



TREE ASSESSMENT REPORT FOR REZONING APPLICATION

50 KING ST. & 399 RIDOUT ST.
LONDON, ONTARIO

Report prepared by
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RKLA Project #21-293



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1.0 INTRODUCTION AND EXECUTIVE SUMMARY

1.1 INTRODUCTION

Ron Koudys Landscape Architects Inc. (RKLA) was retained by York Developments to prepare a tree assessment report in conjunction with the proposed development at 50 King Street and 399 Ridout Street, London, Ontario. The intent of this report is to summarize the findings of the tree assessment and make recommendations regarding tree preservation and removal based on tree health, the current site plan, and anticipated site grading for the purpose of application for rezoning.

Note that refinement of these recommendations will be made upon design refinement at the time of application for site plan approval.

1.2 EXECUTIVE SUMMARY

The inventory captured 100 individual trees. Trees were identified within the subject site, and within 3 meters of the legal property boundary. No species classified as endangered or threatened under the Ontario Endangered Species Act, 2007, S.O. 2007, c. 6 were observed during the tree inventory. All trees observed are common to the current land uses and can be characterized as anthropogenic or opportunistic. The subject site is NOT within or immediately adjacent to a City of London Tree Protection Area.

1.2.1 TREE SPECIES COMPOSITION CHART

The following chart summarizes the amount of each tree species observed.

%	Qty.	Botanical Name	Common Name
31%	31	Gleditsia triacanthos	Honey Locust
11%	11	Picea pungens	Blue Spruce
9%	9	Acer platanoides	Norway Maple
8%	8	Acer pseudoplatanus	Sycamore Maple
8%	8	Ginkgo biloba	Ginkgo
6%	6	Cercidiphyllum	Katsura
5%	5	Cercis canadensis	Redbud
5%	5	Picea abies	Norway Spruce
3%	3	Liriodendron tulipifera	Tulip Tree
2%	2	Acer Rubrum	Red Maple
2%	2	Juglans nigra	Black Walnut
2%	2	Thuja occidentalis	Emerald Cedar
1%	1	Acer saccharum	Sugar Maple
1%	1	Fagus sylvatica	European Beech
1%	1	Liquidambar styraciflua	Sweetgum
1%	1	Magnolia x soulangeana	Saucer Magnolia
1%	1	Malus sylvestris	Crab-Apple
1%	1	Pinus strobus	White Pine
1%	1	Quercus rubra	Red Oak
1%	1	Robinia pseudoacacia	Black Locust
100%	100	Total	

1.2.2 TREE REMOVAL AND PRESERVATION RECOMMENDATIONS

- Removal of 55 trees from subject site due to direct conflict with proposed construction.
- Remove 2 trees located within the City right-of-way of King Street. Consent from the City of London will be required (tree #3 & 8).
- Preserve 41 trees located within the subject site, Ivy Park, and City right-of-way of King Street and Dundas Street.
- 5 trees have previously been removed from the subject site. 1 tree was dead located within the City right-of-way (tree ID #7). 4 trees were located near the existing building that has been demolished (tree ID #69-72).
- Follow pre, during, and post construction recommendations outlined in the Construction Impact Mitigation Recommendations in this report.

2.0 SUBJECT SITE AND SCOPE OF WORK

The subject site is a combination of 50 King Street and 399 Ridout Street London Ontario. The site is bound to the west by Ivy Park and to the south by King Street.

The scope of this tree inventory includes the subject site of 50 King Street, 399 Ridout Street, some boundary trees of Ivy Park, and city ROW of King and Ridout. Refer to Figure 1 for scope of tree inventory.

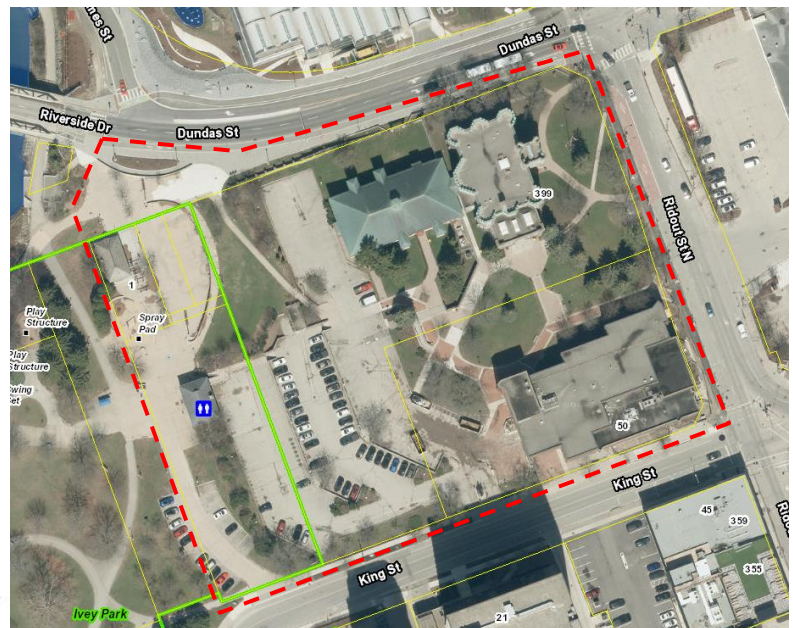


Figure 1 - City of London mapping with 2022 aerial imagery. NTS

Red dashed line - Limit of inventory

3.0 METHODOLOGY

Field work was completed on November 5th, 2021 (prior to annual defoliation) by RKLA staff member Michelle Peeters, ISA certified arborist ON 2129A. A topographic survey provided by Callon Dietz was used as a base for the field work and determined tree location/ownership. All trees with a minimum DBH of 10cm within the given scope were identified and assessed. Groups of trees and hedges were identified and assessed as vegetation units, and include trees smaller than 10cm DBH. Trees were NOT tagged in the field. Each tree and vegetation unit was assigned a number which are identified in the tree data table and on the tree preservation plan. Tree identification numbers include 1-100.

