

Tree Analysis and Preservation Plan – 125 Findlay Drive, Town of Collingwood, Ontario

August 30, 2024

Prepared for: Hanesh Developments

Cambium Reference: 21091-001

CAMBIUM INC.

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Executive Summary

Cambium Inc. (Cambium) was retained by Hanesh Developments (the Client) to prepare the following Tree Analysis and Preservation Plan (the Study) in support of the proposed drilling and geotechnical investigation at 125 Findlay Drive, Collingwood, Ontario (the Site; Figure 1).

The Study has been prepared by a certified Arborist in accordance with standard arboriculture techniques, and Schedule A of Town of Collingwood Tree Preservation and Protection By-law No. 2012-084

A total of 81 individual trees were inventoried and assessed within the proposed access areas. The dominant tree species surveyed as part of the tree inventory and assessment were Green Ash (*Fraxinus pennsylvanica*), Trembling Aspen (*Populus tremuloides*) and Black Walnut (*Juglans nigra*). A total of 35 trees were in healthy condition (Good and Fair), 37 were in poor condition, and 9 were dead. All observed Ash trees on Site were noted to be infested with Emerald Ash Borer (EAB). As such, the Ash trees on Site were either dead or in poor health, with the majority composed of dead canopies and epicormic growth at the base of the trees.

Through on-site guidance provided by Cambium staff, the recommended drilling rig access was orientated to avoid large and healthy trees. As a result, none of the trees inventoried (i.e., > 15 cm diameter at breast height) are recommended for removal, and all are located outside of the anticipated Impact Area. As such, a tree cutting permit under By-law No. 2012-084 in not required. Minor impacts are expected to some trees in the form of pruning, and potential for minor root compaction, to facilitate drill rig access, although these impacts are expected to be minor, if they occur. Given the proposed work scope, protection measures were not recommended for trees outside of the Impact Area.

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1.0 Introduction

Cambium Inc. (Cambium) was retained by Hanesh Developments (the Client) to prepare the following Tree Analysis and Preservation Plan (The Study) in support of the proposed drilling rig access and investigation at 125 Findlay Drive, Collingwood, Ontario (the Site; Figure 1).

The area of impact was established to facilitate the drilling rig access (approximately 3.05 m), while limiting disturbance to the extent feasible. For the purposes of The Study, the drilling rig access path will be considered the Impact Area (see Figure 2 to Figure 5). The Tree Inventory Limits (TIL) have been defined as the Impact Area, plus any tree directly adjacent, as per Schedule A By-Law 2012-084. The Study includes a tree inventory and assessment, conducted to assess the general health and structure of the onsite trees, a survey for Species at Risk (SAR) trees, as well as documenting potential impacts within the TIL.

The Site is within the Town of Collingwood settlement area. The subject property is currently vacant and entirely forested. The southwest and western portion of the Site is Black Walnut (*Juglans nigra*) dominated with Green Ash (*Fraxinus pennsylvanica*) and Trembling Aspen (*Populus tremuloides*) associates. The remainder of Site is Green Ash dominated with Black Walnut and Trembling Aspen associates. Trembling Aspen was mainly present along Findlay Drive with the internal portions of Site dominate by Green Ash. The understory is sparse in some and dense in others. When present, the understory is dominated with Green Ash and Black Walnut saplings (< 5 cm DBH) with European Buckthorn (*Rhamnus cathartica*), Red Osier Dogwood (*Cornus sericea*) and Eastern Prickly Gooseberry *(Ribes cynosbati*) . Ground cover is dominated by grass (Orchard Grass (*Dactylis glomerata),* Common Timothy (*Phleum pratense*) and Red Top (*Agrostis gigantea)),* Canadian Goldenrod (*Solidago canadensis)* and Riverbank Grape *(Vitis riparia)* with Poison Ivy *(Rhus radicans),* Sulphur Cinquefoil *(Potentilla recta)* and Enchanters Nightshade *(Circaea canadensis)* associates. The Site is bounded by Findlay Drive to the south and residential properties to the north, west and east. It should be noted that all Ash trees observed on Site were infested with Emerald Ash Borer (EAB) and in Dead or Poor condition, with the majority of Ash canopies dead with epicormic growth at base of tree.

This Plan has been prepared by a certified Arborist in accordance with standard arboriculture techniques, and Schedule A of Town of Collingwood Tree Preservation and Protection By-law No. 2012-084

2.0 Regulations & By-laws

2.1 Town of Collingwood By-Law No. 2012-084

In the Town of Collingwood, the Tree Preservation and Protection By-law No. 2012-084 (Town of Collingwood, 2012) applies to:

- Five or more trees on a lot simultaneously, or the fifth tree or more in a given calendar year, each with a DBH between 15 cm and 30 cm
- A tree with a DBH greater than 30 cm
- Trees located on municipal property
- Trees located in a woodland

Tree exempt from the By-law include:

- The applicant proposes to injure or destroy four or fewer trees simultaneously or in a given calendar year each with DBH between 15 cm and 30 cm
- The tree has a DBH of less than 15 cm
- Pruning is necessary to maintain the health and condition of the tree, provided that the injury is in accordance with good arboricultural and forestry practices
- Any Tree, or a portion of such tree that necessitates removal as result of being infested, disease, severely injured, hazardous or, considered locally as invasive species

A Tree Cutting Permit is required for any trees that meet the applications of the By-law described above. If a permit is required, tree compensation may be requested as a condition of the permit. Compensation for the injury or destruction of a tree, if applicable through a condition of a permit, will be calculated by the Director of Planning Services for the Municipality using the Internation Society of Arboriculture Trunk Formula Method (Town of Collingwood, 2012).

