Tree Inventory and Preservation Plan Report 4646 County Road 2 Port Hope, Ontario

prepared for

Candevcon Group Inc. GTA West Office 9358 Goreway Drive Brampton, ON L6P 0M7

prepared by



146 Lakeshore Road West PO Box 1267 Lakeshore W PO Oakville ON L6K 0B3 t: 289.837.1871 e: consult@kuntzforestry.ca

7 June 2024

KUNTZ FORESTRY CONSULTING INC Project P4110

Introduction

Kuntz Forestry Consulting Inc. was retained by Candevcon Group Inc. to complete a Tree Inventory and Preservation Plan report as part of a development application for the property located at 4646 County Road 2 in Port Hope. The property is located on the east side of County Road 2 and southeast of Dale Road, within a mixed-use rural residential and agricultural area.

The work plan for this tree preservation study included the following:

- Prepare inventory of the individual tree resources over 10cm diameter at breast height (DBH) and trees of all diameters within the road right-of-way on and within six metres of the disturbance limit,
- Evaluate potential tree saving opportunities based on proposed development plans; and
- Document the findings in a Tree Inventory and Preservation Plan Report.

The results of the evaluation are provided below.

Methodology

The tree inventory was conducted on 1 March 2024. Individual trees were tagged using the numbers 401-451. Tree 407 has been removed since the initial inventory due to its hazardous condition, see Table 1 for notes, and Appendix A for photographs of the tree. Individual trees that could not be tagged were identified as Trees A-Z and AA-AK. Please note that individual tree locations for Trees 404-426, B, C, I-Z, AA, AB, and AE-AK were not included on the provided topographic survey. Where tree locations were not included on the survey, tree resources were located using aerial imagery and in-field estimations. An official topographic survey including individual tree locations will be required to determine ownership of these trees, particularly along the northwestern property boundary.

Individual tree resources were assessed utilizing the following parameters:

Tree # - number assigned to tree that corresponds to Figure 1.

Species - common and botanical names provided in the inventory table (Table 1).

DBH - diameter (centimetres) at breast height, measured at 1.4 m above the ground.

Condition - condition of tree considering trunk integrity, crown structure, and crown vigour. Condition ratings include poor (P), fair (F) and good (G).

Crown width – extent of crown (m).

Comments - additional relevant detail. Defects are rated as light (L), moderate (M), or heavy (H).

Polygons (groups of trees, especially forested units) were identified as P1 and P2. Descriptions for P2 can be found within Table 1. P1 was inventoried by 100% tally, counting all trees within these units and categorizing them by species, size category, and condition [AGS (Acceptable Growing Stock)].

Tree locations are shown on Figure 1. See Tables 1 and 2 for the results of the inventory.

Existing Site Conditions

The subject property is currently occupied by a 2-storey frame house, a gravel driveway, and two wooden sheds. The southwestern portion of the subject property is currently occupied by an agricultural field. Tree resources exist in the form of natural feature trees, individual landscape trees, and hedgerow features. Refer to Figure 1 for the existing conditions.

Tree Resources

The inventory documented 87 individual trees and two (2) tree polygons on and within six metres of the subject area. Refer to Tables 1 and 2 for the full tree inventory and Figure 1 for the locations of trees reported in the tree inventory.

Tree resources were comprised of Manitoba Maple (*Acer negundo*), Black Walnut (*Juglans nigra*), Eastern White Cedar (*Thuja occidentalis*), Sugar Maple (*Acer saccharum*), Silver Maple (*Acer saccharinum*), Red Maple (*Acer rubrum*), Norway Maple (*Acer platanoides*), White Birch (*Betula papyrifera*), Beech Species (*Fagus spp.*), Red Oak (*Quercus rubra*), Black Locust (*Robinia pseudoacacia*), Scots Pine (*Pinus sylvestris*), Thornless Honey Locust (*Gleditsia triacanthos 'inermis' cv.*), Blue Spruce (*Picea pungens*) and White Spruce (*Picea glauca*).

