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ARBORIST REPORT

PROPOSED INDUSTRIAL SUBDIVISION **80 BIG BAY POINT ROAD CITY OF BARRIE, ONTARIO**

PREPARED FOR: **TONLU HOLDINGS LIMITED 401 VAUGHAN VALLEY BOULEVARD WOODBRIDGE, ONTARIO** L4H 3B5

PREPARED BY: STRYBOS BARRON KING LTD. **5770 HURONTARIO STREET SUITE 320** MISSISSAUGA, ONTARIO L5R 3G5

> **OUR PROJECT NO:** 21-5602

August 27, 2021

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Enclosed -- Full Size - V100 Tree Inventory and Preservation Plan

INTRODUCTION

Strybos Barron King Limited was retained by Tonlu Holdings Limited to prepare an Arborist Report for the subject lands as per City of Barrie guidelines. The purpose of this report is to determine the species, composition, character, and health of existing vegetation and assess opportunities for preservation in support of the proposed industrial subdivision. The subject property is located at 80 Big Bay Point Road in the City of Barrie. (See Appendix 1. Key Map). An industrial subdivision is proposed for the site.

This report was prepared using the City of Barrie Tree protection Manual (V4, 2019), in accordance with Tree Preservation By-law 2014-1150 using accepted arboriculture guidelines and standards for tree protection and reporting.

The subject property is located on the north side of Big Bay Point Road, abutting existing industrial properties to the east, north and southwest. Most of the property is composed of cultural meadow with wooded areas along the north, northwest, and southwest portions of the site (refer to EIS prepared by Cambium Inc. for detailed information regarding vegetation communities).

The proposed Draft Plan includes an environmental protection area along the northwest corner and north limit of the property. The proposed development limits occur outside of this environmental area (Block 33). The Draft Plan proposes 30 individual lots as well as a new road accessing off Bayview Drive to the west of the site. Most of the existing trees occur along the east property limit, within the north and northwest area of the property, within the limits of Environmental Protection Block 33 and at the southwest corner of the property.

The north limit of the site is composed of a wooded area dominated by Poplar. Several Butternut plantings (part of former Butternut compensation works) occur within the north property limit. To the northwest, a semi-mature wooded area composed of a mix of Sugar Maple, Birch, Poplar, Basswood, Eastern White Pine, and Scots Pine is present, with an understory and edge mix of Hawthorn, Buckthorn, Crabapple. An existing, mixed, naturalized wooded slope occurs adjacent to the east property limit, and a wooded area occurs at the southwest corner of the property. Three Butternut trees have been observed along the east property limit. A Butternut Health Assessment is included in this report. (*Refer to attached Tree Inventory & Preservation Plan - V100*).

The proposed development will require the removal of all trees within the developable portion of the property.

METHODOLOGY

The trees reviewed in this report were noted as described in a field study conducted at the subject site on August 2-4, 2021. The trees were inventoried along the site property limits, including within 6m of the subject site., as well as along the edge of the limits of the Environmental Protection area. These trees were tagged, and their location surveyed. A topographic plan prepared by Wahba Surveying, showing the location of tagged trees as well as a proposed Draft Plan prepared by Innovative Planning Solutions were used to locate individual trees, elevations, and structures in relation to the proposed development works. The trees on site have been divided into related treed community zones for review purposes. The treed communities within these zones have been analysed with respect to species, size, and condition.

The caliper (diameter of stem) of each tree was measured using a caliper tape at 1.4 metres from existing grade and recorded in cm as Diameter Breast Height (D.B.H.). The trees were assigned a health and condition rating of poor, fair or good, depending on overall vigour, presence of disease and structural integrity as recommended in the Guide for Plant Appraisal, 9th Edition, published by the International Society of Arboriculture. (Refer to attached V100 – Tree Inventory and Removals Plan for specific tree information)

TREE INVENTORY

Inventory Summary

The vegetation found on the subject site varies in species type and composition based on location. These areas have been divided into the following related zones for review purposes: 1) Cultural Meadow, 2) East Property Limit, 3) North & Northwest Limit and Environmental Protection Block 33, and 4) Southwest Corner. The detailed inventory of the trees is included on the enclosed V100 - Tree Inventory and Preservation Plan and captured in Appendix 2 -Site Photographs.

Table 1 – Tree Inventory Table Descriptions

	, , , , , , , , , , , , , , , , , , ,
Key#	This number refers to inventory number assigned to the tree on the plan.
Species	The common names are provided for each tree.
Caliper	This refers to diameter (in centimetres) at breast height and is measured at 1.4m above the ground for each tree.
Health	The general assessed health of the tree.
Structure	This is an assessment of the trees overall form.
Comments	A general description of each tree's condition and/or pertinent characteristics is provided.
Direction	This indicates either preservation or removal of the tree (as noted on the plan)
Min. TPZ	Recommended Tree Preservation Zone (in metres).

