

127 and 131 Ardagh Road, Barrie, Ontario

**TREE INVENTORY, ANALYSIS, PRESERVATION PLAN & CANOPY SURVEY**



127 and 131 Ardagh Road, Barrie, Ontario, L4N 3V5  
City of Barrie

July 9, 2024  
Updated: September 10, 2024

OUR FILE: LA 876-24



**LANDSCAPE ARCHITECTURE & CONSULTING ARBORISTS**

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## 1.0 Scope/Assignment:

The Landmark Environmental Group Ltd. (LEGroup) is retained by Fitchal Incorporated (hereafter referred to as the 'Applicant') to provide Consulting Arboriculture services to the above noted multi-residential development located at 127 and 131 Ardagh Road, Barrie, Ontario, L4N 3V5 (hereafter referred to as the 'the property'). The assignment is to prepare a Tree Inventory, Analysis and Preservation and Canopy Survey/Removal Plan to support a multi-unit residential development that will be submitted to the City of Barrie, by establishing the characterization of the existing tree cover on the parcel. The intent is to preserve trees to the extent possible given the proposed land development and the methods for protecting the same. Those trees that cannot be preserved either by poor or declining health, structural deficiencies or to facilitate the proposed development on the site, are indicated to be removed. This Report is intended to be reviewed by the City of Barrie in compliance with applicable city bylaws, policies and comments.

Specifically, LEGroup is assigned to provide the following services:

- Review of applicable City of Barrie Tree Protection/Preservation requirements and Engineering Standards as they pertain to the subject site along with the Lake Simcoe Region Conservation Authority (LSRCA) development policies (on non-regulated lands) as applicable and discussion with respective staff if necessary;
- Conduct a field review to inventory tree specimens on the subject site, and the impacts of any boundary trees on both the subject site and within the dripline of neighbouring properties as per City tree preservation policy requirements, by visually assessing and identifying the type, location, size and condition of any trees on site within the developable area and indicating the presence of any Butternut (*Juglans cinerea*) & Black Ash (*Fraxinus nigra*) (in accordance with the *Endangered Species Act 2007*);
- Provide a Tree Inventory, Assessment, Preservation Report & Canopy Survey Plan Report that sets out the methodology, observations, criteria, analysis and recommendations of our review and area conditions;
- Indicate on a Tree Inventory and Protection Plan, those trees that are suitable for preservation or removal and providing the methods of protecting the same;

It is the intent in the undertaking of this Report, to comply with the City of Barrie tree preservation bylaws and policies and any requirements of the Lake Simcoe Region Conservation Authority.

## 2.0 Proposed Development:

The subject site is located west of the intersection of Patterson Road and Ardagh Road and is municipally described as 127 and 131 Ardagh Road, Barrie, Ontario. The property has an area of approximately 0.42ha and is in a rectangular configuration with the north property line along Ardagh Road.

The subject site currently has 2 residential units; one vacant, one occupied. The proposed development is to create a 19 unit multi residential development (see Concept Site Plan, Appendix A). The subject site is bounded by residential address on both sides along Ardagh (125 and 135 Ardagh Road, and 2 residential addresses along Patterson Road (210 and 214 Patterson Road). The limits of the Arborist study were confined to the property lines and the trees within 6m of the property lines that may be affected as a result of the proposed development.

LEGroup staff also undertook a Level 1 (visual) structural assessment for trees on the subject site and those trees crossing over the property line from outside of the subject site.

This Tree Inventory & Assessment, Tree Preservation Report & Canopy Survey Plan is submitted as part of the planning application documents associated with a development and to accommodate the requirements set out for a Tree Removal Permit under Bylaw 2014-115 to be submitted to the City of City. The Tree Inventory & Preservation Plan (TIPP) are intended to satisfy the requirements set out under Bylaw 2014-115.



Below, is an air photo illustrating the location of the subject site (red lines delineate the subject site limits):  
**Figure 1:** Air photo of subject site and surrounding area (Courtesy *Simcoe County GIS*).

### 3.0 Method:

LEGroup is requested to create a Tree Inventory, Assessment, Preservation Plan and Canopy Survey Plan identifies specific trees over 10 cm DBH (diameter at breast height) that are directly affected by the

development, and to conduct a scoped field review of existing trees within the development portion of the subject site. As a requirement in the development process, LEGroup conducted a general inventory identifying boundary trees (trees whose stem is on the boundary line or whose first branch union crosses the boundary line) and adjacent trees (trees within 6m of the property line). Onsite tree locations and adjacent trees were captured using a Trimble GNSS satellite device with ArcGIS software and distances were captured using laser range finders.

A summary of the inventory, observations and assessments that were determined in the field can be found in **Tree Inventory and Assessment Table, Appendix C** at the end of this report.

The tree assessments were identified in accordance with the detailed typical criteria used in best arboricultural practices to indicate the merits of tree preservation including the species (*Latin* and common names), size diameter at breast height (DBH), maturity, biological health, structural concerns (if any), condition rating and recommendations for preservation or removal of existing specimen trees.

Condition ratings applied to overall tree assessments using the above-noted criteria range from 0 (dead) to 4 (Good). Typically, those trees being assessed a condition rating of 1-2 (Poor to Marginal) are recommended for removal while those trees being assessed a condition rating of 3-4 (Fair to Good) are recommended for preservation unless there are extenuating circumstances regarding the development of the site.

The criterion is also applied to assist in assessment of their potential for survival in-situ post construction. For the purposes of this Report, only those trees over ten (10) cm DBH were captured. No shrubs or low understory perennials were captured in the data.

Captured tree locations are referenced to County of Simcoe GIS open-source data and are considered approximate. Each onsite and boundary tree was assigned a key number (1-44) tagged on site. Offsite trees were delineated by rangefinder and assigned a key letter (A-K). Observations relating to each tree were tabulated in the updated **Tree Inventory and Assessment Table (Appendix C)**. Each tree was also located on a Tree Inventory and Preservation Map corresponding to the key number or letter assigned and can be seen in the **Tree Inventory, Assessment and Preservation Plans (TP-1)** shown in **Appendix B**.

#### **4.0 Observations:**

A site visit to the property took place on May 16, 2024 by LEGroup staff Robert Glover (Arbor and Forestry Consultant), and Jason Mullen (Arbor & Urban Forestry Associate). The intent of the visit was to prepare an inventory assessment of individual trees within the proposed property development on the property and within 6m into adjacent parcels.

LEGroup staff observed deciduous and coniferous tree species on the subject site consisting of Manitoba maple, red maple, white ash, butternut, black walnut, apple, Colorado spruce, red pine, Scots pine, eastern cottonwood, black cherry, red oak, hydrangea, eastern white cedar and white elm. A total of fifty six (56) trees were observed at a DBH (diameter breast height) greater than ten (10) cm with canopies overlapping or within 6m of the subject site, and were recorded in the **Tree Inventory and Assessment Table (Appendix C)**.

