

September, 2023

Arborist Report - Tree Inventory and Preservation Plan

115 Watson Parkway North, Guelph, ON

Prepared for

Guelph Watson Holdings Inc.



north-south
ENVIRONMENTAL

Project Study Team

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1. Introduction

North-South Environmental Inc. (NSE) was retained by Guelph Watson Holdings Inc to complete an Arborist Report / Tree Inventory and Protection Plan (TIPP) for a proposed mixed-use residential development at 115 Watson Parkway North (herein referred to as the 'Subject Property'). The Subject Property is located at the northeastern edge of Guelph, along Watson Parkway North at Starwood Drive (part of Lot 5, Concession 3) (**Figure 1 in Appendix 1**).

The subject property contains trees regulated under the City of Guelph's Tree Protection By-law 2010-19058. As such, this Arborist Report (Tree Inventory and Preservation Plan -TIPP) has been prepared to address City of Guelph requirements. This report is to be read in conjunction with all other reports and plans provided as part of the complete application for development.

2. Existing Conditions

The Subject Property is approximately 6.44 ha in size with frontage on both Watson Parkway North and Watson Road North. The Subject Property is a vacant, disturbed lot, with limited trees due to previous grading of the lands. To the south is City-owned land which includes a vegetated corridor along Clythe Creek.

The Subject Property is partially within the Grand River Conservation Authority (GRCA) Regulated Area Limit, as shown on **Figure 1 in Appendix 1**.

For further details on existing conditions, including physiography, geology, soils, hydrology, hydrogeology, Ecological Land Classification, etc., please refer to the Environmental Impact Study provided under separate cover (NSE, 2023) as part of this application.

3. Policy Review

3.1. City of Guelph Tree Protection By-Law No. 2010-19058

The City of Guelph Tree Protection By-Law authorizes and regulates the destruction or injuring of trees. Under the By-Law, in general, no person shall cause or permit destruction, injury or removal of any tree with a diameter equal to or greater than 10 centimeters without first obtaining a permit. It outlines conditions that the City may impose when issuing a permit, including requiring a security deposit, replacement trees, an arborist report, and a tree protection plan.

- This arborist report has been prepared in accordance with the Tree Protection By-law.

3.2. City of Guelph Tree Technical Manual (2019)

The City of Guelph Tree Technical Manual (2019) provides “standards, guidelines and specifications aimed for the preservation, protection and maintenance of trees associated with development and construction throughout the City, on both public and private lands. The manual promotes best practices for tree management, provides standardization for tree related plans and reports, promotes effective and long-term retention, and seeks to maintain and enhance the City’s tree canopy”.

- This arborist report has been prepared in accordance with the Tree Technical Manual.

3.3. Canadian Food Inspection Agency Directive D-03-08

The Canadian Food Inspection Agency (CFIA) regulates the movement of all Ash (*Fraxinus spp*) material, including logs, bark, branches, fresh leaves, woodchips, and nursery stock to control the spread of a non-native beetle, the Emerald Ash Borer, whose larvae burrow into Ash. To slow the spread of Emerald Ash Borer to new areas, Ash material may not be transported outside of a regulated area into a non-regulated area. As of 2023, the Emerald Ash Borer regulated area includes all of southern and central Ontario north to Sudbury. Ash may not be transported to areas north of Sudbury.

- No ash trees are present on the Subject Property, therefore there is no risk of contravening the CFIA Directive.

3.4. Ontario Forestry Act (1990)

The Ontario *Forestry Act* provides criteria for identifying treed areas that qualify as woodlands based on an assessment of tree diameter and density. It also provides a directive on boundary tree identification and regulates the injury or destruction of boundary trees. A boundary tree is defined in Section 10 (2) as a “tree whose trunk is growing on the boundary between adjoining lands” and “is the common property of the owners of the adjoining lands”. Section 10 (3) states that “every person who injures or destroys a tree growing on the boundary between adjoining lands without the consent of the landowners is guilty of an offence under this Act.” A tree trunk is defined as the “entire trunk from its point of growth away from its roots up to its top where it branches out to limbs and foliage” (Hartley v Cunningham et al, 2013 ONSC 2929). Therefore, boundary trees are trees where any part of the trunk (i.e., not restricted to the base of the trunk) straddles a property line.

- No boundary trees (i.e., with shared ownership) were identified. It is the landowner’s responsibility to verify ownership of all assessed trees before removal.