The following information was recorded for each individual tree:

Genus + specific epithet (Species)

Diameter at breast height (DBH) (centimetres)

Crown radius (metres)
Crown Condition (overall general vigour of crown)
Structural Form (excellent, good, fair, poor)
Structural Integrity (good, fair, poor, hazard)
General Comments

3.1 HEALTH ASSESSMENT

Trees were assessed following accepted arboricultural techniques and best practices using a limited visual inspection. The inspection included a 360-degree visual examination of the above-ground parts of each tree for structural defects including cavities, wounds, scars, external indicators of internal decay, evidence of insect presence, discoloured or deformed foliage, canopy and root distribution, and the overall condition of the tree. Evaluation of tree health was based on visible tree health indicators including live buds, foliage condition, deadwood, structural defects, form, and signs of disease or insect infestation. If needed, field observations were reviewed against available online imagery of the site to assist in determining tree canopy health. Quantified health assessments included in the inventory are explained here:

Crown Condition Assessment

- 5 Healthy: less than 10% crown decline
- 4 Slight decline: 11% - 30% crown decline
- 3 Moderate decline: 31% - 60% crown decline
- 2 Severe decline: 61% - 90% crown decline
- 1 Dead - No visible indication of living foliage or buds in crown

Structural Form Assessment

- Excellent: An ideal expression of a specific tree species, true to form, balanced canopy, good flare, typical internode length, full crown, etc.
- Good: A satisfactory and generally expected expression of a specific tree species, with only minor or typical variances from an ideal form.
- Fair: Nearly satisfactory, with defects or a combination of defects such as codominant leaders, unbalanced crown, poor/no flare, shortened internodes, has been poorly pruned, etc.
- Poor: Significantly flawed expression of a specific tree species

Structural Integrity Assessment

- Good: Defects if present are minor (e.g. twig dieback, small wounds); defective tree part is small (e.g. 5-8 cm diameter limb) providing little if any risk.
- Fair: Defects are numerous or significant (e.g. dead scaffold limbs); defective parts are moderate in size (e.g. limb greater than 5-8 cm in diameter).
- Poor: Defects are severe (trunk cavity in excess of 50%); defective parts are large (e.g. majority of crown).
- Hazard: Defects are severe and acute; defective part or collective defective parts render the tree a high risk threat to potential targets.

3.2 CRITICAL ROOT ZONES

The critical root zone of a tree is the portion of the root system that is the minimum necessary to maintain tree vitality and stability. Critical root zones are commonly prescribed by municipal bylaws based solely on DBH and/or drip line, and are

typically expressed as a circular shape around the tree. There are a number of other factors, however, that are considered when establishing a critical root zone.

Factors that inform location and extent of a tree preservation barriers to protect the critical root zone include: species tolerance to root loss and other construction impacts (as established by authoritative resources and professional experience), tree trunk size (DBH), tree health and vigour, structural condition, landscape context, soil type, moisture availability, topography, ground cover, crown size (drip line) and balance, current physical root restrictions, visible root arrangement, relationship to neighbouring trees, relationship between tree and proposed construction, type of proposed construction, etc.

The City of London Tree Protection By-Law (C.P.-1555-252) defines the Critical Root Zone as “the area of land within a radius of ten (10) cm from the trunk of a tree for every one (1) cm of trunk diameter”. The Tree Preservation drawing graphically represents this radius for trees to be preserved.

4.0 TREE INVENTORY AND PRESERVATION/REMOVAL RECOMMENDATIONS

4.1 TREE DATA TABLE

The following recommendations are based on requirements of the current site plan. Grey indicates recommended removal.

ID #	BOTANICAL NAME	COMMON NAME	LOCATION	DBH (cm)	CANOPY RADIUS (m)	CROWN CONDITION	STRUCTURAL FORM	STRUCTURAL INTEGRITY	COMMENTS	EXPECTED CONSTRUCTION IMPACT	PRESERVE OR REMOVE	NOTES, IMPACT MITIGATION, CONSENT REQUIREMENTS
1	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	City ROW King St	20	3	5	Good	Good	Decorative tree guard and gate	Minor damage to roots	preserve	Tree protection barrier
2	<i>Acer Rubrum</i>	Red Maple	City ROW King St	8	1.5	5	Good	Good	Decorative tree guard and gate, vertical wound at base	Minor damage to roots	preserve	Tree protection barrier
3	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	City ROW King St	18	3	5	Good	Good	Decorative tree guard and gate	Conflict with proposed development	remove	Consent from the City of London required
4	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	Subject Site 50 King St	40	7	5	Good	Good	In tree grate, full form with minor dead lower branches	Conflict with proposed development	remove	None

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5	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	Subject Site 50 King St	43	7	5	Good	Good	In tree grate, full form with minor dead lower branches	Conflict with proposed development	remove	None
6	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	City ROW King St	19	3.5	5	Good	Good	Located in boulevard	Minor damage to roots	preserve	Tree protection barrier
7	<i>Acer Rubrum</i>	Red Maple	City ROW King St	10	1.3	1	Good	Poor	Fully dead, located in boulevard	N/A	previously removed	Tree has already been removed
8	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	City ROW King St	19	3	5	Good	Good	Located in boulevard, minor basal damage	Conflict with proposed development	remove	Consent from the City of London required
9	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	Subject Site 50 King St	11	2.5	2	Good	Poor	Fully dead, located in grass	Conflict with proposed development	remove	None
10	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	Subject Site 50 King St	26	5	5	Good	Fair	Basal damage, located in grass	Conflict with proposed development	remove	None
11	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	Subject Site 50 King St	15	3	5	Good	Fair	Basal damage, located on slope	Conflict with proposed development	remove	None
12	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	Ivey Park	18	4	5	Good	Fair	Basal damage, located on slope	Conflict with proposed development	remove	None
13	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	Ivey Park	56	7	5	Good	Good	Full form, located in grass	None	preserve	Tree protection barrier
14	<i>Cercis canadensis</i>	Redbud	Ivey Park	11	3	4	Fair	Fair	Slight lean East, torn off scaffold branch	None	preserve	Tree protection barrier
15	<i>Cercidiphyllum japonicum</i>	Katsura	Ivey Park	3, 14, 8, 14, 15, 5, 3, 3	5	5	Good	Good	Multistem 8, exposed roots on down slope, primary union at and just above grade	None	preserve	Tree protection barrier