2.2 Endangered Species Act, 2007

Species listed as endangered or threatened on the Species at Risk in Ontario (SARO) list, and their habitats, are protected under the provincial *Endangered Species Act* (ESA) (Government of Ontario, 2007). Section 9(1) of the ESA prohibits a person from killing, harming, harassing, capturing, or taking a member of a species listed as endangered, threatened, or extirpated. Specific regulations apply to many endangered and threatened species in Ontario, including the Butternut tree (*Juglans cinerea*) and Black Ash (*Fraxinus nigra*). Any protected species found within the TIL or that may be impacted by the proposed work, would be subject to the applicable regulations as described below. No SAR trees were identified within the TIL during the field investigations.

2.2.1 Species at Risk Trees

Butternut is listed as federally and provincially endangered. Butternut trees naturally grow in a variety of treed and open habitats in Ontario. They occur along fencerows, within treed riparian zones, on the lower slopes of treed ravines, and in and around mixed deciduous woodlots and forests, where they grow beneath canopy openings, near forest edges and along forest roads. Trees occur on rich, moist, well-drained loams and on well-drained rocky soils, especially of limestone origin (Poisson, G., and M. Ursic, 2013). Cultivated Butternut trees may be present in additional habitats such as manicured gardens and parks. If any are identified within 25 m of proposed site alteration, a full Site screening for this species and associated Butternut Health Assessment will be required as per regulation under the Endangered Species Act, 2007 (ESA).

Black Ash is listed provincially as endangered and was added to the Species at Risk in Ontario List (O. Reg. 230/08) as an Endangered species on January 26, 2022. Regulations for this species came into effect January 26, 2024, under O. Reg 6/24 and O. Reg 7/24 (MECP, 2024). The new regulations protect healthy Black Ash trees greater than 8 cm DBH and require a buffer of 30 m radius around protected trees. Black Ash grows everywhere in Ontario except for the far north, preferring moist climates and soils such as swamps, fens, bogs, or floodplains. If any are identified within 30 m of proposed site alteration, a full Site screening for

this species and associated Black Ash Health Assessment will be required as per O. Reg 6/24 under the Endangered Species Act, 2007 (ESA).

2.3 Migratory Birds Convention Act, 1994

The federal Migratory Birds Convention Act (MBCA) prohibits killing, capturing, injuring, taking, or disturbing of the listed migratory birds (including eggs) or the damaging, destroying, removing, or disturbing of nests of the listed species. To ensure compliance with the MBCA, best management practices should be implemented to detect and avoid disturbances to active nests of listed species. Active nests are protected and should be left undisturbed until all young have fledged, or the nest is determined by a professional to be inactive. The active nesting period for most migratory birds in this region of Ontario is April 1 through August 31; therefore, tree removals should occur outside of this period to avoid contravention of the MBCA.

3.0 Data Collection Methods

The tree inventory and assessment was completed by International Society of Arboriculture (ISA) Certified Arborists on August 26th, 2024. Data was collected in accordance with industry standard guidance, and Schedule A of Town of Collingwood Tree Preservation and Protection By-law No. 2012-084

3.1 Tree Inventory

All trees with a measurable diameter at breast height (DBH) equal to or greater than 15 cm within the Impact Area, and any tree directly adjacent as per schedule A of By-Law 2012-084, were inventoried. The locations of all identified trees were marked by GPS, and trees were tagged with metal numbered tags.

The Impact Area assessed within this report were based on the limits provided by the Client at the time of assessment; future modifications could be subject to additional assessments during future design stages.

A search for Butternut and Black Ash was completed as part of the tree inventory; no Butternut or Black Ash trees were identified.

3.2 Tree Assessment

The assessment included a visual examination of above-ground parts for each measurable tree, within or directly adjacent to the Impact Area. In accordance with the applicable guidelines, all trees with a DBH greater or equal to 15 cm were identified, sized, and assessed for condition. A full crown assessment, through assessing each tree's leaf coverage and overall vigour, was conducted for each tree. Trees were not climbed, probed, cored, or dissected, and excavation for detailed root crown inspection was not completed.

The visual inspection included recording abiotic and biotic disorders as well as structural defects (Appendix A: see Observations column). A tree health rating was assigned to each tree in accordance with the definitions provided in Table 1. Considering that trees are living organisms, their health and vigour are continually changing over time due to factors such as

seasonal variations and changes in site conditions; therefore, the enclosed assessment is valid at the time of inspection and no guarantee is made about the continued health of trees that were deemed to be in good, fair, or poor condition. Some symptoms may only be present seasonally; therefore, observations may be limited by the time of year in which the assessment occurs.

The hazard potential of trees was assessed using the method outlined in the ISA publication *A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas – 2nd Edition* (Mattheny and Clark, 1994). Using this guide, an overall condition rating (i.e., dead, hazard, poor, fair, or good) was given to each tree included in the inventory.

