

20 & 22 WELLINGTON ST. EAST, BARRIE DEVELOPMENT
TREE INVENTORY, ANALYSIS, AND PRESERVATION REPORT



20-22 WELLINGTON ST. EAST,
BARRIE, ONTARIO, COUNTY OF SIMCOE

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PREPARED BY:



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1.0 Scope/Assignment:

The Landmark Environmental Group Ltd. (LEGroup) are retained by **Youth Haven** (hereafter referred to as the Owner) through Simcoe County Home Builders Association (hereafter referred to as the Owner's authorized representative) to provide Consulting Arboriculture services to lands **20 & 22 Wellington Street East, Barrie Ontario**. The assignment is to prepare a Tree Inventory, Analysis & Preservation (TIPP) Report and Plan reflecting the existing conditions of the subject site, in support of a Community Youth Shelter Development. LEGroup is requested to create a tree inventory, assessment, and preservation 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.

Specifically, LEGroup is assigned to provide the following services:

- Initial site visit, review of site data, review of pertinent City of Barrie Tree Protection/ Preservation requirements (Tree Protection Manual), City of Barrie Standard Details (Engineering Standards, Policies & Guidelines), and City of Barrie Urban Design Manual as they pertain to the subject site along with the Lake Simcoe Region Conservation Authority (LSRCA) watershed development policies (non-regulated lands) as applicable and discussion with respective staff if necessary;
- Conduct a field review to inventory the existing tree specimens on the subject site and the impacts of any boundary trees on both the subject site and within the dripline of neighboring properties as per City tree preservation policy requirements, 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, Assessment, Preservation Report & Canopy Survey/Removal Package that sets out the methodology, observations, criteria, analysis and recommendations 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 by-laws & policies and any requirements of the Lake Simcoe Region Conservation Authority.

2.0 Proposed Development:

The subject site is located north-east of the Wellington Street East & Drury Lane intersection, and is municipally known as 22 Wellington Street East, Barrie (County of Simcoe), Ontario (legally known as Plan 31 Part Lots 12 to 14 (RP 51R19952)). The subject site is in proximity to local roadways in the area including Grove Street to the north, Clapperton Street to the east, Drury Lane to the west and Wellington Street East to the south.

The subject site is comprised of one (1) residential lot containing two (2) municipal addresses (20 & 22 Wellington Street East) with a total area of 0.08 ha. The proposed site plan can be seen in **Appendix A**.

The subject site is defined by 16 & 18 Wellington Street East to the west (residential property), 51 Drury Lane to the north (residential property), 24 Wellington Street East to the east (residential property), and beyond Wellington Street East to the south, residential properties 17, 21 Wellington St. East, and 102 Clapperton Street. The limits of the Arborist study were confined to the site property lines.

This Tree Inventory, Analysis, Preservation Report is submitted in support of and intended to accompany the site planning application documents submitted to the City of Barrie's Development Service Department for their approval in regards to the development of the proposed land.

Below, is an air photo illustrating the location of the subject site (red lines delineate the site property limits):



Figure 1. Air photo of subject site (property limit 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.

As per the Pre-Consultation Review from the City of Barrie's Development Service Department, a Tree inventory, Assessment and Preservation Plan are to be provided for the given proposed development submission.

LEGroup staff undertook a Level 1 limited visual structural assessment for trees on the subject site and those trees crossing over the property line from outside its boundaries.

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 0 (Dead) to 4 (Good). Typically, those trees being assessed a condition rating of 1-2 (Poor-Marginal) are recommended for removal while those trees being assessed a condition rating of 3-4 (Fair-Good) 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 10 cm DBH were captured. No shrubs or low understory perennials were captured in the data.

Each onsite tree was assigned a Key Number (1-4) tagged on site and observed offsite trees were assigned a Key Letter (A-E). Observations relating to each tree were tabulated in the **Tree Inventory and Assessment Table (Appendix C)**. Each tree was also located on a Tree Inventory and Preservation Map corresponding to the key number and key letter assigned and can be seen in the **Existing Conditions (EX-1)** shown in **Appendix B**.

