant or group of plants.

Epicormic Branching – Shoot(s) arising from a latent of adventitious bud (growth point), often a sign of stress in tree.

Included Bark – bark that becomes embedded in a crotch (union) between branch and trunk or between codominant stems. Causes a weak structure.

Interior Decay – Moisture or fungus that has entered a wound in a tree and has begun to rot away the internal, structural wood.

Leader – primary terminal shoot or trunk of a tree. Large, usually upright stem. A stem that dominates a portion of the crown by suppressing lateral branches.

Pine Shoot - It's the shoot of a new branch coming out, and there are no needles visible yet.

Pruning – removing branches from a tree or other plants to achieve a specified objective.

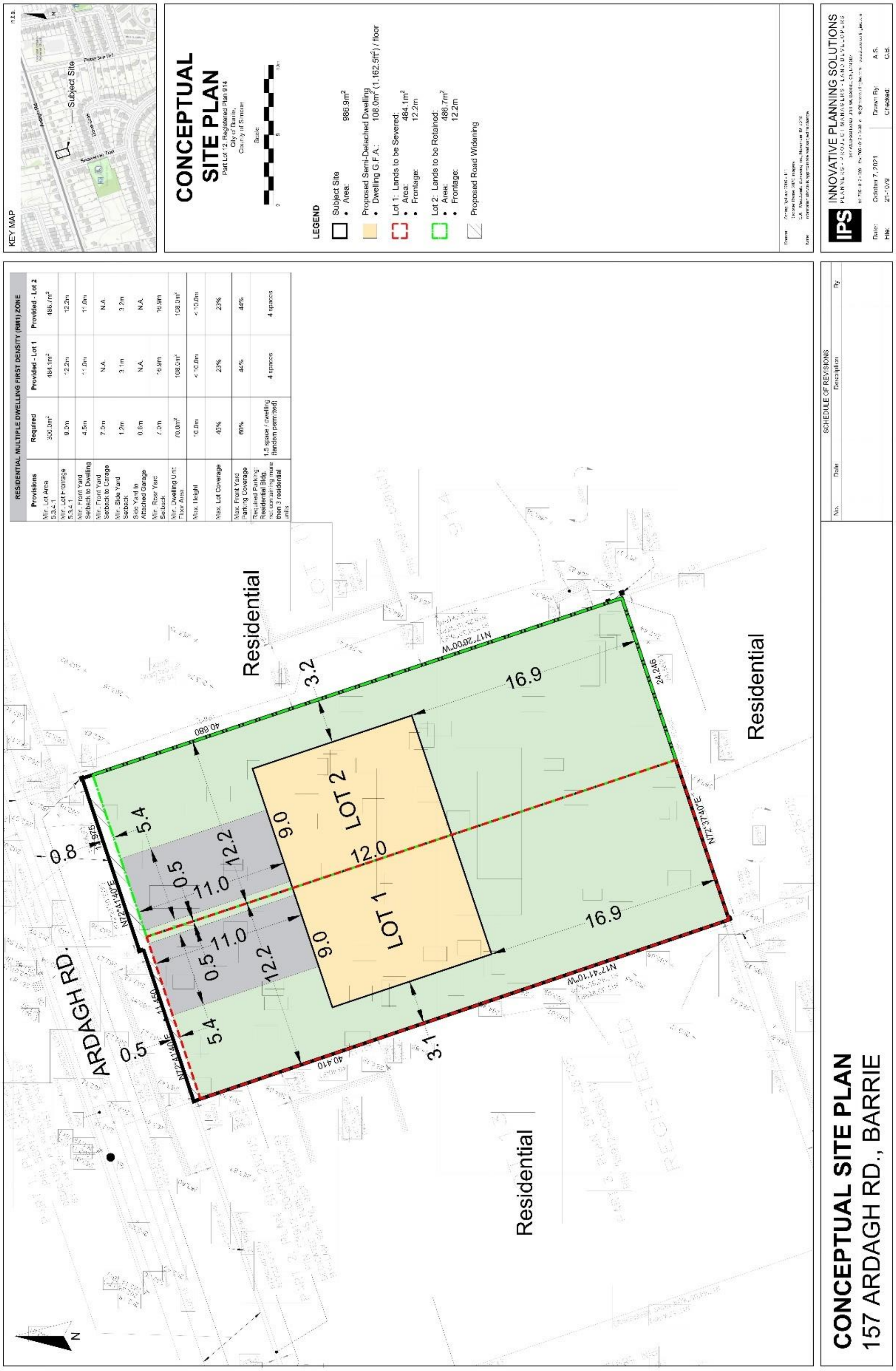
Root Ball - The largest density of roots located underneath trunk of tree.

