Tree Inventory and Preservation Plan Report
13290 Nunnville Road
Caledon, Ontario

prepared for

Bolton Summit Developments Inc.
6198 Tremaine Court
Mississauga, Ontario L5V 4B5

prepared by

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Introduction

Kuntz Forestry Consulting Inc. was retained by Bolton Summit Developments Inc. to complete a Tree Inventory and Preservation Plan Report in support of a development application for the property at 13290 Nunnville Road in the Town of Caledon, Ontario. The subject property is located on the north end of Nunnville Road, within a residential area

The work plan for this study included the following:

- Prepare inventory of the tree resources over 10cm on and within six metres of the proposed development;
- Evaluate tree saving opportunities based on proposed site plans and grading; and,
- Document the findings in a Tree Inventory and Preservation Plan report.

Trees included were visually assessed for condition utilizing the following parameters:

Tree # - number assigned to trees that corresponds to Figure 1.
Species - common and botanical names provided in the inventory table.
DBH - diameter (centimeters) at breast height, measured at 1.4 m above the ground.
Condition - condition of tree considering trunk integrity (TI), crown structure (CS) and crown vigor (CV). Condition ratings include poor (P), fair (F), and good (G);
Crown Die Back – Percentage of dead branches within the crown.
Drip Line - Crown radius; and
Comments – Any other relevant tree condition information.

The results of the evaluation are provided below.

Methodology

Trees measuring over 10cm DBH on and within six metres of the proposed development were identified included in the tree inventory. Trees were located using a handheld GPS unit (Trimble GeoExplorer® 6000 series) accurate to ±1m. Trees included in the inventory were identified with numbers 289-300 and 401-459. Trees located on the neighbouring properties are identified with letters A-C. Tree locations are shown on Figure 1. See Table 1 for the results of the inventory.

Existing Site Conditions

The subject property is currently occupied by one residential dwelling, a shed, and an asphalt driveway. There is a woodlot on the west and east side of the subject property regulated by the Toronto and Region Conservation Authority (TRCA). Tree resources exist in the form of landscape trees and natural generations. Refer to Figure 1 for the existing site conditions.

Individual Tree Resources

The tree inventory was conducted on 11 March 2022. The inventory documented 74 trees on and within six metres of the proposed development. Refer to Table 1 for the full tree inventory and Figure 1 for the location of tree reported in the tree inventory.

Tree resources included in the inventory are Freeman Maple (*Acer x freemanii*), Manitoba Maple (*Acer negundo*), Norway Maple (*Acer platanoides*), Shademaster Honey Locust (*Gleditsia triacanthos 'inermis'*), Black Walnut (*Juglans nigra*), Apple Species (*Malus spp*.), White Mulberry (*Morus alba*), White Spruce (*Picea glauca*), Blue Spruce (*Picea pungens*), Red Pine (*Pinus*

resinosa), Scots Pine (*Pinus sylvestris*), Bur Oak (*Quercus macrocarpa*), Red Oak (*Quercus rubra*), Ivory Silk Lilac (*Syringa reticulata 'Ivory Silk'*), and Eastern White Cedar (*Thuja occidentalis*).

The woodlot located on the west side of the subject property is dominated by invasive European Buckthorn (*Rhamnus cathartica*) with scattered Hawthorns (*Crataegus spp*.). This woodlot can be a candidate for restoration opportunities.

Proposed Development

The proposed development includes the demolition of the existing dwelling and the construction of 15 townhouses and associated driveway. Refer to Figure 1 for the proposed development.

Discussion

The following sections provide a discussion and analysis of development impacts, tree removal requirements and tree preservation relative to the proposed development.

Development Impacts/Tree Removals

The removal of 26 trees is required to accommodate the proposed development. Required tree removals include Trees 295, 401-405, 407, 408, 426, 442, and 444-459. Trees 295 and 401-405 are located within the Town road right-of-way; the remaining trees for removal are located within the subject property. Refer to Figure 1 for the location of the proposed tree removals.

During the construction and prior to the final approval by the Town of Caledon, KFCI staff along with appropriate Town staff shall inspect the entire site. Any noted hazardous trees must be identified and removed prior to final approval. No additional hazard tree monitoring will be required as all hazard trees should be removed prior to the proposed development. All tree removals must be conducted outside of the bird breeding season (April 1st – August 1st).

