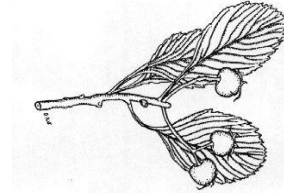


Arborist Report For 591 Liverpool Road

Pickering, Ontario

April 2, 2019



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1. Introduction

The following is an arborist report for the property at 591 Liverpool Road, in Pickering Ontario. The purpose of this report was to inventory the trees on the site and ascertain the potential impacts of the proposed development of the site on the trees on, and near, the subject property. This report was prepared for the Pickering Harbour Company care of The Biglieri Group.

2. Methods

An on-site inspection was made on February 8, 2017. The sizes of individual trees were measured as diameter at breast height (DBH), breast height being 140 cm from ground level. From the data collected plant Condition Rating (CR), Location Rating (LR), Species Rating (SR), and minimum Tree Protection Zones (TPZ), were estimated.^{1,2}

3. Discussion

There are plans to develop the Pickering Harbour lands at 591 Liverpool Road. There are a number of trees on the site that would be removed, in order to allow for the proposed development (Table 1, Figs. 1-3).

Road Allowance Trees:

There are seven road allowance trees on the site. The trees that are compatible with the landscaping work on the site and would be protected and retained (Table 1, Fig. 1).

The remaining road allowance trees on adjacent properties could be retained without significant risk of injury. All of the trees would be more than their TPZ radii from the worksite (Table 1, Fig. 1).

Private Trees:

There are twelve privately owned trees over 15 cm DBH on the development site. All of these onsite trees would be incompatible with the development plans (Table 1, Fig. 1).

There are nineteen trees over 15 cm DBH near the shoreline of Pickering Harbour that would be less than their drip-lines from the development site (Table 1, Fig. 1).

The remaining trees along the shoreline would be retained, with virtual no risk of injury. All of the remaining shoreline trees would be more than their drip-line radii from the worksite (Table 1, Fig. 1).

Neighbours' Trees:

There is one tree over 15 cm DBH on a neighbouring property that could be retained with some risk of injury. The drip-line of the trees extends into the worksite (Table 1, Fig. 1).

The remaining trees on neighbouring properties would be retained, with little risk of injury (Table 1, Fig. 1).

3.2 Tree Protection:

It is necessary to protect all trees designated for preservation during both demolition and construction. This tree protection can be accomplished by protecting the said trees with *tree protection barriers*. The minimum tree protection zone (TPZ) radius is based on the diameter of the tree ($TPZ \approx 0.06_{m/cm} \times DBH_{cm}$). Tree barriers for road allowance areas would be composed of a 1.2 metres (4 ft) high orange plastic web snow fencing secured on 2"x4" wood frames. Usually, tree protection barriers, not on road allowance, are to be 1.2 metres (4 ft) high, and composed of plywood. Where the worksite is up-slope from a vegetated area to be protected, sediment control barrier (silt-fence) would be used. The 1.2 metres (4 ft.) high sediment control fence would be installed between the worksite and protected area down-slope.^{3,4}

Roadside Barriers:

All of the road allowance trees to be retained would be enclosed in web-fence barriers. The barriers would extend out at least 1.8 metres from the trees, where feasible. The barriers in the planter island would extend to the margins of the planters (Fig. 2, Table 1).

Backyard Barriers:

Construction fences or plywood barriers would be installed along the north and northeast margins of the site. they would be placed near the setbacks (Fig. 2).

A sediment control barrier would line the down-slope side of the development site. The barrier would be installed near the setbacks (Fig. 2).

3.3 Replacement Trees:

A Landscape Plan has been prepared by MSLA for the proposed redevelopment of the 591 Liverpool Road property. At least twelve (12) new trees need to be accounted for as replacements for the trees that would be removed (Fig. 1).

