TOWN OF CALEDON
PLANNING
RECEIVED
May 19, 2023

BEACON ENVIRONMENTAL

GUIDING SOLUTIONS IN THE NATURAL ENVIRONMENT

Arborist Report
0 and 14396 Humber Station Road, 0 King Street, and 14275 The Gore Road
File # 21T-22001
Town of Caledon

Prepared For:

Argo Macville I Corporation,
Argo Macville II Corporation,
Argo Macville V Corporation,
Argo Humberking Corporation, and
Robert Speirs

Prepared By:

Beacon Environmental Limited

Date: **May 2023**

Project: **221164 and 221165**

Table of Contents

page

1. Introduction 1
2. Methods 1
3. Findings 2
4. Impact Assessment and Recommendations 3
   - 4.1 Tree Removals 3
   - 4.2 Tree Protection 4
5. Tree Replacement 5
6. References 7

Figures

Figure 1. Site Location ..... after page 2
Figure 2. Draft Plan of Subdivision ..... after page 2

Tables

Table 1. Minimum Tree Protection Zones 4
Table 2. Calculation of Tree Compensation 6

Appendices

Appendix A. Arborist Report Methods
Appendix B. Tree Inventory Data
Appendix C. Tree Inventory and Preservation Plan

1. Introduction

Beacon Environmental Limited (Beacon) was retained by Argo Macville I Corporation, Argo Macville II Corporation, Argo Macville V Corporation, Argo Humberking Corporation, and Robert Speirs to prepare an Arborist Report for lands at 0 and 14396 Humber Station Road, 0 King Street, and 14275 The Gore Road; legally described as Part of Lots 11, 12, and 13, Conc. 4, TWP. ALB. Town of Caledon, Regional Municipality of Peel (ref. **Figure 1**). The Arborist Report is required to support the Macville Application for Draft Plan of Subdivision (ref. **Figure 2**).

This Arborist Report builds upon the tree inventory that included in the 2023 Comprehensive Environmental Impact Study and Management Plan (CEISMP) prepared in support of a Secondary Plan for the Caledon Station Community and authored by Beacon in collaboration with Glen Schnarr & Associates Inc., Urbantech Consulting and DS Consultants Ltd.

This Arborist Report was prepared in accordance with the *Terms of Reference for Arborist Reports, Tree Preservation Plans and Tableland Tree Removal Compensation* (Town of Caledon 2020).

The purpose of this Arborist Report is to:

- Identify and describe individual trees and tree groupings on the subject lands;
- Assess potential impacts to individual trees and tree groupings resulting from the proposed development including requirements for tree removals; and
- Provide recommendations for tree preservation and protection.

2. Methods

An inventory and evaluation of individual trees and tree groupings on the subject lands was completed on June 12, June 18, and August 20, 2020, April 16, 2021, and May 16, 2023 by Arborists certified by the International Society of Arboriculture (ISA).

In general, individual trees ≥10 cm DBH (diameter at breast height, measured 1.4 m above grade) were tagged with numbered aluminum forestry tags and their locations were recorded with dGPS (SBAS). Trees located on adjacent properties were not tagged but were assessed based on observations from the subject lands. For each tree, the following information was recorded:

- Species;
- Trunk DBH (diameter at breast height, measured 1.4 m above grade);
- Health condition; and
- Structural condition rating.

Each tree was assigned a condition rating of good, fair, poor, or dead, based on the following criteria:

- ***Poor*** – Severe dieback, significant lean, missing leader, major defects, significant decay and/or disease presence;

- ***Fair*** – Moderate dieback and/or lean, limb defects, multiple stems, moderate foliage damage from stress;
- ***Good*** – Healthy vigorous growth, minor visible defects or damage; and
- ***Dead*** – No live growth.

Tree condition was assessed based on presence and severity of flaws, damage, evidence of pests or diseases, structural condition, dead or dying branches, or other decline indicators.

Where trees occur in clusters or groupings (i.e., in hedgerows) were proposed for removal, they were not individually tagged and assessed, but rather, the number, species, size, and condition of the trees in each group was recorded.

Limitations of the assessment are summarized in **Appendix A.**

3. Findings

A total of 306 individual trees were documented and assessed on or adjacent to the subject lands. The findings of the tree inventory and assessment are summarized in **Appendix B.** The locations of individual trees and tree grouping are illustrated on the Tree Inventory and Preservation Plan (**Appendix C)**.

A general summary of the individual trees within the subject lands is presented in **Table 1**. Trees range in size from 8 cm to 102 cm DBH. The four most abundant species, in descending order are Hawthorn (*Crataegus*) species, Eastern White Cedar (*Thuja occidentalis*), White Spruce (*Picea glauca*) and Common Apple (*Malus pumila*).

A total of 13 tree groupings were identified on the subject lands, collectively containing 208 of the 306 inventoried trees. The following are brief summaries of the tree groupings. Detailed summaries are provided in **Appendix B.**

Group A

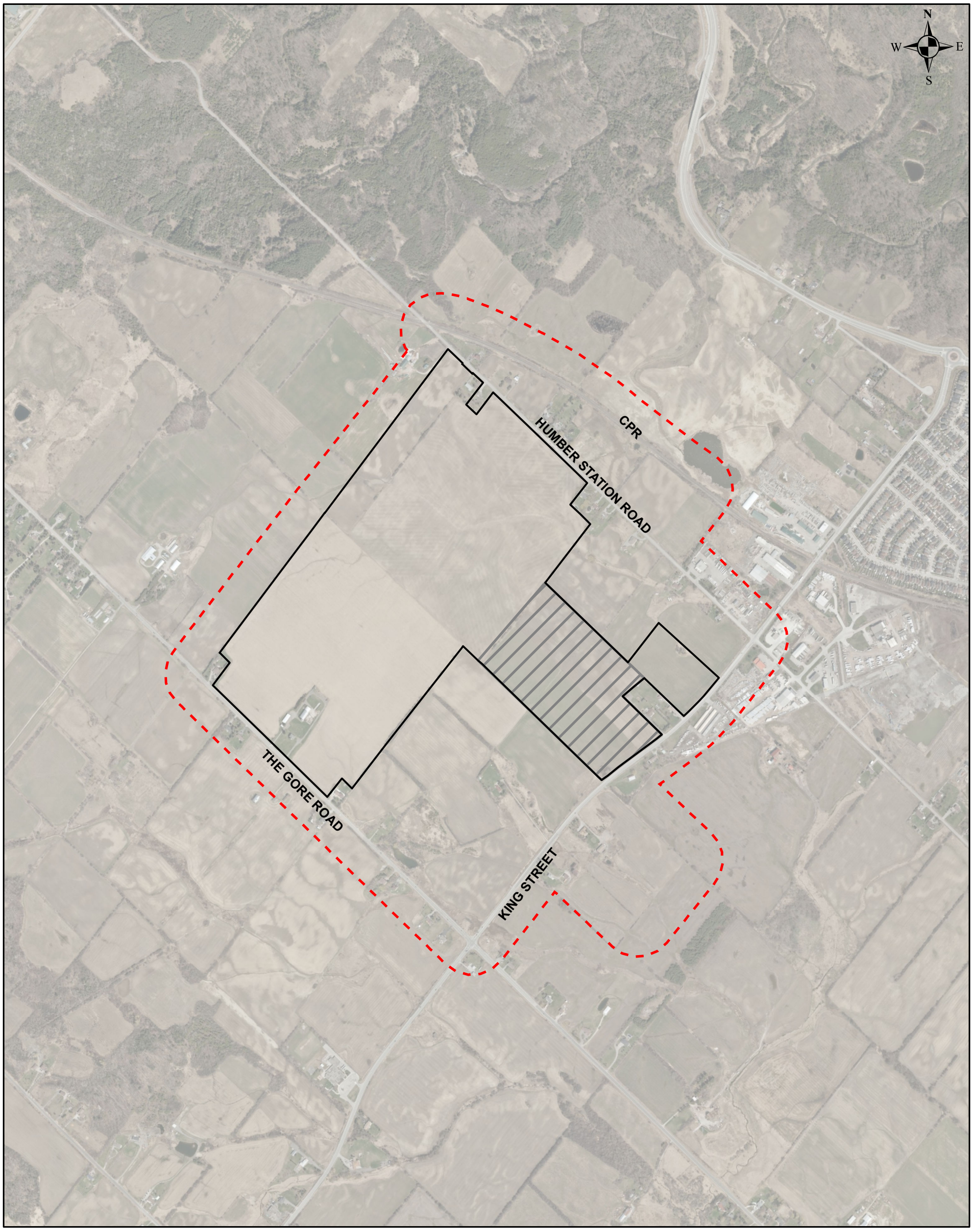
This grouping consists of three Red Cedar (*Juniperus virginiana*) trees adjacent to the existing farmhouse.

Group B1, B2 – White Cedar Hedgerows

Groups B1-B2 are hedgerows dominated by Eastern White Cedar, with occasional hardwoods mixed in.

Group C – Hawthorn/Apple/Buckthorn Hedgerows

Groups C1-C4, C6 and C7 are hedgerows dominated by Buckthorn (*Rhamnus cathartica*), Hawthorns, and Apple. Buckthorn, an invasive shrub, was not included in the inventory. Other trees



LEGEND

- SUBJECT LANDS
- LANDS OWNED BY SPEIRS
- STUDY AREA (CEISMP)

BEACON ENVIRONMENTAL

DS CONSULTANTS LTD. Geotechnical • Environmental • Materials • Hydrogeology

GSAI Glen Schnarr & Associates Inc.

URBANTECH

ARBORIST REPORT
MACVILLE DRAFT PLAN OF SUBDIVISION

PROJECT No. 221164-221165

FIGURE 1

SITE LOCATION

May 2023 Scale 1:12,000

C:\ODB\OneDrive - Beacon Environmental\GeoSpatial\Geo Projects\2021\221164 Macville I Draft Plan EIS\MXD\20230510_Figure01_SiteLocation_221164.mxd

P:\792-020\4. Drawings\2023 05 May\DP Macville May 5 23.dwg

DRAFT PLAN OF SUBDIVISION

ARGO MACVILLE I CORPORATION, ARGO MACVILLE II CORPORATION, ARGO MACVILLE V CORPORATION, ARGO HUMBERKING CORPORATION, & ROBERT SPEIRS

FILE# 21T-22001

PART OF LOTS 11,12 AND 13, CONCESSION 4 (TOWNSHIP OF ALBION)
TOWN OF CALEDON
REGIONAL MUNICIPALITY OF PEEL

SURVEYORS CERTIFICATE

I HEREBY CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED AS SHOWN ON THIS PLAN AND THEIR RELATIONSHIP TO ADJACENT LANDS ARE CORRECTLY AND ACCURATELY SHOWN.