The following woody plant species (Table 1) were observed on the subject site during fieldwork and gives an indication of the species make-up of the site:

**Table 1:** List of Observed Woody Plant Species on the Subject Site

Scientific Name	Common Name	% Composition
<i>Acer negundo</i>	Manitoba maple	7%
<i>Acer rubrum</i>	Red Maple	2%
<i>Fraxinus americana</i>	White Ash	2%
<i>Juglans cinerea</i>	Butternut	2%
<i>Juglans nigra</i>	Black Walnut	5%
<i>Malus sp.</i>	Apple spp.	5%
<i>Picea pungens</i>	Colorado Spruce	2%
<i>Pinus resinosa</i>	Red Pine	31%
<i>Pinus sylvestris</i>	Scots Pine	24%
<i>Populus deltoides</i>	Eastern Cootonwood	5%
<i>Prunus serotina</i>	Black Cherry	7%
<i>Quercus rubra</i>	Red Oak	2%
<i>Thuja occidentalis</i>	Eastern White Cedar	2%
<i>Ulmus americana</i>	American Elm	2%
<b>Total (subject to rounding)</b>		<b>100%</b>

### Butternut

LEGroup staff observed one (1) Butternut (*Juglans cinerea*) on the subject parcel during the on-site inventory in accordance with the requirements of the *Endangered Species Act, 2007* (ESA). The Butternut was photographed (see **Appendix D:** Butternut) and biological samples were sent Canadian Centre for DNA Barcoding (CCDB) and was determined “not to be a hybrid” and therefore will need a Butternut Assessment as per provincial guidelines. (Please see DNA Testing Laboratory Report enclosed and submitted as an additional item report).

On July 17, 2024, a Butternut Health Assessment was performed by Landmark Environmental Group staff and the subject tree was determined to be a Category 1 Butternut tree, meaning the Butternut tree is affected by Butternut Canker to such an advanced degree that retaining the tree would not support the protection or recovery of Butternut trees in the area in which the tree is located.

The Butternut Health Assessment (BHA) was submitted to the Species at Risk Branch (SARB) and received on July 25, 2024. Part 5 of the Ontario Regulation 830/21 for the Category 1 tree identified in the BHA, is eligible for removal after the 30-days following the date that the BHA was submitted to the SARB which is August 25, 2024. We did not hear directly from the province so we can conclude that there is no objection to our assessment to permit removal of a Category 1 Butternut.

### **5.0 Study Criteria**

Tree observations were recorded individually, as set out in the **Tree Inventory and Assessment Table (Appendix C)**, in accordance with the criteria established by common arboricultural practices including:

- ✓ Latin/Common Name of tree;
- ✓ Size (mm cal);
- ✓ Condition/Comments; and

- ✓ Recommendation for Preservation or Removal

Tree locations are on the Tree Inventory and Preservation Plan were recorded and adjusted however; the locations are approximate as shown on **Drawing EX-1 in Appendix B**

## 6.0 Analysis and Recommendations

### 6.1 Analysis

The following analysis criteria were generally applied to measure the merits of tree preservation:

- Species (including native & non-native)
- Size/Maturity
- Structure
- Health
- Location
- Areas of proposed development.

These criteria were applied to the tree assessments to determine the extent of preservation and removal. In addition, the criterion is applied to assess of their potential for survival in-situ post construction.

LEGroup staff also recommends that the roots of trees that fall within the development footprint are pruned cleanly to reduce the risk of infection, and aid in new growth.

These trees are recommended to be preserved based, on the Tree Preservation instructions laid out in Section 9.0, at the edge of their canopy driplines until permission is granted from the respective neighbors and City of Barrie staff.

LEGroup staff note that in addition to the tree preservation line, the City requires an additional 5m development setback from the preservation fencing to the development footprint as outlined in the City's *Tree Protection Manual* (see **TP-1 & TP-2, Appendix B**). Efforts for tree preservation including root care, alternative grading and excavation techniques could also be explored to minimize potential damage to existing trees.

**See Tree Inventory Tables, Appendix C.**

LEGroup is recommending that tree protection hoarding be installed to protect Section 1 trees as seen in **TP-1 & TP-2, Appendix B** in which reflects the dripline of trees to be preserved outside the recommended removal area.

LEGroup staff recommend trees 1-35 & 39-44 within the developable footprint be removed as seen in **EX-1, Appendix B**. Therefore, LEGroup staff recommends the removal of trees within a portion of Section 1 delineated in **TP-1 & TP-2, Appendix B**. Trees recommended for removal are trees within the development area or trees with health or structural issues.

### 6.2 Ecological Offsetting

Trees that are recommended for removal are subject to the City of Barrie's Ecological Offsetting policy (Policy # PP-A09-EOP). The policy sets out that individual healthy trees and trees that are not Invasive in nature are to be compensated for their ecological function, either on a per tree at a rate of \$500 per tree or at a rate of \$57,500 per hectare. The per hectare calculation was selected for this site as the woodlot

area is 0.137ha and the ecological offset amount is **\$7,877.50** The trees that were slated for removal, as shown in **Appendix B**, were either deemed hazardous or would interfere with the proposed development.

**Table 2:** Ecological Offsetting Table.

<b>Ecological Offsetting Area Table</b>			
<b>Total Property Area (ha)</b>	<b>Total Removal Area</b>	<b>Compensation Unit Value</b>	<b>Total Compensation Value</b>
0.44	0.137	\$ 57,500.00	\$ 7,877.50
<b>Total (Subject to Rounding)</b>			<b>\$ 7,877.50</b>

6.3 Summary and Recommendations

In summary, as a result of the proposed development onto the property at 127 and 131 Ardagh Road, Barrie, Ontario, has required that the Applicant submit a Tree Inventory and Assessment, Tree Preservation Report & Canopy Survey Plan for their review.

The summarized recommendations noted above are as follows:

That offsite trees A-L and Boundary Tree 37 are to be retained and protected with tree preservation fencing as shown on **TP-1 & TP-2**, in **Appendix B**, in accordance with the City of Barrie *Tree Preservation Detail BSD-1232*, and to be monitored during and post construction;

- Boundary Tree 36 will require consent to harms before removal;
- Butternut will require a Butternut Health Assessment prior to removal;
- That Onsite Trees 1-35, & 39-44 be removed according to Arboriculture Best Management Practices;
- That onsite trees to be retained and offsite trees be monitored during and post construction;
- That tree preservation signage (**LD-1 Appendix B**) be erected at the time of the hoarding installation (tree preservation fencing) attached to the preservation fencing;
- Vegetation removal or alteration is to occur outside the breeding bird season (April 1 to August 31) and the active roosting period for bats (April 1 to September 30). If clearing is to occur within the breeding bird window, the affected area must be screened by a qualified ecologist 48 hours in advance of scheduled clearing activities. If nests are found, work within the area must cease until the nest has fledged, as per the federal *Migratory Birds Convention Act 1994*;
- No equipment storage or refueling is to take place within the tree preservation zone as established by the preservation fencing;
- Tree preservation fencing is to be removed only after construction on the site is complete and removal of construction equipment;

- Existing tree branching that interferes with the development works or for the safety of future personnel may be pruned by qualified personnel;
- Removal of butternut is subjected to Butternut Health Experts report and acceptance by the Ministry of the Environment, Conservation and Parks.

## 7.0 Arborist's Declaration

It is the policy of Landmark Environmental Group Ltd to attach the following clause regarding the limitations:

The Consulting Arborist's visual assessment and recommendations, made in this Report, have been completed based on accepted arboricultural practices and represents a fair and accurate assessment of the number, type, size and condition of trees on the subject property. Such visual assessments of all tree components could include scars, bark damage, external decay, insect infestations, discolored foliage, crown dieback, an excessive degree of lean from the vertical and above-ground root defects. In addition, environmental conditions, which could affect overall health of the trees such as damaging maintenance practices, have also been taken into consideration where appropriate. However, no tree was dissected, cored or rooting systems assessed through excavation.