The new trees would be of large calliper nursery grown stock. The trees would be transplanted as according to municipal codes and bylaws.^{4,5}

- (1) Minimum 50 mm calliper (2-inch wide stem) for deciduous trees
- (2) Minimum 1.75-2.5 m height for coniferous trees

Trees would best be transplanted during the spring or autumn. Mid-summer transplanting should be avoided. These trees are to be maintained in good condition. Supplemental watering may be required during the drier periods of the year, especially during the first two or three years after their transplantedation.^{4,5}

4. Conclusions

To allow for the proposed development lands at 591 Liverpool Road twelve (12) onsite trees over 15 cm DBH would be removed. There are seven (7) road allowance trees that may require protection during the work on the site. There are nineteen (19) trees over 15 cm DBH in the adjacent shoreline area that would be less than their drip-lines from the worksite. At least one tree on a neighbouring property could be at some risk of injury, during the development on the site.

Twelve (12) privately owned trees over 15 cm DBH within the development area would be removed.

One (1) neighbouring tree over 15 cm DBH would be less than its drip-line from the worksite. The tree could be at some risk of injury

Nineteen (19) trees over 15 cm DBH near the shoreline have drip-lines that extend into the worksite area. The trees could be at some risk of injury.

Seven (7) road allowance trees would be may require protection during work on the site.

All of the trees to be retained would be protected by barriers and sediment control fences during the demolition and construction work on the site.

A Landscape Plan has been prepared by MSLA for the proposed redevelopment of the 591 Liverpool Road property. At least twelve (12) new trees need to be accounted for as replacements for the trees that would be removed.

