

### 250 FORESTWOOD DRIVE

SITE STATISTICS										
ZONING BY-LAW 2014-014										
DESCRIPTION	REGULATION	PROPOSED								
ZONE	RL1-0	RL1-0								
LOT AREA	min 1393.5 m <sup>2</sup>	1289.40 m <sup>2</sup> (EXISTING)								
LOT FRONTAGE	min 22.50 m	55.17 m (EXISTING)								
# STOREYS	max 2	2								
LOT COVERAGE										
BUILDING AREA 255.50 m <sup>2</sup>										
COVERED PORCH AREA		52.00 m <sup>2</sup>								
ACCESSORY BUILDING AREA		10.00 m <sup>2</sup>								
TOTAL	322.35 m <sup>2</sup>	317.50 m <sup>2</sup>								
LOT COVERAGE	max 25%	24.62 %								
RESIDENTIAL FLOOR AREA										
GROUND FLOOR		188.15 m <sup>2</sup>								
SECOND FLOOR		157.95 m <sup>2</sup>								
TOTAL	412.61 m <sup>2</sup>	346.10 m <sup>2</sup>								
FLOOR AREA/LOT RATIO	max 32 %	26.84 %								
FINISHED BASEMENT		210.00 m <sup>2</sup>								
GARAGE FLOOR AREA	max 56.00 m <sup>2</sup>	61.15 m <sup>2</sup> *								
BI	UILDING DIMENSIONS									
DWELLING DEPTH	20.0 m	14.12 m								
BUILDING HEIGHT	max 9.00 m	9.00 m								
GARAGE PROJECTION	max 1.50 m	1.37 m								
GARAGE ENTRY WIDTH	max 9.0 m	8.85 m								
DRIVEWAY WIDTH	max 9.0 m	8.85 m								
FRONT WALL %	min 50 %	100 %								
BUILDING SETBACKS										
FRONT YARD - min	8.36 m	5.50 m *								
FRONT YARD - max	13.86 m	11.00 m								
REAR YARD	10.50	15.35 m								
WEST SIDE YARD	4.20 m	4.20 m								
EAST SIDE YARD	4.20 m	5.75 m								
* REQUIRES MINOR VARIANCE										









250 FORESTWOOD DRIVE

## WEST ELEVATION

1:100



♦SECOND FLOOR SUBFLOOR +11'-2"

• +27'-4"





250 FORESTWOOD DRIVE

## EAST ELEVATION

1:100







250 FORESTWOOD DRIVE

## SOUTH ELEVATION





250 FORESTWOOD DRIVE

## NORTH ELEVATION



#### Arborist Report and Tree Preservation Plan for:

250 Forestwood Dr. Oakville, Ontario

#### Prepared for:

Bachly Construction 27 Nixon Road Bolton, ON L7E 1J7

### Data Collected and Report Prepared by:

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23 March 2021



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## **Background Information**

This report has been prepared in preparation for the application for a building and site alteration permit in the Town of Oakville. The Arborcorp Tree Experts have been retained to provide an inventory of the existing trees, to give an overview of their current state of health and structure and to monitor the trees condition throughout the construction process. At the time of this inspection no construction activities had been started on this property. This report summarizes our findings and recommendations.

## **Methodology**

The tree inventory and assessment was conducted on 23 February 2021. There are twenty four (24) trees included in this report. The existing trees have been numbered and identified on the site plan provided by Bachly Construction. Each tree was assigned a unique number and detailed data was collected.

A preservation priority rating was assigned to each tree based on its current health and structure. Typically, under existing conditions, trees having a high or moderate preservation priority rating are recommended for preservation, and those with a low rating are recommended for removal. Recommendations were assigned to preserve or remove each tree based on its current health and/or structure, and the expected impact from the proposed development. A final recommendation has been made of each tree that takes into account the tree's current biological health, structural condition, and the anticipated development impacts.

The scope of this report involves the identification of the existing trees on the property and to identify tree protection methods throughout the construction process.