3.5. Migratory Birds Convention Act (1994)

The *Migratory Birds Convention Act* (MBCA) and its *Regulations* protect listed migratory birds in Canada through the conservation of populations, individuals, and their nests. Article I of the MBCA identifies

migratory species that are protected under this act. It is a contravention of this act to harass, harm, or kill protected migratory birds, remove, or disrupt their nests, and/or eggs.

- The study area does provide habitat for migratory birds. Any tree and vegetation removals, and demolition works should be conducted outside of the active bird nesting season (April 1 - August 31). Please see the EIS report (NSE, 2023) for further discussion.

3.6. Endangered Species Act (2007)

The *Endangered Species Act* (ESA) provides regulatory protection for Species at Risk and their habitat in Ontario. Species listed as Endangered and Threatened, and habitat for those species, is protected from development under the ESA. Habitat for Special Concern species is not protected under the ESA but is considered Significant Wildlife Habitat (SWH) and is protected under Section 2.1 of the 2020 *Provincial Policy Statement* (PPS).

- No Species at Risk (SAR) trees were recorded within the Study Area during the arborist field surveys. However, there is potential for SAR bats to roost in trees on the subject property. Tree removals are recommended to occur outside of the active bat season (i.e., to be removed between October 1 and March 31). Please see the EIS report (NSE, 2023) for further discussion.

3.7. Grand River Conservation Authority Regulations

- The Subject Property is partially within an area regulated by Grand River Conservation Authority (GRCA). Therefore, the proposed development requires permitting under O. Reg. 150/06. Please see the EIS report (NSE, 2023) for further discussion.

4. Proposed Development

The proposed development is for a mixed-use residential development. The proposal includes four mixed-use buildings (Buildings A, B, C, D) ranging in height from 10 to 14 storeys, town homes, and a public park area. Approximately 873 apartment units and 197 town home units are proposed, for a total of approximately 1070 units.

5. Tree Inventory Methodology

The tree inventory was completed on November 16th, 2022, by D. Bettencourt, an Ecologist and ISA Certified Arborist (ON-2831A) in accordance with the City of Guelph’s tree bylaw and tree technical manual.

Tree diameter (DBH) was measured at approximately 1.4 metres above grade. All standing trees equal to or greater than 10 cm diameter at breast height (DBH) that could be impacted by the proposed development were inventoried. GPS location was recorded using the application Survey 123 on a tablet (accuracy in ideal conditions +/- 3m). Photos were taken of each tree inventoried.

Trunk integrity, crown structure, and crown vigour were evaluated, and the canopy height and width were estimated. Trees within the Subject Property were tagged with aluminum tree tags. Trees located on adjacent properties (within 6 m) were assessed from the Subject Property and were not tagged. Each tree was assigned an overall condition rating (i.e., tree vigour class). These classes range from excellent (1) to dead (6).

Definitions of inventory terms can be found in **Table 1** below. A table summarizing the results of the tree inventory is located in **Appendix 2**.

Table 1. Inventory Term Definitions

Term	Definition
Tree Number	The tree identification number of the tree as indicated on the Tree Inventory Table and Tree Protection Plan.
Ownership	Ownership of the tree (proponent, adjacent landowner).
Species Name	Common name and scientific name of the tree species.
Diameter at Breast Height (DBH) (cm)	Measurement of the diameter of the tree taken at approximately 1.4 m above ground level.
Height (m)	Approximate height of the tree.
Canopy Radius (m)	The radius of the canopy, measured from the tree trunk to the dripline.
Trunk Integrity	Assessment of the tree’s trunk integrity (e.g., root damage or decay, split stem, seam, or cracks, etc.).
Crown Structure	Assessment of the tree’s crown structure (e.g., broken top, broken or severed primary limbs, etc.).
Crown Vigour	Assessment of the trees’ crown vigour (e.g., moderate dead wood, crown dieback, insect defoliators, etc.).
Tree Vigour Class	Overall health assessment of the tree. Tree vigour evaluation for trees range from excellent (1), good (2), fair (3), poor (4), very poor (5), or dead (6) in health.
Proposed Action	Tree is proposed to be preserved (without injury), injured, removed, or transplanted.