We hereby certify that we, Robert Glover & Jason Mullen have:

- Personally, performed a visual inspection of the trees and property referred to in this report and have stated our findings accurately in accordance with accepted arboricultural practices without personal interest or bias;
- No current or prospective interest in the property that is the subject of this Report and have no personal interest or bias with respect to the parties involved;
- That our analysis, opinions and conclusions stated are our own and based on commonly accepted arboricultural practices;
- That our compensation is not contingent on the reporting of a predetermined conclusion that favours the client;
- That we are members in good standing with the International Society of Arboriculture (ISA); and
- This report was review by Certified Arborist & Landscape Architect Principal Jim Hosick.

I trust the above-noted recommendations are of assistance. If there are any questions regarding the Property, Development, Tree Inventory, Analysis, Preservation Report please feel free to contact our Firm at (705) 796-1122.

Prepared by:

*Robert Glover*

Robert Glover, R.P.F.  
Arbor & Urban Forestry Consultant  
**Landmark Environmental Group Ltd**

*Jason Mullen*

Jason Mullen BHE, DipFor  
Arbor & Urban Forestry Associate  
**Landmark Environmental Group Ltd**

Reviewed by:



Jim Hosick, OALA, RPP  
Landscape Architect-Principal,  
ISA Certified Arborist No. 1098-A  
ArborCanada Qualified Appraiser #2164  
Member, American Society of Consulting Arborists  
**Landmark Environmental Group Ltd.**

## 8.0 Glossary of Arboricultural Terms

Arboriculture – practice and study of the care of trees and other woody plants in the landscape.

Branch – stem arising from a larger stem. A subdominant stem.

Canopy – collective branches and foliage of a tree or a group of trees' crowns.

Cavity – open or closed hollow within a tree stem, usually associated with decay.

Co-dominant branches/stems – forked branches nearly the same size in diameter, arising from a common junction and lacking a normal branch union.

Crown – upper part of the tree, measured from the lowest branch, including all the branches and foliage.

DBH – acronym for tree diameter at breast height. Measured 1.4 meters above ground.

Dieback – condition in which the branches in the tree crown die from the tips toward the centre.

Dripline – imaginary line defined by the branch spread of a single plant or group of plants.

Included Bark – bark that becomes embedded in a crotch (union) between branch and trunk or between codominant stems. Causes a weak structure.

In-situ in the natural or original position or place.

Interior Decay – Moisture or fungus that has entered a wound in a tree and has begun to rot away the internal, structural wood.

Leader – primary terminal shoot or trunk of a tree. Large, usually upright stem. A stem that dominates a portion of the crown by suppressing lateral branches.

Pruning – removing branches from a tree or other plants to achieve a specified objective.

Tree Protection Zone (TPZ) – Defined area within which certain activities are prohibited or restricted to prevent or minimize potential injury to designated trees, especially during construction or development.

## 9.0 General Tree Preservation Instructions

### 9.1 Purpose of Tree Preservation Instructions

When trees are recommended to be preserved & protected, the applicant should give their best efforts to accommodate the recommendations from the Supervising Consulting Arborist or Landscape Architect. This section provides detailed instructions on how the applicant can achieve tree preservation for tree recommended to be retained on the subject site. It should be noted that the instructions listed below may not all be relevant to the current conditions and is subject to discretion of the applicant and the Supervising Consulting Arborist.

### 9.2 Pre-Construction Preservation

It is very important for tree protection measures to be in place before construction commences. This is the only available time to mitigate problems to existing trees before damage occurs. Specifically, the measures that are recommended to be established before construction commences are as follows.

Tree Preservation Fencing enclosing and protecting the recommended Tree Preservations Zones (TPZ). See attached Arbor Report for specific details for installing tree preservation Fencing.

Soil compaction protections measures including determining the locations for construction access, areas for equipment storage and implementing compaction mitigation materials such as mud mats, mulching techniques and temporary drainage.

### 9.3 Tree Preservation Zones (TPZ)

Tree Preservations Zones are areas where it is crucial for construction works to *not* encroach. These areas are to be protected in order to avoid root destruction, soil compaction and to mitigate contaminants from effecting tree health.

The following instructions are recommended to be carried out to ensure adequate tree preservation zone installation and maintenance.

Tree Preservation Zones should be marked on all planning documents to make sure construction works are to be avoided this these areas.

Tree Preservation Zones are to be established at the outermost dripline of each retained tree. If encroachment into the dripline is necessary, then dripline encroachment greater than 30% of canopy area should be avoided and warrants a re-assessment or possible removal of the tree.

No construction activities should occur without first establishing the tree preservation zones.

No encroachment into the Tree preservation should occur without first consulting the project arborist, landscape architect or municipal arborist.

Fencing is to be constructed using livestock fencing (150mm x 150mm Paige Wire) and steel "Tee" bar posts spaced 2 m O.C with filter fabric strapped to fence unless otherwise directed by a governing authority (Municipal Arborist).

Tree preservation fencing is to be removed only after construction on the site is complete and removal of construction equipment from the subject site.

Contractors and construction workers are recommended to be made aware of the tree preservation zones.

Trees recommended to be retained and tree preservation zones are recommended to be monitored throughout the development timeline of the site.

Treatments that may be recommended to take place during construction may include irrigation, pest control, fertilizing or pruning. It is up to the discretion of the Supervising Consulting Arborist to recommend appropriate treatments to maintain the health of retained trees.

#### 9.4 Trees near Demolition Areas

During the demolition process, trees are commonly injured due to the removal of material from the subject site. It is important that the contractor knows the extent of the Tree Preservation Zone and methods of conducting root sensitive excavation.

The following instructions are recommended to be carried out to ensure that the demolition process minimally effect the tree preservation zone.

The demolition contractor should contact the Supervising Consulting Arborist prior to commencing work near Tree Preservation Zones to review protection measures taking place, site access and material storage areas.

No demolition activities should occur without first establishing the Tree Preservation Zones.

No encroachment into the Tree Preservation Zone should occur without first consulting the Supervising Consulting Arborist, Landscape Architect or Municipal Arborist.

Trees to be removed that have branches extending into tree that are to be retained must be removed by a qualified Arborist and *not* the demolition contractors.

Trees to be removed within the Tree Preservation Zones are to be cut flush to the ground and any brush or cutting required shall be done by hand and lifted out.

Infrastructure materials (concrete, asphalt, underground utilities) near the Tree Preservation Zone should be broken up and removed by hand or removed with the smallest equipment available.

Any damage to trees during the demolition process (such as bark damage) should be reported to the consulting arborist within six (6) hours so remedial action can take place.

If areas are disturbed within or near the Tree Preservation Zone, then the affected should be backfilled with high quality organic soil (such as triple mix).

#### 9.5 Tree Protection from Compacted Soils

Implementing soil compaction measures *before* equipment and construction works initiate, is a crucial step in ensuring tree survival. Trees that are exposed to compacted soils reduce their ability to absorb and transport water/nutrients leaving them in declining health.