Tree valuations for the municipal trees were calculated using the Replacement Cost Method as described in the Guide to Plant Appraisal 9<sup>th</sup> Edition. Species ratings were determined from the Ontario Supplement of this text.

## **Municipal Trees**

There are twelve (12) municipal trees included in this report.

Tree number one (1) is a 5-14cm dbh White Cedar Hedge that is located on the property line of 250 Forestwood Dr and 236 Forestwood Dr. This tree is in fair condition and protective measures have been recommended.

Tree number two (2) is a 45cm dbh Scots Pine that is located at 250 Forestwood Dr. This tree is in good condition and protective measures have been recommended.

Tree number three (3) is an 8cm dbh White Cedar that is located at 250 Forestwood Dr. This tree is in good condition and protective measures have been recommended.

Tree number four (4) is an 8cm dbh White Cedar that is located at 250 Forestwood Dr. This tree is in good condition and protective measures have been recommended.

Tree number five (5) is an 8cm dbh Scots Pine that is located at 250 Forestwood Dr. This tree is in good condition and protective measures have been recommended.



Tree number six (6) is a 39cm dbh White Pine that is located at 250 Forestwood Dr. This tree is in good condition and protective measures have been recommended.

Tree number seven (7) is a 20cm dbh Scots Pine that is located at 250 Forestwood Dr. This tree is in fair condition and protective measures have been recommended.

Tree number eight (8) is a 56cm dbh White Pine that is located at 250 Forestwood Dr. This tree is in fair condition and protective measures have been recommended.

Tree number nine (9) is a 59/30cm dbh split stem White Pine that is located at 250 Forestwood Dr. This tree is in fair condition and protective measures have been recommended.

Tree number ten (10) is a 19/18/5/5cm dbh split stem White Cedar that is located at 250 Forestwood Dr. This tree is in fair condition and protective measures have been recommended.

Tree number eleven (11) is a 10cm dbh Linden that is located at 250 Forestwood Dr. This tree is in good condition and protective measures have been recommended.

Tree number twelve (12) is a 5-8cm dbh White Cedar Hedge that is located at 249 Poplar Dr. This tree is in poor condition and protective measures have been recommended.

Additional information on this tree can be found in Appendix 1, and a valuation can be found in Appendix 7.

## **Neighbouring Trees**

There are four (4) neighbouring trees within 6m of the property line.

Tree number eighteen (18) is a 50cm dbh Sugar Maple that is located on the north west side of the property at 237 Poplar Dr. This tree is in fair condition and protective measures have been recommended.

Tree number nineteen (19) is a 50cm dbh Sugar Maple that is located on the north west side of the property at 237 Poplar Dr. This tree is in fair condition and protective measures have been recommended.

Tree number twenty (20) is a 28cm dbh Hemlock that is located on the west side of the property at 236 Forestwood Dr. This tree is in good condition and protective measures have been recommended.

Tree number twenty one (21) is a 35cm dbh Hemlock that is located on the west side of the property at 236 Forestwood Dr. This tree is in good condition and protective measures have been recommended.

Additional information on these trees can be found in appendix 1.



## **Observations**

There are eight (8) privately owned trees on this property.

Tree number thirteen (13) is a 23cm dbh White Pine located on the west side of the property. This tree is in good condition and protective measures have been recommended.

Tree number fourteen (14) is a 18cm dbh Cherry located on the west side of the property. This tree is in fair condition and protective measures have been recommended.

Tree number fifteen (15) is a 27cm dbh Walnut located on the west side of the property. This tree is in fair condition and has been recommended for removal due to developmental impact.

Tree number sixteen (16) is a 10-25cm dbh Cedar Hedge located on the south west side of the property. This tree is in fair condition and protective measures have been recommended.

Tree number seventeen (17) is a 96cm dbh Catalpa located on the south side of the property. This tree is in fair condition and protective measures have been recommended.

Tree number twenty two (22) is a 69cm dbh White Pine located on the north east side of the property. This tree is in good condition and protective measures have been recommended.

