Tree Inventory and Preservation Plan Report Florence and Wyandotte Subdivision Wyandotte Street East, Windsor, ON

Prepared For:

Goodban Ecological Consulting Inc. 879 Cabot Trail Milton, ON L9T 3W4

Prepared By:



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Project P129

Introduction

Jackson Arboriculture Inc. was retained by Goodban Ecological Consulting Inc. to complete a Tree Inventory and Preservation Plan report in support of a development application for the Florence and Wyandotte Subdivision situated in Windsor, Ontario. The subject property is situated west of Florence Drive on the south side of Wyandotte Street East.

Methodology

The following work plan was utilized during the completion of this study:

- Prepare field mapping (overlay topo survey/aerial photography);
- Complete a site visit to collect tree inventory information for all trees 15 cm in diameter and larger situated on subject property, on neighbouring property within 6 m of the subject site and in the road allowance;
- Data entry, mapping and completion of preservation planning analysis for trees included in the tree inventory; and,
- Document the findings in a Tree Inventory and Preservation Plan report.

Tree Inventory

The tree inventory was completed on the 16th of May 2018. All trees included in the inventory were visually assessed for condition utilizing the following parameters:

Tree #: A number assigned to each tree correlating to the tree inventory and Figure 1.

Species: Common and scientific species names.

DBH: Diameter of the tree stem, measured at 1.4 m from the ground.

Condition: The health of the tree considering trunk integrity, crown structure and crown vigour; each rated as good, fair or poor.

Crown Dieback: The percentage of the crown that no longer supports foliage.

Dripline: The distance, in meters, from the trunk to the tips of the live crown.

Comments: Any additional notes relevant to the tree or site conditions.

Action: Recommended preservation or removal.

The trees included in the inventory are identified with numbers 1-114. Trees were located by topographic survey provided and hand held GPS unit.

Existing Conditions

The subject site is comprised of agricultural fields and portion of a remnant farmstead. The property is bound by Wyandotte Street East to the north, residential development to the east and storm water management ponds to the south and west.

The tree inventory documented a total of 114 trees situated on subject property, within the road allowance and on neighbouring property within 6 m of the property boundaries. The trees included in the inventory appear to be dominated by naturally occurring trees with some landscape tree plantings. None of the trees included in the inventory are identified as rare, threatened or endangered species.

Trees included in the inventory are comprised of Manitoba Maple (*Acer negundo*), Eastern Cottonwood (*Populus deltoides*), White Elm (*Ulmus americana*), Apple species (*Malus sp.*), Willow species (*Salix sp.*), Siberian Elm (*Ulmus pumila*), Red Oak (*Quercus rubra*), Hackberry (*Celtis occidentalis*), Pear species (*Pyrus sp.*), Silver Maple (*Acer saccharinum*), Green Ash (*Fraxinus pennsylvanica*), White Mulberry (*Morus alba*), Red Maple (*Acer rubrum*), Pin Oak (*Quercus palustris*), Honey Locust cultivar (*Gleditsia triacanthos 'inermis'*) and Little-leaf Linden (*Tilia cordata*). Refer to Table 1 for the complete tree inventory and Figure 1 for tree locations.

Proposed Development

The proposed development is comprised of a residential subdivision including detached and semi-detached homes, and a park in the southwest corner. Access to the subdivision is proposed from Wyandotte Street by extending Florence Avenue.

Discussion and Analysis

A preservation planning analysis was completed on each tree individually 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 earthworks, foundation excavation and grading and servicing.

During the preservation planning analysis the dripline distance was utilized to determine the potential impacts to each tree. Where appreciable encroachment is required within the dripline, tree removal will likely be required.

Tree Removal

The removal of Trees 5-7, 9, 13-21, 27, 29, 30, 44-49 and 81-99 will be required to accommodate the proposed development. These trees will conflict directly with home construction and local road construction.

Trees 67 and 76 do not conflict with the proposed development, however, are exhibiting major defects and must be removed to mitigate the risk they pose to any occupants of the proposed development.

