



# JACKSON ARBORICULTURE INC.

*CONSULTING AND GIS ANALYSIS*

118 Pleasant Ridge Road, Brantford ON, N3R 0B8

905-512-6303, [jeremy@jacksonarbor.ca](mailto:jeremy@jacksonarbor.ca)

## Tree Inventory and Preservation Plan Report

Subject Property:

**134 & 136 Tanbark Road**  
Niagara-on-the-Lake, ON

Prepared For:

**1784510 Ontario Ltd.**  
P.O. Box 870  
Niagara-on-the-Lake, ON L0S 1J0

Prepared By:

**Jackson Arboriculture Inc.**  
118 Pleasant Ridge Road  
Brantford, ON N3R 0B8

30 March 2023

Jackson Arboriculture Inc. Project No. 377

## 1.0 Introduction

Jackson Arboriculture Inc. was retained by 1784510 Ontario Ltd. to complete a Tree Inventory and Preservation Plan report for a property situated at 134 and 136 Tanbark Road in the Town of Niagara-on-the-Lake, Ontario, hereby referred to as the subject property. It is understood that a development application will be filed with the Town for the construction of a residential subdivision.

This study has been completed in accordance with the Town of Niagara-on-the-Lake private tree by-law No. 5139-19. The by-law regulates the removal of trees 12.5 cm in diameter and larger.

## 2.0 Methodology

At the onset of the project the scope of work was coordinated with the client and the consulting team. Prior to conducting a site visit, the topographic survey of the subject property and current aerial photography were overlaid, utilizing geographic information software, for use on site during the completion of the tree inventory. The tree locations, the topographic survey and the site plan were then overlaid and a tree preservation analysis was completed to determine the impacts to each tree included in the inventory.

### 2.1 Tree Inventory

A site visit was conducted on the 22<sup>nd</sup> of March 2023 to complete the tree inventory. All trees 10 cm in diameter and larger situated on subject property, on neighbouring property within 6 m and within the road allowance were included in the tree inventory. A visual assessment was completed on each tree included in the inventory and the following information is provided in the tree inventory table (Table 1):

- **Tree #:** A number assigned to each tree corresponding to the tree inventory and the Tree Preservation Plan (Sheet 1).
- **Species:** Common and scientific (Latin) species names.
- **DBH:** The trunk diameter at breast height, measured in centimeters at 1.4 m from the ground.
- **Condition:** The health of the tree considering the trunk integrity, the crown structure and the crown vigour; each rated as poor, fair or good. The condition ratings are based on the signs, symptoms and defects exhibited by each tree, considering the conditions in which it is growing.
- **Dripline:** The distance in meters from the stem to the tips of the live branches.
- **Location:** The property where the tree is situated.
- **Comments:** Any additional notes relevant to the tree's health or growing conditions.
- **Recommendation:** The recommended removal or preservation of each tree based on the impact assessment.

The trees included in the inventory are identified with numbers 1-61 and were located using a tablet computer with a GPS receiver.

Where numerous trees reside in close proximity to each other and their locations could be not determined utilising the tablet they were inventoried as a “tree group”. Tree groups are identified with the letter “G” prefix prior to the tree number (i.e. G7).

All trees 10 cm in diameter and larger situated within a tree group were tallied utilizing the following parameters:

**Species:** Common and scientific species names.

**Size Class:** Trees were tallied by diameter classes of 10-19 cm, 20-29 cm, 30-39 cm, 40-49 cm, 50-59 cm, etc.

**Condition:** Trees were classified as either Good, Fair or Poor.

Refer to Appendix A for the complete tree group tally sheets.

## 2.2 Impact Assessment

A tree preservation analysis was completed on each tree included in the inventory considering the impacts from the proposed development and many other factors including, but not limited to, tree condition, species, DBH and the existing site conditions. The impacts from the proposed development will occur where tree roots conflict with construction machinery during pre-grading and construction.

During the tree preservation analysis the dripline was utilized to determine the impacts to the trees included in the tree inventory. Where considerable encroachment is required within the dripline tree removal may be required.

