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ARBORIST REPORT

**PROPOSED MIXED USE RESIDENTIAL DEVELOPMENT
N/E CORNER OF MAPLEVIEW DRIVE WST AND ESSA ROAD
CITY OF BARRIE, ONTARIO**

**PREPARED FOR:
PEAL BUILDERS INC.
25 PRODUCTION ROAD
BRAMPTON, ONTARIO
L6T 4L7**

**PREPARED BY:
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**OUR PROJECT NO:
SBK 22-5832**

DECEMBER 15, 2022

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

Arborist Report
Pearl Builders Inc. - Proposed Mixed-Use Residential Development
N/E Corner of Mapleview Drive West and Essa Road
Barrie, Ontario

INTRODUCTION

Strybos Barron King Limited was retained by Pearl Builders Inc. 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 mixed-use residential development. The subject property is located at the northeast corner of Mapleview Drive West and Essa Road in Barrie, Ontario.

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.

METHODOLOGY

A site visit was conducted at the subject property on October 15th, 2022. The trees were located using the topographical survey prepared by Rudy Mak Surveying Ltd, aerial photos from google earth, a previous inventory that was acquired by the client with the purchase of the property, an onsite field review as well as a proposed Draft Plan prepared by IBI used to locate individual trees, elevations, as well as a proposed Draft Plan prepared by IBI used to locate individual trees, elevations, and structures in relation to the proposed development works.

The trees were inventoried along the site property limits and included any trees within 6m of the subject site., as well as along the edge of the limits of the Beer Creek Channel. The calliper (diameter of stem) of each tree was measured using a calliper 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)

SITE OBSERVATIONS

The subject property is located on the northeast corner of Mapleview Drive West and Essa Road, abutting church lands to the north and east. Residential lands and a commercial plaza are present on the West side of Essa Road. Most of the existing trees occur are located centrally within the subject property or bordering the north and east property line.

The south portion of the property is composed of cultural meadow with a swale feature which ties into Beer Creek that is bisecting the lands. Groupings and semi mature to mature trees are found throughout the site. An old driveway off of Essa Road is lined with a hedgerow of Mountain ash and Spruce. Groupings of Manitoba maple are located at the intersection of Essa and Mapleview.

Other trees found on site include, Willow Species (*salix sp.*) Manitoba Maple (*Acer negundo*), Mountain Ash (*sorbus sp.*) Eastern Red Cedar (*Juniperus virginiana*), White Spruce (*Picea pungens*), Apple Sp. (*Malus sp.*) Sugar Maple (*Acer saccharum*), Eastern White Cedar (*Thuja occidentalis*), Norway spruce (*Picea abies*), Eastern Cottonwood (*Populus deltoides*) Red Oak (*Quercus rubra*), Russian olive, (*Eleagnus angustifolia*), Black Locust (*Robinia pseudoacacia*) White Pine (*Pinus strobus*), Pin Oak (*Quercus palustris*), Red Maple (*Acer rubrum*) and Balsam Fir. (*Abies balsamea*).

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On the property to the north a large willow, groupings of Colorado spruce and immature Red and Sugar maple run east to west along the property limit. On the property on the east side of the site, young deciduous trees comprising of Sugar and Red Maple, Pin and White Oak are found within parking lot islands.

PROPOSED DEVELOPMENT

The proposed Draft Plan proposes a total of Condo/Town house residential units with built on underground parking and amenity spaces is proposed for the north portion of the site. On the south portion off Maplevue Road 4 multiuse midrise buildings including ground floor retail, library and community areas, as well as outdoor and private indoor amenity spaces. The proposed development respects the Bear Creek swale proposing a generous naturalize buffer with proposed native planting and reconfigured creek separating the town house development and the 4 multi use buildings.

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

TREE INVENTORY

Inventory Summary

The vegetation found on the subject site varies in species type and composition based on location. 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).

Note: The key#'s reference trees tagged on site. Any trees that were not able to be tagged have been identified with a single letter. Grouping of trees are labelled with a P then a letter. All trees that have been identified on the adjacent site are marked with an A and a letter. All trees on adjacent properties have also been listed together for ease of reference and for preservation purposes.

The tree inventory list can be found on the following pages.