Elevated Root Plate – Roots at the base of the tree are elevated and don't match existing grade.

Root Suckering – Roots of a tree sprouting new growth creating new stems feeding on the original root system, often a sign of stress in tree.

Tree Protection Zone (TPZ) – Defined area within which certain activities are prohibited or restricted to prevent or minimize potential injury to designated trees, especially during construction or development

Appendix A: Conceptual Site Plan

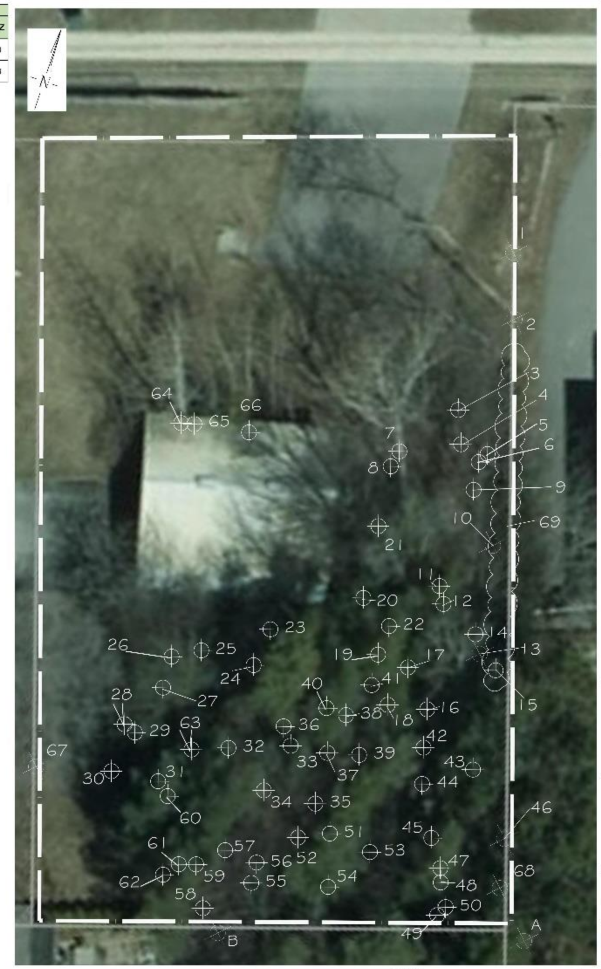


Appendix B: Tree Inventory, Preservation Plan + Detail (EX-1, TP-1, TP-2, LD-1)