4.0 Observations:

A first initial visit was performed on March 29th, 2023, by LEGroup staff (B. Bell, ISA Certified Arborist #ON-2850A & R. Thivierge, Arbor and Landscape Technologist). During the visit, LEGroup staff observed four (4) trees at a DBH greater than 10 cm on the subject site and were recorded in the **Tree Inventory and Assessment Table (Appendix C)**.

LEGroup staff observed four (4) trees at a DBH (diameter breast height) greater than ten (10) centimeters on the subject site (Tree Nos. 1-4), one (1) of which was identified as a boundary tree (Tree Nos. 3). LEGroup also reviewed five (5) offsite trees (Trees A-E). All trees and woody plant material can be seen in the **Tree Inventory and Assessment Table (Appendix C)**.

The following woody plant species were observed on the subject site during fieldwork:

<i>Latin Name</i>	Common Name	% Of Composition
<i>Acer platanoides</i>	Norway Maple	50%
<i>Acer saccharum</i>	Sugar Maple	25%
<i>Juglans nigra</i>	Black Walnut	25%

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

LEGroup staff observed three (3) trees located in the northern portion of the subject site, identified to be Tree Nos. 1, 2 & 4 (Norway Maples and Sugar Maple), to be in poor condition with defects such as included bark, branch die back and bark damage.

Tree No. 1 (Norway Maple) was found to be in declining health with significant girdling roots (see **Photo A, Appendix D**), Tree No.1 is canopy is found conflicting with the proposed development envelope (see **TP-1, Appendix B**).

Tree Nos. 2 & 4 (Norway Maple & Sugar Maple) were also observed to be in declining health with health defects such as branch dieback, damaged bark, multiple leaders and included bark (see **Photo B, Appendix D**). Tree Nos. 2 & 4 locations and canopies were found conflicting with the proposed development's amenity area.

LEGroup staff observed one (1) boundary tree located along the property line in the rear yard, identified to be Tree No. 3 (Black Walnut). Tree no. 3 was assessed to be in fair condition, with defects including the trunk of the tree is growing around a metal fence pole near its base, along with minor branch dieback (see **Photo C, Appendix D**). Tree No. 3 location is found to minimally conflict with the proposed amenity area along with having an extended canopy near the proposed building envelop.

LEGroup staff also observe five (5) offsite trees, identified to be Tree A, B, C, D & E (see **TP-2, Appendix B**). On initial review being taken solely on the property of 20-22 Wellington Street East, all five (5) offsite trees were observed to be in poor to fair condition with shared health defects such as epicormic branching, branch dieback and unequal branch weight distribution.

LEGroup staff did not encounter 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 on the Tree Inventory and Preservation Plans were recorded and adjusted, however the locations are approximate as shown on **Drawing TP-1 & TP-2 in Appendix B**. A GPS data collector device (Trimble) was used to establish the locations of the inventoried trees and is accurate to 30 cm.

6.0 Analysis and Recommendations

6.1 Analysis

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 are of the opinion that Tree Nos. 1-2 & 4 (Norway Maple x2, & Sugar Maple) located on site are in poor to fair condition, conflict with the proposed development, and are generally poor candidates to be retained within the proposed development. These trees were not significant in size and had health defects as outlined in the Tree Inventory and Assessment Table **Appendix C** that are contributing to their declining health including branch dieback and significant bark damage.

As it currently stands, LEGroup staff recommend the preservation of Tree Nos. 3 that is a boundary tree located along the shared property line along the north side of the subject site.

This tree is recommended to be retained and preserved for the development as it is a mature and suitable tree for the new development however its canopy is in minor conflict with the proposed development rear deck footprint. Deck construction in general can be conducted with minimal harm to the tree as excavation is minor in order to install the post footings. For this tree to be preserved throughout the development, it is expected that there may be some minor harm to its root zone and in which, it is recommended that the applicant receive consent from the owners of 51 Drury Lane for Tree no. 3 to be minimally harmed and preserved throughout development.