Trees 5, 7, 9, 16, 17, 20, 21, 29 and 30 appear to be situated fully or partially on neighbouring property. Permission from the respective property owner is required prior to the removal of any trees situated fully or partially on neighbouring property.

Tree Preservation

The preservation of Trees 1-4, 8, 10-12, 22-26, 28, 31-43, 50-66, 68-75, 77-80 and 100-114 will be possible with appropriate tree protection measures, pending a review of detailed grading plans. Tree protection measures will have to be implemented prior to the commencement of earthworks/grading to ensure that no trees identified for preservation are impacted by the proposed development.

Tree protection fence must be installed at the dripline for trees identified for preservation. Refer to Figure 1 for the location of required tree protection fence, the tree protection fence detail and for further tree protection plan notes.

Summary and Recommendations

Jackson Arboriculture Inc. was retained by Goodban Ecological Consulting Inc. to complete a Tree Inventory and Preservation Plan report in support of a development application for the Florence and Wyandotte Subdivision situated in Windsor, Ontario. A tree inventory was conducted and reviewed in the context of the proposed development plan.

The findings of the study indicate a total of 114 trees situated on subject property, on neighbouring property within 6 m and within the road allowance. The removal of 41 trees will be required to accommodate the proposed development. The removal of 2 hazard trees is also recommended to mitigate hazard potential.

The following recommendations are made to ensure trees identified for preservation are not impacted by the proposed development:

- Refer to Figure 1 for the location of prescribed tree protection fencing, the tree protection fence detail and further tree protection plan notes.
- Tree protection fence must be installed prior to the earthworks/grading phase.
- 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 Figure 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 (and roots) that conflict with proposed development must be pruned by a Certified Arborist in accordance with acceptable arboricultural practice.
- Tree protection fencing should be inspected prior to, during, and after construction is complete to ensure that tree protection fence remains intact and in good repair throughout the stages of development.
- Trees 67 and 76 must be removed to mitigate their hazard potential.

Respectfully submitted,

Jackson Arboriculture Inc.

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 of group of trees or their component parts in al 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: Wyandotte St., Windsor Date: 16 May 2018 Surveyors: JJJ