SIGNED _____ DATE: MAY 15, 2023

MONIKA BUDZIAK, OLS
J. D. BARNES LIMITED
EMAIL: mbudziak@jdbarnes.com

ADDITIONAL INFORMATION

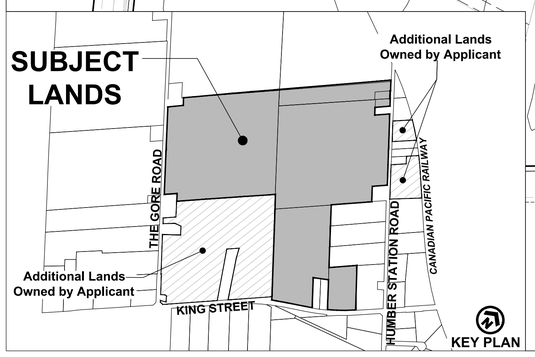
(UNDER SECTION 51(17) OF THE PLANNING ACT) INFORMATION REQUIRED BY CLAUSES A,B,C,D,E,F,G,J & L ARE SHOWN ON THE DRAFT AND KEY PLANS.
H) MUNICIPAL AND PIPED WATER TO BE PROVIDED
I) SANDY LOAM AND CLAY LOAM
K) SANITARY AND STORM SEWERS TO BE PROVIDED

LAND USE SCHEDULE

LAND USE	LOTS / BLOCKS	AREA (ha)	AREA (ac)	UNITS
SINGLE DETACHED - 15.24m (50') (17m DEPTH)	1-580	2.05	5.07	76
SINGLE DETACHED - 12.8m (42')		3.47	8.57	91
SINGLE DETACHED - 12.8m (42') (17m DEPTH)		3.34	8.25	146
SINGLE DETACHED - 11.6m (38')		5.02	12.40	158
SINGLE DETACHED - 11.0m (36')		1.78	4.40	60
SINGLE DETACHED - 10.4m (34')		1.66	4.10	49
BACK-TO-BACK TOWNHOUSES - 6.4m (21')	581-618	3.89	9.61	410
BACK-TO-BACK TOWNHOUSES - 5.6m (18')	619-652	3.21	7.93	388
STREET TOWNHOUSES - 7.6m (25')	653-668	1.25	3.09	52
REAR LANE TOWNHOUSES - 6.05m (20')	669-824	10.68	26.39	815
DUAL FRONTAGE TOWNHOUSES - 6.1m (20')	825-829	0.42	1.04	30
MEDIUM DENSITY RESIDENTIAL	830-845	16.32	40.33	
MIXED USE	846-850	2.17	5.36	
RESIDENTIAL RESERVE	851-886	1.09	2.69	
ELEMENTARY SCHOOL	887-889	5.47	13.52	
PARK	890-904	5.37	13.27	
WALKWAYS	905-907	0.05	0.12	
SWM POND	908	2.09	5.16	
ROAD WIDENING	909-911	0.57	1.41	
0.3m RESERVE	912-952	0.06	0.15	
22.0m R.O.W. - (Length - 4,700m)		10.45	25.82	
18.0m R.O.W. - (Length - 12,901m)		23.33	57.65	
16.0m R.O.W. - (Length - 74m)		0.12	0.30	
14.0m R.O.W. - (Length - 500m)		0.70	1.73	
8.0m Laneway - (Length - 3,167m)		2.63	6.50	
TOTAL	**952**	**107.19**	**264.87**	**2,275**

NOTES

-STREET 'C' / THE GORE ROAD DAYLIGHT TRIANGLE: 15m x 15m
-STREET 'G' / THE GORE ROAD DAYLIGHT TRIANGLE: 15m x 15m
-COLLECTOR / COLLECTOR DAYLIGHT TRIANGLE: 7.5m x 7.5m
-PUBLIC LANE / TO COLLECTOR/LOCAL DAYLIGHT TRIANGLE: 3m x 3m
-LOCAL / COLLECTOR DAYLIGHT ROUNDINGS: 5m
-ALL INTERSECTIONS ARE 90 DEGREES UNLESS OTHERWISE NOTED



ARGO DEVELOPMENT CORP

SCALE 1:2500
(24 x 36)
MAY 5, 2023

GSAI

that occur sporadically in these hedgerows include Basswood (*Tilia americana*), White Ash (typically dead or dying), White Elm (*Ulmus americana*), and Black Cherry (*Prunus serotina*). Trees in these groupings tend be in fair condition but exhibit poor structure.

Group G – Freeman's Maple Patch

This group is small patch of Freeman's Maple (*Acer x freemanii*) located in at the corner of an agricultural field along Humber Station Road.

Group J – Blue Spruce Hedgerow

This grouping is a hedgerow that consists of young Blue Spruce, located along the property line.

Group K – Austrian Pine Hedgerow

This grouping is a hedgerow that consists of Austrian Pine located along the property line.

Group L – White Spruce Hedgerow

This grouping is a hedgerow that consists predominantly of White Spruce and Manitoba Maples located along the property line.

Group N3 – Green Ash Patch

This group is small patch of Green Ash (*Fraxinus pennsylvanica*), Manitoba Maple, and Buckthorn located in the south corner of an agricultural field along King Street.

4. Impact Assessment and Recommendations

4.1 Tree Removals

Based on a review of the proposed development and grading plans (GSAI 2023; Urbantech 2023), the majority of trees will need to be removed to facilitate development of the subject lands. Individual trees and tree groupings identified for removal are illustrated on the Tree Inventory and Preservation Plan (**Appendix C**).

Seven trees from the municipal road allowance along the Gore Road and Humber Station Road will require removal, subject to approval from the Region and Town.

In addition, a number of trees and tree groupings are located on adjacent private property or in close proximity to the property line, which will require removal or may be injured by development or site alteration occurring on the subject lands. Permission form adjacent landowners must be obtained

prior to removing or harming trees located on the property line or adjacent properties. Tree locations illustrated in **Figures TP-1** and **TP-2** are approximate; therefore, it recommended that tree locations be surveyed by an Ontario Land Surveyor to confirm tree ownership and recommendations.

There are no Provincially Endangered or Threatened plant species on record for the subject lands, nor were any observed during the inventory. No rare tree species were observed.

The federal *Migratory Birds Convention Act* (1994) and provincial *Fish and Wildlife Conservation Act* (1997) protect the nests, eggs and young of most bird species from harm or destruction. As the peak breeding bird season in southern Ontario is generally from mid-May to early-July, and the more general breeding bird season is between early April and late August, vegetation clearing should occur outside of these periods (i.e., April 1st to August 31st) whenever possible. For any proposed clearing of vegetation within these dates, or where birds may be suspected of nesting outside of these dates, an Ecologist or Avian Biologist should undertake detailed nest searches immediately prior to site alteration to ensure that no active nests are present. If active nests are confirmed, removal of the tree / vegetation will need to be delayed until the nest is no longer actively used.

4.2 Tree Protection

Ninety-one (92) trees — 58 of which are in four tree groupings — located on adjacent private properties have been identified for preservation. Additionally, existing trees located in a proposed park block (Block 890) are proposed for preservation. Tree preservation will be subject to consultation from the Town and adjacent landowners, as necessary.

Tree locations illustrated in **Figures TP-1** and **TP-2** are approximate; therefore, it recommended that tree locations be surveyed by an Ontario Land Surveyor.

There is potential for damage to occur to trees during construction if proper precautions and protection measures are not implemented. Trees can be negatively impacted through grade changes, soil compaction, root cutting, and mechanical damage to trunks and branches resulting from the operation of construction equipment.

Trees to be preserved shall be protected by establishing a minimum Tree Protection Zone (TPZ) based on the tree DBH as indicated in **Table 1**. If it is determined that work must take place within the minimum TPZ of trees identified for preservation, the management of such trees should be reassessed by a Certified Arborist.

Table 1. Minimum Tree Protection Zones

Trunk Diameter (DBH)	Minimum Protection Distances Required
10-29 cm	1.8 m
30-39 cm	2.4 m
40 - 49 cm	3.0 m
50 – 59 cm	3.6 m
60 – 69 cm	4.2 m
70 – 79 cm	4.8 m
80 – 89 cm	5.4 m
90 – 100 cm	6 m

The location of tree protection fencing is illustrated in **Appendix C** and follows the dripline of existing trees identified for preservation. In general, the placing fencing at the dripline results in a larger TPZ than the minimum shown in **Table 1**. As such, field fit (± 1 m) of tree protection fencing should not compromise the preservation of a tree. Fencing shall be installed before any construction or site alteration takes place.

No grading, soil disturbance, or surface treatments shall occur within the TPZ. No equipment or materials shall be stored inside the TPZ.

The following activities are prohibited within the TPZ:

- Construction;
- Altering of grade by adding fill, excavating, trenching, scraping, dumping or disturbance of any kind;
- Storage of construction materials, equipment, soil, construction waste or debris;
- Disposal of any liquids e.g., concrete sleuth, gas, oil, paint;
- Movement of vehicles, equipment or pedestrians; and
- Parking of vehicles or machinery.

In addition to the establishment of the TPZ, the following measures are recommended to ensure the health and survival of any retained trees:

- Any root damage occurring to retainable trees during construction should be cut cleanly with a handsaw or pruners;
- Any injury caused to a retainable tree during construction should be evaluated by a qualified arborist; and
- Any pruning of trees for construction clearance should be performed by qualified individuals following standard best management practices.

5. Tree Replacement

The Town of Caledon requires compensation for trees removed in relation to draft pan and site plan applications as outlined in the *Terms of Reference for Arborist Reports, Tree Preservation Plans and Tableland Tree Removal Compensation* (Town of Caledon 2020). Compensation for removed trees is determined based on the cost to replace the trees that will be removed due to development. The Town of Caledon has developed a formula for calculating compensation values that is based on tree size. An analysis has been completed for the tree removals on this site using this formula, and it has been determined that the removal of the 214 trees — 182 of which are in fair or better condition — would require planting 407 trees as summarized in **Table 2**.

Table 2. Calculation of Tree Compensation

Diameter at Breast Height (cm)	Number of Trees in Fair or Good Condition to be Removed	Compensation Ratio	Number of Compensation Trees Required
10-20	59	1:1	59
21-35	56	2:1	112
36-50	41	3:1	123
51-65	17	4:1	68
>65	9	5:1	45
Total:	**182**	**Total:**	**407**

If there is in insufficient room to plant the required number of replacement trees on-site, then financial compensation (cash-in-lieu) may be accepted at rate (per tree) as determined by the Town.

Although every effort has been made to ensure that this assessment is reasonably accurate, it is recommended that trees be re-assessed every 5 years to identify changes in condition. Design or site plan changes may also necessitate re-assessment and/or revisions to this report

Report prepared by:
Beacon Environmental



James Seery, B.Sc.
Ecologist
ISA Certified Arborist (ON-2350A)

Report prepared by:
Beacon Environmental



Dan Westerhof, B.Sc., M.E.S.
Senior Terrestrial Ecologist,
ISA Certified Arborist (ON-1536A)

Report reviewed by:
Beacon Environmental



Ken Ursic, B.Sc., M.Sc.
Principal, Senior Ecologist

6. References

Beacon Environmental, Urbantech Consulting, Glen Schnarr & Associates Inc., DS Consultants Ltd. 2023.
Comprehensive Environmental Impact Study and Management Plan Caledon Station Community Secondary Plan. May 2023.

