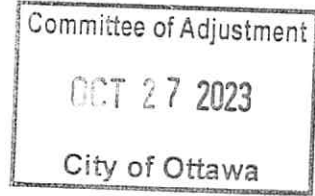


TREE CONSERVATION REPORT

1983 Carling Ave



Tree Conservation Report submitted as Partial
Requirements for a Site Plan Control Application

Dendron Forestry Services

January 28, 2022



Dendron Forestry Services

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Tree Conservation Report

Submitted as part of Site Plan Control Application

Address: 1983 Carling Ave

Date: January 28, 2022

Prepared by: Astrid Nielsen, MFC, RPF (Registered Professional Forester)
Principal, Dendron Forestry Services
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Prepared for: Keegan Gomes,
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Site Visit: January 15, 2021, and January 24, 2022; 30-40 cm snow cover at each visit

Introduction

This Tree Conservation Report has been prepared for Keegan Gomes, as partial requirements for the Site Plan Control Application submitted to the City of Ottawa. It is an update to the Preliminary Tree Conservation Report prepared on January 24, 2021, which did not incorporate the impact of the proposed development on the trees. The following documents were provided to Dendron Forestry and reviewed as part of this report:

- 1) Site Servicing Plan prepared by Stantec, dated June 18, 2021
- 2) Site Plan prepared by Stantec and Figurr dated September 16, 2021, that includes the area of excavation marked in red
- 3) Grading Plan prepared by Stantec, dated June 18, 2021
- 4) Existing Conditions and Removals Plan, dated June 18, 2021

This report also addresses the First Submission Consolidated Review Comments from the City of Ottawa dated November 19, 2021.

The objectives of this Tree Conservation Report are:

- To describe all trees over 10 cm on the site, recording their species, size, and current health condition
- To evaluate the impact of the trees by the proposed development and what the recommended action is (retain or remove)
- To provide recommendations on how to mitigate damage to retained trees during construction



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Current Vegetation

The following is an inventory of all trees that are protected under City of Ottawa Tree Protection (By-law No. 2020-340) on the site and adjacent City property. This includes private trees with a diameter at breast height (dbh) of 10 cm or greater and city-owned trees of all sizes. It also includes trees 10 cm or greater in diameter on adjacent properties whose Critical Root Zone (CRZ) extend into the subject area. The CRZ is an area around the trunk with a radius equivalent to 10 times the diameter of the trunk. This does not take into account infrastructure such as buildings and asphalt and assumes the tree has no restrictions on root growth.

Tree ¹	Species	Diameter at breast height (dbh)	Ownership ²	Condition ³	Action
1	Bur oak (<i>Quercus macrocarpa</i>)	111 cm	Private	Fair; large cavity at the base; salt damage on branches along Carling	Remove based on engineering conflicts
2	Ginkgo (<i>Ginkgo biloba</i>)	28 cm	Private	Good	None – not impacted by construction
3	Red maple (<i>Acer rubrum</i>)	38 cm	Private	Good/Fair	None – not impacted by construction
4	Siberian elm (<i>Ulmus pumila</i>)	40 cm	Private, jointly owned with adjacent property on Bromley Rd	Fair; hydro pruning; lean towards adjacent property	Apply root mitigation measures when replacing asphalt
5	Manitoba maple (<i>Acer negundo</i>)	67 cm	Private, jointly owned with adjacent property on Bromley Rd	Poor; topped by hydro, epicormic shoots at base	Apply root mitigation measures when replacing asphalt
6	Manitoba maple (<i>Acer negundo</i>)	32 cm	Private	Fair; hydro pruned, epicormic shoots throughout	Apply root mitigation measures when replacing asphalt
7	Manitoba maple (<i>Acer negundo</i>)	21 cm	Private	Fair/poor; hydro pruned, epicormic shoots throughout	Apply root mitigation measures when Apply root mitigation measures when



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					replacing asphalt
8	Siberian elm (<i>Ulmus pumila</i>)	35, 38 cm	Private, jointly owned with adjacent property on Bromley Rd	Fair/poor; hydro pruned	Apply root mitigation measures when replacing asphalt
9	Siberian elm (<i>Ulmus pumila</i>)	Row of 32 trees ranging from 10 to 35 cm	Private, some possibly jointly owned with adjacent property on Bromley Rd	Fair/poor; hydro pruned	Apply root mitigation measures when replacing asphalt

¹ Please refer to the enclosed Tree Conservation Report map for tree numbers. Note that this map includes a tree layer added to the grading plan (in pdf format) provided by the client. This layer includes only information about the trees and the original grading plan is not altered in this process.