						,			
EXI	STING TREE	INVENT	ORY - (8	30 Big B	ay Point)				
KEY	SPECIES				STRUCTURE	COMMENTS	PRESERVATION	MIN. TPZ	KEY
		IN (cm)	IN (m)	G/F/P			DIRECTION		ــــــ
1	WHITE WILLOW	106.0	16.0	FAIR	COLLAPLING	BROKEN BRANCHES IN CROWN, VINE ENTANGLED.	REMOVE	6.0	1
2	SUGAR MAPLE	24	6.0	GOOD	ONE SIDED FORM	CROWDING BY ADJACENT TREES	REMOVE	1.8	2
3	POPLAR	23	5.0	FAIR	ONE SIDED FORM	CROWDING BY ADJACENT TREES., BROKEN BRANCHES IN CROWN	REMOVE	1.8	3
4	POPLAR	25	6.0	FAIR	ONE SIDED FORM	CROWDING BY ADJACENT TREES., BROKEN BRANCHES IN CROWN	PRESERVE	1.8	4
5	POPLAR	27-31	8.0	FAIR	MULTISTEMMED	CROWDING BY ADJACENT TREES., BROKEN BRANCHES IN CROWN, VINE ENTANGLED	REMOVE	2.4	5
6	POPLAR	21	6.0	FAIR	ONE SIDED FORM	CROWDING BY ADJACENT TREES., BROKEN BRANCHES IN CROWN	PRESERVE	1.8	6
7	POPLAR 10-28 8.0 FAIR ONE SIDED FORM CROWDING BY ADJACENT TREES., BROKEN BRANCHES IN CROWN		PRESERVE	1.8	7				
8	PAPER BIRCH	32	7.0	FAIR	ONE SIDED FORM	VINE ENTANGLED, BROKEN BRANCHES IN CROWN, UNDERSTORY CROWDING	REMOVE	2.4	8
9	POPLAR	29	5.0	POOR	HAZARD	DEAD, HAZARD	PRESERVE	1.8	9
10	PAPER BIRCH	27	8.0	FAIR	ONE SIDED FORM	CROWDING BY ADJACENT TREES, DIEBACK ON LOWER BRANCHES, UNDERSTORY CROWDING.	PRESERVE	1.8	10
11	POPLAR	22	5.0	FAIR	ONE SIDED FORM	DIEBACK IN CROWN, CROWDING BY ADJACENT TREES., BROKEN BRANCHES IN CROWN	PRESERVE	1.8	11
12	BUTTERNUT	8	4.0		ASYMMETRICAL FORM	STRUNG WITH GUIDEWIRES, TRANSPLANTED	PRESERVE	1.2	12
13	BUTTERNUT	11	4.0	FAIR	ASYMMETRICAL FORM	STRUNG WITH GUIDEWIRES, TRANSPLANTED	PRESERVE	1.8	13
14	BUTTERNUT	12	5.0	POOR	ASYMMETRICAL FORM	GIRDLED BY GUIDEWIRES, SUCKERING, TRANSPLANTED	PRESERVE	1.8	14
15	BUTTERNUT	4	3.0	GOOD	MULTISTEMMED	IMMATURE, TRANSPLANTED	PRESERVE	1.2	15
16	BUTTERNUT	23	6.0	FAIR	ASYMMETRICAL FORM	DEAD LEADER, SUCKERING ON STEM, TRANSPLANTED	PRESERVE	1.8	16
17	BUTTERNUT	17	5.0	FAIR	ASYMMETRICAL FORM	DEAD LEADER, SUCKERING ON STEM, TRANSPLANTED	PRESERVE	1.8	17
18	BUTTERNUT	19	5.0	POOR	ASYMMETRICAL FORM	DEAD LEADER, TRANSPLANTED	PRESERVE	1.8	18
19	BUTTER NUT	20	5.0	POOR	ASYMMETRICAL FORM	DEAD LEADER, TRANSPLANTED	PRESERVE	1.8	19
20	BUTTERNUT	19	5.0	FAIR	ASYMMETRICAL FORM	DEAD LEADER, SUCKERING ON STEM, TRANSPLANTED	PRESERVE	1.8	20
21	BUTTERNUT	8-12	4.0	FAIR	MULTISTEMMED	STRUNG WITH GUIDEWIRES, TRANSPLANTED	PRESERVE	1.8	21
22	BUTTERNUT	9-11	4.0	FAIR	MULTISTEMMED	DEAD MAIN STEM SUCKERING, TRANSPLANTED	PRESERVE	1.8	22
23	POPLAR	15-21	5.0	FAIR	MULTISTEMMED	CROWDING BY ADJACENT TREES	PRESERVE	1.8	23