Table 1 Tree Health Rating Descriptions

Rating	Description
Dead	A specimen tree is considered dead when it has no living tissue.
Hazard	The specimen tree could either be alive or dead but the tree in its part could pose an imminent hazard to people or property during normal weather conditions. These trees have the potential for splitting, breaking and/or falling over during inclement weather, and because of their proximity to various targets (i.e., people or property), could cause personal injury and/or severe damage to municipal infrastructure and/or private property.
Poor	Trees in poor condition show major symptoms of decline. At least 50% of main scaffold branches are dead, missing or in diseased state. The trunk shows evidence of advanced rot, deadwood or is hollow throughout. Twig development on the main branched or throughout the canopy is poor and may have limited sucker growth. Callus growth around wounds is minimal. A tree in poor condition could decline further to become a safety hazard. Removal prior to development should be considered if it is considered a hazard tree.

Rating	Description
Fair	Trees in fair condition show moderate symptoms of decline in lower canopy or scaffold branches, but more than 50% of scaffold branches are present and viable. The trunk shows limited evidence of rot or insect damage. Good callus growth is present near wound areas. Trees that have scaffold branches that are healthy but are in a “Y” formation may also be included in this category, if “included bark” is evident as the risk of splitting or breakage increases as the tree matures. Removal or preservation of these trees depends on the location of the specimen and associated target potential, and would depend on the species, and its tolerance to grading, trenching, and surviving in an urban environment. Some major arboricultural maintenance may be required and may include major scaffold or secondary branch removal, bracing and/or cabling.
Good	The specimen tree shows no symptoms of decline in the trunk, and all scaffold branches are present and are in good condition. Most scaffold branches are at right angles to the trunk and show good vigour. Small amounts of dead wood may be present in secondary branches, but account for less than 25% of the canopy. Depending on the grading in the immediate area, a tree in good condition would be recommended for preservation. Such a tree would typically survive to maturity without major arboricultural maintenance.

3.3 Tree Impact Analysis

The tree impact analysis was performed using ArcGIS software. A determination of each tree’s recommended management action was based on several factors including each tree’s current condition, the proposed activities, and its location in relation to the Impact Area.

4.0 Results

4.1 Tree Inventory

A total of 81 individual trees were inventoried and assessed as outlined above. Of the 81 trees, all were located outside of the Impact Area. Trees inventoried are illustrated on Figure 2 to Figure 5 (Trees < 15 cm DBH not shown on Figures).

Table 2 below summarizes the tree species inventoried.

Table 2 Summary of Trees Inventoried

Tree Species	Total
Apple (*Malus spp.*)	1
Balsam Poplar (*Populus balsamifera*)	1
Black Cherry (*Prunus serotina*)	1
Black Walnut (*Juglans nigra*)	18
Green Ash (Fraxinus pennsylvanica)	40
Trembling Aspen (*Populus tremuloides)*	20
Total	**81**

Appendix A summarizes the data collected for all trees inventoried, including species, DBH, location, condition, and recommended action.

4.2 Tree Assessment

The majority of trees surveyed as part of the tree inventory were Green Ash, Trembling Aspen and Black Walnut. Biotic and abiotic disorders and structural defects observed are included in Appendix A (see: Observations column). A total of 35 trees were in healthy condition (Good and Fair), 37 were in poor condition, and 9 were dead. All the Ash trees observed on Site were noted as being infested with EAB. As such, the Ash trees on Site were either dead or in poor health, with the majority composed of dead canopies with epicormic growth at the base of the trees. Table 3 below provides a summary of the overall condition of the trees.

Table 3 Summary of Tree Condition

Tree Condition	Total number of Trees
Good	32
Fair	3
Poor	37
Hazard	0
Dead	9
Total	**81**

4.3 Tree Impact Assessment

Given the access routing selected in the field, no trees > 15 cm (see Table 2) were within the Impact Area, and as such, do not need to be removed to facilitate drilling access. Minor impacts are expected to some trees in the form of pruning, and potential for minor root compaction, to facilitate drill rig access, although these impacts are expected to be minor, if they occur. As such, a Tree Protection Zone (TPZ) has not been recommended, given the relatively low impact of the proposed activity. Tree management actions are illustrated on Figure 2 to Figure 5.

5.0 Tree Removal, Preservation and Maintenance Recommendations

Trees provide a diverse array of social, economic, and environmental benefits that include aesthetic appeal, increased property values, improved air quality, and important habitats for wildlife. Best management practices for tree management are focused on minimizing damage to existing trees within development limits wherever feasible, through the protection and maintenance of trees before, during, and following site alteration.

5.1.1 Vegetation Clearing and Management

Vegetation removal, including tree removal, will be limited to the specified Impact Area and shall not commence until required permits and approvals are obtained, if applicable.

