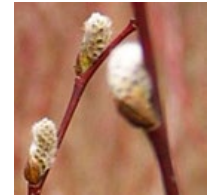


# Arborist Report

60 Clench Avenue

Site Plan Approval

City of Brantford



Prepared for:

Conseil scolaire catholique MonAvenir

c/o

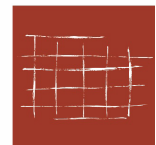
MacDonald Zuberec Ensslen Architect Inc.

Project Number:

AA22-180A

Date:

September 8, 2022





3-5 Edinburgh Road  
Guelph . Ontario  
N1H 5N8

T: 519.822.6839  
info@aboudtng.com  
www.aboudtng.com

URBAN FORESTRY  
ARBORIST REPORTS  
FOREST MANAGEMENT PLANS  
TREE PRESERVATION PLANS  
TREE RISK ASSESSMENT  
GIS TREE INVENTORIES  
TREE APPRAISALS  
MONITORING

ECOLOGICAL RESTORATION  
NATURAL SYSTEMS DESIGN  
HABITAT RESTORATION  
EDGE MANAGEMENT PLANS  
RAVINE STEWARDSHIP PLANS  
NATURALIZATION PLANS  
INTERPRETIVE DESIGN  
MONITORING  
CONTRACT ADMINISTRATION

ENVIRONMENTAL STUDIES  
SUBWATERSHED STUDIES  
ENVIRONMENTAL IMPACT  
STATEMENTS  
ECOLOGICAL LAND  
CLASSIFICATION  
WETLAND EVALUATION  
VEGETATION ASSESSMENT  
BOTANICAL INVENTORIES  
WILDLIFE SURVEYS  
MONITORING

LANDSCAPE ARCHITECTURE  
MASTER PLANNING  
RESIDENTIAL COMMUNITIES  
COMMERCIAL/INDUSTRIAL  
HEALTHCARE AND EDUCATION  
STREETSCAPES  
PARKS AND OPEN SPACES  
TRAIL SYSTEMS  
GREEN ROOFS  
CONTRACT ADMINISTRATION

EXPERT OPINION  
OLT TESTIMONY  
LEGAL PROCEEDINGS  
PEER REVIEW  
RESEARCH  
EDUCATION

September 8, 2022

Our File No.: AA22-180A

Sent by email: AaronH@mzearchitects.com

Conseil scolaire catholique MonAvenir  
110 Drewry Avenue  
North York, ON M2M 1C8

c/o

Aaron Humphreys  
MacDonald, Zuberec, Ensslen Architects Inc.  
39 Queen Street, Studio 403  
St. Catharines, ON L2R 5G6

**Re: Arborist Report  
60 Clench Avenue Site Plan Approval  
City of Brantford**

Dear Aaron,

We have completed our study for the above referenced project. This arborist report has been prepared according to the requirements outlined in the City of Brantford's Site Plan Manual (2015) in support of a site plan approval application.

The following attached documents are part of this investigation.

- *Appendix 1. Tree Inventory and Assessment Methodology*
- *Appendix 2. Detailed Tree Data*
- *Appendix 3. Limitations of this Tree Assessment*
- *Appendix 4. Protection of Migratory Birds and Development*
- *Drawings T1-2 Tree Preservation Plan and Details*

## 1. Introduction

### 1.1 Proposed Development and Existing Conditions

The Conseil Scolaire Catholique MonAvenir is proposing to construct additional parking and walkways for the Sainte Marguerite Bourgeoys Elementary School at 60 Clench Avenue in Brantford (the “subject site”). The subject site is typical of an elementary-intermediate school, with a central school building, parking and open recreational space. The vegetation onsite is composed of manicured turf and open grown trees interior to the site and along shared property boundaries.

### 1.2 Legislative Context

Tree management is generally regulated in the City of Brantford in two ways - through the Municipal Act and through the Planning Act. Through the Municipal Act, the City of Brantford has established a Municipal Code, which regulates public trees in Chapter 322. The City has also enacted *A By-law to Protect Trees* (By-law 171-2002) that regulate the removal of private trees for reasons that are generally exclusive of land development. As established in its Official Plan, through the Planning Act the City of Brantford has required the preparation of an Arborist Report and Tree Preservation Plan to accompany any development or site alteration application where there are any trees located on the site and up to 5 metres of the subject property. These reports and plans may include public trees in their scope.