Government of Canada. 1994.
Migratory Birds Convention Act, 1994 (S.C. 1994, c.22).

Government of Ontario. 1997.
Fish and Wildlife Conservation Act, 1997 (S.O 1997, c. 41)

Town of Caledon. April 2020.
Terms of Reference for Arborist Reports, Tree Preservation Plans and Tableland Tree Removal Compensation. April 2020.

Appendix A

Tree Inventory and Assessment Methodology & Limitations of Tree Assessment

Appendix A

Tree Inventory and Assessment Methodology*

**Note that not all the tree descriptors contained herein may be used in a tree assessment and report.*

DBH (cm): Diameter at breast height, 1.4 m above ground, measured in centimeters. Two or more numbers denotes the DBH of each stem/trunk for trees with multiple stems/trunks. For multi-stemmed trees, for the purpose of determining the minimum tree protection zone DBH is calculated as the square root of the sum of the square DBH of each stem.

Crown Reserve/Diameter (metres): Crown diameter (tree's canopy) measured at intervals of 1 metre.

Condition: General Condition is recorded for standard tree inventories and assessments. For detailed tree inventories and assessments, when required the assessment of tree condition evaluates factors of Biological Health and Structural Condition separately.

The descriptors of health and structure attributed to a tree evaluate the individual specimen to what could be considered typical for that species growing in its location under current site and climatic conditions. For example, some species can display inherently poor branching architecture, such as multiple acute branch attachments with included bark. Whilst these structural defects may technically be considered arboriculturally poor, they are typical for the species and may not constitute an increased risk of failure. These trees may be assigned an intermediate structural rating of fair – poor (rather than poor) at the discretion of the assessor.

General Condition: Outlined below are the detailed guidelines utilized for the classification of general condition rating:

- **Excellent**: (Healthy)
  No major branch mortality: crown is typical with less than 10% branch or twig mortality; no signs of decay.
- **Good**: (Light Decline)
  Branch mortality, twig dieback in 11-25% of the crown: broken branches or crown missing based on presence of old snags is less than 26%; minor evidence of decay.
- **Fair**: (Moderate Decline)
  Branch mortality, twig dieback in 26-50% of the crown: broken branches or crown area missing based on presence of old snags is 50% or less; decay evident.
- **Poor**: (Severe Decline)
  Branch mortality, 50% or more of the crown dead: broken branches or crown area missing based on presence of old snags in more than 50%; decay resulting in high hazard assessment.
- **Dead**: (due to Natural or Human Causes)
  Tree is dead, either standing or down: phloem under bark has brown streaks: few epicormic shoots may be present.

Biological Health: Related to presence and extent of various attributes to describe the overall health and vigour of the tree.

Biological Health Category*	Vigour, Extension, & Growth	Decline symptoms, Deadwood, & Dieback	Foliage density, colour, size, & intactness	Pests and/or Disease
Excellent	Above typical. Excellent. Full canopy density.	None or negligible.	Above typical. No deficiencies or defects detected.	None or negligible.
Good	Above typical. Full canopy density.	Negligible.	Typical. Minor deficiencies or defects could be present.	Negligible.
Fair	Typical vigour. >80% canopy density.	More than typical. Small sub-branch dieback.	Exhibiting deficiencies. Could be thinning, or foliage smaller.	Minor, within damage thresholds.
Poor	Below typical or minimal – declining.	Excessive, large, and/or prominent amount and size of dead wood.	Exhibiting severe deficiencies. Thinning foliage, generally smaller or deformed.	Exceeds damage thresholds and contributing to decline.
Dead	Tree is dead	n/a	n/a	n/a

*Note that intermediate ratings can be applied, at the discretion of the arborist, in cases where biological health attributes fall within closely related categories, e.g. Good-Fair.

Structural Condition: Related to defects in a tree's structure, (i.e., lean, codominant trunks). Structural rating will also consider general branching architecture, stem taper, live crown ratio, crown symmetry, and crown position such as a tree being suppressed by more dominant trees. Tree structure zones listed below are adapted from Coder, Construction damage assessments: trees and sites, 1996 University of Georgia, USA.

Structure Category*	Root plate & Lower stem	Trunk	Primary branch support	Outer crown & Roots
Good	No obvious damage, disease or decay; obvious basal flare / stable in ground.	No obvious damage, disease, or decay; well tapered.	Well formed, attached, spaced and tapered. No history of failure.	No obvious damage, disease, decay, or structural defect. No history of failure.
Fair	Moderate-Minor damage or decay. Basal flare present.	Minor damage or decay.	Generally well-attached, spaced and tapered branches. Minor structural deficiencies may be present or developing. No history of branch failure.	Minor damage, disease, or decay; minor branch end-weight or over-extension. No history of branch failure.
Poor	Moderate - major damage, disease or decay; fungal fruiting bodies present. Excessive lean placing pressure on root plate.	Moderate - major damage, disease, or decay; exceeds recognized thresholds; fungal fruiting bodies present. Acute lean. Stump re-sprout.	Weak, decayed, cavities or has acute branch attachments with included bark; excessive compression flaring; failure likely. Evidence of major branch failure.	Moderate - major damage, disease or decay; fungal fruiting bodies present; major branch end-weight or over-extension. Branch failure evident.

*Note that intermediate ratings can be applied, at the discretion of the arborist, in cases where biological health attributes fall within closely related categories, e.g. Good-Fair.

Height (metres): Height of tree from ground to top of crown. Height is estimated from visual ground observations.

Position on Site: AP - above-ground planter; **ED** - Edge, e.g., forest, woodland; **IN** - Interior, e.g., forest, woodland; **HR** - hedgerow, row/linear group of trees; **OG** - open-grown; **PI** - planting island; **GP** - group/cluster

On-site Tree: Tree trunk located completely within the property boundary of the subject property.

Off-site Tree: Tree trunk located completely outside of the property boundary of the subject property.

Public Tree: Tree is located on the property of the municipality/region, e.g., within Right-of-Way.

Shared Tree: Tree shared between the subject property and adjacent private or public property (i.e. tree trunk located partially within the boundary of the subject property). Documented as '**S**' in off-site tree or municipal tree data columns.

Recommended Action: A recommendation of the following three categories is assigned to preserve or remove a tree:

i. The tree's current biological health and structural condition
ii. The anticipated impacts from proposed development
iii. The summary of the previous two categories.

Note: Only trees having a recommendation of preserve for both health and structure, and impacts from the proposed development are assigned a final recommendation of preserve.

P (Preserve) - Tree has a moderate to high biological health AND moderate to high structural condition, AND is likely to survive impact from the proposed development (if present). The tree is likely to survive for at least 3 to 5 years.

R (Remove) - Tree has low biological health, AND/OR low structural condition, AND/OR will not survive the proposed development impacts (if present). The tree is not likely to survive more than 1-3 years.

C (Conditional) - In some situations a tree's preservation or removal is related to potential relocation/modification of the limit of construction, and/or known arboricultural treatments that will likely improve the biological health and/or structural condition of the tree. This may include review of a tree's condition, e.g., roots, at time of construction/excavation.

Site Development Impact: Impact to tree is anticipated from proposed development (e.g., road, building) at or near the tree, and/or grade changes (cut/fill).

Transplant Potential: A transplantation recommendation of **Y**es or **N**o based on a tree's size, species, and condition, and present and future site conditions (e.g. near adjacent trees/objects, on slopes, soil type).

Codes of Damage Descriptions
BA - branch attachment poor
BB - burlap, basket, wire present on/in tree/root ball
BC - bark crack
BI - bark included
BN - bark necrosis
BS - basal trunk sprouts
CA – crown asymmetrical
CB - crown broken
CD - crown dieback
CK - canker (abnormal growth from disease or damage)
CL - crown live, CL20 - 20% live crown
CS - crown sprouts
CT - crown thin (having reduced foliage)
CV - crown vines
DW - deadwood
ES - Epicormic sprouts
FB - fungal bodies present
LC - leaves chlorotic (yellow)
LD - leaves defoliated
LP - leader poor/problem
MB - multiple branches from same point of attachment
ML - multiple leaders
PH - planted high
PI - improper pruning
PL - planted low
RC - root crown damage/abnormality
RE - roots exposed
RG - roots girdling
SC - stems co-dominant
SG - stem girdled
ST - soil on trunk
TB - trunk bent
TC - trunk cavity
TK - trunk crooked
TD - trunk decay
TE - trunk base enlarged abnormally
TF - trunk basal flair lacking / abnormal
TG - trunk/stem girdling
TL - trunk lean (L< 5°), (M 5-20°), (H>20°)
TM - trunks multiple from at or below ground level
TS - trunk split
TT - trunk twisted
TW - trunk wound
WW - wet wood

Quantified Tree Conditions (defects, diseases)
L (low, minor), M (moderate), H (high, severe)
e.g. TK(H) = severe crooked trunk
TD(L) = minor trunk decay
TF(H) = severely poor basal trunk flare

Cardinal Coordinates (N, S, E, W)
e.g., LN(L-S) = minor lean to the south

Codes of Recommendations
A - Add mulch
B - Remove attachments (burlap, wire, stake, guard)
C - Cable
F - Fertilize
L - lower soil level
M - Monitor
N - None Needed
P - Prune
R - Remove
S - Soil bulk density (compaction) lower
V - soil volume (increase)
W - Water

Priority: An action priority schedule (i.e. general timing) to provide arboricultural treatment(s).
E - Extremely Urgent (within a week)
U - Urgent (within 3 months)
H - High (within a year)
M - Moderate (within 3 years)
L - Low (little or no action required for at least 5 years)

Limitations of Tree Assessment

It is the policy of Beacon Environmental Ltd. to attach the following clause regarding limitations of the tree assessment. The intent is to ensure that the client is aware of what is technically and professionally realistic in assessing and/or retaining trees.

The assessment of the trees presented in this report has been made using accepted arboricultural techniques. These techniques include a visual examination of the above-ground parts of each tree for structural defects, scars, external indications of decay such as fungal fruiting bodies, evidence of insect attack, crown dieback, 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 property and people. Except where specifically noted in the report, none of the trees examined were dissected, cored, probed, or climbed, and detailed root crown examinations involving excavation were not undertaken.

Notwithstanding the recommendations and conclusions made in this report, it must be recognized that trees are living organisms and their health and vigour constantly change over time. They are not immune to changes in site conditions, pests, or variations in the weather conditions including severe storms with high-speed winds. Furthermore, some symptoms may only be visible seasonally; the extent of observations that can be made may be limited by the time of year in which the inspection took place.

