Tree Inventory and Preservation Plan 1 Clair Road East Guelph, Ontario

prepared for

SvN Architects + Planners 110 Adelaide Street East Toronto, Ontario M5C 1L7

prepared by



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KUNTZ FORESTRY CONSULTING INC. Project P4032

Introduction

Kuntz Forestry Consulting was retained by SvN Architects + Planners to complete a Tree Inventory and Preservation Plan as part of a development application for the subject site located at 1 Clair Road East in Guelph, Ontario. The subject site is located on the south corner of the intersection between Clair Road East and Hawkins Drive, within a mixed-use area.

The work plan for this study included the following:

- Prepare an inventory of trees measuring 10cm diameter at breast height (DBH) and greater on and within six metres of the subject site and trees of all sizes within the road right-of-way,
- Evaluate potential tree saving opportunities based on the proposed development plans, and;
- Document the findings in a Tree Inventory and Preservation Plan.

The results of the evaluation are provided below.

Methodology

Trees measuring 10cm DBH and greater on and within six metres of the subject site and trees of all sizes within the road right-of-way were included in the inventory. Trees were located using the topographic survey provided for the subject site and estimations made from known points in the field. Trees included in the inventory were identified as Trees 301 - 307, 466 - 500, A - Z, and AA - AI. Where appropriate, trees were tagged with their identification number. Trees that were not tagged were identified using the alphabetic sequence.

Individual tree resources 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 (cm) at breast height, measured at 1.4m 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 Dieback – Percentage of dead branches within the crown.

Dripline – Crown radius (m).

Comments – Any other relevant tree condition information.

Refer to Table 1 for the detailed tree inventory and Figure 1 for the locations of the trees included in the inventory. See Appendix A for site photographs.

Existing Site Conditions

The subject site is currently occupied by four commercial buildings and surface parking areas. Tree resources exist in the form of landscape trees. Refer to Figure 1 for the existing site conditions.

Individual Tree Resources

The tree inventory was conducted on 23 November 2023. The inventory documented a total of 77 trees on and within six metres of the subject site.

Trees included in the inventory are comprised of Blue Spruce (*Picea pungens*), Hackberry (*Celtis occidentalis*), Japanese Flowering Lilac (*Syringa reticulata*), Red Maple (*Acer rubrum*), Silver Maple (*Acer saccharinum*), and Thornless Honey Locust (*Gleditsia triacanthos* var. *inermis*).

Refer to Table 1 for the complete tree inventory, Figure 1 for the locations of trees included in the inventory, and Appendix A for site photographs.

Proposed Development

The proposed development includes the demolition of all existing buildings and surface parking areas. The construction of four multiple-storey mixed-use buildings, with two buildings having commercial at grade, is proposed for the subject site. Associated subsurface parking garages are also proposed. The eastmost corner of the subject site is to be dedicated as parkland. Various internal roadways, walkways, and outdoor amenity areas are proposed within the subject site. The streetscapes adjacent to the subject site are to be redesigned as part of the proposed works. Refer to Figure 1 for the proposed development plan.

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 72 trees will be required to accommodate the proposed development. Trees identified for removal include Trees 301-307, 466-485, 488-500, A-O, S-Z, and AA-AI. The trees identified for removal either conflict directly with the proposed development or the level of encroachment they would be subject to as a result of the proposed work would be at an intolerable level such that they would not be expected to overcome the injury.

Trees 472, 476 – 478, 482 – 484, and 493 – 498 are located fully or partially within the adjacent road rights-of-way and as such, permission from the City of Guelph will be required prior to the removal of these trees. All other trees identified for removal are located within the boundaries of the subject site and are 10cm DBH or greater. Refer to Figure 1 for the locations of the trees identified for removal.