The City of Brantford has developed its *Site Plan Manual* (August 31, 2015) (“the Manual”) to clarify the requirements of Arborist Reports and Tree Preservation Plans. According to the Manual, these studies are required to support applications under the City’s Site Plan Control By-law (By-law 50-2001). They require information on vegetation that including a detailed inventory of all onsite trees and offsite trees within 5 metres of the property boundary 10 cm or larger in DBH, aerial mapping, an analysis of the inventory data, an assessment of all potential impacts on the trees, recommended mitigation of tree injury, proposed tree protection measures and a rationale for trees that cannot be preserved.

In addition to the municipal by-laws and requirements, it is required by law in the province of Ontario to obtain consent for the removal or injury of any boundary trees prior to injuring or removing that tree. Paragraph 10 of the Forestry Act, R.S.O. 1990, c. F.26 states that:

10. (2) Every tree whose trunk is growing on the boundary between adjoining lands is the common property of the owners of the adjoining lands. 1998, c. 18, Sched. I, s. 21.
- (3) Every person who injures or destroys a tree growing on the boundary between adjoining lands without the consent of the land owners is guilty of an offence under this Act. 1998, c. 18, Sched. I, s. 21.

### 1.3 Study Terms

The proposed development is subject to conditions imposed by City of Brantford, which include the preparation of an Arborist Report and Tree Preservation Plan. Aboud & Associates was retained by MZE Architects Inc., through the CSCMA to complete the an Arborist Report and Tree Preservation Plan. The completion of these materials required an inventory of trees within and adjacent to the proposed limit of work to be performed by an ISA Certified Arborist.

## 2. Methodology

### 2.1 Tree Inventory and Assessment

The tree inventory and assessment required for the arborist report was conducted by Viviana Garcia, ISA Certified Arborist, on July 15, 2022. The survey with tree locations was used in the field to assist in data collection. The Concept Plan prepared by GSP Group Inc is used as the base plan for *Drawing T1* to determine the preservation recommendations for existing trees. The locations of the trees were surveyed by MTE Consultants, Inc. and the locations of off-site trees not surveyed were collected by Aboud & Associates using a GPS (Trimble GeoXH 6000) and laser rangefinder (LaserTech TruPulse 360B) with an average real-time correction precision of 10 cm.

Data for several categories of information were required for each tree included in the inventory. As such, the following data were collected for each tree:

- Species (botanical and common names)\*
- Diameter at breast height - "DBH" (cm)\*
- Crown Reserve (dripline)\*
- Condition (as "Biological Health" and "Structural Condition")\*
- Minimum Tree Protection Zone (MTPZ)
- Recommendation Based on Condition
- Recommendation Based on Development Impacts
- Tree Protection Measures\*
- Observations / comments

\* Categories for data collection required per the City's request.

*Appendix 1* provides a description of assessment methods and definitions of codes used in the Observations/Comments category. Recommendations to preserve or remove individual trees were assigned based on a tree's current condition and the expected impact from the construction. The final recommendation for each tree and other data listed above are provided in *Appendix 2*. Detailed rationale for the recommendations of select trees is given in Section 3.

We provide *Appendix 3 – Limitations of this Tree Assessment* to clarify what is reasonable and possible in our assessment of trees. *Appendix 4 – Protection of Migratory Birds and Development* is provided for reducing impacts to breeding birds.

### 2.2 Technical Tree Preservation Analysis

The intent of an arborist report is to assess the impact of a development on any existing tree, either within the development area or within a reasonable distance of the development area, and recommend measures to preserve trees where possible. Making a recommendation for preservation is based on a number of criteria, many of which are addressed during the tree inventory. Such criteria are the location, species, condition and DBH of a tree.

In the context of development impact on a tree, information contained in the above criteria about a tree can influence the preservation analysis in the following ways:

**Location** – The location of a tree is one of the primary factors to consider in assessing the development impact on the tree. Trees directly in conflict with the development will require extreme preservation measures, including major site plan revision. Trees on the periphery of the development may require site plan revision, but often can be preserved through the provision of tree protection zones. Trees outside the development zone are usually inventoried for precautionary measures, either to ensure they require protection as necessary, or because they are off-site trees and if they require removal, should be dealt with proactively.

**Species** – Some species react less negatively to development impacts (i.e., root cutting, soil compaction, soil volume reduction, etc.) than others. These species tend to be faster growing, since many development impacts affect the ability of the tree to grow and thrive. If one tree species naturally grows faster than another species, it should also be able to outgrow the same magnitude impact faster than another species.

**Condition** – The current health and structure of a tree can affect the tree's response to development. If the tree is currently exhibiting signs of stress (i.e., dieback, crown sprouts, poor shoot elongation, etc.), further stress due to development will likely exacerbate any current issues.