LEGroup staff notes that the canopies of offsite Trees A & C-E referenced in the Observations Section above, cross over the property line of the subject site and have canopies that conflict with the proposed development as shown in **TP-1 & TP-2, Appendix B**. Tree B has a dripline that falls outside of the development footprint giving low concern of root/tree interference along the northern boundary of the subject site.

It is recommended that efforts for tree preservation including root care, alternative grading and excavation techniques be explored to minimize potential damage to existing Trees A & C-E. It is recommended that the applicant receive a consent to harm signoff for Tree A from the owners of 24 Wellington Street East, and C-E from the owners of 16 Wellington Street East and to also ask for permission to minimally harm these trees from their respective neighbors. Until the signoff is received, Tree preservation is recommended to be established as seen in **TP-1 & TP-2, Appendix B**.

LEGroup staff note that in addition to the tree preservation line, the City of Barrie requires an additional 5m foundation limit setback from the limit of canopy to the development footprint as outlined in Barrie Standard Detail #1235 (**BSD-1235**) (**See TP-2 for foundation limit & LD-1 for Detail in Appendix B**). If a 'consent to harm' or 'consent to remove' is obtained from the neighboring property owners (16 Wellington Street East, 24 Wellington Street East & 51 Drury Lane), there may be flexibility by the City in the 5m development setback after receiving the Consent agreement. Efforts for tree preservation including root care, alternative grading and excavation techniques could also be explored to minimize potential damage to existing trees.

6.2 Summary and Recommendations

In summary, as a result of a proposed residential development at 20 & 22 Wellington Street East the City of Barrie has required that the applicant submit Tree Inventory, Assessment and Preservation Report and Plan for their review and approval.

The summarized recommendations noted above are as follows:

- That boundary Tree No. 3 is to be retained and protected with tree preservation fencing on-site or as far away as possible from the trunk, as shown on **TP-1 and TP-2 in Appendix B**;
- That all offsite Trees (Tree. A, B, C, D, E) be protected and that tree preservation fencing be installed at the dripline of Tree A-E which represents the tree preservation zone (TPZ) as shown on **TP-1 & TP-2 in Appendix B**;
- That onsite Tree Nos. 1, 2, & 4 are recommended for removal due to their poor to fair health, conflicting location with the proposed development and are generally poor candidates to be retained for the proposed development as shown on **TP-2 in Appendix B**;

- Where offsite trees and boundary trees potentially may be impacted, written authorization from the adjacent landowner(s) (16 & 24 Wellington Street East, and 51 Drury Lane) are required and no works, such as building, servicing, and grading, are permitted to be undertaken within the canopy limit without written authorization from the adjacent landowner(s) as per requirements set out by the City of Barrie Park Planning Department and the City's *Tree Protection Manual 2019*;
- Where tree preservation fencing cannot be established at the dripline, the tree preservation fence should be installed as far as practical from the trunk. The Arborist/Landscape Architect or qualified personnel shall be on site during the installation of the tree preservation fencing for guidance;
- Vegetation removal or alteration is to occur outside the breeding bird season (April 1 to August 31) and the active roosting period for bats (April 1 to September 30). If clearing is to occur within the breeding bird window, the affected area must be screened by a qualified ecologist 48 hours in advance of scheduled clearing activities. If nests are found, work within the area must cease until the nest has fledged, as per the federal Migratory Birds Convention Act. Should any clearing be required during the active roosting period for bats, contact the Ministry of Environment, Conservation and Parks for further direction (e.g. acoustic monitoring, exit surveys) to ensure conformity with the Endangered Species Act.
- That tree preservation signage (see dwg **LD-1, Appendix B**) be erected at the time of the hoarding installation (tree preservation fencing) attached to the preservation fencing;
- Within the driplines of trees to be protected, there shall be no construction impacts, no machinery or heavy equipment, or change in grade over the root zone of the trees;
- 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;
- During excavation of building envelopes, any roots encountered are to be pruned cleanly by qualified personnel to reduce infection and promote good health;
- 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 **D-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 & Rebecca Thivierge have:

- Personally, performed a visual inspection of the trees and property referred to in this arborist report and have stated our 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 are 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;
- That we are members in good standing with the International Society of Arboriculture (ISA);

I trust the above-noted recommendations are of assistance. If there are any questions regarding the 20-22 Wellington Street East. Residential Development Tree Inventory, Analysis, Preservation Report please feel free to contact our Firm at (705) 796-1122.