The owner must retain the same Certified Arborist to carry out the recommendations in TIPP report to the satisfaction of the Town. A certification letter will be provided by a Certified Arborist that tree removals have been completed as per the approved TIPP report. An additional certification letter from the same Arborist that confirms any long-term requirements and recommendations in the report have been carried out.

The owner is solely responsible for ongoing maintenance and repairs to tree protection fencing throughout the proposed development.

Tree Preservation

The preservation of the remaining 48 trees will be possible with appropriate tree protection measures. Recommended tree preservation includes Trees 289-294, 296-300, 406, 409-425, 427-441, 443, and A-C. Sediment and erosion control fencing should be sufficient as tree protection fencing. Refer to Figure 1 for the location of prescribed tree preservation fencing, further tree preservation plan notes and the tree protection fencing detail.

Trees B and C
Encroachment into the dripline of Trees B and C, a Blue Spruce with 18cm DBH and a Red Oak with approximately 30cm DBH, respectively, is required to accommodate the proposed walkway. Excavation for the proposed walkway is required at 1.2m and 2.3m from the base of Trees B and

C, respectively. Excavation for the proposed walkway within the dripline of Trees B and C must be completed by a low-pressure hydro vac or air spade excavation methods and supervised by a Certified Arborist. Once excavation is completed, exposed roots must be pruned by a Certified Arborist in accordance with Good Arboricultural Standards.

Areas within the tree protection zone shall remain undisturbed for the duration of site construction and shall not be used for the storage of excavated fill, building/construction materials, or equipment.

The limit of tree protection hoarding shall be confirmed in the field by the consulting arborist, Town staff, and conservation authority (if applicable). The Owner/Applicant shall be responsible for ongoing maintenance and repairs to the tree protection fencing to the satisfaction of the Town, until final approval by the Town and conservation authority (if applicable). The Owner/Applicant shall not remove and not cause or permit any tree preservation fencing to be removed without the approval of the Town and conservation authority (if applicable).

Tree Compensation

The Town of Caledon requires tree compensation for any healthy tree removal. The compensation ratio is below:

Diameter at Breast Height (DBH)	Compensation Ratio
<10cm	Not applicable
10-20cm	1:1
21-35cm	2:1
36-50cm	3:1
51-65cm	4:1
>65cm	5:1

The removal of 26 trees on the subject property is proposed to accommodate the proposed site plan. Trees 455 and 457 are in poor condition and not applicable to compensation requirements. As such, a total of 39 replacement plantings is required on the subject property. Refer to Landscape Plan for the planting plan.

Summary and Recommendations

Kuntz Forestry Consulting Inc. was retained by Bolton Summit Developments Inc. to complete a Tree Inventory and Preservation Plan in support of a development application for the property located at 13290 Nunnville Road in Caledon, Ontario. A tree inventory was conducted and reviewed in the context of the proposed development plan.

The findings of the study indicate a total of 74 trees on and within six metres of the proposed development. The removal of 26 trees is required to accommodate the proposed development. The preservation of the remaining 48 trees will be possible with appropriate tree protection measures.

The following recommendations are suggested to minimize impacts to trees identified for preservation. Refer to Figure 1 for additional Tree Protection Plan Notes and tree preservation fence detail.

- Tree protection barriers and fencing should be erected at locations as prescribed on Figure 1. All tree protection measures should follow the guidelines as set out in the tree preservation plan notes and the tree preservation fencing detail.

- No construction activity including surface treatments, excavations of any kind, storage of materials or vehicles, unless specifically outlined above, is permitted within the area identified on Figure 1 as a tree protection zone (TPZ) at any time during or after construction.

- Site visits, pre, during and post construction is recommended by either a certified consulting arborist (I.S.A.) or registered professional forester (R.P.F.) to ensure proper utilization of tree protection barriers. Trees should also be inspected for damage incurred during construction to ensure appropriate pruning or other measures are implemented.

Respectfully Submitted,
Kuntz Forestry Consulting Inc.