EXI	STING TREE	INVENT	ORY - (8	30 Big B	ay Point)				
KEY	(EY SPECIES CALIPER CROV				STRUCTURE	COMMENTS	PRESERVATION	MIN. TPZ	KEY
24	POPLAR	IN (cm) 22-35	IN (m) 10.0	G/F/P FAIR	GROUPING	5 STEMPS IN TIGHT CLUSTER	DIRECTION PRESERVE		
25	SCOTS PINE	27	5.0	FAIR	ONE SIDED FORM	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING	REMOVE	1.8	24
26	SCOTS PINE	30	6.0	FAIR	ONE SIDED FORM	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING	PRESERVE	1.8 2.4	25 26
27	PAPER BIRCH	14-15	8.0	FAIR	MULTISTEMMED	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING, MULTISTEMMED	REMOVE	1.8	27
28	WHITE ELM	24	8.0	FAIR	UPRIGHT	CROWDING BY ADJACENT TREES	PRESERVE	1.8	28
29	POPLAR	20	7.0	FAIR	ASYMMETRICAL FORM	LEANING, CROWDING BY ADJACENT TREES	PRESERVE	1.8	29
30	POPLAR	20	7.0	FAIR	ASYMMETRICAL FORM	CROWDING BY ADJACENT TREES, GROUPING	PRESERVE	1.8	30
31	PAPER BIRCH	24	7.0	FAIR	ASYMMETRICAL	CROWDING BY ADJACENT TREES	REMOVE		
32	PAPER BIRCH	26-28	8.0	FAIR	FORM MULTISTEMMED	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING	PRESERVE	1.8	31 32
33	POPLAR	24-34	7.0	FAIR	MULTISTEMMED	CROWDING BY ADJACENT TREES	PRESERVE	1.8	33
34	BASSWOOD	23	7.0	GOOD	ASYMMETRICAL	CROWDING BY ADJACENT TREES	PRESERVE	1.8	34
35	WHITE ELM	28	6.0	GOOD	FORM UPRIGHT	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING	PRESERVE	1.8	35
36	WHITE WILLOW	17-30	8.0	FAIR	ONE SIDED FORM	BROKEN BRANCHES IN CROWN, UNDERSTORY CROWDING	PRESERVE	2.4	36
37	SCOTS PINE	43	7.0	FAIR	ASYMMETRICAL	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING	PRESERVE	3.0	37
38	PAPER BIRCH	29	7.0	GOOD	FORM ASYMMETRICAL	CROWDING BY ADJACENT TREES	PRESERVE		
39	BLACK CHERRY	28	7.0	FAIR	FORM ASYMMETRICAL	CROWDING BY ADJACENT TREES	PRESERVE	1.8	38
40	PAPER BIRCH	22	7.0	FAIR	FORM ASYMMETRICAL	CROWDING BY ADJACENT TREES, GROWING ON SLOPE	PRESERVE	1.8	39
41	PAPER BIRCH	22	7.0	FAIR	FORM ASYMMETRICAL	CROWDING BY ADJACENT TREES, GROWING ON SLOPE	PRESERVE	1.8	40
42	WHITE ELM	23	6.0	GOOD	FORM ASYMMETRICAL	CROWDING BY ADJACENT TREES, GROWING ON SLOPE	PRESERVE	1.8	41
					FORM	,		1.8	42
43	PAPER BIRCH	32	8.0	GOOD	ASYMMETRICAL FORM	CROWDING BY ADJACENT TREES, GROWING ON SLOPE	PRESERVE	2.4	43
44	PAPER BIRCH	26	7.0	GOOD	ASYMMETRICAL FORM	CROWDING BY ADJACENT TREES, GROWING ON SLOPE	PRESERVE	1.8	44
45	PAPER BIRCH	25	7.0	FAIR	ASYMMETRICAL FORM	CROWDING BY ADJACENT TREES, GROWING ON SLOPE	PRESERVE	1.8	45