D. Andrew White M. Sc.



April 2, 2019

5. Tree Data:

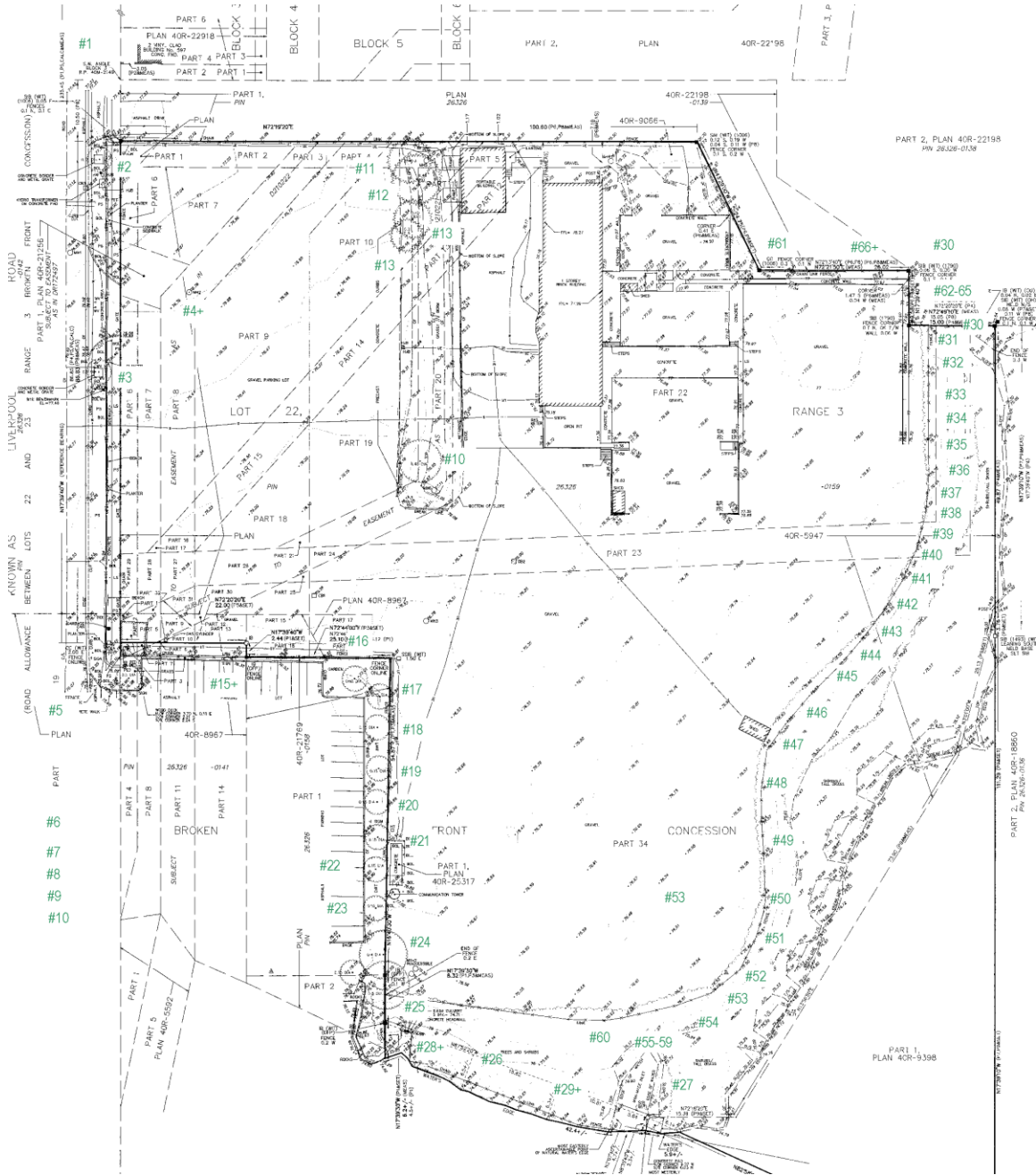


Figure #1: General layout of the 591 Liverpool Road property, with trees location numbered (green).