Tree number twenty three (23) is a 56cm dbh White Birch located on the north side of the property. This tree is in poor condition and has been recommended for removal.

Tree number twenty four (24) is a 31cm dbh Blue Spruce located on the north side of the property. This tree is in fair condition and has been recommended for removal due to developmental impact.

Additional information on these trees can be found in Appendix 1.

## **Tree Protection Recommendations**

The Following recommendations shall serve as guidelines for specific trees. These recommendations are intended to protect specific trees throughout the construction process. Protective tree hoarding shall be constructed according to Town of Oakville specifications and will consist of orange snow fencing with two by four frame top and bottom. The Arborcorp Tree Experts have been retained to ensure that all tree protection measures are being followed.

Trees numbered one (1) through six (6) and eighteen (18) through twenty-two (22) shall have protective tree hoarding erected on the subject property as a one piece unit adhering to the guidelines set out in Appendix 1.

Trees numbered seven (7) through ten (10) shall have protective tree hoarding erected on the subject property as a one piece unit adhering to the guidelines set out in Appendix 1.



An encroachment is expected into the recommended TPZ of trees number seven (7), eight (8), nine (9) and ten (10) to allow for the installation of the new driveway. Ground protection shall be installed for the duration of the construction over the entire area of encroachment. Ground protection shall consist of solid steel plates no less than one half inch thick and a permeable surface shall be used in the areas of encroachment. All excavation shall either be hand dug or excavated utilizing low pressure hydro-vac technology. A qualified member of Arborcorp's staff shall be present during the excavation process to direct, monitor and inspect any excavation activity inside the TPZ.

Post construction, the base of the driveway will be backfilled with permeable aggregate and permeable pavers within the encroached area.

The Arborcorp Tree Experts have been retained to ensure that all tree protection measures are being followed.

Owners Name\_\_\_\_\_ Signature (to acknowledge) \_\_\_\_\_ Date\_\_\_\_\_

Tree number eleven (11) shall have protective tree hoarding erected on the subject property no closer than 1.8m from the base of the tree.

Trees numbered twelve (12) through sixteen (16) shall have protective tree hoarding erected on the subject property no closer than 2.4m from the base of the tree.

Tree number seventeen (17) shall have protective tree hoarding erected on the subject property no closer than 6m from the base of the tree.

In addition to these specific recommendations all of the guidelines indicated in Appendix 4 shall be adhered to throughout the construction process. The Arborcorp Tree Experts have been retained to complete all required arboricultural actions.

## **Conclusions**

There are twenty four (24) trees associated with this property, three (3) of which will be affected by the proposed construction. There are twelve (12) municipal trees associated with this project. Tree preservation recommendations have been made for all trees affected by the proposed construction. Tree removals shall be carried out in accordance with the Town of Oakville's Private Tree Protection By-Law.

There are three (3) trees measuring less than 15cm dbh within 6m of the property line. On the north west side of the property at 249 Polpar Dr. there is one (1) Apple tree and one (1) Yew as well as a row of Pyramidal Cedars on the south west side of that same property, 249 Poplar Dr. Undersized trees are shown as a small green circle on the site plan.