Kaho Hayashi

Kaho Hayashi, B.Sc., M.Sc.F.
Associate Forest Ecologist
ISA Certified Arborist #ON-2153A

Table 1. Tree Inventory

Location: 13290 Nunnville Road, Caledon Date: 11 March 2022 Surveyors: KH

Tree #	Common Name	Scientific Name	DBH	TI	CS	CV	CDB	DL	Comments	Action	Comp.
289	Red Oak	*Quercus rubra*	11.0	FG	G	G		1.5	Seam (L)	Preserve	
290	Red Pine	*Pinus resinosa*	5.5	G	G	G		1.0		Preserve	
291	Freeman Maple	*Acer x freemanii*	4, 3.5	FG	G	G		1.0	Union at base	Preserve	
292	Scots Pine	*Pinus sylvestris*	8.0	G	G	G		1.0		Preserve	
293	Freeman Maple	*Acer x freemanii*	8, 7.5	FG	G	G		1.5	Co-dominance at 0.1m	Preserve	
294	Freeman Maple	*Acer x freemanii*	8.0	G	G	G		1.0		Preserve	
295	Freeman Maple	*Acer x freemanii*	6.5	G	G	G		1.0		Remove	0
296	White Spruce	*Picea glauca*	10.5	G	G	G		1.0	Crook (L)	Preserve	
297	Freeman Maple	*Acer x freemanii*	6.5	G	G	G		1.0		Preserve	
298	Scots Pine	*Pinus sylvestris*	7.5	G	G	G		1.0		Preserve	
299	Freeman Maple	*Acer x freemanii*	5.5	G	G	G		1.0		Preserve	
300	White Spruce	*Picea glauca*	13.0	G	G	G		1.5		Preserve	
401	Freeman Maple	*Acer x freemanii*	5.0	G	G	G		1.0		Remove	0
402	Scots Pine	*Pinus sylvestris*	11.0	G	G	G		1.0		Remove	1
403	White Spruce	*Picea glauca*	13.5	FG	G	FG		1.5	Co-dominance at 1.6m	Remove	1
404	Scots Pine	*Pinus sylvestris*	14.0	G	G	G		1.5		Remove	1
405	White Spruce	*Picea glauca*	13.5	G	G	G		1.5		Remove	1
406	White Spruce	*Picea glauca*	14.0	G	G	G		1.5		Preserve	
407	Bur Oak	*Quercus macrocarpa*	12.0	G	G	G		2.0		Remove	1
408	Scots Pine	*Pinus sylvestris*	20.0	G	G	F		1.5		Remove	1
409	Manitoba Maple	*Acer negundo*	24, 18	P	PF	F	20	4.0	Union at base, lean (L-M), deadwood, crook (M), broken branches (M), epicormic branches (H)	Preserve	
410	Scots Pine	*Pinus sylvestris*	12.0	G	G	FG		1.5		Preserve	
411	Scots Pine	*Pinus sylvestris*	10.5	G	G	G		1.0		Preserve	
412	Scots Pine	*Pinus sylvestris*	12.0	G	G	FG		1.5		Preserve	
413	Norway Maple	*Acer platanoides*	11.5	FG	G	G		2.0	Co-dominance at 1.6m, crook (M)	Preserve	
414	White Mulberry	*Morus alba*	11, 10	FG	G	G		2.0	Co-dominance at 1.5m	Preserve	
415	Eastern White Cedar	*Thuja occidentalis*	15, 14	FG	G	FG		1.5	Co-dominance at 0.3m	Preserve	
416	Eastern White Cedar	*Thuja occidentalis*	20.0	G	FG	G		1.5	Asymmetrical crown (M)	Preserve	
417	Eastern White Cedar	*Thuja occidentalis*	18.5	FG	FG	FG		1.5	Co-dominance in crown, asymmetrical crown (M)	Preserve	
418	Eastern White Cedar	*Thuja occidentalis*	15.0	G	G	FG		1.0		Preserve	
419	Eastern White Cedar	*Thuja occidentalis*	15.0	G	G	F		1.0		Preserve	
420	Eastern White Cedar	*Thuja occidentalis*	18.0	FG	G	F		1.0	Co-dominance at 3m	Preserve	
421	Eastern White Cedar	*Thuja occidentalis*	15.5	G	FG	F		1.0	Asymmetrical crown (M)	Preserve	
422	Eastern White Cedar	*Thuja occidentalis*	17.5	G	G	G		1.0		Preserve	
423	Eastern White Cedar	*Thuja occidentalis*	16.5	G	G	F		1.0		Preserve	
424	Eastern White Cedar	*Thuja occidentalis*	16.0	G	G	G		1.5		Preserve	
425	Eastern White Cedar	*Thuja occidentalis*	11.0	G	G	F	15	1.0	Dead leader	Preserve	
426	Honey Locust (shademaster)	*Gleditsia triacanthos inermis*	50.5	F	FG	FG		4.5	Co-dominance at 2.5m with 4 stems, pruning wounds (H) with rot, crook (M), epicormic branches (M)	Remove	3
427	Black Walnut	*Juglans nigra*	17.0	G	G	G		2.0		Preserve	
428	Apple Species	*Malus spp.*	10-18 (avg. 14)	F	FG	FG		3.0	Union at 0.5m with 5 stems, crook (M)	Preserve	
429	Apple Species	*Malus spp.*	22, 10-15 (avg. 12)	FG	FG	FG		3.5	Union at base with 7 stems, crook (M)	Preserve	
430	Manitoba Maple	*Acer negundo*	21.0	FG	G	FG		3.0	Co-dominance at 3.5m, crooK (M), sweep (L)	Preserve	
431	Manitoba Maple	*Acer negundo*	24, 21	FG	G	FG		3.5	Co-dominance at 1m with included bark (M), crook (M)	Preserve	
432	Manitoba Maple	*Acer negundo*	23, 17.5	PF	FG	FG		5.0	Union at base, lean (H) to east, sweep (M)	Preserve	
433	Scots Pine	*Pinus sylvestris*	24.0	G	G	G		2.5		Preserve	
434	Scots Pine	*Pinus sylvestris*	27.5	G	G	G		3.0		Preserve	
435	Scots Pine	*Pinus sylvestris*	23.0	G	G	G		3.0		Preserve	
436	Scots Pine	*Pinus sylvestris*	25.0	G	G	G		3.0		Preserve	
437	Scots Pine	*Pinus sylvestris*	22.0	G	G	G		3.0		Preserve	
438	Scots Pine	*Pinus sylvestris*	28.5	G	G	G		3.5		Preserve	
439	Scots Pine	*Pinus sylvestris*	24.0	FG	G	FG		3.0	Crook (M)	Preserve	
440	Scots Pine	*Pinus sylvestris*	21.5	G	G	FG		3.0		Preserve	
441	Scots Pine	*Pinus sylvestris*	19.5	G	G	FG		2.5		Preserve	
442	Honey Locust (shademaster)	*Gleditsia triacanthos inermis*	59.0	FG	FG	FG		6.0	Co-dominance at 2m with 3 stems, asymmetrical crown (M)	Remove	4
443	Manitoba Maple	*Acer negundo*	26.5	F	F	F	20	3.0	Co-dominance at 1.6m with included bark (M), lean (L), epicormic branches (M)	Preserve	
444	White Spruce	*Picea glauca*	45.5	FG	G	F	20	4.0	Lean (L), sparse crown (M)	Remove	3
445	White Spruce	*Picea glauca*	47.5	G	G	F		3.0		Remove	3
446	White Spruce	*Picea glauca*	35.5	G	G	F		2.5	Sparse crown (L)	Remove	2
447	Blue Spruce	*Picea pungens*	25.0	G	G	F		1.5	Sparse crown (L)	Remove	2
448	Blue Spruce	*Picea pungens*	23.5	FG	G	F	10	1.0	Crook (M), sparse crown (L)	Remove	2
449	Blue Spruce	*Picea pungens*	23.0	G	G	F		1.0	Sparse crown (L)	Remove	2
450	Honey Locust (shademaster)	*Gleditsia triacanthos inermis*	36.0	FG	G	FG		1.0	Co-dominance at 1.8m, pruning wounds (M), epicormic branches (M)	Remove	3