ONSITE TREE INVENTORY							
Key	**Latin Name**	**Common Name**	**Tree DIA (cm dbh)**	**Notes**	**Assessment**	**Canopy Radius (m)**	**Preserve/ Remove**
1	*Acer negundo*	Manitoba Maple	39.6	lean toward west, interior decay, epicormic branching, poor form, boundary tree	1 Poor	9.1	Remove
2	*Acer negundo*	Manitoba Maple	27.3	lean, epicormic branching, multiple leaders, included bark, pruning, large white face scar, boundary tree	1 Poor	7.4	Remove
3	*Ulmus rubra*	Red or Slippery Elm	14.3	canopy dieback, defoliation, one sided canopy	2 Marginal	3.5	Remove
4	*Tilia americana*	Basswood	18.4	lower branch dieback	2 Marginal	1.5	Remove
5	*Fraxinus pennsylvanica*	Green Ash	12.8	dual leader, defoliated	2 Marginal	1.0	Remove
6	*Tilia americana*	Basswood	13.9	Included bark	2 Marginal	1.2	Remove
7	*Betula papyrifera*	Paper Birch	19.9, 10.2	exposed root flares, one sided canopy, connected to adjacent tree	2 Marginal	4.2	Remove
8	*Populus tremuloides*	Trembling Aspen	29.1	connected to adjacent tree	2 Marginal	3.0	Remove
9	*Tilia americana*	Basswood	14	lower branch dieback	2 Marginal	1.0	Remove
10	*Acer negundo*	Manitoba Maple	10.8	lean toward Northeast, epicormic branching, dead branches, abnormal flare, lower branch dieback, boundary tree	1 Poor	5.5	Remove
11	*Quercus rubra*	Red Oak	23.8	winding trunk	2 Marginal	4.0	Remove
12	*Prunus serotina*	Black Cherry	16.7	canopy dieback, defoliated	2 Marginal	1.2	Remove
13	*Acer negundo*	Manitoba Maple	21.5, 22	multiple trunks, significant lean, dedwood, sweeping trunk, included bark, multiple leaders, boundary tree	2 Marginal	5.5	Remove
14	*Tilia americana*	Basswood	13.7, 16.8, 10.6	multiple leaders, lower branch dieback, included bark	2 Marginal	1.7	Remove
15	*Acer negundo*	Manitoba Maple	21.2, 21.3, 10.6	multiple leaders, significant corrected lean, unstable endweight, defoliated	2 Marginal	3.0	Remove
16	*Tilia americana*	Basswood	10.5	lower branch dieback	2 Marginal	0.5	Remove
17	*Pinus sylvestris*	Scots/Scotch Pine	14.8	significant defoliation, lower branch dieback	1 Poor	0.7	Remove
18	*Pinus sylvestris*	Scots/Scotch Pine	13.9	significant defoliation, lower branch dieback, uncompartmentalized wound	1 Poor	0.8	Remove
19	*Fraxinus pennsylvanica*	Green Ash	23.8	basal trunk wound, uncompartmentalized wound, dual leader	2 Marginal	2.5	Remove
20	*Pinus sylvestris*	Scots/Scotch Pine	23.2	lower branch dieback	1 Poor	2.3	Remove
21	*Tilia americana*	Basswood	29.9	multiple leaders	2 Marginal	3.5	Remove
22	*Tilia americana*	Basswood	31.6	one sided branching, one sided canopy	2 Marginal	4.0	Remove
23	*Tilia americana*	Basswood	17.4, 15.6	dual leaders, lower branch dieback	2 Marginal	5.0	Remove
24	*Tilia americana*	Basswood	10.6	dual leader, minor corrected lean	2 Marginal	1.0	Remove
25	*Juglens nigra*	Black Walnut	10.2	corrected lean, multiple leaders, significant defoliation, lower branch dieback	1 Poor	2.5	Remove
26	*Acer saccharum*	Sugar Maple	13.3	lower branch dieback	2 Marginal	1.7	Remove
27	*Tilia americana*	Basswood	16.2	lower branch dieback, trunk gall	2 Marginal	2.1	Remove
28	*Tilia americana*	Basswood	9.2, 10.8, 6.2, 7.5	multiple leaders, included bark, one sided canopy	2 Marginal	4.5	Remove
29	*Tilia americana*	Basswood	10.7	frost crack, winding trunk	2 Marginal	2.8	Remove
30	*Tilia americana*	Basswood	12.4	exposed root flares, dual leaders, winding trunk	2 Marginal	3.5	Remove
31	*Pinus sylvestris*	Scots/Scotch Pine	24.1	significant defoliation, lower branch dieback, canopy dieback, uncompartmentalized wound	1 Poor	2.5	Remove
32	*Tilia americana*	Basswood	18.3	lower branch dieback, winding trunk	2 Marginal	2.5	Remove
33	*Pinus sylvestris*	Scots/Scotch Pine	13.6	significant defoliation, lower branch dieback	1 Poor	1.0	Remove
34	*Pinus sylvestris*	Scots/Scotch Pine	20.8	lower branch dieback, significant defoilation	1 Poor	1.2	Remove
35	*Pinus sylvestris*	Scots/Scotch Pine	18.6	lower branch dieback, significant defoilation	1 Poor	1.5	Remove