**DBH** – The DBH, while only a measurement, can be used as an indicator of age and also as a multiplying factor for protection zones. A younger tree is more vigorous than an older tree, and can withstand development impacts better than an older tree because it can outgrow development impacts faster than an older tree.

The information collected about the tree's location, species, condition and size consequently inform the recommendation to preserve a tree or not. In some cases, a tree's condition is poor enough on its own to preclude it from preservation, regardless of the development impact.

The tree preservation analysis is most complicated for trees located at the periphery of the development, that is, trees whose trunks are not directly in conflict with the development, but some portion of their crown reserve is. In these cases, the amount of encroachment within a tree's crown reserve or Minimum Tree Protection Zone (MTPZ) is measured and assessed against the other information collected during the tree inventory (species, condition and DBH).

Encroachment within these areas indicates that there will be damage to the root systems of these trees. While the crown reserve is a convenient estimator of root zone, the variation of crown shapes from one tree to another, whether naturally or anthropogenically influenced, indicates that this measurement is often prone to inaccuracy. The MTPZ of a tree is a calculated area based on the DBH of a tree. DBH is more consistent from tree to tree, and it has also been proven to better indicate the spread of a tree's root zone (Day, *et al.*, 2010). Encroachment to the limit of the MTPZ on one side may compromise up to 35% of a 30 cm DBH tree, which would be a significant loss of root mass for any tree, but also survivable for many.

In assessing the potential for tree preservation, intrinsic (i.e., location, species, condition and DBH) and extrinsic (i.e., development impact) factors must be measured. If a tree has the intrinsic qualities to outgrow the development impact, then it can be preserved successfully with proper mitigation and protection measures (i.e., tree protection fencing, root pruning, post-development watering and fertilization, etc.).

### 3. Observations and Recommendations

#### 3.1 Tree Inventory Data Summary

A total of 38 trees and tree groups were recorded in the study area. Specific data for each individual tree are provided in *Appendix 2*. The locations, identification numbers, approximate crown reserve, MTPZ (as per City of Burlington Tree Protection and Preservation Spec. No. SS12, March 2012) and preservation recommendations of trees are shown on *Drawing T1*. The City of Burlington specification for tree protection zones has been applied in this instance because the City of Brantford does not prescribe MTPZs, yet MTPZs are a valuable tool in analyzing development impacts to trees.

There are 33 on-site trees, 4 off-site trees and 1 shared tree in the study area. The community of trees is typical of urban landscapes, with common maple species (*Acer x Freemanii*, *A. platanoides*, *A. saccharum* ssp. *saccharum*), honey locust (*Gleditsia triacanthos* var. 'Inermis'), Siberian crab-apple (*Malus baccata*), red oak (*Quercus rubra*), black locust (*Robinia pseudoacacia*) and little-leaf linden (*Tilia cordata*) representing the planted deciduous component and white spruce (*Picea glauca*), Colorado blue spruce (*P. pungens* 'Glauca') and a juniper species (*Juniperus* sp.) representing the conifer plantings.

#### 3.2 Recommendations for Preservation and Removal

##### 3.2.1 Trees Recommended for Preservation

It is recommended that 32 of the studied trees and tree groups be preserved. These trees are either in acceptable condition or will not be affected by the proposed works. Table A provides a summary of recommended action assigned to all inventoried trees.

Trees 16 and 18 are recommended for preservation despite the development encroaching within their driplines and MTPZs. Trees 16 is younger trees in good condition, which indicates it is likely to outgrow the impact from the pathway construction. The development impact is encroaching into the dripline Tree 18, which is another young and healthy red oak. This impact is likely to be minor, and so the tree will also outgrow the injury. For these trees, the encroachment into sensitive root areas does not preclude them from being preserved so long as the protection recommendations (in Section 3.3 of this report) are followed.

##### 3.2.2 Trees Recommended for Removal

There are six trees recommended for removal due to their condition or the proposed development. Table A provides a summary of recommended action assigned to all inventoried trees.

**Table A.** Summary of Recommended Action Assigned to Trees

Recommended Action	Based on Condition	Based on Construction Impacts	Based on Condition AND Construction Impacts
Preserve	36	34	32
Remove	2	4	6
<b>Totals</b>	<b>36</b>	<b>36</b>	<b>36</b>

Four trees recommended for removal (Trees 16 and Trees 24-26) will be severely impacted by the the construction of the new parking lot or the new pathway. Two trees are recommended for removal because they are in poor condition (Tree 12) or dead (Tree 10).

