



Circle K Nepean Tree Conservation Report

*Gas Station Development – R&R # 52287, 1545 Woodroffe Ave,
Ottawa, ON*

Circle K Inc.

Project # BE20207036

City File D07-12-21-0056

Prepared for:

Circle K Central Canada Division

305 Milner Ave, Suite 400, Toronto, Ontario

April 2021

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List of Acronyms and Abbreviations

CFIA	Canadian Food Inspection Agency
DBH	Diameter at Breast Height
EAB	Emerald Ash Borer
ECCC	Environment and Climate Change Canada
ESA	Endangered Species Act, 2007
ESCP	Erosion and Sediment Control Plan
ETC	Et Cetera
ISA	International Society of Arboriculture
MBCA	Migratory Bird Convention Act
MBR	Migratory Bird Regulations
MECP	Ministry of the Environment, Conservation and Parks
O.Reg.	Ontario Regulation
PTE	Permit to Enter
CRZ	Critical Root Zone Zone
RVCA	Rideau Valley Conservation Authority
TCR	Tree Conservation Report

1.0 Introduction

Wood Environment & Infrastructure, a Division of Wood Canada Limited (Wood), has been retained by Mac's Convenience Stores Inc. – Central Canada Division (Circle K; the proponent) to prepare a Tree Conservation Report (TCR) as part of the construction of a Circle K gas station at 1545 Woodroffe Avenue, Nepean within the City of Ottawa, Ontario (Figure 1), hereinafter referred to as the Project.

The purpose of this Report is to provide a TCR in order to assess and mitigate the impact of the proposed development on the trees located on the subject property, neighbouring properties, parks, and road allowances. This Report aims to provide a detailed inventory of trees that could be impacted or injured (e.g., pruning) by the Project, as well as those trees requiring removal. Trees located within the area of disturbance (Project Footprint) or within 6 metres (m) of the property boundary on municipal public property, were inventoried to determine their location, species, size, and condition. The area surveyed is displayed in Figure 1. Wood also reviewed trees adjacent to the Project Footprint to account for trees on neighbouring properties that may have their canopy or root zone impacted by the proposed Project. A recommendation of action was then given to each tree, determined by the tree's location relative to the Project Footprint and its respective Critical Root Zone (CRZ). All observations and conditions documented within this Report were based on conditions at the time of the field investigation. It is understood that trees and other vegetation are living organisms and subject to change, damage, and disease. Therefore, the results provided within this Report reflect those conditions on the date the assessment was completed.



Figure 1: Approximate Study Area at 1545 Woodroffe Ave.

2.0 Legislative Requirements

This section summarizes the various federal, provincial, and municipal policies and regulations related to tree inventories that may apply to the proposed Project.

2.1 Migratory Birds Convention Act, 1994

The Migratory Birds Convention Act (MBCA) was passed in 1917 and updated in 1994. The MBCA protects migratory bird populations by regulating potentially harmful anthropogenic activities. The MBCA and the Migratory Birds Regulations (MBR) are federal legislative requirements that are binding on members of the public and all levels of government, including federal and provincial governments.

Protected species are listed under Article I of the MBCA, and are native or naturally occurring in Canada, and are species that are known to occur regularly in Canada. The legislation protects certain species, controls the harvest of others, and prohibits the commercial sale of all species. As described in Section 6 of the associated MBR:

"Subject to subsection 5(9), no person shall:

- *Disturb, destroy or take a nest, egg, nest shelter, Eider Duck shelter or duck box of a migratory bird, or*
- *Have in his possession a live migratory bird, or a carcass, skin, nest or egg of a migratory bird except under authority of a permit therefor."*

The "incidental take" of migratory birds and the disturbance, destruction or taking of the nest of a migratory bird is prohibited. No permit can be issued for the incidental take of migratory birds.

Bird species not regulated under the MBCA include Rock Dove, American Crow, Brown-headed Cowbird, Common Grackle, House Sparrow, Red-winged Blackbird, and European Starling. Furthermore, if the species identified are protected under the Endangered Species Act, 2007, Fish and Wildlife Conservation Act, 1997, the federal Species at Risk Act, 2002, or other applicable legislation, additional restrictions may apply.

Environment and Climate Change Canada (ECCC) and the Canadian Wildlife Service have compiled nesting calendars that show the variation in nesting intensity by habitat type and nesting zone within broad geographical areas distributed across Canada. While this does not mean nesting birds will not nest outside of these periods, the calendars can be used to reduce the risk of encountering a nest.

Applicability to the Project

The MBCA applies to all of Canada. As such, the MBCA is applicable to the entire Project. Therefore, if a species or its nest listed under the MBCA is encountered during Project works, contractors must comply with the MBCA. As vegetation removal is part of future Project works, it is recommended that removal occurs outside of the core breeding time-period identified by the MBCA for the Project Site, which occurs from 1 April to 31 August in any given year.

2.2 Canadian Food Inspection Agency

The Canadian Food Inspection Agency (CFIA) Directive (D-03-08): Phytosanitary Requirements to Prevent the Introduction and Spread within Canada of the Emerald Ash Borer (EAB), *Agilus planipennis* (Fairmaire)

(2014) applies to ash species (*Fraxinus spp.*) that are located within the EAB Regulated Areas of Canada as prepared by the CFIA. All ash species found in North America, including cultivars and additional introduced species, are vulnerable to EAB infestation (Canadian Food Inspection Agency, 2014). The intent of the Directive is to slow the spread of the EAB to new areas.

Applicability to the Project

Fifteen White Ash (*Fraxinus americana*) trees were identified within the Project Footprint and are all in poor health or dead due to EAB damage. These trees are likely to be removed to facilitate construction activities and/or prevent safety hazards. The Project Footprint is within an area prohibiting the movement of regulated materials (including but not limited to ash wood or bark and ash wood chips or bark chips) from a regulated area. EAB-regulated articles moving out of a regulated area must be accompanied by a Movement Certificate issued by the CFIA. Refer to the EAB Regulated Areas of Canada found on the CFIA website: <http://www.inspection.gc.ca/plants/plant-pests-invasive-species/insects/emerald-ash-borer/areas-regulated/eng/1347625322705/1367860339942>

Ash is permitted to be chipped on-site and removed. Chipped ash material that is to remain on-site must be ground or chipped to a size of less than 2.5 centimetres (cm) in any two dimensions. All ash material that is to be removed from the site must be disposed of within the Regulated Area identified by CFIA.

2.3 Endangered Species Act, 2007

The Ontario Endangered Species Act (ESA) was passed into law in 2007 and came into effect on 30 June 2008. Under the ESA, Species at Risk in Ontario are identified as extirpated, endangered, threatened, or of special concern. Section 9 of the ESA generally prohibits the killing or harming of a threatened or endangered species. Section 10 of the ESA prohibits the damage or destruction of the habitat of all endangered and threatened species. Habitat is broadly characterized within the ESA as the area the species depends on directly or indirectly to carry out its life processes, including reproduction, rearing of young, hibernation, migration or feeding.

Applicability to the Project

No Species at Risk were identified in the Study Area; however, if threatened and/or endangered species or their habitat are encountered, the Project may be subject to a permit under the ESA and/or its regulatory exemptions under the Act.

2.4 Ontario Forestry Act, 1990

Consent from the adjacent owner is required for trees on adjacent property or trees on the shared property boundary, which requires removal or pruning efforts that would represent injury (Forestry Act (R.S.C., 1990). Principle considerations in relation to boundary trees are defined in Section 10 of the Act as follows:

Boundary trees

10 (1) An owner of land may, with the consent of the owner of adjoining land, plant trees on the boundary between the two (2) lands. 1998, c. 18, Sched. I, s. 21.

Trees common property

10 (2) Every tree whose trunk is growing on the boundary between adjoining lands is the common property of the owners of the adjoining lands. 1998, c. 18, Sched. I, s. 21.

10 (3) Every person who injures or destroys a tree growing on the boundary between adjoining lands without the consent of the landowners is guilty of an offence under this Act. 1998, c. 18, Sched. I, s. 21.

Applicability to the Project

All trees on neighbouring properties or on shared boundary lines to be injured or removed must be discussed with landowners, and permission to injure or remove trees must be obtained.

2.5 Rideau Valley Conservation Authority

The Rideau Valley Conservation Authority (RVCA) regulates watercourses, wetlands, and hazard lands (valleylands, shorelines, floodplains) through the application of the *Ontario Regulation (O. Reg.) 174/06 – Rideau Valley Conservation Authority: Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses*, under Section 28 of the Conservation Authorities Act, 1990. O. Reg. 174/06 applies to hazardous lands that are defined in Section 28 of the Conservation Authorities Act as lands that could be unsafe for development because of naturally occurring processes associated with flooding, erosion, dynamic beaches or unstable soil or bedrock. The regulation limit for O. Reg. 174/06 is the applicable hazard limit for a property.

The main purpose of O. Reg. 174/06 is to ensure public health and safety and protection of life and property in relation to natural hazards. This regulation establishes guidelines for development, interference with wetlands and alterations to shorelines and watercourses.

Applicability to the Project

Based on the review of the RVCA's Regulations Mapping Tool (Rideau Valley Conservation Authority, 2021), the Project Footprint and Study Area are not mapped within the RVCA's regulated area. The project is not regulated by the RVCA.

2.6 City of Ottawa Tree Protection (By-law No. 2020-340)

The Tree Protection By-law No. 2020-340 (City of Ottawa, 2020) is a by-law of the City of Ottawa respecting the protection of municipal trees and municipal natural areas in the City of Ottawa and trees on private property in the urban area of the City of Ottawa. The objectives of this by-law are to prohibit or regulate the destruction or injury of trees, maintain, and grow Ottawa's urban forest and work towards tree canopy cover goals and tree policies outlined in the City's Official Plan.

"Part II – Trees on municipal property" states that no person shall carry out work within the critical root zone (CRZ) of a municipal tree, of any size, without a permit;

“Part III - Protection of municipal natural areas” states that no person injure or destroy any plant unless permitted (and permission to enter is permitted);

“Part IV – Trees on private property” states that trees with a Diameter at Breast Height (DBH) of 10 cm or greater on private property are protected from injury or removal unless permitted if the property is:

- greater than one hectare within the urban area or
- less than one hectare and subject to a site plan, subdivision plan, or condominium plan application pursuant to the Planning Act.

“Part V – Distinctive trees” states that trees on a property that is one hectare or less or property greater than one hectare with an existing condominium or multi-residential development are protected from injury and removal unless permitted. Distinctive trees have a DBH of 30 cm or greater, within the inner urban area (urban lands within the greenbelt), and with a DBH of 50 cm or greater, within the suburban area (urban lands between the greenbelt and the urban boundary).

Any person carrying out work that may impact these trees shall carry out work in accordance with standards outlined in the Tree Protection by-law (City of Ottawa, 2020). A permit to injure, remove, destroy, or work within the CRZ of a protected tree can be applied for following the requirements outlined in Section 20, Section 46, and Section 61 of the Tree Protection By-law (City of Ottawa, 2020). The permit will require a Tree Information Report consistent with the City’s guidelines as prescribed in Schedule “C” for municipally owned trees or a Tree Conservation Report consistent with the City’s Guidelines as prescribed in Schedule “E” for trees on private property. The report must include tree protection measures for retained trees, if any, as per Part VI – Tree Protection of this by-law.