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EXISTING TREE INVENTORY									
KEY	SPECIES	DBH (centimeters)	CROWN (metres)	HEALTH G.F.P.	STRUCTURE	COMMENTS	PRESERVATION DIRECTION	MN. TPZ (metres)	KEY
301	Willow Species	5-15	8	Poor	round	Union at Base with ~11 stems, coppice growth, epicormic branching, deadwood	Removal	1.8	301
302	Manitoba Maple	10-15	6	Poor	round	Union at Base, restricted root zone, pruning wounds	Removal	1.8	302
303	Mountain ash	30	6	Fair	Broad	Coppice growth, lean, Multiple branch attachments	Removal	2.0	303
304	Eastern Red Cedar	35	6	Poor	Onesided	1 lost leader, v-union at 1m, asymmetrical crown	Removal	2.0	304
305	White Spruce	51	8	Good	P.yramidal	Girdling roots	Removal	2.5	305
306	White Spruce	37	8	Good	P.yramidal	Crowded by adjacent trees, branching to grade	Removal	2.5	306
307	Black Walnut	18	7	Fair	Broad	V-union at 1.7m, located on slope	Removal	1.5	307
308	European Ash	12	8	Fair	Irregular	Vine competition, sweep, stem wound	Removal	1.5	308
309	Manitoba Maple	10-14	12	Fair	Irregular	Union at Base	Removal	1.5	309
310	Manitoba Maple	9-16 (6 Stems)	8	Fair	Multistem	Growth from old stump	Removal	1.5	310
311	European Ash	28	8	Fair	Irregular	Clump of 6 Stems	Removal	2	311
312	Norway Maple	31	7	Fair	Broad	Crowded by adjacent trees, minor deadwood, large wound on trunk	Removal	2	312
313	Norway Maple	32	7	Fair	Broad	Minor deadwood, crowded branching	Removal	2	313
314	Mountain ash	25	7	Fair	Vase	Crowded by adjacent trees, leaning, minor deadwood	Removal	1.5	314
315	Mountain ash	25	7	Fair	Vase	Crowded by adjacent trees, codominate stems, minor deadwood	Removal	1.5	315
316	Mountain ash	20	7	Fair	Vase	Crowded by adjacent trees, leaning, minor deadwood	Removal	1.5	316
317	Mountain ash	27	7	Fair	Vase	Crowded by adjacent trees, minor deadwood	Removal	2	317
318	Mountain ash	23	7	Fair	Vase	Cbat, minor deadwood	Removal	1.5	318
319	Mountain ash	26	7	Fair	Vase	Crowded by adjacent trees, minor deadwood, epicormic growth at base.	Removal	2	319
320	Green Ash	DEAD					Removal		320
321	White Spruce	33	6	Fair	P.yramidal	Crowded by adjacent trees, branching to grade	Removal	2	321
322	Blue Spruce	45	7	Fair	P.yramidal	Crowded by adjacent trees, branching to grade	Removal	2.5	322
323	White Spruce	30	8	Fair	P.yramidal	Crowded by adjacent trees, branching to grade	Removal	2	323
324	White Spruce	28	9	Fair	P.yramidal	Crowded by adjacent trees, branching to grade	Removal	2	324
325	Apple Species	24	8	Poor	Asymmetrical	Hollow trunk, basal decay.	Removal	1.5	325
326	Apple Species	12	5	Poor	Leaning	Major dieback	Removal	1.5	326
327	Manitoba Maple	16-24 (4 Stems)	9	Fair	Multistem	Branching to grade, adjacent to mobile trailer	Removal	1.5	327
328	Manitoba Maple	13	5	Poor	leaning	Crowded by adjacent trees, adjacent to mobile trailer, major deadwood	Removal	1.5	328
329	Manitoba Maple	12-16 (Stems)	8	Fair	Multistem	Crowded by adjacent trees, Branching to grade	Removal	1.5	329
330	Manitoba Maple	10-14 (4 Stems)	6	Fair	Multistem	Crowded by adjacent trees, Branching to grade	Removal	1.5	330
331	Manitoba Maple	14-15 (2 Stems)	6	Fair	Multistem	Crowded by adjacent trees, Branching to grade	Removal	1.5	331
332	Black Walnut	20	7	Fair	oval	Crowded by adjacent trees minor deadwood, branching to grade	Removal	1.5	332
333	Black Walnut	26	7	Fair	oval	Crowded by adjacent trees, minor deadwood, branching to grade	Removal	2	333
334	Manitoba Maple	16	6	Fair	Onesided	Branching to grade, epicormic growth, adjacent to existing structure	Removal	1.5	334
335	Manitoba Maple	15-20 (4 Stems)	8	Fair	Multistem	Crowded by adjacent trees, Minor Deadwood	Removal	1.5	335
336	Manitoba Maple	10-18 (4 Stems)	10	Fair	Multistem	Crowded by adjacent trees, epicormic Branching	Removal	1.5	336
337	Manitoba Maple	14-18 (3 Stems)	10	Fair	Multistem	Crowded by adjacent trees, minor deadwood	Removal	1.5	337