### 3.3 Protection of Trees Recommended for Preservation and Off-site Trees

In order to preserve the identified on-site trees during and after construction, the following tree protection measures must be taken:

- Tree protection fencing (TPF) must be installed where shown on *Drawing T1*;
- TPF must be installed as shown in Detail 1 on *Drawing T2*;
- Root pruning may be required for Trees 16 and 18, and should proceed according to the following steps:
  - Prior to earthworks the development limit within protection zones should be marked in the field
  - Roots shall be exposed by air-spading/hydro-vacuuming/hand-digging along the staked development limit
  - Any exposed roots shall be pruned with appropriate tools (pruners, pole saws, or chainsaws as required)
  - The excavation shall be backfilled within 24 hours, or exposed pruned roots shall be kept moist until backfilling can take place.
- Root pruning, as described above, should be conducted or supervised by a Certified Arborist where the development encroaches within the crown reserves or MTPZs of trees recommended for preservation (indicated on *Drawing T1*); and
- Tree branches that are at risk of being damaged due to the movement of machinery on-site should be pruned to arboricultural standards by a Certified Arborist prior to the beginning of construction.

## 4. Conclusion

The proposed development at 60 Clench Avenue in Brantford requires an Arborist Report and Tree Preservation Plan to support the rezoning application for the property. Through field study of the on-site vegetation and analysis of the proposed development, 32 of 38 trees and tree groups are recommended for preservation. Tree protection will be achieved through the installation of TPF and, in some specific cases, through careful root pruning.

**Report Prepared By:**

**ABOUT & ASSOCIATES INC.**



James Dennis, M.Sc.F., Arboriculture Lead  
ISA Certified Arborist No. ON-1580A  
james@aboutdng.com

## **5. References**

Day, S.D., P.E. Wiseman, S.B. Dickinson, and J.R. Harris. 2010. Contemporary Concepts of Root System Architecture of Urban Trees. *Arboriculture & Urban Forestry*. 36(4): 149 – 157.

Elmendorf, W., H. Gerhold, and L. Kuhns. 2005. A Guide to: Preserving Trees in Development Projects. Pennsylvania State University. 32pp.



## APPENDIX 1. TREE INVENTORY AND ASSESSMENT DEFINITIONS

Note: Not all definitions may apply.

**DBH (cm):** Diameter at breast height, 1.4 m above ground, measured in centimeters. Two or more numbers denotes the DBH of each stem/trunk for trees with multiple stems/trunks.

**Height (metres):** Height of tree from ground to top of crown. Height is estimated from visual ground observations.

**Crown Reserve (metres):** Crown diameter, or dripline, generalized to the greatest distance from the trunk.

**Minimum Tree Protection Zone (MTPZ):** The minimum setback required to maintain the structural integrity of the tree's anchor roots, based on generally accepted arboricultural principles. If trees are protected to the TPZ then the tree's anchor root structure is expected to be maintained. Protection zone distances may be applied from a different municipality if none are applied in the municipality pertinent to this application.

**Biological Health:** Related to presence and extent of disease/disease symptoms and the vigour of the tree.

**H (High)** - No diseases/disease symptoms present, and moderate to high vigour.

**M (Moderate)** - Presence of minor diseases/disease symptoms, and/or moderate vigour.

**L (Low)** - Presence of major diseases/disease symptoms, (i.e., extensive crown dieback), and/or poor vigour.

A further rating may be assigned of M(L) = Low side of Moderate, M(H) = High side of Moderate.

**Structural Condition:** Related to defects in a tree's structure, (i.e., lean, codominant trunks).

**H (High)** - No structural defects, well-developed crown.

**M (Moderate)** - Presence of minor structural defects.

**L (Low)** - Presence of major structural defects.

A further rating may be assigned of M(L) = Low side of Moderate, M(H) = High side of Moderate.

**Development Tolerance:** Related to the tree's combined overall rating of biological health and structural condition and the general tolerance to the development of each species. In addition to the health and condition of a tree, species type plays an important role in determining how a tree will respond to development pressures such as root severance, flooding, soil compaction and increases in light or heat due to the removal of other trees.

**H (High)** - Biological Health rating of greater than moderate AND Structural Condition rating greater than moderate, and high species tolerance to development (e.g. Biological Health = M(H) to H AND Structural Condition = MH to H).

**M (Moderate)** - Biological Health rating of moderate AND Structural Condition rating of moderate, and a moderate relative species tolerance to development.

