

# ARBORIST REPORT

**PROJECT NAME:** Liverpool House  
**PROJECT NUMBER:** ADS001  
**ISSUE DATE:** May 15, 2019  
**DATE OF INSPECTION:** January 20, 2019  
**PERSONS PRESENT:** Stanley Luk, ISA Certified Arborist, The MBTW Group

**LOCATION:** 1294 Kingston Road and  
1848-1852 Liverpool Road  
**DESCRIPTION:** Arborist report

The MBTW Group has been retained to provide an arborist consultation report for the Liverpool House site at 1294 Kingston Road and 1848 - 1852 Liverpool Road, on the northwest intersection of Liverpool Road and Kingston Road in the City of Pickering.

Altona Group, owner of the site known municipally as 1294 Kingston Road, 1848 Liverpool Road, and 1852 Liverpool Road ("subject site"), is proposing the redevelopment and intensification of the subject site with a mixed use development that incorporates a 25-storey tower, a 12-storey midrise building, and a row of 3-storey townhouses. The proposal also commits to the restoration and adaptive reuse of the Old Liverpool House as well as new publicly accessible open space and improvements to the public realm.

The proposed development adds 391 units to the 0.91 hectare site with a total residential gross floor area of 32,350 square metres. Active at grade retail and commercial uses make up 850 square metres along the Liverpool and Kingston Road frontages of the new buildings and the retained Old Liverpool House. A total gross floor area of 33,200 square metres is proposed at a density of 3.6 FSI over the subject site. A total of 512 parking spaces will be provided, mostly within 3 levels of underground parking with 10 spaces provided at-grade to support the retail. The trees identified on this property and tabulated in this report are regulated under City of Pickering Tree Protection By-law 6108/03.

## NATURE OF WORK

The arborist inspection was conducted on January 22, 2019 to inventory the existing trees on site and any trees located within a 6m offset line from the property line on adjacent properties. A total of 51 privately owned trees and 3 City owned trees were documented in association with the subject property and along the shared property line with adjacent properties to the West and North limits of the site. The subject site is a commercial strip mall property with surface parking lots and three separate low rise buildings. The south part of the property is occupied by the Liverpool John's Pub and Restaurant, the northern limit of the site is occupied by two single storey buildings, housing a Daycare facility, a Bank and various other restaurant and retail businesses.

This Arborist report provides information with regards to existing trees on site as per acceptable arboricultural procedures as recommended in the 'Guide for Plant Appraisal' prepared under contract by the "Council of Tree and Landscape Appraisers (CTLA), an official publication of the International Society of Arboriculture (I.S.A.), 9<sup>th</sup> edition, 2000". The information includes species, health, opportunities for tree preservation, and tree Diameter at Breast Height (DBH using a caliper tape at 1.4m from finished grade). A rating of Good / Fair / Poor or Hazardous has been assigned to each tree based on health, structural integrity, species response and the age of the tree in comparison with species longevity. Trees that are dying are identified as being in the condition of Terminal Decline.

## OBSERVATIONS

### Subject Site – City Owned Trees

Three (3) City owned trees (#258, 263 and 264) were identified along the Liverpool Road frontage of the property. No City owned trees were observed on Kingston Road frontage of the site.

The tree # 258 is a Silver Maple (*Acer saccharinum*) at 86cm diameter. This tree is in good condition and is located just north of an existing driveway entry into the site from Liverpool Road. The two trees # 263 and 264 are Bird Cherry Trees (*Prunus avium*) with tree # 263 measured at 45cm in dbh and the double trunked tree #264 measured at 65 and 45 cm in dbh. The two Bird Cherry trees identified in the report are overly mature and are in poor condition. It was documented that extensive frost cracks had developed on the trunk of tree 264 and significant heartwood decay have developed in both trees 263 and 264. The Bird Cherry tree is a tree species most often associated with fruit orchards or private cultivation. Due to the messy fruits, susceptibility of this tree species to diseases and naturally short life span, this tree is rarely used as a species for street tree planting.

### Privately Owned Trees on Adjacent Properties

Out of the total of 52 Privately owned trees documented on site, 15 of the trees are boundary trees, originating on adjacent property to the development site at 1854 Liverpool Road, two trees at 1849 and 2 trees on 1855 Glendale Drive.

The trees # 219, 257a & 257b originate over 2.5m away from the property line to the West and will not be impacted by the proposed site development work at 1294 Kingston Road. Please refer to Tree protection plan TP-1 for tree location information.