Troo	Common									
Tree #	Common Name	Scientific Name	DBH	TI	CS	CV	DL	CDB	Comments	Action
1	Manitoba Maple	Acer negundo	~19	FG	G	G	4		Light lean	Preserve
2	Eastern Cottonwood	Populus deltoides	111	F	FG	G	10		Seam, pruning wound, light lean, heavy stem wound ~5 m long	Preserve
3	Manitoba Maple	Acer negundo	~20, 18	FG	FG	G	4		Light stem wounds, union at 0.3 m, bowed over subject property	Preserve
4	White Elm	Ulmus americana	20	G	G	G	3			Preserve
5	White Elm	Ulmus americana	40	G	FG	G	4		Union at 1.8 m	Remove
6	Eastern Cottonwood	Populus deltoides	23	G	G	G	3			Remove
7	White Elm	Ulmus americana	26	FG	G	G	2		Light stem wound	Remove
8	White Elm	Ulmus americana	~45, 38	F	F	FG	4		Wound from failed stem	Preserve
9	Apple species	Malus sp.	~15	FG	FG	G	3		Bowed over subject property	Remove
10	Manitoba Maple	Acer negundo	~23	FG	PF	PF	2	30	Grapevine competition, lean	Preserve
11	White Elm	Ulmus americana	~15	G	G	G	3		Bowed west	Preserve
12	White Elm	Ulmus americana	~19	G	G	G	3			Preserve
13	White Elm	Ulmus americana	21	G	G	G	3			Remove
14	White Elm	Ulmus americana	15	G	FG	G	3		Understory	Remove
15	White Elm	Ulmus americana	25	G	G	G	4			Remove
16	Eastern Cottonwood	Populus deltoides	34	G	G	G	4		Light lean	Remove
17	White Elm	Ulmus americana	~20	G	FG	G	4		Understory	Remove
18	White Elm	Ulmus americana	17	G	G	G	3			Remove
19	Willow species	Salix sp.	~31, 26, 22, 21, 19	FG	G	G	5		Union at ground	Remove
20	Willow species	Salix sp.	23, 21, 18, 15	FG	G	G	4		Union at ground	Remove
21	Siberian Elm	Ulmus pumila	~19, 15	G	FG	G	3		Union at ground	Remove
22	Siberian Elm	Ulmus pumila	~21, 20	G	FG	FG	4		Union at 1.2 m, bowed northwest	Preserve
23	Siberian Elm	Ulmus pumila	~17, 19	G	FG	F	3	15		Preserve
24	Siberian Elm	Ulmus pumila	~25	G	G	G	3		Bowed east	Preserve
25	Siberian Elm	Ulmus pumila	~17	FG	F	F	2	20		Preserve
26	Siberian Elm	Ulmus pumila	~28	FG	FG	FG	3		Bowed east	Preserve
27	Red Oak	Quercus rubra	54	F	G	G	5		Stem wound	Remove
28	Siberian Elm	Ulmus pumila	~33	FG	F	F	3	20	Lean southeast	Preserve
29	Eastern Cottonwood	Populus deltoides	48	G	G	G	5			Remove
30	Willow species	Salix sp.	~45, 50, 48, 48	FG	G	G	7		Union at ground	Remove
31	Eastern Cottonwood	Populus deltoides	30	G	G	G	4			Preserve
32	Manitoba Maple	Acer negundo	~21	FG	G	G	3		Light stem wound	Preserve
33	Manitoba Maple	Acer negundo	~15	G	G	G	2			Preserve
34	Manitoba Maple	Acer negundo	36, 25, 18	FG	FG	FG	4		Grapevine competition, union at ground	Preserve
35	Manitoba Maple	Acer negundo	~20, 14	F	G	G			Separating union at ground	Preserve
36	Manitoba Maple	Acer negundo	~30	F	FG	FG	3		Bowed north, sweep	Preserve
37	Hackberry	Celtis occidentalis	~25	G	G	G	4			Preserve
38	Manitoba Maple	Acer negundo	~15	F	FG	FG	3		Bowed north	Preserve
39	Manitoba Maple	Acer negundo	~19	FG	FG	F	3		Bowed north	Preserve
40	Manitoba Maple	Acer negundo	~17	FG	PF	PF	2	30	Bowed northeast, grapevine competition	Preserve

