

# TREE CONSERVATION REPORT

216 McArthur

Tree Conservation Report submitted as Partial Requirements for a Site Plan Control Application, September 13, 2022

**Dendron Forestry Services** 



# **Tree Conservation Report**

Submitted as part of Site Plan Control Application

Address:	216 McArthur
Date of Report:	September 13, 2022
Date of Site Visit:	September 13, 2022
Prepared by:	Astrid Nielsen, RPF, ISA Certified Arborist ®
Client:	Bryden Gibson Architects Elia El Murr 1066 Somerset Street West Suite 200 Ottawa, K1Y 4T3 eelmurr@brydengibson.ca

This Report must be read in its entirety, including the Assumptions and Limiting Conditions attached herein.

# Purpose of the Report

This Tree Conservation Report has been prepared for Elia El Murr from Bryden Gibson Architects as partial requirements for the Site Plan Control Application submitted to the City of Ottawa. The objectives of this Tree Conservation Report are:

- To describe all trees with diameters over 10 cm on the site, recording their species, size, and current health condition. This includes trees on adjacent private property 10 cm or greater in diameter, with critical root zones that extend onto the subject property. It also includes city trees of all sizes that will be impacted by the proposed development.
- To evaluate the impact of the trees by the proposed development and what the recommended action is (retain and protect or remove)
- To provide recommendations on how to mitigate damage to retained trees during construction

# **Methodology**

The following materials were reviewed as part of this report:

- Survey Plan prepared by Fairhall, Moffat & Woodland dated February 19, 2021
- Site Plan prepared by Bryden Gibson dated June 2021
- GeoOttawa tree inventory layer and aerial photography
- Google<sup>©</sup> Street View imagery various years

A site visit was conducted to collect the following information from each tree classified as protected under the City of Ottawa's Tree Protection By-law No. 2020-340:



- Diameter at breast height (1.3 m from grade)
- Species
- Tree health

# **Current Vegetation**

This property is in a highly developed urban area, and **no** presence of natural elements as described in the City of Ottawa Tree Protection were identified, including butternut (*Juglans Cinerea*), a common tree species at risk in Ontario.

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. 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 with a dbh of 10 cm or greater 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 it assumed the tree has no restrictions on root growth.

Tree <sup>1</sup>	Species	Diameter at breast height (dbh)	Ownership <sup>2,3</sup>	Condition	Action
1	Silver maple (Acer saccharinum)	101 cm	Private – 216 McArthur	Fair/good; 2 codominant stems with included bark at the base, roots likely extend under pavement which compromises almost 50% of CRZ, low to medium amount of epicormic shoots with 5% crown dieback	Retain and protect; remove pavement cautiously without severing roots, keep roots moist and covered at all times (see root mitigation measures)
2	Manitoba maple ( <i>Acer</i> <i>negundo</i> )	56 cm	Jointly owned with 218 McArthur	Poor; heavy lean over playground area in the property to the rear, significant vertical splitting with decay at bend in trunk where there are also horizontal stress fractures	Remove based on health and risk for failure over children in the playground; recommend to adjacent property owner to remove tree
3	Eastern white cedar ( <i>Thuja</i> <i>occidentalis</i> ) hedge	13,12,13, 14,15,17 16,19,19 17,26,26 22,25	Some fully owned by 218 McArthur and some jointly owned	Fair/good; recent addition of 25 cm of mulch and landscape fabric at base	Remove; excavation for new building will extend to base of trees; Tree Permit and permission from adjacent property owner required

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



<sup>2</sup>Ownership 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.

<sup>3</sup>Trees 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.

# **Proposed Development and Conserved Vegetation**

The large silver maple (tree 1) at the rear of the property could be retained if there is no significant site grading or infrastructure planned for the rear yard. The CRZ on the subject site is under pavement, under which there are likely some roots. If possible, this pavement should not be replaced until the final stages of construction as it is currently acting as a protective layer for the roots. It is possible that some roots will be lost during excavation for the new building. If any roots are severed during the excavation, the following mitigation measures should be applied:

- Prune roots back with a clean hand tool to reduce the risk of pathogens from entering the tree through proper sealing
- Do not use wound dressings or pruning paint to cover root tips
- Avoid pronged exposure of roots Keep all exposed roots moist and covered with soil, mulch, irrigation, or at least moistened burlap.