For a boundary tree, in addition to the requirements of these sections, the applicant for any permit or approval under this by-law must provide the written consent of the other property owner or owners to the application. A permit to injure, remove or destroy a tree may be subject to additional terms and conditions as determined by the General Manager.

Applicability to the Project

The Project Footprint is located within the City of Ottawa’s inner urban area. It, therefore, is required to follow Part IV of the Tree Protection By-law as the site is less than one hectare but is subject to a site plan application. Distinctive trees are considered 30 cm or greater within this area, this includes Tree #220, 224, 233, 237, 238, 242, 241 and 285 within the Study Area. As the Project falls under Part IV – Trees on private property, a Tree Conservation Report consistent with the City’s Guidelines (Schedule E of the by-law) is required. This report is consistent with Schedule E requirements once permit fees and application is submitted along with the report by the proponent to the General manager. All trees included in Appendix B found within and adjacent to the Study Area are protected trees under this by-law. Where possible, these trees have been tagged with a pre-numbered aluminum tag affixed with an aluminum nail. Those trees identified for removal or impact will require a permit to do so as per the City of Ottawa Tree Protection By-law.

3.0 Methodology

This Tree Conservation Report was prepared based on existing information at the time of the field investigation. The field investigation was completed on 13 April 2021. Trees in inaccessible locations were assessed from the closest vantage point. Field data was collected by a qualified professional and certified International Society of Arboriculture (ISA) arborist (Arborist Identification Number: ON-2296A). Trees were inventoried and assessed following the requirements outlined in the City of Ottawa Tree Protection

By-law and associated Tree Conservation Report requirements found in Schedule E to prepare this document (City of Ottawa, 2020). For those trees situated on City property (i.e., within road ROW), all trees, no matter their size, were inventoried, assessed, and affixed with a pre-numbered aluminum tag. Trees situated on private property that were 10 cm DBH or greater were also affixed with a pre-numbered aluminum tag where accessible. Those trees located on private property that was not accessible were assigned a corresponding tree number (Appendix B).

All trees were georeferenced using a hand-held Global Positioning System (GPS) device with ± 5 m accuracy and recorded with the ArcGIS Collector mobile data collection app.

All trees included as part of this assessment were inspected visually from the ground. This included a non-invasive inspection of each tree, documenting site conditions, buttress roots, trunk, and branches. This is considered a standard assessment that is performed by arborists to identify tree conditions from the ground level. The results from this basic assessment should not be relied on for internal, below-ground and/or upper crown conditions or defects, as these areas may not be possible to visually inspect from the ground level.

The following data was collected for each tree and are included in Appendix B:

- **Tree Number:** This refers to the aluminum tag identification number noted in Appendix B for those trees measured at 20 cm or greater DBH. There is also a heading for '**Tagged**' which indicates whether the tree was tagged or not, due to access.
- **Species:** Identified the individual tree by botanical name and common name.
- **Size (DBH):** This refers to the diameter (in cm) at breast height and is measured at 1.4 m above the ground for each tree. For multiple stemmed trees that split below the 1.4 m mark, the DBH measurement will be calculated using the DBH of each stem. The final DBH measurement will be calculated by taking the square root of the sum of all squared trunk stem DBH's.
- **Approximate Dripline Radius (m):** The approximate radius of the dripline was estimated in the field.
- **Critical Root Zone (CRZ) Radius (m):** Protected area surrounding a tree which is the calculated radius of 10 cm from the trunk of a tree for every 1 cm of trunk diameter.
- **Condition Rating:** Two condition ratings are provided, structure and health. Tree structure refers to architecture, such as codominant trunks, branch arrangement, and asymmetry. The health condition of the tree is based on several biological and mechanical factors, including size, species, condition, location, root system, trunk, branching, twigs and foliage, disease evidence, and the overall health and vigour of the tree. Each tree was provided with a condition as outlined in the following categories:
 - **G - Good:** Overall, the tree is healthy and satisfactory in condition, vigour, and form. The tree has no major structural problems, no mechanical damage, and may only have insignificant aesthetic, insect, disease, or structure problems. Small amounts of deadwood may be present in the secondary branches but account for less than 25 percent of the canopy.
 - **F - Fair:** The tree has no major structural problems, no significant mechanical damage, may have only minor aesthetic insect, disease, or structure problems, and is in good health. Trees

in fair condition show moderate symptoms of decline (25 percent to 50 percent) in the lower canopy or scaffold branches.

- **P - Poor:** The tree may exhibit the following characteristics: minor structural problems, mechanical damage, significant damage from diseases, thin crown, or stunted growth compared to adjacent trees. This condition also includes trees that have been topped but show reasonable vitality with no obvious signs of decay. The poor condition rating can be applied to trees where the trunk shows evidence of advanced rot, deadwood or is hollow and/or there is twig development on the main branches (i.e., greater than 50 percent).
- **D - Dead:** The tree is considered dead. There is no live crown or branches and has begun stages of decay.
- **Arborist Recommendation:** The recommendation on trees to remove or retain. Injury is sometimes used if construction activities will encroach in the CRZ, but it is expected the tree will still survive.
- **Comments:** additional comments noted in the field.
- **Ownership:** The ownership for each tree is listed (e.g. City, address of private lot, shared, Client). For trees on a shared property line, the address it is shared with is listed.
- **Tree Location via UTM Easting and UTM Northing:** A UTM easting and northing are provided for each tree.

4.0 Existing Conditions (Trees)

The tree inventory documented a total of 65 trees. The structural condition and the overall health of the trees ranged from good to poor, with the majority of those classified as poor being White Ash damaged by EAB. Many had dead main stems with only live young epicormic shoots. Three trees appeared to be dead with no visible signs of live growth. A summary of those trees documented is provided in Table 4-1 below. A complete inventory table of documented trees is provided in Appendix B.

Table 4-1: Tree Inventory Summary

Common Name	Scientific Name ¹	Total # Surveyed	# to be Removed	# to be Injured	# to be Preserved
American Elm	<i>Ulmus americana</i>	5	4	0	1
Crabapple	<i>Malus species*</i>	2	2	0	0
Littleleaf Linden	<i>Tilia cordata*</i>	1	1	0	0
Trembling Aspen	<i>Populus tremuloides</i>	5	3	0	2
Honey Locust	<i>Gleditsia triacanthos</i>	3	3	0	0

Common Name	Scientific Name ¹	Total # Surveyed	# to be Removed	# to be Injured	# to be Preserved
Hedge Maple	<i>Acer campestre</i> [*]	4	4	0	0
Serviceberry	<i>Amelanchier species</i>	1	1	0	0
Sugar Maple	<i>Acer saccharum</i>	1	1	0	0
Austrian Pine	<i>Pinus nigra</i> [†]	2	2	0	0
Eastern White Cedar	<i>Thuja occidentalis</i>	21	1	11	9
Manitoba Maple	<i>Acer negundo</i> ^{**}	3	2	0	1
Norway Maple	<i>Acer platanoides</i> [†]	2	1	0	1
White Ash	<i>Fraxinus americana</i>	15	15	0	0
Total		65	40	11	14

1 * = Non-native species
 † = Invasive
 ** = Native to Canada but not the area

4.1 Tree Removal and Injury

For the 65 trees inventoried, a recommendation with respect to tree removal was made based on tree age, species tolerance to construction impacts, tree health, and where the tree was located relative to the proposed design. Based on the proposed design footprint provided, this Project will require the removal of 40 trees and the injury of 11 trees. Permits will be required for 51 trees. The majority of trees proposed to be removed are located within the footprint or are in poor condition/dead and considered a hazard, and removal is evident. Specific trees that are to be injured or removed and the reasoning for impact is described below:

- Trees #201, 207, 208, 209, 210, 213, 215, 216, 218, 220, 221, 222, 225, 229, 246 are all White Ash trees in poor condition due to EAB damage. These trees are to be removed as they are considered hazardous.
- Tree #211 is a Manitoba Maple to be removed for construction of the car wash driveway.
- Tree #212 is an American Elm that appeared dead and is considered hazardous.
- Tree #217 is an American Elm to be removed for the construction of the car wash building.
- Tree #219 is a Norway Maple to be removed for the construction of the car wash building.
- Tree #224 is an American Elm to be removed for the construction of the car wash building and associated driveway.
- Tree #228 is a Trembling Aspen to be removed for the construction of the car wash building and associated driveway.
- Tree #231 is a Trembling Aspen that appeared dead and is considered hazardous.



- Tree #233 is a Trembling Aspen to be removed for construction of the car wash entrance.
- Tree #236 is an American Elm to be removed for construction of the car wash building and associated driveway.
- Tree #237 is a Manitoba Maple to be removed for construction of the car wash entrance driveway.
- Tree #238 is a Sugar Maple to be removed for construction of the car wash entrance driveway.
- Tree #239 is a Serviceberry to be removed for construction of the convenience store and restaurant.
- Tree #240 is a Hedge Maple to be removed for construction of the convenience store and restaurant.
- Tree #241 and 242 are Austrian Pines to be removed for construction of the restaurant and driveway access to the garbage storage area.
- Tree #243 is a Hedge Maple to be removed for the construction of a paved area behind the convenience store and restaurant.
- Tree #244 and 245 are crabapples to be removed for construction of a paved area on the southeast side of the Project Footprint.
- Tree #247, 272 and 273 are Honey Locusts to be removed for the construction of the new driveway entrance on the south side of the Project Footprint.
- Tree #274 and 275 are Hedge Maples to be removed for the construction of a paved area behind the convenience store and restaurant.
- Tree #285 is a Littleleaf Linden to be removed for the construction of the paved area behind the garbage storage area.
- Tree #289 is an Eastern White Cedar to be removed for the existing fence removal and construction of the new perimeter fence on the east side of the Project Footprint.
- Tree #286-288 and #290-297 are Eastern White Cedars to be injured for the existing fence removal and construction of the new perimeter fence on the east side of the Project Footprint.

4.2 Tree Preservation

There is a total of 14 trees to be preserved based on the proposed design footprint, and no impacts or injuries are expected. Retained trees are to be protected by a CRZ barrier, as shown on the Tree Preservation Plan (Appendix A). Specifications for CRZ's are found in Section 8.0.

As CRZ's can be smaller than tree canopies, canopy pruning to account for overhead work and root pruning to accommodate the final design footprint may be required. To help preserve these trees without injury it is recommended the CRZ fencing is extended to the dripline or the CRZ area, whichever is greater.

5.0 Existing Conditions (Other Trees and Vegetation)

Based on the project's current design, some vegetation directly associated with construction activities will be removed from the Project Footprint. The Project Footprint consists mainly of mowed lawn grass and a disturbed thicket on the north side. These habitats are typical of an urban area heavily influenced by human disturbance. The thicket community is young in age, which is representative of the early

successional and non-native vegetation and tree species present. Although not significant in size, habitat, or species present, this is the only naturalized portion of the Project Footprint and should be prioritized for preservation in comparison to the rest of the Project Footprint. The vegetation communities adjacent to the Project Footprint are expected to be preserved.