36	*Pinus sylvestris*	Scots/Scotch Pine	12.5	significant defoilation, one sided branching, lower branch dieback	1 Poor	0.5	Remove
37	*Pinus sylvestris*	Scots/Scotch Pine	21.6	significant defoilation, lower branch dieback	1 Poor	1.3	Remove
38	*Pinus sylvestris*	Scots/Scotch Pine	13.9	significant defoilation, lower branch dieback	1 Poor	0.7	Remove
39	*Pinus sylvestris*	Scots/Scotch Pine	14.1	dual leader, significant defoliation, lower branch dieback	1 Poor	0.5	Remove
40	*Pinus sylvestris*	Scots/Scotch Pine	20.4	pruning, uncompartmentalized wound, lower branch dieback, defoliation	1 Poor	1.5	Remove
41	*Pinus sylvestris*	Scots/Scotch Pine	13.5	significant defoliation, lower branch dieback, winding trunk	1 Poor	1.0	Remove
42	*Tilia americana*	Basswood	16.2	winding trunk	2 Marginal	2.0	Remove
43	*Prunus serotina*	Black Cherry	11.3	lower branch dieback, included bark, minor corrected lean	2 Marginal	3.0	Remove
44	*Populus tremuloides*	Trembling Aspen	20.4	minor corrected lean, winding trunk, lower branch dieback	2 Marginal	5.5	Remove
45	*Tilia americana*	Basswood	16.7	uncompartmentalized wound	2 Marginal	3.8	Remove
46	*Pinus resinosa*	Red Pine	39.6	bart beetle, lower branch dieback, dead branches, one sided branching to north, boundary tree	2 Marginal	3.7	Remove
47	*Fraxinus pennsylvanica*	Green Ash	13.9, 9.8	dual leader, included bark	2 Marginal	4.0	Remove
48	*Pinus resinosa*	Red Pine	32.5	trunk gall, uncompartmentalized wound, pruning, lower branch dieback	2 Marginal	3.7	Remove
49	*Pinus resinosa*	Red Pine	24.1	lower branch dieback	2 Marginal	2.5	Remove
50	*Prunus serotina*	Black Cherry	24.8	significant corrected lean, unstable endweight, dual leader	2 Marginal	6.0	Remove
51	*Pinus sylvestris*	Scots/Scotch Pine	18.8	significant defoliation, lower branch dieback, canopy dieback	1 Poor	1.2	Remove
52	*Pinus sylvestris*	Scots/Scotch Pine	10.4	significant defoliation, lower branch dieback, canopy dieback	1 Poor	0.5	Remove
53	*Pinus sylvestris*	Scots/Scotch Pine	14.7	brown needles, defoliation, lower branch dieback	1 Poor	1.0	Remove
54	*Pinus sylvestris*	Scots/Scotch Pine	20.4	lower branch dieback, defoliation	1 Poor	2.5	Remove
55	*Tilia americana*	Basswood	26.1	bulging trunk	2 Marginal	2.3	Remove
56	*Pinus sylvestris*	Scots/Scotch Pine	13.3	one sided canopy, lower branch dieback, defoliation	1 Poor	1.5	Remove
57	*Pinus sylvestris*	Scots/Scotch Pine	15.4	significant defoliation, canopy dieback, lower branch dieback	1 Poor	0.5	Remove
58	*Pinus sylvestris*	Scots/Scotch Pine	14.3	lower branch dieback	1 Poor	1.1	Remove
59	*Prunus serotina*	Black Cherry	13.8	corrected lean, one sided canopy	2 Marginal	2.0	Remove
60	*Pinus sylvestris*	Scots/Scotch Pine	15.7	lower branch dieback, one sided canopy	1 Poor	1.7	Remove
61	*Pinus sylvestris*	Scots/Scotch Pine	17.5	lower branch dieback, winding trunk, one sided canopy	1 Poor	1.8	Remove
62	*Pinus sylvestris*	Scots/Scotch Pine	24.6	one sided branching, lower branch dieback, minor corrected lean	1 Poor	2.3	Remove
63	*Pinus sylvestris*	Scots/Scotch Pine	11	uncompartmentalized wounds, one sided branching	1 Poor	1.2	Remove
64	*Populus tremuloides*	Trembling Aspen	21.8	winding trunk, basal bark crack, suspected interior decay	2 Marginal	3.0	Remove
65	*Populus tremuloides*	Trembling Aspen	10	corrected lean, basal trunk wound, winding trunk	2 Marginal	1.9	Remove
66	*Populus tremuloides*	Trembling Aspen	13.6	basal trunk wound, corrected lean, frost crack, suspected interior decay, included bark	2 Marginal	1.1	Remove
67	*Ulmus pumila*	Elm	26, 20.5, 30	multple trunks, dead branches, one sided branching, lower branch dieback, pruning damage, multiple leaders, included bark, interior decay, boundary tree	1 Poor	5.0	Remove
68	*Pinus resinosa*	Red Pine	23.8	Onw sided branching, lower branch dieback, bark beetle, boundary tree	2 Marginal	4.0	Remove
69	*Thuja occidentalis*	Eastern White Cedar	Hedge <5cm DBH	epicormic branching, multiple leaders, thin foliage, competiton with adajcent trees, boundary hedge	1 Poor	1.0	Remove