46	PAPER BIRCH	27	7.0	FAIR	ASYMMETRICAL FORM	CROWDING BY ADJACENT TREES, GROWING ON SLOPE	PRESERVE	1.8	46
47	BASSWOOD	21.0	6.0	FAIR	ASYMMETRICAL FORM	CROWDING BY ADJACENT TREES, GROWING ON SLOPE	PRESERVE	1.8	47
48	WHITE ELM	31	7.0	FAIR	ASYMMETRICAL FORM	CROWDING BY ADJACENT TREES,	PRESERVE	2.4	48
49	POPLAR	32	7.0	FAIR	ASYMMETRICAL FORM	CROWDING BY ADJACENT TREES, GROWING ON SLOPE	PRESERVE	2.4	49
50	PAPER BIRCH	25	7.0	FAIR	ASYMMETRICAL	CROWDING BY ADJACENT TREES, GROWING ON SLOPE	REMOVE		
51	BASSWOOD	23	8.0	FAIR	FORM ASYMMETRICAL	CROWDING BY ADJACENT TREES, GROWING ON SLOPE	PRESERVE	1.8	50
52	BASSWOOD	34	8.0	FAIR	FORM ASYMMETRICAL	CROWDING BY ADJACENT TREES, GROWING ON SLOPE	PRESERVE	1.8	51
53	PAPER BIRCH	33	9.0	FAIR	FORM ASYMMETRICAL	CROWDING BY ADJACENT TREES, GROWING ON SLOPE	PRESERVE	2.4	52
54	BASSWOOD	24	7.0	GOOD	FORM ASYMMETRICAL	CROWDING BY ADJACENT TREES, GROWING ON SLOPE	PRESERVE	2.4	53
					FORM	·		1.8	54
55	PAPER BIRCH	24	7.0	FAIR	ASYMMETRICAL FORM	CROWDING BY ADJACENT TREES, GROWING ON SLOPE	PRESERVE	1.8	55
56	PAPER BIRCH	27	7.0	FAIR	ASYMMETRICAL FORM	CROWDING BY ADJACENT TREES, GROWING ON SLOPE	PRESERVE	1.8	56
57	BASSWOOD	25	6.0	FAIR	ASYMMETRICAL FORM	CROWDING BY ADJACENT TREES, GROWING ON SLOPE	PRESERVE	1.8	57
58	BASSWOOD	21	6.0	GOOD	ASYMMETRICAL	CROWDING BY ADJACENT TREES,	REMOVE		
59	PAPER BIRCH	32	6.0	POOR	FORM ASYMMETRICAL FORM	DECAY ON STEM, CROWDING BY ADJACENT TREES	REMOVE	1.8	58 59
60	POPLAR	23	5.0	FAIR	ASYMMETRICAL	CROWDING BY ADJACENT TREES	REMOVE		
61	WHITE PINE	44	8.0	GOOD	FORM ASYMMETRICAL	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING	REMOVE	1.8	60
62	WHITE SPRUCE	20	5.0	FAIR	FORM ASYMMETRICAL	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING	REMOVE	3.0	61
63	WHITE PINE	32	7.0	FAIR	FORM ASYMMETRICAL	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING	PRESERVE	1.8	62
64	SUGAR MAPLE	21	5.0	GOOD	FORM ASYMMETRICAL	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING	REMOVE	2.4	63
65	SUGAR MAPLE	20	5.0	GOOD	FORM ASYMMETRICAL	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING	PRESERVE	1.8	64
66	SUGAR MAPLE	22	5.0	GOOD	FORM ASYMMETRICAL	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING	PRESERVE	1.8	65
					FORM	· ·		1.8	66
67	SUGAR MAPLE	20	5.0	GOOD	ASYMMETRICAL FORM	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING	PRESERVE	1.8	67

