Theia Partners

Tree Conservation Report and Species at Risk Screening

30 Cleary Avenue

October 6, 2026



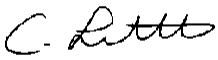
Tree Conservation Report and Species at Risk Screening

30 Cleary Avenue

Updated October 6, 2026

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Version Control (optional)

Revision No.	Reviewed by	Date Issued	Description
000	LC	September 7, 2023	Executive Summary for Client Review, prepared by CIMA+
001	LC	October 4, 2023	Existing Conditions, prepared by CIMA+
002	LC	November 17, 2023	Impact Assessment, prepared by CIMA+
003	LC	July 3, 2024	Expanded Study Area and updated design, prepared by CIMA+
004	AZ	May 13, 2025	Detailed Design and updated Impact Assessment, prepared by Arcadis
005	DF	November 26, 2025	Detailed Design and updated Impact Assessment, prepared by Arcadis
006	DF	February 9, 2026	Addressing Submission Comments
007		October 6, 2026	Addressing Submission Comments & updated assessment of select trees.

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1 Introduction

Arcadis Canada Inc. (Arcadis) has been retained by Theia Partners (the 'Client') to prepare a Tree Conservation Report (TCR) for the proposed residential development located at 30 Cleary Ave, on Part Lot 26, Concession 1, Geographic Township of Nepean – within the Urban boundary of the City of Ottawa (the 'Site').

1.1 Project Location and Description

The subject property at 30 Cleary Avenue, Ottawa ON is approximately 2.2 hectares in total. The Site is bordered by a deciduous woodlot to the north that runs parallel to the Kichi Zibi Mikan (formerly Sir John A MacDonald Parkway), and the River Parkway Children's Centre to the south. A naturalized strip of vegetation along the western edge separates the Site by a chain link fence along the backyard of homes located on Aylen Avenue. The First Unitarian Congregation of Ottawa is situated to the east, where a community prayer garden separates the proposed development from the church. The topography is flat and is currently comprised of an asphalt parking area.

Refer to **Figure 1** on the following page to view the Site Location.

1.2 Objective

This Tree Conservation Report (TCR) follows the *City of Ottawa Tree Conservation Report Guidelines* (City of Ottawa, 2021), which required a site visit to identify trees larger than 10 cm in diameter that could be impacted by the project. Information on the individual trees and tree groupings, their species, size (diameter-at-breast height, dbh) and health were recorded. The TCR summarizes the results, identifies the ownership of the trees, and based on the current design plans provides commentary on which trees could be retained and those that are recommended to be pruned or removed. This information is depicted on the mandatory Map 1 and Map 2 of the TCR, as per the guidelines. In the paragraphs below, we have outlined the field methodology and findings of the tree inventory. This report will help determine the project's potential impact on existing trees and provide general recommendations to avoid and/or mitigate tree loss and injury.

As part of this scope of work, the city requested that a screening of the Site be completed to determine if impacts to Species at Risk (SAR) and/or their habitat would occur as a result of this proposed development.



Figure 1: Aerial Image of the Subject Property, Proximity to Rapid Transit, and the Surrounding Area

2 City of Ottawa Tree Protection By-Law

The Site is located within the City of Ottawa's Tree Protection By-law No. 2020-340 (January 1, 2021) limits. The intent of this By-Law is to respect 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.

Under the Tree Protection By-law, the following protected trees cannot be injured or removed without a tree permit from the city:

- *All City-owned trees throughout the urban and rural area.*
- *All trees 10 cm or more in diameter at breast height on private properties within the urban area that are subject to a Planning Act application for Site Plan, Plan of Subdivision, or Plan of Condominium.*
- *All trees 10 cm or more in diameter at breast height on private properties within the urban area that are over 1 hectare in size.*
- *All distinctive trees on private properties 1 hectare or less in size, where distinctive trees are defined as:*
    - *Trees measuring 30 cm or more in diameter at breast height within the City's inner urban area.*
    - *Trees measuring 50 cm or more in diameter at breast height within the City's suburban area.*

The Tree Protection By-law requires permits to be obtained before City-owned trees or protected privately owned trees are removed. It also sets out requirements for compensation to be provided when trees are removed, so that they can be replaced.

A Tree Conservation Report (TCR) is required as a part of the application package for all Plans of Subdivision, Site Plan Control Applications, Common Elements Condominium Applications, and Vacant Land Condominium Applications where there is a tree of 10 centimeters in diameter or greater on the site and/or if there is a tree on an adjacent site that has a Critical Root Zone (CRZ) extending onto the development site. The purpose of the TCR is to demonstrate how tree cover will be retained and protected on the Site, including mature trees, stands of trees, and hedgerows, using a design with nature approach. A design with nature approach incorporates the natural features of a site into the design and engineering of a proposed development. The TCR also shows which trees must be removed on the site to accommodate the proposed development.

3 Limitations

The assessment presented in this report has been made using accepted standard arboriculture techniques as outlined in Chapter 4 (Data Collection) of the *Council of Tree and Landscape Appraisers Guide for Plant Appraisal, 10th Edition, Second Printing* (2020). The trees observed were not climbed, cored, or dissected, and excavation for detailed root crown inspection was not performed. Since some symptoms may only be present seasonally, the extent of observations that can be made may be limited by the time of year the inspection took place.

As trees are living organisms, their health and vigor continually change over time due to seasonal variations, changes in site conditions, and other factors. For this reason, the assessment presented in this report is valid at the time of inspection, and no guarantee is made about the continued health of trees that are deemed to be in good condition. It is recommended that the trees be reassessed periodically to identify changes in condition. While every standing tree has the potential for failure and therefore poses some risk, a tree assessment is a good indication of present health and potential problems that could arise in the future.

Previous versions of this report were prepared by CIMA+ for the sole use of the client. Any use of this report by a third party, as any decision based on this report, is the singular responsibility of the third party. CIMA+ will not be held responsible for eventual damage to a third party resulting from decisions taken, or based, on this report.

4 Methodology

The tree inventory was undertaken on July 21, 2023, and June 5, 2024. Trees were numbered, identified, measured, and assessed for condition. Information collected on the individual trees included:

- Species
- Diameter at breast height (DBH)
- Approximate crown spread
- Condition

The Tree Inventory and Assessment Table containing this information is included in **Appendix A**. Mandatory Map 1 as per City of Ottawa, 2021, also included in **Appendix A**, depicts the locations of the numbered trees assessed. The assessment methodology is outlined in the sections below.

4.1 Tree Size

Size refers to trunk diameter at breast height (DBH or caliper) measured in centimeters (cm) at 1.4 meters (m) above the ground. Where trees had more than one trunk from the base, the size of each trunk was recorded. Where trees forked into codominant trunks the diameter was measured at the narrowest point below the fork.

4.2 Tree Assessment

The assessment involved a visual examination of the above-ground parts of each tree. The crown, trunk, and root structure of each tree were observed and assessed noting any abiotic and/or biotic disorders as well as structural defects present. Several structural defects and health problems are included in the Tree Inventory and Assessment Table (**Appendix A**). The following list provides an explanation of the short forms used in the table of the top eight (8) deficiencies observed on Site:

- DB - Dieback refers to the ends of branches dying, which is often associated with root problems.
- SMD - Small dead branches are an indicator of crown dieback and can be an early sign of stress.
- UC - Unbalanced Crown is a tree's crown that is much more extensive in one direction than another, often due to competition from the crown of a nearby tree or exposure
- COD - Codominant leaders (2 trunks or branches of approximately equal size) often have narrow branch angles and are associated with weak branch attachment. Strong branch attachments occur between 2 limbs of unequal size with enough space for branch enlargement and formation of a branch bark ridge.
- FC - Frost cracking is a winter injury caused by temperature fluctuations on bark and inner wood when the sun warms a tree trunk and then temperatures drop quickly, causing splitting of the bark that can extend into the wood below. Frost cracking can be associated with snow reflection and southwest-facing trunk exposures and particularly affects young trees and species with thin bark.
- LE - A tree with a lean can be more susceptible to windthrow and soil failure. Self-correcting lean refers to a natural correction of the lean by development of new growth that counteracts the lean of the trunk to provide a more balanced form.
- NRF - No root flare refers to the base of the trunk where it widens as it transitions to the root system.
- MBR – When a tree has multiple branches from the same point of attachment, the branches usually have characteristics of weakly attached branches.
- ADV – Adventitious shoots refer to vigorous growth of shoots from pruning cuts, inner branches, of along the trunk that usually occur in response to stress.
- INCL – Included bark is bark that has become embedded in a crotch where limbs join and causes weakened branch attachments. As the trunk and branch increase in diameter, the bark of each stem in the tight crotch begins to push apart, increasing the likelihood of failure.
- SUP - Suppressed trees are growing under the canopies of neighboring trees, which can diminish vigor and affect structural form.

4.3 Tree Condition

Each tree was given an overall health condition rating of: Excellent, Good, Fair, Poor, or Dead. The following is a summary of how the ratings are determined:

- EXCELLENT: No apparent health problems; good structural form.
- GOOD: Minor problems with health and/or structural form.
- FAIR: Significant problems with health and/or structural form.
- POOR: Major problems with health and structural form.
- DEAD: Dead.

4.4 Tree Ownership

Apart from Trees 88 and 89, which are City-owned trees within the right-of-way of Cleary Avenue, all the trees inventoried are located on private property. Trees 20, 21, 25, 35, 81-87, 90-113, 115, 118, group 119, and 120-123 are privately owned trees on adjacent properties. No impact is expected to any of the trees not located within the subject property, apart from tree 123 located on the River Parkway Children's Centre property.

4.5 Tree Protection and Impact Analysis

The Critical Root Zone (CRZ) was determined using the *City of Ottawa Tree Conservation Report Guidelines* (City of Ottawa, 2021). The CRZ is established as 10 cm from the trunk of a tree for every cm of trunk DBH. The CRZ is calculated as DBH x 10 cm and is shown on Maps 1 and 2 in **Appendix A**.