Vegetation clearing outside of the active nesting period for migratory birds is recommended to avoid potential impacts to nesting migratory birds and avoid contravention of the MBCA (no vegetation removal between April 1 and August 31). Note that many migratory birds nest on the ground, and in low vegetation including grasses, herbaceous plants, and shrubs. Searching for nests to ‘clear’ an area for vegetation removal within the bird breeding season is not recommended within complex habitats (i.e. woodlands, thickets, or other areas with dense vegetation and/or complex vertical structure), as the ability to detect nests is low while the risk of disturbance to active nests is high. This disturbance increases the risk of nest predation or abandonment by adults. However, if vegetation removal must occur during the active season, nests searches may be conducted by a qualified biologist within low complexity habitats (i.e., open areas with low ground cover such as lawns and few trees or shrubs, previously cleared areas, or individual snags) where risk of inadvertent nest disturbance is low (ECCC, 2023). Clearing in low complexity habitats during the nesting season should only proceed if a qualified biologist has confirmed that the work will not result in negative impacts to nesting birds and their young.

5.1.2 Limb Pruning

Where branches are likely to be damaged during the proposed activities, they shall be pruned prior to equipment access, in order to avoid unnecessary damage to the tree.

5.1.3 Roots

The sensitive root zones of trees will be protected by limiting equipment access to the Impact Area and out of the driplines of adjacent trees. Damage to the structural root plate can affect tree stability and long-term health and may lead to the creation of a hazard tree. Equipment should be situated within the Impact Area at all times, to minimize root compaction.

6.0 Summary and Recommendations

A total of 81 individual trees > 15 cm DBH were inventoried and assessed during the Study. All 81 trees were located outside of the proposed Impact Area and none of the trees are recommended for removal to facilitate drilling rig access under the current plan. As such, a tree cutting permit under By-law No. 2012-084 in not required. Minor impacts may occur to some trees in the form of pruning, and potential for minor root compaction, to facilitate drill rig access, although these impacts are expected to be minor, if they occur. As such, a Tree Protection Zone (TPZ) has not been recommended, given the relatively low impact of the proposed activity.

The following recommendations are provided to ensure protection of trees in accordance with industry standards and the local municipal by-law:

1. A certified Arborist should be consulted if any modifications to the Impact Area are made to ensure that additional tree protection measures are implemented, and to update the tree inventory accordingly, if applicable.
2. Vegetation clearing should occur outside of the active nesting period for migratory birds (no vegetation removal between April 1 and August 31). If vegetation removal must occur during the active season, nests searches may be conducted by a qualified biologist within low complexity habitats to confirm that the work will not result in negative impacts to nesting birds and their young.
3. Where vegetation clearing within a dripline is necessary, vegetation shall be removed manually to reduce soil compaction and mitigate risk of mechanical damage to the tree.
4. Where branches are likely to be damaged, they shall be pruned, in order to avoid unnecessary damage to the tree.
5. Equipment should be limited to the footprint of the Impact Area at all times, to reduce disturbance and minimize impacts to the root zone.

7.0 Closing

The enclosed report was prepared by an ISA Certified Arborists referenced below. The information presented in this report is accurate as of the date of publication, to the best of our knowledge. Provided that the recommendations outlined herein are implemented, we are of the opinion that appropriate mitigating has been demonstrated in accordance with industry standards to minimize potential impacts to tree health.

Respectfully submitted,

Cambium Inc.

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8.0 References

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Town of Collingwood. (2012). *Tree Preservation and Protection By-law No. 2012-084.* Collignwood.

9.0 Standard Limitations

Limited Warranty

In performing work on behalf of a client, Cambium relies on its client to provide instructions on the scope of its retainer, and, on that basis, Cambium determines the precise nature of the work to be performed. Cambium undertakes all work in accordance with applicable accepted industry practices and standards. Unless required under local laws, other than as expressly stated herein, no other warranties or conditions, either expressed or implied, are made regarding the services, work or reports provided.

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Site Assessments

A site assessment is created using data and information collected during the investigation of a site and based on conditions encountered at the time and particular locations at which fieldwork is conducted. The information, sample results and data collected represent the conditions only at the specific times at which and at those specific locations from which the information, samples and data were obtained and the information, sample results and data may vary at other locations and times. To the extent that Cambium's work or report considers any locations or times other than those from which information, sample results and data was specifically received, the work or report is based on a reasonable extrapolation from such information, sample results and data but the actual conditions encountered may vary from those extrapolations.

Only conditions at the site and locations chosen for study by the client are evaluated; no adjacent or other properties are evaluated unless specifically requested by the client. Any physical or other aspects of the site chosen for study by the client, or any other matter not specifically addressed in a report prepared by Cambium, are beyond the scope of the work performed by Cambium and such matters have not been investigated or addressed.