338	Manitoba Maple	28-38 (4Stem)	8	Fair	Multistem	Crowded by adjacent trees, minor deadwood	Removal	2	338
339	Black Walnut	82	40	Good	spread	Adjacent to existing structure, minor deadwood	Removal	4.5	339
340	Manitoba Maple	23.5	6	Fair	leaning	Crowded by adjacent trees, adjacent to existing structure, minor deadwood	Removal	1.5	340
341	Black Walnut	22	8	Fair	Onesided	Crowded by adjacent trees, minor deadwood	Removal	1.5	341
342	Manitoba Maple	57	10	Fair	Irregular	Broken branch, crowded branching, epicormic growth at base	Removal	2.5	342
343	Black Walnut	32-37 (2 Stems)	8	Fair	Multistem	Minor deadwood, wound on trunk	Removal	2	343
344	Manitoba Maple	28	5	Fair	Onesided	Co-dominate stems, poor pruning at base, suckering, canopy to grade	Removal	2	344
345	Black Walnut	28-35 (2 Stems)	10	Fair	Multistem	Branching to grade, crowded canopy, adjacent to existing stone structure	Removal	2	345
346	Black Walnut	21	8	Fair	Onesided	Crowded by adjacent trees, minor deadwood, codominate leader, vines in canopy	Removal	1.5	346
347	Black Walnut	27	8	Fair	Onesided	Crowded by adjacent trees, co-dominant leader	Removal	2	347
348	Black Walnut	21.5	8	Fair	Irregular	Minor deadwood, adjacent to stone structure	Removal	1.5	348
349	Black Walnut	26	8	Fair	Irregular	Minor deadwood, branching to grade, adjacent to stone structure	Removal	2	349
350	Black Walnut	36	8	Fair	Irregular	Minor deadwood, minor deadwood, branching to grade, vines in canopy	Removal	2	350
351	Black Walnut	19.5	6	Good	Irregular	Branching to grade	Removal	1.5	351
352	Black Walnut	72	12	Fair	Irregular	Minor deadwood, broken branch, wound on trunk from previous prune	Removal	3	352
353	Sugar Maple	23-37 (2 Stems)	10	Fair	Multistem	Crowded by adjacent trees, minor dieback	Removal	2	353
354	Eastern White Cedar	35	8	Poor	Onesided	mainstem broken, branching to grade	Removal	2	354
355	Sugar Maple	41	12	Fair	Broad	Crowded by adjacent trees, large wound from previous prune	Removal	2.5	355
356	Sugar Maple	44.5	10	Fair	Onesided	Crowded by adjacent trees, crowded branching	Removal	2.5	356
357	Sugar Maple	34	10	Fair	Onesided	Crowded by adjacent trees, crowded branching	Removal	2	357
358	Sugar Maple	137	12	Poor	Leaning	Major broken branch, 50% of canopy has fallen, basal decay	Removal	6	358
359	Sugar Maple	88	14	Fair	Broad	Decay at trunk, minor deadwood	Removal	4.5	359
360	Norway Maple	55.5	8	Fair	P.yramidal	Elevated canopy, plaque nailed to trunk, adjacent to road/powerlines	Removal	2.5	360
361	Norway Maple	59.5	8	Fair	P.yramidal	Elevated canopy, minor deadwood, adjacent to road/powerlines	Preserve	2.5	361
362	Norway Maple	55.5	8	Fair	P.yramidal	Crowded by adjacent trees, elevated canopy	Removal	2.5	362
363	Norway Maple	51.5	8	Fair	P.yramidal	Crowded by adjacent trees, poor pruning, elevated canopy	Removal	2.5	363
364	Norway Maple	49.5	8	Fair	P.yramidal	Crowded by adjacent trees, elevated canopy minor deadwood	Removal	2.5	364
365	Sugar Maple	17	6	Fair	Columnar	Crowded by adjacent trees, minor deadwood, elevated canopy	Removal	1.5	365
366	Norway Maple	42	8	Fair	P.yramidal	Crowded by adjacent trees, minor deadwood, branching to grade	Removal	2.5	366
367	Norway Maple	49	8	Fair	P.yramidal	Crowded by adjacent trees, minor deadwood	Removal	2.5	367
368	Sugar Maple	55	16	Poor	One-sided	Crowded by adjacent trees, broken branch, trunk decay, wound from previous prune	Removal	2.5	368
369	Sugar Maple	95	16	Fair	One-sided	Crowded by adjacent trees, major prune on trunk, trunk decay, multiple broken branch wounds	Removal	4.5	369
370	Apple Species	38.5-27 (2 Stems)	12	Fair	Multistem	Onesided, major deadwood,cbat	Removal	2	370
371	Apple Species	17-35.5 (2 Stems)	10	Fair	Multistem	One-sided, major deadwood,cbat	Removal	2	371
372	Apple Species	10-30 (12 Stems)	12	Fair	Multistem	One-sided, major deadwood,cbat	Removal	2	372