451	Ivory Silk Lilac	*Syringa reticulata 'Ivory Silk'*	20.5	G	G	G		1.0		Remove	1
452	Ivory Silk Lilac	*Syringa reticulata 'Ivory Silk'*	18.5	G	G	G		1.0		Remove	1
453	Blue Spruce	*Picea pungens*	21.5	G	G	G		1.0		Remove	2
454	White Spruce	*Picea glauca*	23.0	G	G	G		1.0		Remove	2
455	Norway Maple	*Acer platanoides*	26.5	F	PF	F	25	1.0	Seam (L), lost leader	Remove	0
456	Blue Spruce	*Picea pungens*	~13, 12, 10	FG	G	G		1.0	Union at base	Remove	1
457	Norway Maple	*Acer platanoides*	46.0	P	PF	PF	40	1.0	Union at 1.6m and 2.5m with 3 stems, vertical crack at union, 1 stem lost leader, stem wound (H), broken branches (M)	Remove	0
458	Norway Maple	*Acer platanoides*	11.0	G	G	G		1.0		Remove	1
459	Blue Spruce	*Picea pungens*	17.5	G	G	F	10	1.0	Sparse crown (M)	Remove	1
A	Black Walnut	*Juglans nigra*	17.0	G	G	G		2.0		Preserve	
B	Blue Spruce	*Picea pungens*	18.0	G	G	G		1.5		Preserve	
C	Red Oak	*Quercus rubra*	~30	G	G	G		4.0		Preserve	
										TOTAL	39