**L (Low)** - Biological Health rating of less than moderate OR Structural Condition rating of less than moderate and a relatively low species tolerance to development.

### Ownership:

**Private Tree:** Tree trunk located completely within the property boundary of the subject property.

**Offsite Tree:** Tree trunk located on private property completely outside of the property boundary of the subject property.

**Municipal Tree:** Tree is located on the property of the municipality/region, e.g., within Right-of-Way.

**Shared Tree:** Tree shared between the subject property and adjacent private or public property.

**Recommended Action:** A recommendation of the following three categories is assigned to preserve or remove a tree:

i) The tree's current biological health and structural condition

ii) The anticipated impacts from proposed development

iii) The summary of the previous two categories. Note: Only trees having a recommendation of preserve for both health and structure, and impacts from the proposed development are assigned a final recommendation of preserve.

**P (Preserve)** - Tree has a moderate to high biological health AND moderate to high structural condition, AND is likely to survive impact from the proposed development (if present). The tree is likely to survive for at least 3 to 5 years.

**R (Remove)** - Tree has low biological health, AND/OR low structural condition, AND/OR will not survive the proposed development impacts (if present). The tree is not likely to survive more than 1-3 years.

**DP (Discretionary Preservation)** - In some situations, a tree's preservation decision is not relevant to the development. Thorough tree assessments are required of arborists as a duty of care, but the decision to preserve any tree is entirely that of the tree owner. The recommendation for "Discretionary Preservation" applies in cases where a tree is in poor or dead condition, but its retention does not have any bearing on the development project and so any management decision for that tree shall be executed solely at the owner's discretion.

## APPENDIX 1. TREE INVENTORY AND ASSESSMENT DEFINITIONS

Note: Not all definitions may apply.

### Codes of Damage Descriptions

BA - branch attachment poor  
BB – branches broken  
BC - bark crack  
BD - bark dead  
BI - bark included  
BS - basal trunk sprouts  
CB - crown broken  
CD - crown dieback  
CK - canker (abnormal growth from disease or damage)  
CL - crown live, CL20 - 20% live crown  
CS - crown sprouts  
CT - crown thin (having reduced foliage)  
CU - crown unbalanced  
CV - crown vines  
DW - deadwood  
FB - fungal bodies present  
LC - leaves chlorotic (yellow)  
LD - leaves defoliated  
LP - leader poor/problem  
MB - multi-branched node of limbs on stem  
ML - multiple leaders  
PH - planted high  
PL - planted low  
PP - past pruning problems  
RC - root crown damage/abnormality  
RE - roots exposed  
RG - roots girdling  
SC - stems co-dominant  
SG - stem girdled  
ST - soil on trunk  
TB - trunk bent  
TC - trunk cavity  
TK - trunk crooked  
TD - trunk decay  
TE - trunk base enlarged abnormally  
TF - trunk basal flair lacking / abnormal  
TG - trunk/stem girdling  
TL - trunk lean (L < 5°, (M 5-20°), (H > 20°)  
TM - trunks multiple from at or below ground level  
TS - trunk split  
TT - trunk twisted  
TW - trunk wound  
WW - wet wood

### QUANTIFIED CONDITIONS (defects, diseases)

L (low, minor), M (moderate), H (high, severe)  
E.G. CT(H) = severe crooked trunk  
TD(L) = minor trunk decay  
TF(H) = severely poor basal trunk flare

### CARDINAL COORDINATES (N, S, E, W)

e.g., LN(L-S) = minor lean to the south

### Codes of Recommendations

A - Add mulch  
B - Remove attachments (burlap, wire, stake, guard)  
C - Cable  
F - Fertilize  
L - lower soil level  
M - Monitor  
N - None Needed  
P - Prune  
R - Remove  
S - Soil bulk density (compaction) lower  
V - soil volume (increase)  
W – Water  
~ - Denotes approximate

### Life Expectancy

1 - Less than 5 years  
2 - 5 to 10 years  
3 - 11 to 20 years  
4 - 21 to 50 years  
5 - 51 to 100 years  
6 - 101 to 200 years

**Priority:** An action priority schedule (i.e. general timing) to provide arboricultural treatment(s).

E - Extremely Urgent (within a week)  
U - Urgent (within 3 months)  
H - High (within a year)  
M - Moderate (within 3 years)  
L - Low (little or no action required for at least 5 years)

S:\Forms\Trees\Tree Assessment Definitions\Latest\Brampton

Trees not tagged. Data collected July 15, 2022.