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KEY	SPECIES	DBH (centimetres)	CROWN (metres)	HEALTH G/F/P	STRUCTURE	COMMENTS	PRESERVATION DIRECTION	MIN. TPZ (metres)	KEY
374	Manitoba Maple	21	6	Fair	irregular	Double leader , minor deadwood, epicormic growth	Removal	1.5	374
376	Apple Species	40-49 (2 Stems)	10	Poor	Multistem	Major deadwood, epicormic growth, crowded branching	Removal	2.5	376
377	Apple Species	22-30(2 Stems)	8	Poor	Multistem	Major deadwood, trunk decay, hollow trunk, epicormic growth	Removal	2	377
378	White Spruce	36.5	5	Fair	Pyramidal	Crowded by adjacent trees, minor deadwood , excavation at trip line	Removal	2	378
379	White Spruce	40	5	Fair	Pyramidal	Crowded by adjacent trees, minor deadwood , excavation at trip line	Removal	2.0	379
380	Manitoba Maple	11-21 (2 Stems)	6	Poor	Multistem	Major deadwood , one dead stem, suckering at base , crowded branching	Removal	1.5	380
381	Apple Species	45	6	Poor	Leaning	Hollow trunk, basal decay, major dieback in canopy	Removal	2.5	381
387	Norway Maple	54	10	Fair	Broad leaning	major deadwood , spongy moth present	Removal	2.5	387
388	Eastern Cottonwood	16.5	4	Good	leaning	minor deadwood	Removal	1.5	388
389	Eastern Cottonwood	39-59 (3 Stems)	14	Fair	Multistem	Minor deadwood crowded branching,	Removal	2.5	389
390	Red Oak	18	8	Fair	One-sided	Crowded by adjacent trees, minor dieback	Removal	1.5	390
391	Black Walnut	12-18 (2 Stems)	8	Fair	One-sided	Crowded by adjacent trees, minor deadwood	Removal	1.5	391
392	Manitoba Maple	16-35 (6 Stems)	12	Fair	Multistem	epicormic growth, branching to grade, crowded branching	Removal	2	392
393	Black Walnut	23-28 (2 Stems)	8	Fair	Irregular	Co-dominante stems, minor deadwood , branching to grade	Removal	2	393
394	Black Walnut	26	8	Good	Irregular	Minor deadwood , branching to grade	Removal	2	394
395	Black Walnut	14-25 (2 Stems)	8	Fair	Multistem	Crowded by adjacent trees, minor deadwood	Removal	1.5	395
396	Manitoba Maple	32	8	Fair	Onesided	Crowded by adjacent trees, branching to grade soil pile within drip line	Removal	2	396
A	Russian Olive	10	4	Poor	Round	Adjacent to road, poor pruning, epicormic growth	Removal	1	A
B	Manitoba Maple	21	6	Fair	Leaning	Crowded by adjacent trees	Removal	1.5	B
C	Black Locust	9	4	Fair	Irregular	Crowded by adjacent trees, vines in canopy	Removal	1	C
PD	Manitoba Maple	15-20 (8 Trees)	6	Fair	Grouping	Crowded by adjacent trees, Adjacent to road	Removal	1.5	PD
E	Manitoba Maple	11-14 (3 Stems)	6	Fair	Multistem	Crowded by adjacent trees, minor deadwood	Removal	1.5	E
PF	Manitoba Maple	10-12(12 Stems)	12	Fair	Multistem	Crowded by adjacent trees, minor deadwood	Removal	1.5	PF
G	Manitoba Maple	14-16 (2 stems)	6	Fair	Multistem	Crowded by adjacent trees, minor deadwood, vines in canopy	Removal	1.5	G
PH	Manitoba Maple	12-25(9 Trees)	8	Fair	Grouping	Crowded by adjacent trees, minor deadwood	Removal	1.5	PH
I	Blue Spruce	45	6	Fair	Pyramidal	Crowded by adjacent trees	Removal	2.5	I
PJ	White Spruce	25-30	6	Fair	Pyramidal	Grouping, Crowded by adjacent trees	Removal	2	J
K	Mountain ash	Dead					Removal	-	K
L	Manitoba Maple	34	6	Poor	Onesided	Stem split at base , basal decay, 50%dead wood,cbat	Removal	2	L
M	Manitoba Maple	38	8	Poor	Onesided	codominate stems, crowded branching , suckering ,canopy to grade	Removal	2	M
N	Eastern White Cedar	5-25	4	Poor	Grouping	Major deadwood ,cbat	Removal	1.5	PN