Proposed Development

The proposed development includes the severance of the subject property into 12 new lots and the construction of a new road, 'Street A', providing access to County Road 2. It is our understanding that the existing house located in Lot 1 will remain intact. Note that the provided site plan is preliminary; therefore, does not currently include building envelopes or a servicing and grading plan. Refer to Figure 1 for the proposed site plan.

Discussion

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

Development Impacts/Tree Removals

The proposed development will require the removal of 27 trees and one tree polygon, including Trees 401, 402, 436, 435-436, AD, AH-AK and P1. Trees 401-403, 436, 446-451 and AK directly conflict with the proposed new road. It is assumed that regrading, building of swales, etc. will be required within the limit of the property boundary and for the building of the road. Trees 403,440,441,444-446 either require significant encroachment into their driplines for the construction of Street A or anticipated regrading; therefore, we do not anticipate these trees to tolerate this level of injury and their removal will be required. Please note that the removal of these trees is subject to change pending a detailed servicing and grading plan.

The removal of an additional eight (8) trees will be due to their hazardous condition, including Trees 417, 421, 422, 425, 437-439, and 442. Trees 417, 425, 437-439, and 442

also conflict with the proposed site plan. Refer to Table 1 for detailed notes on their condition.

Refer to Figure 1 for the location of tree removals.

Tree Preservation

The preservation of the remaining 53 trees, including Trees 404-408, 409-416, 418-420, 424, A-Z, AA-AC, AE-AG and P2 will be possible with the use of appropriate tree protection measures as indicated on Figure 1. Designated tree protection fencing has not been prescribed for Trees Y-Z, AA and AB as they are located behind existing fences on neighbouring property. Tree protection measures will have to be implemented prior to earthworks to ensure designated tree resources are not impacted by the development. Refer to Figure 1 for the location of required tree preservation fencing and further tree protection plan notes. Tree protection fencing was prescribed at the edge of the dripline of trees identified for preservation. Although this level of protection cannot be respected for Trees I, J and L, these trees are afforded a minimum tree protection zone (mTPZ) that is consistent with standards utilized by surrounding municipalities.

The following mTPZ's are based on the trunk diameter of the tree, as follows:

Tree DBH	mTPZ (m), as measured
(cm)	from edge of tree stem
<10cm	1.2
10-29	1.8
30-40	2.4
41-50	3.0
51-60	3.6
61-70	4.2
71-80	4.8

All grading and disturbances should be directed outside of the TPZ indicated on Figure 1. A standard tree protection fencing detail is shown on Figure 1 (snow fencing on wooden frame). Alternatively, protection fencing can also be comprised of erosion and sediment control fencing, erected on t-bars and/or affixed paige wire fencing.

Summary and Recommendations

Kuntz Forestry Consulting Inc. was retained by Candevcon Group Inc. to complete a Tree Inventory and Preservation Plan report as part of a development application for 4646 County Road 2 in Port Hope. A tree inventory was conducted and reviewed in the context of the proposed development plan.

The findings of the study indicate a total of 87 individual trees and two (2) tree polygons on and within six metres of the subject property. The removal of 27 trees and one (1) tree polygon is required to accommodate the proposed development. An additional eight (8) trees are recommended for removal due to their hazardous condition. All other tree resources can be saved provided appropriate tree protection measures are installed prior to construction.

The following recommendations are suggested to minimize impacts to trees identified for preservation. Refer to Figure 1 for additional tree preservation notes.

- Tree protection barriers and fencing should be erected at locations prescribed on Figure 1.
- Tree protection measures will have to be implemented prior to construction to ensure the trees identified for preservation are not impacted by the development.
- Branches and roots that extend past prescribed tree protection zones that require pruning must be pruned by a qualified Arborist or other tree professional. All pruning of tree roots and branches must be in accordance with good arboricultural standards.
- Site visits, pre, during and post construction are 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 mitigation measures are implemented.