Tree No.	Tree Species	DBH (cm) <sup>1, 2</sup>	Minimum Tree Protection Zone (m) (from outer trunk of tree) <sup>3</sup>	Critical Root Zone (m) (from outer trunk of tree) <sup>3</sup>	Crown Reserve est. (m)	Biological Health (%)	Structural Condition (%)	Overall Condition (%)	Ownership: Private, Offsite, Municipal, Shared	Rec. Action - Condition: Preserve, Remove	Rec. Action - Development: Preserve, Remove	Final Recommendation: Preserve, Remove	Observations/ Tree Preservation Notes	
<b>Tree Inventory Summary</b>		Detailed inventory data follows on subsequent pages.												
<b>Ownership</b>														
									Private Trees	33				
									Offsite Trees	4				
									Municipal Trees	0				
									Shared Trees	1				
									<b>Subtotal</b>	<b>38</b>				
<b>Recommendation Based on Condition</b>														
											Preserve Tree Based on Health & Structure	36		
											Remove Tree Based on Health & Structure	2		
									<b>Subtotal</b>	<b>38</b>				
<b>Recommendation Based on Development</b>														
											Preserve/Transplant Tree Based on Development Impacts	34		
											Remove Tree Based on Development Impacts	4		
									<b>Subtotal</b>	<b>38</b>				
<b>Final Recommendation</b>														
												Final Recommendation: Preserve (P)	32	
												Final Recommendation: Remove due to Condition (RC)	2	
												Discretionary Preservation (DP)	0	
												Final Recommendation: Remove due to Development (RD)	4	
												Final Recommendation: Remove due to Condition and Development (RCD)	0	
									<b>Total</b>	<b>38</b>				

**Notes**

1. DBH (Diameter at breast height): Measurement of tree stem diameter at 1.4 meters above ground.
  2. [ ] Denotes DBH's of Each Stem of Tree with Multiple Stems
  3. Tree Protection Zones, Taken from Specifications for Trees (SS12A) City of Burlington. February, 2013.
- Removal of trees owned by others (e.g. private off-site, municipal or shared/boundary trees) require approval from the owner.  
See Appendix 1 of this report for explanations of data categories and collection methodologies.

Trees not tagged. Data collected July 15, 2022.

1	<i>Acer platanoides</i> Norway Maple	16	2.4	4	6	M	M(H)	Fair	S	P	P	P	Dieback, chlorosis
2	<i>Acer platanoides</i> Norway Maple	46	3	5	14	M	M(H)	Fair	P	P	P	P	Trunk without bark (20%), decay in large branch at 3m high moderate, decay in Crown moderate
3	<i>Tilia cordata</i> Little-Leaf Linden	29	2.4	4	6	M	M(H)	Fair	P	P	P	P	Deadwood in Crown minor moderate
4	<i>Gleditsia triacanthos</i> var. <i>inermis</i> Honey Locust (Thornless)	38	2.4	4	16	M(H)	M(H)	Good	P	P	P	P	
5	<i>Juniperus</i> sp. Juniper	11	2.4	4	2	M	M(H)	Fair	P	P	P	P	Poor pruning
6	<i>Juniperus</i> sp. Juniper	12[11,5]	2.4	4	2	M	M(H)	Fair	P	P	P	P	Codominant stems from base
7	<i>Picea glauca</i> White Spruce	57	3.6	6	10	M	M(H)	Fair	P	P	P	P	Lack of vigour, slime flux, exposed roots, girdling roots, deadwood in Crown moderate, poor pruning
8	<i>Acer platanoides</i> Norway Maple	46	3	5	14	M	M	Fair	P	P	P	P	Girdling roots, decay minor in previous pruning scars, deadwood in Crown minor
9	<i>Tilia cordata</i> Little-Leaf Linden	40	2.4	4	8	M	M(H)	Fair	P	P	P	P	Raised soil level, garden plants around possible decay around base of trunk, deadwood in Crown minor
10	Dead tree	25	2.4	4	8	-	-	-	P	R	P	RC	
11	<i>Juglans nigra</i> Black Walnut	60	3.6	6	16	M	M(H)	Good	P	P	P	P	
12	<i>Malus</i> sp. Apple species	25	2.4	4	8	M(L)	M(L)	Poor	P	R	P	RC	Decay severe at base of trunk, two 15cm branches dead
13	<i>Quercus rubra</i> Red Oak	15	2.4	4	8	M(H)	M(H)	Good	P	P	P	P	
14	<i>Quercus rubra</i> Red Oak	14	2.4	4	6	M(H)	M(H)	Good	P	P	P	P	
15	<i>Quercus rubra</i> Red Oak	5	1.8	1.8	2	M(H)	M(H)	Good	P	P	P	P	
16	<i>Quercus rubra</i> Red Oak	5	1.8	1.8	3	M(H)	M(H)	Good	P	P	P	P	
17	<i>Quercus rubra</i> Red Oak	22	2.4	4	12	M(H)	M(H)	Good	P	P	R	RD	
18	<i>Quercus rubra</i> Red Oak	15	2.4	4	8	M(H)	M(H)	Good	P	P	P	P	
19	<i>Quercus rubra</i> Red Oak	18	2.4	4	10	M(H)	M(H)	Good	P	P	P	P	
20	<i>Acer platanoides</i> Norway Maple	5	1.8	1.8	2	M	M(H)	Fair	P	P	P	P	Chlorosis moderate
21	<i>Acer platanoides</i> Norway Maple	5	1.8	1.8	2	M	M(H)	Fair	P	P	P	P	Chlorosis moderate
22	<i>Acer platanoides</i> Norway Maple	5	1.8	1.8	1	M	M(H)	Fair	P	P	P	P	Chlorosis moderate
23	<i>Acer platanoides</i> Norway Maple	5	1.8	1.8	2	M	M(H)	Fair	P	P	P	P	Chlorosis moderate
24	<i>Acer x Freemanii</i> Freeman Maple	25	2.4	4	10	M(H)	M(H)	Fair	P	P	R	RD	Exposed roots
25	<i>Acer x Freemanii</i> Freeman Maple	30	2.4	4	12	M	M	Fair	P	P	R	RD	Girdling roots