OFFSITE TREE INVENTORY			
Key	**Latin Name**	**Common Name**	**TPZ**
A	*Pinus resinosa*	Red Pine	2.8
B	*Pinus sylvestris*	Scots/Scotch Pine	2.8

BOUNDARY TREE

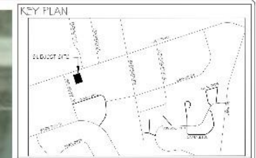


NOTE:
THE APPLICANT HAS PERMISSION TO REMOVE TREE NOS. 1, 2, 10, 13, 46, 68 & 69 ON THE EAST SIDE OF THE PROPERTY FROM THE PROPERTY OWNER OF 153 ARDAGH RD AND TREE NO 67 ON THE WEST SIDE OF THE PROPERTY FROM THE OWNER OF 159 ARDAGH ROAD.

NOTE:
VEGETATION CLEARING IS TO BE AVOIDED FROM APRIL 1 TO AUGUST 31 TO AVOID IMPACTS TO BIRDS PROTECTED UNDER THE MIGRATORY BIRDS CONVENTION ACT. IF CLEARING MUST PROCEED WITHIN THIS WINDOW, THE AFFECTED AREA MUST BE SCREENED BY A QUALIFIED ECOLOGIST BEFORE 48HRS OF CLEARING ACTIVITIES.

** TREE LOCATIONS CAPTURED USING TRIMBLE GNSS UNITS AND ARCGIS SOFTWARE

KEY PLAN



GENERAL NOTES

LEGEND
TREE LOCATION
PROPERTY LIMIT

STAMP

APPROVAL
CITY OF BARRIE

AERIAL SOURCED FROM SIMCOE COUNTY GIS

LANDMARK ENVIRONMENTAL GROUP LTD.
LANDSCAPE ARCHITECTS & CONSULTING ARBORISTS
OFFICE: 705-796-1122
info@LEGroupLtd.com
www.LEGroupLtd.com