FV	SPECIES	CALIPER	CROWN	HEALTH	STRUCTURE	COMMENTS	PRESERVATION	MIN TP7	KE
	3F LOIL3	IN (cm)	IN (m)	G/F/P	STRUCTURE	COMMENTS	DIRECTION	WIIIV. TFZ	IKL
67	SUGAR MAPLE	20	5.0	GOOD	ASYMMETRICAL FORM	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING	PRESERVE	1.8	67
68	SUGAR MAPLE	23	5.0	GOOD	ASYMMETRICAL FORM	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING	REMOVE	1.8	68
69	SUGAR MAPLE	23	5.0	GOOD	ASYMMETRICAL FORM	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING	REMOVE	1.8	69
0	SUGAR MAPLE	24	5.0	GOOD	ASYMMETRICAL FORM	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING	PRESERVE	1.8	70
1	SUGAR MAPLE	20	5.0	GOOD	ASYMMETRICAL FORM	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING	REMOVE	1.8	7
2	ASH	27	6.0	POOR	DEAD	EMERALD ASH BORER	PRESERVE	1.8	7
3	ASH	24	5.0	POOR	DEAD	EMERALD ASH BORER	PRESERVE	1.8	7
4	SUGAR MAPLE	27	6.0	FAIR	ASYMMETRICAL FORM	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING	PRESERVE	1.8	7
5	ASH	21	5.0	POOR	DEAD	EMERALD ASH BORER	PRESERVE	1.8	7
6	MANITOBA MAPLE	15-35	15.0	FAIR	COLLAPSED	COLLAPSED, BROKEN BRANCHES IN CROWN, SUCKERING ON STEM	PRESERVE	2.4	7
7	WHITE ELM	30	7.0	GOOD	ONE SIDED FORM	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING, GROWING ON SLOPE	REMOVE	2.4	7
3	RED OAK	45	10.0	GOOD	BROAD	GROWING ON SLOPE, BROAD CANOPY	PRESERVE	3.0	7
)	RED OAK	43	10.0	GOOD	ONE SIDED FORM	GROWING ON SLOPE, MINOR BROKEN BRANCHES IN CROWN	PRESERVE	3.0	-
)	BLACK CHERRY	37	8.0	POOR	ONE SIDED FORM	HALF DEAD, LEANING, BROKEN BRANCHES IN CROWN	PRESERVE	2.4	-
	RED OAK	35	8.0	FAIR	ONE SIDED FORM	GROWING ON SLOPE, MINOR BROKEN BRANCHES IN CROWN	PRESERVE	2.4	
	BLACK CHERRY	39	8.0	POOR	HAZARD	DEAD, BROKEN BRANCHES IN CROWN	PRESERVE	2.4	
_	WHITE ELM	34-36	8.0	FAIR	ONE SIDED FORM	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING	PRESERVE	2.4	
	YELLOW BIRCH	53	10.0	FAIR	ONE SIDED FORM	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING	PRESERVE	3.6	
	PAPER BIRCH	21-27	8.0	FAIR	MULTISTEMMED	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING	PRESERVE		
	PAPER BIRCH	23	8.0	GOOD	ONE SIDED FORM	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING	PRESERVE	1.8	
,	PAPER BIRCH	20	8.0	GOOD	ONE SIDED FORM	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING	PRESERVE	1.8	
	PAPER BIRCH	23	8.0	GOOD	ONE SIDED FORM	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING	PRESERVE	1.8	
)	PAPER BIRCH	20	8.0	GOOD	ONE SIDED FORM	INGROWN WITH ADJACENT MOUNTAIN ASH	PRESERVE	1.8	-
)	RED OAK	41	10.0	GOOD	ONE SIDED FORM	CROWDING BY ADJACENT TREES	PRESERVE	1.8	
_	BLACK CHERRY	37	8.0	FAIR	ONE SIDED FORM	CROWDING BY ADJACENT TREES, UNDERSTORY CROWDING	PRESERVE	3.0	
2	RED OAK	88	18.0		BROAD	CROWDING BY ADJACENT TREES	PRESERVE	2.4	
3	SUGAR MAPLE	51	12.0	FAIR	ONE SIDED FORM	CROWDING BY ADJACENT TREES	PRESERVE	5.4	-
1	PAPER BIRCH	26	9.0		ONE SIDED FORM	CROWDING BY ADJACENT TREES	PRESERVE	3.6	-
;	SUGAR MAPLE	32-45	10.0	FAIR	MULTISTEMMED	MULTISTEMMED, UNDERSTORY CROWDING	PRESERVE	1.8	
;	WHITE PINE	60	11.0	GOOD	ASYMMETRICAL	UNDERSTORY CROWDING	REMOVE	3.0	
7	WHITE PINE	45	9.0	GOOD	FORM ASYMMETRICAL	UNDERSTORY CROWDING	REMOVE	3.6	
3	WHITE PINE	51	10.0	GOOD	FORM ASYMMETRICAL	UNDERSTORY CROWDING	REMOVE	3.0	
)	SCOTS PINE	54	10.0	FAIR	FORM ASYMMETRICAL FORM	UNDERSTORY CROWDING, MINOR DIEBACK IN CROWN	REMOVE	3.6	
0	SUGAR MAPLE	115	20.0	FAIR	ASYMMETRICAL FORM	UNDERSTORY CROWDING, MINOR DIEBACK IN CROWN	REMOVE	6.0	١.
6	WHITE ELM	27	7.0	GOOD	ONE SIDED FORM	MINOR DAMAGE ON STEM, UNDERSTORY CROWDING	REMOVE	1.8	1
7	SUGAR MAPLE	27	8.0	GOOD	ONE SIDED FORM	MINOR DAMAGE ON STEM, UNDERSTORY CROWDING	REMOVE	1.8	1
67	BUTTERNUT	27&28	10.0	FAIR	DOUBLE STEM	ONE SIDED FORM, CROWN SUBORDINATED BY ADJACENT TREE, DIEBACK OOWER	PRESERVE		
68	BUTTERNUT	26-40	13.0	FAIR	MULTI-STEMMED	BRANCHES, MINOR CANKER OBSERVED, LARGE PERCENTAGE OF LIVE CROWN ONE SIDED FORM, CROWDED BY ADJACENT TREES, DIEBACK ON LOWER BRANCHES, MINOR CANKED ORSEDVED, LARGE REPORTAGE OF LIVE CROWN	PRESERVE	1.8	2
	BUTTERNUT	43	12.0	FAIR	ASYMMETRICAL	BRANCHES, MINOR CANKER OBSERVED, LARGE PERCENTAGE OF LIVE CROWN CROWDED BY ADJACENT TREE, LOW BRANCHING, MINOR DIEBACK ON LOWER	PRESERVE	2.4	2

