

**Tree Inventory and Preservation Plan Report:
Ravine Rehabilitation Stewardship Efforts
2570 – 2590 Argyle Road
Mississauga, Ontario**

prepared for

**STUDIO tla
20 Champlain Boulevard, Suite 102
Toronto, Ontario M3H 2Z1**

prepared by



PO Box 1267 Lakeshore W PO
146 Lakeshore Road West
Oakville ON L6K 0B3
289.837.1871
www.kuntzforestry.ca
consult@kuntzforestry.ca

12 October 2021

KUNTZ FORESTRY CONSULTING Inc. Project P2950

Introduction

Kuntz Forestry Consulting Inc. was retained by STUDIO tla to complete a Tree Inventory and Preservation Plan in support of the ravine rehabilitation stewardship efforts for the ravine area located adjacent to the subject property at 2570 – 2590 Argyle Road in the City of Mississauga, Ontario. The subject property is located southeast of Dundas Street West, on the southwest side of Argyle Road, within a residential area. The ravine area borders Mary Fix Creek at the southwest limit of the subject property. A separate Arborist Report respecting the overall development application was prepared by others (Ferris + Associates Inc.). This report respects recommended tree/shrub removals for ravine stewardship efforts only.

The work plan for this tree preservation study included the following:

- Prepare inventory of the tree and shrub resources within the ravine area of the subject property;
- Identify and recommend removal of invasive species of trees and shrubs;
- Document the findings in a Tree Inventory and Preservation Plan Report.

The results of the evaluation are provided below.

Methodology

Trees and shrubs within the ravine area of the subject property were identified in the inventory. Trees and shrubs were located using the topographic survey provided for the subject property and measurements taken from known points in-field. The City of Mississauga requires dripline as the limit of protection and as such the dripline of each tree and shrub was measured in field. Trees and shrubs were identified as Trees 100 – 138, T31, T32, and T35 – T37. Polygons (groups of trees / shrubs) were denoted with a “P” before their identification number.

Trees T31, T32, and T35 – T37 were originally assessed by Ferris + Associates Inc. in the Tree Removal Inventory for 2570 – 2590 Argyle Road, Mississauga, dated 23 July 2019 and updated 3 September 2020. Recommendations for tree removal and preservation for Trees T31, T32, and T35 – T38, as it relates to the proposed development, were made by Ferris + Associates Inc.

Tree and shrub resources were assessed utilizing the following parameters:

Tree # - number assigned to tree that corresponds to Figure 1.

Species - common and botanical names provided in the inventory table.

DBH - diameter (centimeters) at breast height, measured at 1.4 metres above the ground.

Condition - condition of tree considering trunk integrity, crown structure, crown vigour, and root zone environment. Condition ratings include poor (P), fair (F) and good (G).

Dripline – radius (metres) of the tree crown, measured from the stem to the outer branches of the crown.

Crown Dieback – percentage of crown that has died.

Comments - additional relevant detail.

Refer to Figure 1 for the tree and shrub locations and Table 1 for the results of the tree inventory.

Existing Site Conditions

Two 12-storey residential buildings, associated driveways, parking areas, and a ravine area currently exist on the subject property. The ravine area of the subject property is currently an unmanaged, riparian feature. Tree and shrub resources within the ravine area exist in the form of natural regeneration. Refer to Figure 1 for the existing site conditions.

Tree Resources

The tree inventory was conducted on 4 October 2021. The inventory documented 36 trees / shrubs and seven tree / shrub polygons within the ravine area of the subject property. Refer to Table 1 for the detailed inventory and Figure 1 for the location of trees and shrubs reported in the inventory.

Tree and shrub resources were comprised of Apple species (*Malus sp.*), Basswood (*Tilia americana*), Bur Oak (*Quercus macrocarpa*), Cherry species (*Prunus sp.*), Common Buckthorn (*Rhamnus cathartica*), Manitoba Maple (*Acer negundo*), Morrow Honeysuckle (*Lonicera morrowii*), Norway Maple (*Acer platanoides*), Prickly Ash (*Xanthoxylum americanum*), Dogwood species (*Cornus sp.*), Siberian Elm (*Ulmus pumila*), White Ash (*Fraxinus americana*), and White Elm (*Ulmus americana*).

Proposed Development

The proposed development includes the demolition of the existing parking area at the southwest end of the property and the construction of a new multi-level residential building with subsurface parking. The ravine area is subject to ravine rehabilitation stewardship efforts (i.e. removal of invasive / dead / poor condition trees and shrubs). Refer to Figure 1 for the proposed site plan as it relates to the ravine area.