- In places that propose foot traffic and light material transport, the following instructions should be carried out:
- Installation of 15cm deep of tree chips over the root area while keeping 30cm away from the trunk of any tree;
- Cover with ½” Plywood \*(or equivalent material such as mud mats);

- In places that propose vehicular access or critical root compaction, it is recommended that a detailed specific diagram or drawing be created using vigorous engineered materials to reduce soil compaction in the affected area. In any instance, the contractor should avoid working in wet soils as wet soil conditions are more susceptible to soil compaction;
- When removing preventative soil compaction material, it is important to *not* disturb the existing soil and any exposed roots that maybe present.

#### 9.6 Pruning trees Retained for development

Commonly, branches of retained trees may obstruct the construction or demolition process. The following instructions are recommended to be carried out to provide guidance on tree pruning for developments.

When possible, branches that obstruct development should be temporarily tied back. If branches succumb to breaking or bark is removed, then the branch should be pruned.

Pruning cuts greater than 10cm in diameter should be avoided.

No more than 20% of the total live crown/foliage shall be removed from the tree without guidance from the supervising consulting arborist.

Pruning shall be carried out by a qualified Arborist in conformity with good arboriculture practices and International Society of Arboriculture's *Tree Pruning Guidelines* (1995) or ANSI A300 Pruning Standard (2017).

#### 9.7 Post-Construction Preservation

The following instructions are recommended to be carried out after construction is complete to ensure that the condition of retained trees is maintained.

Retained trees should be regularly monitored by a qualified Arborist for signs of stress possibly caused by construction.

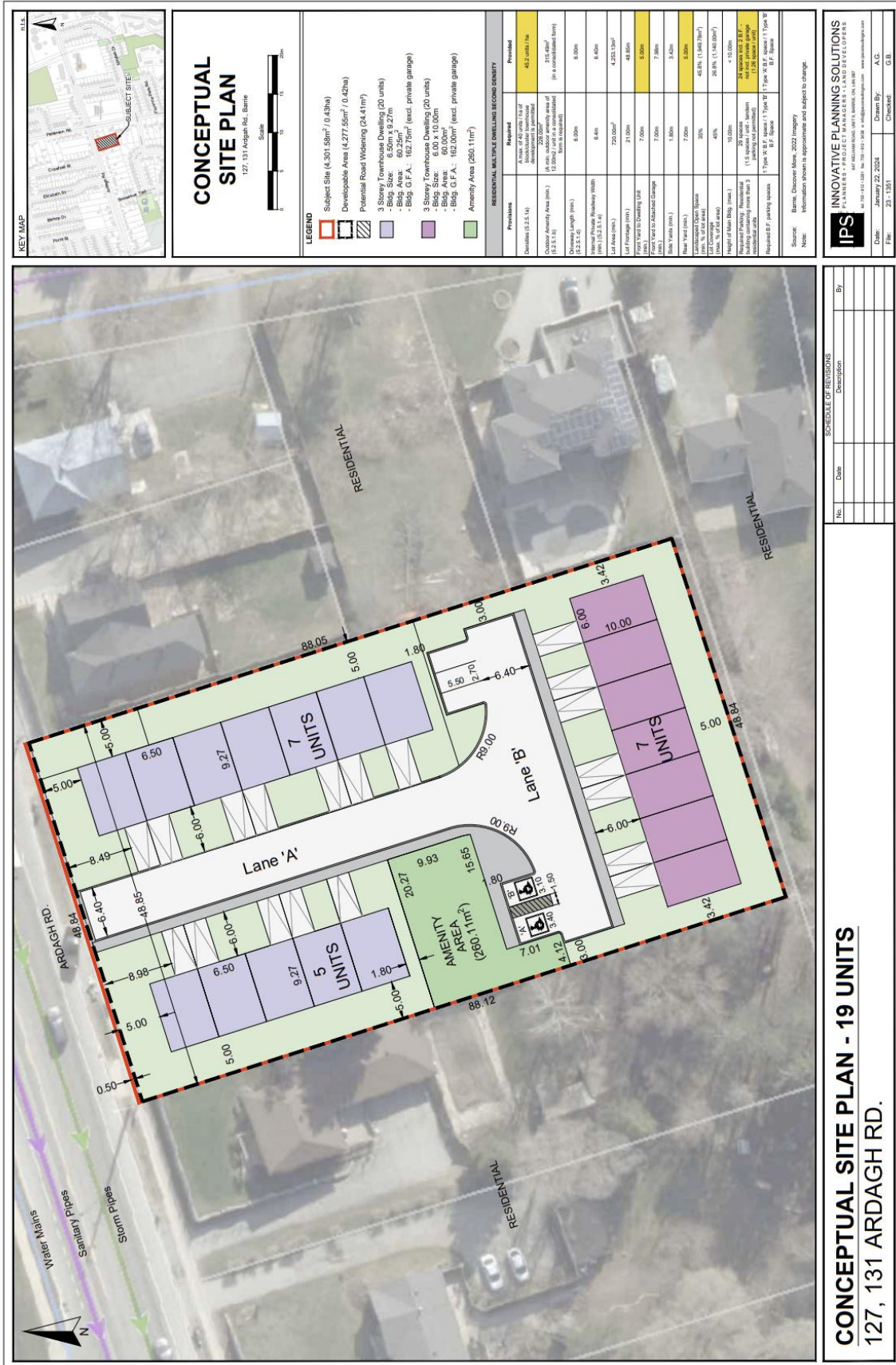
Treatments for retained trees may be warranted to maintain the health of the trees. This may include irrigation, pest control, fertilizing or pruning. It is up to the discretion of the Consulting Arborist to recommend appropriate treatments to maintain the health of retained trees.

Any damage to retained trees during the construction process should be assessed and dealt with in a timely matter. Trees that pose a risk as a result of damage during construction are recommended to be evaluated by a Tree Risk Assessment Qualified Arborist (TRAQ).