While reasonable efforts have been made to ensure that the trees recommended for retention are healthy unless stated otherwise within the report, no warranty or guarantees are offered, or implied, that these trees, or any parts of them, will have continued health or structure as noted in the report. It is both professionally and practically impossible to predict with absolute certainty the behaviour of any single tree or group of trees or their component parts in all circumstances. Inevitably, a standing tree will always pose some risk. Most trees have the potential for failure if provided with the necessary combinations of stresses and elements. This risk can only be eliminated if the tree is removed.

Although every effort has been made to ensure that this assessment is reasonably accurate, it is recommended that trees be re-assessed periodically to identify changes in condition. Design or site plan changes may also necessitate re-assessment and/or revisions to this report. **The assessment presented in this report is valid at the time of the inspection and is intended for sole use of the client.** Any use of this report by a third party, and any decision based on this report, is the singular responsibility of the third party.

Appendix B

Tree Inventory Data

Appendix B

Tree Inventory Data

Table B-1. Summary of Individual Trees

Tree No.	Scientific Name	Common Name	DBH (cm)	Condition	Comments
15	*Aesculus hippocastanum*	European Horse-Chestnut	53	Fair	several cavities with decay in trunk, uneven crown due to pruning for adjacent power lines
16	*Aesculus hippocastanum*	European Horse-Chestnut	62	Good	several cavites at branch stubs
17	*Aesculus hippocastanum*	European Horse-Chestnut	65	Fair	minor dieback, cavites at branch stubs
18	*Aesculus hippocastanum*	European Horse-Chestnut	48,48	Poor	branch dieback, hollow trunk with multiple cavities, poor form
19	*Picea abies*	Norway Spruce	78	Good	codominant leaders with included bark
20	*Aesculus hippocastanum*	European Horse-Chestnut	52	Fair	top cut off due to overhead wires
21	*Aesculus hippocastanum*	European Horse-Chestnut	50	Poor	top cut off, hollow trunk with extensive decay
22	*Aesculus hippocastanum*	European Horse-Chestnut	50	Poor	top cut off, hollow trunk with extensive decay
23	*Crataegus sp.*	Hawthorn	40,20	Fair	branch dieback
45	*Acer negundo*	Manitoba Maple	20	Good	
63	*Salix alba*	White Willow	100	Poor	massive wound in lower trunk with extensive decay as a result of fallen trunk
64	*Ulmus americana*	American Elm	50	Fair	embedded fence, codominant leaders with included bark
65	*Salix alba*	White Willow	19, 15, 10, 10, 8	Good	
66	*Ulmus americana*	American Elm	35, 32, 38, 36	Fair	stems fused at base, branch unions with included bark
67	*Ulmus americana*	American Elm	35, 40	Good	
68	*Acer negundo*	Manitoba Maple	40, 20	Good	
69	*Tilia americana*	Basswood	74	Poor	branch dieback, brown leaves, poor form, hollow trunk
70	*Ulmus americana*	American Elm	28	Poor	in decline, sparse foliage
73	*Acer negundo*	Manitoba Maple	32, 31, 20	Good	
75	*Salix alba*	White Willow	70, 30	Good	
76	*Populus sp.*	Cottonwood	30	Fair	codominant leaders, extensive epicormics along trunk
77	*Acer platanoides*	Norway Maple	40	Good	
78	*Salix x fragilis*	Crack Willow	40, 40, 40	Good	
79	*Acer negundo*	Manitoba Maple	20	Poor	
80	*Salix x sepulcralis*	Weeping Willow	120 @ 0.5	Fair	
81	*Acer negundo*	Manitoba Maple	20, 15, 15, 10	Poor	leader fallen; multistem at base
814	*Salix x sepulcralis*	Weeping Willow	65	Fair-Good	
815	*Abies balsamea*	Balsam Fir	20	Good	
816	*Salix alba*	White Willow	26	Poor	Crown dieback extensive
817	*Populus tremuloides*	Trembling Aspen	12	Fair	
818	*Salix x sepulcralis*	Weeping Willow	68	Poor	Crown snapped. Good vigour otherwise
819	*Populus tremuloides*	Trembling Aspen	15	Good	
820	*Populus tremuloides*	Trembling Aspen	20	Good	
821	*Populus tremuloides*	Trembling Aspen	14	Fair	
822	*Populus tremuloides*	Trembling Aspen	21, 14	Good	
823	*Abies balsamea*	Balsam Fir	16	Good	
824	*Populus tremuloides*	Trembling Aspen	14, 12, 10	Poor	Dieback and decay in upper crown
825	*Ulmus pumila*	Siberian Elm	11	Fair	
826	*Abies balsamea*	Balsam Fir	18	Poor	Extensive dieback
827	*Abies balsamea*	Balsam Fir	21	Good	
828	*Ulmus pumila*	Siberian Elm	13	Good	

Tree No.	Scientific Name	Common Name	DBH (cm)	Condition	Comments
829	*Ulmus pumila*	Siberian Elm	31 @ 0.5	Fair	Low fork
830	*Abies balsamea*	Balsam Fir	22	Good	
831	*Populus tremuloides*	Trembling Aspen	10	Poor	Trunk snapped 3 m above ground
832	*Ulmus pumila*	Siberian Elm	34	Fair	
833	*Ulmus pumila*	Siberian Elm	42	Good	
834	*Ulmus pumila*	Siberian Elm	16	Fair	
835	*Ulmus pumila*	Siberian Elm	24	Good	
836	*Ulmus pumila*	Siberian Elm	17	Fair-Good	
837	*Salix alba*	White Willow	37, 28, 23	Good	
838	*Salix alba*	White Willow	94 @ 0.5 m	Fair	Hollow trunk below union; good vigour and for otherwise
839	*Salix alba*	White Willow	20	Good	
840	*Tilia americana*	Basswood	50, 50, 48, 45, 40, 35	Fair	Multistem, braced with deck boards and screws
841	*Salix alba*	White Willow	23	Good	Possible boundary tree; trunk overlaps with fence line
842	*Salix alba*	White Willow	52	Fair	
939	*Picea glauca*	White Spruce	50	Fair-Good	Minor dieback and thinning.
940	*Picea glauca*	White Spruce	31, 33	Fair-Good	Minor dieback and thinning; Stems fork below breast height; Included bark.
941	*Acer saccharinum*	Silver Maple	39	Good	Good form and vigour.
942	*Acer saccharinum*	Silver Maple	45	Good	Good form and vigour.
943	*Acer saccharinum*	Silver Maple	73	Fair	Full healthy crown; Large cavity above breast height; Wound wood present.
944	*Picea abies*	Norway Spruce	49	Good	Good form and vigour.
945	*Acer saccharinum*	Silver Maple	67	Fair-Good	Minor dieback and thinning; Epicormic shoots at base.
946	*Pinus sylvestris*	Scots Pine	42	Good	Good form and vigour.
947	*Picea glauca*	White Spruce	33	Fair-Good	Minor dieback and thinning.
948	*Acer saccharinum*	Silver Maple	102	Fair	Minor dieback and thinning; Stems fork above breast height; Included bark; Large stem removed, decay at prune wound.
949	*Picea glauca*	White Spruce	30	Fair-Good	Minor dieback and thinning.
950	*Picea abies*	Norway Spruce	23	Good	Good form and vigour.
951	*Picea abies*	Norway Spruce	21	Good	Good form and vigour.
952	*Picea abies*	Norway Spruce	23, 8	Good	Good vigour; Stems fork below breast height; Included bark.
953	*Picea abies*	Norway Spruce	12	Good	Good form and vigour.
954	*Picea abies*	Norway Spruce	23, 13	Good	Good vigour; Stems fork below breast height; Included bark.
955	*Picea abies*	Norway Spruce	50	Good	Good form and vigour.
956	*Picea abies*	Norway Spruce	52	Good	Good form and vigour.
957	*Picea abies*	Norway Spruce	24	Fair	Moderate dieback and thinning; Flush cuts to stem; Sap ooze.
958	*Picea abies*	Norway Spruce	31	Fair-Good	Minor dieback and thinning; Sap ooze.
959	*Acer saccharinum*	Silver Maple	76	Fair-Good	Minor dieback and thinning; Stems fork above breast height; Included bark.
960	*Pinus sylvestris*	Scots Pine	30	Good	Good form and vigour.
961	*Picea glauca*	White Spruce	21	Good	Good form and vigour.
962	*Ulmus americana*	White Elm	52	Poor	Significant dieback and thinning; Almost dead, only one live branch and epicormic shoots along stem.
NT2	*Acer saccharinum*	Silver Maple	65	Fair-Good	Minor dieback and thinning; Off site tree, DBH measurement estimated.
NT3	*Picea glauca*	White Spruce	35	Fair-Good	Minor dieback and thinning; Off site tree, DBH measurement estimated.
NT4	*Acer saccharinum*	Silver Maple	67	Fair-Good	Minor dieback and thinning; Stems fork at breast height; Included bark; Off property tree, DBH measurement estimated.
NT5	*Picea glauca*	White Spruce	25, 25	Good	Good vigour; Stems fork at breast height; Included bark; Off property tree, DBH measurement estimated.
NT6	*Quercus macrocarpa*	Bur Oak	22	Good	Good form and vigour; Off site tree, DBH measurement estimated.
NT7	*Picea pungens*	Blue Spruce	18	Good	Good form and vigour; Off site tree, DBH measurement estimated.
NT8	*Picea pungens*	Blue Spruce	22	Good	Good form and vigour; Off site tree, DBH measurement estimated.
NT9	*Picea pungens*	Blue Spruce	15	Good	Good form and vigour; Off site tree, DBH measurement estimated.
NT10	*Picea pungens*	Blue Spruce	17	Good	Good form and vigour; Off site tree, DBH measurement estimated.
NT11	*Picea pungens*	Blue Spruce	15	Good	Good form and vigour; Off site tree, DBH measurement estimated.
NT12	*Picea pungens*	Blue Spruce	20	Good	Good form and vigour; Off site tree, DBH measurement estimated.
NT13	*Picea pungens*	Blue Spruce	22	Good	Good form and vigour; Off site tree, DBH measurement estimated.