Respectfully Submitted,

Kuntz Forestry Consulting Inc.

Natasha Brooks

Natasha Brooks, B.B.R.M.(EM), CERPIT Ecologist, ISA Certified Arborist #ON-2906A Email: natasha.brooks@kuntzforestry.ca

Phone: 289-837-1871 ext. 109

<u>Limitations of Assessment</u>

Only the tree(s) identified in this report were included in the inventory. The assessment of the trees presented in this report has been made using accepted arboricultural techniques. These may include a visual examination taken from the ground of all the above-ground parts of the tree for structural defects, scars, external indications of decay such as fungal fruiting bodies, evidence of attack by insects, discoloured foliage, the condition of any visible root structures, the degree of lean (if any), the general condition of the trees and the identification of potentially hazardous trees or recommendations for removal (if applicable). Where trees could not be directly accessed (ie. due to obstructions, and/or on neighbouring properties), trees were assessed as accurately as possible from nearby vantage points.

Locations of trees provided in the report are determined as accurately as possible based on the best information available. If official survey information is not provided, tree locations in the report may not be exact. Where KFCI's in-house GPS unit is used (if applicable), tree locations are accurate only to the extent that the technology allows, which can be variable based on satellite available, RTK network / cell coverage, canopy coverage, and/or projection transformation limitations. If trees occur on or near property boundaries, an official site survey may be required to determine ownership utilizing specialized survey protocol to gain precise location.

Furthermore, recommendations made in this report are based on the site plans that have been provided at the time of reporting. These recommendations may no longer be applicable should changes be made to the site plan and/or grading, servicing, or landscaping plans following report submission.

Notwithstanding the recommendations and conclusions made in this report, it must be recognized that trees are living organisms, and their health and vigor constantly change over time. They are not immune to changes in site conditions or seasonal variations in the weather conditions. Any tree will fail if the forces applied to the tree exceed the strength of the tree or its parts.

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 inspection.

Table 1. Tree Inventory

Location: 4646 County Road 2 Port Hope

Date: 01 March 2024 Surveyors: NB

Tree#	Common	Scientific Name	DBH	CW	TI	cs	cv	CDB	Comments	Action
401	Black Locust	Robinia pseudoacacia	72	12	F	F-G	F-G		Union at 1.8m, cavity in stem (M), lean (L), crook (L)	Remove
402	Black Locust	Robinia pseudoacacia	44	10	F-G	F-G	G		Union at 2.5m, deadwood (L), crook (L), asymmetrical crown (L)	Remove
403	Black Locust	Robinia pseudoacacia	60	11	F-G	F-G	F-G		Union at 3m, bowing (L), lean (VL)	Remove
404	Norway Maple	Acer platanoides	55	9	F-G	F-G	F-G		Lean (L), seam in trunk (L),included bark (L), multiple branch attachment (L)	Preserve
405	Black Walnut	Juglans nigra	31	6	G	F-G	G		Asymmetrical crown (M)	Preserve
406	Norway Maple	Acer platanoides	15	3	F-G	F-G	F-G		Union at base, asymmetrical crown (L)	Preserve
407	Black Locust	Robinia pseudoacacia	66	10	Р	P-F	Р	60	Fruiting bodies, horizontal cracking, hole in trunk at 7m - can see through tree - contacted owner to remove immediately	Tree has been removed following inventory due to hazardous condition
408	Black Locust	Robinia pseudoacacia	28,13,8	7	F	F-G	F	15	Union at 0.2m, crook (L)	Preserve
409	Norway Maple	Acer platanoides	~15,17	3	F	F	F		Union at 0.2m	Preserve
410	Norway Maple	Acer platanoides	26	5	F-G	F-G	F-G		Lean (L), asymmetrical crown (M)	Preserve
411	Norway Maple	Acer platanoides	20	4	F-G	F-G	F	10	Asymmetrical crown (L), deadwood (L)	Preserve
412	Norway Maple	Acer platanoides	16	4	F	F	F	10	Deadwood (L)	Preserve
413	Norway Maple	Acer platanoides	15	4	F	F	F	10	Deadwood (L)	Preserve
414	Black Walnut	Juglans nigra	20	4	F-G	F-G	F-G		Asymmetrical crown (L), crook (L)	Preserve
415	Black Walnut	Juglans nigra	12	3	F-G	F-G	F-G		Crook (L)	Preserve
416	Black Walnut	Juglans nigra	15	3	G	G	G			Preserve
417	Black Locust	Robinia pseudoacacia	29	6	P-F	P-F	Р	50	Lean (L), deadwood (M) -> Removal recommended	Remove (Condition)
418	Black Walnut	Juglans nigra	46	8	G	F-G	G		Crook (L)	Preserve
419	Black Walnut	Juglans nigra	50	8	G	G	G			Preserve
420	Black Walnut	Juglans nigra	65	9	F-G	F-G	F	15	Deadwood (M)	Preserve
421	Black Locust	Robinia pseudoacacia	-	-	D	D	D	-	Dead	Preserve
422	Black Locust	Robinia pseudoacacia	65	10	P-F	P-F	F	20	Vertical cracking, hollow stem -> Removal recommended	Remove (Condition)
423	Black Walnut	Juglans nigra	25	5	F-G	F	F		Bowing (L)	Preserve
424	Norway Maple	Acer platanoides	16	3	F-G	F	F		Lean (L), seam in trunk (L)	Preserve
425	Black Locust	Robinia pseudoacacia	60	10	Р	Р	Р	70	Union at 2m, crack in trunk (M) with rot -> Removal recommended	Remove (Condition)