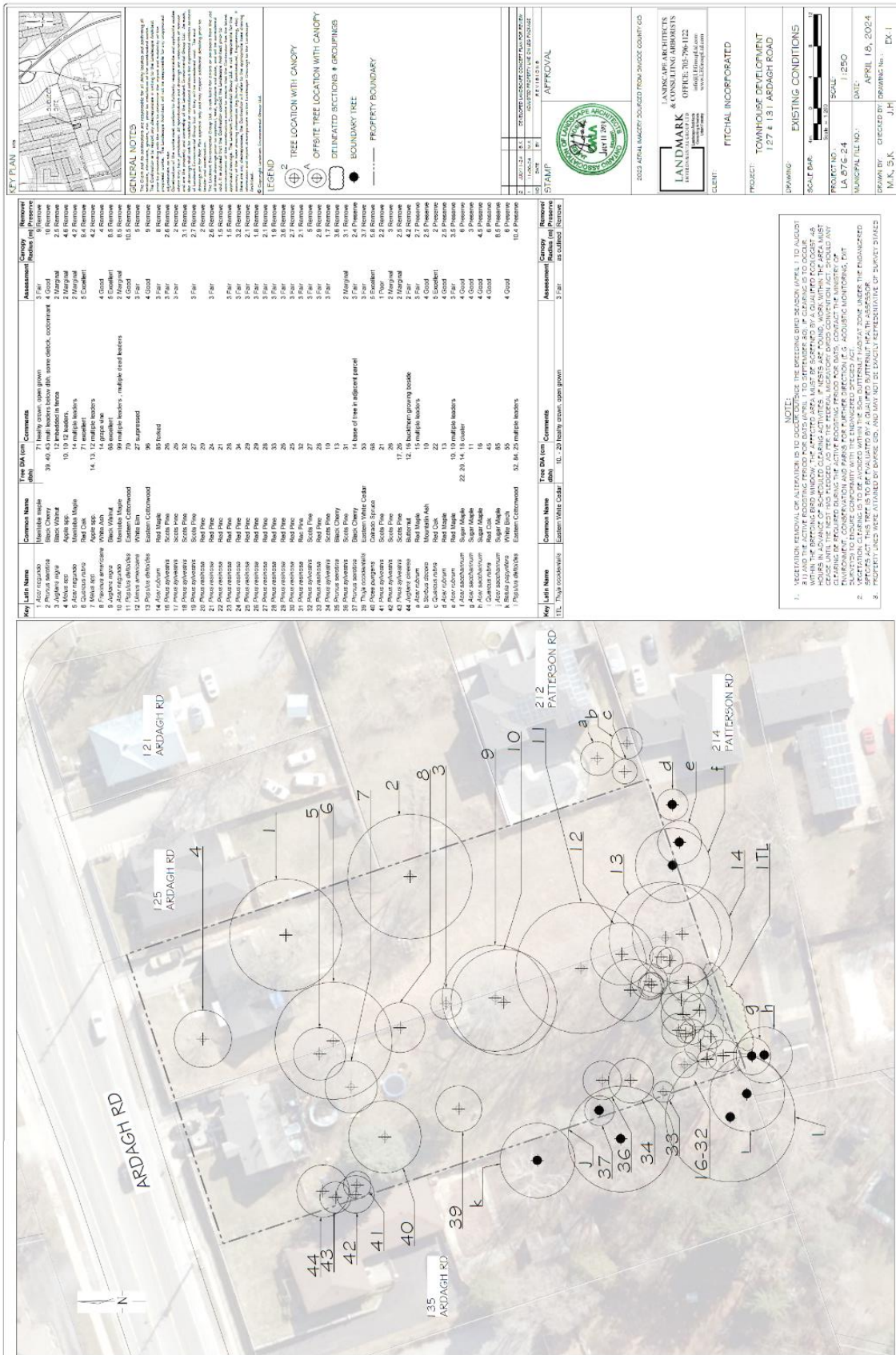
#### 9.8 Tree Preservation Instruction Disclaimer

These general recommendations and instructions should be considered in part with the proposed development. In most instances, the applicant is required to provide tree preservation as part of the development process in which tree preservation and development is site specific and requires specific discretion of the Supervising Consulting Arborist, applicant and contractors. LEGroup does not warrant the ensured survival of any retained tree that is recommended to be preserved. Trees are living organisms which are constantly adapting to their surroundings but, they are not immune to changes in their local environment. These instructions should aid in preservation efforts but they do not warrant the survival of the retained trees.

# Appendix A: Conceptual Site Plan



# Appendix B: Tree Inventory, Preservation & Details (EX-1, TP-1, LD-1)



**KEY PLAN** en

**GENERAL NOTES**

1. The information contained herein is for the use of the client and is not to be used for any other purpose without the written consent of the consultant.
2. The information contained herein is based on the best available information and is not a guarantee of accuracy.
3. The information contained herein is not to be used for any other purpose without the written consent of the consultant.
4. The information contained herein is not to be used for any other purpose without the written consent of the consultant.
5. The information contained herein is not to be used for any other purpose without the written consent of the consultant.
6. The information contained herein is not to be used for any other purpose without the written consent of the consultant.

**LEGEND**

- 1. ON-SITE TREE LOCATION WITH CANOPY
- 2. OFF-SITE TREE LOCATION WITH CANOPY
- 3. BOUNDARY TREE
- 4. TREE RECOMMENDED FOR REMOVAL
- 5. PROPERTY BOUNDARY
- 6. TREE PRESERVATION FENCE
- 7. 5m DEVELOPMENT SETBACK LIMIT

**STAMP**

**APPROVAL**

**LANDMARK ENVIRONMENTAL GROUP LTD.**  
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**CLIENT:** FITCHAL INCORPORATED

**PROJECT:** TOWNHOUSE DEVELOPMENT  
127 & 131 ARDAGH ROAD

**DRAWING:** TREE PRESERVATION PLAN I

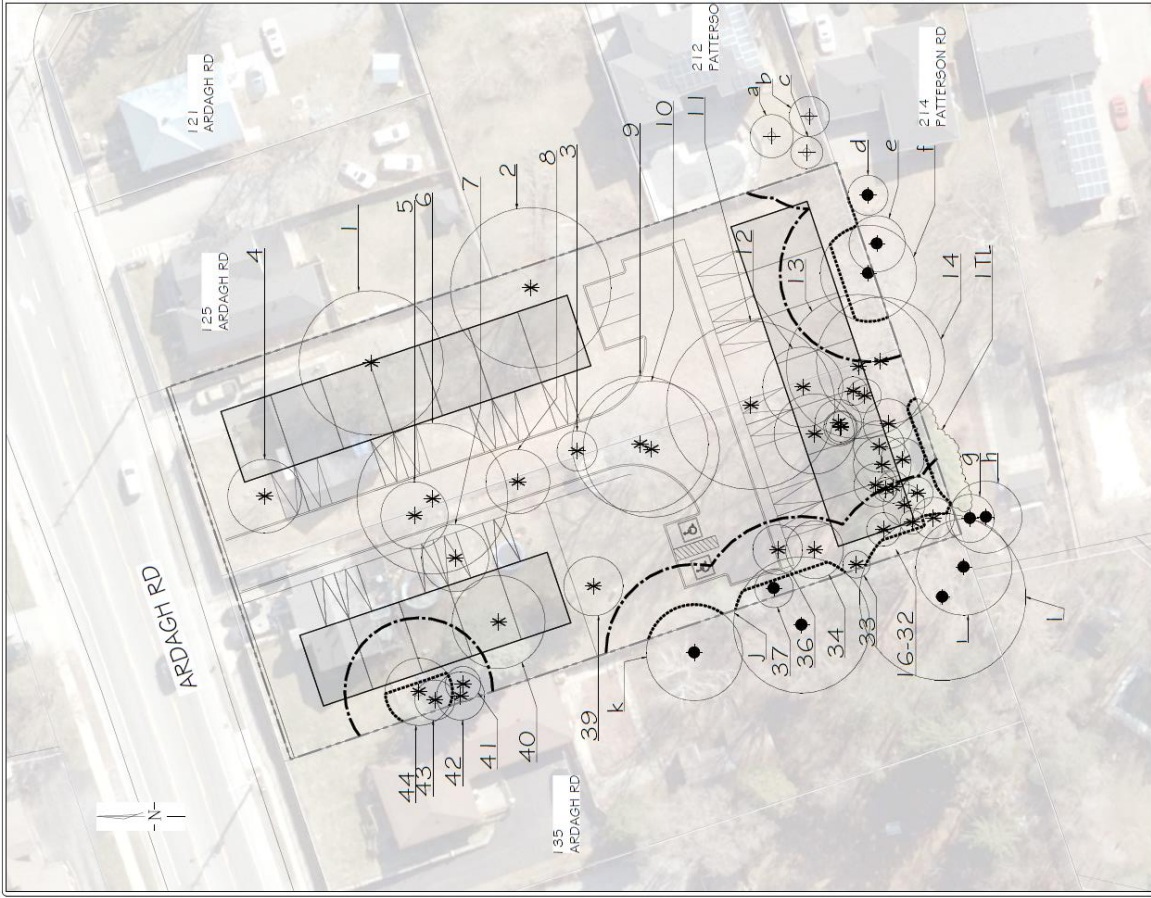
**SCALE BAR:** 1" = 20'