6.0 Species at Risk

During the field inventory, no Species at Risk were observed within the Project Footprint. If a species at risk is encountered during Project works, further consultation will be required with the Ministry of the Environment, Conservation and Parks (MECP).

7.0 Potential Impacts on Trees

There are several common impacts to trees that can occur during construction, especially in urban settings due to the already limited growth space for root systems. The following construction activities can damage trees and might be encountered for this Project. However, these impacts will be avoided with appropriate CRZ establishment. As noted, those impacts that will result in removal or injury will require a permit.

7.1 Soil Compaction and Grade Changes

Soil compaction around areas where tree roots grow is one of the leading causes of tree decline. Soil compaction may include vehicle traffic, pedestrian/foot traffic, and stockpiling. Soil compaction reduces the pore space in the soil, thereby limiting oxygen and water transport. If the soil becomes heavily compacted, the tree will suffocate and begin declining, making it more susceptible to pests and disease. Impacts such as these may not be immediately visible. The decline could take up to five years to become evident, likely well after construction and/or associated work activities have concluded.

7.2 Physical Injury and Severing Roots

Accidental contact between construction equipment and trees can result in damage to the roots, trunks and crown. If an accidental injury occurs, a qualified arborist should be retained to assess the damage and triage the physical injury. If site conditions find that pruning of overhead branches is required (so machinery does not cause improper cuts or 'rips') a qualified arborist should be retained to remove branches.

Root cutting is a type of injury to a tree that can significantly affect its health. Excavation for the installation of new infrastructure may cut tree roots if the excavation is too close to the tree. It is important to note that the majority of tree roots are found in the upper 30 to 60 cm of the soil. Trees can become destabilized (i.e., a hazard) and may fall if structural roots that support the tree are severed or removed completely. All root pruning should be done by hand with sterilized tools and by a qualified arborist.

7.2.1 Maintenance and Pruning

Those trees identified for preservation will have protective measures around the tree. Protective measures should be implemented at as great a distance from trees as possible. In most cases, this may mean implementing measures along the outside border of the work areas rather than around each tree.

Trees shall be pruned in a manner that minimizes physical damage and promotes quick wound closure and regeneration. If earthworks are required immediately adjacent to a TPZ, and there is a potential to encounter roots, it is recommended that an exploratory exercise with an air spade be conducted. If it is determined that root pruning must occur to facilitate a grade change or other earthworks, the roots shall be pruned in accordance with acceptable arboricultural standards, which may include:

- Maintenance and pruning shall be avoided during hot and dry weather;
- Exposed roots should be neatly cut with a sharp saw;
- Ends of severed roots should be wrapped with dampened burlap, especially if there is a delay in pruning or filling with soil; and
- Trees to be pruned should be watered after digging, along with an application of soil and mulch.

All tree maintenance and pruning should be carried out by a tree care specialist that is also an ISA certified arborist or under the supervision of an ISA certified arborist.

7.3 Release of Deleterious Substance

The accidental release of deleterious substances such as oil, hydraulic fluid, etc., into the soil within close proximity to trees, can inhibit tree growth and function. A spill plan shall be available during the construction period.

8.0 Tree Preservation and Protection Specifications

Tree protection measures have been identified for 14 trees to be preserved and for 11 trees identified for injury. Trees to be protected will follow the Tree Protection By-law Sections 72-77 (City of Ottawa, 2020) and the City of Ottawa Tree Protection Specification drawing found in the Tree Preservation Plan (Appendix A). Prior to any work beginning, tree protection fencing must be installed around the outer edge of the CRZ, or as per the approved plans within this TCR and remain in place until the work is complete. The CRZ is calculated by the area of land within a radius of 10 cm from the trunk of a tree for every 1 cm of trunk diameter, the CRZ values of all trees documented on-site can be found in Appendix B. The tree protection fencing shall be at least 1.2 m in height and constructed of rigid or framed materials (e.g. moduloc - 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 and bracing must be placed outside of the CRZ, and installation must minimize damage to existing roots. The plan and constructed fencing must be approved by City forestry staff prior to the commencement of work. If the fenced tree protection area must be reduced to facilitate construction, mitigation measures must be prescribed by an ISA certified arborist and approved by City forestry staff. These may include the placement of plywood, wood chips, or steel plating over the roots for protection or the proper pruning and care of roots where encountered.

The tree protection area is considered a "no-touch zone", and unless approved by City forestry staff;

- Do not place any material or equipment - including outhouses;

- Do not attach any signs, notices or posters to any tree;
- Do not raise or lower the existing grade, tunnel or bore when digging;
- Do not damage the root system, trunk, or branches or any tree;
- Ensure that exhaust fumes from all equipment are not directed toward any tree canopy; and
- Do not extend hard surfaces or significantly change the landscaping.

It is the responsibility of the site supervisor to inspect the condition of the tree protection measures on a regular basis to denote damage and/or maintenance requirements. If damage or maintenance is observed, repair work to the tree protection barriers should be completed immediately. To not repair is considered a breach of the Tree Protection By-law and could result in an immediate “stop-work” order being issued for the site.

It is recommended that an ISA certified arborist be retained during tree removal operations to ensure that standardized arboricultural techniques are employed before and during the proposed work activities and to confirm the need to remove or protect additional trees in proximity to the Project Footprint. Additionally, it is recommended that a certified arborist return at the conclusion of construction to assess the health of trees that were protected during construction and identify opportunities for mitigation should any trees display signs of stress (i.e., falling limbs, declining health, etc.).

9.0 Vegetation Protection Measures

It is expected that a perimeter fence is installed around the entire Project Footprint to denote ‘no-go’ zones for construction using similar fencing details described for individual trees noted above. All measures as identified above would be applicable to adjacent vegetation communities to the Project Footprint. Additionally, an Erosion and Sediment Control Plan (ESCP) should be created, and in combination with the perimeter fencing will be sufficient in protecting vegetation.

10.0 Compensation

Tree compensation requirements are outlined in Schedule B of the Tree Protection By-law (City of Ottawa, 2020). For private property in the urban area, of any size, subject to a Planning Act application, tree compensation requirements include the following:

- To be determined through the development review process.

There are a total of 23 trees that will be removed and 11 trees that will be injured within the Study Area that will need compensation requirements determined through the development review process.

For private property in the urban area, of any size, where the tree removed is dead, hazardous, or an ash tree, compensation requirements include the following:

- 1:1 replacement planting

There are a total of 17 trees that are either dead or are ash trees in poor condition due to EAB within the Study Area. Therefore, 17 replacement plantings are required for these trees. The location of plantings is to be determined in a landscape plan and through the development review process.

It is recommended that trees selected for compensation plantings follow the general guidelines listed below:

- The species should be native to the region and nursery stock be grown in local conditions.
- The species should be considered non-invasive.
- When planted, the replacement tree must be a minimum of 50 mm measured no less than 15 cm above ground level for deciduous trees, and no less than 200 cm in height as measured from ground level to midway between the tip of the leader and the uppermost whorl, or as otherwise approved by the General Manager.
- It is preferable to plant tree species that will attain the largest size at maturity, given the site-specific context.

11.0 Summary

Circle K retained Wood to provide a TCR and Tree Preservation Plan as part of the construction of a Circle K gas station at 1545 Woodroffe Avenue in the City of Ottawa, Ontario. A total of 65 trees were inventoried as part of this report. Of those 65 trees, a total of 40 trees have been identified for removal, 11 trees have been identified for injury for construction activities, and a total of 14 trees are recommended to be preserved. To preserve those trees, maintenance and protection measures recommended in this report shall be followed. The vegetation communities outside of the Project Footprint are expected to be preserved following the recommendations in this report and no Species at Risk were identified within the Study Area. All CRZs and tree protection areas shall be constructed in accordance with the Tree Protection By-law (City of Ottawa, 2020) and the City of Ottawa Tree Protection Specification in Appendix A.

It is recommended that an ISA certified arborist be retained during tree removal operations to ensure that standardized arboricultural techniques are employed before and during the proposed work. Additionally, it is recommended that a certified arborist return at the conclusion of construction to assess the health of trees that were protected during construction and identify opportunities for mitigation should any trees display signs of stress (i.e., falling limbs, declining health, etc.).

Compensation for trees removed or injured has not been finalized. Pending a review of a landscape plan and client coordination with the General Manager through the development review process compensation can be finalized.

Circle K is required to apply for permits to remove and injure the trees identified in Appendix B. Compensation for trees and vegetation should follow the City of Ottawa By-law (City of Ottawa, 2020) requirements and recommendations listed in Section 10.0. If further assessment of trees and their required CRZ are required for this Project, they must follow and adhere to the City of Ottawa requirements.

12.0 Closure

The findings, interpretations, and recommendations as outlined herein are based on Wood's expertise and the observations and information available at the time of document preparation. This Report has been prepared by Wood for the sole benefit of the proponent for the purposes of this Project as identified herein. It should not be relied upon by any other party or used for any other purposes. Any use which a third party makes of this Tree Inventory and Report, or any reliance on or decisions made based on it, are

the responsibilities of such third parties. We trust this Report provides the required information to complete the tree preservation components of the Project. Should you have any questions, or you would like to discuss the above information, please do not hesitate to contact the undersigned.

Regards,

Wood Environment & Infrastructure Solutions

a Division of Wood Canada Limited

Prepared By:



Shane Butnari
Biologist/ISA Certified Arborist

Reviewed By:

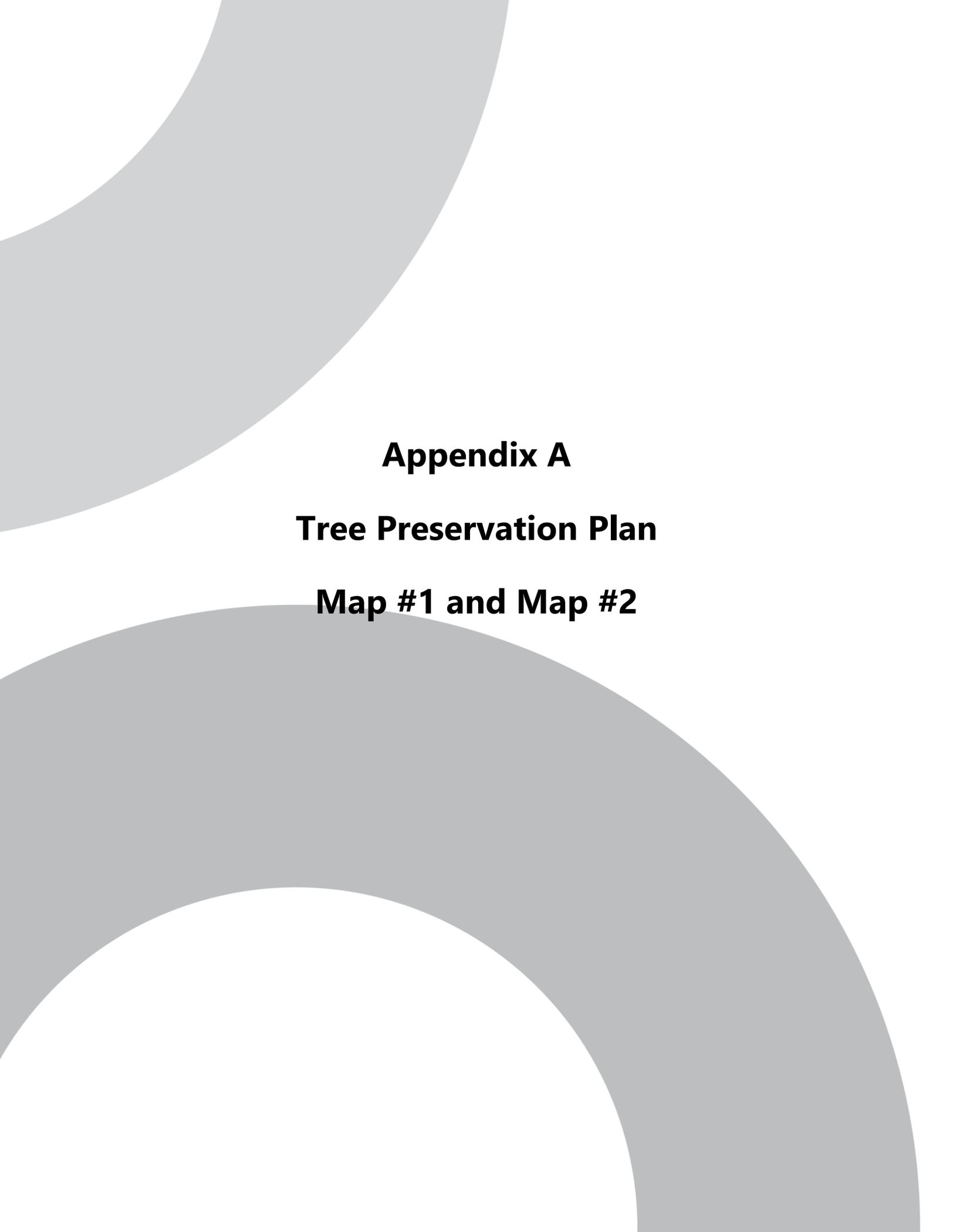


Samantha Hughes
Senior Biologist/ISA Certified Arborist



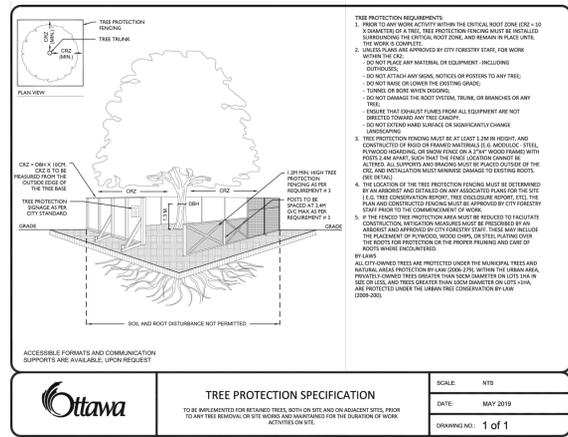
13.0 References

- Canadian Food Inspection Agency. (2014). *D-03-08: Phytosanitary Requirements to Prevent the Introduction into and Spread within Canada of the Emerald Ash Borer, Agrilus planipennis (Fairmaire)*.
- City of Ottawa. (2020). *City of Ottawa Municipal Code Tree Protection*. Retrieved from <https://ottawa.ca/en/living-ottawa/laws-licences-and-permits/laws/law-z/tree-protection-law-no-2020-340>
- Endangered Species Act, 2007, S.O. 2007, c. 6. (2007). Retrieved from <https://www.ontario.ca/laws/statute/07e06#BK0>
- Forestry Act (R.S.C., 1. c.-3. (1990). *Forestry Act*. Retrieved from <https://laws-lois.justice.gc.ca/eng/acts/f-30/>
- Migratory Birds Convention Act, 1. (. (1994). *Migratory Birds Convention Act*. Retrieved from <https://laws-lois.justice.gc.ca/eng/acts/m-7.01/>
- (1990). *O. Reg. 166/06: Rideau Valley Conservation Authority: Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses*.
- Rideau Valley Conservation Authority. (2021). *Regulated Area Search*. Retrieved from <https://www.arcgis.com/apps/webappviewer/index.html?id=fd54fe0962284dc0a63deabc8357bb25>



Appendix A
Tree Preservation Plan
Map #1 and Map #2

Tree Number	Common Name	Botanical Name	DBH (cm)	Drip Line Radius (m)	Min TPZ Radius (m)	CRZ Radius (m)	Tree Condition	Tree Health	Impact	Ownership	Comments
201	White Ash	Fraxinus americana	24	3	3	2.4	F	P	Remove due to condition	Client	Almost dead, some live shoots
207	White Ash	Fraxinus americana	29	2	2	2.9	P	P	Remove due to condition	Client	Almost dead, some live shoots
208	White Ash	Fraxinus americana	20	2	2	2.0	P	P	Remove due to condition	Client	Almost dead, some live shoots
209	White Ash	Fraxinus americana	18,20-27	2	2	2.7	P	P	Remove due to condition	Client	Almost dead, some live shoots
210	White Ash	Fraxinus americana	13	3	3	1.3	P	F	Remove	Client	N/A
211	Manitoba Maple	Acer negundo	10	2	2	1.0	F	G	Remove	Client	N/A
212	American Elm	Ulmus americana	16	1	1	1.6	P	D	Remove due to condition	Client	Appears dead
213	White Ash	Fraxinus americana	28	2	2	2.8	P	P	Remove due to condition	Client	Almost dead, some live shoots
214	Norway Maple	Acer platanoides	13	3	3	1.3	G	P	Protect	Client	N/A
215	White Ash	Fraxinus americana	15	3	3	1.5	F	P	Remove due to condition	Client	N/A
216	White Ash	Fraxinus americana	16	2	2	1.6	P	D	Remove due to condition	Client	Appears dead
217	American Elm	Ulmus americana	10	2	2	1.0	G	G	Remove	Client	N/A
218	White Ash	Fraxinus americana	14	2	2	1.4	P	P	Remove due to condition	Client	Almost dead, few live shoots
219	Norway Maple	Acer platanoides	18	3	3	1.8	G	G	Remove	Client	N/A
220	White Ash	Fraxinus americana	30,18,10-	5	5	3.6	P	P	Remove due to condition	Client	Almost dead, some live shoots
221	White Ash	Fraxinus americana	36	3	3	1.2	F	P	Remove due to condition	Client	Some live branches/shoots
222	White Ash	Fraxinus americana	16	3	3	1.6	F	P	Remove due to condition	Client	Remove due to condition
223	Manitoba Maple	Acer negundo	17	4	4	1.7	F	G	Protect	Client	N/A
224	American Elm	Ulmus americana	34	6	6	3.4	G	G	Remove	Client	N/A
225	White Ash	Fraxinus americana	18	2	2	1.8	F	P	Remove due to condition	Client	Almost dead, few live shoots
226	American Elm	Ulmus americana	10	2	2	1.0	G	G	Protect	Shared - 88 Brockington Crescent, Nepean, ON K2G 5L1	N/A
228	Trembling Aspen	Populus tremuloides	21	3	3	2.1	G	G	Remove	Client	N/A
229	White Ash	Fraxinus americana	20	3	3	2.0	F	P	Remove	Shared - 88 Brockington Crescent, Nepean, ON K2G 5L1	Almost dead, some live shoots
230	Trembling Aspen	Populus tremuloides	22	2	2	2.2	F	G	Protect	Client	N/A
231	Trembling Aspen	Populus tremuloides	27	2	2	2.7	P	D	Remove due to condition	Client	Appears dead
232	Trembling Aspen	Populus tremuloides	22	3	3	2.2	G	G	Protect	88 Brockington Crescent, Nepean, ON K2G 5L1	N/A
233	Trembling Aspen	Populus tremuloides	31	4	4	3.1	G	F	Remove	Client	N/A
236	American Elm	Ulmus americana	25	5	5	2.5	G	G	Remove	88 Brockington Crescent, Nepean, ON K2G 5L1	N/A
237	Manitoba Maple	Acer negundo	29,16,12-35	6	6	3.5	P	G	Remove	Client	N/A
238	Sugar Maple	Acer saccharum	41	6	6	4.1	G	G	Remove	Client	N/A
239	Serviceberry	Aamelanchier species	14,12,12-13-26	6	6	2.6	G	G	Remove	Client	N/A
240	Hedge Maple	Acer campestre	19	5	5	1.9	F	G	Remove	Client	N/A
241	Austrian Pine	Pinus nigra	43	5	5	4.3	G	G	Remove	Client	N/A
242	Austrian Pine	Pinus nigra	35	5	5	3.5	G	G	Remove	Client	N/A
243	Hedge Maple	Acer campestre	25,18-31	5	5	3.1	F	F	Remove	Shared - 149 Medhurst Drive, Nepean, ON K2G 5K9	N/A
244	Crabapple	Malus species	22,24-33	5	5	3.3	F	F	Remove	Client	N/A
245	Crabapple	Malus species	28	5	5	2.8	F	G	Remove	Client	N/A
246	White Ash	Fraxinus americana	29	3	3	2.9	P	P	Remove	Client	Almost dead, few live shoots
247	Honey Locust	Gleditsia triacanthos	44	6	6	4.4	G	G	Remove	Client	N/A
272	Honey Locust	Gleditsia triacanthos	38	6	6	3.8	G	G	Remove	Client	N/A
273	Honey Locust	Gleditsia triacanthos	40	5	5	4.0	G	G	Remove	Client	N/A
274	Hedge Maple	Acer campestre	20,20-28	6	6	2.8	F	G	Remove	Client	N/A
275	Hedge Maple	Acer campestre	20,20-28	5	5	2.8	F	G	Remove	Shared - 149 Medhurst Drive, Nepean, ON K2G 5K9	N/A
276	Eastern White Cedar	Thuja occidentalis	15	3	3	1.5	G	G	Protect	Client	N/A
277	Eastern White Cedar	Thuja occidentalis	10	2	2	1.0	G	G	Protect	92 Brockington Crescent, Nepean, ON K2G 5L3	N/A
278	Eastern White Cedar	Thuja occidentalis	12	2	2	1.2	G	G	Protect	93 Brockington Crescent, Nepean, ON K2G 5L3	N/A
279	Eastern White Cedar	Thuja occidentalis	15	3	3	1.5	G	G	Protect	94 Brockington Crescent, Nepean, ON K2G 5L3	N/A
280	Eastern White Cedar	Thuja occidentalis	12	3	3	1.2	G	G	Protect	95 Brockington Crescent, Nepean, ON K2G 5L3	N/A
281	Eastern White Cedar	Thuja occidentalis	12	3	3	1.2	G	G	Protect	96 Brockington Crescent, Nepean, ON K2G 5L3	N/A
282	Eastern White Cedar	Thuja occidentalis	15	3	3	1.5	G	G	Protect	97 Brockington Crescent, Nepean, ON K2G 5L3	N/A
283	Eastern White Cedar	Thuja occidentalis	15	3	3	1.5	G	G	Protect	98 Brockington Crescent, Nepean, ON K2G 5L3	N/A
284	Eastern White Cedar	Thuja occidentalis	15	3	3	1.5	G	G	Protect	99 Brockington Crescent, Nepean, ON K2G 5L3	N/A
285	Littleleaf Linden	Tilia cordata	40	5	5	4.0	F	F	Remove	100 Brockington Crescent, Nepean, ON K2G 5L3	N/A
286	Eastern White Cedar	Thuja occidentalis	12	3	3	1.2	G	G	Injure	Shared - 100 Brockington Crescent, Nepean, ON K2G 5L3	N/A
287	Eastern White Cedar	Thuja occidentalis	12	3	3	1.2	G	G	Injure	Shared - 100 Brockington Crescent, Nepean, ON K2G 5L3	N/A
288	Eastern White Cedar	Thuja occidentalis	15	3	3	1.5	G	G	Injure	Shared - 100 Brockington Crescent, Nepean, ON K2G 5L3	N/A
289	Eastern White Cedar	Thuja occidentalis	14	3	3	1.4	G	G	Remove	Shared - 100 Brockington Crescent, Nepean, ON K2G 5L3	N/A
290	Eastern White Cedar	Thuja occidentalis	15	3	3	1.5	G	G	Injure	Shared - 100 Brockington Crescent, Nepean, ON K2G 5L3	N/A
291	Eastern White Cedar	Thuja occidentalis	12	3	3	1.2	G	G	Injure	Shared - 100 Brockington Crescent, Nepean, ON K2G 5L3	N/A
292	Eastern White Cedar	Thuja occidentalis	15	3	3	1.5	G	G	Injure	Shared - 100 Brockington Crescent, Nepean, ON K2G 5L3	N/A
293	Eastern White Cedar	Thuja occidentalis	14	3	3	1.4	G	G	Injure	Shared - 100 Brockington Crescent, Nepean, ON K2G 5L3	N/A
294	Eastern White Cedar	Thuja occidentalis	12	3	3	1.2	G	G	Injure	Shared - 100 Brockington Crescent, Nepean, ON K2G 5L3	N/A
295	Eastern White Cedar	Thuja occidentalis	15	3	3	1.5	G	G	Injure	Shared - 100 Brockington Crescent, Nepean, ON K2G 5L3	N/A
296	Eastern White Cedar	Thuja occidentalis	16	4	4	1.6	G	G	Injure	Shared - 100 Brockington Crescent, Nepean, ON K2G 5L3	N/A
297	Eastern White Cedar	Thuja occidentalis	15	4	4	1.5	G	G	Injure	Shared - 100 Brockington Crescent, Nepean, ON K2G 5L3	N/A