Using data collected during the tree inventory and assessment, drawings showing the tree locations (collected through topographic survey), and the proposed development footprint and anticipated area of impact, tree impact analysis was completed, resulting in recommendations to Retain, Remove, or Prune trees. Our understanding is that the buildings will be constructed using blind forms, resulting in an impact area that will not extend significantly beyond the building footprint. We also understand that Landscape Plans being developed for the Site will minimize the requirement for tree removals, with efforts to integrate landscape improvements without impact to existing trees on the Site. The proposed limit of building forms is shown on Map 2 (in **Appendix A**) along with changes to vehicular circulation that will impact trees.

The minimum CRZ of each tree canopy is illustrated on Mandatory Map 2 as per City of Ottawa, 2021 (included in **Appendix A**) to help determine possible injury and branch pruning that may be required. The Comments section of the Tree Inventory and Assessment Table (**Appendix A**) also includes notes about tree form and canopy location that can help determine any pruning that may be required to accommodate construction equipment.

Tree Impact and associated recommendations (retain, prune and protect, or remove) have been determined and is described in Section 7, as well as included in the Tree Inventory and Assessment Table, and displayed on Map 2 included in **Appendix A**).

For all trees to be retained, tree protection fencing must be installed to separate trees from the work area. Tree protection fencing must be installed no closer to the trunk than the Critical Root Zone but should be placed as far as possible from the tree.

5 Existing Conditions

The dates, timing, and environmental conditions at the time of the assessments are presented below in **Table 1**.

Table 5: Site Investigations Details

Date	Start/End Time	Survey Intent	Weather Conditions
2023/07/21	0930-1430	Visual assessment of all trees ≥10 cm dbh on-site	Temperature: 20°C Cloud cover / Precipitation: Mixed sun/clouds, Light wind.
2024/06/05	1030-1530	Visual assessment of all trees ≥10 cm dbh in adjacent areas	Temperature: 29°C Cloud cover / Precipitation: Clear skies, Light wind

The Site has three surface water features; only two of which were observed during the 2023/2024 site investigation. One drainage ditch is situated along the western extent within the naturalized vegetation. This feature was approximately 40 m long from north to south, had standing water during the July 2023 assessment, and consisted of reed canary grass. The second feature is situated within the community garden and flows through a small culvert / pipe that runs underground in this location. Another small drainage feature is depicted on geoOttawa along the northern extent of the Site within the deciduous woodlot, outside the Site boundaries. There was no standing water present or indication of inundation in this area during the site visit. There are no wetlands or watercourses on Site.

The Site is flat with no presence of steep slopes, valleylands or escarpments. There are no valued woodlands designated as Urban Natural Features or Natural Environment Areas, or significant woodlands on or adjacent the Site. There are no riparian woodlots, rare communities, or other unique ecological features (i.e., Provincially Significant Wetlands, unevaluated wetlands).

Majority of the subject lands where the building envelope is planned consist of paved parking areas surrounded by residential and commercial buildings. The woodland to the north is dominated by deciduous tree species generally in good health. The narrow band of vegetation along the western extent of the Site is comprised of a mix of coniferous tree species (red pine) and non-native deciduous trees and shrubs (Norway maple, Manitoba maple, common buckthorn, and honeysuckle). The community garden that separates the Site from the church has numerous tree, shrub, and herbaceous plants species that are well taken care of and provide a peaceful naturalized space for the community members to enjoy. The adjacent lands to the south are fully developed (commercial and residential, respectively).

A total of 122 individual trees and one (1) group were assessed as part of this inventory. The condition of the trees on Site ranged from Good to Dead, approximately 80% of which were in Good condition. The most common species are Norway maple (26%), red pine (12%), and Manitoba maple (12%).

There are 45 trees that meet the definition of a ‘Distinctive Tree’ as per Tree Protection By-law No. 2020-340 (any tree located on private property with a DBH of 30 cm or greater, within the inner urban area), including Trees 20, 21, 25, 35, and 115 which are located on adjacent properties. Trees 2 and 80 are Distinctive trees that require removal based on the current design plans.

6 Species at Risk Screening

A desktop screening and review of the natural heritage features was completed for the Study Area to determine if SAR or SAR habitat may be present on or adjacent to the Site. Since many of these features have a regulatory influence which extends beyond the Study Area, the desktop screening included features up to two kilometers away from the subject property on a case-by-case basis.

This information was supplemented by a review of regulated habitat described in Ontario Regulation 242/08 under the Ontario *Endangered Species Act, 2007* to include habitat that may be protected even in the absence of the species.

6.1 Background Data Collection

The following referenced online resources were reviewed to collect general background information, including occurrence records of Species at Risk (SAR) listed as endangered and/or threatened under the provincial *Endangered Species Act, 2007*, within 1 km of the Site.

- NHIC Make a Natural Heritage Map – MNR (Square #18VR3925)
- Aquatic Species at Risk (SAR) Map – Fisheries and Oceans Canada (DFO)
- Ontario Breeding Bird Atlas – (Square #18TVR32)
- Ontario Reptile and Amphibian Atlas – Square (#18VR32)
- Ontario Butterfly Atlas – (Square #18VR32)

6.2 Existing Conditions

Background review of NHIC listed the following SAR occurrences within 1 km^2 of the project area: bobolink (threatened), chimney swift (threatened), and eastern meadowlark (threatened).

The Ontario Breeding Bird Atlas (OBBA), Ontario Reptile and Amphibian Atlas (ORAA), and Aquatic Species at Risk Atlas have historic records for the following SAR within 10 km^2 of the project area: bobolink, chimney swift, eastern meadowlark, hickorynut (endangered) and Blanding's turtle (threatened). Six (6) endangered SAR mammals are also known to occur in the Ottawa area and may be present, including: eastern red bat, eastern small-footed myotis, hoary bat, little brown myotis, northern long-eared myotis, silver-haired bat, and tri-colored bat.

There is no suitable habitat on-Site for bobolink, eastern meadowlark, hickorynut, or Blanding's turtle.

Chimney swift may use the surrounding chimneys or other manmade structures adjacent to the Site for nesting/roosting, and SAR bat habitat is present within the trees on and adjacent to the Site. General avoidance timing windows will protect the SAR with potential to occur on Site.

Based on the site conditions, the proposed project area contains habitat for common wildlife species with a high tolerance for human activity, preferring manicured habitats with a mix of lawn, trees, shrubs, and ornamental beds. These species would include wildlife such as mice, squirrels, racoons, and many common species of insects and birds.

The trees and shrubs within the Site provide adequate nesting habitat for several bird species protected under the *Migratory Bird Convention Act, 1994*.

7 Impact Assessment and Recommendations

7.1 Impacts on Trees

Based on the conditions of the trees and extent of the proposed construction limits, **Table 2** summarizes the impact and recommended actions of the 123 trees/group assessed within the Site. It is anticipated that 21 trees >10 cm diameter at breast height (DBH) will need to be removed. These details are depicted on Mandatory Map 2 as per the City of Ottawa, 2021 and outlined in the Tree Inventory and Assessment Table included in **Appendix A**.

Refer to **Section 8.2** below for information on measures recommended to protect all remaining trees within the Site prior to and during construction.

It should be noted that the condition of one (1), 2-stem northern catalpa (tree #7) situated within the community garden was assessed as Good, however is experiencing some crotch decay. It was recommended that prior to construction, an ISA certified Tree Risk Assessor (ISA TRAQ) complete a Risk Assessment for this tree, and comment on its candidacy for cabling the 2 stems to strengthen its structural integrity. This Risk Assessment was completed in Fall 2026 and the results can be found in **Appendix D**. **Photo 1** below displays the codominant union of the trunks of tree #7.

Table 2: Impact Assessment and Recommendations for Trees on Site

Trees to be Removed	Trees to be Pruned and Protected	Trees to be Retained
22	3	98



Photo 1: View of crotch decay and codominant leaders of Tree #7 – Northern Catalpa

7.2 Impacts to SAR

Loss of vegetation is expected to occur because of the proposed design and general construction activities (i.e. staging, excavation, and asphalt placement) required to complete this work. It is anticipated that 21 trees >10 cm diameter at breast height (DBH) will need to be removed. The mature trees located within and adjacent to the Site provide suitable SAR bat habitat. It's generally understood that within the Ottawa area, this roosting habitat is not a limiting factor contributing to the decline of SAR bats. However, because there is tree removals anticipated as a result if this Project, a Risk Category of 'Moderate' potential to impact SAR bats and their habitat has been assigned. Basic management recommendations and mitigation measures are proposed in **Section 8.5**. below to mitigate the potential impact the proposed development may have on SAR bats.

There are suitable structures in the vicinity of the Site that provide potential roosting/nesting habitat for chimney swifts, however, as none of these suitable structures will be impacted, this infrastructure project has been assigned a Risk Category of 'Very Low' potential to impact chimney swift and their habitat.

8 Mitigation Measures and Construction Management

8.1 Tree Removal

Based on the proposed project design and existing conditions of the trees on site, 21 trees have been recommended for removal. The following recommendations are provided:

- Retain a Certified Arborist during site layout operations to confirm recommended tree removals, pruning, and tree protection fencing in proximity to the construction limits.

8.2 Tree Protection Measures

The most typical construction damage to trees is root damage from compaction and severance. While the drip line of a tree's canopy is typically thought to be associated with the root area, the root zones can extend significantly beyond the drip line of the tree, sometimes up to 2 or 3 times the height of the tree. Some of the trees inventoried are growing close to the edge of proposed construction and will be at risk of contact with, and damage from, heavy equipment. To protect trees, grade changes and construction activities that could cause soil compaction should generally be kept away from trees as much as possible.