**PROJECT NO.:** LA 076-24

**MUNICIPAL FILE NO.:** APRIL 10, 2024

**DRAWN BY:** M.K. S.K. **CHECKED BY:** J.P.

Key	Latin Name	Common Name	Tree D.A. (cm) (dbh)	Comments	Assessment	Canopy Radius (m)	Removal/Preserve
1	<i>Acer spicatum</i>	Manitoba maple	31	Healthy crown, upper growth	3 Fair	10	Remove
2	<i>Pinus strobus</i>	Black Walnut	38, 40, 43	Small leaders, some dbh, some deck, codominant	4 Good	2.5	Remove
3	<i>Juglans nigra</i>	Black Walnut	12	Intact in fence	2 Marginal	4.0	Remove
4	<i>Malus spp.</i>	Apple spp.	10, 10, 12	Leaders	2 Marginal	9.0	Remove
5	<i>Acer nigropurpureum</i>	Manitoba Maple	14	Multiple leaders	3 Fair	5.0	Remove
6	<i>Acer sp.</i>	Apple spp.	14, 13, 12	Multiple leaders	3 Excellent	4.2	Remove
7	<i>Malus spp.</i>	Apple spp.	14	grape vine	4 Good	8.0	Remove
8	<i>Juglans americana</i>	Black Walnut	68	Excellent	5 Excellent	8.0	Remove
9	<i>Pinus strobus</i>	Black Walnut	70	Multiple leaders, multiple dead leaders	4 Marginal	10.0	Remove
10	<i>Pinus strobus</i>	Black Walnut	70	Multiple leaders	4 Marginal	10.0	Remove
11	<i>Populus deltoides</i>	White Elm	27	Suppressed	3 Fair	8.0	Remove
12	<i>Ulmus americana</i>	Eastern Cottonwood	96		4 Good	8.0	Remove
13	<i>Populus deltoides</i>	Red Maple	85	Forked	3 Fair	8.0	Remove
14	<i>Acer rubrum</i>	Scotts Pine	26		3 Fair	3.0	Remove
15	<i>Pinus strobus</i>	Scotts Pine	32		3 Fair	3.0	Remove
16	<i>Pinus strobus</i>	Scotts Pine	32		3 Fair	3.0	Remove
17	<i>Pinus strobus</i>	Scotts Pine	27		3 Fair	3.0	Remove
18	<i>Pinus strobus</i>	Red Pine	20		3 Fair	3.0	Remove
19	<i>Pinus strobus</i>	Red Pine	24		3 Fair	3.0	Remove
20	<i>Pinus strobus</i>	Red Pine	28		3 Fair	3.0	Remove
21	<i>Pinus strobus</i>	Red Pine	29		3 Fair	3.0	Remove
22	<i>Pinus strobus</i>	Red Pine	28		3 Fair	3.0	Remove
23	<i>Pinus strobus</i>	Red Pine	33		3 Fair	3.0	Remove
24	<i>Pinus strobus</i>	Red Pine	26		3 Fair	3.0	Remove
25	<i>Pinus strobus</i>	Red Pine	25		3 Fair	3.0	Remove
26	<i>Pinus strobus</i>	Red Pine	32		3 Fair	3.0	Remove
27	<i>Pinus strobus</i>	Red Pine	28		3 Fair	3.0	Remove
28	<i>Pinus strobus</i>	Scotts Pine	10		3 Fair	3.0	Remove
29	<i>Pinus strobus</i>	Scotts Pine	13		3 Marginal	3.0	Remove
30	<i>Pinus strobus</i>	Black Cherry	14	Base of tree in adjacent parcel	3 Fair	3.0	Remove
31	<i>Thuja occidentalis</i>	Black Cherry	53		3 Fair	3.0	Remove
32	<i>Thuja occidentalis</i>	Colorado Spruce	68		5 Excellent	3.0	Remove
33	<i>Thuja occidentalis</i>	Scotts Pine	21		1 Poor	2.2	Remove
34	<i>Thuja occidentalis</i>	Scotts Pine	21		1 Poor	2.2	Remove
35	<i>Thuja occidentalis</i>	Scotts Pine	21		1 Poor	2.2	Remove
36	<i>Thuja occidentalis</i>	Butternut	17, 26		2 Marginal	2.5	Remove
37	<i>Thuja occidentalis</i>	Butternut	12, 16	Backbone growing beside	2 Fair	4.2	Remove
38	<i>Thuja occidentalis</i>	Red Maple	15	Multiple leaders	3 Fair	2.7	Preserve
39	<i>Thuja occidentalis</i>	Mountain Ash	10		4 Good	2.5	Preserve
40	<i>Thuja occidentalis</i>	Red Maple	13		4 Good	2.5	Preserve
41	<i>Acer rubrum</i>	Red Maple	10, 10	Multiple leaders	3 Fair	2.5	Preserve
42	<i>Acer rubrum</i>	Sugar Maple	22, 20, 14, 18	Slender	3 Fair	3.5	Preserve
43	<i>Acer rubrum</i>	Sugar Maple	11		4 Good	5.0	Preserve
44	<i>Acer rubrum</i>	Sugar Maple	14		4 Good	4.5	Preserve
45	<i>Quercus rubra</i>	Red Oak	45		4 Good	5.0	Preserve
46	<i>Acer saccharinum</i>	Sugar Maple	85		8.5	Preserve	Preserve
47	<i>Alnus incana</i>	White Birch	55		4 Good	10.4	Preserve
48	<i>Populus deltoides</i>	Eastern Cottonwood	52, 84, 25	Multiple leaders	4 Good		Preserve



**Ecological Offsetting Area Table**

Property Area (ha)	Total Removal Area	Compensation Unit Value	Total Compensation Value
0.44	0.137	\$ 57,500.00	\$ 7,877.50
<b>Total (Subject to Rounding)</b>			<b>\$ 7,877.50</b>



**GENERAL NOTES**

The Client and the Contractor are responsible for all utility markers and existing at the site. The Contractor is responsible for all utility markers and existing at the site. The Contractor is responsible for all utility markers and existing at the site.

The Contractor is responsible for all utility markers and existing at the site. The Contractor is responsible for all utility markers and existing at the site.