426	Black Walnut	Juglans nigra	20	4	G	G	G			Preserve
427	Black Walnut	Juglans nigra	25	4	F-G	F-G	F-G		Deadwood (L)	Preserve
428	Black Walnut	Juglans nigra	34	7	F-G	F-G	F-G		Lean (L)	Preserve
429	Black Walnut	Juglans nigra	26	6	F F	F-G	F	10	Lean (L), Crook (L), deadwood (L)	Remove
430	Black Walnut	Juglans nigra	27	6	F	F-G	F	10	Deadwood (L)	Remove
431	Black Walnut	Juglans nigra	55	8	G	F-G	G	10	Asymmetrical crown (L)	Remove
432	Black Walnut	Juglans nigra	68	10	G	F-G	F-G		Union at 4m	Remove
433	Manitoba Maple	Acer negundo	13, 10	3	F	F F	F		Union at base, asymmetrical crown (L)	Remove
434	Manitoba Maple	Acer negundo	75	12	F	F	F	15	Union at 3m, growing into concrete, epicormic branching (L)	Remove
435	Manitoba Maple	Acer negundo	10,15	3	F	F	F	10	Union at base	Remove
436	Black Locust	7.1007 Tregative	30	5	F-G	F	F	20	Crook (L), asymmetrical crown (L)	Remove
437	Black Locust	Robinia pseudoacacia	38, 45	8	P-F	Р	Р	60	Union at 1m, pruning wounds (M). Stem wound (M), fruiting bodies, within striking distance of house and/or driveway - >Removal recommended	Remove (Condition)
438	Black Locust	Robinia pseudoacacia	41	8	F	F	Р	70	Deadwood (M-H), within striking distance of house and/or driveway -> Removal recommended	Remove (Condition)
439	Black Locust	Robinia pseudoacacia	25	6	F	Р	Р	70	Lean (L), crook (L), deadwood (M), within striking distance of house and/or driveway -> Removal recommended	Remove (Condition)
440	Black Locust	Robinia pseudoacacia	20	5	F	F	F	30	Crook (L), deadwood (L-M)	Remove
441	Black Locust	Robinia pseudoacacia	39	7	F-G	F	F	20	Crook (L), deadwood (L)	Remove
442	Black Locust	Robinia pseudoacacia	28	_	D	D	D	-	Dead, vertical crack in trunk, within striking distance of house and/or driveway -> Removal recommended	Remove (Condition)
443	Black Locust	Robinia pseudoacacia	16	4	F	F	F-G		Crook (L), asymmetrical crown (L)	Remove
444	Black Locust	Robinia pseudoacacia	44	7	F-G	F	F	20	Lean (L), deadwood (M)	Remove
445	Norway Maple	Acer platanoides	25	5	F	P-F	F	20	Poor form (M), seam (L), epicormic branching (L)	Remove
446	Black Locust	Robinia pseudoacacia	45	6	F	F-G	F-G		Lean (L), exposed roots (L), asymmetrical crown (L)	Remove
447	Eastern White Cedar	Thuja occidentalis	15,16,15	3	F	F	G		Union at base, sweep (L)	Remove
448	Black Locust	Robinia pseudoacacia	30	6	F	F	P-F	30	Union at 1.3m, crook (L)	Remove
449	Black Walnut	Juglans nigra	81	12	G	F-G	G		Deadwood (L)	Remove
450	Black Walnut	Juglans nigra	71	11	G	F	G		Union at 3m, poor form (M), deadwood (L)	Remove
451	Black Walnut	Juglans nigra	70	11	G	F-G	G			Remove
Α	Sugar Maple	Acer saccharum	70	12	G	F-G	F-G		Deadwood (L)	Preserve
В	Norway Maple	Acer platanoides	20	4	G	F-G	F-G		Crook (M)	Preserve
С	Norway Maple	Acer platanoides	65	10	F-G	F-G	F-G		Union at 3m, bowing (L)	Preserve
D	White Birch	Betula papyrifera	~45	7	F-G	F	F	15	1 stem topped, multiple branch attachment	Preserve
E	White Birch	Betula papyrifera	~35,25,20	7	F	P-F	F	20	Topped, union at base	Preserve
F	Red Maple	Acer rubrum	~15	4	G	G	G			Preserve
G	Norway Maple	Acer platanoides	~50	8	F-G	F-G	G		Multiple branch attachment	Preserve
Н	Norway Maple	Acer platanoides	~70	10	F-G	F-G	F-G		Union at 3m, multiple branch attachment, deadwood (L)	Preserve
1	Scots Pine	Pinus sylvestris	~50	10	G	G	G			Preserve
J	White Birch	Betula papyrifera	~7-25	7	F	F	F-G	10	~8 stems, poor form (M),	Preserve