Discussion

The following sections provide a discussion and analysis of tree impacts, and tree preservation relative to the proposed development, existing conditions, and ravine rehabilitation stewardship efforts.

Development Impacts / Tree and Shrub Removal

The removal of three trees within the subject area is required to accommodate the proposed development, as identified in the Ferris + Associates Inc. report, including Trees T31, T32, and T35.

A total of ten trees / shrubs and six tree / shrub polygons are considered invasive species and as such, their removal is recommended as part of the ravine rehabilitation stewardship efforts. The recommended removals include Trees 104, 105, 115, 117, 118, 122 – 125, and 133, and polygons 102, 103, 107, 129, 131, and 134. Several dead trees that were not included in the inventory but area noted on Figure 1 are also recommended for removal as part of the ravine rehabilitation stewardship efforts.

Trees 117, 122, 133, T31, T32, and T35 are larger than 15cm DBH and as such, are protected by the City Private Tree By-law.

Refer to Figure 1 for the proposed tree and shrub removals.

Tree Preservation

The preservation of the remaining 25 trees / shrubs including Trees 100, 101, 106, 108 – 114, 116, 119 – 121, 126 – 128, 130, 132, 135 – 138, T36, and T37 will be possible during development and as part of the Ravine Stewardship efforts as indicated on Figure 1. Ferris + Associates Inc. determined that T36 and T37 can be preserved with respect to the proposed development. Tree protection measures as they relate to the proposed development are specified within the Ferris + Associates Inc. report. All restoration activities including invasive species management and planting should occur by hand within the ravine area to avoid impacts to trees and shrubs identified for preservation.

Summary and Recommendations

Kuntz Forestry Consulting Inc. was retained by STUDIO tla to complete a Tree Inventory and Preservation Plan in support of the ravine rehabilitation stewardship efforts for the ravine area located on the subject property at 2570 – 2590 Argyle Road in the City of Mississauga, Ontario. A tree inventory was conducted and reviewed in the context of the proposed site plan.

The findings of the study indicate a total of 36 trees / shrubs and seven tree / shrub polygons within the ravine area of the subject property. The removal of ten trees / shrubs and six tree / shrub polygons is recommended as part of the ravine rehabilitation stewardship efforts. The removal of three trees is required to accommodate the proposed development. The remaining 25 trees and shrubs can be preserved in the context of the development and the ravine stewardship efforts.

The following recommendations are suggested to minimize impacts to trees identified for preservation. Refer to Figure 1 for tree protection fencing locations and general Tree Protection Plan Notes and tree preservation fence details.

- Tree protection barriers and fencing should be erected at locations as prescribed on Figure 1. All tree protection measures should follow the guidelines as set out in the tree preservation plan notes and the tree preservation fencing detail.
- No construction activity including surface treatments, excavations of any kind, storage of materials or vehicles, unless specifically outlined above, is permitted within the area identified on Figure 1 as a tree protection zone (TPZ) at any time during or after construction.
- Branches and roots that extend beyond prescribed tree protection zones that require pruning must be pruned by a qualified Arborist or other tree professional. All pruning of tree roots and branches must be in accordance with Good Arboricultural Standards.
- Site visits, pre, during and post construction is recommended by either a certified consulting arborist (I.S.A.) or registered professional forester (R.P.F.) to ensure proper utilization of tree protection barriers. Trees should also be inspected for damage incurred during construction to ensure appropriate pruning or other measures are implemented.

Respectfully Submitted,

Kuntz Forestry Consulting Inc.

Celine Batterink

Celine Batterink, H.B.Sc. Ecology
Associate Ecologist, ISA Certified Arborist #ON1546-A
Email: cbatterink@kuntzforestry.ca
Phone: 289-837-1871 ext. 18

Kaylee Harper

Kaylee Harper, B.Sc.Env. Ecology
Ecologist, ISA Certified Arborist #ON-2749A
Email: kaylee.harper@kuntzforestry.ca
Phone: 289-837-1871 ext. 24

Limitations of Assessment

Only the tree(s) identified in this report were included in the inventory. The assessment of the trees presented in this report has been made using accepted arboricultural techniques. These may include a visual examination taken from the ground of all the above-ground parts of the tree for structural defects, scars, external indications of decay such as fungal fruiting bodies, evidence of attack by insects, discoloured foliage, the condition of any visible root structures, the degree of lean (if any), the general condition of the trees and the identification of potentially hazardous trees or recommendations for removal (if applicable). Where trees could not be directly accessed (ie. due to obstructions, and/or on neighbouring properties), trees were assessed as accurately as possible from nearby vantage points.