Term	Definition
Minimum Tree Protection Zone (MTPZ) (m)	The minimum area around the tree trunk that must be protected using Tree Protection Barriers. The minimum TPZ is determined based on the tree DBH and municipal requirements. Per Guelph’s Tree Technical Manual.
Potential Rooting Area (PRA) (m)	The potential rooting area for all trees and TPZ for trees in NHS, parks, open spaces, and other significant natural heritage features. Per Guelph’s Tree Technical Manual.
Compensation	Statement on whether compensation for removal is required. Per Guelphs Tree By-law.

6. Tree Inventory Results

A total of 52 trees were inventoried, of which 49 occurred on the Subject Property and 3 occurred on adjacent properties.

Trees are primarily young, early successional trees of small diameter. Trees are primarily in excellent or good condition. Tree size ranged from 10 to 42.4 cm. No trees are considered Heritage Trees or Species at Risk.

Eight tree species were recorded:

- Balsam Poplar (*Populus balsamea*)
- Trembling Aspen (*Populus tremuloides*)
- Eastern Cottonwood (*Populus deltoides*)
- Willow (*Salix sp.*)
- Siberian Elm (*Ulmus pumila*)
- Manitoba Maple (*Acer negundo*)
- Scot’s Pine (*Pinus slyvestris*)
- Eastern White-cedar (*Thuja occidentalis*)

The tree inventory table is provided in **Appendix 2**. Tree locations and tag numbers are marked on the Tree Preservation Plan (**Appendix 1 Figure 2**).

7. Impact Assessment

7.1. Trees to be Removed

A total of 45 trees are recommended for removal. Of these trees, 44 require removal to accommodate the site plan and 1 tree requires removal as it is a hazard (Tree #326).

Trees to be removed for the proposed development are trees that fall directly in the development footprint or trees where greater than 30% of the canopy occurs within the development footprint (Matheny, N., and James R.J., 1998). These trees are recommended for removal as they will interfere with construction or will be mortally injured by construction or associated activities (grading, excavation, etc.).

7.2. Trees to be Injured

One tree will be injured as work will occur within its dripline, though intrusion is expected to be minor and that the tree can be retained on the landscape (Tree #310).

This tree could see impacts in the root system or other minor injury, but tree stability and health should not be compromised to a critical point. This was determined by the amount and type of work to be completed within the Minimum Tree Protection Zone (MTPZ) and Probable Root Area (PRA) in combination with factors related to age, species, and an assessment of the tree vigour.

7.3. Trees to be Retained

Six trees will be retained. These trees are either off-site or are located on the subject property within the buffer to the Natural Heritage System. These trees are Trees: #B, C, D, G, H, K.

8. Tree Removal Measures

As per the City of Guelph's Tree Technical Manual, tree removal measures are as follows:

- Trees approved for removal must be clearly marked on-site, preferably with orange or yellow spray paint at breast height (1.4 m) and at the base of the stem (stump height) as per the Ontario Tree Marking Guide;
- Tree removal cannot proceed until written approval of the TIPP has been granted by the City;
- Approved tree removals shall be carried out prior to site works and in such a manner as to minimize site disturbance and damage to trees to be retained;
- Approved tree protection fencing must be installed and inspected prior to tree removals unless otherwise approved by the City;
- Removal of all trees and tree parts from Termite Management Areas shall adhere to procedures of Guelph's Termite Control Program for removal and disposal of termite infested material and soils; and
- The Canadian Food Inspection Agency (CFIA) restricts the movement of any part of trees infested with or host to a regulated pest or disease. For more information about transporting regulated material, contact your local CFIA office.

9. Tree Compensation

9.1. Tree Technical Manual Guidance

The City of Guelph requires compensation for trees regulated under its Tree By-law, unless an exemption applies (such as for dead trees, trees in very poor condition, or certain invasive species). Compensation can create a net benefit in that it can replace non-native, unhealthy, or otherwise undesirable species or species assemblages with healthy, diverse, native tree species. Further, the City of Guelph Tree Technical Manual (2019) states that *"appropriate compensation for removed trees can (also) provide opportunities to create new green spaces and enhance existing protected natural areas."*

The City of Guelph's Tree Technical Manual (2019) indicates that compensation shall be provided for individual trees removed on private property using the Aggregate Caliper Formula. The Aggregate Caliper Formula means that the total DBH of trees removed shall be equal to the total DBH of replacement plantings (e.g., if one tree is removed with a DBH of 60 cm, three trees with DBHs of 20 cm could be planted as compensation or two trees with DBHs of 30 cm). Because the Aggregate Caliper Formula is not a compensation ratio in the sense of trees removed to trees replaced, it allows for the number of compensation plantings to vary so long as total replacement DBH remains the same. This can be advantageous for small sites which cannot accommodate large numbers of plantings.