²Ownership of the tree in this report is based on the information provided and should not be used as a determination of ownership. For ownership disputes, a survey should be relied on. For boundary trees, consent from the adjacent property owner is required for removal as part of the application.

³Trees on adjacent properties do not include a full assessment. The diameters are estimated, and the health is estimated based on what is visible from the subject property. Trees along the property line may also have limited health assessments if part of the tree is not visible.

The large bur oak located close to the sidewalk and along Carling Avenue is the tree of concern that will be most impacted by the proposed development. This tree has a diameter of 111 cm, and its root system likely extends at least 11 m in all directions, except for where there is infrastructure such as the road and building. Although the tree appears in good health, it does have some health concerns to note. The crown is extensive, but since this tree is overhanging a major thoroughfare, it has been damaged by salt spray which is visible along the south side. Also, there is a large cavity at the base of the tree that measures 80 cm long; 15 cm wide; and 40 cm deep. A metal rod was inserted and extended past the cavity wall an additional 30 cm. Therefore, the decay and cavity extend 70 cm into the trunk at the widest point. The extent of decay is over 1 m up the tree in the centre of the decay column – the 1 m rod did not reach the end. These observations on decay were made using tools for a basic assessment. To understand better the extent of internal decay in this tree, a Level 3 risk assessment would be required using an advanced technique such as sonic tomography or resistance drilling. These tools can map out the decay in the stem at different heights up the trunk and are relatively non-invasive. Combining these results with a good understanding of the dynamics of how internal decay impacts large oak trees would help to assess the structural integrity of the tree. Although extensive decay can give the impression of structural weakness, this may not always be the case. Trees can learn to adapt to weaknesses by refocusing their growth on strengthening their stem and reducing the crown weight naturally.



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Proposed Development and Conserved Vegetation

Bur oak

Based on the plans provided, the following are the impacts that will be experienced by the large bur oak:

- 1) Excavation zone (refer to Proposed Development and Conserved Vegetation (excavation zone) map): The excavation will extend well into the critical root zone as well as the static root zone to less than 2 m from the edge of the tree. A large portion of the critical root zone will be lost during the excavation which would impact both the long-term viability of the tree and possibly the structural integrity.
- 2) Site servicing (refer to Proposed Development and Conserved Vegetation (site servicing) map) as well as the Site Servicing plan prepared by Stantec): to properly manage the stormwater on the site, a 250 mm pipe between two catch basins will need to be installed approximately 1 m from the tree trunk. In discussions with engineering staff from Stantec, boring could be used to install the pipe, but there would be excavation required to install the catch basins. Boring can be an effective alternative to trenching for the installation of services when root preservation is a goal. However, this is only a feasible option when further away from the tree. For a tree this large with high consequences of failure (Carling Avenue), boring within the static root zone (approximately 3 m) is not recommended. Relocating the catch basins closer to the building was also discussed, but Stantec engineers indicated that this would create ponding up against the building.
- 3) Site grading: To manage the storm water on the site, there will be some grading immediately around the tree.

Based on the impacts to the tree as noted above, tree removal is the recommended option.

Trees along northern property line

The intention is to retain the trees along the northern property line, particularly those that are jointly owned with the adjacent property owners. The area is currently covered in asphalt, and the asphalt will be replaced with new asphalt. The Landscape Plan prepared by Stantec shows that there will be some of the asphalt will be replaced with soft landscaping around tree grouping #9.

Because the area is covered in asphalt, no tree protective fencing is required during site works.

However, the following mitigation measures should be applied when replacing the asphalt:

- Avoid tearing of the roots. If the roots do tear, they should be pruned with a clean cut to increase the likelihood of sealing properly and reduce the risk of pathogens from entering the tree.
- Roots should not be left exposed and be covered with soil as quickly as possible, or temporarily with a moist, organic material such as mulch and/or burlap



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The undersigned personally inspected the property and issues associated with this report on January 15, 2021, and January 24, 2022. On Behalf of Dendron Forestry Services,



Astrid Nielsen, MFC, RPF (Registered Professional Forester)

ISA Certified Arborist ®, ON-1976

ISA Tree Risk Assessment Qualified

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Figure 1: Large bur oak along Carling, facing east



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Figure 2: Wound at base of trunk along the west side



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Figure 3: Picture showing cavity. Decay and cavity extend 70 cm into tree



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Figure 4: Trees grouping #9 - Siberian elm along northern property line under hydro – to be retained



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Figure 5: Tree 8, Siberian elm to be retained



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Intended Use of the Report

This Information Report was carried out by Dendron Forestry Services (hereafter Dendron) at the request of the Client. The information, interpretation and analysis contained within this Report is to be used solely for the purposes outlined within this Report. This Report is for the exclusive use of the Client.