Tree No.	Scientific Name	Common Name	DBH (cm)	Condition	Comments
NT14	*Picea pungens*	Blue Spruce	24	Good	Good form and vigour; Off site tree, DBH measurement estimated.
NT21	*Pinus sylvestris*	Scots Pine	25	Fair	
NT22	*Abies balsamea*	Balsam Fir	15	Good	Planted
NT23	*Pinus sylvestris*	Scots Pine	15	Fair	
NT24	*Pinus nigra*	Austrian Pine	25	Fair	Topped
NT25	*Salix alba*	White Willow	32	Good	Next to fence; Possible boundary tree
NT26	*Salix alba*	White Willow	100	Fair	

Table B-2. Summary of Trees in Group A

Scientific Name	Common Name	DBH (cm)	Condition	Structure/Form	Comments
Juniperus virginiana	Red Cedar	20	Good	Good	
Juniperus virginiana	Red Cedar	15	Good	Fair-Good	
Juniperus virginiana	Red Cedar	20	Good	Fair-Good	

Table B-3. Summary of Trees in Group B1

Scientific Name	Common Name	DBH (cm)	Condition	Structure/Form	Comments
Thuja occidentalis	White Cedar	59	Good	Poor	codominant leaders with included bark, split in crotch between leaders
Thuja occidentalis	White Cedar	20	Good	Fair	Crowded
Thuja occidentalis	White Cedar	21	Fair	Fair	Crowded
Thuja occidentalis	White Cedar	64	Good	Poor	Codominant leaders with included bark, crack below crotch
Thuja occidentalis	White Cedar	30,35	Good	Poor	cavity in crotch with decay into trunk

Table B-4. Summary of Trees in Group B2

Scientific Name	Common Name	DBH (cm)	Condition	Structure/Form	Comments
Thuja occidentalis	White Cedar	26,26	Good	Fair	
Thuja occidentalis	White Cedar	32	Fair	Fair	
Thuja occidentalis	White Cedar	23,17,14	Fair	Fair	
Thuja occidentalis	White Cedar	27,26	Fair	Fair	rocks piled against base
Thuja occidentalis	White Cedar	30,19	Fair	Fair-Good	split in crotch, rocks piled against base
Thuja occidentalis	White Cedar	16	Fair	Fair	rocks piled against base
Thuja occidentalis	White Cedar	16,18	Fair	Fair	rocks piled against base
Thuja occidentalis	White Cedar	15,10	Fair	Fair	rocks piled against base
Thuja occidentalis	White Cedar	17,29	Good	Poor	large open wound in root flare/lower trunk
Thuja occidentalis	White Cedar	50	Good	Fair	codominant leaders with included bark
Thuja occidentalis	White Cedar	22	Good	Fair	Crowded
Thuja occidentalis	White Cedar	43	Good	Fair	codominant leaders with included bark
Thuja occidentalis	White Cedar	35	Good	Fair	
Thuja occidentalis	White Cedar	27,27	Fair	Fair-Good	
Thuja occidentalis	White Cedar	22,22	Good	Fair	
Thuja occidentalis	White Cedar	21	Fair	Poor	
Thuja occidentalis	White Cedar	32,32	Fair	Poor	codominant leaders, split in crotch
Thuja occidentalis	White Cedar	59	Good	Fair	multiple codominant leaders
Thuja occidentalis	White Cedar	22	Fair	Poor	
Thuja occidentalis	White Cedar	26,26	Poor	Poor	codominant leaders , split in crotch through trunk
Thuja occidentalis	White Cedar	30,35	Fair	Poor	large old wound in trunk, poor form

Scientific Name	Common Name	DBH (cm)	Condition	Structure/Form	Comments
Thuja occidentalis	White Cedar	25,14	Fair	Fair	
Thuja occidentalis	White Cedar	16	Fair	Poor	
Thuja occidentalis	White Cedar	20,24,24,20	Fair	Poor	
Prunus avium	Sweet Cherry	16	Good	Fair	Lean
Thuja occidentalis	White Cedar	30	Fair	Poor	large decaying stump at base
Thuja occidentalis	White Cedar	30,35	Fair	Fair	multiple codominant leaders
Thuja occidentalis	White Cedar	26,26	Good	Fair	
Thuja occidentalis	White Cedar	27	Fair	Good	
Thuja occidentalis	White Cedar	24,21	Fair	Fair	
Prunus avium	Sweet Cherry	13,11	Good	Fair-Good	twisted trunk, lean
Thuja occidentalis	White Cedar	17	Good	Fair	lean, uneven crown
Thuja occidentalis	White Cedar	16,18,18	Good	Fair	codominant stems with included bark
Thuja occidentalis	White Cedar	25,25	Good	Fair-Poor	
Thuja occidentalis	White Cedar	18	Fair	Poor	
Thuja occidentalis	White Cedar	20	Fair	Poor	large wound in trunk
Thuja occidentalis	White Cedar	11,13,13,14	Good	Fair	
Acer negundo	Manitoba Maple	18	Good	Poor	
Thuja occidentalis	White Cedar	32,19	Good	Fair	Codominant
Thuja occidentalis	White Cedar	30	Good	Fair	large wound in trunk
Thuja occidentalis	White Cedar	32	Good	Fair	Lean

Table B-5. Summary of Trees in Group C1

Scientific Name	Common Name	DBH (cm)	Condition	Structure/Form	Comments
Malus pumila	Apple	20,20,15,15	Fair	Fair	
Malus pumila	Apple	50	Good	Poor	crack in branch unions, cavity at base
Malus pumila	Apple	12	Good	Fair	

Table B-6. Summary of Trees in Group C2

Scientific Name	Common Name	DBH (cm)	Condition	Structure/Form	Comments
Pyrus communis	Pear	14,14	Good	Fair	
Fraxinus pennsylvanica	Green Ash	30	Dead		
Malus pumila	Apple	25,24,25,20	Good	Poor	
Crataegus sp.	Hawthorn	15	Good	Fair	
Crataegus sp.	Hawthorn	25	Poor		nearly dead
Fraxinus pennsylvanica	Green Ash	50	Dead		
Crataegus sp.	Hawthorn	40,22,20	Good	Poor	split at base
Crataegus sp.	Hawthorn	28	Good	Fair	bulges in root flare
Crataegus sp.	Hawthorn	15,20	Fair	Poor	cavities in lower trunk
Malus pumila	Apple	50	Fair	Poor	twisted trunk, dead branches, poor form
Malus pumila	Apple	25,20	Poor	Poor	
Crataegus sp.	Hawthorn	40,20	Fair	Poor	poor form, cavities in trunk
Fraxinus pennsylvanica	Green Ash	38	Dead		
Crataegus sp.	Hawthorn	15,15,16,18	Good	Fair	
Crataegus sp.	Hawthorn	12	Poor	Poor	
Malus pumila	Apple	20	Fair	Poor	
Malus pumila	Apple	40	Poor	Poor	
Crataegus sp.	Hawthorn	14,12	Good	Fair	
Malus pumila	Apple	50,35,25,30,25	Fair	Poor	

Scientific Name	Common Name	DBH (cm)	Condition	Structure/Form	Comments
Crataegus sp.	Hawthorn	40	Fair	Poor	cavities in trunk large broken branches
Malus pumila	Apple	35,45	Fair-Good	Poor	branch dieback, poor form, extensive epicormics
Malus pumila	Apple	25,25,20,28	Fair	Poor	
Crataegus sp.	Hawthorn	11,14,15,12	Good	Poor	
Malus pumila	Apple	45	Poor	Poor	extensive dieback, poor form
Crataegus sp.	Hawthorn	15	Fair	Poor	
Crataegus sp.	Hawthorn	20,22,14	Good	Fair	
Malus pumila	Apple	30,30	Poor	Poor	one stem broken
Malus pumila	Apple	13	Poor	Poor	
Crataegus sp.	Hawthorn	20,12,20,18	Good	Fair	
Crataegus sp.	Hawthorn	18,15,22	Good	Fair	
Malus pumila	Apple	17,20,15	Fair	Fair-Good	
Ulmus americana	White Elm	16	Good	Fair	
Crataegus sp.	Hawthorn	22	Good	Fair	
Quercus macrocarpa	Bur Oak	10	Good	Good	
Crataegus sp.	Hawthorn	27	Poor	Poor	
Crataegus sp.	Hawthorn	20,25,35	Poor	Poor	poor form, large cavities, extensive decay
Malus pumila	Apple	38	Fair	Fair	damage to base
Malus pumila	Apple	25	Fair	Fair	
Crataegus sp.	Hawthorn	25	Poor	Poor	
Malus pumila	Apple	20,18,20,20	Good	Poor	
Crataegus sp.	Hawthorn	20,18,30,20,20	Fair	Poor	fused trunks
Crataegus sp.	Hawthorn	20,35,22,20	Good	Fair	
Crataegus sp.	Hawthorn	45,26,30	Good	Fair	
Crataegus sp.	Hawthorn	25,20,17	Good	Fair-Good	
Crataegus sp.	Hawthorn	26,25	Good	Fair	
Malus pumila	Apple	40,40	Fair	Fair-Good	
Malus pumila	Apple	25	Good	Poor	
Prunus serotina	Black Cherry	30	Good	Fair	damage to trunk, codominant stems
Prunus serotina	Black Cherry	20,20	Good	Fair	codominant stems with included bark
Crataegus sp.	Hawthorn	20,25,22,20	Good	Fair	

Table B-7. Summary of Trees in Group C3

Scientific Name	Common Name	DBH (cm)	Condition	Structure/Form
Crataegus sp.	Hawthorn	18,18,14	Good	Fair
Malus pumila	Apple	15,12	Good	Poor
Malus pumila	Apple	20	Good	Fair
Malus pumila	Apple	17	Good	Fair
Malus pumila	Apple	45,30	Fair	Fair-Good

Table B-8. Summary of Trees in Group C4

Scientific Name	Common Name	DBH (cm)	Condition	Structure/Form
Crataegus sp.	Hawthorn	12,8,8,8	Good	Fair-Poor
Crataegus sp.	Hawthorn	25,15,10,25,10,10	Good	Fair-Good
Crataegus sp.	Hawthorn	8,8,12	Good	Good
Crataegus sp.	Hawthorn	11,11	Good	Good
Crataegus sp.	Hawthorn	11,9	Good	Good
Crataegus sp.	Hawthorn	13	Good	fair
Crataegus sp.	Hawthorn	10,10,10,10	Good	fair
Crataegus sp.	Hawthorn	13,15	Good	Fair
Crataegus sp.	Hawthorn	15,10	Good	Fair
Malus pumila	Apple	22,16	Fair	Poor
Crataegus sp.	Hawthorn	14,10	Fair	Poor
Crataegus sp.	Hawthorn	20	Good	Good

Table B-9. Summary of Trees in Group C6

Scientific Name	Common Name	DBH (cm)	Condition	Form/Structure
Crataegus sp.	Hawthorn	16,13,20	Good	Fair
Crataegus sp.	Hawthorn	11,12,12,10	Good	Fair
Ulmus americana	White Elm	18	Good	Good
Crataegus sp.	Hawthorn	14,10,10	Good	Fair
Crataegus sp.	Hawthorn	12,10,10	Good	Fair
Acer negundo	Manitoba Maple	12,15	Fair	Poor
Crataegus sp.	Hawthorn	14,14,10	Good	Fair
Ulmus americana	White Elm	55	Fair	Fair-Good
Crataegus sp.	Hawthorn	15,16	Good	Poor
Crataegus sp.	Hawthorn	18, 21,14,14,	Poor	Poor
Crataegus sp.	Hawthorn	10,10,10,10	Good	Fair
Tilia americana	Basswood	16	Good	Good
Ulmus americana	White Elm	50	Good	Fair-Poor
Tilia americana	Basswood	11	Good	Fair-Poor
Tilia americana	Basswood	28,15,16	Good	Poor
Crataegus sp.	Hawthorn	20,20,11	Good	Fair