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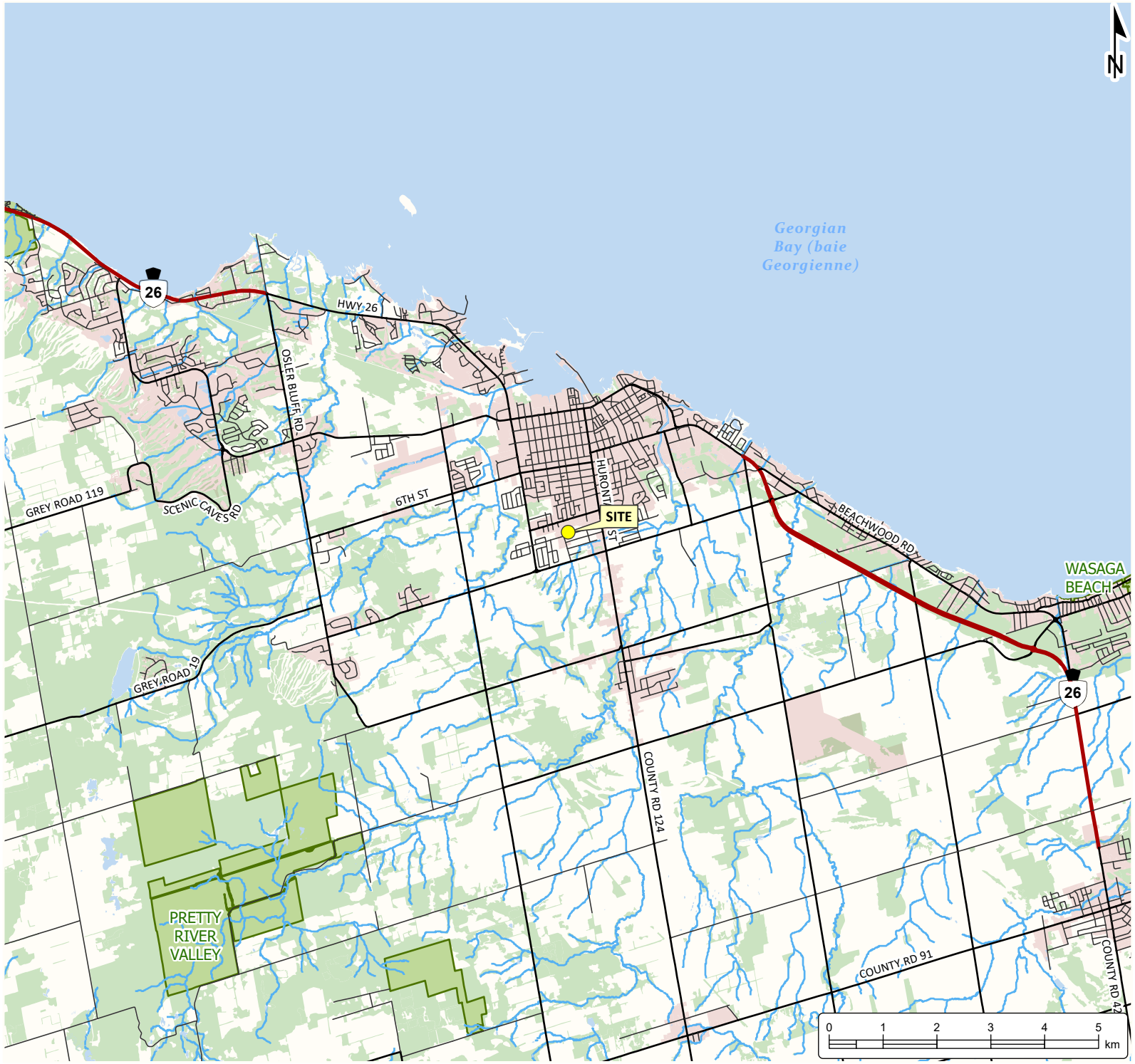
Personal Liability

The client expressly agrees that Cambium employees shall have no personal liability to the client with respect to a claim, whether in contract, tort and/or other cause of action in law. Furthermore, the client agrees that it will bring no proceedings nor take any action in any court of law against Cambium employees in their personal capacity.

Appended Figures



TREE ANALYSIS AND PRESERVATION PLAN

HANESH DEVELOPMENTS
125 Findlay Drive
Collingwood, Ontario

LEGEND

- Highway
- Major Road
- Minor Road
- Watercourse, Permanent
- Provincial Park
- Water Area
- Wooded Area
- Built Up Area

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SITE LOCATION PLAN

Project No.: 21091-001		Date: August 2024 Rev.:	
Scale: 1:100,000		Projection: NAD 1983 UTM Zone 17N	
Created by: DBB	Checked by: CJ	Figure:	1