O	Eastern White Cedar	5-20	4	Poor	Grouping	Major deadwood ,cbat	Removal	1.5	PO
P	Black Walnut	10	2	Good	Round	On slope, adjacent to road, minor deadwood, pruned leader	Removal	1	P
OO	Blue Spruce	*30	6	Good	Pyramidal	Adjacent to powerlines	Removal	2	AO
PO	Balsam Fir	10-25	5	Fair	Grouping	21 trees Crowded by adjacent trees, branching to grade	Removal	1.5	PAP
PQ	Eastern White Cedar	10-15	5	Fair	Grouping	15 trees, Crowded by adjacent trees, branching	Removal	1.5	PAQ
MM	White Spruce	40	5	Fair	Pyramidal	Crowded by adjacent trees, broken branches , minor deadwood	Remove	2	AM
NN	Manitoba Maple	30-35 (5 Stems)	12	Poor	Multistem	Major deadwood , crowded branching, canopy to grade	Remove	2	AN
Trees Located on Adjacent Properties									
AA	Sugar Maple	13	4	Good	asymmetric	Minor deadwood	Preserve	1.5	AA
AB	Sugar Maple	8	3	Poor	One-sided	Dead leader, major trunk wound	Preserve	1	AB
AC	Sugar Maple	12	4	Good	asymmetric	Crowded branching, minor deadwood	Preserve	1.5	AC
AD	Sugar Maple	6	1	Poor	Thin	Broken branches, cut leader	Preserve	1	AD
AE	Red Oak	14.5	5	Fair	Irregular	Branching to grade , minor deadwood	Preserve	1.5	AE
AF	Red Oak	16.5	4	Fair	Irregular	Double leader, minor dieback	Preserve	1.5	AF
AG	Pin Oak	20	6	Good	Irregular	Minor deadwood, crowded branching,	Preserve	1.5	AG
AH	Pin Oak	9	2	Fair	Irregular	Major deadwood in lower canopy	Preserve	1	AH
AI	Red Maple	13	3	Good	Irregular	minor deadwood	Preserve	1.5	AI
AJ	Red Maple	7	2	Poor	Irregular	Major deadwood, cbat , major wound on trunk	Removal	1	AJ
AK	Red Maple	10	2	Good	Leaning	Minor deadwood	Preserve	1	AK
AL	Red Maple	10.5	2	Fair	Irregular	Minor deadwood	Preserve	1	AL
AR	Blue Spruce	30	5	Good	Pyramidal	Elevated canopy	Preserve	2	AR
AS	Basswood	22	4	Good	Oval	Elevated canopy	Preserve	1.5	AS
AT	Basswood	18	4	Fair	Oval	Boulevard tree, epicormic growth, exposed roots	Preserve	1.5	AT
AU	Basswood	14	4	Good	Oval	Boulevard tree, elevated canopy	Preserve	1.5	AU
AV	Basswood	16	4	Good	Oval	Boulevard tree, elevated canopy	Preserve	1.5	AV
AW	Honey Locust	17	5	Good	Asymmetric	Boulevard tree, elevated canopy	Preserve	1.5	AW
AX	Honey Locust	16	5	Good	Asymmetric	Boulevard tree, elevated canopy	Preserve	1.5	AX
AY	Honey Locust	13.5	5	Good	Asymmetric	Boulevard tree, elevated canopy	Preserve	1.5	AY
AZ	Basswood	17	4	Good	Oval	Boulevard tree, elevated canopy	Preserve	1.5	AZ
AAQ	Basswood	17	4	Good	Oval	Boulevard tree, elevated canopy	Preserve	1.5	BA
AAQ	Willow Species	36	8	Good	Irregular	Branching to grade, Located on adjacent	Preserve	1.5	Q
AAR	White Spruce	15	4	Good	Pyramidal	Crowded by adjacent trees, branching to grade	Preserve	1.5	R
AAS	White Spruce	15	4	Good	Pyramidal	Crowded by adjacent trees, branching to grade	Preserve	1.5	S
AAT	White Spruce	15	4	Good	Pyramidal	Crowded by adjacent trees, branching to grade	Preserve	1.5	T
AAU	White Pine	15	5	Good	Irregular	Crowded by adjacent trees, branching to grade	Preserve	1.5	U
AAV	White Pine	15	5	Good	Irregular	Crowded by adjacent trees, branching to grade	Preserve	1.5	V
AAW	White Pine	15	5	Good	Irregular	Crowded by adjacent trees, branching to grade	Preserve	1.5	W
AAX	White Pine	15	5	Good	Irregular	Crowded by adjacent trees, branching to grade	Preserve	1.5	X
AAZ	White Pine	15	5	Good	Irregular	Crowded by adjacent trees, branching to grade	Preserve	1.5	Y
APZ	White Spruce	12	4	Good	Grouping	6 Trees in a group Crowded by adjacent trees, branching to grade	Preserve	1.5	PZ