**LEGEND**

Symbol	Description
---	Tree Preservation Area
---	Tree Preservation Area

**LANDSCAPE ARCHITECTS**

**LANDMARK**  
BY TERRACON CONSULTANTS  
OFFICE: 705-796-1122  
1000 BAYVIEW AVENUE, SUITE 1000  
SCARBOROUGH, ONTARIO M1B 2Y4

**CLIENT:**  
SIMCOE COUNTY DISTRICT SCHOOL BOARD

**PROJECT:**  
210 DEAN AVENUE, BARRIE, ON

**DRAWING:**  
TREE PRESERVATION DETAILS

**SCALE BAR:**

**PROJECT NO.:**  
LA 084-24

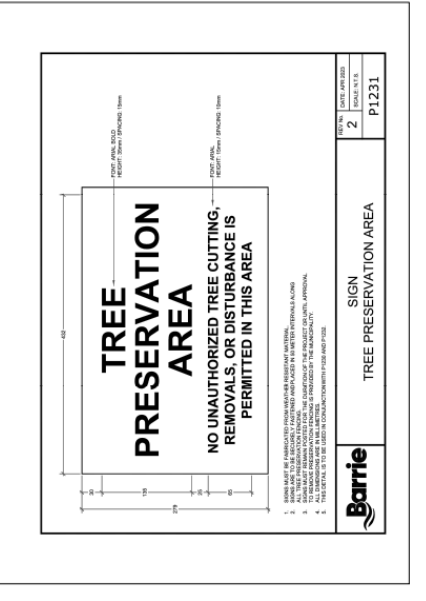
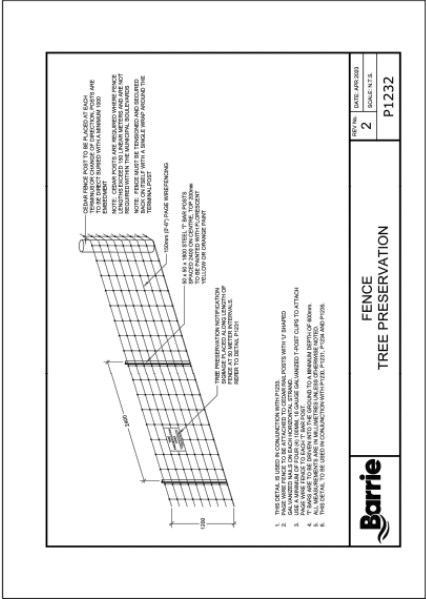
**SCALE:**  
N.T.S.

**DATE:**  
MARCH 19, 2024

**DESIGNED BY:**  
M.S.E.D.

**CHECKED BY:**  
J.H.

**DATE:**  
D-1



**TREE PRESERVATION NOTES**

1. THE INTENT OF THE TREE PRESERVATION IS TO PROTECT PROTECTION AND PRESERVATION FOR EXISTING TREES ON THE SUBJECT PROPERTY. THEREFORE, ALL TREES ARE TO BE PRESERVED UNLESS OTHERWISE INDICATED IN THE PLAN OR THE ARCHITECT'S REPORT. CONTACT THE LANDSCAPE ARCHITECT FOR ANY CHANGES TO THE TREE PRESERVATION AREA. THE TREE PRESERVATION AREA SHALL BE MAINTAINED AND PROTECTED THROUGHOUT THE CONSTRUCTION PERIOD.
2. PRIOR TO THE COMMENCEMENT OF ANY CLEARING, GRUBBING OR CONSTRUCTION WORKS, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF ANY PROTECTION FENCING TO BE INSTALLED AND TO BE MAINTAINED IN ACCORDANCE WITH THE FENCING DETAIL AND TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT. ERECTION OF ANY PROTECTION FENCING SHALL BE UNDER THE DIRECTION OF THE LANDSCAPE ARCHITECT.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ERECT AND MAINTAIN ALL FENCING AS PER THE FENCING DETAIL AND TO MAINTAIN THE FENCING IN GOOD CONDITION THROUGHOUT THE CONSTRUCTION PERIOD.
4. ANY STORAGE OF EQUIPMENT OR MATERIALS, USE AND STORAGE OF MATERIALS TO BE EXCAVATED OR REMOVED, OR ANY OTHER ACTS OF CONSTRUCTION SHALL NOT BE PERMITTED WITHIN THE AREA OF PRESERVATION PROTECTION. TREES SAVED FOR PROTECTION WILL NOT BE USED FOR LOGGING OR WRAPPING. THE PROTECTION PRESERVATION AREA SHALL NOT BE USED TO STORE EQUIPMENT, MATERIALS, OR TO STORE EQUIPMENT.
5. TREES LOCATED ON THE IMMEDIATE EDGE OF THE CONSTRUCTION WORKS ARE TO BE PRUNED IN THE INTEREST OF SAFETY, IN ACCORDANCE WITH APPROVED ARBORIST WORK PRACTICES.
6. TREE LOCATIONS ARE APPROXIMATE AND THEREFORE VERIFICATION ON SITE IS REQUIRED.
7. SHOULD A TREE BE REQUIRED TO BE REMOVED OR DAMAGED OR REMOVED WITHOUT THE APPROVED ARBORIST'S SUPERVISION, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF THE TREE OF EQUAL CALIBER AND ACCEPTABLE TREE SPECIES AT THE DISCRETION AND SATISFACTION OF THE LANDSCAPE ARCHITECT.
8. THE WORK COMPLETED BY THE CONTRACTOR WILL NOT CAUSE OR EXACERBATE FLOODING OR EROSION. THE CONTRACTOR SHALL TAKE PLACE WITH THE TREE PRESERVATION AREA UNLESS OTHERWISE APPROVED BY THE LANDSCAPE ARCHITECT.
9. ANY REQUIRED LAMB TRIMMING SHALL BE UNDER THE DIRECT SUPERVISION OF THE LANDSCAPE ARCHITECT OR A QUALIFIED ARBORIST.
10. PRESERVATION FENCING TO BE INSTALLED IN ACCORDANCE WITH THE APPROVED DETAIL FILTER FABRIC TO BE INSTALLED IN CONJUNCTION WITH THE APPROVED ENGINEERING DRAWINGS.
11. BOUNDING TREE PRESERVATION MAY BE COMPLETED IN CONJUNCTION WITH SEEDING/CONTROL.