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16	<i>Cercidiphyllum japonicum</i>	Katsura	Ivey Park	15, 14, 6	4	5	Good	Good	Multistem 3, primary union at and just above grade, exposed roots on slope	None	preserve	Tree protection barrier
17	<i>Cercis canadensis</i>	Redbud	Ivey Park	6, 10, 3, 8	4	5	Good	Good	Multistem 4, primary union at grade, squat form	None	preserve	Tree protection barrier
18	<i>Cercis canadensis</i>	Redbud	Ivey Park	13, 6, 4, 3	5	5	Fair	Good	Multistem 4, suppressed, lean to West	None	preserve	Tree protection barrier
19	<i>Cercidiphyllum japonicum</i>	Katsura	Ivey Park	12, 16, 15, 15	4	4	Good	Good	Multistem 4, primary union just above grade, thin crown	None	preserve	Tree protection barrier
20	<i>Cercidiphyllum japonicum</i>	Katsura	Ivey Park	13, 10, 9, 13	4	5	Good	Good	Multistem 4, located on slope, primary union at and just above grade	Conflict with proposed development	remove	None
21	<i>Cercidiphyllum japonicum</i>	Katsura	Ivey Park	17, 17, 16, 15	5	5	Good	Good	Multistem 4, vine on trunk to bottom of crown, primary union just above grade	Conflict with proposed development	remove	None
22	<i>Cercidiphyllum japonicum</i>	Katsura	Ivey Park	16, 11, 9, 17, 20, 15	5	5	Good	Good	Multistem 6, exposed roots, primary union just above grade	Conflict with proposed development	remove	None
23	<i>Cercis canadensis</i>	Redbud	Subject Site 399 Ridout St N	19	4	5	Good	Good	Bowed trunk	Conflict with proposed development	remove	None
24	<i>Cercis canadensis</i>	Redbud	Subject Site 399 Ridout St N	9	2	5	Good	Good	Lean to the East	Conflict with proposed development	remove	None

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25	<i>Robinia pseudoacacia</i>	Black locust	Subject Site 399 Ridout St N	16	4	5	Good	Fair	Included bark at scaffold branch union	Conflict with proposed development	remove	None
26	<i>Fagus sylvatica</i>	European beech	Subject Site 399 Ridout St N	28	4.5	5	Good	Good	Circling roots, low crown, full form	Conflict with proposed development	remove	None
27	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	Subject Site 399 Ridout St N	25	4	5	Good	Good	Full form, located in grass	Conflict with proposed development	remove	None
28	<i>Acer pseudoplatanus</i>	Sycamore maple	Subject Site 399 Ridout St N	23	4	5	Good	Good	Full form, located on slope	Conflict with proposed development	remove	None
29	<i>Acer pseudoplatanus</i>	Sycamore maple	Subject Site 399 Ridout St N	28	3	3	Fair	Poor	-70% of bottom trunk bark missing	Conflict with proposed development	remove	None
30	<i>Acer pseudoplatanus</i>	Sycamore maple	Subject Site 399 Ridout St N	29	4	5	Good	Good	Crest of slope	Conflict with proposed development	remove	None
31	<i>Acer pseudoplatanus</i>	Sycamore maple	Subject Site 399 Ridout St N	28	5	5	Good	Fair	1-meter-long vertical wound from base with wound wood	Conflict with proposed development	remove	None
32	<i>Acer pseudoplatanus</i>	Sycamore maple	Subject Site 399 Ridout St N	26	5	5	Good	Good	Located on slope, suppressed	Conflict with proposed development	remove	None
33	<i>Acer pseudoplatanus</i>	Sycamore maple	Subject Site 399 Ridout St N	13	2.5	5	Good	Good	Full form, located in grass	Conflict with proposed development	remove	None
34	<i>Acer pseudoplatanus</i>	Sycamore maple	Subject Site 399 Ridout St N	26	4.5	5	Good	Good	Elevation at base in grass, full form	Conflict with proposed development	remove	None
35	<i>Acer pseudoplatanus</i>	Sycamore maple	Subject Site 399 Ridout St N	16	3	5	Good	Good	Thin crown, basal damage	Conflict with proposed development	remove	None
36	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	Ivey Park	7	2.5	4	Fair	Good	Struggling with no flare, lifting adjacent concrete	None	preserve	N/A
37	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	Ivey Park	15	2.5	2	Fair	Good	Squat form, struggling with no flare	None	preserve	N/A