When the pavement is replaced with soft landscaping, care should be taken to avoid any root tearing. Keeping these roots covered with organic material as quickly as possible is key to avoid desiccation.

The large Manitoba maple on adjacent property has a large vertical crack in the bend of the trunk, and also has some horizontal stress fractures at this location. The majority of the crown is leaning over the playground on adjacent property, and it is advised to remove this tree as soon as possible.

The cedar hedge runs along the east side of the fence on the eastern property line. Most of the trees are on the adjacent property, but some appear to be jointly owned according to the survey. The root system of these cedars is restricted by pavement on the adjacent property, and the majority likely lie under the soft surface of the subject property. Excavation for the new building will extend to the base of these trees, and removal would be the most practical option for this proposed development. Because these trees are on the adjacent property, permission from the adjacent property owned is required as part of the Tree Permitting process.

Although it is recognized that the entire CRZ of the silver maple cannot be retained, as much of it as possible should be kept out of the construction zone and protected as per the following **City of Ottawa Tree Protection Specifications (March 2021)**. Protective fencing should be installed around the tree as indicated in the attached Tree Information Map and maintained until all construction on site has been completed as per the Within the fenced area, the following tree protection guidelines should be applied:

- Do not change the grade
- Do not store construction material



- Do not operate machinery
- Do not place signs, notices or posters to any tree
- Do not damage the root system, trunk, or branches of any tree
- Direct the exhaust away from the tree

The tree protection fencing must be 1.2 m in height and constructed of a rigid or framed material (e.g. modulus – steel, plywood hoarding, or snow fence on a 2"X4" wood frame) with posts 2.4 m apart such that the fence location cannot be altered. All supports must be placed outside of the CRZ and installation must minimize damage to existing roots.

### **Tree Planting Recommendation**

With the retention of the silver maple, there will be limited space for planting new trees on this site. A medium-sized tree would fit well at the front of the property.

The undersigned personally inspected the property and issues associated with this report on September 13, 2022. On Behalf of Dendron Forestry Services,

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Astrid Nielsen, MFC, RPF (Registered Professional Forester) ISA Certified Arborist<sup>®</sup>, ON-1976 ISA Tree Risk Assessment Qualified Principal, Dendron Forestry Services <u>Astrid.nielsen@dendronforestry.ca</u> (613) 805-9663 (WOOD)





Figure 1: Tree 1, large silver maple at the rear of the property





Figure 2: Tree 2, jointly owned Manitoba maple tree leaning over playground behind the properties



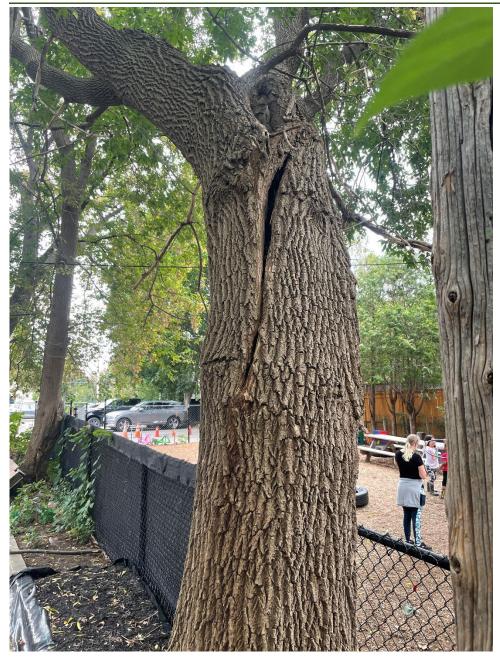


Figure 3: Vertical and horizontal stress fractures of tree 2 located on the upper side of the bend in the trunk





Figure 4: Line of eastern white cedars along the east property line



#### ASSUMPTIONS AND LIMITING CONDITIONS

#### Intended Use of the Report

This Report was prepared by Dendron Forestry Services (hereafter "Dendron") at the request of the Client. The results, observations, interpretations, analysis, recommendations, and conclusions contained within this Report are to be used solely for the purposes outlined within this Report. All other uses are impermissible and unintended, unless specifically stated in writing in the Report.

#### Intended User of the Report

This Report was prepared by Dendron for the exclusive use of the Client and may not be used or relied upon by any other party. All other users are unintended and unauthorized, unless specifically stated in writing in the Report.