Table B-10. Summary of Trees in Group C7

Scientific Name	Common Name	DBH (cm)	Condition	Form/Structure
Malus pumila	Apple	14,10,10	Fair	Fair-Good
Crataegus sp.	Hawthorn	26,13,14,12,18	Poor	Poor
Malus pumila	Apple	20,25,20	Fair	Fair
Malus pumila	Apple	15,16,18,13	Good	Fair
Malus pumila	Apple	15,16	Good	Fair
Malus pumila	Apple	13,15,20	Good	Fair-Good
Malus pumila	Apple	16,16,22	Fair	Fair

Table B-11. Summary of Trees in Group G

Scientific Name	Common Name	DBH (cm)	Condition	Form/Structure
Acer x freemanii	Freeman's Maple	11	Good	Fair
Acer x freemanii	Freeman's Maple	8	Good	Fair
Acer x freemanii	Freeman's Maple	14,10	Good	Fair
Acer x freemanii	Freeman's Maple	12,10	Good	Fair
Acer x freemanii	Freeman's Maple	11	Good	Fair
Acer x freemanii	Freeman's Maple	8	Good	Fair

Table B-12. Summary of Trees in Group J

Scientific Name	Common Name	DBH (cm)	Condition	Form/Structure
Picea pungens	Blue Spruce	15	Fair-Good	Fair
Picea pungens	Blue Spruce	15	Dead	
Picea pungens	Blue Spruce	15	Dead	
Picea pungens	Blue Spruce	15	Dead	
Picea pungens	Blue Spruce	15	Dead	
Picea pungens	Blue Spruce	15	Fair-Good	Good
Picea pungens	Blue Spruce	18	Good	Good
Picea pungens	Blue Spruce	18	Fair-Good	Good
Picea pungens	Blue Spruce	18	Fair-Good	Good
Picea pungens	Blue Spruce	15	Fair-Good	Good

Table B-13. Summary of Trees in Group K

Scientific Name	Common Name	DBH (cm)	Condition	Form/Structure	Comments
Pinus nigra	Austrian Pine	20	Good	Fair	
Pinus nigra	Austrian Pine	30	Good	Fair	
Pinus nigra	Austrian Pine	20	Good	Poor	
Pinus nigra	Austrian Pine	20	Good	Fair-Poor	lean/uneven crown
Pinus nigra	Austrian Pine	30	Good	Fair	
Pinus nigra	Austrian Pine	25	Good	Fair	codominant leaders, minor needle dieback
Pinus nigra	Austrian Pine	25	Good	Fair	minor needle dieback
Pinus nigra	Austrian Pine	30	Good	Fair	codominant leaders, minor needle dieback
Pinus nigra	Austrian Pine	28	Good	Fair	minor needle dieback
Pinus nigra	Austrian Pine	28	Good	Fair	codominant leaders, minor needle dieback
Pinus nigra	Austrian Pine	30	Good	Fair	codominant leaders, minor needle dieback
Pinus nigra	Austrian Pine	30	Good	Fair	minor needle dieback
Pinus nigra	Austrian Pine	25	Good	Fair	minor needle dieback
Pinus nigra	Austrian Pine	30	Good	Fair	minor needle dieback

Table B-14. Summary of Trees in Group L

Scientific Name	Common Name	DBH (cm)	Condition	Structure		
				Root Flare	Trunk	Crown/Branches
Acer negundo	Manitoba Maple	10	Good	Fair	Fair	Poor
Acer negundo	Manitoba Maple	13	Good	Fair	Fair	Fair
Acer negundo	Manitoba Maple	25	Good	Good	Good	Fair-Good
Picea glauca	White Spruce	40	Good	Good	Good	Good
Picea glauca	White Spruce	40	Good	Good	Good	Good
Picea glauca	White Spruce	25	Good	Good	Good	Good
Picea glauca	White Spruce	40	Good	Good	Good	Good
Picea glauca	White Spruce	25	Good	Good	Good	Good
Picea glauca	White Spruce	20	Fair	Good	Good	Fair
Picea glauca	White Spruce	25	Fair	Good	Good	Fair
Picea glauca	White Spruce	40	Good	Good	Good	Good
Picea glauca	White Spruce	15	Fair			Fair
Picea glauca	White Spruce	15	Fair-Poor	Good	Good	Fair-Poor
Picea glauca	White Spruce	15	Fair	Good	Good	Fair
Picea glauca	White Spruce	40	Good	Good	Good	Good
Picea glauca	White Spruce	25	Fair	Good	Good	Fair
Picea glauca	White Spruce	25	Fair	Good	Good	Fair
Picea glauca	White Spruce	25	Good	Good	Good	Fair
Picea glauca	White Spruce	30	Fair	Good	Good	Good
Picea glauca	White Spruce	40	Good	Good	Good	Good
Picea glauca	White Spruce	35	Good	Good	Good	Good
Picea glauca	White Spruce	25	Fair-Good	Good	Good	Good
Picea glauca	White Spruce	25	Fair	Good	Good	Good
Picea glauca	White Spruce	25	Good	Good	Good	Good
Picea glauca	White Spruce	30	Good	Good	Good	Good
Picea glauca	White Spruce	15	Good	Good	Good	Good

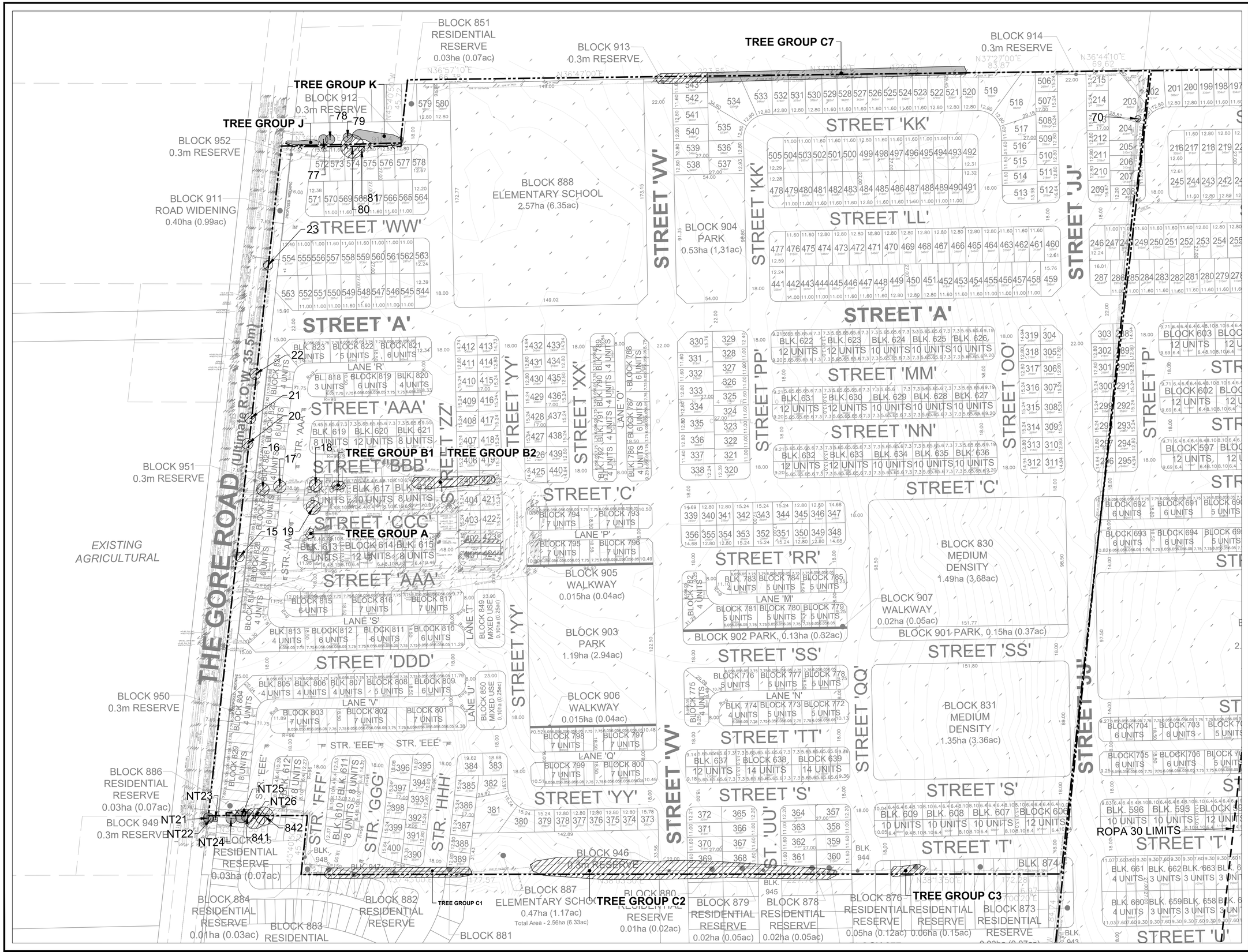
Scientific Name	Common Name	DBH (cm)	Condition	Structure		
				Root Flare	Trunk	Crown/Branches
Picea glauca	White Spruce	30	Good	Good	Good	Good
Picea glauca	White Spruce	30	Good	Good	Good	Good
Picea glauca	White Spruce	10,15	Fair	Good	Good	Fair
Picea glauca	White Spruce	15	Good	Good	Good	Poor

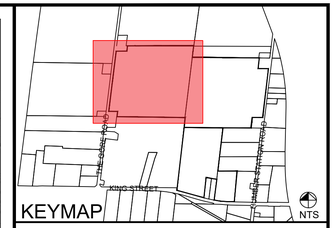
Table B-15. Summary of Trees in Group N3

Scientific Name	Common Name	DBH (cm)	Crown Radius (m)	Condition	Comments
Fraxinus pennsylvanica	Green Ash	35	N/A	Dead	Standing snag.
Acer negundo	Manitoba Maple	25, 25	8	Fair-Good	Minor dieback and thinning; Stems fork near ground; Included bark.
Acer negundo	Manitoba Maple	35	7	Fair-Good	Minor dieback and thinning.
Fraxinus pennsylvanica	Green Ash	29	6	Poor	Significant dieback and thinning; Almost dead, likely due to EAB infestation.
Fraxinus pennsylvanica	Green Ash	14	N/A	Dead	Standing snag.
Fraxinus pennsylvanica	Green Ash	20, 25	N/A	Dead	Standing snag; Stems fork near ground.