Prepared by:



Brock Bell BScF
Consulting Arborist/Forestry Technician
ISA Certified Arborist No. ON-2850A
Landmark Environmental Group Ltd

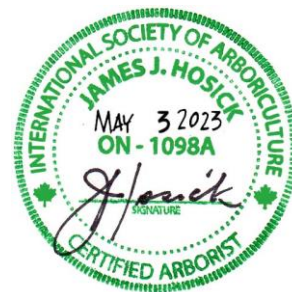


Rebecca Thivierge
Arbor & Landscape Technologist
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Landmark Environmental Group Ltd.



8.0 Glossary of Arboricultural Terms

Adventitious – arising from parts of the root of stem and having no connection to apical meristems.

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

Blackened Bark – surface area of bark is black in colour, often a sign of interior decay

Bleeding – flow of sap from plant wounds, injuries, or pathogen invasion.

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

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

Cavity – open or closed hollow within a tree stem, usually associated with decay.

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

Conk – fruiting body or non-fruiting body (sterile conk) of a fungus. Often associated with decay.

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 Shoot – Shoot arising from a latent or adventitious bud (growth point).

Girdling Root – root that encircles all or part of the trunk of a tree or other roots and constricts the vascular tissue and inhibits secondary growth and the movement of water and photosynthates.

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

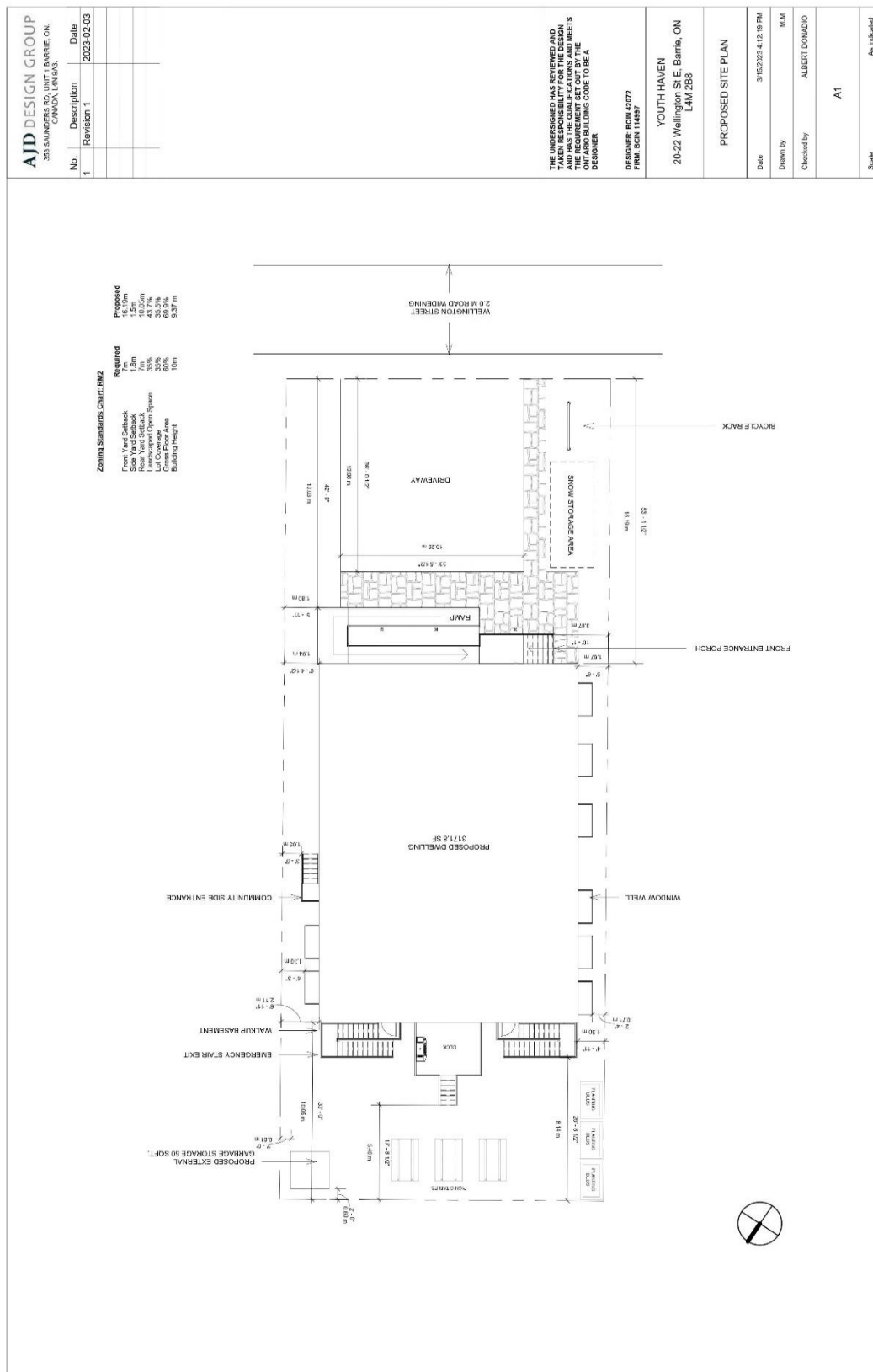
Interior Decay – Moisture or fungus that has entered a wound in a tree and has begun to rot away the internal, structural wood.