Two Bird Cherry trees (#227a and 227b) were documented on the west side of the property line in the garden of 1849 Glendale Drive. These two trees are measured with trunk diameters below 15cm in dbh and are in terminal decline due to fungal disease damage. These two trees are not regulated under the City of Pickering Tree protection By-laws and are not subject to tree preservation requirement guidelines.

A row of trees is located along the north property boundary with 1854 Liverpool Road. The trees consist of a row of predominantly Siberian Elm trees # 240 to 255 (*Ulmus pumila*) and three White Spruce (*Picea glauca*), that forms a vegetated screen between the two properties. The Siberian Elm is a quick growing pioneer tree species that is originally native to Western Asia, east to Siberia and south to Northern China and Korea. This tree species is highly invasive due to its prolific seed production with high germination success rates. its adaptability to grow in soils of varying moisture levels allows this species to colonize open sunny areas quickly to create a closed canopy that prevents the regeneration of native plant species.

The Siberian Elm hedgerow is recommended for preservation as the trees documented on site are located on the adjacent property side of the property line. Subject to the location of future privacy fencing, grading and underground site servicing design conditions, this row of Siberian Elm trees can be preserved and protected as shown on Tree protection drawing TP-1. Over hanging tree limbs and branches in obstruction of the proposed buildings should be cut and removed by an ISA Certified Arborist. The Siberian Elm tree is a vigorous and resilient tree species and it is anticipated that the trees impacted by site development should survive and recover following construction.

Trees # 259, 260 and 261 are mature White Spruce trees located on the north side of the property line on the adjacent property at 1862 Liverpool Road. These three trees can be retained and preserved according to the minimum tree protection limits as show on drawing TP-1.

### Privately Owned Trees on Subject Property

A total of 26 privately owned trees were documented on the development property. The trees documented on site are predominantly ornamental shade tree plantings of mostly non-native ornamental tree species. The most abundant tree species is the Pyramidal English Oak (*Quercus robur* 'Fastigiata') # 220 to 227 and 228. The trees were observed to be

recently planted trees below 8cm in dbh. These trees were planted in a row along the west limit of the site along a wood privacy fence.

A more mixed selection of deciduous and coniferous trees (#214 to 218, 230 to 239, 256 and 262) were documented along the South, East and North limits of the property where clusters of White Cedar (*Thuja occidentalis*), Honeylocust (*Gleditsia triacanthos* var. *inermis*), Little Leaf Linden (*Tilia cordata*), Norway Maple (*Acer platanoides*), Austrian Pine (*Pinus nigra*) and White Spruce trees were documented. The trees occur as isolated shade tree plantings between the interior parking lot and the adjacent street frontage. Most trees are in good condition but due to the proposed site plan design and building construction requirements, no existing trees documented on site can be preserved.

### **Tree maintenance program**

#### Pre-Construction

- Ensure that the Tree protection zone as identified in Tree protection plan TP-1 is in accordance with the City of Pickering Tree Preservation Protection Fencing Detail # P-1100. Install tree protection fence according to the approved Tree Protection plan and details.
- Provide the City of Pickering Tree Protection Notes as shown on City Detail P-1101 on tree protection fencing.
- Root pruning must be conducted by an ISA Certified Arborist.
- Roots to be pruned under 2.5cm in diameter should be severed with a sterilized cutting tool such as secateurs or pruning saw to prevent diseases from entering the damaged roots. Roots over 5cm in diameter should be preserved and protected. Following root pruning, backfill trench immediately with a weed free sandy loam topsoil mix to aid in the regeneration of the damaged roots. Provide irrigation to settle in the new soil and to remove air bubbles.
- Placement of construction materials, equipment, fill, liquids, or garbage are not allowed within the TPZ during construction.

#### During Construction

- Provide irrigation to protected trees to compensate for root loss during periods of drought. Top up soil moisture level with irrigation to provide the equivalent of 5cm depth of natural rainfall per week during May to September.
- Provide a one year slow release low nitrogen fertilizer such as 8-30-30 to promote root regeneration and plant vigor. Apply fertilizer during the active growing season from April to end of July. Do not apply additional fertilizer from August onwards to prevent formation of soft new growth that will be damaged by cold weather.
- The arborist report suggests that a Project Consulting Arborist (PCA) should be retained during construction. It is recommended regular site inspection reporting by the PCA should be provided to the City for review to ensure the all tree protection bylaws and tree maintenance are being followed.
- In tree planting areas where the topsoil has been compacted during construction, it is advised that the compacted soil be remediated by rototilling or air spade aeration prior to tree and shrub planting works.