SPECIFICATIONS FOR THE PROTECTION AND PRESERVATION OF EXISTING TREES

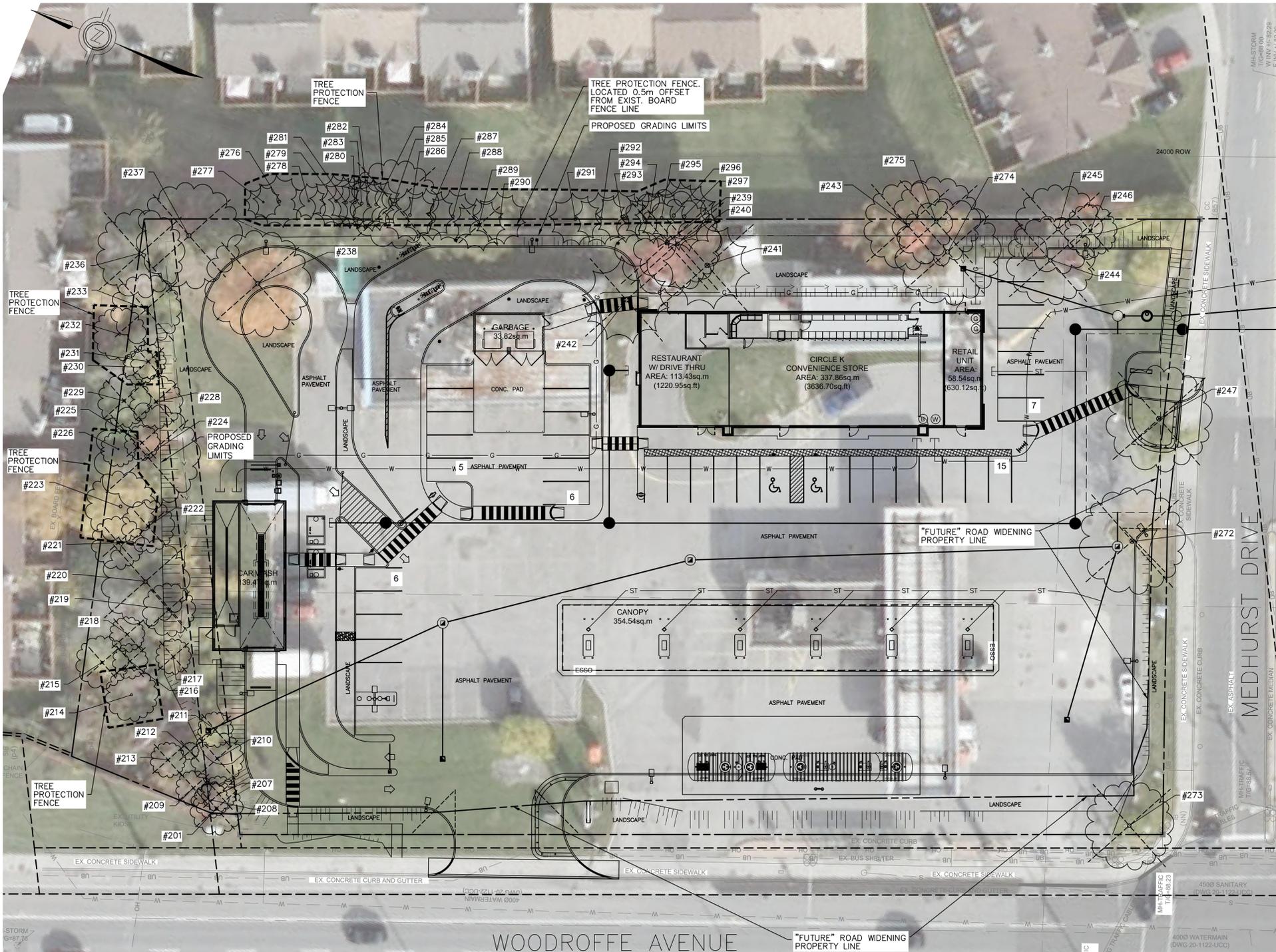
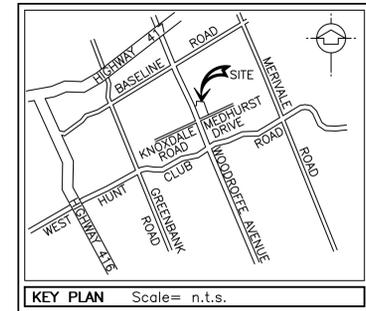
- ALL EXISTING TREES WHICH ARE TO REMAIN SHALL BE FULLY PROTECTED WITH FENCING ERRECTED AROUND THE ENTIRE PERIMETER OF THE TREE PROTECTION ZONE IN ACCORDANCE WITH THE MINIMUM DISTANCE REQUIREMENTS, GROUPS OF TREES AND OTHER EXISTING PLANTINGS TO BE PROTECTED, SHALL BE DONE IN A LIKE MANNER WITH FENCING AROUND THE ENTIRE CLUMP(S).
- AREAS WITHIN THE PROTECTIVE FENCING SHALL REMAIN UNDISTURBED AND SHALL NOT BE USED FOR THE STORAGE OF BUILDING MATERIALS OR EQUIPMENT.
- THIS WORK SHALL BE COMPLETED, TO THE SATISFACTION OF THE COMMISSIONER OF DEVELOPMENT SERVICES, PRIOR TO THE ISSUANCE OF BUILDING PERMITS FOR THE SITE DEVELOPMENT. THE DEVELOPER OR HIS/HER AGENT SHALL TAKE EVERY PRECAUTION NECESSARY TO PREVENT DAMAGE TO TREES OR SHRUBS TO BE RETAINED.
- NO RIGGING CABLES SHALL BE WRAPPED AROUND OR INSTALLED IN TREES; AND SURPLUS SOIL, EQUIPMENT, DEBRIS OR MATERIALS SHALL NOT BE PLACED OVER ROOT SYSTEMS OF THE TREES WITHIN THE PROTECTIVE FENCING. NO CONTAMINANTS WILL BE DUMPED OR FLUSHED WHERE FEEDER ROOTS OF TREES EXIST.
- WHERE LIMBS OR PORTIONS OF TREES ARE REMOVED TO ACCOMMODATE CONSTRUCTION WORK, THEY WILL BE CAREFULLY REMOVED BY AN ISA CERTIFIED ARBORIST.
- WHERE ROOT SYSTEMS OF PROTECTED TREES ARE EXPOSED DIRECTLY ADJACENT TO OR DAMAGED BY CONSTRUCTION WORK, THEY SHALL BE TRIMMED NEARLY BY A QUALIFIED ARBORIST AND THE AREA BACK FILLED WITH APPROPRIATE MATERIAL TO PREVENT DESICCATION.
- IF GRADES AROUND TREES TO BE PRESERVED ARE LIKELY TO CHANGE, THE DEVELOPER SHALL BE REQUIRED TO TAKE SUCH PRECAUTION AS DRY WELLING AND ROOT FEEDING TO THE SATISFACTION OF THE COMMISSIONER OF DEVELOPMENT SERVICES.
- TREES TO BE PRESERVED THAT HAVE DIED OR HAVE BEEN DAMAGED BEYOND REPAIR, SHALL BE SUBJECT TO SUITABLE COMPENSATION AS DETERMINED BY THE TOWN OF MARKHAM AND REVIEW OF THE TREE INVENTORY AND ANALYSIS.
- AN ISA CERTIFIED ARBORIST SHALL BE ON SITE FOR ANY WORK WHICH IMPACTS ANY TREE OR TREE PROTECTION ZONE.

LEGEND:

- Denotes surveyed location of existing trees, & # SPECIES / CALIPER / CONDITIONS / REMARKS AS NOTED IN ARBORIST REPORT & TREE INVENTORY LIST
- TREE PRESERVATION FENCE, PER OTTAWA TREE PROTECTION SPECIFICATION DETAIL
- Denotes existing trees to be removed for development, as noted, see ARBORIST REPORT

IT IS THE CONTRACTOR'S RESPONSIBILITY TO:

- DETERMINE LOCATION OF ALL EXISTING SERVICES AND OBTAIN NECESSARY STAKE-OUTS BEFORE ANY EXCAVATION.
- USE FIGURED DIMENSIONS, OPPOSED TO SCALING, AND VERIFY DIMENSIONS AT THE SITE.
- REPORT ALL DISCREPANCIES TO THE LANDSCAPE ARCHITECT, AND AGREE IN WRITING, BEFORE PROCEEDING.
- CONTRACTOR SHALL DO THEIR OWN SITE INSPECTIONS FOR ESTIMATED PURPOSES.