CLIENT: MR MICHEAL LATO

PROJECT: 157 ARDAGH ROAD, BARRIE, ON

DRAWING: EX-1: EXISTING CONDITIONS

PROJECT NO.: IA. 590-21	SCALE: 1:100
MUNICIPAL FILE NO.: D28-056-2021	DATE: OCTOBER 22, 2021
DRAWN BY: B.B / CHECKED BY: J.H	DRAWING No.: EX-1

Tree Preservation Plan 1 (TP-1)

Tree Preservation Plan 2 (TP-2)

Tree Preservation Details (LD-1)

Appendix C: Tree Inventory and Assessment Table

ONSITE TREE INVENTORY							
Key	**Latin Name**	**Common Name**	**Tree DIA (cm dbh)**	**Notes**	**Assessment**	**Canopy Radius (m)**	**Preserve/ Remove**
1	*Acer negundo*	Manitoba Maple	39.6	lean toward wast, interior decay, epicormic branching, poor form, boundary tree	1 Poor	9.1	Remove
2	*Acer negundo*	Manitoba Maple	27.3	lean, epicormic branching, multiple leaders, included bark, pruning, large white face scar, boundary tree	1 Poor	7.4	Remove
3	*Ulmus rubra*	Red or Slippery Elm	14.3	canopy dieback, defoliation, one sided canopy	2 Marginal	3.5	Remove
4	*Tilia americana*	Basswood	18.4	lower branch dieback	2 Marginal	1.5	Remove
5	*Fraxinus pennsylvanica*	Green Ash	12.8	dual leader, defoliated	2 Marginal	1.0	Remove
6	*Tilia americana*	Basswood	13.9	Included bark	2 Marginal	1.2	Remove
7	*Betula papyrifera*	Paper Birch	19.9, 10.2	exposed root flares, one sided canopy, connected to adjacent tree	2 Marginal	4.2	Remove
8	*Populus tremuloides*	Trembling Aspen	29.1	connected to adjacent tree	2 Marginal	3.0	Remove
9	*Tilia americana*	Basswood	14	lower branch dieback	2 Marginal	1.0	Remove
10	*Acer negundo*	Manitoba Maple	10.8	lean toward Northeast, epicormic branching, dead branches, abnormal flare, lower branch dieback, boundary tree	1 Poor	5.5	Remove
11	*Quercus rubra*	Red Oak	23.8	winding trunk	2 Marginal	4.0	Remove
12	*Prunus serotina*	Black Cherry	16.7	canopy dieback, defoliated	2 Marginal	1.2	Remove
13	*Acer negundo*	Manitoba Maple	21.5, 22	multiple trunks, significant lean, dedwood, sweeping trunk, included bark, multiple leaders, boundary tree	2 Marginal	5.5	Remove
14	*Tilia americana*	Basswood	13.7, 16.8, 10.6	multiple leaders, lower branch dieback, included bark	2 Marginal	1.7	Remove
15	*Acer negundo*	Manitoba Maple	21.2, 21.3, 10.6	multiple leaders, significant corrected lean, unstable endweight, defoliated	2 Marginal	3.0	Remove
16	*Tilia americana*	Basswood	10.5	lower branch dieback	2 Marginal	0.5	Remove
17	*Pinus sylvestris*	Scots/Scotch Pine	14.8	significant defoliation, lower branch dieback	1 Poor	0.7	Remove
18	*Pinus sylvestris*	Scots/Scotch Pine	13.9	significant defoliation, lower branch dieback, uncompartmentalized wound	1 Poor	0.8	Remove
19	*Fraxinus pennsylvanica*	Green Ash	23.8	basal trunk wound, uncompartmentalized wound, dual leader	2 Marginal	2.5	Remove
20	*Pinus sylvestris*	Scots/Scotch Pine	23.2	lower branch dieback	1 Poor	2.3	Remove
21	*Tilia americana*	Basswood	29.9	multiple leaders	2 Marginal	3.5	Remove
22	*Tilia americana*	Basswood	31.6	one sided branching, one sided canopy	2 Marginal	4.0	Remove
23	*Tilia americana*	Basswood	17.4, 15.6	dual leaders, lower branch dieback	2 Marginal	5.0	Remove
24	*Tilia americana*	Basswood	10.6	dual leader, minor corrected lean	2 Marginal	1.0	Remove
25	*Juglans nigra*	Black Walnut	10.2	corrected lean, multiple leaders, significant defoliation, lower branch dieback	1 Poor	2.5	Remove
26	*Acer saccharum*	Sugar Maple	13.3	lower branch dieback	2 Marginal	1.7	Remove
27	*Tilia americana*	Basswood	16.2	lower branch dieback, trunk gall	2 Marginal	2.1	Remove
28	*Tilia americana*	Basswood	9.2, 10.8, 6.2, 7.5	multiple leaders, included bark, one sided canopy	2 Marginal	4.5	Remove
29	*Tilia americana*	Basswood	10.7	frost crack, winding trunk	2 Marginal	2.8	Remove
30	*Tilia americana*	Basswood	12.4	exposed root flares, dual leaders, winding trunk	2 Marginal	3.5	Remove