#### Post -Construction

- Ensure that the tree protection fences are intact until the completion of the project.
- Provide a one year slow release low nitrogen fertilizer such as 8-30-30 to promote root regeneration and plant vigor. Apply fertilizer during the active growing season from April to end of July. Do not apply additional fertilizer from August onwards to prevent formation of soft new growth that will be damaged by cold weather.
- Ensure all new trees and existing trees impacted by additional infrastructure work are irrigated on a weekly basis if rainfall is less than 5cm per week.
- Ensure all new trees are provided with an irrigation program for 2 years following installation.

### **COMMENTS**

Following the arborist inspection and analysis of the condition and species composition of trees, it was identified that the trees on the subject property consist of ornamental tree plantings with no naturally occurring regionally rare or endangered tree species. In consideration of the proposed site plan and construction requirements, it is anticipated that all 26 privately owned existing trees on the subject property will require removal (trees #214 to 218, 220 to 227, 228 to 239, 257 and 262). As per the City of Pickering Tree Protection By-law requirements, please find the following Tree Compensation Table showing the minimum number of new trees to be installed to compensate for the removal of the 26 trees on site.

## Tree Compensation Table

Existing Tree Sizes	No Compensation Required	1:1 Ratio	2:1 Ratio	3:1 Ratio	4:1 Ratio	Number of Trees Required.
Trees < 15cm cal. or dead	10					0
Trees with 15 to 29 cm cal.		7				7
Trees with 30 to 49 cm cal.			11			22
Trees with 50 to 74 cm cal.				0		0
Trees with 75 cm + cal.					0	0
Total trees required for Compensation						29

In accordance to the Landscape Plan L1-a, a minimum total of approximately 33 deciduous trees and 25 coniferous trees will be planted as part of the proposed landscape design within the property boundary of the site. The total number of trees to be planted exceeds the minimum compensation tree planting requirements for 29 trees.

Considering the low tree species diversity observed on site, it is recommended that a varied mix of native tree species be selected for use on site. The use of native tree species such as the Sugar Maple (*Acer saccharum*), Hackberry (*Celtis occidentalis*), Kentucky Coffee Tree (*Gymnocladus dioica*), Tulip Tree (*Liriodendron tulipifera*), White Spruce (*Picea glauca*), Bur Oak (*Quercus macrocarpa*), Red Oak (*Quercus rubra*), Basswood (*Tilia americana*) and other large non-native and non-invasive tree species such as European Beech (*Fagus sylvatica*), Ginkgo (*Ginkgo biloba*), Limber Pine (*Pinus flexilis*), Douglas Fir (*Pseudotsuga menziesii*) and Dutch Elm resistant Elm tree selections (i.e. *Ulmus americana* 'Princeton' and *Ulmus japonica* 'Morton') can be installed to increase shade tree species diversity on the subject site.

### LIMITATIONS OF ARBORIST INSPECTION REPORT

The trees identified in the Arborist Inspection Report have been made using accepted ISA arboricultural techniques including visual review of above ground parts, defects, scars, decay, fungal fruiting bodies, foliage color, insect damage, lean of tree canopy, visible root structures and condition of the trees in conjunction with the tree location, land use, site users and context. Except where noted, trees in this arborist report have not been cored, probed, excavated or climbed during the assessment process. Notwithstanding the observations and recommendations in this report, it must be noted that trees are living organisms that react to their environment, and their conditions will change over time. It is recommended that trees should be re-assessed periodically. The tree assessment information presented in this report is representative of the tree conditions at the time of inspection.