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38	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	Ivey Park	7	1.5	4	Fair	Fair	Bent and bowed leader, mechanical damage to trunk	None	preserve	N/A
39	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	Ivey Park	24	4.5	5	Fair	Fair	Fused branches, no flare, lifting adjacent concrete	None	preserve	N/A
40	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	City ROW Dundas St	15	2.5	5	Good	Good	No flare, dense crown	None	preserve	N/A
41	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	City ROW Dundas St	16	2.5	5	Good	Good	No flare, dense crown, lifting adjacent concrete	None	preserve	N/A
42	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	City ROW Dundas St	18	2.5	5	Good	Good	No flare, dense crown, lifting adjacent concrete	None	preserve	N/A
43	<i>Ginkgo biloba</i>	Ginkgo	City ROW Dundas St	14	2	5	Good	Good	No flare, dense crown, located in concrete	None	preserve	N/A
44	<i>Ginkgo biloba</i>	Ginkgo	City ROW Dundas St	9	1	5	Fair	Good	Low scaffolds, thin crown, lifting adjacent concrete	None	preserve	N/A
45	<i>Liriodendron tulipifera</i>	Tulip tree	City ROW Dundas St	4	1	5	Good	Good	Recently planted, located in garden	None	preserve	N/A
46	<i>Liriodendron tulipifera</i>	Tulip tree	City ROW Dundas St	5	1	5	Good	Good	Recently planted, located in garden	None	preserve	N/A
47	<i>Ginkgo biloba</i>	Ginkgo	City ROW Dundas St	5	1	5	Good	Good	Recently planted in grass	None	preserve	N/A

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48	<i>Ginkgo biloba</i>	Ginkgo	City ROW Dundas St	5	1	5	Good	Good	Recently planted in grass	None	preserve	N/A
49	<i>Ginkgo biloba</i>	Ginkgo	City ROW Dundas St	5	1	5	Good	Good	Recently planted in grass	None	preserve	N/A
50	<i>Ginkgo biloba</i>	Ginkgo	City ROW Dundas St	5	1	5	Good	Good	Recently planted in grass	None	preserve	N/A
51	<i>Ginkgo biloba</i>	Ginkgo	City ROW Dundas St	5	1	5	Good	Good	Recently planted in grass	None	preserve	N/A
52	<i>Ginkgo biloba</i>	Ginkgo	City ROW Dundas St	5	1	5	Good	Good	Recently planted in grass	None	preserve	N/A
53	<i>Liquidambar styraciflua</i>	Sweetgum	Subject Site 399 Ridout St	28	5	5	Good	Good	Full form. Located in grass	None	preserve	N/A
54	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	Subject Site 399 Ridout St	62	7	5	Good	Good	At crest of slope. Located in grass, full form	None	preserve	Tree protection barrier
55	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	Subject Site 399 Ridout St	68	7	5	Good	Good	At crest of slope, located in grass, full form	None	preserve	Tree protection barrier
56	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	Subject Site 399 Ridout St	57	10	5	Good	Good	Horizontal scaffolds, broad crown	None	preserve	Tree protection barrier
57	<i>Malus sylvestris</i>	Crab-apple	Subject Site 399 Ridout St	26, 28	5.5	4	Fair	Fair	Heavily suppressed by 57, significant epicormic growth, typical malus form	None	preserve	Tree protection barrier
58	<i>Acer platanooides</i>	Norway Maple	Subject Site 399 Ridout St	65	7	5	Fair	Fair	Multiple vertical wounds on scaffolds, large prune cuts, located in grass	None	preserve	Tree protection barrier

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59	<i>Picea pungens</i>	Blue Spruce	Subject Site 399 Ridout St	45	4	2	Fair	Good	Limbed up 6 meters, dead top 1/4 from crown, thinning crown	None	preserve	Tree protection barrier
60	<i>Acer platanoides</i>	Norway Maple	Subject Site 399 Ridout St	45	6	5	Fair	Fair	Multiple vertical wounds on scaffolds, rotted out leader	None	preserve	Tree protection barrier
61	<i>Quercus rubra</i>	Red Oak	Subject Site 399 Ridout St	40	7	5	Good	Good	Double leader, full form, located in grass	None	preserve	Tree protection barrier
62	<i>Acer platanoides</i>	Norway Maple	Subject Site 399 Ridout St	45	6	5	Fair	Fair	Circling roots, mechanical branch damage, old basal damage	None	preserve	Tree protection barrier
63	<i>Pinus strobus</i>	White Pine	Subject Site 399 Ridout St	29	4	4	Good	Good	Thin crown, limbed up 2 meters	Conflict with proposed development	remove	None
64	<i>Acer platanoides</i>	Norway Maple	Subject Site 50 King St	45	6	5	Fair	Fair	Matted flare, clustered primary union, vertical suckers	Conflict with proposed development	remove	None
65	<i>Picea pungens</i>	Blue Spruce	Subject Site 50 King St	44	4	4	Good	Good	Sparse crown, limbed up 3 meters, exposed roots, likely early stages of Rhizosphaera	Conflict with proposed development	remove	None
66	<i>Picea pungens</i>	Blue Spruce	Subject Site 50 King St	43	4	4	Fair	Fair	Sparse crown, codominant leaders, limbed up 3 meters, likely early stages of Rhizosphaera	Conflict with proposed development	remove	None

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67	<i>Picea pungens</i>	Blue Spruce	Subject Site 50 King St	42	4	4	Fair	Fair	Sparse crown, limbed up 3 meters, exposed roots, likely early stages of Rhizosphaera	Conflict with proposed development	remove	None
68	<i>Picea pungens</i>	Blue Spruce	Subject Site 50 King St	48	4	4	Fair	Fair	Sparse crown, limbed up 3 meters, lean South East, likely early stages of Rhizosphaera	Conflict with proposed development	remove	None
69	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	Subject Site 50 King St	26	4	5	Good	Fair	Thinning, being shaded out	N/A	previously removed	Tree has already been removed
70	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	Subject Site 50 King St	24	4	5	Good	Fair	Thinning, being shaded out, bulging base area	N/A	previously removed	Tree has already been removed
71	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	Subject Site 50 King St	19	4	5	Good	Fair	Thinning, being shaded out, bulging base area	N/A	previously removed	Tree has already been removed
72	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	Subject Site 50 King St	22	4.5	5	Good	Good	Full form	N/A	previously removed	Tree has already been removed
73	<i>Picea pungens</i>	Blue Spruce	Subject Site 399 Ridout St N	36	3	31	Good	Fair	Thinning crown, leans South East, likely early stages of Rhizosphaera	Conflict with proposed development	remove	None
74	<i>Picea pungens</i>	Blue Spruce	Subject Site 399 Ridout St N	57	4.5	3	Good	Good	Sparse crown, likely early stages of Rhizosphaera	Conflict with proposed development	remove	None
75	<i>Magnolia x soulangeana</i>	Saucer Magnolia	Subject Site 399 Ridout St N	14, 13, 14	3.5	5	Good	Fair	Multistem 3, significant trunk wounds, seam at primary	Conflict with proposed development	remove	None