	AP ALLO DE A ALL												to set insets to n		
Tree No.	Tree Species	Lainne	Munic	PE DEH	n. Height	Crown	Crown	h Biologi	Stuck	Minimi Minimi	Munici	Pecon	theatton	n pever a	. <sup>90</sup>
1	Cedar White	Thuja occidentalis	250	5-14	5	2	5	F	F	2.4	Y	Р	Р	Р	
2	Pine Scots	Pinus sylvestris	250	45	11	8	10	G	G	3	Y	Ρ	Ρ	Р	
3	Cedar White	Thuja occidentalis	250	8	5	2	5	G	G	1.8	Y	Р	Р	Р	
4	Cedar White	Thuja occidentalis	250	8	5	2	5	G	G	1.8	Y	Ρ	Ρ	Р	
5	Pine Scots	Pinus sylvestris	250	8	3	4	8	G	G	1.8	Y	Р	Р	Р	
6	Pine Eastern White	Pinus strobus	250	39	16	8	16	G	G	3	Y	Р	Р	Р	
7	Pine Scots	Pinus sylvestris	250	20	18	3	18	Р	F	2.4	Y	Ρ	Ρ	Р	
8	Pine Eastern White Pinus strobus		250	56	20	9	17	F	F	3.6	Y	Ρ	Р	Р	
9	Pine Eastern White	Eastern White Pinus strobus		59/30	20	9	19	F	F	4.2	Y	Р	Р	Р	
10	Cedar White	Thuja occidentalis		10/18/5/5	10	4	10	F	F	2.4	Y	Ρ	Р	Р	
11	Linden Little Leaf	Tilia cordata	250	10	7	4	5	G	G	1.8	Y	Ρ	Р	Р	
12	Cedar White	Thuja occidentalis		5-8	2	1	2	Р	Р	1.8	Y	Р	Р	Р	
13	Pine Eastern White	Pine Eastern White Pinus strobus		23	14	5	12	G	G	2.4	Ν	Ρ	Ρ	Р	
14	Cherry Black Prunus serotina		250	18	8	6	9	G	F	2.4	Ν	Р	Р	Р	
15	Walnut Black	Juglans nigra	250	27	15	8	10	F	F		N	R	R	R	
16	Cedar White	Thuja occidentalis	250	10-25	11	5	11	F	F	2.4	Ν	Р	Р	Р	
17	Catalpa Northern	Catalpa speciosa	250	96	23	15	18	G	F	6	Ν	R	R	R	
18	Maple Sugar (hard maple) Acer saccharinum		237 Poplar Dr	50	23	9	18	G	F	3	Ν	Ρ	Ρ	Р	
19	Maple Sugar (hard maple)	gar (hard maple) Acer saccharinum		50	23	8	18	G	F	3	Ν	Р	Р	Р	
20	Hemlock Eastern	Hemlock Eastern Tsuga canadensis		28	10	5	10	G	G	2.4	Ν	Р	Р	Р	
21	Hemlock Eastern	emlock Eastern Tsuga canadensis		35	13	7	11	G	G	3	Ν	Р	Р	Р	
22	Pine Eastern White	Nhite Pinus strobus		69	24	15	23	F	G	4.2	Ν	Р	Р	Р	
23	Birch European White	Betula pendula	250	56	9	7	6	Р	Р		N	R	R	R	
24	Spruce Blue	Picea pungens	250	31	16	5	16	G	F		N	R	R	R	

# Appendix 1 Detailed Tree Data Graph

Trees highlighted in blue are municipally owned Trees highlighted in red are recommended for removal



# Appendix 2 Tree Locations



Tree protection zones indicated by ---- not drawn to scale.