Limitations of this Report

This Report is based on the circumstances and observations as they existed at the time of the site inspection of the Client's Property and the trees situated thereon by Dendron and upon information provided by the Client to Dendron. The opinions in this Report are given based on observations made and using generally accepted professional judgment, however, because trees and plants are living organisms and subject to change, damage and disease, the results, observations, recommendations, and analysis as set out in this Report are valid only as at the date any such testing, observations and analysis took place and no guarantee, warranty, representation or opinion is offered or made by Dendron as to the length of the validity of the results, observations, recommendations and analysis contained within this Report. As a result the Client shall not rely upon this Report, save and except for representing the circumstances and observations, analysis and recommendations that were made as at the date of such inspections. It is recommended that the trees discussed in this Report should be re-assessed periodically.

Further Services

Neither Dendron nor any assessor employed or retained by Dendron for the purpose of preparing or assisting in the preparation of this Report shall be required to provide any further consultation or services to the Client, save and except as already carried out in the preparation of this Report and including, without limitation, to act as an expert witness or witness in any court in any jurisdiction unless the Client has first made specific arrangements with respect to such further services, including, without limitation, providing the payment of the Report's regular hourly billing fees.

Dendron accepts no responsibility for the implementation of all or any part of the Report, unless specifically request to examine the implementation of such activities recommended herein. In the event that inspection or supervision of all or part of the implementation is request, that request shall be in writing and the details agreed to in writing by both parties.

Assumptions

The Client is hereby notified and does hereby acknowledge and agree that where any of the facts and information set out and referenced in this Report are based on assumptions, facts or information provided to Dendron by the Client and/or third parties and unless otherwise set out within this Report, Dendron will in no way be responsible for the veracity or accuracy of any such information. Further, the Client acknowledges and agrees that Dendron has, for the purposes of preparing their Report, assumed that the Property, which is the subject of this Report is in full compliance with all applicable federal, provincial, municipal and local statutes, regulations, by-laws, guidelines and other related laws. Dendron explicitly denies any legal liability for any and all issues with respect to non-compliance with any of the above-referenced statutes, regulations, bylaws, guidelines and laws as it may pertain to or affect the Property to which this Report applies.

Professional Responsibility

In carrying out this Report, Dendron and any Assessor appointed for and on behalf of Dendron to perform and carry out the Report has exercised a reasonable standard of care, skill and diligence as would be customarily and normally provided in carrying out this Report. While reasonable efforts have been made to ensure that the trees recommended for retention are healthy, no guarantees are offered, or implied, that these trees, or all parts of them will remain standing. It is professionally impossible to predict with absolute certainty the behaviour of any single tree or group of trees, or all their component parts, in all given circumstances. Inevitably, a standing tree will always pose some risk. Most trees have the potential to fall, lean, or otherwise pose a danger to property and persons in the event of adverse weather conditions, and this risk can only be eliminated if the tree is removed.