## 3.0 Existing Conditions

The subject property is currently occupied by manicured lawn and tree resources. A gravel driveway providing access to 39 Dyck Lane traverses the property along the northern property boundary. The property is bound by residential development to the north, east and west, and Hickory Avenue to the south.

## 4.0 Tree Inventory Results

The results of the tree inventory indicate that a total of 57 trees and 4 tree groups reside on subject property, on neighbouring property within 6 m and in the road allowances. The trees included in the inventory appear to be comprised of landscape plantings and naturally occurring trees.

The trees included in the inventory are comprised of the following species:

- black walnut (*Juglans nigra*),
- white mulberry (*Morus alba*),
- Austrian pine (*Pinus nigra*),

- weeping willow species (*salix sp.*),
- pear species (*Pyrus sp.*),
- callery pear (*Pyrus calleryana*),
- columnar English oak (*Quercus robur* 'Fastigiata'),
- eastern white cedar (*Thuja occidentalis*),
- eastern cottonwood (*Populus deltoides*),
- European larch (*Larix decidua*),
- Manitoba maple (*Acer negundo*),
- copper beech (*Fagus sylvatica f. purpurea*),
- hybrid butternut (*Juglans x.*),
- weeping nootka cypress (*Chamaecyparis nootkatensis*),
- blue spruce (*Picea pungens*),
- apple species (*Malus sp.*),
- Norway Maple (*Acer platanoides*) and
- Honey locust cultivar (*Gleditsia triacanthos var. 'inermis'*).

No rare, threatened or endangered tree species were documented in the tree inventory. Refer to Table 1 for the complete tree inventory and Sheet 1 for the tree locations.

## 5.0 Proposed Development

The proposed development includes the construction of a residential subdivision. Access to the subdivision is proposed from Kenmir Avenue to the south. A pedestrian trail is proposed to connect the subdivision with Tamarack Road to the east.

## 6.0 Discussion

The following sections outline the tree removal requirements, tree preservation opportunities and tree protection recommendations.

### 6.1 Tree Removal

The removal of the following trees and tree groups will be required to accommodate the proposed development:

- G1, G7, 9-20, 28, 29, a portion of G30, 32, 34-47, 50-53 and 55-60.

All of the trees identified for removal appear to reside on subject property.

## 6.2 Tree Preservation

The preservation of the following trees will be possible with the use of appropriate tree protection measures:

- 2-6, 8, 21-27, the majority of G30, G31, 33, 48, 49, 54 and 61.

Tree protection measures must be implemented prior to the commencement of pre-grading to ensure that the trees identified for preservation are not damaged by the proposed development activities.

Encroachment within the dripline of tree groups G30, G31 and tree 33 will be required to accommodate the proposed pedestrian trail. Considering that the area of encroachment is comprised of a compacted gravel driveway it is anticipated that few tree roots will reside within the area of encroachment. As such, there should be no impacts to tree groups G30, G31 or tree 33 by the proposed encroachment. If any tree roots are exposed during excavation they must be pruned by a Certified Arborist in accordance with good arboricultural practice to ensure that the tree roots are not damaged.

Tree protection fence must be installed at the driplines of the trees identified for preservation unless noted otherwise in this report and on Sheet 1. Refer to Sheet 1 for the prescribed tree protection fence locations, the tree protection fence detail and additional tree protection plan notes.

## 6.3 Tree Protection Recommendations

The following recommendations are made in attempts to reduce the impacts to the trees identified for preservation:

- Tree protection fence must be installed at the dripline for trees identified for preservation prior to the commencement of pre-grading, unless noted otherwise in this report and on Sheet 1.
- Once tree protection fence has been installed it must not be moved, relocated or altered in any way (unless repairing fallen fence etc.) for the duration of the construction period.
- No intrusion into an area identified on Sheet 1 as a tree preservation zone (TPZ) is allowed at anytime during construction.
- No storage of machinery, construction debris, materials, waste or any other items is allowed within a TPZ.
- Any tree branches or roots that conflict with proposed development must be pruned by a Certified Arborist in accordance with good arboricultural practice.
- Tree protection fencing should be inspected by a Certified Arborist prior to and during construction to ensure that the fencing remains intact and in good repair throughout the stages of development.