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50 King St. & 399 Ridout St. London, Ontario

ID #	BOTANICAL NAME	COMMON NAME	LOCATION	DBH (cm)	CANOPY RADIUS (m)	CROWN CONDITION	STRUCTURAL FORM	STRUCTURAL INTEGRITY	COMMENTS	EXPECTED CONSTRUCTION IMPACT	PRESERVE OR REMOVE	NOTES, IMPACT MITIGATION, CONSENT REQUIREMENTS
									union			
76	<i>Picea pungens</i>	Blue Spruce	Subject Site 399 Ridout St N	33	3	5	Good	Good	Limed up 3 meters, full form	Conflict with proposed development	remove	None
77	<i>Picea pungens</i>	Blue Spruce	Subject Site 50 King St	29	3	4	Good	Good	Limbed up 2 meters, sparse crown	Conflict with proposed development	remove	None
78	<i>Liriodendron tulipifera</i>	Tulip tree	Subject Site 50 King St	36	4.5	5	Excellent	Good	Full form	Conflict with proposed development	remove	None
79	<i>Acer saccharum</i>	Sugar Maple	Subject Site 50 King St	48	6	5	Good	Good	Circling roots	Conflict with proposed development	remove	None
80	<i>Acer platanoides</i>	Norway Maple	Subject Site 399 Ridout St N	32	3	5	Good	Good	Minor Damaged Flare	Conflict with proposed development	remove	None
81	<i>Picea pungens</i>	Blue Spruce	Subject Site 399 Ridout St N	32	3	5	Good	Good	Limbed up 4 meters, full form	Conflict with proposed development	remove	None
82	<i>Gleditsia triacanthos var. inermis</i>	Honey Locust	Subject Site 50 King St	16	3	5	Good	Good	Squat form, limited root space	Conflict with proposed development	remove	None
83	<i>Picea abies</i>	Norway Spruce	Subject Site 399 Ridout St N	33	3	5	Good	Good	Limbed up 4 meters, slight lean to East	Conflict with proposed development	remove	None
84	<i>Picea abies</i>	Norway Spruce	Subject Site 399 Ridout St N	48	4	5	Good	Good	Limbed up 4 meters, exposed roots	Conflict with proposed development	remove	None
85	<i>Acer platanoides</i>	Norway Maple	Subject Site 399 Ridout St N	17	1	2	Poor	Fair	Stub with epicormic growth	Minor damage to roots	preserve	Tree protection barrier
86	<i>Thuja occidentalis</i>	Emerald Cedar	Subject Site 399 Ridout St N	19	1	3	Fair	Fair	Codominant leaders, limbed up 4 meters	Minor damage to roots	preserve	Tree protection barrier
87	<i>Thuja occidentalis</i>	Emerald Cedar	Subject Site 399 Ridout St N	21	2	5	Good	Fair	Multiple leaders, limbed up 3 meters	Minor damage to roots	preserve	Tree protection barrier

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ID #	BOTANICAL NAME	COMMON NAME	LOCATION	DBH (cm)	CANOPY RADIUS (m)	CROWN CONDITION	STRUCTURAL FORM	STRUCTURAL INTEGRITY	COMMENTS	EXPECTED CONSTRUCTION IMPACT	PRESERVE OR REMOVE	NOTES, IMPACT MITIGATION, CONSENT REQUIREMENTS
88	<i>Acer platanoides</i>	Norway Maple	Subject Site 399 Ridout St N	13	2.5	5	Good	Good	Sealed vertical buttressing scar	Conflict with proposed development	remove	None
89	<i>Picea abies</i>	Norway Spruce	Subject Site 399 Ridout St N	37	4	5	Good	Good	Limbed up 3 meters, full form	Conflict with proposed development	remove	None
90	<i>Picea abies</i>	Norway Spruce	Subject Site 399 Ridout St N	55	4	5	Good	Good	Limbed up 3 meters, full form	Conflict with proposed development	remove	None
91	<i>Picea abies</i>	Norway Spruce	Subject Site 399 Ridout St N	44	4	5	Good	Good	Limbed up 3 meters, full form, roots lifting interlock stone	Conflict with proposed development	remove	None
92	<i>Picea pungens</i>	Blue Spruce	Subject Site 399 Ridout St N	46	4	5	Fair	Good	Limbed up 6 meters, no flare, double leader, exposed roots	Conflict with proposed development	remove	None
93	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	Subject Site 50 King St	54	6	5	Good	Good	Exposed roots, large would at previous scaffold roots	Conflict with proposed development	remove	None
94	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	Subject Site 50 King St	47	6	5	Good	Good	Exposed roots	Conflict with proposed development	remove	None
95	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	Subject Site 399 Ridout St N	41	5	4	Good	Good	Located in parking lot island, dense crown	Conflict with proposed development	remove	None
96	<i>Acer platanoides</i>	Norway Maple	Subject Site 50 King St	17	1.5	2	Poor	Fair	Stub with epicormic growth	Conflict with proposed development	remove	None
97	<i>Juglans nigra</i>	Black Walnut	Subject Site 399 Ridout St N	11, 10	2	5	Fair	Fair	Multistem 2, included bark at primary union	Conflict with proposed development	remove	None
98	<i>Juglans nigra</i>	Black Walnut	Subject Site 399 Ridout St N	15	3	5	Good	Good	Full Form	Conflict with proposed development	remove	None