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REMOVALS

Limits of Development

The Draft Plan proposes a mixed use development within the subject property. Based on the anticipated servicing, grading and development requirements, all the trees within the proposed development area will require removal.

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

<i>Trunk Diameter (DBH)</i>	<i>Minimum Protection Zone</i>
<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

All trees located on the adjacent properties are to be preserved.

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 neighboring properties and most of the trees within the municipal right of way are to be preserved and protected throughout the development construction process.

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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 D -Tree Protection Hoarding Signage and 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.
- Any hazard trees identified adjacent to the development area and property are to be mitigated accordingly. If a hazard tree is identified on a neighbouring property, consent from that property owner will be required prior to any hazard mitigation works.

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.

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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 Pearl Builders Inc. to prepare an Arborist Report and Tree Inventory & Preservation Plan in support of a proposed mixed-use residential development.

The proposed Draft Plan will require the removal of all the existing trees within the development area. Trees located on neighbouring properties are to 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 including areas within the naturalized conservation buffer, proposed boulevards, and amenity areas.

Prepared by
STRYBOS BARRON KING LTD.



Matthew Regimbal
Certified Arborist ISA #ON 1758A
Senior Landscape Technologist
Ext: 234

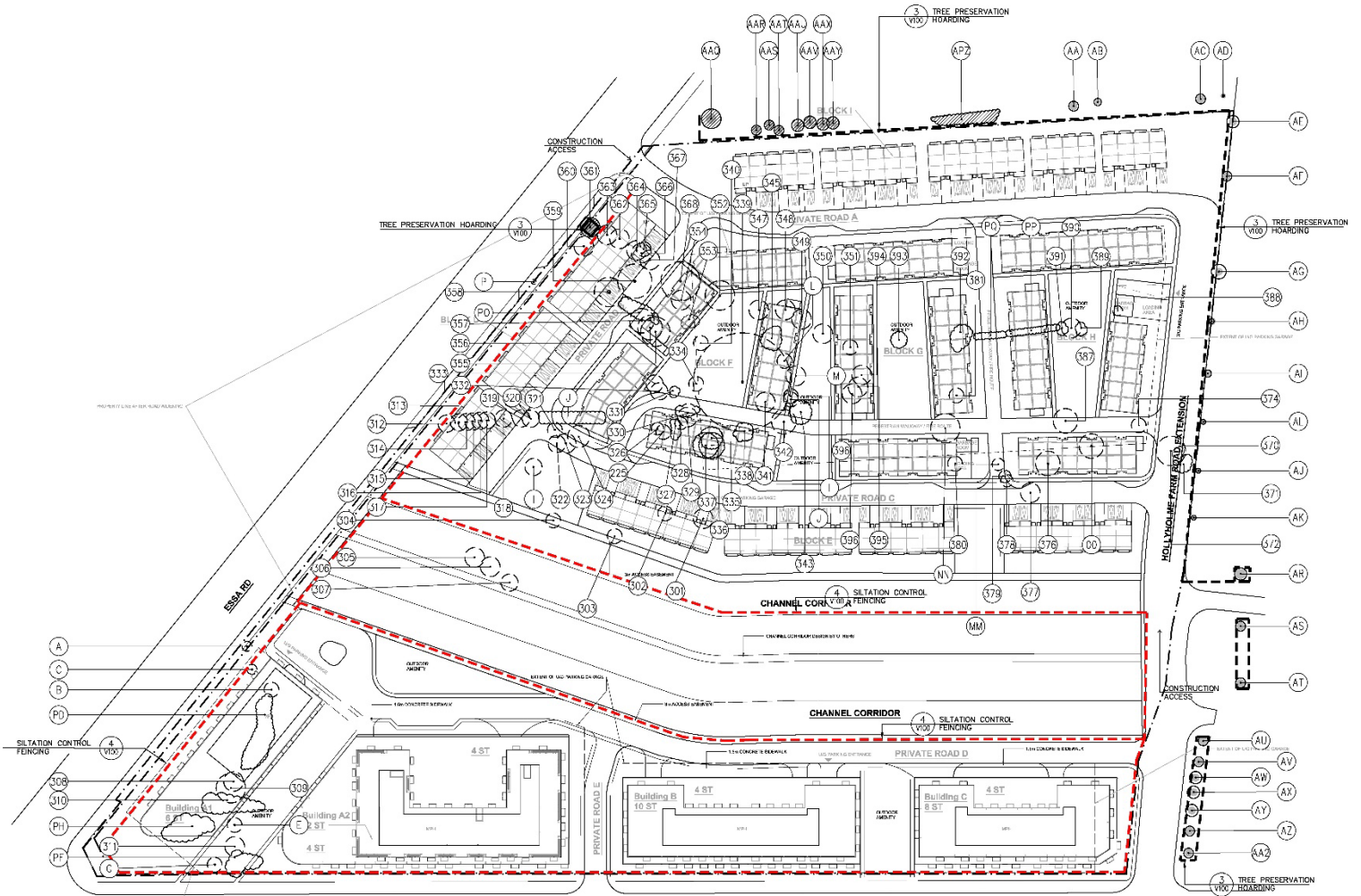
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APPENDIX A – KEY MAP



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APPENDIX B - PRESERVATION PLAN

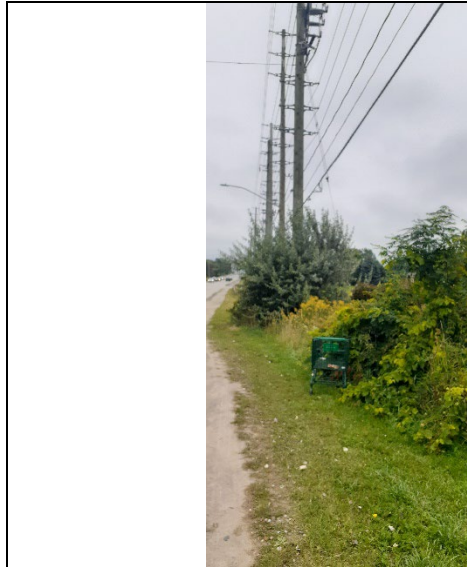


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APPENDIX C – SITE PHOTOGRAPHS

	
<p>Trees located on the adjacent property to the north to be preserved.</p>	<p>Groupings of trees on the site</p>
	
<p>Groupings of trees on the site</p>	<p>Groupings of trees on the site</p>
	
<p>Evergreen trees lining the driveways</p>	<p>Shrubs and mixed vegetation</p>

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View north on Essa Road



Manitoba Maple groupings and the corner of Essa Road and Maple View

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APPENDIX D – TREE PROTECTION NOTES & DETAILS