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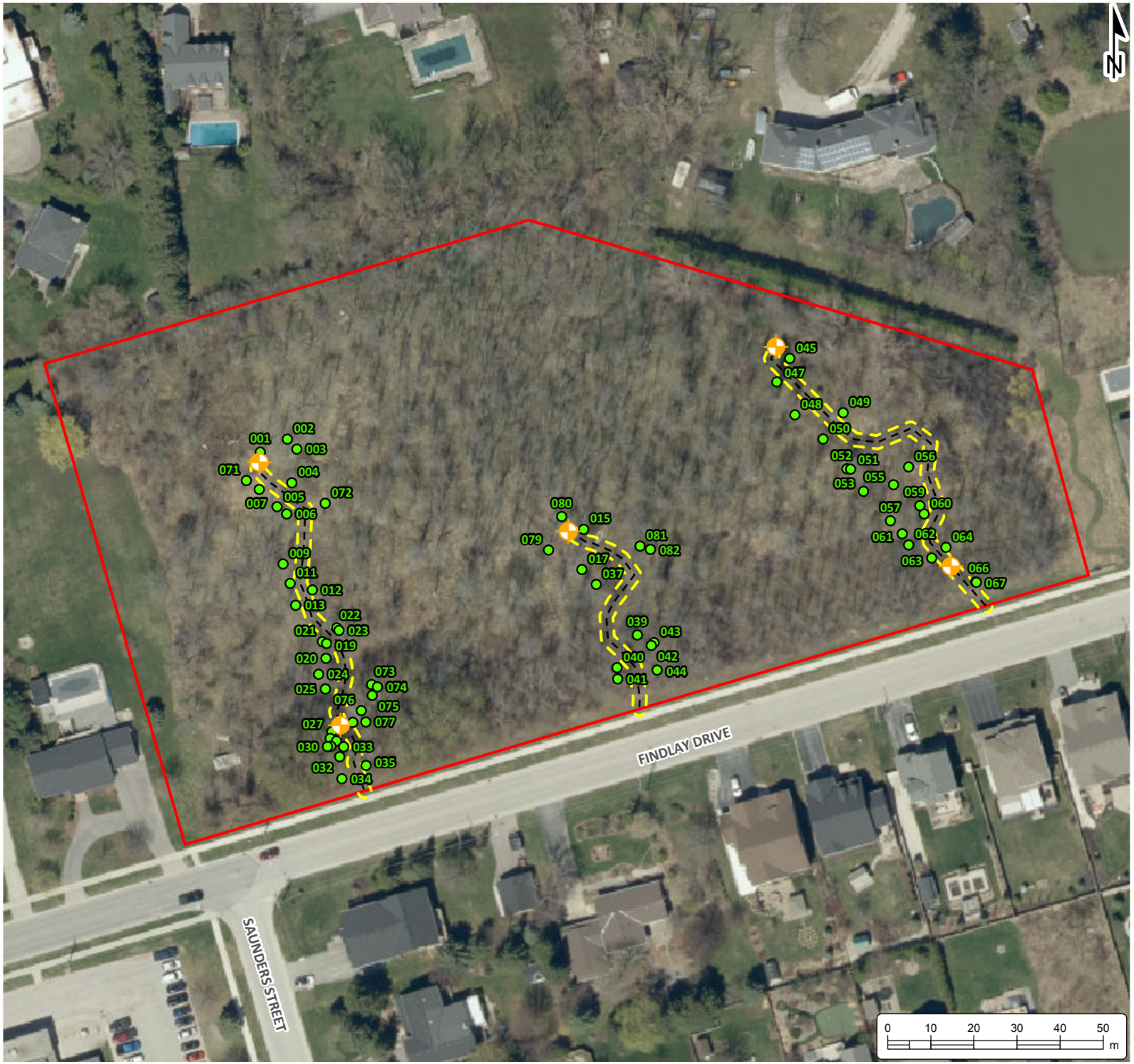

TREE ANALYSIS AND PRESERVATION PLAN

HANESH DEVELOPMENTS
125 Findlay Drive
Collingwood, Ontario

LEGEND

- Borehole
- Drill Rig Path
- Impact Area
- Site (approximate)

Tree Locations - Recommended Actions

- Remove
- Remove - Hazard
- Protect - Injury
- Protect - No Injury
- Retain - Minor Injury

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TREE ANALYSIS AND PRESERVATION STUDY AREA

Project No.: 21091-001		Date: August 2024 Rev.:	
Scale: 1:1,250		Projection: NAD 1983 UTM Zone 17N	
Created by: DBB	Checked by: CJ	Figure:	2

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TREE ANALYSIS AND PRESERVATION PLAN

HANESH DEVELOPMENTS
125 Findlay Drive
Collingwood, Ontario

LEGEND

- Borehole
- Drill Rig Path
- Impact Area
- Site (approximate)

Tree Locations - Recommended Actions

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TREE ANALYSIS AND PRESERVATION PLAN STUDY AREA 1

Project No.: 21091-001		Date: August 2024 Rev.:	
Scale: 1:500		Projection: NAD 1983 UTM Zone 17N	
Created by: DBB	Checked by: CJ	Figure:	3

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TREE ANALYSIS AND PRESERVATION PLAN

HANESH DEVELOPMENTS
125 Findlay Drive
Collingwood, Ontario

LEGEND

- Borehole
- Drill Rig Path
- Impact Area
- Site (approximate)

Tree Locations - Recommended Actions

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TREE ANALYSIS AND PRESERVATION PLAN STUDY AREA 2

Project No.: 21091-001		Date: August 2024 Rev.:	
Scale: 1:400		Projection: NAD 1983 UTM Zone 17N	
Created by: DBB	Checked by: CJ	Figure:	4

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TREE ANALYSIS AND PRESERVATION PLAN

HANESH DEVELOPMENTS
125 Findlay Drive
Collingwood, Ontario

LEGEND

- Borehole
- Drill Rig Path
- Impact Area
- Site (approximate)

Tree Locations - Recommended Actions

- Remove
- Remove - Hazard
- Protect - Injury
- Protect - No Injury
- Retain - Minor Injury

Notes:
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- Distances on this plan are in metres and can be converted to feet by dividing by 0.3048.
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TREE ANALYSIS AND PRESERVATION PLAN STUDY AREA 3

Project No.: 21091-001		Date: August 2024 Rev.:	
Scale: 1:500		Projection: NAD 1983 UTM Zone 17N	
Created by: DBB	Checked by: CJ	Figure:	5