To successfully preserve trees that are recommended for on-site retention, the following series of mitigation measures is recommended. These recommended measures largely center on the minimum CRZ of trees (The CRZ is calculated as DBH x 10 cm), as defined by the City's Tree Conservation Report Guidelines. The following measures are recommended to protect the CRZ of all trees slated for retention and/or impact:

- Delineation of the disturbance limits within work areas will be clearly defined in drawings and on the site prior to construction.
- Install Tree Protection Fencing prior to commencement of construction activities, and retain fencing until construction activities have been completed, as per City of Ottawa's Tree Protection (By-law No. 2020-340), Part VI:

    - Tree protection fencing shall be at least 1.2 m in height and installed in such a way that the fence cannot be altered.
    - Refer to **Appendix B** for the City of Ottawa's Tree Protection Fencing Specification.
- Ensure that site clearing is carried out only in areas where it is specifically required, and that the areas to be cleared are carefully and clearly delineated.
- Do not place any material or equipment within the CRZ of a tree.
- Do not raise or lower the existing grade within the CRZ of a tree.
- Do not extend any hard surface or significantly change landscaping.
- If the construction will have to encroach into a tree's minimum CRZ, installing a temporary layer of 150 mm deep partially composed wood chips, or mulch over the root zone can help to protect roots from compaction damage, and conserve soil moisture levels.
- Equipment and materials should not be stored near trees.
- Ensure that exhaust fumes from all equipment are not directed towards any tree's canopy.
- Do not attach any signs, notices, or posters to trees.
- Prior to construction, an ISA certified Tree Risk Assessor (ISA TRAQ) should be retained to complete a Risk Assessment of Tree #7, and comment on its candidacy for cabling the 2 stems to strengthen its structure integrity.

8.3 Branch and Root Pruning

- If branches are likely to hang in the way of passing equipment, the branches should be pruned by a Certified Arborist or Registered Forester to avoid tearing and undue injury to the tree.
- All pruning work must be performed under the supervision and guidance of a qualified tree professional in accordance with the latest ANSI A300 Pruning Standards and best management practices identified by the International Society of Arboriculture.
- Do not damage the root system, trunk, or branches of any tree; if any roots are encountered during excavation while working outside the CRZ, they should be cut off cleanly with sharp pruning tools rather than allow them to be torn by large equipment; clean cuts will help to minimize decay and entry points for disease.
- All exposed roots of trees to be retained should be covered in a minimum of 5 cm of firm soil within 24 hours of exposure.
- If root pruning is implemented, the crown of the tree should be reduced proportionately under the direction of a Certified Arborist or Registered Forester, to decrease wind sail. Pruning should be kept to thinning cuts (no major limb removal), and crowns should be monitored, and maintenance carried out for two (2) years after root pruning to remove any dieback under the direction of a Certified Arborist or Registered Forester.

8.4 Tree Planting Recommendations

For new tree planting(s) the Landscape Plan considerations may include:

- Prioritizing the use of native species, where appropriate.
- Where post-development growing conditions and landscape management requirements are not favorable for native species, the use of known invasive species shall be restricted.
- The species and health of existing tree as an indicator of appropriateness.

- The age of existing trees and potential for succession planting.
- Seek to mitigate any loss of canopy cover.
- Diversity of species in newly planted and existing trees.
- Micro-climatic conditions.

8.5 SAR Protection

The City of Ottawa, in collaboration with the MNRF, created a list of best management practices (BMPs) and mitigation measures to be implemented for City projects to minimize the impacts of projects on SAR and migratory birds. These BMPs and mitigation measures are commonly applied to similar projects and are broad enough to cover SAR groups such as SAR birds and SAR bats. The mitigation measures provide activity windows for work in habitats that have the potential to impact SAR/migratory birds and bats. The sections below recommend mitigation measures for the Site to protect SAR and SAR habitat because of the proposed construction. Refer to **Appendix C** for the City of Ottawa's SAR Mitigations Table.

Timing of Construction Activities

The trees and shrubs within and adjacent the Site may provide suitable habitat for SAR bats. When construction activities occur within or near SAR bat habitat impacts to individuals can be minimized by carefully scheduling the timing of the work to avoid these areas when they may be occupied or during sensitive periods. The City of Ottawa's SAR Mitigations #15, and #16 (**Appendix C**) provide timing windows to protect SAR bats.

- As vegetation clearing is required because of the Project, this work should be completed outside of the active bat timing window when SAR bats are not present in the Ottawa area (October 1 to April 30).
    - Should any clearing be required during the active bat season, searches for bat roosting habitat shall be conducted by a qualified person and must be completed 48 hours prior to clearing activities.
    - If suitable roost habitat is observed, an evening exit survey shall be conducted for each candidate roost tree proposed for removal and will occur from 30 minutes before dusk until 60 minutes after dusk. Each identified cavity requires one (1) surveyor to be present (i.e. if a tree has been identified to have three (3) cavities then three (3) surveyors are required to complete the survey for this individual tree). If no bats are observed exiting the cavity tree, the following day, the tree shall immediately be removed. If the tree is not removed the following day, a further exit survey must be carried out prior to tree removal.

Protection of Wildlife during Construction

The City of Ottawa's *Protocol for Wildlife Protection during Construction* (2013), was developed as part of the City's Wildlife Strategy. The protocol is a compilation of best practices that serves as a guide and a common frame of reference for the city and the development industry in addressing wildlife protection during construction (City of Ottawa, 2013). This protocol is intended to help reduce the direct impacts of development on wildlife that occur during construction (ibid). The protocol promotes best management practices relating to sensitive timing windows for clearing, pre-stressing, site clearing, construction site management, wildlife encounters, wildlife-proofing, and owner awareness (ibid).

General habitat for several wildlife species were observed within the immediate area of the proposed Project location during the site investigations. It is recommended that this protocol be included in the Contract Documents to guide wildlife protection prior to and during construction. Refer to the City of Ottawa's *Protocol for Wildlife Protection during Construction* (2013) for further information.

Site Restoration/Rehabilitation

The following mitigation measures are also recommended to reduce impacts to SAR, migratory birds and other wildlife because of the pathway extension:

- Travel paths, stockpile areas and staging areas, within the vicinity of the Site, should be pre-planned and followed.
- Minimize vegetation removal where possible and proper clearing and grubbing techniques will be utilized. All retained vegetation will be delineated and protected.
- Remove all construction materials from Site upon project completion.

9 Permits and Approvals

The City of Ottawa's Tree Protection By-law No. 2020-340 describes the rules that govern tree ownership in Ottawa and the responsibility of tree maintenance, including administration and enforcement. As per Part IV: Sections 42 – 44 Prohibition: *No person shall injure or destroy a tree without a permit.* Sections 45 to 48 - Application for tree permit stipulates the process of applying for a permit under this by-law.

Therefore, it is recommended that consultation should be undertaken with the city prior to construction to confirm the requirements for tree removal permits associated with the municipal tree protection by-law. Where required, tree removal permits must be obtained from the city prior to the start of construction.

10 Summary

One hundred and twenty-three (123) trees were inventoried within the proposed residential development area located at 30 Cleary Avenue in Ottawa, Ontario. Based on the proposed design, the inventory resulted in ninety-eight (98) trees to be retained, three (3) of which are to be pruned and protected, and twenty-two (22) trees proposed for removal.

A list of proposed avoidance and mitigation measures have been included in Section 7 of this report in relation to tree removals, tree protection, and tree preservation.

Based on the review of the potential impacts to the SAR and SAR habitat that could result from the proposed Project, it was determined that appropriate measures can be implemented prior to and during construction to mitigate the impacts to SAR and SAR habitat within the Site. Best management practices and limited mitigation measures have been recommended for this Project to reduce impacts on SAR bats. These are mostly focused on recommended timing windows when planning construction activities.

Landscape plans have been developed separately as part of the development application.

11 Certification and Closure

We certify that all the statements of fact in this assessment are true, complete, and correct to the best of our knowledge and belief, and that they are made in good faith.

Appendix A

Tree Inventory and Protection Plan, and Maps 1 and 2



CURRENT VEGETATION PLAN
SCALE 1:750

0 5 10 20 50 metres
DO NOT SCALE DRAWING

NOTES:

1. THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE TREE CONSERVATION REPORT PREPARED BY ARCADIS;
2. REFER TO RECOMMENDATIONS IN TREE CONSERVATION REPORT FOR TECHNIQUES TO PRESERVE TREES.