1) Cultural Meadow

Most of the Development area for the property is composed of cultural meadow. Based on the EIS, this area was recently cleared by the previous owner. There are no existing trees within the meadow.

2) East Property Limit

An existing naturalized wooded area occurs on a slope immediately adjacent to the east limit of the property. Most of the trees along this slope include Red Oak, Black Cherry, White Elm, Paper Birch White Pine and Sugar Maple. Three semi-mature Butternut trees also occur along this limit, adjacent to the site. A Butternut Health Assessment has been prepared for these trees and is referenced in this report. Overall, the trees along this slope are in generally fair to good health and condition.

3) North & Northwest limit and Environmental Protection Block 33

The cultural meadow gives way to mixed wooded areas along the north and northwest area of the site. The development limits adjacent to the north and northwest limit of the site are defined by the Environmental Protection Block 33. This area is dominated by naturalized stands of Poplar trees to the north. Several Butternut plantings (part of former Butternut compensation works) occur within the north property limit. Although mainly composed of Poplar, the edge of Block 33 is also composed of immature to semi-mature Sugar Maple, Birch, Basswood, Eastern White Pine, and Scots Pine, with an understory and edge mix of Hawthorn, Buckthorn, and Crabapple. Overall, the trees along the edge of Block 33 are in generally good health and condition.

4) Southwest Corner (Lot 1)

The southwest corner of the property currently contains a portion of a wooded area composed of semi-mature to mature White Pine, Scots Pine, Sugar Maple, and White Elm. The wooded area continues into the property to the west. Overall, the trees within this wooded area are in generally good health and condition.

DISCUSSION

Limits of Development

The Draft Plan proposes an industrial subdivision within the subject property. Environmental Protection Block 33 (2.5ha) has been established along the north and northwest portion of the site. Based on the anticipated servicing, grading and development requirements, all the trees within the proposed development area will require removal; however, there are opportunities for preservation along the boundary of Block 33 as well as along the east and southwest property limit.

BUTTERNUT HEALTH ASSESSMENT (BHA)

Butternut is an endangered species and protected under the Ontario's Endangered Species Act. Ontario Regulation 242/08 states that before a butternut tree can be removed or harmed, its health must be evaluated by a person designated to assess the health of butternut trees.

Three pure Butternut Trees (as determined through DNA testing coordinated by Cambium Inc.) were inventoried immediately adjacent to the east limit of the property (refer to Existing Tree Inventory List – tag no. 267, 268 & 269 for detailed tree information).

A Butternut Health Assessment (BHA) was conducted by Butternut Health Assessor Matthew Gehres of Strybos Barron King Ltd. BHA# 447 on July 6, 2021. Butternut trees are divided into three (3) categories based on their health:

- Category 1: Non-Retainable (in the advanced stages of disease as a result of butternut canker).
- Category 2: Retainable (the tree does not have butternut canker, or the disease is not as advanced
- Category 3: Archivable (could be useful in determining how to prevent or resist butternut canker

Based on the BHA, these three trees were determined to be Category 2 trees – retainable (refer to Appendix D – Butternut Health Assessment Forms). Although construction disturbance will likely occur within the 50m set back required for category 2 trees, these trees can be retained and protected based on the "optimum Tree Protection Zone Distance" as defined below.

RECOMMENDATIONS

Tree Preservation

In determining the tree preservation recommendations for the site, the criteria discussed in the preceding section as well as additional items noted below were considered:

- Overall tree health, form, size, species and predicated longevity.
- Anticipated impact from construction of buildings and proposed landscape features, road works, site servicing and grading.

Each tree was assigned a minimum Tree Preservation Zone (TPZ) as per the City of Barrie Tree Protection Manual (Refer to Table 1-Minimum Tree Protection Zones).

Table 2 - Tree Protection Zones

Trunk Diameter (DBH)	Minimum Protection Zone
<10 cm	1.0m
11-25 cm	1.5 m
26-40 cm	2.0 m
41-60 cm	2.5 m
61-80 cm	3.0 m
81 cm +	4.0 m

Trees are recommended for preservation or removal based on proximity of the TPZ to the limit of construction, in conjunction with the overall tree health, size and anticipated ability to withstand root or crown impacts. Where possible, a protected tree's dripline or "optimum Tree Protection Zone Distance" (as per the Tree Protection Manual) has been used.

Due to the anticipated constraints of the proposed development limits, all the existing trees within the development area are to be removed. All trees on the neighbouring properties and within the limits of Environmental Protection Block 33 are to be preserved and protected throughout the development construction process.

TREE PROTECTION MEASURES

The following tree preservation and protection measures are required as indicated on the V100 – Tree Inventory & Preservation Plan:

Pre-Construction

- Prior to construction, the trees to be preserved shall be protected with tree protection hoarding. (See Appendix E -Tree Protection Hoarding Details) The hoarding is to be installed along the edge of the tree protection zones as noted on the Tree Inventory & Removals Plan. This hoarding shall be maintained for the duration of site construction. It shall not be removed until authorised by the Consulting Arborist.
- The limits of tree protection hoarding shall be confirmed in the field by the Consulting Arborist.
- Where limbs or portions of trees are to be pruned to remove deadwood or accommodate construction, they will be removed by a qualified Arborist in accordance with acceptable arboricultural practice.
- All garbage and foreign debris shall be removed from the tree preservation zones prior to construction.