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Appendix A

Tree Assessment Results

Appendix A: Tree Inventory and Assessment Data

Tree ID	Tag #	Location	Tree Species (Common Name)	Tree Species (Scientific Name)	DBH (cm)	Crown Reserve (TPZ) (m)	Overall Condition	Observations	Recommended Action	Ownership
1	1	Buffer Area	Black Walnut	*Juglans nigra*	17	4	Good	DW	Retain (Minor Injury)	Private (On Site)
2	2	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	17.5	2	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
3	3	Buffer Area	Black Walnut	*Juglans nigra*	26	5	Good	VC, DW	Retain (Minor Injury)	Private (On Site)
4	4	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	17	2	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
5	5	Buffer Area	Black Walnut	*Juglans nigra*	23.7	6	Good	VC, DW	Retain (Minor Injury)	Private (On Site)
6	6	Buffer Area	Black Walnut	*Juglans nigra*	35.5	6	Good	VC, DW	Retain (Minor Injury)	Private (On Site)
7	7	Buffer Area	Black Walnut	*Juglans nigra*	15	4	Good	VC, DW	Retain (Minor Injury)	Private (On Site)
8	8	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	11	1	Dead	EAB	Retain (Minor Injury)	Private (On Site)
9	9	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	21.3	3	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
10	10	Buffer Area	Black Walnut	*Juglans nigra*	14	3	Good	DW	Retain (Minor Injury)	Private (On Site)
11	11	Buffer Area	Black Walnut	*Juglans nigra*	19.5	3	Good	VC, DW	Retain (Minor Injury)	Private (On Site)
12	12	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	18	3	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
13	13	Buffer Area	Black Walnut	*Juglans nigra*	22.2	5	Good		Retain (Minor Injury)	Private (On Site)
14	15	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	14.5/15.3	2	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
15	16	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	14.7	2	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
16	17	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	17.0/17.2	2	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
17	18	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	13.5	2	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
18	19	Buffer Area	Black Walnut	*Juglans nigra*	15.5	3	Good	VC	Retain (Minor Injury)	Private (On Site)
19	20	Buffer Area	Black Walnut	*Juglans nigra*	27.8	4	Good	VC	Retain (Minor Injury)	Private (On Site)
20	21	Buffer Area	Black Walnut	*Juglans nigra*	30.7	4	Good	VC	Retain (Minor Injury)	Private (On Site)
21	22	Buffer Area	Black Walnut	*Juglans nigra*	25.4	3	Good	VC	Retain (Minor Injury)	Private (On Site)
22	23	Buffer Area	Black Walnut	*Juglans nigra*	21.8	4	Good	VC, DW	Retain (Minor Injury)	Private (On Site)
23	24	Buffer Area	Black Walnut	*Juglans nigra*	26.2	4	Good	VC, DW	Retain (Minor Injury)	Private (On Site)
24	25	Buffer Area	Black Walnut	*Juglans nigra*	19	3	Good	VC, DW	Retain (Minor Injury)	Private (On Site)
25	26	Buffer Area	Black Walnut	*Juglans nigra*	14	4	Good	CL	Retain (Minor Injury)	Private (On Site)
26	27	Buffer Area	Trembling Aspen	*Populus tremuloides*	21.8	2	Good	VC	Retain (Minor Injury)	Private (On Site)
27	28	Buffer Area	Trembling Aspen	*Populus tremuloides*	21.5	2	Good		Retain (Minor Injury)	Private (On Site)
28	29	Buffer Area	Trembling Aspen	*Populus tremuloides*	24.1	3	Good		Retain (Minor Injury)	Private (On Site)
29	30	Buffer Area	Trembling Aspen	*Populus tremuloides*	24.2	3	Good		Retain (Minor Injury)	Private (On Site)
30	31	Buffer Area	Trembling Aspen	*Populus tremuloides*	27.2	4	Good	VC	Retain (Minor Injury)	Private (On Site)
31	32	Buffer Area	Trembling Aspen	*Populus tremuloides*	17.6	3	Good		Retain (Minor Injury)	Private (On Site)
32	33	Buffer Area	Trembling Aspen	*Populus tremuloides*	27.5	4	Good		Retain (Minor Injury)	Private (On Site)
33	34	Buffer Area	Trembling Aspen	*Populus tremuloides*	29.5	4	Good		Retain (Minor Injury)	Private (On Site)
34	35	Buffer Area	Trembling Aspen	*Populus tremuloides*	30.5	3	Good	DW	Retain (Minor Injury)	Private (On Site)
35	36	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	14.5	2	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
36	37	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	27.1/30.0	4	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
37	38	Buffer Area	Trembling Aspen	*Populus tremuloides*	14.3	2	Dead		Retain (Minor Injury)	Private (On Site)
38	39	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	24	3	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
39	40	Buffer Area	Trembling Aspen	*Populus tremuloides*	20.3	4	Good	VC, DW	Retain (Minor Injury)	Private (On Site)
40	41	Buffer Area	Trembling Aspen	*Populus tremuloides*	31.5	4	Good	VC	Retain (Minor Injury)	Private (On Site)