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legend / légende

EXISTING TREES
ESTIMATED CROWN DIAMETER
CRITICAL ROOT ZONE
TREE NUMBERING

EXISTING TREE-LINE AS SURVEYED TO BE PRESERVED, REFER TO TREE CONSERVATION REPORT FOR PRESERVATION TECHNIQUES DURING CONSTRUCTION

03	Re-Issued for Tree Conservation Report	2026/10/02
02	Re-Issued for Tree Conservation Report	2025/11/18
01	Issued for Tree Conservation Report	2025/05/08
00	Issued for DRAFT Tree Conservation Report	2025/04/09
revn	description / la description	yyyy/mm/dd

north / le nord

project / projet

30 CLEARY AVENUE

drawing / dessin

TREE CONSERVATION REPORT
CURRENT VEGETATION

designed / conçu	drawn / dessiné	reviewed / examiné
	BM	DF

project number / No. du projet
23002

drawing number / No. du dessin
MAP 1

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- EXISTING TREES TO REMAIN
- ESTIMATED CROWN DIAMETER
- CRITICAL ROOT ZONE
- TREE NUMBERING
- TREES TO BE REMOVED
- TREE NUMBERING
- EXTENT OF PROPOSED UNDERGROUND GARAGE (DEEP EXCAVATION)
- EXTENT OF PROPOSED SITE WORKS (SHALLOW EXCAVATION, RE-GRADING, SITE WORKS, PLANTING)
- EXISTING TREE-LINE AS SURVEYED TO BE PRESERVED. REFER TO TREE CONSERVATION REPORT FOR PRESERVATION TECHNIQUES DURING CONSTRUCTION
- TREE NUMBERING
- TREE PROTECTION FENCING
- PROPOSED TREE PLANTING

04	Re-Issued for Tree Conservation Report	2026/10/02
03	Re-Issued for Tree Conservation Report	2026/02/05
02	Re-Issued for Tree Conservation Report	2025/11/18
01	Issued for Tree Conservation Report	2025/05/08
00	Issued for DRAFT Tree Conservation Report	2025/04/09
revn	description / la description	yyyy/mm/dd

north / le nord

project / projet

30 CLEARY AVENUE

drawing / dessin

TREE CONSERVATION REPORT

TREE CONSERVATION & PROPOSED DEVELOPMENT

designed / conçu	drawn / dessiné	reviewed / examiné
	BM	DF

project number / No. du projet

23002

drawing number / No. du dessin

MAP 2

TREE CONSERVATION PLAN AND SCOPE OF PROPOSED DEVELOPMENT

SCALE 1:750

0 5 10 20 50 metres

DO NOT SCALE DRAWING

NOTES:

1. THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE TREE CONSERVATION REPORT PREPARED BY ARCADIS;
2. REFER TO RECOMMENDATIONS IN TREE CONSERVATION REPORT FOR TECHNIQUES TO PRESERVE TREES.

Appendix A: 30 Cleary Tree Inventory and Protection Plan

Tree #	Common Name	Scientific Name	No. Stems	DBH (cm) * approx.	Crown Spread (m)	Structural Defects											Condition[i]	CRZ	Tree Ownership	Impact / Recommendation	Action Rationale	Comments
						DB	SMD	UC	COD	FC	LE	NRF	MBR	ADV	INCL	SUP						
1	Ohio Buckeye	*Aesculus glabra*	1	18	5							√					Good	1.8		**Remove**		In existing parking area, and within proposed building
2	Eastern Cottonwood	*Populus deltoides ssp. deltoides*	1	62	11	√	√										Good	6.2		**Remove**		In existing parking area, and within proposed building
3	Eastern White Pine	*Pinus strobus*	1	12	4												Excellent	1.2		**Remove**		In existing parking area, and within proposed building
4	Black Locust	*Robinia pseudoacacia L.*	4	4;5;6;8	4		√	√				√					Good	0.8		**Remove**		In north community garden; very close to proposed edge of building
5	Black Locust	*Robinia pseudoacacia L.*	1	21	4	√	√			√		√					Fair	2.1		**Remove**		In north community garden; very close to proposed edge of building
6	Black Locust	*Robinia pseudoacacia L.*	1	20	4		√					√					Good	2.0		**Remove**		In north community garden; very close to proposed edge of building
7	Northern Catalpa	*Catalpa speciosa*	2	44;45	9	√	√		√	√							Good	4.5		Prune and Protect		In north community garden; near proposed building; crotch rot; Consider cabling 2 stems; Multi-stemmed Amur maple and lilac underneath.
8	American Elm	*Ulmus americana*	1	42	9	√	√		√	√							Good	4.2		Retain		In north community garden.
9	Norway Maple	*Acer platanoides*	1	39	8	√	√			√		√					Poor	3.9		Remove		In north community garden
10	Blue Spruce	*Picea pungens*	1	29	3	√		√				√				√	Good	2.9		Retain		In north community garden
11	Common Hawthorn	*Crataegus monogyna*	1	11	3		√					√				√	Dead	1.1		**Remove**		In north community garden; within proposed edge of building
12	Red Pine	*Pinus resinosa*	1	19	3	√	√	√			√	√					Good	1.9		**Remove**		In north community garden; close to proposed edge of building
13	Norway Maple	*Acer platinoids*	1	44	10	√	√										Good	4.4		**Remove**	Removal to accommodate the underground stormwater capture system	In north community garden
14	Norway Maple	*Acer platanoides*	1	32	8	√	√	√		√	√	√					Fair	3.2		Retain		Large scarring along entire SW trunk margin.
15	Norway Maple	*Acer platanoides*	1	44	7	√	√	√		√		√					Fair	4.4		Retain		Large scarring along SW side of trunk; Seepage along trunk.
16	Norway Maple	*Acer platanoides*	2	26;23	7	√	√		√	√		√					Good	2.6		Retain		
17	Norway Maple	*Acer platanoides*	1	35	6	√	√	√				√					Poor	3.5		Retain		Missing leader. Consider removal due to tree condition
18	Norway Maple	*Acer platanoides*	1	53	9	√	√	√									Poor	5.3		**Remove**	Tree removal allows for greater conservation of existing Memorial Gardens	Crown spread within development area
19	Northern Catalpa	*Catalpa speciosa*	1	48	6	√		√			√	√					Good	4.8		Prune and Protect		Leaning east towards development area
20	Norway Maple	*Acer platanoides*	1	40*	9	√	√										Good	4.0	Adjacent Land Owner	Retain		Private property (adjacent)- other side of fence; estimated dbh.
21	Manitoba Maple	*Acer negundo*	1	58*	9	√	√	√		√	√						Fair	5.8	Adjacent Land Owner	Retain		Private property (adjacent)- other side of fence; estimated dbh.
22	Norway Maple	*Acer platanoides*	1	22	7	√	√					√					Good	2.2		Retain		
23	Manitoba Maple	*Acer negundo*	1	11	5	√	√	√			√						Good	1.1		Retain		
24	Manitoba Maple	*Acer negundo*	3	10;11;14	6	√	√	√	√		√	√					Good	1.4		Retain		

25	Manitoba Maple	*Acer negundo*	3	11;22;34*	7	√	√	√	√								Fair	3.4	Adjacent Land Owner	Retain		Private property (adjacent)- other side of fence; estimated dbh.
26	Red Pine	*Pinus resinosa*	1	35	6	√	√										Good	3.5		Retain		
27	Red Pine	*Pinus resinosa*	1	34	5	√	√										Good	3.4		Retain		
28	Norway Maple	*Acer platanoides*	2	11;13	5	√	√		√			√				√	Good	1.3		Retain		
29	Red Pine	*Pinus resinosa*	1	35	5	√	√				√	√				√	Good	3.5		Retain		
30	Norway Maple	*Acer platanoides*	1	15	5	√	√				√	√					Good	1.5		Retain		
31	Red Pine	*Pinus resinosa*	1	35	5	√	√					√				√	Good	3.5		Retain		
32	Norway Maple	*Acer platanoides*	1	10	4											√	Good	1.0		Retain		
33	Red Pine	*Pinus resinosa*	1	19	3											√	Good	1.9		Retain		
34	Norway Maple	*Acer platanoides*	1	13	4	√										√	Good	1.3		Retain		
35	American Elm	*Ulmus americana*	2	50;47*	10	√	√		√								Good	5.0	Adjacent Land Owner	Retain		Private property (adjacent)- other side of fence; estimated dbh.
36	Red Pine	*Pinus resinosa*	1	34	6	√	√										Good	3.4		Retain		
37	Red Pine	*Pinus resinosa*	1	35	5	√	√					√					Good	3.5		Retain		
38	Norway Maple	*Acer platanoides*	2	13;10	6	√	√	√	√	√		√				√	Poor	1.3		Retain		
39	Horse Chestnut	*Aesculus hippocastanum*	1	13	4							√					Good	1.3		Remove		Located at edge of proposed building
40	Red Pine	*Pinus resinosa*	1	35	5	√	√										Good	3.5		Retain		
41	Red Pine	*Pinus resinosa*	1	36	3	√	√	√			√	√					Fair	3.6		Retain		
42	Norway Maple	*Acer platanoides*	2	38;59	8	√	√	√	√		√	√				√	Poor	5.9		Retain		
43	Red Pine	*Pinus resinosa*	1	33	2	√		√				√				√	Poor	3.3		Retain		
44	Red Pine	*Pinus resinosa*	1	34	4	√	√	√				√					Good	3.4		Retain		
45	Red Pine	*Pinus resinosa*	1	41	6	√	√										Good	4.1		Retain		
46	Norway Maple	*Acer platanoides*	1	18	5	√	√									√	Good	1.8		Retain		
47	Norway Maple	*Acer platanoides*	1	54	12	√	√	√		√		√					Poor	5.4		Retain		
48	Norway Maple	*Acer platanoides*	1	17	5	√										√	Good	1.7		Retain		
49	Red Maple	*Acer rubrum*	1	18	5	√	√			√							Good	1.8		Retain		
50	Eastern White Cedar	*Thuja occidentalis*	1	12	3											√	Good	1.2		Retain		
51	Eastern White Cedar	*Thuja occidentalis*	1	15	4											√	Good	1.5		Retain		
52	Red Pine	*Pinus resinosa*	1	36	7	√						√					Good	3.6		**Remove**		
53	Manitoba Maple	*Acer negundo*	1	13	5	√		√	√		√						Fair	1.3		**Remove**		Multiple stems from cut base
54	River Birch	*Betula nigra*	1	18;19	4												Good	1.9		**Remove**		Located in community garden; very close to proposed edge of building
55	Weeping Norway Spruce	*Picea abies "Pendula"*	4	<10	2												Good	1.0		**Remove**		Located in north community garden; conflict with proposed vehicular circulation; consider transplanting
56	Silver Maple	*Acer saccharinum*	1	61	10		√						√	√			Good	6.1		Retain		Located in north community garden
57	Silver Maple	*Acer saccharinum*	1	42	7		√							√			Good	4.2		Retain		Located in north community garden
58	Austrian Pine	*Pinus nigra*	1	15	3												Good	1.5		Retain		Located in north community garden
59	Ginkgo	*Ginkgo biloba*	1	15	3												Good	1.5		**Remove**		Located in south community garden; conflict with proposed vehicular circulation; consider transplanting
60	White Spruce	*Picea glauca*	1	21	5												Good	2.1		Retain		Located in south community garden
61	White Spruce	*Picea glauca*	1	22	6												Good	2.2		Retain		Located in south community garden
62	Willow sp.	*Salix spp.*	3	41;45;46	11		√							√			Good	4.6		Retain		Located in south community garden
63	White Spruce	*Picea glauca*	1	18	4												Good	1.8		Retain		Located in south community garden
64	Katsura tree	*Cercidiphyllum japonicum*	10	15	4		√										Good	1.5		Retain		(10) multi-stemmed, largest trunk measured
65	Willow sp.	*Salix spp.*	1	22	5												Fair	2.2		Retain		Main trunk removed
66	White Spruce	*Picea glauca*	1	13	3												Good	1.3		Retain		Main trunk removed