Codes		
DBH	Diameter at Breast	(cm)
TI	Trunk Integrity	(G, F, P)
CS	Crown Structure	(G, F, P)
CV	Crown Vigor	(G, F, P)
CDB	Crown Die Back	(%)
DL	Dripline in radius	(m)
~ = estimate; (VL) - very light; (L) = light; (M) = moderate; (H) = heavy		

Appendix A. Photographs of Trees and Property

Image 1. Driveway – view from Nunnville Road (Tree C on left)

Image 2. Trees 289-300 along driveway

Image 3. Trees 300 and 401-408 on left and Trees 458-459 and N on right

Image 4. Trees 406-414

Image 5. Trees 415-425 (right), 427, 428

Image 6. Trees 426 (front), 428, 429

Image 7. Trees 430-438

Image 8. Trees 439-442

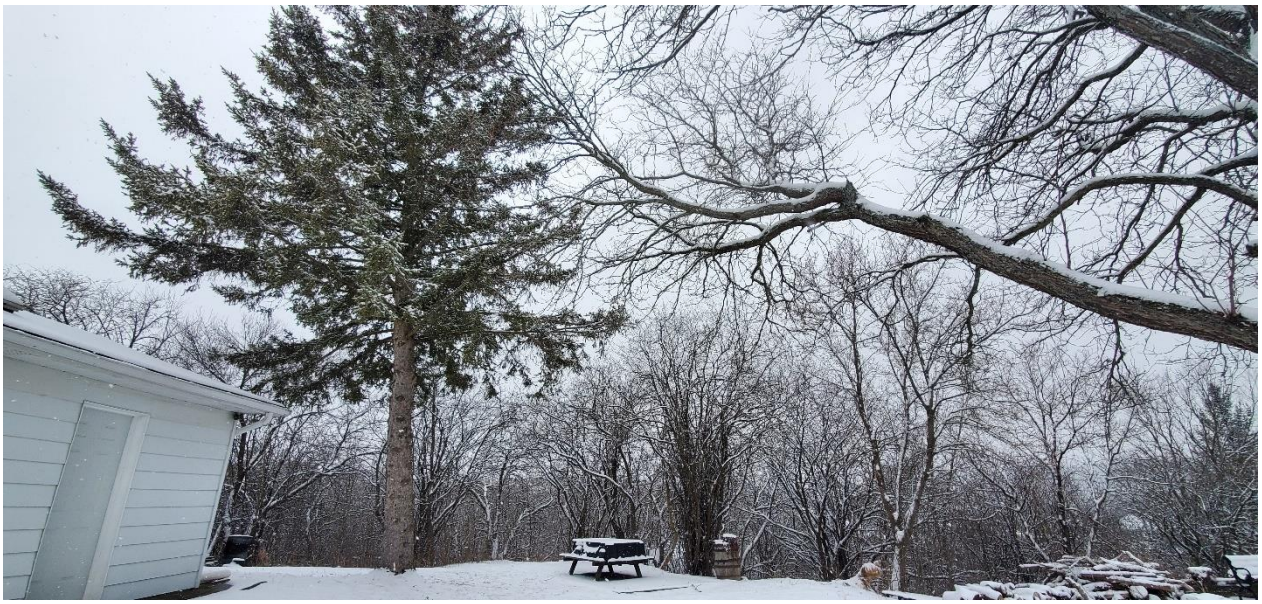

Image 9. Trees 443-444

Image 10. Trees 445-446

Image 11. Hedge along fence line on the southwest corner

Image 12. Trees 447-450

Image 13. Trees 451-454

Image 14. Trees 454-455

Image 15. Tree 456

Image 16. Tree 457

Image 17. Trees 458-459 and B