41	Manitoba Maple	Acer negundo	20	G	FG	FG	3		Grapevine competition	Preserve
42	Manitoba Maple	Acer negundo	~22. 16	FG	F	F	3		Union at ground, sweep,	Preserve
43	Manitoba Maple	Acer negundo	~18	FG	F	F	3		grapevine competition Grapevine competition	Preserve
44	Pear species	Pyrus sp.	28	F	FG	FG.	3		Understory, stem wounds	Remove
45	Silver Maple	Acer saccharinum	51	FG	FG	G	5		Bowed west	Remove
46	Pear species	Pyrus sp.	~21, 20	F	F	F	2		Union at 0.4 m, stem wounds with	Remove
	•	Fraxinus	-						dry rot	rtomovo
47	Green Ash	pennsylvanica	~15	Р	Р	Р	2	50	EAB infestation	Remove
48	Green Ash	Fraxinus pennsylvanica	~36, 25	Р	Р	Р	3	60	EAB infestation	Remove
49	Eastern Cottonwood	Populus deltoides	24	G	G	G	3			Remove
50	Manitoba Maple	Acer negundo	~35, 13	FG	FG	G	6		Union at ground, lean	Preserve
51	Willow species	Salix sp.	~110	G	FG	FG	10	10	Broken branches	Preserve
52	Eastern Cottonwood	Populus deltoides	~45	G	G	G	4			Preserve
53	Eastern Cottonwood	Populus deltoides	~38	G	G	G	4			Preserve
54	Red Oak	Quercus rubra	~65	G	G	G	8			Preserve
55	Eastern Cottonwood	Populus deltoides	~42	G	G	G	4			Preserve
56	Eastern Cottonwood	Populus deltoides	~15	F	F	F	2	20	Understory	Preserve
57	Eastern Cottonwood	Populus deltoides	~25	G	G	G	3			Preserve
58	Eastern Cottonwood	Populus deltoides	67	G	G	G	5			Preserve
59	Eastern Cottonwood	Populus deltoides	71	G	G	FG	5	10		Preserve
60	Eastern Cottonwood Eastern	Populus deltoides	78	G	FG	FG	5	15	Light lean north east	Preserve
61	Cottonwood	Populus deltoides	62	G	G	FG	7			Preserve
62	Silver Maple	Acer saccharinum	~30, 15, 17	FG	FG	FG	4		Union at 0.3 m, understory	Preserve
63	Eastern Cottonwood	Populus deltoides	~75	G	G	G	6			Preserve
64	Manitoba Maple	Acer negundo	~28, 16	FG	FG	FG	3		Lean, understory	Preserve
65	Eastern Cottonwood	Populus deltoides	58	G	G	G	4			Preserve
66	Eastern Cottonwood	Populus deltoides	80	G	FG	FG	5	10		Preserve
67	Eastern Cottonwood	Populus deltoides	60	PF	PF	PF	4		Heavy stem wound with heart rot -> HAZARD - remove	Remove
68	Eastern Cottonwood	Populus deltoides	68	G	FG	F	8	15		Preserve
69	Red Maple	Acer rubrum	~19, 21, 15, 14	F	F	F	4		Coppice growth orignating from rotten stump	Preserve
70	Manitoba Maple	Acer negundo	22	F	FG	G	4		Lean west	Preserve
71	Eastern Cottonwood	Populus deltoides	72	PF	F	F	6	4.5	Stem wound (H) with hear rot	Preserve
72	Willow species	Salix sp.	32, 32	FG	G	G	4	10	Union at ground, sweep	Preserve
73 74	Manitoba Maple Eastern	Acer negundo Populus deltoides	~20 75	FG G	FG G	FG G	7		Bowed east	Preserve Preserve
75	Cottonwood Manitoba Maple	Acer negundo	~15	FG	F	PF	3	40	Bowed west	Preserve
		, , ,							Heavy cavity with hollow stem	
76	Manitoba Maple	Acer negundo	~65	P _	PF	PF	2	80	and heart rot HAZARD - remove Crook/bowed west, light	Remove
77	Willow species	Salix sp.	~25 ~25, 22, 21,	F	FG	G	3		epicormic branching	Preserve
78	Willow species	Salix sp.	20, 22, 21,	FG	FG	FG	6		Union at ground	Preserve