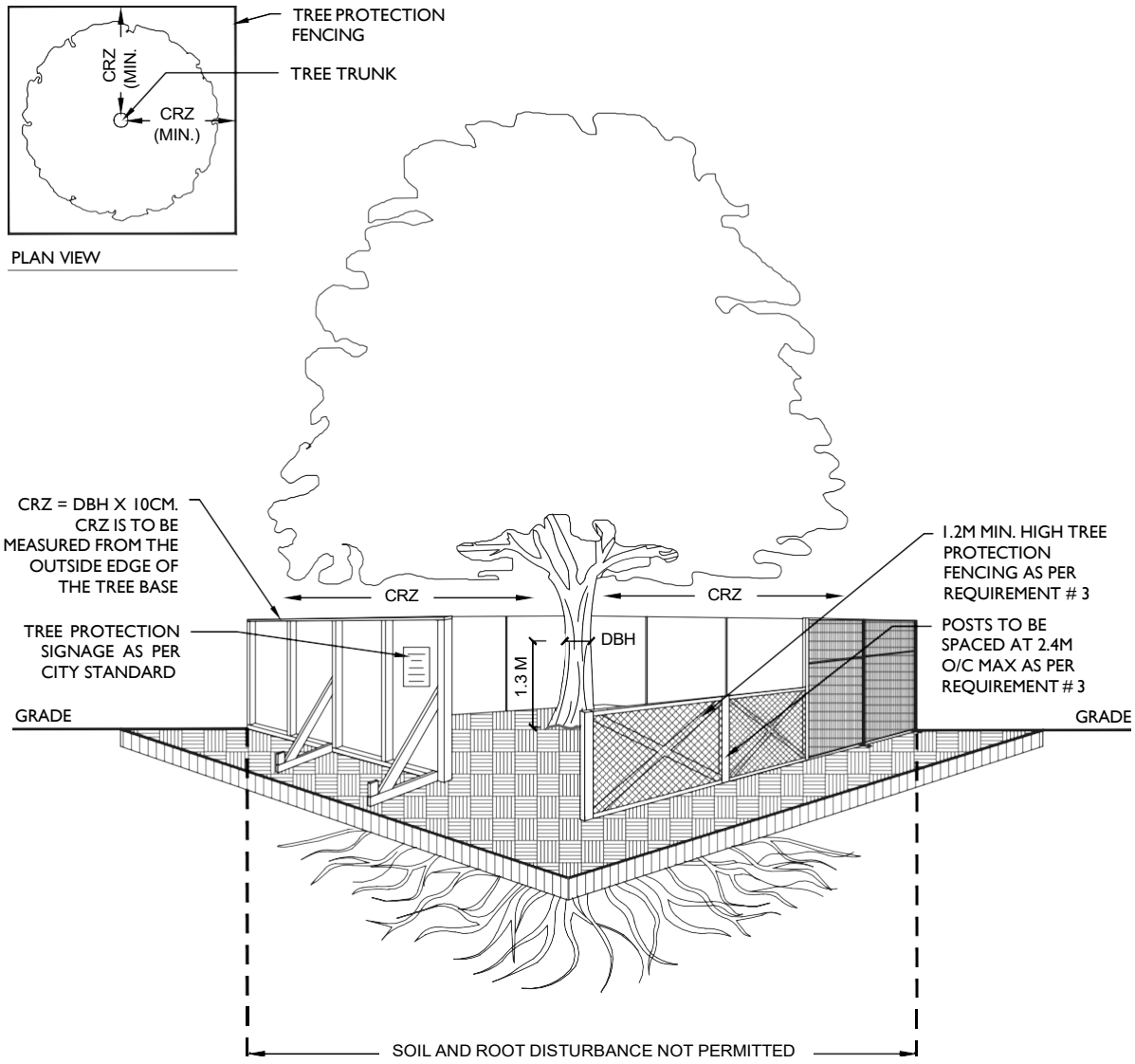
67	Norway Maple	*Acer platanoides*	1	10	3												Good	1.0		**Remove**		Main trunk removed. Conflict with proposed parking.
68	Northern Catalpa	*Catalpa speciosa*	1	32	6		√										Fair	3.2		Retain		Main trunk removed; missing leader
69	Eastern Cottonwood	*Populus deltoides ssp. deltoides*	1	42	5		√										Good	4.2		Retain		Missing leader
70	Black Walnut	*Juglans nigra*	1	17	4												Good	1.7		Retain		Missing leader
71	Eastern Cottonwood	*Populus deltoides ssp. deltoides*	2	25;36	5		√										Good	3.6		Retain		Missing leader
72	Butternut	*Juglans cinerea*	1	24	5												Good	2.4		Retain		Missing leader
73	Tulip Tree	*Liriodendron tulipifera*	1	27	6		√										Good	2.7		Retain		Missing leader
74	Northern Catalpa	*Catalpa speciosa*	1	61	7												Good	6.1		Retain		Missing leader
75	Red Oak	*Quercus rubra*	1	45	8												Good	4.5		Retain		Missing leader
76	Eastern White Pine	*Pinus strobus*	1	19	5												Good	1.9		Prune and Protect		Missing leader; leaning west towards development area
77	Ornamental spp.		1	18	3												Good	1.8		Retain		Missing leader
78	Burr Oak	*Quercus macrocarpa*	1	21	6												Good	2.1		Retain		Missing leader
79	Chokecherry	*Prunus virginiana*	5	5;6;7;7;8	5												Good	0.8		Retain		Located in south community garden
80	Silver Maple	*Acer saccharinum*	2	43;45	10		√								√		Good	4.5		**Remove**		Located in south community garden; conflict with proposed vehicular circulation
81	Dead		2	17;18													Dead	1.8		Retain		Consider Removal (dead)
82	Norway Maple	*Acer platanoides*	1	16	3												Good	1.6		Retain		Under electrical lines
83	American Elm	*Ulmus americana*	1	14	3												Good	1.4		Retain		Under electrical lines
84	Dead		1	25													Dead	2.5		Retain		Consider Removal (dead)
85	Norway Maple	*Acer platanoides*	1	18	4		√										Good	1.8		Retain		
86	Common Buckthorn	*Rhamnus cathartica*	1	7													Good	0.7		Retain		
87	Dead		1	8													Dead	0.8		Retain		Consider Removal (dead)
88	Norway Maple	*Acer platanoides*	1	26	5												Good	2.6		Retain		
89	Siberian Elm	*Ulmus pumila*	3	31;32;44	9		√								√		Fair	4.4		Retain		Dieback 30%
90	Malus sp.	*Malus spp.*	1	32	5												Poor	3.2		Retain		Dieback 60%; large scare entire trunk
91	Norway Maple	*Acer platanoides*	1	13	3												Good	1.3		Retain		
92	Bur Oak	*Quercus macrocarpa*	1	17	4												Good	1.7		Retain		
93	Common Buckthorn	*Rhamnus cathartica*	4	8;8;8;10	3												Good	1.0		Retain		
94	American Elm	*Ulmus americana*	1	13	2												Good	1.3		Retain		lean 30%
95	Norway Maple	*Acer platanoides*	1	17	4												Good	1.7		Retain		
96	Manitoba Maple	*Acer negundo*	1	37	7		√						√	√			Good	3.7		Retain		
97	Norway Maple	*Acer platanoides*	1	11	3												Good	1.1		Retain		
98	Manitoba Maple	*Acer negundo*	1	17	6									√			Good	1.7		Retain		lean 30%
99	Manitoba Maple	*Acer negundo*	1	23	6		√							√			Good	2.3		Retain		
100	Manitoba Maple	*Acer negundo*	1	39	8												Good	3.9		Retain		lean 30%
101	Manitoba Maple	*Acer negundo*	1	25	5		√							√			Fair	2.5		Retain		missing leader; scarring
102	Norway Maple	*Acer platanoides*	1	12	3		√							√			Good	1.2		Retain		
103	Manitoba Maple	*Acer negundo*	2	42;44	9		√							√			Good	4.4		Retain		
104	Norway Maple	*Acer platanoides*	1	11	2												Good	1.1		Retain		
105	Norway Maple	*Acer platanoides*	1	11	2												Good	1.1		Retain		
106	Manitoba Maple	*Acer negundo*	1	19	8												Good	1.9		Retain		30% lean
107	Siberian Elm	*Ulmus pumila*	1	65	7												Good	6.5		Retain		crotch rot