Locations of trees provided in the report are determined as accurately as possible based on the best information available. If official survey information is not provided, tree location in the report may not be exact. In this case, if trees occur on or near property boundaries, an official site survey may be required to determine ownership utilizing specialized survey protocol to gain precise location.

Furthermore, recommendations made in this report are based on the site plans that have been provided at the time of reporting. These recommendations may no longer be applicable should changes be made to the site plan and/or grading, servicing, or landscaping plans following report submission.

Notwithstanding the recommendations and conclusions made in this report, it must be recognized that trees are living organisms, and their health and vigor constantly change over time. They are not immune to changes in site conditions or seasonal variations in the weather conditions. Any tree will fail if the forces applied to the tree exceed the strength of the tree or its parts.

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

Table 1. Tree Inventory

Tree #	Common Name	Scientific Name	DBH	TI	CS	CV	CDB	DL	Comments	Action
100	Cherry species	<i>Prunus sp.</i>	15	FG	G	G		4	Lean (L), crook (L)	Preserve
101	Basswood	<i>Tilia americana</i>	<5	FG	FG	G		2	6 stems, union at base	Preserve
P102	Common Buckthorn	<i>Rhamnus cathartica</i>	<5	FG	FG	G		1.5	~ 10 stems, lean (L)	Remove (Invasive)
P103	Common Buckthorn	<i>Rhamnus cathartica</i>	~3 - 9	FG	FG	FG		2.5	~ 7 trees, average DBH 4cm	Remove (Invasive)
104	Morrow Honeysuckle	<i>Lonicera morrowii</i>	<5	G	G	G		1	Mutistem, union at base	Remove (Invasive)
105	Morrow Honeysuckle	<i>Lonicera morrowii</i>	<5	G	G	G		1	Mutistem, union at base	Remove (Invasive)
106	Prickly Ash	<i>Xanthoxylum americanum</i>	<5	G	G	G		1		Preserve
P107	Common Buckthorn	<i>Rhamnus cathartica</i>	~3 - 11	FG	FG	FG		1.5	~ 28 trees, average DBH 6cm	Remove (Invasive)
108	Basswood	<i>Tilia americana</i>	15, 4	FG	FG	G		3	Union at base, sweep (L)	Preserve
109	Cherry species	<i>Prunus sp.</i>	16.5	FG	G	G		3	Lean (L), crook (L)	Preserve
110	Bur Oak	<i>Quercus macrocarpa</i>	8	FG	G	G		1.5	Bow (L)	Preserve
111	Basswood	<i>Tilia americana</i>	10	FG	G	G		1.5	Sweep (L)	Preserve
112	Apple species	<i>Malus sp.</i>	~12.5	F	FG	F		4	Epicormic branching (H), bow (M)	Preserve
113	Bur Oak	<i>Quercus macrocarpa</i>	11.5	FG	G	FG		3	Bow (L), epicormic branching (L)	Preserve
114	Bur Oak	<i>Quercus macrocarpa</i>	10.5	FG	FG	FG		2	Bow (L), epicormic branching (L), asymmetrical crown (L)	Preserve
115	Morrow Honeysuckle	<i>Lonicera morrowii</i>	<5	F	F	F	35	1.5	Deadwood (M), multistem	Remove (Invasive)
116	Apple species	<i>Malus sp.</i>	10.5, 10	F	FG	G		2.5	Union at base, bow (M) in one stem, bow (L) in one stem	Preserve
117	Manitoba Maple	<i>Acer negundo</i>	15.5	P	PF	P	80	3	V-union at 0.5m with included bark, one stem dead, fruiting bodies, deadwood (H)	Remove (Invasive)
118	Common Buckthorn	<i>Rhamnus cathartica</i>	~3 - 10	FG	FG	FG		2	~ 12 trees	Remove (Invasive)
119	Bur Oak	<i>Quercus macrocarpa</i>	10	FG	G	G		2.5	Bow (L)	Preserve
120	Bur Oak	<i>Quercus macrocarpa</i>	10.5	FG	G	G		2.5	Crook (L)	Preserve
121	Apple species	<i>Malus sp.</i>	9.5, 11	FG	FG	FG		4	Union at base, epicormic branching (L), asymmetrical crown (L)	Preserve
122	Norway Maple	<i>Acer platanoides</i>	16	F	FG	G		4	Asphalt in root zone, sweep (L), crook (L), asymmetrical crown (L)	Remove (Invasive)
123	Norway Maple	<i>Acer platanoides</i>	12	F	FG	G		3	Sweep (L), crook (L), stem wounds (L)	Remove (Invasive)