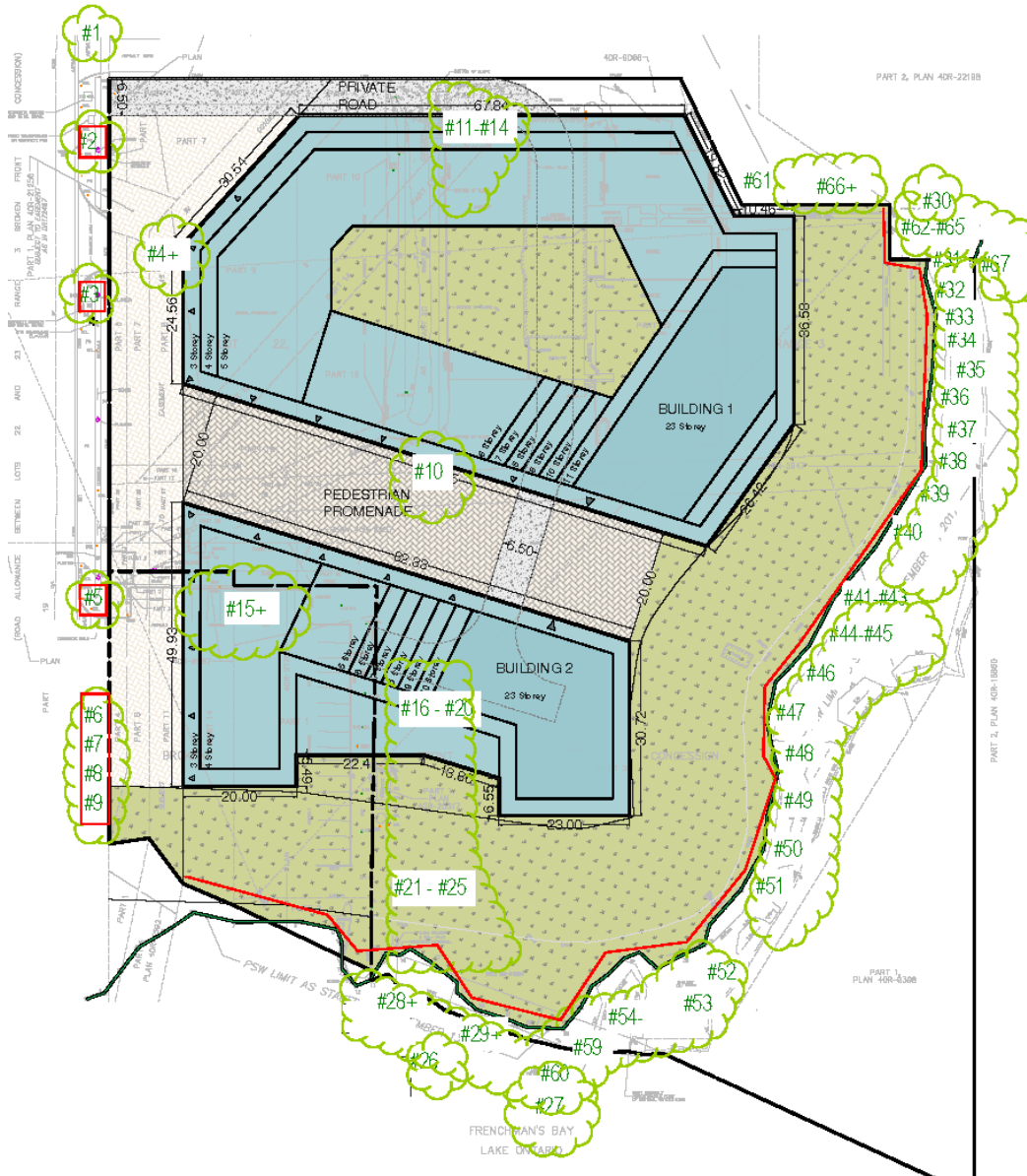


Figure #2: General layout of the Concept Plan of the 591 Liverpool Road property. Trees are numbered (green), and tree protection barriers and sediment control fences (red) are indicated. See Pickering Harbour Concept Plan (Jan 14, 2019) for more details.



Figure #1: Aerial view of the 591 Liverpool Road development site, as photographed circa 2017.

Table #1. Tree number (No.), species, diameter at breast height (DBH), comments, Condition Rating (CR) and Tree Category.

No.	Tree Species	DBH	Comments	CR	TC
#1	Bradford Pear	16 cm	NW offsite	65%	City
#2	Bradford Pear	18 cm	NW onsite	65%	City
#3	Bradford Pear	18 cm	W onsite	70%	City
#4+	stumps	NA	missing trees	NA	Private
#5	Balsam Poplar	19 cm	W onsite	60%	City
#6	Freeman Maple	13 cm	SW onsite	75%	City
#7	Freeman Maple	17 cm	SW onsite	65%	City
#8	Freeman Maple	18 cm	SW onsite	65%	City
#9	Freeman Maple	21 cm	SW onsite	70%	City
#10	White Birch	20-26 cm	N onsite	70%	Private
#11	Austrian Pine	37 cm	N onsite	65%	Private
#12	Austrian Pine	46 cm	N onsite	70%	Private
#13	pine stump	c 25 cm	N stump	0%	Private
#14	pine stump	c 20 cm	N stump	0%	Private
#15+	Stag-horn Sumacs	10-14 cm	W onsite	65-70%	Private
#16	Freeman Maple	17 cm	SW onsite	60%	Private
#17	Freeman Maple	18 cm	S onsite	70%	Private
#18	Freeman Maple	18 cm	S onsite	60%	Private
#19	Freeman Maple	14 cm	S onsite	65%	Private
#20	Freeman Maple	16 m	S onsite	70%	Private
#21	Freeman Maple	17 cm	S onsite	70%	Private
#22	Freeman Maple	17 cm	S onsite	70%	Private
#23	Freeman Maple	16 cm	S onsite	65%	Private
#24	White Willow	25-26 cm	S onsite	60%	Private
#25	White Willow	20 cm	S onsite	55%	Private
#26	White Willow	20-29	S shore	50%	Lakeshore
#27	White Willow	96 cm	S shore	55%	Lakeshore
#28+	Buckthorns	8-10 cm	S shore	60-65%	Lakeshore
#29+	Stag-horn Sumacs	8-12 cm	S shore	65-70%	Lakeshore
#30	White Spruce	13 cm	NE shore	65%	Lakeshore
#31	White Spruce	12 cm	NE shore	65%	Lakeshore
#32	Black Maple	53 cm	NE shore	70%	Lakeshore
#33	Black Maple	13 cm	NE shore	70%	Lakeshore
#34	White Spruce	13 cm	NE shore	65%	Lakeshore
#35	Black Maple	14 cm	NE shore	70%	Lakeshore