50

150

105

610

40

70

140

50 50

NOTICE OF TREE
REMOVALS

ALL VEGETATION REMOVAL WORK SHALL
OCCUR IN ACCORDANCE WITH
BY-LAW 2014-115

OWNER: *(name of company or land owner)*

REMOVALS COMPLETED BY: *(individual or company retained)*

FOR FURTHER INFORMATION PLEASE CONTACT:
(name of company or representative)
(address line 1)
(address line 2)
(contact telephone number)

FONT: ARIAL BOLD
HEIGHT: 50mm / SPACING: 25mm

FONT: ARIAL
HEIGHT: 25mm / SPACING: 15mm

FONT: ARIAL
HEIGHT: 20mm / SPACING: 10mm

FONT: ARIAL
HEIGHT: 20mm / SPACING: 10mm

CONTACT INFORMATION TO CONTAIN
THE ADDRESS AND TELEPHONE
NUMBER OF A PERSON ACTING ON
BEHALF OF THE COMPANY / LAND
OWNER FOR WHOM FURTHER
INFORMATION ON THE PROPOSED
VEGETATION REMOVAL MAY BE
OBTAINED

1. NOTICE TO BE POSTED IN A VISIBLE LOCATION (7) SEVEN CALENDAR DAYS PRIOR TO INJURING OR DESTROYING VEGETATION.

2. NOTICE MUST BE PLACED IN A CONSPICUOUS PLACE ON THE PRIVATE LAND THAT IS ADJACENT TO A PUBLIC ROAD. AN ADDITIONAL SIGN IS REQUIRED FOR EACH PUBLIC ROAD FRONTAGE.

3. SIGNAGE MUST REMAIN IN PLACE FOR A PERIOD OF NO LESS THAN (2) TWO MONTHS FOLLOWING THE COMPLETION OF VEGETATION REMOVALS FROM THE SUBJECT SITE.

4. ALL DIMENSIONS ARE IN MILLIMETRES.

The City of
BARRIE
STANDARD DETAIL

TREE REMOVAL
NOTIFICATION TEMPLATE

REV No.	DATE: JUNE 2015
1	SCALE: N.T.S.
BSD-1230	

APPROVED

DATE: *June 11/15*

.....*J.M.W.*.....

DIRECTOR OF ENGINEERING

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APPENDIX C – TREE PROTECTION NOTES & DETAILS

The diagram shows a rectangular sign template with a total width of 432 mm and a total height of 279 mm. The sign contains the following text:

**TREE
PRESERVATION
AREA**

**NO UNAUTHORIZED TREE CUTTING,
REMOVALS, OR DISTURBANCE IS
PERMITTED IN THIS AREA**

Dimensions on the left side of the sign:

- Top margin: 30 mm
- Text area height: 135 mm
- Bottom margin: 25 mm
- Bottom margin: 65 mm

Font specifications:

- TREE PRESERVATION AREA:** FONT: ARIAL BOLD, HEIGHT: 35mm / SPACING: 15mm
- NO UNAUTHORIZED TREE CUTTING, REMOVALS, OR DISTURBANCE IS PERMITTED IN THIS AREA:** FONT: ARIAL, HEIGHT: 15mm / SPACING: 10mm

1. SIGNS MUST BE FABRICATED FROM WEATHER RESISTANT MATERIAL.
2. SIGNS ARE TO BE SECURELY FASTENED AND PLACED IN 50 METER INTERVALS ALONG ALL TREE PRESERVATION FENCING.
3. SIGNS MUST REMAIN POSTED FOR THE DURATION OF THE PROJECT OR UNTIL APPROVAL TO REMOVE PRESERVATION FENCING IS PROVIDED BY THE MUNICIPALITY.
4. ALL DIMENSIONS ARE IN MILLIMETRES.
5. THIS DETAIL IS TO BE USED IN CONJUNCTION WITH BSD-1230 AND BSD-1232.

 STANDARD DETAIL	TREE PRESERVATION AREA TEMPLATE	REV No.	DATE: JUNE 2015	APPROVED DATE: <i>June 11, 15</i> DIRECTOR OF ENGINEERING
		1	SCALE: N.T.S.	
		BSD-1231		

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APPENDIX C – TREE PROTECTION NOTES & DETAILS

150mm (0'-6") PAGE WIRE FENCING

50 x 50 x 1800 STEEL 'T' BAR POSTS SPACED 2400 ON CENTRE, TOP 200mm TO BE PAINTED WITH FLORESCENT YELLOW OR ORANGE PAINT

TREE PRESERVATION NOTIFICATION SIGNAGE PLACED ALONG LENGTH OF FENCE AT 50 METER INTERVALS. REFER TO DETAIL BSD-1231

2400

1200

TREE PRESERVATION AREA

CEDAR FENCE POST TO BE PLACED AT EACH TERMINUS OR CHANGE OF DIRECTION, POSTS ARE TO BE DIRECT BURIED WITH A MINIMUM 1000 EMBEDMENT

NOTE: CEDAR POSTS ARE REQUIRED WHERE FENCE LENGTHS EXCEED 150 LINEAR METERS AND ARE NOT REQUIRED WITHIN THE MUNICIPAL BOULEVARDS