## Appendix C: Tree Inventory and Assessment Table

Key	Latin Name	Common Name	Tree DIA (cm dbh)	Comments	Assessment	Canopy Radius (m)	Remove/ Preserve
1	<i>Acer negundo</i>	Manitoba maple	71	healhy crown, open grown	3 Fair	9	Remove
2	<i>Prunus serotina</i>	Black Cherry	39, 40, 43	multi leaders below dbh, some diebck, codominant	4 Good	10	Remove
3	<i>Juglans nigra</i>	Black Walnut	12	imbedded in fence	2 Marginal	2.5	Remove
4	<i>Malus spp</i>	Apple spp.	10, 10	12 leaders,	2 Marginal	4.6	Remove
5	<i>Acer negundo</i>	Manitoba Maple	14	multiple leaders	2 Marginal	4.2	Remove
6	<i>Quercus rubra</i>	Red Oak	71	excellent	5 Excellent	9.4	Remove
7	<i>Malus spp</i>	Apple spp.	14, 13, 12	multiple leaders		4.2	Remove
8	<i>Fraxinus americana</i>	White Ash	14	grape vine	4 Good	4	Remove
9	<i>Juglans nigra</i>	Black Walnut	68	excellent	5 Excellent	8.5	Remove
10	<i>Acer negundo</i>	Manitoba Maple	99	multiple leaders , multiple dead leaders	2 Marginal	8.5	Remove
11	<i>Populus deltooides</i>	Eastern Cottonwood	70		4 Good	10.5	Remove
12	<i>Ulmus americana</i>	White Elm	27	surpressed	3 Fair	5	Remove
13	<i>Populus deltooides</i>	Eastern Cottonwood	96		4 Good	9	Remove
14	<i>Acer rubrum</i>	Red Maple	85	forked	3 Fair	8	Remove
16	<i>Pinus sylvestris</i>	Scots Pine	26		3 Fair	2.6	Remove
17	<i>Pinus sylvestris</i>	Scots Pine	26		3 Fair	2	Remove
18	<i>Pinus sylvestris</i>	Scots Pine	32			3.1	Remove
19	<i>Pinus sylvestris</i>	Scots Pine	27		3 Fair	2.7	Remove
20	<i>Pinus resinosa</i>	Red Pine	20			2	Remove
21	<i>Pinus resinosa</i>	Red Pine	24		3 Fair	2.6	Remove
22	<i>Pinus resinosa</i>	Red Pine	21			1.5	Remove
23	<i>Pinus resinosa</i>	Red Pine	28		3 Fair	1.5	Remove
24	<i>Pinus resinosa</i>	Red Pine	34		3 Fair	3.2	Remove
25	<i>Pinus resinosa</i>	Red Pine	29		3 Fair	2.1	Remove
26	<i>Pinus resinosa</i>	Red Pine	29		3 Fair	1.8	Remove
27	<i>Pinus resinosa</i>	Red Pine	28		3 Fair	2.1	Remove
28	<i>Pinus resinosa</i>	Red Pine	33		3 Fair	1.9	Remove
29	<i>Pinus resinosa</i>	Red Pine	26		3 Fair	3.6	Remove
30	<i>Pinus resinosa</i>	Red Pine	25		3 Fair	2.7	Remove
31	<i>Pinus resinosa</i>	Rec Pine	32		3 Fair	2.1	Remove
32	<i>Pinus sylvestris</i>	Scots Pine	27		3 Fair	5	Remove
33	<i>Pinus resinosa</i>	Red Pine	28		3 Fair	2.9	Remove
34	<i>Pinus sylvestris</i>	Scots Pine	10		3 Fair	1.7	Remove
35	<i>Prunus serotina</i>	Black Cherry	13			3.6	Remove
36	<i>Pinus sylvestris</i>	Scots Pine	31		2 Marginal	3.1	Remove
37	<i>Prunus serotina</i>	Black Cherry	14	base of tree in adjacent parcel	3 Fair	2.4	Preserve
39	<i>Thuja occidentalis</i>	Eastern White Cedar	53		3 Fair	3.7	Remove
40	<i>Picea pungens</i>	Colorado Spruce	68		5 Excellent	5.8	Remove
41	<i>Pinus sylvestris</i>	Scots Pine	21		1 Poor	2.2	Remove
42	<i>Pinus sylvestris</i>	Scots Pine	26		2 Marginal	3	Remove
43	<i>Pinus sylvestris</i>	Scots Pine	17, 26		2 Marginal	2.5	Remove
44	<i>Juglans cinerea</i>	Butternut	12, 16	buckthorn growing beside	2 Fair	4.2	Remove
a	<i>Acer rubrum</i>	Red Maple	15	multiple leaders	3 Fair	2.7	Preserve
b	<i>Sorbus decora</i>	Mountatin Ash	10		4 Good	2.5	Preserve
c	<i>Quercus rubra</i>	Red Oak	22		5 Excellent	2	Preserve
d	<i>Acer rubrum</i>	Red Maple	13		4 Good	2.5	Preserve
e	<i>Acer rubrum</i>	Red Maple	10, 10	multiple leaders	3 Fair	3.5	Preserve
f	<i>Acer saccharinum</i>	Sugar Maple	22, 20, 14, 18	cluster	4 Good	6	Preserve
g	<i>Acer saccharinum</i>	Sugar Maple	11		4 Good	3	Preserve
h	<i>Acer saccharinum</i>	Sugar Maple	16		4 Good	4.5	Preserve
i	<i>Quercus rubra</i>	Red Oak	45		4 Good	6	Preserve
j	<i>Acer saccharinum</i>	Sugar Maple	85			8.5	Preserve
k	<i>Betula papyrifera</i>	White Birch	55		4 Good	6	Preserve
l	<i>Populus deltooides</i>	Eastern Cottonwood	52, 84, 25	multiple leaders		10.4	Preserve
Key	Latin Name	Common Name	Tree DIA (cm dbh)	Comments	Assessment	Canopy Radius (m)	Remove/ Preserve
1TL	<i>Thuja occidentalis</i>	Eastern White Cedar	10. - 20	healhy crown, open grown	3 Fair	as outlined	Remove

## Appendix D: Selected Site Photos

**Picture 1:** Southview of backyard 127 Ardagh



**Picture2:** Southview of backyard 127 Ardagh



**Picture 3:** Eastview from back yard 127 Ardagh



**Picture 4:** Westview of boundary of 131 Ardagh and 135 Ardagh

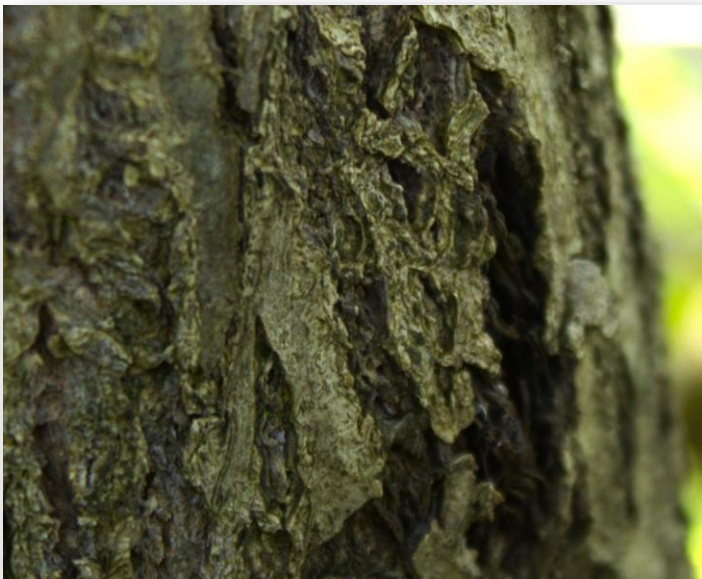


## Butternut

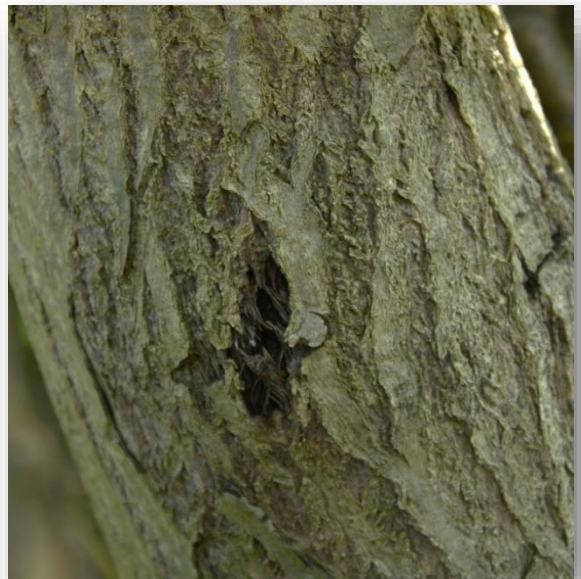
**Picture 5:** Close up of bud scar on Butternut (*Juglans cinera*)



**Picture 6:** Close up of Butternut Canker



**Picture 7:** Close up of Butternut Canker



**Picture 8:** Westview of Butternut (*Juglans cinera*)