## 7.0 Summary

Jackson Arboriculture Inc. was retained by 1784510 Ontario Ltd. to complete a Tree Inventory and Preservation Plan report for a property situated at 134 and 136 Tanbark Road in the Town of Niagara-on-the-Lake, Ontario. A tree inventory was conducted and an impact assessment was completed in the context of the proposed development plan.

The tree inventory documented a total of 57 trees and 4 tree groups situated on subject property, on neighbouring property within 6 m and within the road allowance. The results of the impact assessment indicate that the removal of 39 trees, 2 tree groups and a small portion of 1 tree group will be required to accommodate the proposed development.

Respectfully submitted,  
**Jackson Arboriculture Inc.**

*Jeremy Jackson*

Jeremy Jackson, H.B.Sc.,  
ISA Certified Arborist #ON-1089A  
GIS Analyst

## Limitations of Assessment

It is our policy to attach the following limitations of assessment to ensure that the client, municipalities and agencies are fully aware of what is technically and professionally realistic when visually assessing and 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 attack by insects, discoloured foliage, the condition of any visible root structures, the degree and direction of any lean, the general condition of the trees and the surrounding site, and the proximity of property and people.

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. 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 under adverse weather conditions, and the risk can only be eliminated if the tree is removed.

Although every effort has been made to ensure that this assessment is reasonably accurate, trees should be re-assessed periodically. The assessment presented in this report is valid as the time of the inspection.

**Table 1. Tree Inventory**

Location: 134 & 136 Tanbark Rd, NOTL

Date: 22 March 2023 Surveyors: JJJ

Tree #	Common Name	Scientific Name	DBH	TI	CS	CV	DL	Location	Comments	Recom.
G1	Refer to Appendix A							Subject Property		Remove
2	Black Walnut	<i>Juglans nigra</i>	~10	G	G	G	1	Neighbouring		Preserve
3	Black Walnut	<i>Juglans nigra</i>	~15, 13	F	FG	G	3	Neighbouring	Union at ground	Preserve
4	Black Walnut	<i>Juglans nigra</i>	~14	G	G	G	3	Neighbouring	Union at 1.5 m	Preserve
5	White Mulberry	<i>Morus alba</i>	~15, 12, 10	F	FG	G	3	Neighbouring	Union at ground	Preserve
6	Austrian Pine	<i>Pinus nigra</i>	~25	G	G	G	3	Neighbouring		Preserve
G7	Refer to Appendix A							Subject Property	Plantation	Remove
8	Weeping Willow species	<i>Salix sp.</i>	~35, 40, 20	FG	G	G	7	Neighbouring	Union at 0.4 m	Preserve
9	Pear species	<i>Pear sp.</i>	30	F	G	G	3	Subject Property	Stem wound with heart rot	Remove
10	Pear species	<i>Pear sp.</i>	20, 16	F	F	F	3	Subject Property	Union at 0.8 m with heart rot	Remove
11	Pear species	<i>Pear sp.</i>	17, 13	F	FG	FG	3	Subject Property	Union at ground	Remove
12	Pear species	<i>Pear sp.</i>	22, 18	F	F	F	3	Subject Property	Union at 0.3 m with stem wound	Remove
13	Pear species	<i>Pear sp.</i>	14, 15	F	FG	FG	3	Subject Property	Union at 0.4 m	Remove
14	Pear species	<i>Pear sp.</i>	14, 10	F	F	F	2	Subject Property	Union at 1 m, stem wound at flare	Remove
15	Pear species	<i>Pear sp.</i>	19, 15	F	FG	FG	2	Subject Property	Union at 0.4 m	Remove
16	Pear species	<i>Pear sp.</i>	23, 25	F	F	F	3	Subject Property	Union at 1 m, vine competition	Remove
17	Pear species	<i>Pear sp.</i>	34	F	F	F	3	Subject Property	Heavy vine competition	Remove
18	Pear species	<i>Pear sp.</i>	17	FG	G	G	2	Subject Property	Stem wound at flare	Remove
19	Pear species	<i>Pear sp.</i>	14	F	F	F	3	Subject Property	Heavy vine competition	Remove
20	Pear species	<i>Pear sp.</i>	45	F	F	F	3	Subject Property	Union at 1.4 m, heavy vine competition	Remove
21	Callery Pear	<i>Pyrus calleryana</i>	~10	G	G	G	2	Neighbouring		Preserve
22	Callery Pear	<i>Pyrus calleryana</i>	~10	G	G	G	2	Neighbouring		Preserve
23	Callery Pear	<i>Pyrus calleryana</i>	~10	G	G	G	2	Neighbouring		Preserve
24	Callery Pear	<i>Pyrus calleryana</i>	~10	G	G	G	2	Neighbouring		Preserve
25	Columnar English Oak	<i>Quercus robur</i> "Fastigiata"	~10	G	G	G	2	Neighbouring		Preserve
26	Eastern White Cedar	<i>Thuja occidentalis</i>	~20	G	G	G	2	Neighbouring		Preserve
27	Eastern Cottonwood	<i>Populus deltoides</i>	24	G	G	G	3	Neighbouring		Preserve
28	European Larch	<i>Larix decidua</i>	12	G	G	G	3	Subject Property		Remove
29	Manitoba Maple	<i>Acer negundo</i>	~18	PF	F	G	3	Subject Property	Heavy crook - stem resting on top of board fence	Remove
G30	Eastern White Cedar	<i>Thuja occidentalis</i>	10-20, avg: ~15	G	G	G	2	Subject Property	Hedge, 15 trees >10 cm	Preserve