Appendix C

Tree Inventory Preservation Plan





LEGEND

- Property Boundary
- ROPA 30 Limits
- Tree Preservation Fencing
- 1678 Tree tag
- Tree Crown
- Minimum Tree Protection Zone
- Tree Location
- Tree to be Preserved
- Tree to be Removed

Notes: Scale shown is for an 36" x 24" page.
For illustrative purposes. Do not scale

N°	REVISIONS	DATE:	BY:
6			
5			
4			
3			
2			
1	ISSUED FOR DRAFT PLAN OF SUBDIVISION	2023/05/17	JS

SCALE 1:1250 (0 20 40 80 m)

NORTH ARROW

CERTIFIED ARBORIST ISA
JAMES SEERY
#ON-2350A

BEACON ENVIRONMENTAL

CLIENT
ARGO MACVILLE I

PROJECT
14275 THE GORE ROAD, LOT 12, CONC. 4, TWP., ALB

SHEET TITLE
TREE INVENTORY AND PRESERVATION PLAN

DESIGN BY: --	PROJECT N°: 221164/5
DRAWN BY: AD	FIGURE N°: TP-1
CHECKED BY: JS	
DATE: 17 May 2023	

HUMBER STATION ROAD
(TO BE RE-ALIGNED)

EXISTING AGRICULTURAL

BLOCK 914 0.3m RESERVE
BLOCK 915 0.3m RESERVE
BLOCK 916 0.3m RESERVE
BLOCK 917 0.3m RESERVE
BLOCK 845 MEDIUM DENSITY 0.39ha (0.96ac)
BLOCK 844 MEDIUM DENSITY 1.04ha (2.57ac)
BLOCK 889 ELEMENTARY SCHOOL 2.43ha (6.00ac)
BLOCK 919 0.3m RESERVE
BLOCK 918 0.3m RESERVE
BLOCK 846 MIXED USE 0.04ha (0.10ac)
BLOCK 920 0.3m RESERVE
BLOCK 843 MEDIUM DENSITY 1.16ha (2.87ac)
BLOCK 842 MEDIUM DENSITY 1.22ha (3.02ac)
BLOCK 840 MEDIUM DENSITY 1.31ha (3.24ac)
BLOCK 841 MEDIUM DENSITY 1.05ha (2.59ac)
BLOCK 847 MIXED USE 1.03ha (2.55ac)
BLOCK 921 0.3m RESERVE
BLOCK 848 MIXED USE 0.89ha (2.20ac)
BLOCK 922 0.3m RESERVE
BLOCK 836 MEDIUM DENSITY 0.53ha (1.31ac)
BLOCK 837 MEDIUM DENSITY 1.59ha (3.93ac)
BLOCK 923 0.3m RESERVE
BLOCK 924 0.3m RESERVE
BLOCK 925 0.3m RESERVE
BLOCK 852 RESIDENTIAL RESERVE 0.03ha (0.07ac)
BLOCK 853 RESIDENTIAL RESERVE 0.02ha (0.05ac)
BLOCK 830 MEDIUM DENSITY 1.49ha (3.68ac)
BLOCK 907 WALKWAY 0.02ha (0.05ac)
BLOCK 901 PARK, 0.15ha (0.37ac)
BLOCK 831 MEDIUM DENSITY 1.35ha (3.36ac)
BLOCK 878 RESIDENTIAL RESERVE 0.02ha (0.05ac)
BLOCK 876 RESIDENTIAL RESERVE 0.05ha (0.12ac)
BLOCK 875 RESIDENTIAL RESERVE 0.06ha (0.15ac)
BLOCK 873 RESIDENTIAL RESERVE 0.03ha (0.07ac)
BLOCK 877 RESIDENTIAL RESERVE 0.02ha (0.05ac)
BLOCK 872 RESIDENTIAL RESERVE 0.04ha (0.10ac)
BLOCK 871 RESIDENTIAL RESERVE 0.04ha (0.10ac)
BLOCK 870 RESIDENTIAL RESERVE 0.04ha (0.10ac)
BLOCK 896 PARK 2.44ha (6.03ac)
BLOCK 893 PARK, 0.13ha (0.32ac)
BL. 892 PARK, 0.11ha (0.27ac)
BL. 891 PARK, 0.10ha (0.25ac)
BLOCK 839 MEDIUM DENSITY 1.18ha (2.92ac)
BLOCK 838 MEDIUM DENSITY 0.95ha (2.35ac)

STREET 'A' STREET 'B' STREET 'C' STREET 'D' STREET 'E' STREET 'F' STREET 'G'
STREET 'H' STREET 'I' STREET 'J' STREET 'K' STREET 'L' STREET 'M' STREET 'N'
STREET 'O' STREET 'P' STREET 'Q' STREET 'R' STREET 'S' STREET 'T' STREET 'U'
STREET 'V' STREET 'W' STREET 'X' STREET 'Y'
STREET 'JJ' STREET 'KK' STREET 'LL' STREET 'MM' STREET 'NN' STREET 'OO'
STREET 'QQ' STREET 'RR' STREET 'SS' STREET 'TT' STREET 'UU'
LANE 'A' LANE 'B' LANE 'C' LANE 'D' LANE 'E' LANE 'F' LANE 'N'

ROPA 30 LIMITS
PROPOSED MIXED USE
ADDITIONAL LANDS OWNED BY APPLICANT
PROPOSED GO TRANSIT LANDS
CANADIAN PACIFIC RAILWAY
HUMBER STATION ROAD

TREE GROUP C7
TREE GROUP C6
TREE GROUP G
TREE GROUP L
TREE GROUP C3
TREE GROUP C4
TREE GROUP E7

70 962 69 68 954 953 952 951 960 946 NT4 956 955 957 958 959 939 944 949 950 948 940 941 942 947 943 NT2 NT3 945 76 67 66 65 64 75 45 73 63

KEYMAP

LEGEND

- Property Boundary
- ROPA 30 Limits
- Tree Preservation Fencing
- 1678 Tree tag
- Tree Crown
- Minimum Tree Protection Zone
- Tree Location
- Tree to be Preserved
- Tree to be Removed

Notes: Scale shown is for an 36" x 24" page.
For illustrative purposes. Do not scale

N°	REVISIONS	DATE:	BY:
6			
5			
4			
3			
2			
1	ISSUED FOR DRAFT PLAN OF SUBDIVISION	2023/05/17	JS

SCALE 1:1500 (0 20 40 80 m)

NORTH ARROW

JAMES SEERY #ON-2350A

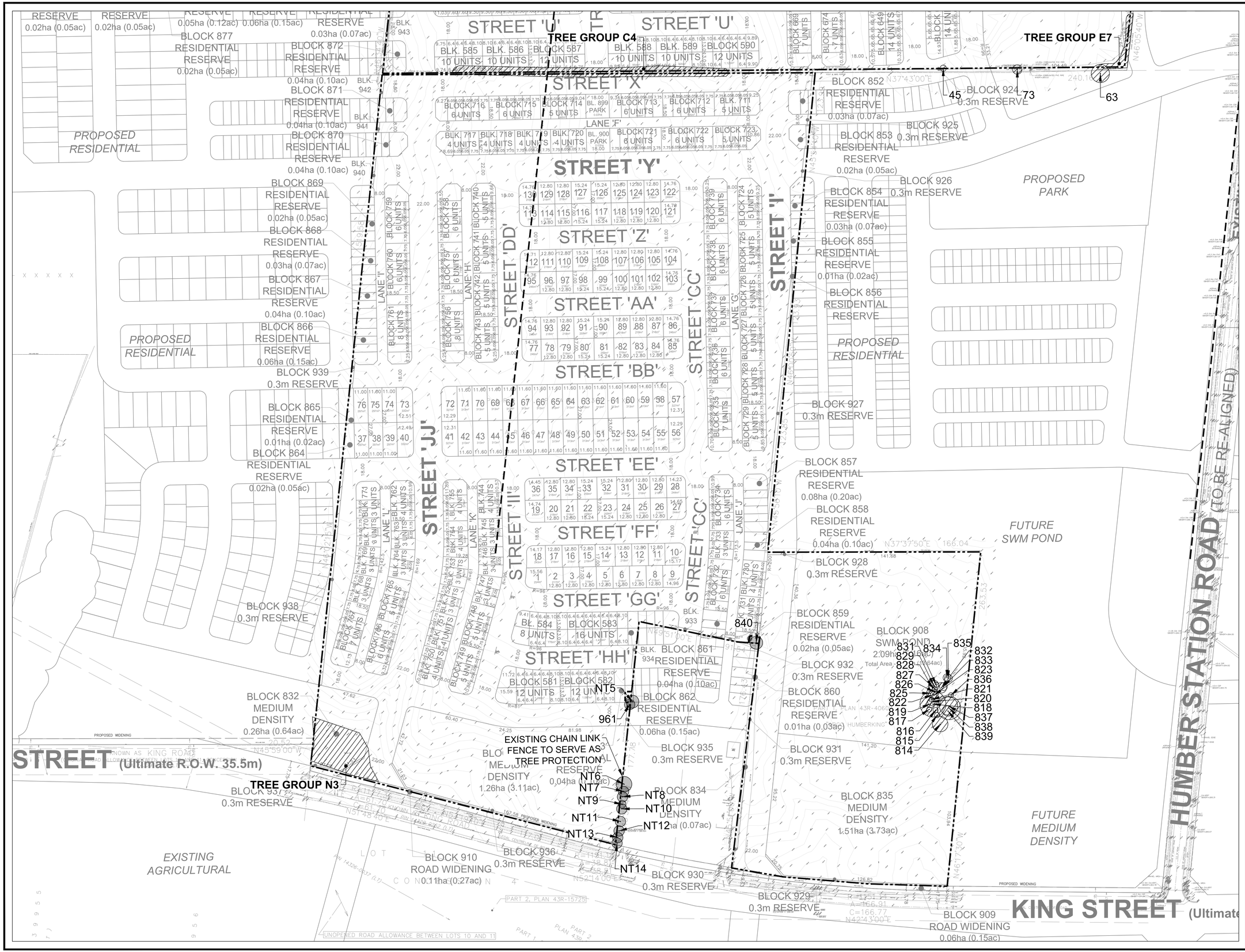
BEACON ENVIRONMENTAL

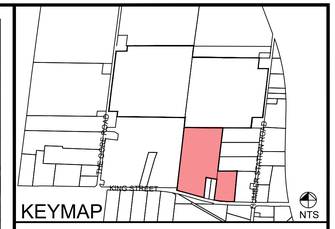
CLIENT
ARGO MACVILLE II, ARGO MACVILLE V

PROJECT
0 HUMBER STATION ROAD, LOT 12 & 13,CONC. 4, TWP., ALB

SHEET TITLE
TREE INVENTORY AND PRESERVATION PLAN

DESIGN BY: --	PROJECT N°: 221164/5
DRAWN BY: AD	FIGURE N°: TP-2
CHECKED BY: JS	
DATE: 17 May 2023	





LEGEND

- Property Boundary
- ROPA 30 Limits
- Tree Preservation Fencing
- 1678 Tree tag
- Tree Crown
- Minimum Tree Protection Zone
- Tree Location
- Tree to be Preserved
- Tree to be Removed

Notes: Scale shown is for an 36" x 24" page.
For illustrative purposes. Do not scale