### REPORT PREPARED BY:

APRIL 10, 2019



Stanley Luk, ISA certified arborist # ON-0994A

## Appendix 1 - Tree Information Table

Tag#	Species	Common Name	DBH (cm)	Canopy Spr.	Condition	Remarks	Tree Location	Tree Status	TPZ distance from trunk (m)	Replacement QTY
214	<i>Gleditsia triacanthos</i>	Honeylocust	38	8	Good		Private	Remove	5	2
215	<i>Tilia cordata</i>	Little Leaf Linden	28	6	Fair	Frost crack on west side of trunk, minor branch tip dieback	Private	Remove	4	1
216	<i>Thuja occidentalis</i>	White Cedar	26, 22	2	Good	Two trunk clump	Private	Remove	2	1
217	<i>Thuja occidentalis</i>	White Cedar	19, 18, 18	2	Good	Three trunk clump	Private	Remove	2	1
218	<i>Pinus nigra</i>	Austrian Pine	33	4	Poor	Canopy damage due to diplopedia tip blight, trunk leaning east.	Private	Remove	3	2
219	<i>Picea pungens</i>	Colorado Spruce	11	1	Good	New tree planting on adjacent site	Private	Preseve	1.5	0
220	<i>Quercus robur</i> 'Fastigiata'	Pyramidal English Oak	6	1	Good	New Tree planting, tree stakes and ties wrapped around trunk.	Private	Remove	1.5	0
221	<i>Quercus robur</i> 'Fastigiata'	Pyramidal English Oak	6	1	Good	New Tree planting, tree stakes and ties wrapped around trunk.	Private	Remove	1.5	0
222	<i>Quercus robur</i> 'Fastigiata'	Pyramidal English Oak	11	1	Good	New Tree planting, tree stakes and ties wrapped around trunk.	Private	Remove	1.5	0
223	<i>Quercus robur</i> 'Fastigiata'	Pyramidal English Oak	6	1	Good	New Tree planting, tree stakes and ties wrapped around trunk.	Private	Remove	1.5	0
224	<i>Quercus robur</i> 'Fastigiata'	Pyramidal English Oak	7	1	Good	New Tree planting, tree stakes and ties wrapped around trunk.	Private	Remove	1.5	0
225	<i>Quercus robur</i> 'Fastigiata'	Pyramidal English Oak	6	1	Dead	Tree is dead	Private	Remove	1.5	0
226	<i>Quercus robur</i> 'Fastigiata'	Pyramidal English Oak	6	1	Good	New Tree planting, tree stakes and ties wrapped around trunk.	Private	Remove	1.5	0
227	<i>Quercus robur</i> 'Fastigiata'	Pyramidal English Oak	4	1	Good	New Tree planting, tree stakes and ties wrapped around trunk.	Private	Remove	1.5	0
227a	<i>Prunus avium</i>	Domestic Cherry	10	3	Poor	Tree in adjacent property, trunk and limbs infected with canker decay	Private	Preserve	2.5	0
227b	<i>Prunus avium</i>	Domestic Cherry	10	3	Poor	Tree in adjacent property, part of canopy is dead due to fungal decay	Private	Preserve	2.5	0
228	<i>Quercus robur</i> 'Fastigiata'	Pyramidal English Oak	7	1	Good	New Tree planting, tree stakes and ties wrapped around trunk.	Private	Remove	1.5	0

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Tag#	Species	Common Name	DBH (cm)	Canopy Spr.	Condition	Remarks	Tree Location	Tree Status	TPZ distance from trunk (m)	Replacement QTY
229	<i>Pinus nigra</i>	Austrian Pine	40	8	Good		Private	Remove	5	2
230	<i>Gleditsia triacanthos</i>	Honeylocust	36	8	Good		Private	Remove	5	2
231	<i>Picea pungens</i>	Colorado Spruce	34	4	Good		Private	Remove	3	2
232	<i>Pinus nigra</i>	Austrian Pine	35	5	Fair	Trunk leaning south, included bark between 2 co-dominant leaders 2m from grade.	Private	Remove	3.5	2
233	<i>Tilia cordata</i>	Little Leaf Linden	39	6	Good		Private	Remove	4	2
234	<i>Picea pungens</i>	Colorado Spruce	32	4	Poor	Canopy sparse due to needle cast disease, bleeding cankers observed on trunk.	Private	Remove	3	2
235	<i>Gleditsia triacanthos</i>	Honeylocust	42	8	Good		Private	Remove	5	2
236	<i>Acer platanoides</i>	Norway Maple	25	4	Poor	Frost crack on west side of trunk, minor branch tip dieback	Private	Remove	3	1
237	<i>Acer platanoides</i>	Norway Maple	30	4	Poor	Frost crack on west side of trunk, severe branch tip dieback	Private	Remove	3	2
238	<i>Acer platanoides</i>	Norway Maple	32	6	Good		Private	Remove	4	1
239	<i>Acer platanoides</i>	Norway Maple	36	6	Poor	Tree in decline, 1/2 of canopy dead and removed by others	Private	Remove	4	1
240	<i>Ulmus pumila</i>	Siberian Elm	31, 22, 19, 19	8	Good	4 trunk clump	Private	Preserve	5	0
241	<i>Ulmus pumila</i>	Siberian Elm	39, 39	8	Good	2 trunk clump	Private	Preserve	5	0
242	<i>Acer negundo</i>	Manitoba Maple	25, 14	6	Poor	2trunk clump, base of tree growing from the root flare of tree 241	Private	Preserve	4	0
243	<i>Ulmus pumila</i>	Siberian Elm	17	2	Poor	Part of hedge, branch fall observed in canopy	Private	Preserve	2	0
244	<i>Ulmus pumila</i>	Siberian Elm	27	2	Poor	Part of hedge, branch fall observed in canopy	Private	Preserve	2	0
245	<i>Ulmus pumila</i>	Siberian Elm	17	3	Poor	Tree canopy leaning north	Private	Preserve	2.5	0
246	<i>Ulmus pumila</i>	Siberian Elm	18	2	Poor	Part of hedge, branch fall observed in canopy	Private	Preserve	2	0
247	<i>Ulmus pumila</i>	Siberian Elm	26	4	Poor	Trunk fused to tree 248.	Private	Preserve	3	0
248	<i>Ulmus pumila</i>	Siberian Elm	14	2	Hazard	Tree trunk hollow, severe canopy dieback	Private	Preserve	2	0