Tree Preservation

The preservation of five trees, identified as Trees 486, 487, and P-R, will be possible with the use of appropriate tree protection measures as indicated on Figure 1. Tree protection measures must be implemented prior to the commencement of the proposed work to ensure tree resources designated for retention are not impacted. Refer to Figure

1 for the location of required tree preservation fencing, general Tree Protection Plan Notes, and tree preservation fence details.

Where the minimum tree protection zone (mTPZ) of a tree cannot be fully respected, including for Tree 487, special mitigation measures have been prescribed and are described below.

Tree 487

Minor encroachment into the mTPZ of Tree 487 will be required to install a proposed sidewalk. Tree preservation fencing has been prescribed at the anticipated limit of encroachment within the mTPZ of Tree 487. Any excavation to occur within the mTPZ of Tree 487 for the installation of the proposed sidewalk should be supervised by a Certified Arborist. Any roots exposed during the excavation process should be pruned by a Certified Arborist in accordance with Good Arboricultural Standards.

Summary and Recommendations

Kuntz Forestry Consulting was retained by SvN Architects + Planners to complete a Tree Inventory and Preservation Plan as part of a development application for the subject site located at 1 Clair Road East in Guelph, Ontario. A tree inventory was conducted and reviewed in the context of the proposed site plan.

The findings of the study indicate a total of 77 trees on and within six metres of the subject site. The removal of 72 trees will be required to accommodate the proposed development. The remaining five trees can be preserved providing appropriate tree protection measures are implemented prior to the commencement of the proposed works.

The following recommendations are suggested to minimize impacts to trees identified for preservation. Refer to Figure 1 for the location of the required tree preservation fencing, general Tree Protection Plan Notes, and tree preservation fence details.

- 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.
- Special mitigation measures have been prescribed for select trees, as outlined in the *Tree Preservation* section of this report.
- Branches and roots that extend beyond 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 measures are implemented.

Respectfully Submitted,

Kuntz Forestry Consulting Inc.

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Limitations of Assessment

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 (i.e. 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 location in the report may not be exact. In this case, 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: 1 Clair Road East, Guelph Date: 23 November 2023 Surveyors: KNH