Trees not tagged. Data collected July 15, 2022.

1	<i>Acer platanoides</i> Norway Maple	16	2.4	4	6	M	M(H)	Fair	S	P	P	P	Dieback, chlorosis
26	<i>Acer x Freemanii</i> Freeman Maple	26	2.4	4	12	M	M	Fair	P	P	R	RD	Girdling roots
27	<i>Quercus rubra</i> Red Oak	9	1.8	1.8	5	M(H)	M(H)	Good	P	P	P	P	
28	<i>Acer x Freemanii</i> Freeman Maple	31	2.4	4	14	M	M	Fair	O	P	P	P	Neighbour's tree, girdling roots
29	<i>Picea glauca</i> White Spruce	10	1.8	1.8	3	M(H)	M(H)	Good	P	P	P	P	
30	<i>Picea pungens</i> 'Glauca' Colorado Blue Spruce	16	2.4	4	8	M	M	Fair	O	P	P	P	Neighbour's tree
31	<i>Malus baccata</i> Siberian Crab-Apple	20[14,10,10]	2.4	4	4	M(L)	M	Fair	P	P	P	P	Deadwood in Crown moderate, codominant stems from base, 14 cm branch 40 % bark off with decay
32	<i>Tilia cordata</i> Little-Leaf Linden	10	1.8	1.8	4	M(H)	M(H)	Fair	P	P	P	P	Partially suppressed on one side
33	<i>Acer saccharum</i> ssp. <i>saccharum</i> Sugar Maple	38	2.4	4	16	M	M	Fair	P	P	P	P	
34	<i>Tilia cordata</i> Little-Leaf Linden	44	3	5	12	M(H)	M(H)	Fair	P	P	P	P	Girdling roots
35	<i>Acer platanoides</i> Norway Maple	55	3.6	6	16	M(H)	M	Fair	P	P	P	P	Girdling roots, decay in some previous pruning scars minor, deadwood in Crown minor
36	<i>Acer platanoides</i> Norway Maple	29	2.4	4	12	M	M	Fair	O	P	P	P	Neighbour's tree
37	<i>Picea pungens</i> 'Glauca' Colorado Blue Spruce	25	2.4	4	10	M	M(H)	Fair	O	P	P	P	Lean minor
38	<i>Robinia pseudoacacia</i> Black Locust	16[10,8,7,6,3]	2.4	4	6	M	M(H)	Good	P	P	P	P	Multiple stems

### **APPENDIX 3. LIMITATIONS OF TREE ASSESSMENT**

It is the policy of Aboud & Associates Inc. to attach the following clause regarding limitations. We do this to ensure that developers, agencies, municipalities and owners are clearly aware of what is technically and professionally realistic in retaining trees.