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Tag#	Species	Common Name	DBH (cm)	Canopy Spr.	Condition	Remarks	Tree Location	Tree Status	TPZ distance from trunk (m)	Replacement QTY
249	<i>Ulmus pumila</i>	Siberian Elm	18	3	Poor	North trunk severely pruned in the past	Private	Preserve	2.5	0
250	<i>Ulmus pumila</i>	Siberian Elm	25	3	Good	Minor branch fall in canopy	Private	Preserve	2.5	0
251	<i>Ulmus pumila</i>	Siberian Elm	17	2	Poor	Severe branch fall in canopy	Private	Preserve	2	0
252	<i>Ulmus pumila</i>	Siberian Elm	21	2	Poor	Top of tree collapsed	Private	Preserve	2	0
253	<i>Ulmus pumila</i>	Siberian Elm	19, 15	2	Poor	Two trunk clump, canopy dieback	Private	Preserve	2	0
254	<i>Ulmus pumila</i>	Siberian Elm	23	4	Fair	Canopy lopsided favoring west side of trunk.	Private	Preserve	3	0
255	<i>Ulmus pumila</i>	Siberian Elm	19	2	Poor	Minor branch fall in canopy, canopy leaning west	Private	Preserve	2	0
256	<i>Thuja occidentalis</i>	White Cedar	19	2	Fair	2 leaders originating from trunk at 1m from grade, included bark between leaders.	Private	Preserve	2	0
257	<i>Acer negundo</i>	Manitoba Maple	31	6	Hazard	Tree trunk severely girdled by adjacent wood fence, fall hazard.	Private	Remove	4	2
257a	<i>Picea pungens</i>	Colorado Spruce	10	2	Good	Tree on adjacent property	Private	Preserve	2	0
257b	<i>Picea pungens</i>	Colorado Spruce	10	2	Good	Tree on adjacent property	Private	Preserve	2	0
258	<i>Acer saccharinum</i>	Silver Maple	86	12	Good	5 leader at 1.5m from grade, good canopy vigor	City	Preserve	7	0
259	<i>Picea glauca</i>	White Spruce	50	6	Good	Tree located in adjacent property	Private	Preserve	4	0
260	<i>Picea glauca</i>	White Spruce	48	6	Good	Tree located in adjacent property	Private	Preserve	4	0
261	<i>Picea glauca</i>	White Spruce	29	4	Good	Tree located in adjacent property	Private	Preserve	3	0
262	<i>Acer negundo</i>	Manitoba Maple	21, 20, 19, 14	4	Poor	Tree growing adjacent to building foundation, canopy leaning northwest	Private	Remove	3	1
263	<i>Prunus avium</i>	Bird Cherry	45	5	Poor	Cavity decay observed in junction between main lateral limbs in canopy, 2 main lateral limbs occur at 1m from grade.	City	Preserve	3.5	0
264	<i>Prunus avium</i>	Bird Cherry	65, 45	6	Poor	Frost crack on south trunk, cavity decay observed on north leaning trunk	City	Preserve	4	0
									Total Replacement Qty =	29