Tree #	Common Name	Scientific Name	DBH	TI	cs	cv	CDB	mTPZ	DL	DL+1	Comments	Owner	Action
301	Silver Maple	Acer saccharinum	14	PF	F	F		1.8	3	4	Epicormic branching (L), poor form (L), seam (H) with decay (M)	Subject Site	Remove
302	Silver Maple	Acer saccharinum	18	G	F	F		1.8	3	4	Epicormic branching (M)	Subject Site	Remove
303	Silver Maple	Acer saccharinum	17	FG	F	FG		1.8	3	4	Bow (L), poor form (L), epicormic branching (L)	Subject Site	Remove
304	Silver Maple	Acer saccharinum	16.5	FG	F	F		1.8	3	4	Epicormic branching (M), crook (L)	Subject Site	Remove
305	Thornless Honey Locust	Gleditsia triacanthos var. inermis	11	FG	G	G		1.8	3	4	Basal swell	Subject Site	Remove
306	Hackberry	Celtis occidentalis	12.5	G	F	FG		1.8	2	3	Main leader lost at 2.5m	Subject Site	Remove
307	Hackberry	Celtis occidentalis	12	G	G	G		1.8	1	2		Subject Site	Remove
466	Japanese Flowering Lilac	Syringa reticulata	10	G	G	F		1.8	1	2		Subject Site	Remove
467	Hackberry	Celtis occidentalis	11	FG	FG	F		1.8	2	3	Lean (L), epicormic branching (L)	Subject Site	Remove
468	Japanese Flowering Lilac	Syringa reticulata	10	FG	G	F		1.8	1	2	Lean (L)	Subject Site	Remove
469	Thornless Honey Locust	Gleditsia triacanthos var. inermis	10	FG	G	G		1.8	2	3	Lean (L)	Subject Site	Remove
470	Japanese Flowering Lilac	Syringa reticulata	10	G	G	G		1.8	1	2		Subject Site	Remove
471	Japanese Flowering Lilac	Syringa reticulata	10	FG	F	PF	20	1.8	1	2	Stem wounds (L)	Subject Site	Remove
472	Japanese Flowering Lilac	Syringa reticulata	9	G	G	F		1.2	1	2		City	Remove
473	Hackberry	Celtis occidentalis	13	G	FG	FG		1.8	1	2	Epicormic branching (L), pruning wounds (L)	Subject Site	Remove
474	Hackberry	Celtis occidentalis	13	G	G	G		1.8	1	2		Subject Site	Remove
475	Hackberry	Celtis occidentalis	12	G	G	G		1.8	1	2		Subject Site	Remove
476	Japanese Flowering Lilac	Syringa reticulata	8	Р	Р	Р	50	1.2	1	2	Lean (M), stem wounds (H), decay (M) in trunk	City	Remove
477	Japanese Flowering Lilac	Syringa reticulata	10	F	F	F	20	1.8	1	2	Lean (M)	City	Remove
478	Japanese Flowering Lilac	Syringa reticulata	9.5	G	FG	F	10	1.2	1	2		City	Remove
479	Hackberry	Celtis occidentalis	13	G	G	G		1.8	1	2		Subject Site	Remove
480	Japanese Flowering Lilac	Syringa reticulata	11	F	FG	FG	10	1.8	1	2	Stem wounds (M) from torn out branch	Subject Site	Remove
481	Japanese Flowering Lilac	Syringa reticulata	11	F	F	F	10	1.8	1	2	Seam (M) with decay (L), lean (L)	Subject Site	Remove
482	Japanese Flowering Lilac	Syringa reticulata	11.5	FG	G	G		1.8	2	3	Lean (L)	City	Remove
483	Japanese Flowering Lilac	Syringa reticulata	10	Р	PF	Р	30	1.8	1	2	Lean (L), decay (H) in trunk	City	Remove
484	Japanese Flowering Lilac	Syringa reticulata	10.5	F	F	F	10	1.8	1	2	Seam (L), lean (L), epicormic branching (L)	City	Remove