# Appendix 3 Tree Inventory Methodology

DBH (cm)	Diameter at breast height, 1.4m above ground, measured in centimeters.							
Height (m)	Height of tree from ground to top of crown.							
Crown Reserve (m)	Crown diameter (tree's canopy) measured at intervals of 1, 3, 5, 7.5, 10, 15 meters.							
Biological Health	Related to presence and extent of disease/disease symptoms and the vigour of the tree. <b>H</b> (high) - No disease or disease symptoms present, moderate to high vigour. <b>M</b> (Moderate) - Presence of minor diseases/disease symptoms, and/or moderate vigour.							
Structure Condition	<ul> <li>L (Low) - Presence of diseases/disease symptoms, and/or severely poor vigour.</li> <li>Related to defects in a tree's structure, (i.e., lean, co dominant stems).</li> <li>H (High) - No structural defects, well-developed crown.</li> <li>M (Moderate) - Presence of minor structural defects.</li> <li>L (Low) - Presence of major structural defects.</li> </ul>							
Position on Site	AP—above ground planter; ED - edge of forest or woodland; IN– interior of forest or woodland; HR - hedgerow, or group of trees in a line; OG-open grown; PI - planting island.							
Preservation Priority	A rating of each tree's projected survival related to existing conditions.							
	<ul> <li>1 (high) - high to moderate biological health, and well developed crown. Well suited as a shade tree of screen planting. Will survive existing conditions indefinitely.</li> <li>2 (moderate) - one or more moderate to severe defects in biological health and/or structural condition. Marginally suited as a shade tree or screen planting. Can survive at least 3 - 5 years under existing conditions. This category also includes stock planted within past 2 years that is not yet established.</li> <li>3 (low) - low biological health and/or severely damaged/defective structural condition, unsuitable for urban uses. If biologically defective, survival for more than 1 - 3 years under existing conditions is unlikely.</li> </ul>							
Tree Location	Tree is located on Subject Property – S; Tree is located on neighbouring property – N; Tree is located on property line – $PL$							
Municipal tree	Tree is located on the property of the local municipality/town. Y = Municipal tree.							
Site Dev. impact	changes (cut/fill) of which the tree is not likely to survive. 1 - Site dev. impact.							
Rec. Action	A recommendation to preserve or remove a tree based on i) anticipated impacts from proposed development, ii) the tree's current biological health and structural condition, and iii) having a moderate to high hazard potential. <b>P (preserve)</b> - tree having moderate to high biological health and moderate to low structural defects. Tree is likely to survive at least 3-5 years. <b>R (remove)</b> - tree having low biological health and/or severe structural defects, and is not likely to survive more than 1-3 years, and/or will not survive proposed development. <b>C (conditional)</b> - tree's preservation or removal is related to potential relocation/modification of the limit of construction, and/or known treatments that will likely improve the biological health and/or structural condition of the tree. May require review of tree's condition, e.g., roots, at time of construction/excavation. Also applies to trees that may require further or regular evaluation.							
Action Priority	A rating which relates to the urgency of treatment(s). H - high (immediate), M - moderate (within 2 years), L - low (little or no action required)							



## **Appendix 4 Management Recommendations**

The following steps should be taken to remove trees, to assess the conditions of trees at time of tree works and excavation, and to protect trees identified for preservation. A qualified arborist or professional forester should oversee implementation of tree works.

#### A. Prior to Construction:

- 1 Mark trees for treatments as outlined in the detailed tree assessment descriptions. Ensure that branches and/or trees are removed so as not to damage trees to be preserved. Prune trees to correct/improve structure; remove deadwood, snags, and clear limbs that are likely to be impacted from proposed structures. Treatments are to be carried out prior to commencement of construction. Details of tree pruning and thinning recommendations are to be provided at the time of tree work activities.
- 2 Erect tree protection fencing (1.5 meter high plywood hoarding, paige wire fencing or equivalent) around trees to be preserved approximately 1 meter outside the drip line of the trees. Where this is not possible and changes to grades will occur within the tree's drip line, onsite inspection is required to identify the full and precise extent of disturbance to each tree and to determine additional protection measures. However if more than 25% of the root system is to be compromised, preservation is not recommended.
- 3 Identify areas on site to be used to stockpile and store soils, supplies and materials so that they do not impact trees to be preserved. Do not pile materials within the drip line of the trees to be preserved.
- 4 Identify and locate routes to be used by large, heavy excavation and building machinery. Do not drive equipment within the drip line of trees to be preserved.

#### B. During Construction:

- 1 Excavation works near trees to be preserved must be conducted carefully so as to minimize impacts. Where necessary, pruning of excavated or damaged roots and limbs should be conducted by qualified personnel. All exposed roots of trees to be preserved must be kept moist and covered at all times.
- 2 On-site guidance to preserve/remove trees based on underground findings at time of excavation is recommended.