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03/25/22 RE-ISSUED FOR SPA

PROFESSIONAL SEAL

PROFESSIONAL IN CHARGE
S. HUGHES
PROJECT MANAGER
S. LAWRENCE
QUALITY CONTROL
S. BUTNARI
DRAWN BY
F. RIVARD

PROJECT NAME
CIRCLE K STORES INC.
R&R No. 5287
NEPEAN ONTARIO
1545 WOODROFFE AVENUE
NEPEAN, ON, CANADA
K2G 1W2

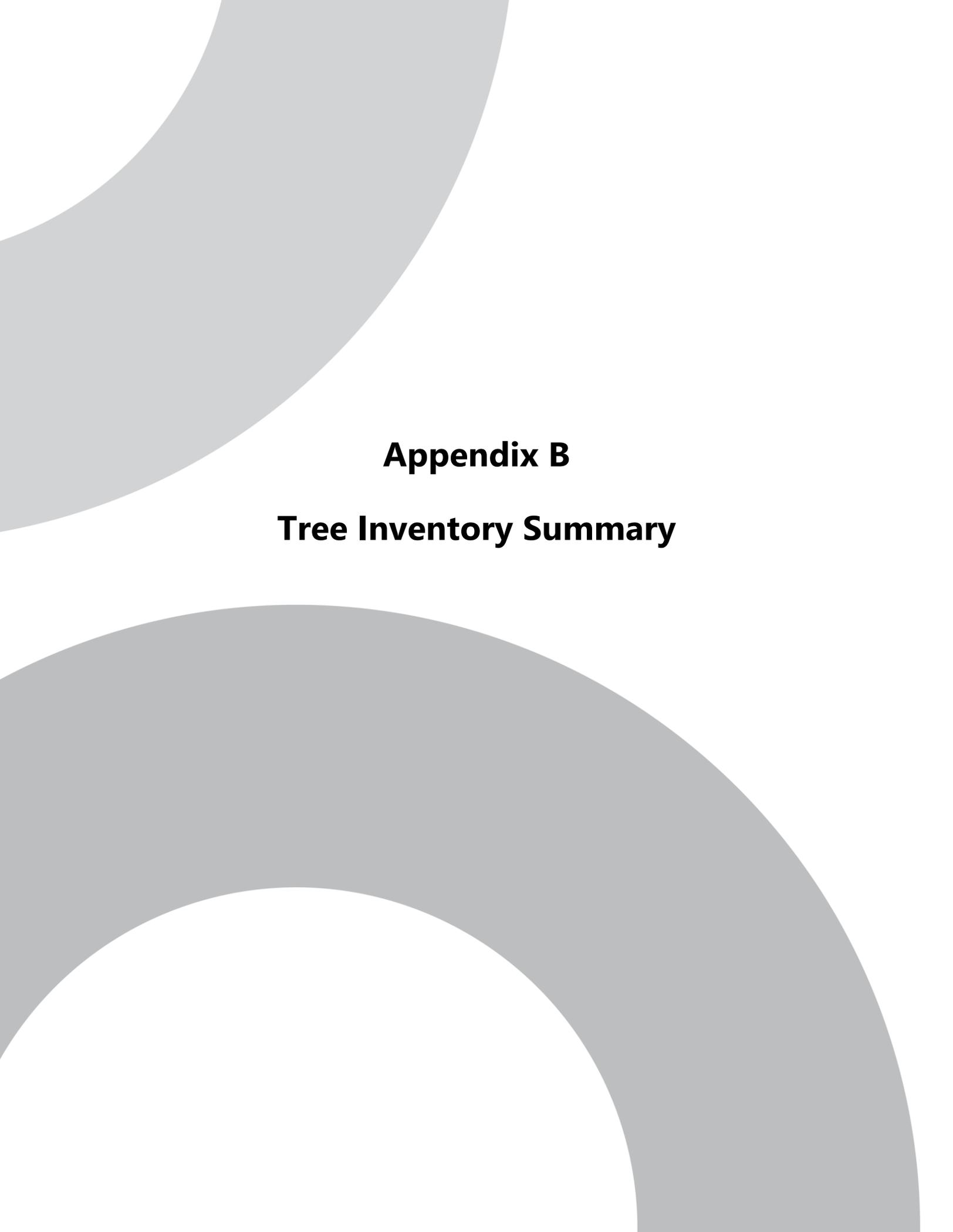


PROJECT NUMBER
BE20207036

SHEET TITLE
PROPOSED DEVELOPMENT
CONSERVED VEGETATION
PLAN

SHEET NUMBER
L1.1

DWG # 17094



Appendix B
Tree Inventory Summary

TREE NUMBER	TAGGED	COMMON NAME	BOTANICAL NAME	DBH (CM)	APPROXIMATE DRIPLINE RADIUS (M)	CRZ RADIUS (M)	TREE CONDITION	TREE HEALTH	ARBORIST RECOMMENDATION	COMMENTS	OWNERSHIP	UTM EASTING	UTM NORTHING
201	Yes	White Ash	<i>Fraxinus americana</i>	24	3	2.4	F	P	Remove due to condition	Almost dead, some live shoots	Client	441049	5020437
207	Yes	White Ash	<i>Fraxinus americana</i>	29	2	2.9	P	P	Remove due to condition	Almost dead, some live shoots	Client	441051	5020438
208	Yes	White Ash	<i>Fraxinus americana</i>	20	2	2.0	P	P	Remove due to condition	Almost dead, some live shoots	Client	441050	5020438
209	Yes	White Ash	<i>Fraxinus americana</i>	18,20=27	2	2.7	P	P	Remove due to condition	Almost dead, some live shoots	Client	441050	5020440
210	Yes	White Ash	<i>Fraxinus americana</i>	13	3	1.3	P	F	Remove	N/A	Client	441054	5020439
211	Yes	Manitoba Maple	<i>Acer negundo</i>	10	2	1.0	F	G	Remove	N/A	Client	441057	5020441
212	Yes	American Elm	<i>Ulmus americana</i>	16	1	1.6	P	D	Remove due to condition	Appears dead	Client	441054	5020442
213	Yes	White Ash	<i>Fraxinus americana</i>	28	2	2.8	P	P	Remove due to condition	Almost dead, some live shoots	Client	441052	5020444
214	Yes	Norway Maple	<i>Acer platanoides</i>	13	3	1.3	G	G	Protect	N/A	Client	441058	5020451
215	Yes	White Ash	<i>Fraxinus americana</i>	15	3	1.5	F	P	Remove due to condition	N/A	Client	441060	5020455
216	Yes	White Ash	<i>Fraxinus americana</i>	16	2	1.6	P	D	Remove due to condition	Appears dead	Client	441061	5020452
217	Yes	American Elm	<i>Ulmus americana</i>	10	2	1.0	G	G	Remove	N/A	Client	441063	5020448
218	Yes	White Ash	<i>Fraxinus americana</i>	14	2	1.4	P	P	Remove due to condition	Almost dead, few live shoots	Client	441064	5020454
219	Yes	Norway Maple	<i>Acer platanoides</i>	18	3	1.8	G	G	Remove	N/A	Client	441068	5020450
220	Yes	White Ash	<i>Fraxinus americana</i>	30,18,10=36	5	3.6	P	P	Remove due to condition	Almost dead, some live shoots	Client	441070	5020454
221	Yes	White Ash	<i>Fraxinus americana</i>	12	3	1.2	F	P	Remove due to condition	Some live branches/shoots	Client	441073	5020458
222	Yes	White Ash	<i>Fraxinus americana</i>	16	3	1.6	F	P	Remove due to condition	Almost dead, some live shoots	Client	441076	5020456
223	Yes	Manitoba Maple	<i>Acer negundo</i>	17	4	1.7	F	G	Protect	N/A	Client	441077	5020460
224	Yes	American Elm	<i>Ulmus americana</i>	34	6	3.4	G	G	Remove	N/A	Client	441083	5020459