K	White Spruce	Picea glauca	~30	5	G	G	G			Preserve
L	Silver Maple	Acer saccharinum	~40,35	8	F-G	F-G	G		Union at 1.2m	Preserve
М	White Spruce	Picea glauca	~25	5	G	G	G			Preserve
N	Norway Maple	Tilia cordata	~20	5	F-G	G	G			Preserve
0	White Spruce	Picea glauca	~20	5	G	G	G			Preserve
Р	White Birch	Betula papyrifera	~25	6	G	G	G			Preserve
Q	White Spruce	Picea glauca	~17	4	G	G	G			Preserve
R	White Spruce	Picea glauca	~25	5	G	G	G			Preserve
S	White Spruce	Picea glauca	~30	5	G	G	G			Preserve
Т	Norway Maple	Acer platanoides	~28	5	F-G	G	G		Union at 3m, multiple branch attachment	Preserve
U	Blue Spruce	Picea pungens	~28	5	G	G	G			Preserve
V	Norway Maple	Acer platanoides	~40	8	G	F-G	G			Preserve
W	Norway Maple	Acer platanoides	~16	4	F-G	G	G			Preserve
Х	Honey Locust (cultivar)	Gleditsia triacanthos 'inermis' cv.	~45	7	G	G	G		Union at 3m	Preserve
Υ	Beech	Fagus sp.	~30	6	G	G	G		Asymmetrical crown (L)	Preserve
Z	White Spruce	Picea glauca	~20	4	G	G	G		Behind hedgerow	Preserve
AA	Norway Maple	Acer platanoides	~16,17,12	4	F-G	G	G		Union at 0.2m	Preserve
AB	Honey Locust (cultivar)	Gleditsia triacanthos 'inermis' cv.	~32	6	F-G	F-G	G		Union at 1.2m, poor form (L)	Preserve
AC	Sugar Maple	Acer saccharum	~18	5	F-G	G	G		Stem wound (L)	Preserve
AD	Black Locust	Robinia pseudoacacia	10	3	F	F	F-G		Asymmetrical crown (L)	Remove
AE	Blue Spruce	Picea pungens	~25	4	G	G	F-G	10	Dieback at base of tree (L)	Preserve
AF	Black Walnut	Juglans nigra	~50	10	G	G	G		Union at 6m, christmas lights wrapped around entirety of trunk	Preserve
AG	Black Locust	Robinia pseudoacacia	~45	8	G	F-G	G		Union at 7m	Preserve
АН	Manitoba Maple		30,25	5	F	F	F-G		Union at base, crook (M), lean (L), poor form (M)	Remove
Al	Manitoba Maple		15	3	F	F	F-G		Crook (M), lean (L)	Remove
AJ	Manitoba Maple		10	2	F	F	F-G		Lean (L), poor form (M)	Remove
AK	Manitoba Maple		28,30,21	2	F	F	F		Union at 0.2m, deadwood (L), 3 stems, poor form (L)	Remove
P1	See Table 2									Remove
P2	Eastern White Cedar	Thuja occidentalis	~10-15	2	G	G	G		~10 trees	Preserve