Tree #	Common Name	Scientific Name	DBH	TI	CS	CV	DL	Location	Comments	Recom.
G31	Eastern White Cedar	<i>Thuja occidentalis</i>	10-20, avg: ~15	G	G	G	2	Neighbouring	Hedge, 11 trees >10 cm	Preserve
32	Copper Beech	<i>Fagus sylvatica f. purpurea</i>	45	G	G	G	4	Subject Property	Union at 1 m with seam	Remove
33	Hybrid Butternut	<i>Juglans x.</i>	13	G	G	G	3	Subject Property	Notched bud scars, smooth bark, elongated lenticels	Preserve
34	Weeping Nootka Cypress	<i>Chamaecyparis nootkatensis</i>	18, 17, 11	F	FG	G	3	Subject Property	Union at ground	Remove
35	Blue Spruce	<i>Picea pungens</i>	~17	G	G	G	2	Subject Property		Remove
36	Blue Spruce	<i>Picea pungens</i>	15	G	FG	FG	2	Subject Property	Dead leader	Remove
37	Blue Spruce	<i>Picea pungens</i>	21	G	G	G	2	Subject Property		Remove
38	Blue Spruce	<i>Picea pungens</i>	20	G	G	G	2	Subject Property		Remove
39	Blue Spruce	<i>Picea pungens</i>	19	G	G	G	2	Subject Property		Remove
40	Pear species	<i>Pear sp.</i>	38	G	G	G	5	Subject Property		Remove
41	Pear species	<i>Pear sp.</i>	32	G	FG	G	5	Subject Property	Crown bowed north	Remove
42	Pear species	<i>Pear sp.</i>	32, 16	G	FG	G	5	Subject Property	Union at ground	Remove
43	Pear species	<i>Pear sp.</i>	19, 25	G	FG	G	5	Subject Property	Union at ground	Remove
44	Pear species	<i>Pear sp.</i>	19, 13	G	FG	G	4	Subject Property	Union at ground	Remove
45	Pear species	<i>Pear sp.</i>	34	G	G	G	5	Subject Property		Remove
46	Pear species	<i>Pear sp.</i>	23	G	G	G	4	Subject Property		Remove
47	Pear species	<i>Pear sp.</i>	31	G	G	G	4	Subject Property		Remove
48	Apple species	<i>Malus sp.</i>	~20, 14	G	G	G	3	Neighbouring	Unions at 0.4 and 1.2 m	Preserve
49	Norway Maple	<i>Acer platanoides</i>	~50	G	FG	G	5	Neighbouring	Pruning wounds	Preserve
50	Hybrid Butternut	<i>Juglans x.</i>	28, 28	FG	G	G	6	Subject Property	Union at ground, some sooty canker, notched bud scars, elongated lenticels, coarse hairy twig	Remove
51	Manitoba Maple	<i>Acer negundo</i>	38	F	FG	G	7	Subject Property	Stem wound, light lean	Remove
52	Black Walnut	<i>Juglans nigra</i>	33	G	G	G	5	Subject Property		Remove
53	Black Walnut	<i>Juglans nigra</i>	36	G	G	G	5	Subject Property		Remove
54	White Mulberry	<i>Morus alba</i>	~10, 8, 9	F	G	G	3	Neighbouring		Preserve
55	Manitoba Maple	<i>Acer negundo</i>	54	F	F	F	8	Subject Property	Broken branches, stem wound	Remove
56	Black Walnut	<i>Juglans nigra</i>	31	G	G	G	5	Subject Property	Bowed crown - understory	Remove
57	Black Walnut	<i>Juglans nigra</i>	44	G	G	G	6	Subject Property		Remove
58	Black Walnut	<i>Juglans nigra</i>	39	G	G	G	4	Subject Property		Remove
59	Black Walnut	<i>Juglans nigra</i>	23	G	G	G	4	Subject Property		Remove
60	Manitoba Maple	<i>Acer negundo</i>	10, 8	P	PF	PF	2	Subject Property	Coppice growth from stump, grapevine competition	Remove