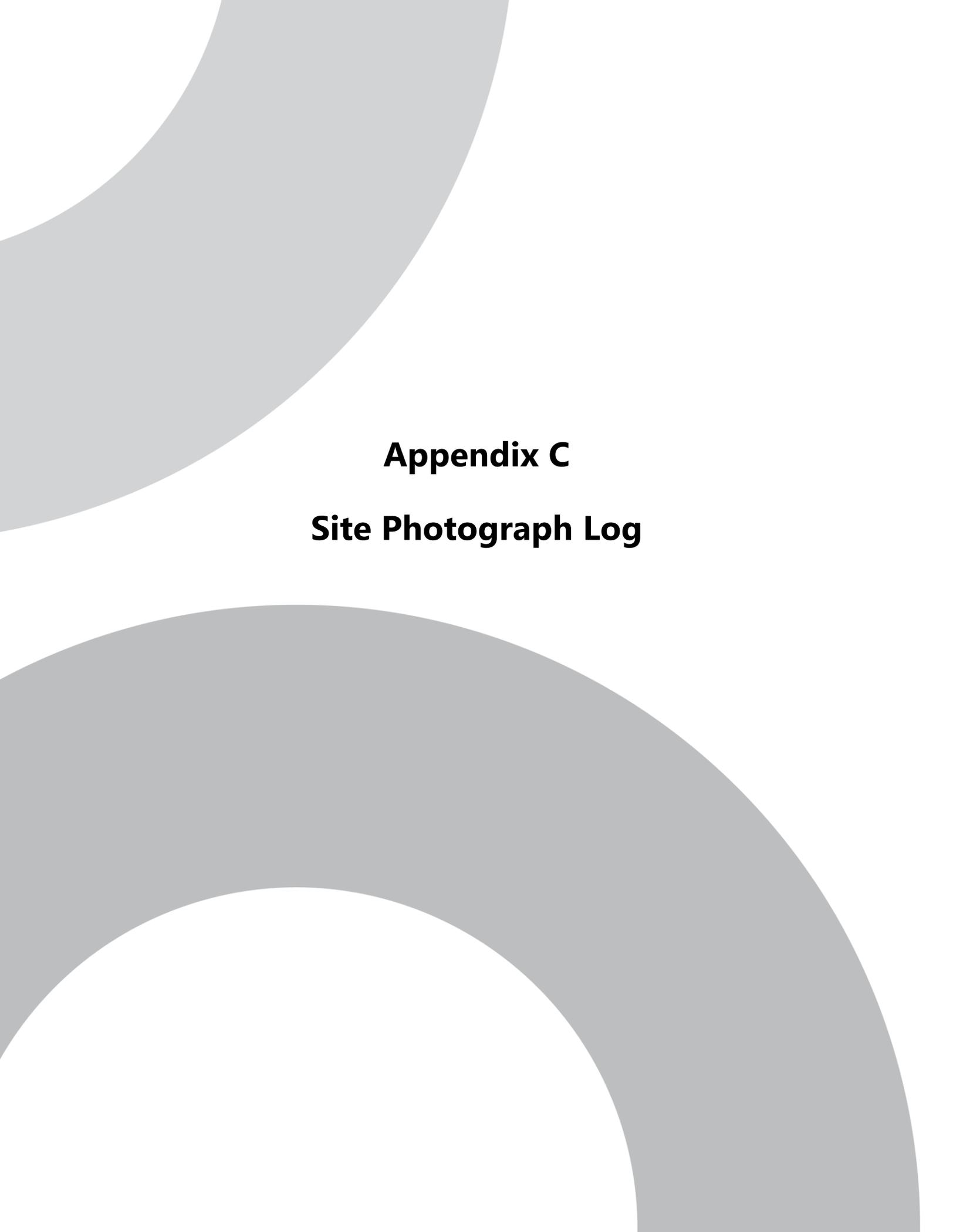


225	Yes	White Ash	<i>Fraxinus americana</i>	18	2	1.8	F	P	Remove due to condition	Almost dead, few live shoots	Client	441084	5020460
226	Yes	American Elm	<i>Ulmus americana</i>	10	2	1.0	G	G	Protect	N/A	Shared - 88 Brockington Crescent, Nepean, ON K2G 5L1	441083	5020462
228	Yes	Trembling Aspen	<i>Populus tremuloides</i>	21	3	2.1	G	G	Remove	N/A	Client	441089	5020460
229	Yes	White Ash	<i>Fraxinus americana</i>	20	3	2.0	F	P	Remove due to condition	Almost dead, some live shoots	Shared - 88 Brockington Crescent, Nepean, ON K2G 5L1	441088	5020464
230	Yes	Trembling Aspen	<i>Populus tremuloides</i>	22	2	2.2	F	G	Protect	N/A	Client	441092	5020463
231	Yes	Trembling Aspen	<i>Populus tremuloides</i>	27	2	2.7	P	D	Remove due to condition	Appears dead	Client	441093	5020463
232	Yes	Trembling Aspen	<i>Populus tremuloides</i>	22	3	2.2	G	G	Protect	N/A	88 Brockington Crescent, Nepean, ON K2G 5L1	441095	5020467
233	Yes	Trembling Aspen	<i>Populus tremuloides</i>	31	4	3.1	G	F	Remove	N/A	Client	441098	5020465
236	Yes	American Elm	<i>Ulmus americana</i>	25	5	2.5	G	G	Remove	N/A	88 Brockington Crescent, Nepean, ON K2G 5L1	441104	5020468
237	Yes	Manitoba Maple	<i>Acer negundo</i>	29,16,12 =35	6	3.5	P	G	Remove	N/A	Client	441110	5020465
238	Yes	Sugar Maple	<i>Acer saccharum</i>	41	6	4.1	G	G	Remove	N/A	Client	441105	5020455
239	Yes	Serviceberry	<i>Amelanchier species</i>	14,12,12, 13 =26	6	2.6	G	G	Remove	N/A	Client	441118	5020414
240	Yes	Hedge Maple	<i>Acer campestre</i>	19	5	1.9	F	G	Remove	N/A	Client	441127	5020413
241	Yes	Austrian Pine	<i>Pinus nigra</i>	43	5	4.3	G	G	Remove	N/A	Client	441127	5020412
242	Yes	Austrian Pine	<i>Pinus nigra</i>	35	5	3.5	G	G	Remove	N/A	Client	441125	5020406
243	Yes	Hedge Maple	<i>Acer campestre</i>	25,18 =31	5	3.1	F	F	Remove	N/A	Shared - 149 Medhurst Drive, Nepean, ON K2G 5K9	441138	5020391
244	Yes	Crabapple	<i>Malus species</i>	22,24 =33	5	3.3	F	F	Remove	N/A	Client	441139	5020389
245	Yes	Crabapple	<i>Malus species</i>	28	5	2.8	F	G	Remove	N/A	Client	441135	5020385
246	Yes	White Ash	<i>Fraxinus americana</i>	29	3	2.9	P	P	Remove	Almost dead, few live shoots	Client	441142	5020373

247	Yes	Honey Locust	<i>Gleditsia triacanthos</i>	44	6	4.4	G	G	Remove	N/A	Client	441145	5020373
272	Yes	Honey Locust	<i>Gleditsia triacanthos</i>	38	6	3.8	G	G	Remove	N/A	Client	441145	5020369
273	Yes	Honey Locust	<i>Gleditsia triacanthos</i>	40	5	4.0	G	G	Remove	N/A	Client	441125	5020354
274	No	Hedge Maple	<i>Acer campestre</i>	20,20 =28	6	2.8	F	G	Remove	N/A	Client	441116	5020352
275	No	Hedge Maple	<i>Acer campestre</i>	20,20 =28	5	2.8	F	G	Remove	N/A	Shared - 149 Medhurst Drive, Nepean, ON K2G 5K9	441084	5020341
276	No	Eastern White Cedar	<i>Thuja occidentalis</i>	15	3	1.5	G	G	Protect	N/A	Client	441115	5020456
277	No	Eastern White Cedar	<i>Thuja occidentalis</i>	10	2	1.0	G	G	Protect	N/A	92 Brockington Crescent, Nepean, ON K2G 5L3	441114	5020457
278	No	Eastern White Cedar	<i>Thuja occidentalis</i>	12	2	1.2	G	G	Protect	N/A	93 Brockington Crescent, Nepean, ON K2G 5L3	441116	5020452
279	No	Eastern White Cedar	<i>Thuja occidentalis</i>	15	3	1.5	G	G	Protect	N/A	94 Brockington Crescent, Nepean, ON K2G 5L3	441117	5020450
280	No	Eastern White Cedar	<i>Thuja occidentalis</i>	12	3	1.2	G	G	Protect	N/A	95 Brockington Crescent, Nepean, ON K2G 5L3	441118	5020448
281	No	Eastern White Cedar	<i>Thuja occidentalis</i>	12	3	1.2	G	G	Protect	N/A	96 Brockington Crescent, Nepean, ON K2G 5L3	441118	5020449
282	No	Eastern White Cedar	<i>Thuja occidentalis</i>	15	3	1.5	G	G	Protect	N/A	97 Brockington Crescent, Nepean, ON K2G 5L3	441118	5020446
283	No	Eastern White Cedar	<i>Thuja occidentalis</i>	15	3	1.5	G	G	Protect	N/A	98 Brockington Crescent, Nepean, ON K2G 5L3	441118	5020447
284	No	Eastern White Cedar	<i>Thuja occidentalis</i>	15	3	1.5	G	G	Protect	N/A	99 Brockington Crescent, Nepean, ON K2G 5L3	441119	5020445
285	No	Littleleaf Linden	<i>Tilia cordata</i>	40	5	4.0	F	F	Remove	N/A	100 Brockington Crescent, Nepean, ON K2G 5L3	441119	5020443
286	No	Eastern White Cedar	<i>Thuja occidentalis</i>	12	3	1.2	G	G	Injure	N/A	Shared - 100 Brockington Crescent, Nepean, ON K2G 5L3	441119	5020441
287	No	Eastern White Cedar	<i>Thuja occidentalis</i>	12	3	1.2	G	G	Injure	N/A	Shared - 100 Brockington Crescent, Nepean, ON K2G 5L4	441120	5020439
288	No	Eastern White Cedar	<i>Thuja occidentalis</i>	15	3	1.5	G	G	Injure	N/A	Shared - 100 Brockington Crescent, Nepean, ON K2G 5L5	441121	5020437

289	No	Eastern White Cedar	<i>Thuja occidentalis</i>	14	3	1.4	G	G	Remove	N/A	Shared - 100 Brockington Crescent, Nepean, ON K2G 5L6	441121	5020434
290	No	Eastern White Cedar	<i>Thuja occidentalis</i>	15	3	1.5	G	G	Injure	N/A	Shared - 100 Brockington Crescent, Nepean, ON K2G 5L7	441122	5020432
291	No	Eastern White Cedar	<i>Thuja occidentalis</i>	12	3	1.2	G	G	Injure	N/A	Shared - 100 Brockington Crescent, Nepean, ON K2G 5L8	441125	5020424
292	No	Eastern White Cedar	<i>Thuja occidentalis</i>	15	3	1.5	G	G	Injure	N/A	Shared - 100 Brockington Crescent, Nepean, ON K2G 5L9	441126	5020421
293	No	Eastern White Cedar	<i>Thuja occidentalis</i>	14	3	1.4	G	G	Injure	N/A	Shared - 100 Brockington Crescent, Nepean, ON K2G 5L10	441128	5020419
294	No	Eastern White Cedar	<i>Thuja occidentalis</i>	12	3	1.2	G	G	Injure	N/A	Shared - 100 Brockington Crescent, Nepean, ON K2G 5L11	441129	5020416
295	No	Eastern White Cedar	<i>Thuja occidentalis</i>	15	3	1.5	G	G	Injure	N/A	Shared - 100 Brockington Crescent, Nepean, ON K2G 5L12	441129	5020415
296	No	Eastern White Cedar	<i>Thuja occidentalis</i>	16	4	1.6	G	G	Injure	N/A	Shared - 100 Brockington Crescent, Nepean, ON K2G 5L13	441130	5020414
297	No	Eastern White Cedar	<i>Thuja occidentalis</i>	15	4	1.5	G	G	Injure	N/A	Shared - 100 Brockington Crescent, Nepean, ON K2G 5L14	441130	5020413





Appendix C
Site Photograph Log

Site Photograph	Description
	<p>Northwest corner of the Study Area showing thicket habitat and declining ash trees from EAB, facing Woodroffe Avenue.</p>
	<p>East side of the Study Area showing existing wood fence and shared Eastern White Cedar trees.</p>





East side of the Study Area showing Austrian Pines and existing closed restaurant building.



Existing car wash entrance and trees on the southeast side of the Study Area.



City owned Honey Locusts on the south end of the Study Area.



Southwest corner of the Study Area facing the intersection of Woodroffe Avenue and Medhurst Drive.