#### Limitations of this Report

This Report is based on the circumstances and on-site conditions as they existed at the time of the site inspection and the information provided by the Client and/or third parties to Dendron. On-site conditions may limit the extent of the on-site inspection(s) conducted by Dendron, including weather events such as rain, flooding, storms, winds, tornados, snowfall, snow cover, hail; obstructions including fencing, dwellings, buildings, sheds, plants, and animals; lack of access to the entire perimeter of the tree due to adjacent properties; the shape of the tree; and accessibility of the tree crown, branches, trunk, or roots for examination.

In the event that information provided by the Client or any third parties, including but not limited to documents, records, site and grading plans, permits, or representations or any site conditions are updated or change following the completion of this Report, this Report is no longer current and valid and cannot be relied upon for the purpose for which it was prepared. Dendron and its agents, assessors, and/or employees are not liable for any damages, injuries, or losses arising from amendments, revisions, or changes to the documents, records, site and grading plans, permits, representations, or other information upon which Dendron relied in preparing this Report.

No assessment of any other trees or plants has been undertaken by Dendron. Dendron and its agents, assessors, and/or employees are not liable for any other trees or plants on or around the subject Property except those expressly identified herein. The results, observations, interpretations, analysis, recommendations, and conclusions contained within this Report apply only to the trees identified herein.

Trees and plants are living organisms and subject to change, damage, and disease, and the results, observations, interpretations, analysis, recommendations, and conclusions as set out in this Report are valid only as at the date any inspections, observations, tests, and analysis took place. No guarantee, warranty, representation, or opinion is offered or made by Dendron as to the length of the validity of the results, observations, interpretations, analysis, recommendations, and conclusions contained within this Report. As a result the Client shall only rely upon this Report as representing the results, observations, interpretations, analysis, recommendations, analysis, recommendations, and conclusions that were made as at the date of such inspections, observations, tests, and analysis. The trees discussed in this Report should be re-assessed periodically and at least within one year of the date of this Report.

#### No Opinion regarding ownership of the Tree

This Report was not prepared to make a determination as to ownership of the subject tree(s). Where ownership of the subject tree(s) is identified within this Report, said identification is based on the information provided by the Client and third parties, including surveys, permits, and site and grading plans and may not be relied upon as a guarantee, warranty, or representation of ownership.

#### Assumptions

This Report is based on the circumstances and conditions as they existed at the time of the site inspection and the information provided by the Client and/or third parties to Dendron. Where documents, records, site and grading plans, permits, representations, and any other information was provided to Dendron for the purpose of preparing this Report, Dendron assumed that said information was correct and up-to-date and prepared this Report in reliance on that information. Dendron and its agents, assessors, and/or employees, are not responsible for the veracity or accuracy of such information. Dendron and its agents, assessors, or employees are not liable for any damages, injuries, or losses arising from inaccuracies, errors, and/or omissions in the documents, records, site and grading plans, permits, representations, or other information upon which Dendron relied in preparing this Report.

For the purpose of preparing this Report, Dendron and its agents, assessors, and/or employees 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 and its agents, assessors, and/or employees are not liable for any 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.

For the purpose of preparing this Report, Dendron and its agents, assessors, and/or employee assumed that there are no hidden or unapparent conditions affecting the results, observations, interpretations, analysis, recommendations, and conclusions contained within this Report.

#### **No Publication**

The Client acknowledges and agrees that all intellectual property rights and title, including without limitation, all copyright in this Report shall remain solely with Dendron Forestry. Possession of this Report, or a copy thereof, does not entitle the Client or any third party to the right of publication or reproduction of the Report for any purpose save and except where Dendron has given its prior written consent.



Neither all nor any part of the contents of this Report shall be disseminated to the public through advertising, public relations, news, sales, the internet or other media (including, without limitation, television, radio, print or electronic media) without the prior written consent of Dendron Forestry.

#### Implementing the Report Recommendations

Dendron and its agents, assessors, and/or employees accept no responsibility for the implementation of any part of this Report unless specifically requested to provide oversight on the implementation of the recommendations. In the event that inspection or supervision of all or part of the implementation of the within recommendations is requested, that request shall be in writing and the details agreed to in writing by both parties.

Dendron and its agents, assessors, and/or employees are not liable for any damages or injuries arising from the manner in which the recommendations in this Report are implemented, including failure to, incorrect, or negligent implementation of the recommendations.