485	Japanese Flowering Lilac	Syringa reticulata	11.5	F	G	G		1.8	1	2	Seam (M), basal swell	Subject Site	Remove
486	Japanese Flowering Lilac	Syringa reticulata	13	FG	F	FG		1.8	1	2	Lean (L), broken branches (M)	Subject Site	Preserve
487	Japanese Flowering Lilac	Syringa reticulata	11.5	G	G	G		1.8	1	2		Subject Site	Preserve (Injure)
488	Red Maple	Acer rubrum	12	FG	G	G		1.8	2	3	Exposed roots (L) with wounds	Subject Site	Remove
489	Red Maple	Acer rubrum	10	FG	G	G		1.8	2	3	Exposed roots (L)	Subject Site	Remove
490	Red Maple	Acer rubrum	10.5	FG	G	G		1.8	2	3	Exposed roots (L) with wounds	Subject Site	Remove
491	Red Maple	Acer rubrum	11	G	FG	G		1.8	2	3	Broken branches (L)	Subject Site	Remove
492	Japanese Flowering Lilac	Syringa reticulata	10	F	G	F		1.8	1	2	Stem wounds (M) with decay (L)	Subject Site	Remove
493	Silver Maple	Acer saccharinum	11.5	FG	FG	FG		1.8	2	3	Bow (L), epicormic branching (L)	Shared (Subject Site / City)	Remove
494	Silver Maple	Acer saccharinum	10	Р	FG	PF		1.8	1	2	Lean (L), stem wounds (M) with decay (H), epicormic branching (L)	Shared (Subject Site / City)	Remove
495	Silver Maple	Acer saccharinum	12	FG	FG	F	10	1.8	3	4	Crook (L)	Shared (Subject Site / City)	Remove
496	Silver Maple	Acer saccharinum	10.5	F	F	F	10	1.8	3	4	Bow (M), asymmetrical crown (M)	Shared (Subject Site / City)	Remove
497	Silver Maple	Acer saccharinum	13	FG	FG	G		1.8	3	4	Bow (L), asymmetrical crown (L)	Shared (Subject Site / City)	Remove
498	Silver Maple	Acer saccharinum	14	G	FG	FG		1.8	3	4	Epicormic branching (L)	Shared (Subject Site / City)	Remove
499	Silver Maple	Acer saccharinum	13	FG	FG	FG		1.8	3	4	Bow (L), epicormic branching (L)	Subject Site	Remove
500	Silver Maple	Acer saccharinum	14	F	G	FG		1.8	3	4	Stem wounds (L), crook (L), basal swell	Subject Site	Remove
Α	Blue Spruce	Picea pungens	~12	G	G	G		1.8	1	2		Subject Site	Remove
В	Blue Spruce	Picea pungens	~12	G	G	G		1.8	1	2		Subject Site	Remove
С	Blue Spruce	Picea pungens	~14	G	G	G		1.8	1	2		Subject Site	Remove
D	Blue Spruce	Picea pungens	~18	G	F	F	20	1.8	1	2		Subject Site	Remove
E	Blue Spruce	Picea pungens	~16	FG	F	PF	30	1.8	1	2	Crook (L)	Subject Site	Remove
F	Blue Spruce	Picea pungens	~20	FG	G	G		1.8	1	2	Crook (L)	Subject Site	Remove
G	Blue Spruce	Picea pungens	~16	G	G	G		1.8	1	2		Subject Site	Remove
Н	Blue Spruce	Picea pungens	~14	G	FG	F	10	1.8	1	2		Subject Site	Remove
- 1	Blue Spruce	Picea pungens	~12	F	PF	PF	30	1.8	1	2	Sweep (M)	Subject Site	Remove
J	Blue Spruce	Picea pungens	~14	FG	PF	PF	30	1.8	1	2	Top-down dieback, poor form (L), sweep (L)	Subject Site	Remove
К	Blue Spruce	Picea pungens	~12	FG	FG	FG	10	1.8	1	2	Crook (L)	Subject Site	Remove
L	Blue Spruce	Picea pungens	~14	FG	G	G		1.8	2	3	Sweep (L)	Subject Site	Remove
М	Blue Spruce	Picea pungens	~14	G	G	G		1.8	2	3		Subject Site	Remove
N	Blue Spruce	Picea pungens	~14	FG	G	G		1.8	1	2	Sweep (L)	Subject Site	Remove
0	Blue Spruce	Picea pungens	~10	Р	Р	Р	90	1.8	1	2	Moribund, sweep (M)	Subject Site	Remove
Р	Blue Spruce	Picea pungens	~16	FG	G	G		1.8	1	2	Lean (L)	Subject Site	Preserve