79 Cattonwood Populus deltoides 39, 30 FG G G 4 Union at ground 80 Willow species Salix sp. ~48, 18 FG FG G 7 Union at ground 81 Manitoba Maple Acer negundo ~65 FG G G 5 Moderate stem wour 82 Eastern Cottonwood Populus deltoides 70 G G G 5 5 83 Eastern Cottonwood Populus deltoides 57 G G G 6 84 Eastern Cottonwood Populus deltoides 57 G G G 6 85 Eastern Cottonwood Populus deltoides 105 G G G 5 Sweep 87 Manitoba Maple Acer negundo 64 FG FG G 5 Lean, epicormic brar wound 88 Manitoba Maple Acer negundo 48 G G G 4 89 Manitoba Maple Acer negundo 77 G G G 5 <th>Remove Remove Remove Remove</th>	Remove Remove Remove Remove
81 Manitoba Maple Acer negundo ~65 FG G G 5 Moderate stem wour 82 Eastern Cottonwood Populus deltoides 70 G G G 5 83 Eastern Cottonwood Populus deltoides 84 G G G G 84 Eastern Cottonwood Populus deltoides 57 G G G G 85 Eastern Cottonwood Populus deltoides 105 G G G 10 86 Manitoba Maple Acer negundo 33 FG G G 5 Sweep 87 Manitoba Maple Acer negundo 64 FG FG G 5 Lean, epicormic brar wound 88 Manitoba Maple Acer negundo 48 G G G 4 89 Manitoba Maple Acer negundo ~45 G FG G 5 90 Eastern Cottonwood Populus deltoides 77 G G G 5 91 Eastern Cottonwood Po	nd Remove
B2	Remove Remove Remove Remove Remove Remove Remove
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86 Manitoba Maple Acer negundo 33 FG G 5 Sweep 87 Manitoba Maple Acer negundo 64 FG FG G 5 Lean, epicormic brar wound 88 Manitoba Maple Acer negundo 48 G G G 4 89 Manitoba Maple Acer negundo ~45 G FG G 4 90 Eastern Cottonwood Populus deltoides 77 G G G 5 91 Eastern Cottonwood Populus deltoides 62 FG PF F 5 Stem failed in crown	nching, stem Remove
87 Manitoba Maple Acer negundo 64 FG FG G 5 wound 88 Manitoba Maple Acer negundo 48 G G G 4 89 Manitoba Maple Acer negundo ~45 G FG G 4 90 Eastern Cottonwood Populus deltoides 77 G G G G 5 91 Eastern Cottonwood Populus deltoides 62 FG PF F 5 Stem failed in crown	Remove
88 Manitoba Maple Acer negundo 48 G G G 4 89 Manitoba Maple Acer negundo ~45 G FG G 4 90 Eastern Cottonwood Populus deltoides 77 G G G 5 91 Eastern Cottonwood Populus deltoides 62 FG PF F 5 Stem failed in crown	Remove
89 Manitoba Maple Acer negundo ~45 G FG G 4 90 Eastern Cottonwood Populus deltoides 77 G G G 5 91 Eastern Cottonwood Populus deltoides 62 FG PF F 5 Stem failed in crown	
90 Cottonwood Populus deltoides 77 G G G 5 91 Eastern Cottonwood Populus deltoides 62 FG PF F 5 Stem failed in crown	Remove
91 Cottonwood Populus deltoides 62 FG PF F 5 Stem failed in crown	Remove
Fastern	n Remove
92 Cottonwood Populus deltoides 67 G G G 6	Remove
93 Eastern Cottonwood Populus deltoides ~70 G G G 5	Remove
94 Manitoba Maple Acer negundo 47 F FG FG 4 Stem wounds, broke	en branches Remove
95 Manitoba Maple Acer negundo 41 G G G 4	Remove
96 Manitoba Maple Acer negundo 52 G FG FG 4 15 Union at 1.8 m	Remove
97 White Mulberry Morus alba 37 FG FG FG 3 Union at 1.5 m, under	erstory Remove
98 Willow species Salix sp. ~85 G FG FG 7 Bowed north	Remove
99 Willow species Salix sp. ~100 FG FG FG 6 10 Stem wound	Remove
100 Apple species Malus sp. 38 FG FG G 5 Pruning wounds	Preserve
101 Red Maple Acer rubrum 9 G G G 1	Preserve
102 Red Maple Acer rubrum 8 G G G 1	Preserve
103 Red Maple Acer rubrum 6 G P P 0 50	Preserve
104 Red Maple Acer rubrum 8 G G G 1	Preserve
105 Red Maple Acer rubrum 5 G F PF 1 40	Preserve
106 Pin Oak Quercus palustris 13 G G G 2	Preserve
107 Pin Oak Quercus palustris 13 G G G 3	Preserve
108 Pin Oak Quercus palustris 14 G G G 3	Preserve
109 Pin Oak Quercus palustris 9 G G FG 2 10	Preserve
Honey Locust cultivar Gleditsia tracanthos 'inermis' Shademaster 11 G G G G 3	Preserve
Honey Locust cultivar Gleditsia tracanthos 'inermis' Shademaster 12 G G G 3	Preserve
Honey Locust tracanthos 'inermis' Shademaster 10 G G G 3	Preserve
Honey Locust tracanthos 9 G G G 3 inermis' Shademaster	Preserve
114 Little-leaf Linden Tilia cordata 12 G G G 2	1

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	(m)				
EAB	Emerald Ash Borer					
~ = estimate						