Tree ID	Tag #	Location	Tree Species (Common Name)	Tree Species (Scientific Name)	DBH (cm)	Crown Reserve (TPZ) (m)	Overall Condition	Observations	Recommended Action	Ownership
41	42	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	16.6	3	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
42	43	Buffer Area	Trembling Aspen	*Populus tremuloides*	19.8	3	Fair	VC, LC, CD	Retain (Minor Injury)	Private (On Site)
43	44	Buffer Area	Trembling Aspen	*Populus tremuloides*	21.4	2	Dead		Retain (Minor Injury)	Private (On Site)
44	45	Buffer Area	Black Walnut	*Juglans nigra*	16.1	2	Fair	CD, VC	Retain (Minor Injury)	Private (On Site)
45	46	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	13	2	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
46	47	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	23.4	2	Dead	EAB	Retain (Minor Injury)	Private (On Site)
47	48	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	27.3	3	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
48	49	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	18.2	2	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
49	50	Buffer Area	Apple spp.	*Malus spp.*	18.8	3	Good		Retain (Minor Injury)	Private (On Site)
50	51	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	17.5	3	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
51	52	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	19	2	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
52	53	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	15.8	2	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
53	54	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	14.2	2	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
54	55	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	15.7	2	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
55	56	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	16.4	2	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
56	57	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	19.7	3	Poor	DC, SB, SC,EAB	Retain (Minor Injury)	Private (On Site)
57	58	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	12.1	2	Poor	DC, SB, EAB, VC	Retain (Minor Injury)	Private (On Site)
58	59	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	23	2	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
59	60	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	15.6	2	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
60	61	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	15.5	2	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
61	62	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	21.8	3	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
62	63	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	18.3	3	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
63	64	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	16.1	3	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
64	65	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	12.9	3	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
65	66	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	20.7	3	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
66	67	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	17.6	2	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
67	68	Buffer Area	Blasam Poplar	*Populus balsamifera*	12.3	3	Good	LN	Retain (Minor Injury)	Private (On Site)
68	69	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	14.2	2	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
69	70	Buffer Area	Black Cherry	*Prunus serotina*	14.3	1	Dead		Retain (Minor Injury)	Private (On Site)
70	71	Buffer Area	Black Walnut	*Juglans nigra*	17.1	3	Good	VC	Retain (Minor Injury)	Private (On Site)
71	72	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	16	2	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
72	73	Buffer Area	Trembling Aspen	*Populus tremuloides*	20.3	2	Dead		Retain (Minor Injury)	Private (On Site)
73	74	Buffer Area	Trembling Aspen	*Populus tremuloides*	18.1	2	Fair	VC, CD	Retain (Minor Injury)	Private (On Site)
74	75	Buffer Area	Trembling Aspen	*Populus tremuloides*	30.8	2	Good	VC	Retain (Minor Injury)	Private (On Site)
75	76	Buffer Area	Trembling Aspen	*Populus tremuloides*	22.8	3	Good	VC	Retain (Minor Injury)	Private (On Site)
76	77	Buffer Area	Trembling Aspen	*Populus tremuloides*	31.8	2	Dead		Retain (Minor Injury)	Private (On Site)
77	78	Buffer Area	Trembling Aspen	*Populus tremuloides*	27.4	0	Dead		Retain (Minor Injury)	Private (On Site)
78	79	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	31.3	3	Dead	EAB	Retain (Minor Injury)	Private (On Site)
79	80	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	42.4	3	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
80	81	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	17.2	2	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)
81	82	Buffer Area	Green Ash	*Fraxinus pennsylvanica*	16.8	2	Poor	DC, SB, EAB	Retain (Minor Injury)	Private (On Site)

Appendix B

Tree Inventory Abbreviations

Tree Inventory Abbreviations

AD	Animal/Insect Damage	GTF	Growing Through Fence
BC	Broken Crown	IB	Included Bark
BD	Bark Damage	LN	Lean
BH	Bat Habitat	LS	Landscaped Tree
BN	Bark Necrosis	MB	Multi-branch Nodes on Trunk
BB#	# of Broken Branches	ML	Multiple Leaders
BSD	Basal Trunk Damage	NST	Bird Nest in Tree
CD	Crown Dieback	OW	Oozing Wound
CL	Chlorotic Leaves	PB	Peeling Bark
CN	Crown Necrosis	PC	Pollarded Crown
CS	Close to Building	PF	Previous Failure
CT	Crooked/Bent Trunk	PL	Poor Leader Development
CV	Cavity	PP	Past Pruning
DC	Dead Canopy	RPM	Root Plate Movement
DE	Diseased/Decayed	SB	Sprouts at Trunk Base
DED	Dutch Elm Disease	SC	Sprouts in Crown
DF	Defoliated	SL	Slender Form
DL	Dead Leader	SN	Squirrel Nest
DW	Deadwood	SP	Sapling
EAB	Emerald Ash Borer	ST	Sprouts on Trunk
ER	Exposed Roots	TS	Trunk Split
ETB	Enlarged Trunk Base	TT	Twisted Trunk
FC	Frost Cracks	TW	Trunk Wound
FS	Fused Branched/Limbs	UC	Unbalanced Crown
GC	Grade Change	UW	Under Wires
GR	Gridling Roots	VC	Vine Covered

Updated: 2024-07-17