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.

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

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: Proposed Site Plan



The figure is an aerial photograph of a residential area. A red dashed line outlines a property boundary. Inside the boundary, there is a building labeled '204.22 WELLINGTON STREET EAST - EXISTING BUILDING'. To the left of the building, there is a street labeled '51 PRURY AVE'. To the right of the building, there is a street labeled '24 WELLINGTON STREET EAST'. The map shows several trees, some of which are marked with numbers 1 through 5. A scale bar at the bottom indicates a distance of 10 meters. A north arrow is located in the bottom right corner.

20 & 22 Wellington Street East, Barrie, ON.
Landmark Environmental Group Ltd.



Details (LD-2)

[illegible]

Appendix C: Tree Inventory and Assessment Table

ONSITE TREE INVENTORY						
KEY	BOTANICAL NAME	COMMON NAME	TREE DIA (CM DBH)	COMMENTS	CONDITION	CANOPY RADIUS (M)
1	<i>Acer platanoides</i>	Norway Maple	34, 44	Co-dominant stem with included bark, branch dieback, damaged roots and trunks, and significant girdling roots.	Poor	7.4
2	<i>Acer platanoides</i>	Norway Maple	34	Significant bark damage, branch dieback and missing bark.	Poor	3.3
3	<i>Juglans nigra</i>	Black Walnut	74	Branch dieback, embedded metal pole, multiple leaders and included bark.	Fair	7.3
4	<i>Acer saccharum</i>	Sugar Maple	18	Multiple leaders with included bark and lower branch dieback.	Poor	2.7

Boundary Tree

OFFSITE TREE INVENTORY		
KEY	BOTANICAL NAME	COMMON NAME
A	<i>Juglans nigra</i>	Black Walnut
B	<i>Acer saccharum</i>	Sugar Maple
C	<i>Acer platanoides</i>	Norway Maple
D	<i>Acer platanoides</i>	Norway Maple
E	<i>Acer platanoides</i>	Norway Maple

Appendix D: Selected Site Photos



Photo A: Facing North East, Tree No. 1 (Norway Maple) with significant girdling roots. Adjacent patio stones and parking lot is restricting tree's growth surface area and depth. Tree No. 1 is found in conflict with proposed development and is recommended for removal.



Photo B: Facing North West, Tree No. 2 (Norway Maple) with damaged bark, pruning wounds and root compaction due to adjacent patio stones. Tree No. 2 is recommended for removal as it conflicts with the proposed development's amenity area and grading.



Photo C: Facing North, Tree No. 3 (Black Walnut) with embedded metal at its basal area. Photo directed to the north