ID #	BOTANICAL NAME	COMMON NAME	LOCATION	DBH (cm)	CANOPY RADIUS (m)	CROWN CONDITION	STRUCTURAL FORM	STRUCTURAL INTEGRITY	COMMENTS	EXPECTED CONSTRUCTION IMPACT	PRESERVE OR REMOVE	NOTES, IMPACT MITIGATION, CONSENT REQUIREMENTS
99	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust	Subject Site 399 Ridout St N	39	5	5	Good	Good	Located in parking lot island, dense crown	Conflict with proposed development	remove	None
100	<i>Acer platanoides</i>	Norway Maple	Subject Site 399 Ridout St N	21	2	2	Poor	Fair	No flare, stub with epicormic growth	Conflict with proposed development	remove	None

5.0 POTENTIAL CONSTRUCTION IMPACTS ON TREES

Most trees have been recommended for removal due to direct conflict with the proposed development. Some trees that have been recommended for preservation may be in proximity to the proposed construction. Trees to be preserved may be affected by the construction process, or by the construction itself. It is imperative that the design team and the construction crew understand the potential for, and the causes of tree damage. Trees recommended for preservation may experience some or all of the following potential construction impacts. Strategies and methods to avoid these impacts are outlined in the Construction Impact Mitigation Recommendations section of this report.

5.1 SOIL COMPACTION

Soil compaction is caused by heavy or repeated compression or vibration of the soil around the tree. Soil compaction reduces the amount and size of macro and micro pore space that is vital for subsurface movement of air and water. The harmful effects of soil compaction include, but are not limited to: slower water infiltration, poor aeration, reduced root growth and an overall increased susceptibility to biotic and abiotic stressors.

5.2 ROOT LOSS

Root loss occurs when roots are severed. The majority of roots are typically located within the top 60cm of soil and can extend outward up to three times the extent of the tree drip line. Excavation of any kind within the critical root zone* can sever roots. Two categories of roots need to be considered when evaluating impacts of root loss - small, fibrous absorbing roots, and large structural roots. Significant loss of either or both of these functions can cause stress and/or affect the structural stability of the tree. Note, however, that it is commonly accepted that healthy trees can typically tolerate and recover from the removal of approximately 33% (up to a maximum of 50%) of their root mass. Thorough consideration regarding extent of acceptable root removal is dependent on individual species characteristics, root loss distribution, and site specific conditions (*ref. Trees and Development: A Technical Guide to Preservation of Trees During Land Development by Nelda Matheny and James R. Clark, 1998. Pg 72*).

* Refer to ‘Critical Root Zones’ in this report for definition.

5.3 GRADE CHANGES

Lowering of the grade around trees has immediate and long term effects on trees. Lowering of grade requires immediate root loss from cutting the roots which results in water stress from the root removal and potential reduced structural stability.

Raising the grade around a tree can be equally damaging. The addition of fill over the root zone of a tree alters the roots’ ability for normal water and gas exchange that is necessary for healthy root growth and stability. Fill essentially suffocates the roots and can lead to the slow and eventual decline of the tree.

5.4 MECHANICAL DAMAGE

Mechanical damage is caused by physical contact with a tree that damages the tree to any degree. During land development and construction activities, there is an increased risk of both minor and fatal mechanical damage to trees from construction equipment. Minor damage can create entry points for insects and pathogens, and fatal damage can cause irreparable structural damage.

5.5 CHANGES TO EXPOSURE - SUN AND WIND

Trees can be negatively affected by increased exposure to sun or wind when neighbouring trees are removed. This can be of particular concern when ‘interior trees’ (trees that have developed surrounded by other trees) are suddenly exposed to forest edge conditions. These trees may experience higher intensity of direct sunlight resulting in leaf scald, and instability due to increased wind and snow loads.

Trees can be negatively affected by decreased exposure to sunlight. Proposed development that includes tall buildings located to the south and west of mature existing trees can greatly reduce the amount of daily direct sunlight. While this change in environment may not cause the immediate or eventual death of a tree, it can certainly slow development and alter growing habits and patterns, and must therefore be a consideration when evaluating trees for potential preservation.

5.6 SOIL CONTAMINATION

Soil health around a tree can be compromised by contamination from spills or leaks of fuels, solvents, or other construction related fluids.

5.7 WATER AVAILABILITY

Grading and servicing requirements for development can affect water availability for trees. Trees may experience a loss of available water due to a lowered water table or the capture or redirection of subsurface and/or overland flow. Conversely, trees may experience an increase of available water due to changes in site grading and storm water retention efforts.

The successful survival of the trees to be preserved is largely dependent on adhering to the construction impact mitigation recommendations that follow.

6.0 CONSTRUCTION IMPACT MITIGATION RECOMMENDATIONS

The following general recommendations are provided to guide the removal process, mitigate construction impacts, and ensure compliance with provincial, federal, and

municipal regulatory requirements. Some of the recommendations listed below are noted to be undertaken by an ISA certified arborist.