#### **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.

#### **Limits of Liability**

In carrying out this Report, Dendron and its agents, assessors, and/or employees have 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.

The total monetary amount of all claims or causes of action the Client may have as against Dendron Forestry, including but not limited to claims for negligence, negligent misrepresentation, and breach of contract, shall be strictly limited solely to the total amount of fees paid by the Client to Dendron Forestry pursuant to the Contract for Services dated September 6, 2022, for which this Assessment was carried out.

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, assessors, or Assessors, in contract or in tort, more than 12 months after the date of this Report.

#### No Third Party Liability

This Report was prepared by Dendron exclusively for the Client for the purpose set out in the Report. Any use which a third party makes of this Report, or any reliance on or decisions a third party may make based upon this Report, are made at the sole risk of any such third parties. Dendron Forestry accepts no responsibility for any damages or loss suffered by any third party or by the Client as a result of decisions made or actions based upon the unauthorized use or reliance of this Report by any such party.

#### 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.

Notwithstanding any of the above, nothing in this Report is taken to absolve the Client of the responsibility of obtaining a new Report in the event that the circumstances of the tree change.





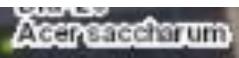
Critical Root Zone



Private Tree



Tree either fully or partly on adjacent property



<b>Tree</b> <sup>1</sup>	Species	Diameter at breast height (dbh)	Ownership <sup>2,3</sup>	Condition
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3	Eastern white cedar ( <i>Thuja</i> <i>occidentalis</i> ) hedge	13,12,13, 14,15,17 16,19,19 17,26,26 22,25	Some fully owned by 218 McArthur and some jointly owned	Fair/good; recent addition of 25 cm of mulch and landscape fabric at base

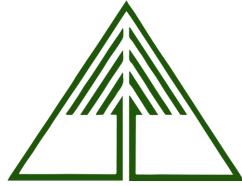
218



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**Existing Conditions REport** Version 1.0, September 14, 2022

Note that the tree layer has been added to 2021 GeoOttawa imagery taken from the City of Ottawa website



# **Tree Protection Fencing**

Prior to any site works, protective fencing should be installed around the trees as indicated in Map and maintained until all construction on site has been completed as per the **City of Ottawa Tree** Protection Specifications (March 2021). Within the fenced area, the following tree protection guidelines should be applied:

- Do not change the grade
- Do not store construction material
- Do not operate machinery