108	Manitoba Maple	*Acer negundo*	1	18	4												Good	1.8		Retain		
109	Manitoba Maple	*Acer negundo*	1	31	7												Good	3.1		Retain		
110	Norway Maple	*Acer platanoides*	1	22	4												Good	2.2		Retain		
111	Manitoba Maple	*Acer negundo*	1	18	5												Good	1.8		Retain		
112	Norway Maple	*Acer platanoides*	1	11	3												Good	1.1		Retain		
113	Norway Maple	*Acer platanoides*	1	49	8												Good	4.9		Retain		
114	Eastern White Pine	*Pinus strobus*	1	24	4												Good	2.4		Retain		Southwest limit
115	Eastern White Pine	*Pinus strobus*	1	55*	9												Good	5.5	Adjacent Property Owner	Retain		Private tree located on adjacent property; estimated dbh
116	Siberian Elm	*Ulmus pumila*	2	10;6	3												Good	1.0		**Remove**		located at edge of proposed building
117	Green Ash	*Fraxinum pennsylvanica*	2	9;9	4												Good	0.9		**Remove**		Conflict with path adjacent to proposed building
118	Norway Maple	*Acer platanoides*	1	22	4												Good	2.2		Retain		north end of site, crown extends 3m over paved area
119	Group:1 1 Siberian Elm 10 Norway Maple	*Ulmus pumila Acer platanoides*	11	7;11 7-19	–												Good	1.9		Retain		Dripline/crowns extend 3 m over paved area
120	Sunburst Honeylocust	*Gleditsia triacanthos 'Suncole'*	1	15*	4												Good	1.5	River Parkway Children's Centre	Retain		Private tree located at River Parkway Children's Centre property; estimated dbh
121	Sunburst Honeylocust	*Gleditsia triacanthos 'Suncole'*	1	20*	6												Good	2	River Parkway Children's Centre	Retain		Private tree located at River Parkway Children's Centre property; estimated dbh
122	Sunburst Honeylocust	*Gleditsia triacanthos 'Suncole'*	1	25*	7												Good	2.5	River Parkway Children's Centre	Retain		Private tree located at River Parkway Children's Centre property; estimated dbh
123	White Spruce	*Picea glauca*	1	25*	4												Good	2.5	River Parkway Children's Centre	**Remove**	Removal required to facilitate short-term daycare parking estimated dbh; conflict with proposed design	Private tree located at River Parkway Children's Centre property.

[i] Excellent: No apparent health problems; good structural form.
Good: Minor problems with health and/or structural form.
Fair: Significant problems with health and/or structural form.
Poor: Major problems with health and structural form.
Snag: Standing dead or dying tree, often missing a top.
Dead: Dead.

Appendix B

Tree Protection Specification (City of Ottawa, 2021)



TREE PROTECTION REQUIREMENTS:

1. PRIOR TO ANY WORK ACTIVITY WITHIN THE CRITICAL ROOT ZONE (CRZ = 10 X DIAMETER) OF A TREE, TREE PROTECTION FENCING MUST BE INSTALLED SURROUNDING THE CRITICAL ROOT ZONE, AND REMAIN IN PLACE UNTIL THE WORK IS COMPLETE.
2. UNLESS PLANS ARE APPROVED BY CITY FORESTRY STAFF, FOR WORK WITHIN THE CRZ:
   - 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.
   - DO NOT EXTEND HARD SURFACE OR SIGNIFICANTLY CHANGE LANDSCAPING
3. TREE PROTECTION FENCING MUST BE AT LEAST 1.2M 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 2.4M APART, SUCH THAT THE FENCE LOCATION CANNOT BE ALTERED. ALL SUPPORTS AND BRACING MUST BE PLACED OUTSIDE OF THE CRZ, AND INSTALLATION MUST MINIMISE DAMAGE TO EXISTING ROOTS. (SEE DETAIL)
4. THE LOCATION OF THE TREE PROTECTION FENCING MUST BE DETERMINED BY AN ARBORIST AND DETAILED ON ANY ASSOCIATED PLANS FOR THE SITE (E.G. TREE CONSERVATION REPORT, TREE INFORMATION REPORT, ETC). THE PLAN AND CONSTRUCTED FENCING MUST BE APPROVED BY CITY FORESTRY STAFF PRIOR TO THE COMMENCEMENT OF WORK.
5. IF THE FENCED TREE PROTECTION AREA MUST BE REDUCED TO FACILITATE CONSTRUCTION, MITIGATION MEASURES MUST BE PRESCRIBED BY AN 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 CITY'S TREE PROTECTION BY-LAW, 2020-340 PROTECTS BOTH CITY-OWNED TREES, CITY-WIDE, AND PRIVATELY-OWNED TREES WITHIN THE URBAN AREA. PLEASE REFER TO WWW.OTTAWA.CA/TREEBYLAW FOR MORE INFORMATION ON HOW THE TREE BY-LAW APPLIES.

ACCESSIBLE FORMATS AND COMMUNICATION SUPPORTS ARE AVAILABLE, UPON REQUEST

Ottawa

TREE PROTECTION SPECIFICATION

TO BE IMPLEMENTED FOR RETAINED TREES, BOTH ON SITE AND ON ADJACENT SITES, PRIOR TO ANY TREE REMOVAL OR SITE WORKS AND MAINTAINED FOR THE DURATION OF WORK ACTIVITIES ON SITE.

SCALE:	NTS
DATE:	MARCH 2021
DRAWING NO.:	1 of 1

Appendix C

City of Ottawa Suggested Mitigation Measures

Suggested Mitigation Measures

Number	Type of Mitigation Measures	Description
1	General Mitigation Measures	Species at risk (SAR) awareness training is recommended for all site supervisors. Training should be specific to each infrastructure project site and focus on SAR with potential to occur.
2	General Mitigation Measures	Infrastructure project work sites must be surveyed by a person trained in SAR identification (i.e., construction staff or supervisor) prior to start-up to ensure none are present. Observations of SAR should be reported to the City Project Manager and Contract Administrator, who in return must provide SAR observations to MECP. Further measures may be needed to continue the activity.
3	General Mitigation Measures	On-site environmental monitoring should be considered for the project. The monitor must be a qualified biologist (or similarly qualified person) that is knowledgeable in SAR and their habitat. The level of effort for the environmental monitoring should be determined through conversation with the project manager and the qualified monitor.
4	General Mitigation Measures	Provide site-specific SAR information to on-site staff. Information should include: A description of relevant SAR; Photos of SAR that may be present on site; Appropriate avoidance measures; and Emergency contact numbers in case of incident with SAR.
5	General Mitigation Measures	Construction activities occurring adjacent to wetlands and watercourses that may provide habitat for SAR should avoid the core turtle and marsh bird breeding period (April 15 to August 15, of any year). Furthermore, in-water winter work may only be done if overwintering SAR turtles are not present.

6	General Mitigation Measures	For wetlands and watercourses that may provide habitat for SAR fishes, ensure that any in-water works are completed outside of the applicable fish spawning timing windows. Implement fish salvage and other protection measures as required for in-water work during other times of year. Timing windows when in-water work is restricted: Ottawa River: October 1 to July 15 (includes Channel Darter, Lake Sturgeon, Northern Brook Lamprey, Northern Sunfish, River Redhorse, Silver Lamprey) Mississippi River: January 1 to June 30 (includes River Redhorse) Rideau River: January 1 to June 30 (includes Bridle Shiner, River Redhorse) All other water features: March 15 to June 30
7	Barn Swallows	If the presence of Barn Swallow nesting is confirmed in the project area and construction has the potential to harm or harass the species, then no work should be conducted during the breeding period (May 1 to August 31). Active Barn Swallow nests are protected under the federal *Migratory Birds Convention Act* and must not be removed, and access to nests must not be prevented, until the birds have finished nesting for the year.
8	Barn Swallows	If active Barn Swallow nests are found in or on a culvert or bridge, during construction activities; stop work immediately, take a photo and contact the City Project Manager and Contract Administrator.
9	Grassland Birds	Sections 4.1, 23.2 and 23.6 of Ontario Regulation 242/08 generally cover the requirements for activities in Bobolink and Eastern Meadowlark habitat. If the habitat of Bobolink or Eastern Meadowlark will likely be damaged or destroyed, or if activities will likely harm or harass the species, an authorization may be required from MECP as described in the Regulation. Project proposals should be reviewed by MECP to determine required authorization. Construction activities adjacent to grasslands should avoid core grassland breeding bird period (May 1 to July 31, of any year).

10	Fish	All in-water works will minimize the overall footprint and ensure works occur outside of spawning timing windows (see mitigation 6). Necessary erosion and sediment controls will be in place prior to work beginning adjacent to watercourses. Furthermore, monitoring of devices during significant rain events (10 mm over 24 h) should occur within 24 hours of the event.
11	Turtles	If mitigation measure 12 is not implemented the following measure applies. Work should not be conducted within the nesting habitat during the nesting season (May 1 to September 30).
12	Turtles	Heavy duty silt fencing should be erected adjacent to the wetland habitat by May 1 (prior to the nesting season), to prevent turtles from entering the work area. As turtles have been known to climb the geotextile fencing, the fence must be inspected often (daily or weekly). Silt fencing should be constructed in accordance with the Species at Risk Branch Best Practices Technical Note: Reptile and Amphibian Exclusion Fencing: http://files.ontario.ca/environment-and-energy/species-at-risk/mnr_sar_tx_rptl_amp_fnc_en.pdf
13	Butternut Trees	A qualified biologist shall conduct a survey to determine if construction activities will occur within 50 metres of a butternut. If butternut tree(s) are present and could be negatively impacted by the proposed construction works (i.e., removal, limbing, or root destruction), a Butternut Health Assessment will be required. An assessment can only occur between May 15 and August 31, of any year. Note: Construction within existing 'impervious surfaces' (e.g., paved roads, sidewalks, buildings), is excluded from the 50 metre area noted above. No additional screening or surveys would be required.