Tree #	Common Name	Scientific Name	DBH	TI	CS	CV	DL	Location	Comments	Recom.
61	Honey Locust cultivar	<i>Gleditsia triacanthos</i> var. 'inermis'	7	G	G	G	1.5	ROW		Preserve

**Table Legend**

- DBH Diameter at Breast Height (cm)
- TI Trunk Integrity (G, F, P)
- CS Crown Structure (G, F, P)
- CV Crown Vigor (G, F, P)
- DL Dripline (m)
- Recom. Recommendation (preserve/remove)
- G Good
- F Fair
- P Poor
- ~ Estimate

## Appendix A – Tree Group Tally Sheets

Group #	Species	10-19 cm			20-29 cm			30-39 cm			40-49 cm			50-59 cm			Total:
		G	F	P	G	F	P	G	F	P	G	F	P	G	F	P	
G1	Manitoba Maple ( <i>Acer negundo</i> )		1										1			1	3
	Black Walnut ( <i>Juglans nigra</i> )	9	2		8	1		2			1				1		24
	Green Ash ( <i>Fraxinus pennsylvanica</i> )			2			3			2							7
	Red Oak ( <i>Quercus rubra</i> )							1									1
	Basswood ( <i>Tilia americana</i> )	1				1			1								3
	Eastern Cottonwood ( <i>Populus deltoides</i> )	2															2
	<b>Total:</b>	12	3	2	8	2	3	3	1	2	1	0	1	0	1	1	40

Group #	Species	10-19 cm			20-29 cm			30-39 cm			40-49 cm			50-59 cm			Total:
		G	F	P	G	F	P	G	F	P	G	F	P	G	F	P	
G7	White Spruce ( <i>Picea glauca</i> )	24	15	3	23	3											68
	Blue Spruce ( <i>Picea pungens</i> )			1	16	2		2									21
	Norway Spruce ( <i>Picea abies</i> )				10			3									13
	White Mulberry ( <i>Morus alba</i> )	13	2		1												16
	Black Walnut ( <i>Juglans nigra</i> )	6			2												8
	Austrian Pine ( <i>Pinus nigra</i> )				1												1
	<b>Totals:</b>	43	17	4	53	5	0	5	0	0	0	0	0	0	0	0	127