Do not convert to hard surface or change the landscaping

Do not excavate unless it is a method that has been pre-approved by the City

Do not place signs, notices or posters to any tree

Do not damage the root system, trunk, or branches of any tree

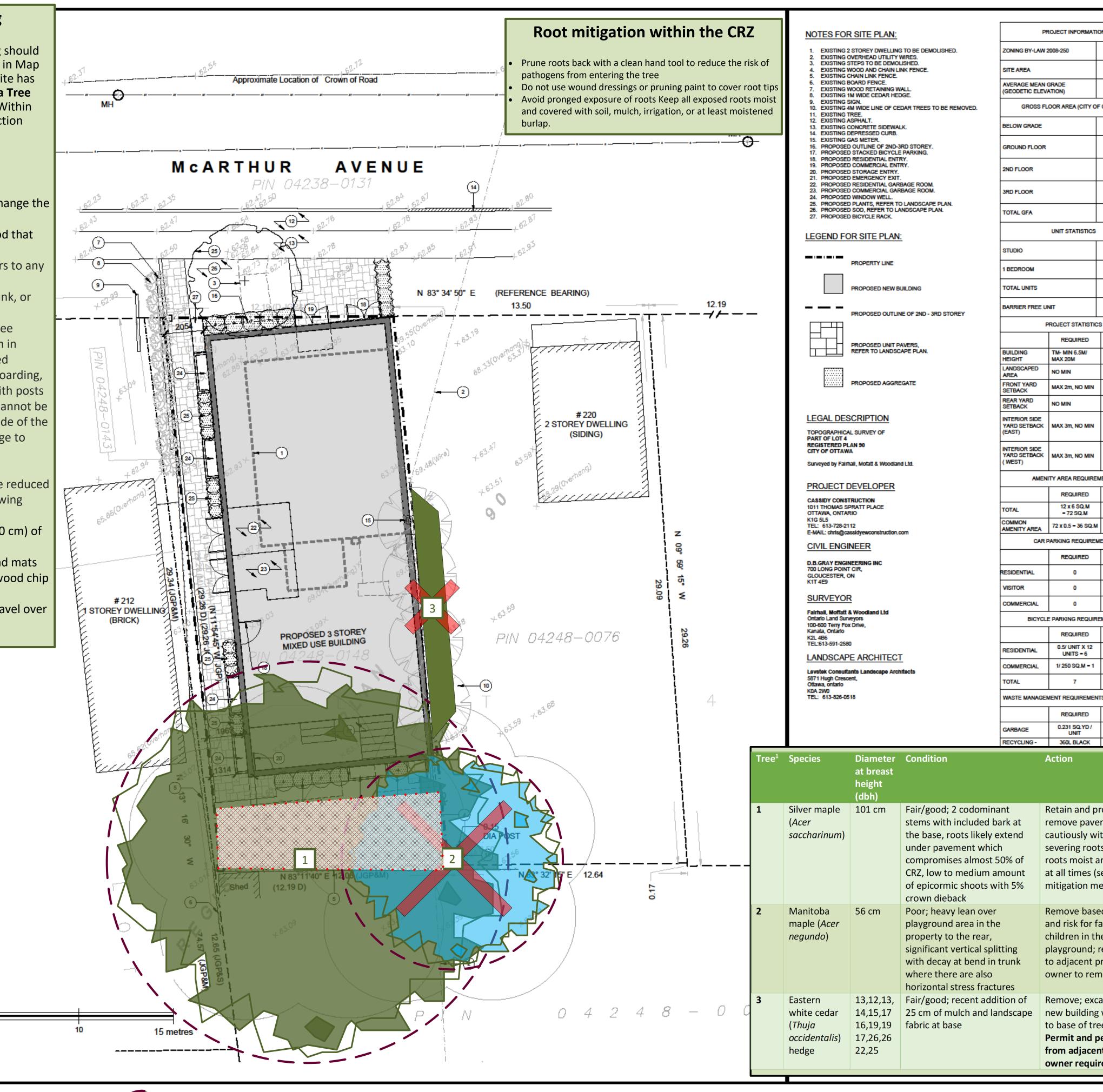
Direct the exhaust away from the tree The tree protection fencing must be 1.2 m in height and constructed of a rigid or framed material (e.g. modulus – steel, plywood hoarding, or snow fence on a 2"X4" wood frame) with posts 2.4 m apart such that the fence location cannot be altered. All supports must be placed outside of the CRZ and installation must minimize damage to existing roots.

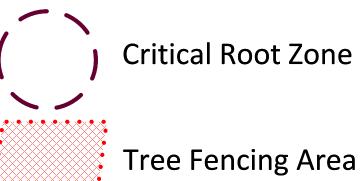
If the fenced tree protection area must be reduced to facilitate construction, one of the following mitigation measures should be applied:

Place a layer of 6-12 inches (15 to 30 cm) of woodchip mulch to the area

Apply <sup>3</sup>/<sub>4</sub> (2 cm) inch plywood, or road mats over a 4+ inch (10 cm) think layer of the wood chip mulch

Apply 4-6 inches (10 to 15 cm) of gravel over a taut, staked, geotextile fabric





Site Plan

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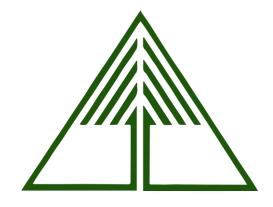


**Private Tree** 

Q

Tree either fully or partly on adjacent property

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



Tree layer prepared by Dendron Forestry Services Version 1.0, September 14, 2022

For more information, please contact info@dendronforestry.ca

SITE PLAN cautiously without severing roots, keep roots moist and covered JOB № 703-21 DATE JUN 2021 N\* DE PROJET at all times (see root mitigation measures) SCALE 1:100 ECHELLE Remove based on health CONCEPTION BY CONCUS PAR SG and risk for failure over children in the DRAWN BY DESSINÉ PAR playground; recommend to adjacent property VÉRIFIÉ PAR CHECKED BY owner to remove tree ARCHITECT'S STAMP AWING No Remove; excavation for new building will extend to base of trees; **Tree** Permit and permission from adjacent property owner required REVISION No RÉVISION Nº 0 CEAU D'ARCHITECTE Tree Conservation Report – 216 McArthur **Proposed Development and Conserved Vegetation** 

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