During Construction

- Areas within the protective hoarding shall remain undisturbed for the duration of construction and shall not be used for the storage of excavated fill, building materials, structures, or equipment.
- Minor grading works will be permitted at the edge of the preservation zone as required to correct localized depressions adjacent to the new development. This work to be undertaken under the supervision of the Consulting Arborist.
- Where root systems of trees to be preserved are exposed or damaged by construction work, they are to be trimmed neatly by a qualified Arborist in accordance with acceptable arboricultural practice. The exposed area shall be backfilled with appropriate material to prevent desiccation.
- The Consulting Arborist must be notified prior to the temporary removal of a section of hoarding to gain access for fine grading or other works. All works to be supervised by the Consulting Arborist.
- No cables of any type shall be wrapped around or installed on trees to be preserved. No contaminants will be dumped or flushed where feeder roots of trees exist.
- Protective hoarding may be removed following rough topsoil grading to permit planting, fine grading, seeding, or sodding as required during final landscaping. This work shall be undertaken under the supervision of the Consulting Arborist to ensure that existing trees remain undamaged.
- Layout and installation of planting within tree protection zones shall be supervised by the Consulting Arborist.

Post-Construction

 Following construction, the limits of the preservation zones shall be inspected by the Consulting Arborist. Any remaining dead, diseased, or hazardous limbs or trees are to be removed by a qualified tree professional as directed by the Consulting Arborist.

To ensure that the Tree Preservation and Protection Measures are properly implemented, the Consulting Arborist shall be involved at the following stages of construction in the vicinity of the tree preservation zones:

- 1. Upon layout of protective hoarding.
- 2. During pruning and removal of existing trees.
- 3. Periodically during construction to ensure that hoarding remains in place and no damage occurs to trees to be preserved.
- 4. Upon fine grading of site and during layout of planting, or other landscape works.
- 5. Upon completion of construction activities.

CONCLUSION

Strybos Barron King Ltd. was retained by Tonlu Holdings Limited to prepare an Arborist Report and Tree Inventory & Preservation Plan in support of a proposed industrial subdivision development.

The proposed Draft Plan will require the removal of all the existing trees within the development area. Trees located on neighbouring properties and within Environmental Protection Block 33 can be preserved and protected. A permit to remove these trees will be issued through the Draft Planning process with the City of Barrie and other agencies as required. New plantings within the property will be proposed through the landscape planning process.

Based on the Butternut Health Assessment, the three Butternuts flanking the east property limit have been deemed "retainable". These trees can be successfully preserved and protected throughout the construction process.

Prepared by

STRYBOS BARRON KING LTD.

Matthew Gebres

Certified Arborist ISA #ON 1114A Senior Landscape Technologist

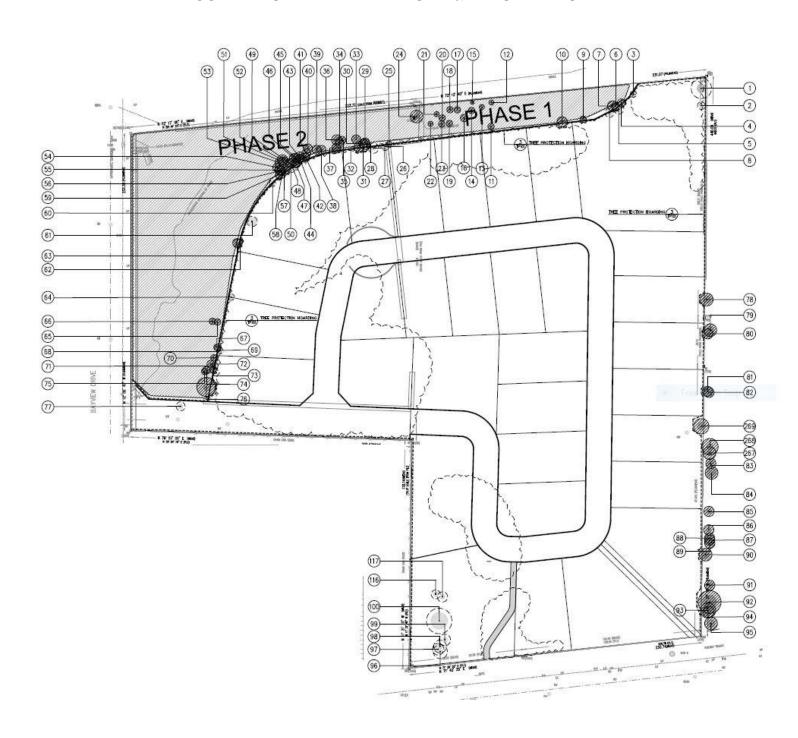
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APPENDIX A - KEY MAP