No.	Tree Species	DBH	Comments	CR	TC
#36	White Spruce	15 cm	NE shore	70%	Lakeshore
#37	White Spruce	13 cm	NE shore	65%	Lakeshore
#38	White Spruce	14 cm	NE shore	65%	Lakeshore
#39	Manitoba Maple	9 cm	W shore	65%	Lakeshore
#40	Manitoba Maple	8-11 cm	W shore	60%	Lakeshore
#41	Manitoba Maple	8-10 cm	W shore	60%	Lakeshore
#42	Red Oak	16 cm	W shore	75%	Lakeshore
#43	White Spruce	18 cm	SW shore	65%	Lakeshore
#44	White Spruce	17 cm	SW shore	65%	Lakeshore
#45	White Pine	20 cm	SW shore	70%	Lakeshore
#46	White Spruce	16 cm	SW shore	65%	Lakeshore
#47	White Spruce	5 cm	SW shore	65%	Lakeshore
#48	White Spruce	15 cm	SW shore	65%	Lakeshore
#49	White Pine	16 cm	SW shore	70%	Lakeshore
#50	Black Maple	13 cm	SW shore	70%	Lakeshore
#51	White Pine	15 cm	SW shore	70%	Lakeshore
#52	White Spruce	14 cm	SW shore	65%	Lakeshore
#53	White Spruce	15 cm	SW shore	70%	Lakeshore
#54	White Spruce	14 cm	SW shore	65%	Lakeshore
#55	White Spruce	15 cm	S shore	65%	Lakeshore
#56	White Spruce	14 cm	S shore	65%	Lakeshore
#57	Black Maple	19 cm	S shore	70%	Lakeshore
#58	White Pine	20 cm	S shore	70%	Lakeshore
#59	White Pine	18 cm	S shore	70%	Lakeshore
#60	White Spruce	18 cm	S shore	65%	Lakeshore
#61	White Willow	12-28 cm	N offsite	60%	Neighbour
#62	Willow	5-6 cm	N offsite	70%	Neighbour
#63	Willow	5-8 cm	N offsite	65%	Neighbour
#64	Manitoba Maple	11 cm	NE offsite	65%	Neighbour
#65	Cottonwood	31 cm	NE shore	70%	Lakeshore
#66+	Willows	3-5 cm	NE offsite	65-70%	Neighbour



Photograph #1: Front yard trees #2 and #3 on the 591 Liverpool Road property.



Photograph #2: Tree 5 on the 591 Liverpool Road property.



Photograph #3: Trees #6 to #9 on the 591 Liverpool Road property.



Photograph #4: Trees 11 to #14 on the 591 Liverpool Road property.



Photograph #5: Tree 10 on the 591 Liverpool Road property.



Photograph #6: Trees 30 to #33 adjacent the 591 Liverpool Road property.



Photograph #7: Trees #39 to #42 adjacent to the 591 Liverpool Road property.



Photograph #8: Trees #30 to #36 adjacent to the 591 Liverpool Road property.



Photograph #9: Trees #48 to #58 adjacent to the 591 Liverpool Road property.



Photograph #10: Trees on the 591 Liverpool Road property.



Photograph #11: Tree #26 adjacent to the 591 Liverpool Road property.



Photograph #12: Tree #27 adjacent to the 591 Liverpool Road property.



Photograph #13: Tree #61 to #65 adjacent to the 591 Liverpool Road property.

6. References

- 1- Council of Tree Landscape Appraisers. 2000. Guide for Plant Appraisal. 9th Edition. International Society of Arboriculture.
- 2- International Society of Arboriculture of Ontario. 1998. Ontario Supplement to Guide for Plant Appraisal 8th Edition. Ontario Chapter, International Society of Arboriculture.
- 3-.City of Pickering. 2019. Pickering Website. <http://www.cityofpickering.com> . Pickering Civic Complex. One The Esplanade. Pickering, ON L1V 6K7.
- 4- City of Pickering. 2003. TREE PROTECTION BY-LAW - BY-LAW NUMBER 6108/03. Corporation of the City of Pickering.
- 5- MMAH. 2005. Greenbelt Plan No. 208/2005. Feb 28, 2005. Ministry of Municipal Affairs & Housing.