6.1 PRE-CONSTRUCTION RECOMMENDATIONS

- a) Prior to any construction activity, tree preservation fencing is to be installed as per the attached tree preservation drawings and detail.
- b) Trees approved for removal are to be clearly indicated in the field (marked with spray paint or other agreed upon method) by the project arborist or landscape architect prior to any tree removal operations. All removals to be undertaken by an ISA certified arborist.
- c) In accordance with the Migratory Birds Convention Act, 1994, all removals must take place between September 1st and March 31st to avoid disturbing nesting migratory birds. If tree removal occurs between April 1st and August 31st, a biologist is required to complete a search for nests. Once cleared, the contractor has 48 hours to remove. If removal does not occur within 48 hours, another search will be required.
- d) Care should be taken during the felling operation to avoid damaging the branches, stems, trunks, and roots of nearby trees to be preserved. Where possible, all trees are to be felled towards the construction zone to minimize impacts on adjacent vegetation. All removals to be undertaken by an ISA certified arborist.
- e) It is recommended that the existing ground-layer vegetation at the base of trees to be preserved remain intact within the critical root zone so as not to disturb the soil around the base of the existing trees.
- f) Final site grading plans should ensure that the existing soil moisture conditions are maintained.

6.2 RECOMMENDATIONS RELATED TO THE CONSTRUCTION PROCESS

- a) Tree preservation fencing is to be maintained in good condition and effective for the duration of construction until all construction activity is complete or as per the project arborist or landscape architect.
- b) Tree preservation fencing is to remain intact as per the tree preservation drawings, and can only be temporarily removed with the express written consent from the project arborist or landscape architect. Should tree preservation fencing be temporarily relocated or moved, it is to be reinstated as per the tree preservation plans as soon as possible.
- c) No construction, excavation, adding of fill, stockpiling of construction material, or heavy equipment is permitted within the critical root zone/within the tree preservation fencing.
- d) When excavation near a tree is required, and it is anticipated that roots will be severed and exposed, duration of exposure is to be minimized to prevent root desiccation.
- e) During the excavation process, roots 25mm or larger that are severed and exposed should be hand pruned to leave a clean-cut surface. To be undertaken by an ISA certified arborist. Exposed severed roots that cannot be covered in soil on the same day as the cuts are made are to be kept moist. Exposed roots are to be kept moist by covering them with water soaked burlap or any other means available to prevent them from drying out.
- f) Avoid idling heavy equipment under or within close proximity to trees to be preserved to prevent canopy damage from exposure to the heat of the exhaust.

- g) Broken branches on trees within the subject site to be preserved should be cleanly cut as soon as possible after the damage has occurred. To be undertaken by an ISA certified arborist.

6.3 POST-CONSTRUCTION RECOMMENDATIONS

- a) Avoid discharging rain water leaders adjacent to retained trees, as this may result in an overly moist environment which can cause root rot.
- b) After all work is completed, tree preservation fences and any other impact mitigation paraphernalia must be removed.
- c) A final review must be undertaken by the project arborist or landscape architect to ensure that all mitigation measures as described above have been met.

7.0 DISCLAIMER

The assessment of the trees presented within this report has been made using accepted arboricultural techniques. These include a visual examination of the above-ground parts of each tree for structural defects, scars, external indications of decay, evidence of insect presence, discoloured foliage, the general condition of the trees and the surrounding site, as well as the proximity of property and people. None of the trees examined were dissected, cored, probed, or climbed, and detailed root crown examinations involving excavation were not undertaken.

Notwithstanding the recommendations and conclusions made in this report, it must be realized that trees are living organisms and their health and vigour is constantly changing. They are not immune to changes in site conditions or seasonal variations in the weather.

While reasonable efforts have been made to ensure the trees recommended for retention are healthy, no guarantees are offered or implied, that these trees or any part of them will remain standing.

Note that this arborist report has been prepared using the latest drawings and information provided by the client. Any subsequent design or site plan changes affecting trees may require revisions to this report. Any new information or drawings are to be provided to RKLA prior to report submission to planning authorities.