Compensation plantings should be assessed for quality by a Certified Arborist prior to planting as well as after planting to assess ongoing health. Compensation plantings should be cared for with appropriate pruning, watering and mulching. All pruning must be conducted by or supervised by an Arborist.

The following requirements pertain to trees planted as compensation for tree removal:

- Small stock (in lieu of standard stock size) may be acceptable as compensation and for naturalization and other mass plantings;
- All plant material shall conform to the latest edition of the Canadian Nursery Trades Association Specifications and Standards;
- The spacing of plant material should account for the ultimate size and form of the selected species; and
- Deciduous shade trees are preferable, and coniferous trees shall not account for more than one-quarter of proposed trees.

Trees planted for compensation on the Subject Property shall include species native to the Guelph area and suited to local hydrological and soil conditions. A list of suitable species for planting as street trees in the Guelph area can be found in Schedule D of the Tree Technical Manual (2019). Other

native tree species may also be considered. Standard replacement tree and shrub sizes for compensation are as follows:

- a) A caliper of 60 mm shall be considered as the standard replacement size for deciduous trees;
- b) A height of 250 cm shall be considered as the standard replacement size for coniferous trees; and
- c) One 250 cm coniferous tree shall be considered as equivalent to one 60 mm deciduous tree when using the aggregate caliper formula to determine required compensation caliper.

Compensation as described above shall be incorporated into the planting plan for the proposed work. If the site size constrains the ability to accommodate the required compensation planting in a manner that allows for sufficient room to grow, cash-in lieu shall be provided to the City of Guelph or replacement trees shall be planted off-site as an alternative. Compensation in cash-in-lieu shall be calculated according to the Tree Technical Manual (City of Guelph 2019) and must be approved by the City. Locations of any off-site compensation planting shall be approved by the City.

9.2. Calculated Compensation Requirement

The required compensation caliper is 843.9 cm, which equates to planting 141 replacement trees of 60 mm (6 cm) caliper. As described above, a less amount of replacement trees of larger diameter may also be considered as long as the minimum aggregate caliper of 843.9 cm is met.

Tree replacement, or financial compensation, or a combination of the two, may be used to fulfill this compensation requirement. The landowner intends to plant all replacement trees onsite within the buffer area along the southeastern limit of the property.

10. Tree Preservation

10.1. Mitigation Measures for Trees to be Injured

One tree along the wetland buffer, Scots Pine (Tree tag 310) is expected to be injured as the minimum Tree Protection Zone (MTPZ) cannot be accommodated. However, it is expected that the tree can survive if mitigation measures are followed to preserve its health.

In order to prevent fatal injury to the tree recommended for protection, a Minimum Tree Protection Zone (MTPZ) shall be established according to the requirements in Table 1 of the Tree Technical Manual (City of Guelph 2019), which defines MTPZ values based on DBH. The MTPZ is provided in **Appendix 2**. The MTPZ of each tree shall be delineated with protection fencing (i.e. tree protection hoarding) to prevent entry by the contractors during construction. The MTPZ detailed below should be measured from the tree trunk.

The MTPZ represents an area where no impacts are to occur and will be comprised of Erosion and Sediment Control Fencing installed prior to the initiation of construction and remaining in place until works are completed. Tree protection hoarding and/or fencing shall be installed to the specifications detailed in Section 4.3 of the Tree Technical Manual (2019). Tree protection fencing shall be installed prior to commencing construction and maintained throughout the duration of the proposed works. Entry into the MTPZ by the contractor shall be prohibited.

Additionally, a Tree Protection Zone (TPZ) at a distance of canopy width plus 1 m measured from the trunk of the tree shall be established. Tree protection fencing delineating the TPZ will be comprised of orange safety fencing. This fencing shall be installed prior to commencement of works and remain in place until works must be completed within the TPZ. Once works within that area have been completed the fencing shall be reinstalled and remain in place for the duration of the proposed works. When entry into the TPZ is required to accommodate construction, the fencing may be temporarily taken down; however, a Certified Arborist shall be present on site for the duration to ensure the impact of construction activities to the trees is minimized. Construction activities proposed within the TPZ include grading, excavation and the installation of a pipe. Root sensitive excavation shall be used to minimize impacts of the excavation process.