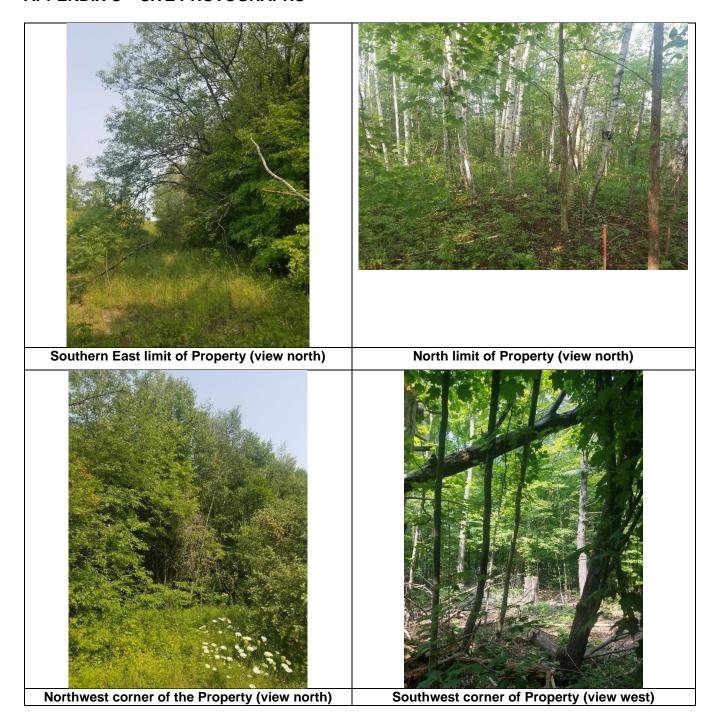
80 Big Bay Point Road, Barrie

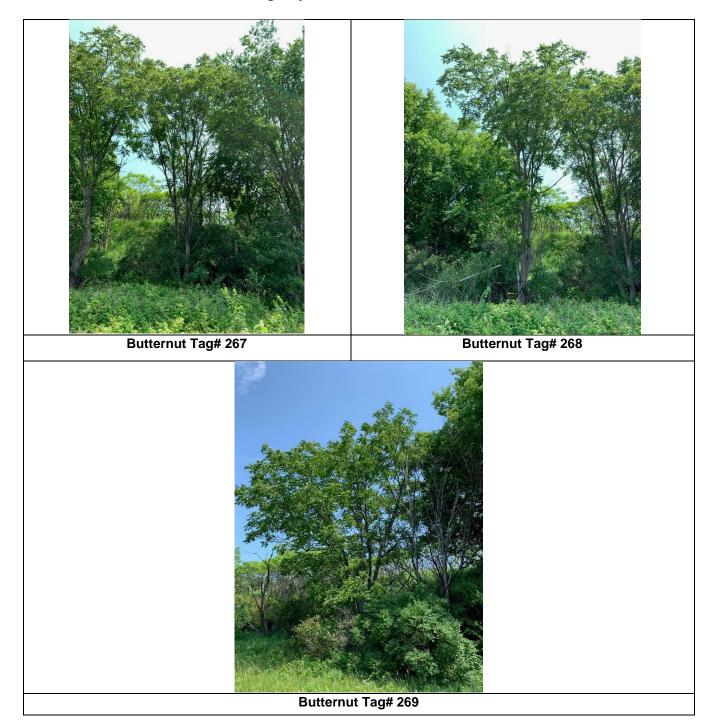


APPENDIX B - CONTEXTUAL TREE INVENTORY & PRESERVATON PLAN



APPENDIX C - SITE PHOTOGRAPHS





APPENDIX D - BUTTERNUT HEALTH ASSESSMENT FORMS

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Butternut Data Collection FORM 2 (2010 Edition) Shaded fields are mandatory for Butternut Health Assess	ETTERS) established The information can Form 2
Site Code(A,B,Z, AA) Surveyor ID	Date (dd/mm/yyyy) 06 - 07 - 2021
Surveyor Last Name GEHRES Tree ID Numbering: 1,2,3,Starting from 1 for each site Tree # Zone Easting Northing	
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Twig Dieback 2#Stems Butternut Origin Male Flowers Slans Slans	Type =<2m 3 KLM MAN 1708A Callused Vounds >2m 2 MAN LE
Tree # Zone Easting Northing	Metres from badly cankered tree
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Defoliation Natural Female Flowers	Callused Vounds >2m MAN 170RL
Branch Dieback	Type =<2m 1 MADLE MADLE
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Defoliation Natural Permale Plowers	# Callused Wounds >2m
Please enter matching page link code on forms 1 and 2 Page Link (Contact Information follows all applications)	Please return forms to: Forest Gene Conservation Association Suite 233, 266 Charlotte St. Peterborough, ON, K9J 2V4 www.fgca.net

	BHA Tree Analysis (version: December 2013)																			
	This table is to be completed by a designated Butternut Health Assessor (BHA).																			
BHA Assessment Date(s)										6-Jul	-21			Total # Butternut Trees in BHA Report					3	
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Landowner / Client Name TONLU HOLDINGS LIMITED																				
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input field data											omatic c	alculatio	ns fror	n field	data		Cat	tego	ries	
			soot		# bole cankers cy (S) open (O) # 1			(Y or N)		Circ.	total bole	total RF canker	bole	RF	total	1: non-retainable, 2: retainable, 3: archivable			ble,	
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267	95	28	2			3	2	2	N	87.92	20.0	15.0	22.7	17.1	19.9	1	2	1	2	2
268	98	40	1				3		N	125.6	2.5	7.5	2.0	6.0	4.0	1	2	2	2	2
269	98	43	1				2		N	135	2.5	5.0	1.9	3.7	2.8	1	2	2	2	2

APPENDIX E - TREE PROTECTION NOTES & DETAILS