BOUNDARY TREE

Key	Latin Name	Common Name	Tree DIA (cm dbh)	Notes	Assessment	Canopy Radius (m)	Preserve/ Remove
31	*Pinus sylvestris*	Scots/Scotch Pine	24.1	significant defoliation, lower branch dieback, canopy dieback, uncompartmentalized wound	1 Poor	2.5	Remove
32	*Tilia americana*	Basswood	18.3	lower branch dieback, winding trunk	2 Marginal	2.5	Remove
33	*Pinus sylvestris*	Scots/Scotch Pine	13.6	significant defoliation, lower branch dieback	1 Poor	1.0	Remove
34	*Pinus sylvestris*	Scots/Scotch Pine	20.8	lower branch dieback, significant defoliation	1 Poor	1.2	Remove
35	*Pinus sylvestris*	Scots/Scotch Pine	18.6	lower branch dieback, significant defoliation	1 Poor	1.5	Remove
36	*Pinus sylvestris*	Scots/Scotch Pine	12.5	significant defoliation, one sided branching, lower branch dieback	1 Poor	0.5	Remove
37	*Pinus sylvestris*	Scots/Scotch Pine	21.6	significant defoliation, lower branch dieback	1 Poor	1.3	Remove
38	*Pinus sylvestris*	Scots/Scotch Pine	13.9	significant defoliation, lower branch dieback	1 Poor	0.7	Remove
39	*Pinus sylvestris*	Scots/Scotch Pine	14.1	dual leader, significant defoliation, lower branch dieback	1 Poor	0.5	Remove
40	*Pinus sylvestris*	Scots/Scotch Pine	20.4	pruning, uncompartmentalized wound, lower branch dieback, defoliation	1 Poor	1.5	Remove
41	*Pinus sylvestris*	Scots/Scotch Pine	13.5	significant defoliation, lower branch dieback, winding trunk	1 Poor	1.0	Remove
42	*Tilia americana*	Basswood	16.2	winding trunk	2 Marginal	2.0	Remove
43	*Prunus serotina*	Black Cherry	11.3	lower branch dieback, included bark, minor corrected lean	2 Marginal	3.0	Remove
44	*Populus tremuloides*	Trembling Aspen	20.4	minor corrected lean, winding trunk, lower branch dieback	2 Marginal	5.5	Remove
45	*Tilia americana*	Basswood	16.7	uncompartmentalized wound	2 Marginal	3.8	Remove
46	*Pinus resinosa*	Red Pine	39.6	barl beetle, lower branch dieback, dead branches, one sided branching to north, boundary tree	2 Marginal	3.7	Remove
47	*Fraxinus pennsylvanica*	Green Ash	13.9, 9.8	dual leader, included bark	2 Marginal	4.0	Remove
48	*Pinus resinosa*	Red Pine	32.5	trunk gall, uncompartmentalized wound, pruning, lower branch dieback	2 Marginal	3.7	Remove
49	*Pinus resinosa*	Red Pine	24.1	lower branch dieback	2 Marginal	2.5	Remove
50	*Prunus serotina*	Black Cherry	24.8	significant corrected lean, unstable endweight, dual leader	2 Marginal	6.0	Remove
51	*Pinus sylvestris*	Scots/Scotch Pine	18.8	significant defoliation, lower branch dieback, canopy dieback	1 Poor	1.2	Remove