14	Butternut Trees	If construction activities are to occur within the 50 metre butternut habitat area, tree protection fencing will be installed around any healthy (retainable - as determined by a Butternut Health Assessor), butternut tree that may be negatively impacted by the construction activities. Fencing shall be constructed in accordance with City of Ottawa Tree Protection Guidelines. The City of Ottawa can be contacted directly for more information on 'Tree Protection Guidelines', or refer to: https://ottawa.ca/en/residents/water-and-environment/trees-and-community-forests/protection Note: Works occurring entirely within existing hardened surfaces (e.g., resurfacing of existing roads) are not anticipated to impact the species. Due caution, however, is still required to avoid direct damage to individuals.
15	Bats	If SAR bat (i.e., Northern Myotis, Little Brown Myotis, Eastern Small-Footed Myotis, or Tri-coloured Bat) hibernacula are determined to be present through field studies, then no work should occur from October 1 through April 30, of any year. Maternity roost habitat for SAR bats (i.e., hollow trees and snags [>20 cm DBH]; houses, buildings, and barns; rock piles, cliffs, rocky outcroppings; and mature forest [>60 years old]), are protected under the Endangered Species Act, 2007, and protected as significant wildlife habitat under the Provincial Policy Statement (Ontario, 2020). Maternity roosting periods occur from May 1 through July 15, of any year.
16	Bats	If work cannot be avoided during October 1 through April 30, a permit from the MECP would likely be required.
17	Snakes	Prevent equipment from encroaching on SAR snake habitat (i.e., keep equipment in road right-of-way). Inspect equipment regularly to ensure no snakes are present in or on machinery.
18	Snakes	Conduct sweeps for SAR snakes ahead of construction (especially in the early morning), to determine if snakes are present in the construction area. If SAR snakes are present, commence work once the snake has left the work area.
19	Amphibians	Avoid working in wet ditches and other ephemeral wetland habitats during spring spawning of Western Chorus Frogs (i.e., March through June, of any year), unless amphibian surveys can determine the species is not present.

20	Turtles	If proposed works are to be completed within an area that may impact overwintering habitat for turtles (e.g., stormwater management ponds, etc.), then work must occur only between April 30 and October 15 of any year, to avoid disturbing overwintering turtles. All water must be pumped from the pond, and any turtles must be removed prior to clean-out.
21	Birds	Project works should avoid clearing trees and vegetation during the breeding bird season. The Migratory Birds Convention Act, 1994, protects breeding migratory birds, their active nests, and young, in Canada. City of Ottawa guidelines require nest activity inspection of vegetation and trees to be cleared from April 15 to August 15, of any year.
22	Turtles	If the project is located in an area of known Blanding's Turtle occurrences, silt fence should be placed through the channel to either side of the culvert to prevent turtles from travelling into the worksite. In addition, a thorough sweep of the worksite for Blanding's Turtles should be conducted each day before work commences.

Appendix D

TREE RISK ASSESSMENT – 30 CLEARY AVENUE, OTTAWA

P.O. BOX 13593, STN. KANATA, OTTAWA, ON K2K 1X6
TELEPHONE: (613) 850-2475
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URBAN FORESTRY & FOREST MANAGEMENT CONSULTING

October 2, 2026

Breanna Mitchell
Landscape Designer
FOTENN
420 O'Connor Stret
Ottawa, ON
K2P 1W4

RE: TREE RISK ASSESSMENT – 30 CLEARY AVENUE, OTTAWA

Dear Breanna,

This report details a tree risk assessment of a mature northern catalpa *(Catalpa speciosa)* located in the side yard of 30 Cleary Avenue in Ottawa – a property adjacent to a future multi-storey building. This tree has been identified as tree #7 on the tree conservation report prepared as part of the site plan application. Specifically, an assessment of the current structural and physiological health of this tree has been requested.

The tree is double stemmed from grade and so has two DBH (diameters at breast height), 47.2 and 49.0 centimeters. As such it is considered 'distinctive' under the City of Ottawa's Tree Protection By-law (By-law No. 2020-340). Under the by-law trees with diameters of 30 centimeters or greater are considered distinctive.

Due to the intercompetition for sunlight the two stems have grown divergently and the crowns they hold are asymmetric (see picture 1 on page 2). Adding to this poor growth form is a structural defect– a weak point of attachment with a basal cavity between the stems (see pictures 2 and 3 on page 3). Also, several secondary branches have included bark within their unions. These issues can easily be remedied through reduction pruning and, especially, cabling. If done properly the tree's life span will not be limited by its poor structure.

The tree's physiological health appears to be good. A full crown of good-sized leaves with no signs of crown dieback indicates the tree's ability to sustain its current mass.

A more detailed assessment of the tree's current condition and risk assessment is included on pages 5 and 6.

As part of this assignment cursory inspections of trees #9 and 18, both Norway maples *(Acer platanoides)* and #80, a silver maple *(Acer saccharinum)* were performed. Norway maple #18 has a major cavity in the upper crown leaving it susceptible to failure and unsuitable for retention given its proximity to the future building. Norway maple #9 is in advanced decline, most likely due to girdling roots, a condition from which it will not recover.



Picture 1. Catalpa tree #7 at 30 Cleary Avenue



Picture 2. Primary union of catalpa tree #7 at 30 Cleary Avenue (looking westward)



Picture 3. Primary union of catalpa tree #7 at 30 Cleary Avenue (looking eastward – note cavity)

The silver maple will be prone to full tree failure given the presumed asymmetric nature of its root plate (saturated soils towards the east will have forced roots towards the west where most of this roots will be lost to excavation for below grade parking).

With the above basic assessments in mind, it is my opinion that all three trees should be removed prior to the start of construction. Trees #9 and 18 due to their current poor overall condition and tree #80 due to its poor prospects during and following construction.

I trust this report satisfies your requirements. Please do not hesitate to contact me with any questions or comments you may have.

This report is subject to the attached Limitations of Tree Assessments and Liability to which the reader's attention is directed.

Yours,



Andrew K. Boyd, B.Sc.F, R.P.F. (#1828)
ISA Certified Arborist #ON-0496A and TRAQualified
Consulting Urban Forester

Basic Tree Risk Assessment Form

Assessor: Andrew Boyd

Client: Theia Partners — Date: July 27, 2026

Address/Tree Location: 30 Cleary Avenue — Tools: DBH & measuring tape

Tree Species: Northern Catalpa — Tree #: 7 — DBH: 49.0 — Height: 14 — **Time Frame**: Two years years/months

Target #	Target Description (Be specific, only one target per line.)	Target Zone: Drip line	1 X Ht	1.5 X Ht	>1.5 X Ht	Occupancy Rate: Rare	Occasional	Frequent	Constant
1	Vehicles, people	✓						✓	
2	Sitting bench, people		✓				✓		
3	Third priority (e.g., structures, vehicles)								

Site Conditions

Concerns: Proposed excavation for new building will be 3m away on west. ☐ None

Site changes: ☐ None ☑ Grade change ☐ Site clearing ☑ Changed hydrology ☐ Other Both in future

Crown

Foliage: ☐ None (dead) ☐ None (seasonal) Normal 95 % Chlorotic ____ % Necrotic 5 %

Tree Health: ☐ Dead ☐ Poor ☐ Fair ☑ Good

Health concerns: ____ ☐ None

Density: ☐ Sparse ☑ Average ☐ Dense ☐ Vines/mistletoe/moss ____

Relative size crown/trunk: ☐ Small ☑ Medium ☐ Large ☑ Unbalanced ☐ Crown dieback ☐ Excessive end weight

Wind Exposure: ☐ Protected ☑ Partial ☐ Full ☐ Wind funneling Load concerns/recent changes ____

Pruning: ☐ Topped ☐ Thinned ☐ Lion tailed ☑ Raised ☐ Other Crown raised on east over garden Live crown ratio (LCR) 80 %

Branches

☐ No concerns ☐ Dead branches ____% overall Max. dia. ____

☐ Broken/hanging # ____ Max. dia. ____ ☐ Overextended

☐ Poor taper ☑ Weak attachments Inclusion ridges

☐ Previous branch failures ____ ☐ Similar branches present

☐ Structural support ____ ☐ Excessive sprouts ☐ Cracks

☐ Sapwood/heartwood decay ☐ Conks/mushrooms ____

☐ Cavity opening ____ ☐ Response growth ____

Main Branch and Crown Failure Types:

Failure Type 1: Failure of secondary stems

Part size Mod Fall distance ____ Load: ☑ Low ☐ Med ☐ High

Likelihood of Failure: ☑ Improbable ☐ Possible ☐ Probable ☐ Imminent

Target # 1 Protection NA

Likelihood of Impact: ☐ Very Low ☐ Low ☑ Medium ☐ High

Consequences: ☐ Negligible ☐ Minor ☑ Significant ☐ Severe

Target # 2 Protection NA

Likelihood of Impact: ☐ Very Low ☑ Low ☐ Medium ☐ High

Consequences: ☐ Negligible ☐ Minor ☐ Significant ☑ Severe

Failure Type 2: ____

Part size ____ Fall distance ____ Load: ☐ Low ☐ Med ☐ High

Likelihood of Failure: ☐ Improbable ☐ Possible ☐ Probable ☐ Imminent

Target # ____ Protection ____

Likelihood of Impact: ☐ Very Low ☐ Low ☐ Medium ☐ High

Consequences: ☐ Negligible ☐ Minor ☐ Significant ☐ Severe

Target # ____ Protection ____

Likelihood of Impact: ☐ Very Low ☐ Low ☐ Medium ☐ High

Consequences: ☐ Negligible ☐ Minor ☐ Significant ☐ Severe

Trunk

☐ No concerns ☑ Codominant stems # 2 ☑ Included bark

☑ Decay ☐ Conks/mushrooms ____ ☑ Cavity opening ____

☑ Decay depth 30cm ☐ Poor taper ☐ Lean ____° ☐ Corrected

☐ Dead/missing bark ☐ Cracks ☐ Ooze ☐ Lightning damage

Other ____ Response growth ____

Main Trunk Failure Type: Co-dominant stem 1 (north)