Codes										
Diameter at Breast =Height	(cm)									
Crown width	(m)									
Trunk Integrity	(G, F, P)									
Crown Structure	(G, F, P)									
Crown Vigour	(G, F, P)									
Crown dieback	%									
	Diameter at Breast =Height Crown width Trunk Integrity Crown Structure Crown Vigour									

P = poor, F = fair, G = good, ~ = estimate, (VL) = very light, (L) = light, (M) = moderate, (H) = heavy

Table 2: 100% Tally Polygon

Location: 4646 County Rd 2

Date: 01-Mar-24

Surveyor: NB Compartment: P1

Stations Tallied: 100% Tally

	Class >>>>	Polewood 10-24 cm				Total All Sizes					
Tree Size		10-24cm		Small 26-36 cm				Medium 38-48 cm		Large 50 cm +	
Sp	ecies	AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS
Black Locust (Robinia p	seudoacacia)	2	0	4	2	2	3	1	0	9	5
Norway Maple (Acer pla	atanoides)	4	1	3	0	0	0	0	1	7	2
Manitoba Maple (Acer r	negundo)	1	0	3	1	2	0	0	0	6	1
Total Number of Trees		7	1	10	3	4	3	1	1	22	8

Appendix A: Photographs of trees



Photo 1. Trees 401-406 (Left to right)



Photo 2. Trees 407-427 (Left to right)



Photo 3. Trees B and C (Left to right)



Photo 4. Tree A (background) and B (foreground)



Photo 6. Trees 428-432 (Right to left)



Photo 7. Tree D





Photo 9. Tree 433





Photo 11. Polygon 1 (facing north)



Photo 12. Trees AH-AK (Left to right)



Photo 13. Trees 434 and 435



Photo 14. Trees I- K (Left to right)



Photo 15. Tree L



Photo 16. Trees M- O (Left to right)



Photo 17. Tree V



Photo 18. Polygon 2 and Tree W



Photo 19. Tree Z (Left)



Photo 20. Trees X and Y (Left to right)



Photo 21. Trees AA and AB (far left and right)







Photo 23. Trees 437-444 (Right to left)



Photo 24. Trees 447-448 (Left to right)



Photo 25. Trees 449-451 (Left to right)



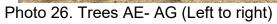




Photo 27. Tree 107 prior to removal



Photo 28. Stump of Tree 107 (image provided by property owner.)