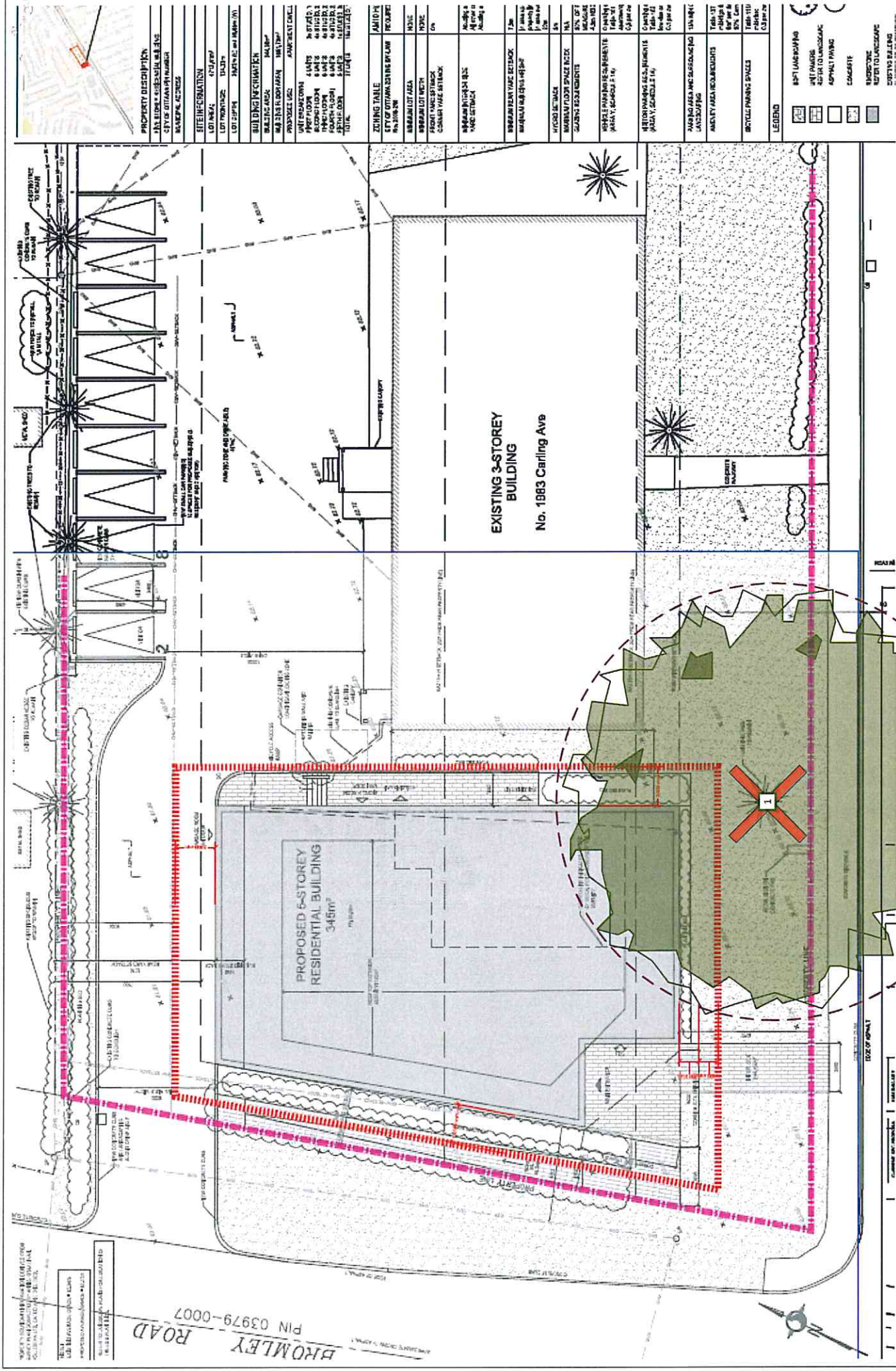
Without limiting the foregoing, no liability is assumed by Dendron for:

- a) any legal description provided with respect to the Property;
- b) issues of title and or ownership respect to the Property;
- c) the accuracy of the Property line locations or boundaries with respect to the Property; and
- d) the accuracy of any other information provided to Dendron by the Client or third parties;
- e) any consequential loss, injury or damages suffered by the Client or any third parties, including but not limited to replacement costs, loss of use, earnings and business interruption; and
- f) the unauthorized distribution of the Report.

Further, under no circumstance may any claims be initiated or commenced by the Client against Dendron or any of its directors, officers, employees, contractors, agents or Assessors, in contract or in tort, more than 12 months after the date of this Report.

General

Any plans and/or illustrations in this Report are included only to help the Client visualize the issues in this Report and shall not be relied upon for any other purpose. This report is best viewed in colour. Any copies printed in black and white may make some details difficult to properly understand. Dendron accepts no liability for misunderstandings due to a black and white copy of the report.



Tree Conservation Report – 1983 Carling Ave
Proposed Development and Conserved Vegetation (excavation zone)
Tree layer prepared by Dendron Forestry Services
Version 1.0, January 27, 2022
For more information, please contact info@dendronforestry.ca



Note that the tree layer has been added to the original site plan prepared by Stantec and Figurr and provided in pdf format. This layer refers to the trees only, and the original plan has not been altered in the process.

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