Q	Blue Spruce	Picea pungens	~10	FG	PF	PF	40	1.8	1	2	Sweep (L)	Subject Site	Preserve
R	Blue Spruce	Picea pungens	~16	G	G	G		1.8	1	2		Subject Site	Preserve
S	Blue Spruce	Picea pungens	~20	G	G	G		1.8	1	2		Subject Site	Remove
Т	Blue Spruce	Picea pungens	~14	G	FG	F	10	1.8	1	2		Subject Site	Remove
U	Blue Spruce	Picea pungens	~20	G	G	G		1.8	1	2		Subject Site	Remove
V	Blue Spruce	Picea pungens	~24	G	G	G		1.8	1	2		Subject Site	Remove
W	Blue Spruce	Picea pungens	~20	G	G	G		1.8	1	2		Subject Site	Remove
X	Blue Spruce	Picea pungens	~20	FG	G	G		1.8	2	3	Sweep (L)	Subject Site	Remove
Υ	Blue Spruce	Picea pungens	~20	FG	G	G		1.8	1	2	Sweep (L)	Subject Site	Remove
Z	Blue Spruce	Picea pungens	~18	G	FG	F	10	1.8	1	2		Subject Site	Remove
AA	Blue Spruce	Picea pungens	~12	F	F	F	20	1.8	1	2	Sweep (M)	Subject Site	Remove
AB	Blue Spruce	Picea pungens	~10	FG	PF	PF	40	1.8	1	2	Sweep (L), epicormic branching (L)	Subject Site	Remove
AC	Blue Spruce	Picea pungens	~14	G	G	G		1.8	1	2		Subject Site	Remove
AD	Blue Spruce	Picea pungens	~16	FG	G	G		1.8	1	2	Lean (L)	Subject Site	Remove
AE	Blue Spruce	Picea pungens	~10	FG	F	F		1.8	1	2	Crook (L), poor form (M)	Subject Site	Remove
AF	Blue Spruce	Picea pungens	~16	G	G	G		1.8	1	2		Subject Site	Remove
AG	Blue Spruce	Picea pungens	~18	G	G	G		1.8	1	2		Subject Site	Remove
АН	Blue Spruce	Picea pungens	~12, 12	F	F	G		1.8	2	3	V-union at 1m with included bark, poor form (M)	Subject Site	Remove
Al	Blue Spruce	Picea pungens	~14	G	G	G		1.8	1	2		Subject Site	Remove

Codes										
DBH	Diameter at Breast Height	(cm)								
TI	Trunk Integrity	(G, F, P)								
CS	Crown Structure	(G, F, P)								
CV	Crown Vigor	(G, F, P)								
CDB	Crown Dieback	(%)								
mTPZ	Minimum Tree Protection Zone	(m)								
DL	Dripline	(m)								
DL+1	Dripline Plus One Metre	(m)								
Owner	Ownership of Tree	(Subject Site, Neighbour, City)								

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

Appendix A. Site Photographs



Image 1. From near to far, Trees 499, 500, 301



Image 2. From near to far, Trees 302 – 304







Image 3. Tree 305 Image 4. Tree 306 Image 5. Tree 307







Image 8. Tree 468







Image 9. Tree 469 Image 10. Tree 470 Image 11. Tree 471





Image 13. From left to right, Trees 473 – 475





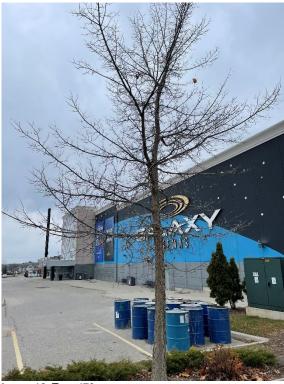


Image 14. Tree 476

Image 15. Trees 477 (near) and 478 (far)

Image 16. Tree 479



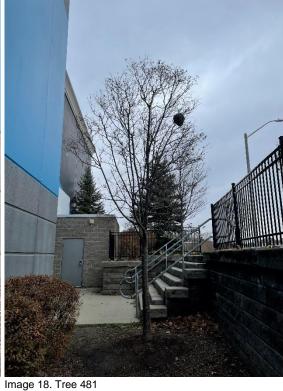




Image 17. Tree 480 Image 18. Tree 481 Image 19. Tree 482







Image 22. Tree 485



Image 23. Trees 486 (left) and 487 (right)



Image 24. Tree 488







Image 29. From far to near, Trees 493 – 495





Image 31. Tree 498







Image 32. From left to right, Trees A – C

Image 33. Tree D

Image 34. From left to right, Trees E - G



Image 35. From left to right, Trees H – K



Image 36. From left to right, Trees L – O





Image 40. Tree V



Image 41. From left to right, Trees W – Z







Image 42. Trees AA (left) and AB (right)

Image 43. Tree AC

Image 44. Tree AD



Image 45. From left to right, Trees AE – AH



Image 46. Tree Al