10.2. Monitoring Requirements

It is recommended that a Certified Arborist be on site to supervise critical stages, including:

- Tree marking and removal,
- Installation of tree protection hoarding and other tree protection measures,
- Excavation or grading within the TPZ or PRA, and root pruning, if required,
- Occurrences of physical tree injury,
- Site preparation for planting,
- Tree planting and maintenance, and
- A final (as-built) inspection of compensation plantings within the warranty period.

Reporting requirements may be required by the City at any critical stage of development. Tree protection fencing should be inspected bi-monthly or on a timeline agreed upon with the City of Guelph. Erosion and sediment control inspections should ensure that no work occurs outside of the designated work area in order to ensure no harm comes to additional trees outside of the Study Area. Post-construction monitoring should be completed by an Arborist to assess health of compensation plantings and nearby trees outside of the Subject Property.

10.3. Additional Mitigation Measures

- Vegetation removal should occur outside of the breeding bird season for Nesting Zone C2 (April 1- August 31) and outside of the active bat season (April 1 to September 30).

- Erosion and sediment control measures as outlined in the scoped EIS should be followed.
- Clearing equipment and vehicles should be cleaned to prevent the introduction of non-native species.
- During construction, refueling of equipment should be conducted well away from natural vegetation.
- Monitoring pre, during, and post-construction should be completed to provide adaptive management recommendations.
- A site visit by a qualified tree professional may be required post-construction to ensure appropriate compensation and plantings occurred and to assess health of the plantings.
- It is recommended that long-term occupants of the property minimize salt application on the driveways and paths in order to prevent potential chronic effects of salts on trees and other vegetation that may be planted in compensation.

11. Conclusion/ Summary

A total of 52 trees above 10 cm DBH were surveyed, of which 49 occurred on the Subject Property and 3 occurred on adjacent properties. The proposed works will require the removal of the majority (45 total) of surveyed trees.

A total of 45 trees to be removed, 44 will require compensation. Compensation should be in the form of 141 replacement plantings of 60 mm caliper or a combination of calipers equivalent to 843.9 cm DBH. Tree protection fencing and other mitigation measures have been recommended to mitigate impacts on retained trees.

12. References

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APPENDIX 1 | Figures



Figure 1 | 115 Watson Parkway North, Guelph ON
 Subject Property / GRCA Regulated Areas

- Legend**
- Subject Property
 - Regulation Limit (GRCA)



Project Number 22-1267	Date: 2023-05-18	N ▲
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Tree Preservation Plan
 115 Watson Parkway North, Guelph ON

Legend

- Subject Property
- Regulation Limit (GRCA)
- Regulatory Floodline
- Combined Setback
- Proposed Development**
- Proposed Structures
- Development Details
- Tree Status**
- Remove (Circle depicts Canopy Radius)
- Injured (Circle depicts Tree Protection Zone)
- Retain (Circle depicts Tree Protection Zone)
- Probable Root Area (PRA)
- Minimum Tree Protection Zone (MTPZ)

The applicant is responsible for ensuring that tree protection fencing (hoarding) is maintained throughout all phases of construction in the location and condition approved. Hoarding will provide protection to the individual trees, clumps of trees, and woodland edges to be retained. It should be placed a minimum of one meter from the dripline of the tree/woodland around the perimeter of individual/grouped trees/woodland (refer to Figure 1). Paige wire farm fencing shall be the standard form; snow fencing is not acceptable. A sign must be posted on the fence to indicate that it delineates a tree protection zone. Tree Protection Zone also refers to where the protective hoarding should be placed.

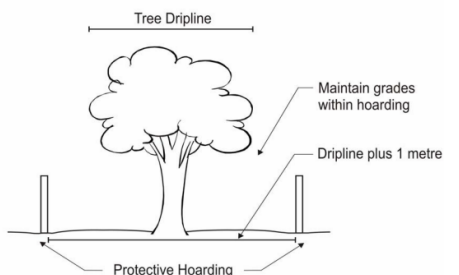
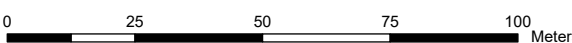


Figure 1. Tree Protection Fencing Diagram



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APPENDIX 2 | Tree Inventory Table