8.0 CONTACT INFORMATION

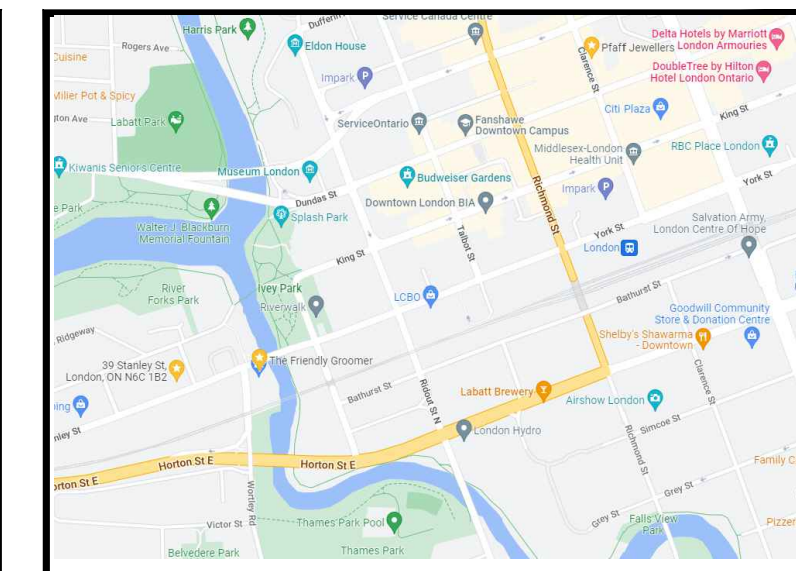
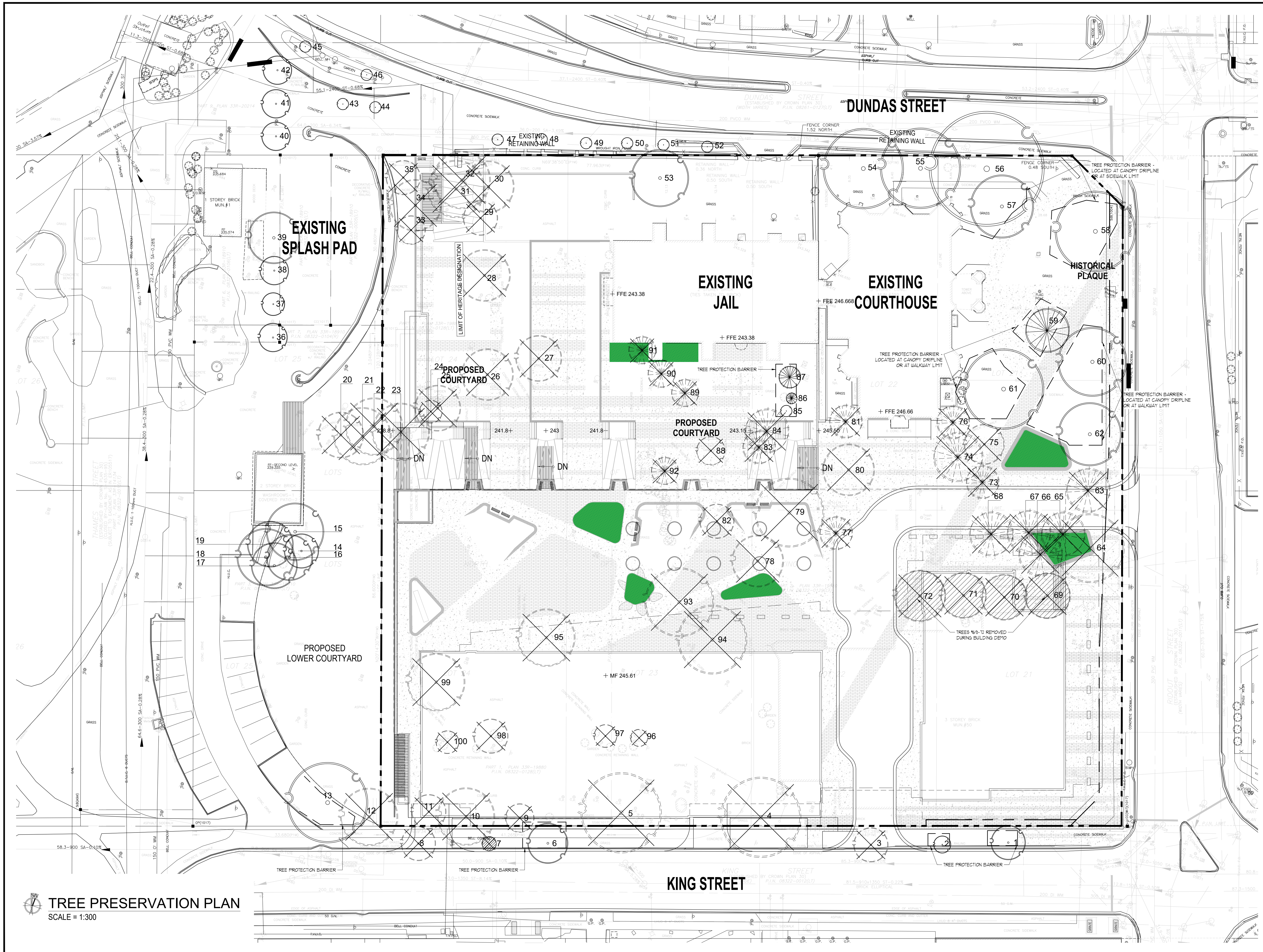
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*Tree Assessment Report for Rezoning Application
50 King St. & 399 Ridout St. London, Ontario*

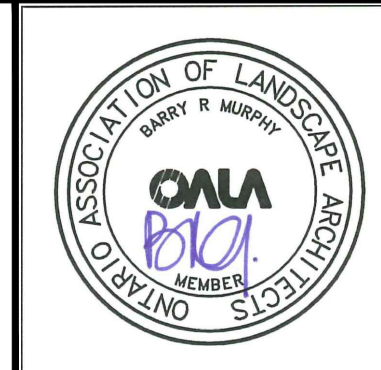
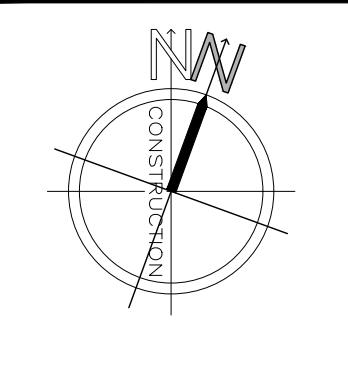
Reviewed and updated by
Luke Koudys, ISA Certified Arborist ON-2865A - Luke@rkla.ca

9.0 APPENDIX A - TREE PRESERVATION DRAWINGS



DATE	DESCRIPTION	No.
APR1323	ISSUED FOR ZBA	1.
MAR2823	ISSUED FOR REVIEW	6.
DEC1222	ISSUED FOR REVIEW	5.
DEC0722	ISSUED FOR REVIEW	4.
DEC0522	ISSUED FOR COORDINATION	3.
NOV302022	ISSUED FOR REVIEW	2.
SEPT282022	ISSUED FOR REVIEW	1.

PLOTTING INFORMATION:
 PLOTTED DATE + 2023-04-13
 PLOTTED SCALE + 1:1



PROJECT TITLE:
YORK DEVELOPMENT
 50 KING STREET
 LONDON, ONTARIO

DRAWING TITLE:
TREE PRESERVATION PLAN

DATE: SEPT. 2022	SCALE: AS NOTED	DRAWING No. T-1
DRAWN: RCLA Inc.	CHECKED BY: B.M.	
PROJECT No. 21-293LJ		

TREE PRESERVATION PLAN
 SCALE = 1:300