Tree Inventory and Preservation Plan Report: Ravine Rehabilitation Stewardship Efforts
2570 – 2590 Argyle Road, Mississauga, ON

124	Manitoba Maple	<i>Acer negundo</i>	12	F	FG	FG		2	Bow (L), epicormic branching (L), fruiting bodies	Remove (Invasive)
125	Norway Maple	<i>Acer platanoides</i>	7	FG	G	G		2	Lean (L)	Remove (Invasive)
126	Apple species	<i>Malus sp.</i>	13	FG	FG	G		2.5	Sweep (M)	Preserve
127	Apple species	<i>Malus sp.</i>	~12, 8	FG	F	F		2	Union at base, seam (L), bow (L), epicormic branching (M)	Preserve
128	Dogwood species	<i>Cornus sp.</i>	<5	PF	PF	G		2	Bow (H)	Preserve
P129	Common Buckthorn	<i>Rhamnus cathartica</i>	~3 - 11	FG	FG	FG		2	~ 11 trees, average DBH 9cm	Remove (Invasive)
130	Siberian Elm	<i>Ulmus pumila</i>	18.5, 18	FG	G	G		3	Union at 1m (co-dominance)	Preserve
P131	Common Buckthorn	<i>Rhamnus cathartica</i>	~ 5 - 14	FG	FG	FG		2	~ 6 trees, average DBH 5cm	Remove (Invasive)
132	White Elm	<i>Ulmus americana</i>	14	G	FG	F	20	2	Deadwood (L)	Preserve
133	Norway Maple	<i>Acer platanoides</i>	22	FG	G	G		4	Union at 2m	Remove (Invasive)
P134	Common Buckthorn	<i>Rhamnus cathartica</i>	~3 - 10	FG	FG	FG		2	~ 18 trees, average DBH 5cm	Remove (Invasive)
135	Cherry species	<i>Prunus sp.</i>	14.5	FG	FG	FG		2	Sweep (L), broken branches (L)	Preserve
P136	White Ash	<i>Fraxinus americana</i>	~3 - 8	FG	FG	F		1.5	4 trees, Emerald Ash Borer, average DBH 6cm	Preserve
137	White Ash	<i>Fraxinus americana</i>	11	G	FG	FG		2	Emerald Ash Borer	Preserve
138	White Ash	<i>Fraxinus americana</i>	10	FG	FG	FG		2	Emerald Ash Borer	Preserve
T31	Siberian Elm	<i>Ulmus pumila</i>	23.5, 27	F	PF	F		3	Lean (L), V-union at 0.5m fused to 1m, epicormic branching (M), pruning wounds (L), poor form (L)	Remove (Development)
T32	Siberian Elm	<i>Ulmus pumila</i>	32	F	PF	F		3	Lean (L), broken branches (M), epicormic branching (H), pruning wounds (L), poor form (L)	Remove (Development)
T35	Siberian Elm	<i>Ulmus pumila</i>	41, 36.5	PF	F	F	15	6	Union at 1m, two stems pruned at 1m, one stem remaining, poor form (L), bow (M), deadwood (L)	Remove (Development)
T36	Bur Oak	<i>Quercus macrocarpa</i>	56, 58	F	F	FG		7	V-union at 1.2m with included bark (co-dominance), one stem broken in canopy, epicormic branching (L)	Preserve
T37	Siberian Elm	<i>Ulmus pumila</i>	53	F	FG	F	10	5	Lean (L), deadwood (L), stem wounds (L), epicormic branching (M), union at 1.5m and 2.5m	Preserve

Codes		
DBH	Diameter at Breast Height	(cm)
TI	Trunk Integrity	(G, F, P)
CS	Crown Structure	(G, F, P)
CV	Crown Vigor	(G, F, P)
CDB	Crown Die Back	(%)
DL	Dripline in radius	(m)
~ = estimate; (VL) = very light; (L) = light; (M) = moderate; (H) = heavy; (VH) = very heavy		