Tree Inventory Table

Tree Tag (#)	Common Name	Botanical Name	DBH (cm)	Height (m)	Canopy Radius (m)	Trunk Integrity	Crown Structure	Crown Vigour	Overall Condition	Ownership	Proposed Action	TPZ (Dripline + 1 m)	MTPZ (m) ¹	PRA (m) ²	Compensation
301	Balsam Poplar	<i>Populus balsamifera</i>	14.2	7.5	4				Good	Proponent	Remove (conflicts with site plan)	5.0	0.9	1.7	Required
302	Eastern Cottonwood	<i>Populus deltoides</i>	19	12	4			id	Good	Proponent	Remove (conflicts with site plan)	5.0	1.1	2.3	Required
303	Scots Pine	<i>Pinus sylvestris</i>	18.8	9	4.25				Good	Proponent	Remove (conflicts with site plan)	5.3	1.1	2.3	Required
304	Trembling Aspen	<i>Populus tremuloides</i>	24.5	18	4.5				Excellent	Proponent	Remove (conflicts with site plan)	5.5	1.5	2.9	Required
305	Scots Pine	<i>Pinus sylvestris</i>	12	12	3				Excellent	Proponent	Remove (conflicts with site plan)	4.0	0.7	1.4	Required
306	Eastern White-cedar	<i>Thuja occidentalis</i>	10	6	2				Excellent	Proponent	Remove (conflicts with site plan)	3.0	0.6	1.2	Required
307	Eastern White-cedar	<i>Thuja occidentalis</i>	12.5	7	2.25	st			Excellent	Proponent	Remove (conflicts with site plan)	3.3	0.8	1.5	Required
308	Eastern White-cedar	<i>Thuja occidentalis</i>	10.5	6	2				Excellent	Proponent	Remove (conflicts with site plan)	3.0	0.6	1.3	Required
309	Eastern White-cedar	<i>Thuja occidentalis</i>	17	6.5	2	st			Excellent	Proponent	Remove (conflicts with site plan)	3.0	1.0	2.0	Required
310	Scots Pine	<i>Pinus sylvestris</i>	13.9	7	3				Excellent	Proponent	Retain with Injury	4.0	0.8	1.7	Required
311	Eastern cottonwood	<i>Populus deltoides</i>	24.5	21	3	s, f			Good	Proponent	Remove (conflicts with site plan)	4.0	1.5	2.9	Required
312	Scots Pine	<i>Pinus sylvestris</i>	11.8	5	2				Excellent	Proponent	Remove (conflicts with site plan)	3.0	0.7	1.4	Required
313	Willow sp.	<i>Salix sp.</i>	33	13	6	st, l			Good	Proponent	Remove (conflicts with site plan)	7.0	2.0	4.0	Required
314	Trembling Aspen	<i>Populus tremuloides</i>	12.4	14	3				Excellent	Proponent	Remove (conflicts with site plan)	4.0	0.7	1.5	Required
315	Balsam Poplar	<i>Populus balsamifera</i>	15.6	20	4				Excellent	Proponent	Remove (conflicts with site plan)	5.0	0.9	1.9	Required
316	Willow sp.	<i>Salix sp.</i>	31.9	23	6				Excellent	Proponent	Remove (conflicts with site plan)	7.0	1.9	3.8	Required
317	Balsam Poplar	<i>Populus balsamifera</i>	12.9	22	5.5	wh			Excellent	Proponent	Remove (conflicts with site plan)	6.5	0.8	1.5	Required
318	Willow sp.	<i>Salix sp.</i>	11	12	2	st			Excellent	Proponent	Remove (conflicts with site plan)	3.0	0.7	1.3	Required
319	Scots Pine	<i>Pinus sylvestris</i>	18.8	9	5	w			Good	Proponent	Remove (conflicts with site plan)	6.0	1.1	2.3	Required
320	Eastern Cottonwood	<i>Populus deltoides</i>	24.7	24	6				Excellent	Proponent	Remove (conflicts with site plan)	7.0	1.5	3.0	Required
321	Siberian Elm	<i>Ulmus pumila</i>	22.2	8	3	st			Good	Proponent	Remove (conflicts with site plan)	4.0	1.3	2.7	Required
322	Willow sp.	<i>Salix sp.</i>	13.5	9	2	l			Excellent	Proponent	Remove (conflicts with site plan)	3.0	0.8	1.6	Required