NOTE: FENCE MUST BE TENSIONED AND SECURED BACK ON ITSELF WITH A SINGLE WRAP AROUND THE TERMINAL POST

1. THIS DETAIL IS USED IN CONJUNCTION WITH BSD-1233 -SEDIMENTATION CONTROL FENCE.
2. PAGE WIRE FENCE TO BE ATTACHED TO CEDAR RAIL POSTS WITH 'U' SHAPED GALVANIZED NAILS ON EACH HORIZONTAL STRAND.
3. USE A MINIMUM OF FOUR (4) 100MM, 16 GAUGE GALVANIZED T-POST CLIPS TO ATTACH PAGE WIRE FENCE TO EACH 'T' BAR POST.
4. 'T' BARS ARE TO BE DRIVEN INTO THE GROUND TO A MINIMUM DEPTH OF 600mm.
5. ALL MEASUREMENTS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
6. THIS DETAIL TO BE USED IN CONJUNCTION WITH BSD-1230, BSD-1231, BSD-1234 AND BSD-1235.

<p>The City of BARRIE STANDARD DETAIL</p>	<p align="center">TREE PRESERVATION FENCING</p>	REV No.	DATE: JUNE 2015	<p align="center">APPROVED</p> <p>DATE</p> <p>.....</p> <p>DIRECTOR OF ENGINEERING</p>
		1	SCALE: N.T.S.	
		BSD-1232		

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APPENDIX C – TREE PROTECTION NOTES & DETAILS

<p>1. THE DRIP LINE IS MEASURED FROM THE OUTER MOST LIMIT OF BRANCHING WITHIN THE CROWN OF THE TREE. THE FURTHEST DISTANCE SHALL APPLY TO THE ENTIRE PERIMETER OF THE CROWN.</p> <p>2. WHEN CONSTRUCTION AND/OR REMOVALS ARE LIMITED TO ONE SIDE OF A TREE AND/OR GROUP OF TREES THE LIMIT OF PRESERVATIONS SHALL BE DETERMINED BY THE DRIP LINE. IN THE EVENT THAT INDIVIDUAL TREES ARE BEING PRESERVED WHERE MORE THAN 1/3 OF THE ROOT ZONE WILL BE DISTURBED THE LIMIT OF PRESERVATION SHALL BE 1.5 TO 2 TIMES THE LIMIT OF CANOPY OR AS DIRECTED BY THE CITY OF BARRIE.</p> <p>3. PRESERVATION FENCING TO BE INSTALLED AS PER BSD-1232. THE APPLICATION OF FILTER FABRIC IS ONLY REQUIRED WHEN FENCING DOUBLES AS SILTATION CONTROL AS PER BSD-1233.</p> <p>4. NOTICE OF REMOVAL SIGNAGE IS TO BE PLACED AT 50m INTERVALS AS PER BSD-1230.</p>	<p>5. THERE IS TO BE NO GRADING, CONSTRUCTION OF SWALES, CATCH BASINS OR OTHER DRAINAGE CONTROLS PLACED WITHIN THE LIMIT OF PRESERVATION.</p> <p>6. WITHIN THE DEFINED LIMIT OF PRESERVATION THERE WILL BE:</p> <ul style="list-style-type: none"> • NO CHANGE OF ALTERATION TO EXISTING GRADES • NO TRENCHING • NO REMOVAL OF UNDER STORY VEGETATION • NO ADDITION OF FILL OF EXCAVATIONS • NO STORAGE OF MATERIALS OR EQUIPMENT • NO DISPOSAL OF ANY LIQUIDS i.e. GAS, PAINT, OIL • NO INTRUSION BY VEHICLES OR EQUIPMENT • NO INTRUSION BY PEDESTRIANS • NO MANHOLES OR OTHER INFRASTRUCTURE INCLUDING UTILITIES. <p>7. THE LOCATION OF THE PROPERTY LIMIT IS NOT SHOWN IN THIS DETAIL AS IT IS NOT RELEVANT TO THE ESTABLISHMENT OF PRESERVATION LIMITS OR ASSOCIATED SETBACK REQUIREMENTS.</p>										
<p><i>The City of</i> BARRIE STANDARD DETAIL</p>	<p align="center">LIMIT OF TREE PRESERVATION FOR DEVELOPMENT APPROVALS</p>	<table border="1"> <tr> <td>REV No.</td> <td>DATE: JUNE 2015</td> </tr> <tr> <td align="center">1</td> <td>SCALE: N.T.S.</td> </tr> <tr> <td align="center" colspan="2">BSD-1235</td> </tr> <tr> <td align="center" colspan="2">FORMERLY BSD-21A</td> </tr> </table>	REV No.	DATE: JUNE 2015	1	SCALE: N.T.S.	BSD-1235		FORMERLY BSD-21A		<p align="center">APPROVED</p> <p>DATE: <i>June 11/15</i></p> <p><i>[Signature]</i></p> <p align="center">DIRECTOR OF ENGINEERING</p>
REV No.	DATE: JUNE 2015										
1	SCALE: N.T.S.										
BSD-1235											
FORMERLY BSD-21A											