#### C. Following Construction Including Lot Grading:

- 1 Fertilize trees that receive crown/root pruning with a slow release fertilizer. In the absence of soil and/or foliar nutrient analysis, a fertilizer ratio of 3:1:1 should be used.
- 2 Where possible and in consultation with the arborist/landscape architect apply a mixture of wood chips and <sup>3</sup>/<sub>4</sub> clear gravel over tree root zones that may be encroached. Depth of cover and extent of area covered shall be determined on a per case basis.
- 3 Use light soils where fill is required up to a depth of 6 inches. Where depth of fill is greater than 6 inches, retaining wall structures and/or vertical mulching are recommended. Local drainage patterns within the root zones of trees to be preserved should be maintained as existing.
- 4 Monitor the health and condition of trees annually for 5 years.



## **Appendix 5 Tree Protection Barriers**





# Appendix 6 Municipal Tree Photo(s)

## Tree#1



Tree#2



Tree #3





## Tree #4



## Tree #6









### Tree #9



### Tree #11



Tree #10









# Appendix 7 Appraisal Calculations

Tree Number	Tree Species	Diameter of Appraised Tree (cm)	Area Of Appraised Tree (cm)	Diameter of Replaceme nt Tree (cm)	Area of the Replaceme nt Tree (cm)	Cost of Replaceme nt Tree	Basic Price	Species Rating	Basic Value	Location Rating	Conditions Rating	Appraised Value
1	White Cedar	14	153.86	6	28.26	57.5	2.034678	70.00%	236.3889	80.00%	75.00%	141.833333
2	Scots Pine	45	1589.625	6	28.26	210	7.430998	53.00%	6359.325	80.00%	80.00%	4069.968
3	White Cedar	8	50.24	6	28.26	57.5	2.034678	70.00%	88.80556	80.00%	80.00%	56.8355556
4	White Cedar	8	50.24	6	28.26	57.5	2.034678	70.00%	88.80556	75.00%	80.00%	53.2833333
5	Scots Pine	8	50.24	6	28.26	210	7.430998	53.00%	296.5667	85.00%	85.00%	214.269417
6	White Pine	39	1193.985	6	28.26	125	4.423213	75.00%	3992.188	80.00%	80.00%	2555
7	Scots Pine	20	314	6	28.26	210	7.430998	53.00%	1335.367	70.00%	65.00%	607.591833
8	White Pine	56	2461.76	6	28.26	125	4.423213	75.00%	8197.917	75.00%	70.00%	4303.90625
9	White Pine	67	3523.865	6	28.26	125	4.423213	75.00%	11721.35	75.00%	70.00%	6153.71094
10	White Cedar	19	283.385	6	28.26	57.5	2.034678	70.00%	420.8681	75.00%	75.00%	236.738281
11	Linden	10	78.5	6	28.26	200	7.077141	71.00%	452.4444	80.00%	80.00%	289.564444
12	White Cedar	8	50.24	6	28.26	57.5	2.034678	70.00%	88.80556	65.00%	65.00%	37.5203472



# **Appendix 8 Staff Credentials and Qualifications**





## **Appendix 10 Limitations of Assessment**

It is the policy of Arborcorp Tree Experts Ltd. to attach the following clause regarding limitations. We do this to ensure that developers, agencies, municipalities and owners are clearly aware what is technically and professionally realistic in 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 insect attack and crown dieback, discolored foliage, the condition of any visible root structures, the degree and direction of lean, the general condition of the trees and the surrounding site, and the proximity of property and people. Except where specifically noted in the report, none of the trees examined were dissected, cored, probed, or climbed, and detailed root crown examinations involving excavation were not undertaken.

Trees greater than 100 mm in DBH have been assessed for structural integrity by following the methodology in the International Society of Arboriculture's (ISA) "Evaluation of Hazard Trees in Urban Areas", Second Edition. Monetary values for trees have been determined using the Guide for Plant Appraisal 9<sup>th</sup> Edition's replacement cost method.

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 over time. 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 behavior 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 in the event of adverse weather conditions, and this risk can only be eliminated if the tree is removed.

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 the inspection.

This 17 Page report was prepared by

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