52	*Pinus sylvestris*	Scots/Scotch Pine	10.4	significant defoliation, lower branch dieback, canopy dieback	1 Poor	0.5	Remove
53	*Pinus sylvestris*	Scots/Scotch Pine	14.7	brown needles, defoliation, lower branch dieback	1 Poor	1.0	Remove
54	*Pinus sylvestris*	Scots/Scotch Pine	20.4	lower branch dieback, defoliation	1 Poor	2.5	Remove
55	*Tilia americana*	Basswood	26.1	bulging trunk	2 Marginal	2.3	Remove
56	*Pinus sylvestris*	Scots/Scotch Pine	13.3	one sided canopy, lower branch dieback, defoliation	1 Poor	1.5	Remove
57	*Pinus sylvestris*	Scots/Scotch Pine	15.4	significant defoliation, canopy dieback, lower branch dieback	1 Poor	0.5	Remove
58	*Pinus sylvestris*	Scots/Scotch Pine	14.3	lower branch dieback	1 Poor	1.1	Remove
59	*Prunus serotina*	Black Cherry	13.8	corrected lean, one sided canopy	2 Marginal	2.0	Remove
60	*Pinus sylvestris*	Scots/Scotch Pine	15.7	lower branch dieback, one sided canopy	1 Poor	1.7	Remove
61	*Pinus sylvestris*	Scots/Scotch Pine	17.5	lower branch dieback, winding trunk, one sided canopy	1 Poor	1.8	Remove
62	*Pinus sylvestris*	Scots/Scotch Pine	24.6	one sided branching, lower branch dieback, minor corrected lean	1 Poor	2.3	Remove
63	*Pinus sylvestris*	Scots/Scotch Pine	11	uncompartmentalized wounds, one sided branching	1 Poor	1.2	Remove
64	*Populus tremuloides*	Trembling Aspen	21.8	winding trunk, basal bark crack, suspected interior decay	2 Marginal	3.0	Remove
65	*Populus tremuloides*	Trembling Aspen	10	corrected lean, basal trunk wound, winding trunk	2 Marginal	1.9	Remove
66	*Populus tremuloides*	Trembling Aspen	13.6	basal trunk wound, corrected lean, frost crack, suspected interior decay, included bark	2 Marginal	1.1	Remove
67	*Ulmus pumila*	Elm	26, 20.5, 30	multple trunks, dead branches, one sided branching, lower branch dieback, pruning damage, multiple leaders, included bark, interior decay, boundary tree	1 Poor	5.0	Remove
68	*Pinus resinosa*	Red Pine	23.8	Onw sided branching, lower branch dieback, bark beetle, boundary tree	2 Marginal	4.0	Remove
69	*Thuja occidentalis*	Eastern White Cedar	Hedge <5cm DBH	epicormic branching, multiple leaders, thin foliage, competiton with adajcent trees, boundary hedge	1 Poor	1.0	Remove

OFFSITE TREE INVENTORY			
Key	**Latin Name**	**Common Name**	**TPZ**
A	*Pinus resinosa*	Red Pine	2.8
B	*Pinus sylvestris*	Scots/Scotch Pine	2.8

Appendix D: Selected Site Photos

Photo A: Photo of Manitoba Maple (Tree Nos. 1 & 2) showing significant western lean and unstable end weight.

Photo B: Photo of typical canopy of Scots Pine at the site.