The assessment of the trees presented in this report has been made using accepted arboricultural techniques. These include a visual examination of the above-ground parts of each tree for structural defects, scars, external indications of decay such as fungal fruiting bodies, evidence of insect attack and crown dieback, discoloured foliage, the condition of any visible root structures, the degree and direction of lean (if any), the general condition of the tree(s) and the surrounding site, and the proximity of property and people. Except where specifically noted in the report, none of the trees examined were dissected, cored, probed, or climbed, and detailed root crown examinations involving excavation were not undertaken.

Notwithstanding the recommendations and conclusions made in this report, it must be realized that trees are living organisms, and their health and vigour constantly change over time. They are not immune to changes in site conditions, or seasonal variations in the weather conditions, including severe storms with high-speed winds.

While reasonable efforts have been made to ensure that the trees recommended for retention are healthy no guarantees are offered, or implied, that these trees, or any parts of them, will remain standing. It is both professionally and practically impossible to predict with absolute certainty the behaviour of any single tree or group of trees or their component parts in all circumstances. Inevitably, a standing tree will always pose some risk. Most trees have the potential for failure in the event of adverse weather conditions, and this risk can only be eliminated if the tree is removed.

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 the inspection.

## APPENDIX 4. PROTECTION OF MIGRATORY BIRDS AND DEVELOPMENT

Most species of birds in Ontario are protected under the federal Migratory Birds Convention Act, 1994 (MBCA) or the provincial Fish and Wildlife Conservation Act, 1997. The “incidental take” of migratory bird nests or the disturbance, destruction or taking of the nest of a migratory bird are prohibited under section 6 of the *Migratory Bird Regulations* (MBRs), under the authority of the MBCA. “Incidental take” is defined as the harming of migratory bird nests due to actions such as construction activities. No permit can be issued for the incidental take of migratory birds or their nests as a result of economic activities.

The provincial Fish and Wildlife Conservation Act, 1997, provides protection for some species excluded from the MBCA, including raptors, gamebirds and specially protected birds. Under the Act (Section 7 (1)) a person shall not destroy, take or possess the nest or eggs of a bird that belongs to a species that is wild by nature. With the exception of the nest or eggs of an American crow, brown-headed cowbird, common grackle, house sparrow, red-winged blackbird or starling (Section 7(2)).

Project construction, operation or maintenance activities such as vegetation clearing, tree removal/harvesting, site grubbing, site access, excavation and stockpiling of soil/fill could result in the incidental take of migratory birds or their nests if conducted in migratory bird habitat. Construction activities could also disturb nearby breeding birds and disrupt breeding. It is the proponent’s responsibility to meet the requirements of the MBRs and should projects or activities result in the contravention of the MBRs, prosecution under the MBCA may be initiated.

In order to ensure compliance with the MBRs, Aboud & Associates recommends the following:

1. Activities resulting in the disturbance, destruction or removal of potential breeding bird habitat should, where possible, not take place during the General Nesting Period as outlined by Environment Canada (2014). The General Nesting Period is identified in ‘Environment Canada’s Avoidance Guidelines for Incidental Take’ (2014) as the period between the end of March and August 31 in Nesting Zones C1 and C2 in Ontario, located in the Lower Great Lakes/St. Lawrence Plain (Bird Conservation Region (BCR) 13).
2. When it is absolutely necessary that work must take place during the General Nesting Period, a qualified wildlife biologist must carry out a comprehensive survey to identify areas on the subject property where birds are building nests, incubating eggs, rearing young, etc. All disruptive activities in the nesting area should be halted and identified nests should be protected with a buffer (i.e. nest protection zone/no disturbance zone) appropriate for the species, the disturbance intensity level and the surrounding habitat. Disruptive activities can continue inside the buffered area once the biologist has deemed that fledglings have naturally left the vicinity of the nest.
3. Disruptive activities taking place outside of the General Nesting Period can be preceded by an assessment by a qualified wildlife biologist to ensure that the identification of stick nests of owls and raptors is undertaken in suitable habitat. Most raptor species, with the exception of species protected under the ESA are excluded from the MBCA; as a result, the nesting period for this group is not included under Environment Canada’s general nesting periods.

### References:

Environment Canada. 2014. Incidental take of Migratory Birds in Canada.  
<https://www.ec.gc.ca/paom-itmb/default.asp?lang=En&n=C51C415F-1>. Accessed: April 7, 2015.

Fish and Wildlife Conservation Act, 1997.

Migratory Birds Convention Act, 1994.

- Urban Forestry
- Ecological Restoration Design
- Environmental Impact Studies
- Landscape Architecture
- Expert Testimony and Peer Review