Likelihood of Failure: ☐ Improbable ☐ Possible ☑ Probable ☐ Imminent

Target # 1 Protection NA

Likelihood of Impact: ☐ Very Low ☐ Low ☐ Medium ☑ High

Consequences: ☐ Negligible ☐ Minor ☑ Significant ☐ Severe

Target # 2 Protection NA

Likelihood of Impact: ☐ Very Low ☐ Low ☐ Medium ☑ High

Consequences: ☐ Negligible ☐ Minor ☐ Significant ☑ Severe

Root Collar, Roots, and Soil

☑ No concerns ☐ Collar buried/not visible Depth ____

☐ Stem girdling ____ ☐ Fill soil ____

☐ Significant root damage or decay ☐ Conks/mushrooms ____

☐ Cut, distance from trunk ____ ☐ Root plate lifted ____

Soil: ☐ Often saturated ☐ Limited volume ☐ Pavement/Compaction

Response growth ____

Main Root / Soil Failure Type: ____

Likelihood of Failure: ☐ Improbable ☐ Possible ☐ Probable ☐ Imminent

Target # ____ Protection ____

Likelihood of Impact: ☐ Very Low ☐ Low ☐ Medium ☐ High

Consequences: ☐ Negligible ☐ Minor ☐ Significant ☐ Severe

Target # ____ Protection ____

Likelihood of Impact: ☐ Very Low ☐ Low ☐ Medium ☐ High

Consequences: ☐ Negligible ☐ Minor ☐ Significant ☐ Severe

This form is for data collection and analysis. It is not intended to be used as a report.

Risk Categorization and Analysis

Tree Part Branches, Trunk, Root Collar, Roots, or Soil	Failure Type Dead, Hanging, Decay, Crack, etc.	Target Description or Number	Likelihood of Failure				Likelihood of Impact				Failure and Impact from Matrix 1				Consequences				Risk Rating from Matrix 2
			Improbable	Possible	Probable	Imminent	Very low	Low	Medium	High	Unlikely	Somewhat	Likely	Very likely	Negligible	Minor	Significant	Severe	
Trunk		Vehicles			✓				✓			✓					✓		Mod
		Bench		✓						✓		✓					✓		Mod
Branches		Vehicles	✓						✓		✓						✓		Low
		Bench	✓					✓			✓						✓		Low

Overall tree risk rating: ☐ Low ☑ Moderate ☐ High ☐ Extreme

Matrix 1. **Likelihood matrix**

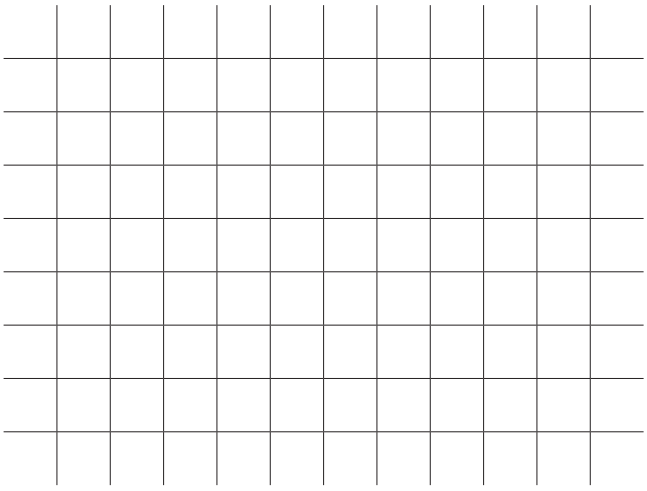
Likelihood of Failure	Likelihood of Impact			
	Very low	Low	Medium	High
Imminent	Unlikely	Somewhat likely	Likely	Very likely
Probable	Unlikely	Unlikely	Somewhat likely	Likely
Possible	Unlikely	Unlikely	Unlikely	Somewhat likely
Improbable	Unlikely	Unlikely	Unlikely	Unlikely

Matrix 2. **Risk matrix**

Likelihood of Failure & Impact	Consequences of Failure			
	Negligible	Minor	Significant	Severe
Very likely	Low	Moderate	High	Extreme
Likely	Low	Moderate	High	High
Somewhat likely	Low	Low	Moderate	Moderate
Unlikely	Low	Low	Low	Low

Notes, explanations, descriptions

DBH of two stems 49.9 and 47.2cm



Option	Mitigation More than one failure type/target can be mitigated on each line.	Residual Risk of the tree
1	Reduction pruning and cabling	Low
2		
3		

Inspection limitations: ☑ None ☐ Visibility ☐ Access ☐ Vines ☐ Root collar buried Describe: _____

Data: ☑ Final ☐ Preliminary — Advanced Assessment recommended Type/reason: _____

Reassessment recommended in two years/months

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LIMITATIONS OF TREE ASSESSMENTS & LIABILITY

GENERAL

It is the policy of *IFS Associates Inc.* to attach the following clause regarding limitations. We do this to ensure that our clients are clearly aware of what is technically and professionally realistic in assessing trees for retention.

This report was prepared by *IFS Associates Inc.* at the request of the client. The information, interpretation and analysis expressed in this report are for the sole benefit and exclusive use of the client. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the client to whom it is addressed. Unless otherwise required by law, neither all or any part of the contents of this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through public relations, news or other media, without the prior expressly written consent of the author, and especially as to value conclusions, identity of the author, or any reference to any professional society or institute or to any initialed designation conferred upon the author as stated in his qualifications.

This report and any values expressed herein represent the opinion of the author; his fee is in no way contingent upon the reporting of a specified value, a stipulated result, nor upon any finding to be reported. Details obtained from photographs, sketches, *etc.*, are intended as visual aids and are not to scale. They should not be construed as engineering reports or surveys. Although every effort has been made to ensure that this assessment is reasonably accurate, the tree(s) should be reassessed at least annually. The assessment presented in this report is valid at the time of the inspection only. The loss or alteration of any part of this report invalidates the entire report.

LIMITATIONS

The information contained in this report covers only the tree(s) in question and no others. It reflects the condition of the assessed tree(s) at the time of inspection and was limited to a visual examination of the accessible portions only. *IFS Associates Inc.* has prepared this report in a manner consistent with that level of care and skill ordinarily exercised by members of the forestry and arboricultural professions, subject to the time limits and physical constraints applicable to this report. The assessment of the tree(s) presented in this report has been made using accepted arboricultural techniques. These include a visual examination of the above-ground portions of each tree for structural defects, scars, cracks, cavities, external indications of decay such as fungal fruiting bodies, evidence of insect infestations, discoloured foliage, the condition of any visible root structures, the degree and direction of lean (if any), the general condition of the tree(s) and the surrounding site, and the proximity of people and property. Except where specifically noted in the report, the tree(s) examined were not dissected, cored, probed or climbed to gain further evidence of their structural condition. Also, unless otherwise noted, no detailed root collar examinations involving excavation were undertaken.

While reasonable efforts have been made to ensure that the tree(s) proposed for retention are healthy, no warranty or guarantee, expressed or implied, are offered that these trees, or any parts of them, will remain standing. This includes other trees on or off the property not examined as part of this assignment. It is both professionally and practically impossible to predict with absolute certainty the behaviour of any single tree or groups of trees or their component parts in all circumstances, especially when within construction zones. Inevitably, a standing tree will always pose some risk. Most trees have the potential for failure in the event of root loss due to excavation and other construction-related impacts. This risk can only be eliminated through full tree removal.

Notwithstanding the recommendations and conclusions made in this report, it must be realized that trees are living organisms, and their health and vigour constantly change over time. They are not immune to changes in site conditions, or seasonal variations in the weather. It is a condition of this report that *IFS Associates Inc.* be notified of any changes in tree condition and be provided an opportunity to review or revise the recommendations within this report. Recognition of changes to a tree's condition requires expertise and extensive experience. It is recommended that *IFS Associates Inc.* be employed to re-inspect the tree(s) with sufficient frequency to detect if conditions have changed significantly.

ASSUMPTIONS

Statements made to *IFS Associates Inc.* in regard to the condition, history and location of the tree(s) are assumed to be correct. Unless indicated otherwise, all trees under investigation in this report are assumed to be on the client's property. A recent survey prepared by a Licensed Ontario Land Surveyor showing all relevant trees, both on and adjacent to the subject property, will be provided prior to the start of field work. The final version of the grading plan for the project will be provided prior to completion of the report. Any further changes to this plan invalidate the report on which it is based. *IFS Associates Inc.* must be provided the opportunity to revise the report in relation to any significant changes to the grading plan. The procurement of said survey and grading plan, and the costs associated with them both, are the responsibility of the client, not *IFS Associates Inc.*

LIABILITY

Without limiting the foregoing, no liability is assumed by *IFS Associates Inc.* for: 1) any legal description provided with respect to the property; 2) issues of title and/or ownership with respect to the property; 3) the accuracy of the property line locations or boundaries with respect to the property; 4) the accuracy of any other information provided by the client or third parties; 5) 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, 6) the unauthorized distribution of the report.

INDEMNIFICATION

An applicant for a permit or other approval based on this report shall agree to indemnify and save harmless *IFS Associates Inc.* from any and all claims, demands, causes of action, losses, costs or damages that affected private landowners and/or the City of Ottawa may suffer, incur or be liable for resulting from the issuance of a permit or approval based on this report or from the performance or non-performance of the applicant, whether with or without negligence on the part of the applicant, or the applicant's employees, directors, contractors and agents.

Further, under no circumstances may any claims be initiated or commenced by the applicant against *IFS Associates Inc.* 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.

ONGOING SERVICES

IFS Associates Inc. accepts no responsibility for the implementation of any or all parts of the report, unless specifically requested to supervise the implementation or examine the results of activities recommended herein. In the event that examination or supervision is requested, that request shall be made in writing and the details, including fees, agreed to in advance.

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