Tree #201



Tree #207



Tree #208



Tree #209



Tree #210



Tree #211



Tree #212



Tree #213



Tree #214



Tree #215



Tree #216



Tree #217



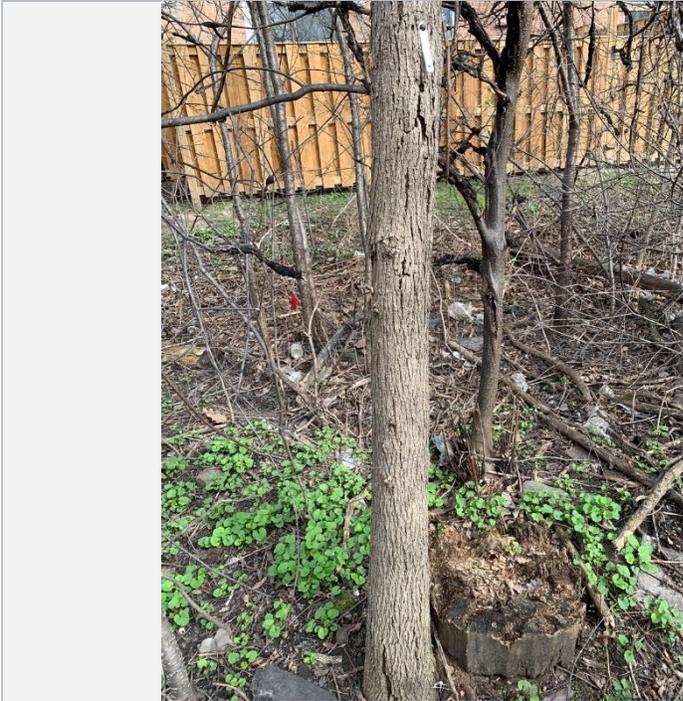
Tree #218



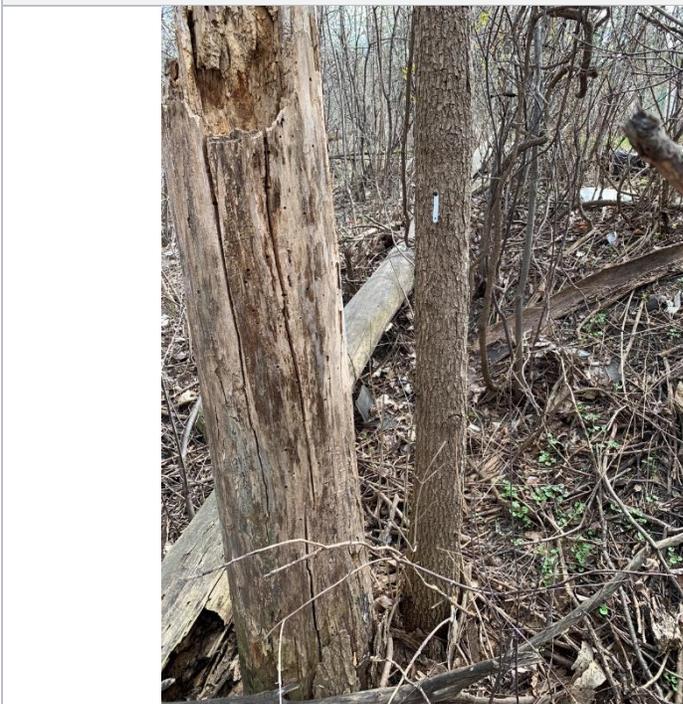
Tree #219



Tree #220



Tree #221



Tree # 222



Tree #223



Tree #224





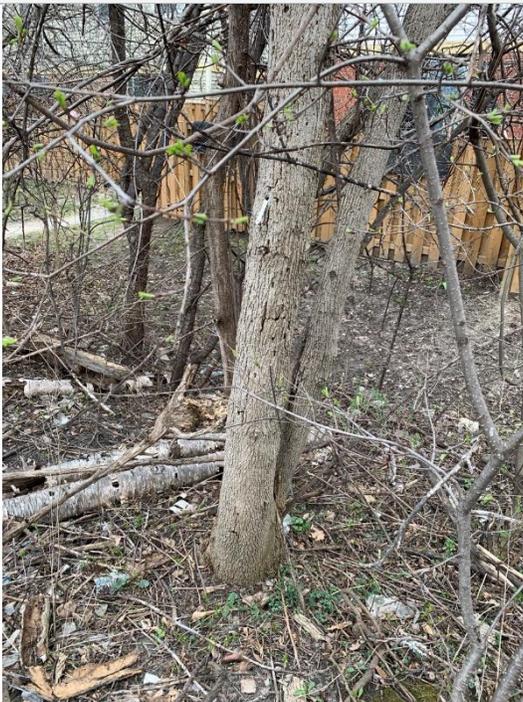
Tree #225



Tree #226



Tree #228



Tree #229



Tree #230



Tree #231





Tree #232



Tree #233



Tree #236



Tree #237



Tree #238



Tree #239



Tree #240



Tree #241



Tree #242



Tree #243



Tree #244



Tree #245



Tree #246



Tree #247

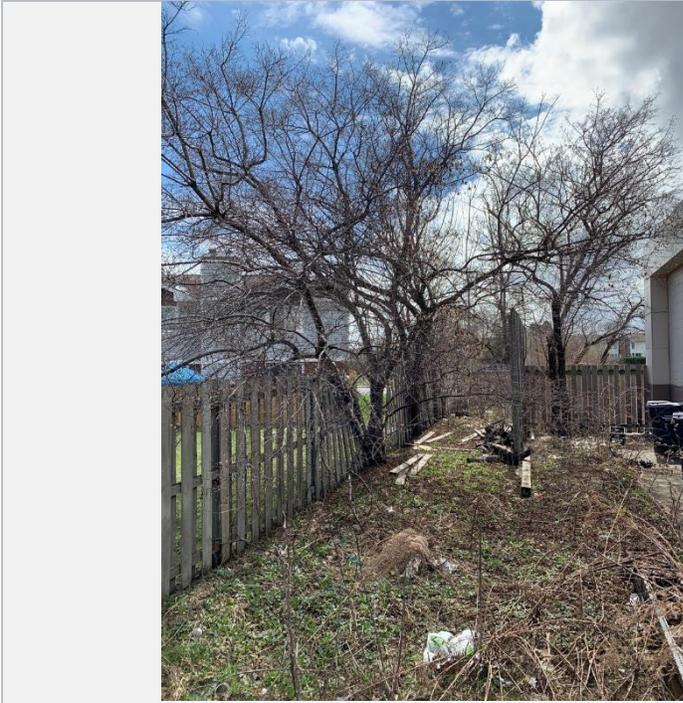


Tree #272



Tree #273





Tree #274



Tree #275



Tree #276



Tree #277



Tree #278



Tree #279



Tree #280



Tree #281



Tree #282



Tree #283



Tree #284



Tree #285



Tree #286



Tree #287



Tree #288



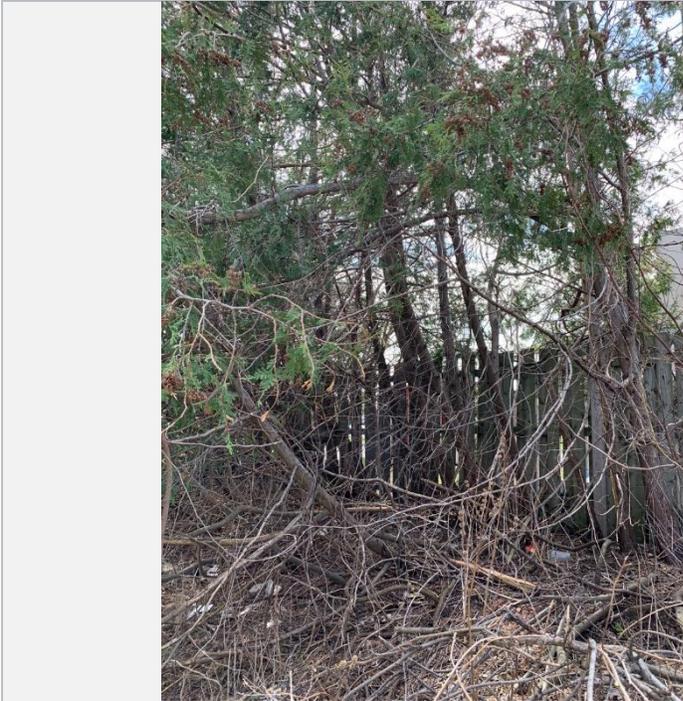
Tree #289



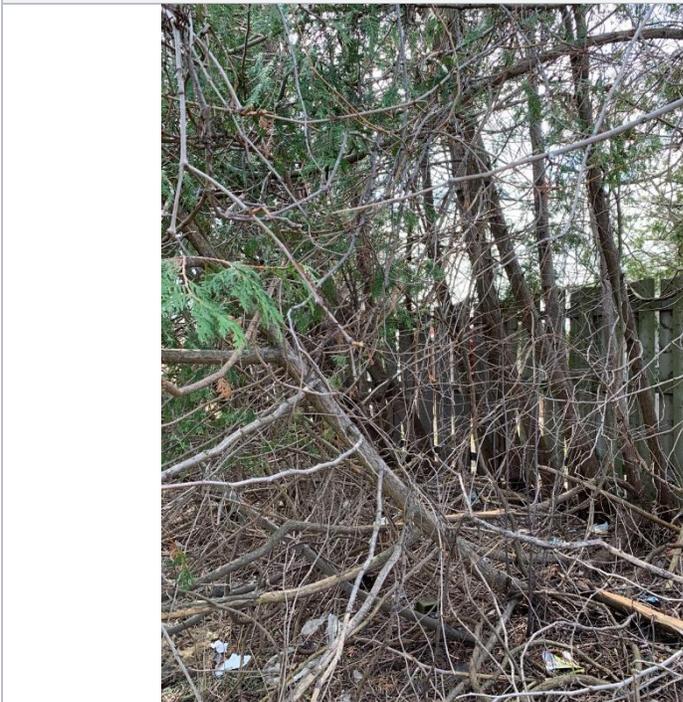
Tree #290



Tree #291



Tree #292



Tree #293



Tree #294



Tree #295



Tree #296



Tree #297

Limitations

1. The work performed in the preparation of this report and the conclusions presented are subject to the following:
 - a. The Standard Terms and Conditions which form a part of our Professional Services Contract;
 - b. The Scope of Services;
 - c. Time and Budgetary limitations as described in our Contract; and
 - d. The Limitations stated herein.
2. No other warranties or representations, either expressed or implied, are made as to the professional services provided under the terms of our Contract, or the conclusions presented.
3. The conclusions presented in this report were based, in part, on visual observations of the Site and attendant structures. Our conclusions cannot and are not extended to include those portions of the Site or structures, which are not reasonably available, in Wood's opinion, for direct observation.
4. The environmental conditions at the Site were assessed, within the limitations set out above, having due regard for applicable environmental regulations as of the date of the inspection. A review of compliance by past owners or occupants of the Site with any applicable local, provincial or federal By-laws, orders-in-council, legislative enactments and regulations was not performed.
5. The Site history research included obtaining information from third parties and employees or agents of the owner. No attempt has been made to verify the accuracy of any information provided, unless specifically noted in our report.
6. Where testing was performed, it was carried out in accordance with the terms of our contract providing for testing. Other substances, or different quantities of substances testing for, may be present on-site and may be revealed by different or other testing not provided for in our contract.
7. Because of the limitations referred to above, different environmental conditions from those stated in our report may exist. Should such different conditions be encountered, Wood must be notified in order that it may determine if modifications to the conclusions in the report are necessary.
8. The utilization of Wood's services during the implementation of any remedial measures will allow Wood to observe compliance with the conclusions and recommendations contained in the report. Wood's involvement will also allow for changes to be made as necessary to suit field conditions as they are encountered.
9. This report is for the sole use of the party to whom it is addressed unless expressly stated otherwise in the report or contract. Any use which any third party makes of the report, in whole or the part, or any reliance thereon or decisions made based on any information or conclusions in the report is the sole responsibility of such third party. Wood accepts no responsibility whatsoever for damages or loss of any nature or kind suffered by any such third party as a result of actions taken or not taken or decisions made in reliance on the report or anything set out therein.
10. This report is not to be given over to any third party for any purpose whatsoever without the written permission of Wood.
11. Provided that the report is still reliable, and less than 12 months old, Wood will issue a third-party reliance letter to parties that the client identifies in writing, upon payment of the then current fee for such letters. All third parties relying on Wood's report, by such reliance agree to be bound by our proposal and Wood's standard reliance letter. Wood's standard reliance letter indicates that in no event shall Wood be liable for any damages, howsoever arising, relating to third-party reliance on Wood's report. No reliance by any party is permitted without such agreement.