Nº	REVISIONS	DATE:	BY:
6			
5			
4			
3			
2			
1	ISSUED FOR DRAFT PLAN OF SUBDIVISION	2023/05/17	JS

SCALE
1:1250
0 20 40 80 m

NORTH ARROW

CERTIFIED ARBORIST ISA
JAMES SEERY
#ON-2350A

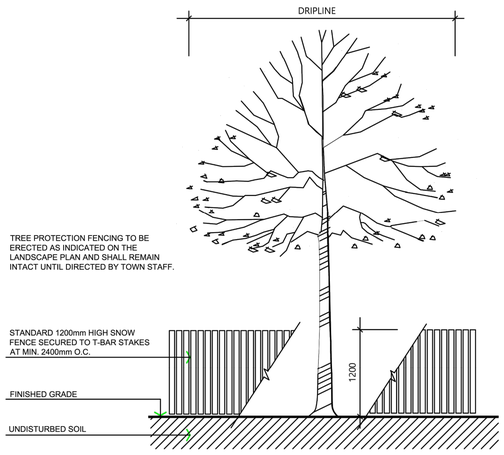
BEACON ENVIRONMENTAL

CLIENT
ROBERT SPEIRS, ARGO HUMBERKING

PROJECT
0 KING STREET, LOT 11, CONC. 4, TWP., ALB

SHEET TITLE
TREE INVENTORY AND PRESERVATION PLAN

DESIGN BY: --	PROJECT Nº: 221164/5
DRAWN BY: AD	FIGURE Nº: TP-3
CHECKED BY: JS	
DATE: 17 May 2023	



SPECIFICATIONS FOR THE PROTECTION AND PRESERVATION OF EXISTING VEGETATION:

1. PRIOR TO ISSUANCE OF THE GRADING AND SERVICING OR BUILDING PERMIT, ALL EXISTING TREES THAT ARE TO BE PRESERVED SHALL BE FULLY PROTECTED WITH HOARDING (IE SNOW FENCING) OUTSIDE THEIR 'DRIPLINES', OR AS DIRECTED THROUGH ADDITIONAL GOVERNING DOCUMENTS,TO THE SATISFACTION OF THE TOWN.
2. GROUPS OF TREES AND OTHER EXISTING PLANTINGS TO BE PROTECTED SHALL BE TREATED IN A LIKE MANNER WITH HOARDING AROUND THE ENTIRE CLUMP(S).
3. TREE PRESERVATION FENCE IS TO BE INSPECTED BY THE CONSULTING ARBORIST OR LANDSCAPE ARCHITECT AND APPROVED BY THE TOWN PRIOR TO CONSTRUCTION COMMENCING.
4. SILTATION CONTROL FENCING MAY BE USED AS A TREE PRESERVATION FENCING SUBSTITUTE IF REQUIRED BY ENGINEERING AT THE DISCRETION OF THE TOWN.
5. AREAS WITHIN PROTECTIVE FENCING SHALL REMAIN UNDISTURBED AND SHALL NOT BE USED FOR THE STORAGE OF BUILDING MATERIALS OR EQUIPMENT. NO CONTAMINANTS SHALL BE DUMPED OR FLUSHED WHERE FEEDER ROOTS OF TREES EXIST. NO GARBAGE OR BUILDING MATERIALS ARE TO BE PLACED ON OR AGAINST THE TREE PRESERVATION FENCE.
6. PRUNE BRANCHES TO REMOVE DAMAGED LIMBS ONLY. DO NOT DAMAGE LEADERS. ALL CUTS OVER 25mm SHALL BE TREATED IN ACCORDANCE WITH APPROPRIATE HORTICULTURAL PRACTICES AS APPROVED BY THE TOWN. NO MORE THAN 20% OF THE TREE SHALL BE PRUNED UNLESS DIRECTED BY THE TOWN.
7. CUTTING OF ROOTS OR CHANGING OF GRADES AROUND EXISTING TREES TO BE PRESERVED WILL NOT BE PERMITTED WITHOUT THE APPROVAL OF THE PUBLIC WORKS AND ENGINEERING DEPARTMENT.
8. IF TREES ARE BEING ADVERSELY AFFECTED BY CONSTRUCTION, A WATERING AND FERTILIZING PROGRAM IS TO BE SET UP TO THE SATISFACTION OF THE TOWN.
9. PRIOR TO FINAL APPROVAL TREES THAT HAVE DIED OR HAVE BEEN DAMAGED BEYOND REPAIR PRIOR DURING OR POST CONSTRUCTION SHALL BE REMOVED AND REPLACED WITH TREES OF A SIZE AND SPECIES APPROVED BY THE TOWN, AT THE SOLE COST OF THE DEVELOPER.

TOWN OF CALEDON

TREE PRESERVATION

NO.	REVISION	APR'D	DATE
3	STANDARD 707 NOW 606		JAN 18
2	STANDARD No. 1135 NOW 707, NOTES EDIT		JUNE 08
1	NOTE NO. 9 ADDED		MARCH 08

APR'D: C.C. DATE: JUNE 08
DRAWN: abal SCALE: NTS

STANDARD No. 606

SPECIFICATIONS

A. General

The following Tree Preservation and Protection Measures will be undertaken to help eliminate and/or significantly reduce construction injury to all trees recommended for preservation. All temporary tree protection measures cited for retained trees must comply with the Town of Caledon Tree Protection Specifications and Details. Any variation from the standard tree protection measures must be approved in writing by the Town of Caledon.

B. Pre-Construction Phase

1. Prior to construction, the trees to be preserved shall be protected with a Tree Protection Barrier. The barrier shall consist of 1.2m (4ft) high orange plastic snow fence wired to T-bars (see Town of Caledon Tree Preservation Fencing, STD 606).
2. If applicable, attach a filter cloth 600mm high to the construction side of the hoarding to act as sediment control. Sediment control fencing shall meet or exceed OPSD-219.110, and be installed to the satisfaction of the Town of Caledon.
3. All supports and bracing used to safely secure the barrier should be located outside the Tree Protection Zone (TPZ). All supports and bracing should minimize damage to roots.
4. The TPZ fence is to be installed along the edge of the tree protection zones. This hoarding is to remain in place and remain in good condition throughout the entire duration of the project. Dismantling the tree protection barrier prior to approval by the Town of Caledon staff may constitute a contravention.
5. The applicant shall notify the Town of Caledon and the consulting certified arborist or landscape architect to confirm that the tree protection barriers are in place.
6. Where fill or excavated material must be temporarily located near a TPZ, a wooden barrier must be used to ensure no material enters the TPZ.
7. Remove any garbage and foreign debris from the tree protection zones, daily.
8. For the trees that were recommended for removal and/or crown pruning that are within the TPZ limits, these activities are to be performed by a qualified ISA certified arborist prior to the installation of the Tree Protection Zone barriers and prior to the commencement of any construction activities. Install the Tree Protection Zone barrier as per Tree Preservation Fencing, STD 606 at the limits shown on the tree inventory and protection plan after the tree removal, whichever is greater, and crown pruning activities are completed.
9. A **Tree Protection Zone** sign must be mounted on all sides of the tree protection barrier for the duration of site construction. The sign should be a minimum of 40cm x 60cm and made of white gator board or equivalent material.
10. The sign must be similar to the illustration shown below, or as directed by the Town of Caledon.

> **TREE PROTECTION ZONE**
> **No work is permitted in the Tree Protection Zone**
> This includes construction works, grading, storage of trash or materials.
> The tree protection barrier must not be removed without written authorization of the Town of Caledon.

11. All contractors and site visitors should be informed of the tree preservation and protection measures at a pre-construction meeting.

specifications continued on next panel...

TOWN OF CALEDON

TREE PRESERVATION
STANDARD NOTES - PART 1

NO.	REVISION	APR'D	DATE

APR'D: B.B. DATE: AUGUST 17
DRAWN: B.M. SCALE: NTS

STANDARD No. 710

SPECIFICATIONS continued from previous panel

C. During Construction Phase

1. All areas within the TPZ shall remain undisturbed for the duration of construction. There will be no grade changes, dumping, and storage of any materials, structures or equipment within these areas. The Tree Protection Barrier must not be removed without the written authorization of the Town of Caledon.
2. Minor grading works will be permitted at the edge of the preservation zone as required to correct localized depressions, and blend to existing grades.This work to be undertaken under the direct supervision of an ISA certified arborist.
3. A certified ISA arborist will undertake proper root pruning in accordance with acceptable arboriculture practices when and if roots of retained trees are to be exposed, damaged, or severed by construction work. The exposed roots will be backfilled with appropriate material as soon as possible to prevent desiccation. Root pruning prior to excavation will help prevent necessary damage to tree roots.The use of low pressure hydrovac to expose roots is recommended, at no additional cost.
4. The Town of Caledon must be notified for all work that impacts the TPZ for temporary removal of a section of hoarding to gain access for fine grading or other works. All works are to be supervised by the Town of Caledon.
5. No cables, wire or ropes of any kind shall be wrapped around or installed in trees to be preserved.
6. No contaminants will be dumped or flushed in the TPZ areas or where feeder roots of trees exist (generally beyond the TPZ areas).
7. Irrigate tree protection zones during drought conditions, June to September to reduce drought stress.
8. Inspect the site daily to ensure hoarding is in place and in good condition. Inspect trees to monitor condition.

D. Post Construction Phase

1. Following the completion of all site works including landscaping, and after review and approval by the Town of Caledon staff, the protective hoarding may be removed.
2. After removal of the protective hoarding, the Tree Preservation Zones shall be inspected by the Town of Caledon staff. Any remaining dead, diseased, or hazardous limbs or trees are to be removed by an ISA certified arborist as directed by the consulting arborist or Town of Caledon staff.

end of specifications

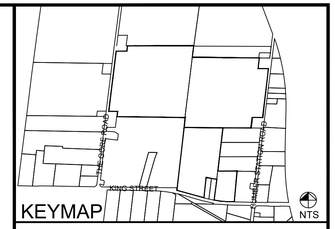
TOWN OF CALEDON

TREE PRESERVATION
STANDARD NOTES - PART 2

NO.	REVISION	APR'D	DATE

APR'D: B.B. DATE: AUGUST 17
DRAWN: B.M. SCALE: NTS

STANDARD No. 711



LEGEND

Notes: Scale shown is for an 36" x 24" page.
For illustrative purposes. Do not scale

N°	REVISIONS	DATE:	BY:
6			
5			
4			
3			
2			
1	ISSUED FOR DRAFT PLAN OF SUBDIVISION	2023/05/17	JS

SCALE

NORTH ARROW

CERTIFIED ARBORIST ISA ®
JAMES SEERY
#ON-2350A

BEACON ENVIRONMENTAL

CLIENT

PROJECT

SHEET TITLE

NOTES AND DETAILS

DESIGN BY: --
DRAWN BY: AD
CHECKED BY: JS
DATE: 17 May 2023

PROJECT N°: 221164/5

FIGURE N°:

TP-4

N:\Projects\2021\164 Klaviyk - Draft Plan Edit\Drawings\2023-05-15_SWM-GRADE_221164-6.dwg,TP-4*,Andrew, 17 May 2023