323	Willow sp.	<i>Salix sp.</i>	25	15	1	w, l			Good	Proponent	Remove (conflicts with site plan)	2.0	1.5	3.0	Required
324	Willow sp.	<i>Salix sp.</i>	30.7	16	5	st			Good	Proponent	Remove (conflicts with site plan)	6.0	1.8	3.7	Required
325	Eastern Cottonwood	<i>Populus deltoides</i>	20	22	3			id	Good	Proponent	Remove (conflicts with site plan)	4.0	1.2	2.4	Required
326	Balsam Poplar	<i>Populus balsamifera</i>	11	4	3.75	l	bt		Very Poor	Proponent	Remove (hazard)	4.8	0.7	1.3	N/A
327	Balsam Poplar	<i>Populus balsamifera</i>	11.5	9	4				Excellent	Proponent	Remove (conflicts with site plan)	5.0	0.7	1.4	Required
328	Balsam Poplar	<i>Populus balsamifera</i>	11	10	3		bl		Good	Proponent	Remove (conflicts with site plan)	4.0	0.7	1.3	Required
329	Eastern Cottonwood	<i>Populus deltoides</i>	12.4	20	3				Good	Proponent	Remove (conflicts with site plan)	4.0	0.7	1.5	Required
330	Willow sp.	<i>Salix sp.</i>	23.4	20	4	st			Excellent	Proponent	Remove (conflicts with site plan)	5.0	1.4	2.8	Required
331	Willow sp.	<i>Salix sp.</i>	42.4	21	5.5	st	ab		Good	Proponent	Remove (conflicts with site plan)	6.5	2.5	5.1	Required
332	Willow sp.	<i>Salix sp.</i>	17	19	6		ab		Good	Proponent	Remove (conflicts with site plan)	7.0	1.0	2.0	Required
333	Willow sp.	<i>Salix sp.</i>	24.7	18	5	st			Good	Proponent	Remove (conflicts with site plan)	6.0	1.5	3.0	Required
334	Balsam Poplar	<i>Populus balsamifera</i>	12	17	5	l			Excellent	Proponent	Remove (conflicts with site plan)	6.0	0.7	1.4	Required
335	Balsam Poplar	<i>Populus balsamifera</i>	17.3	13	4	st			Good	Proponent	Remove (conflicts with site plan)	5.0	1.0	2.1	Required
336	Balsam Poplar	<i>Populus balsamifera</i>	11.7	9	3				Excellent	Proponent	Remove (conflicts with site plan)	4.0	0.7	1.4	Required
337	Balsam Poplar	<i>Populus balsamifera</i>	19.1	9	4	st			Good	Proponent	Remove (conflicts with site plan)	5.0	1.1	2.3	Required
338	Eastern Cottonwood	<i>Populus deltoides</i>	15.5	15	2.25				Excellent	Proponent	Remove (conflicts with site plan)	3.3	0.9	1.9	Required
339	Willow sp.	<i>Salix sp.</i>	23	19	5				Excellent	Proponent	Remove (conflicts with site plan)	6.0	1.4	2.8	Required
340	Willow sp.	<i>Salix sp.</i>	18	7	2	st			Good	Proponent	Remove (conflicts with site plan)	3.0	1.1	2.2	Required
341	Trembling Aspen	<i>Populus tremuloides</i>	28.5	9	3	st			Good	Proponent	Remove (conflicts with site plan)	4.0	1.7	3.4	Required
A	Manitoba Maple	<i>Acer negundo</i>	25	7	2	st			Good	Proponent	Remove (conflicts with site plan)	3.0	1.5	3.0	Required
B	Scots Pine	<i>Pinus sylvestris</i>	10	4	2.5				Excellent	Proponent	Retain	3.5	0.6	1.2	N/A

Tree Inventory Table

Tree Tag (#)	Common Name	Botanical Name	DBH (cm)	Height (m)	Canopy Radius (m)	Trunk Integrity	Crown Structure	Crown Vigour	Overall Condition	Ownership	Proposed Action	TPZ (Dripline + 1 m)	MTPZ (m) ¹	PRA (m) ²	Compensation
C	Scots Pine	<i>Pinus sylvestris</i>	15	12	3				Excellent	Proponent	Retain	4.0	0.9	1.8	N/A
D	Scots Pine	<i>Pinus sylvestris</i>	15	12	3				Excellent	Proponent	Retain	4.0	0.9	1.8	N/A
E	Balsam Poplar	<i>Populus balsamifera</i>	11	8	4				Excellent	Proponent	Remove (conflicts with site plan)	5.0	0.7	1.3	Required
F	Scots Pine	<i>Pinus sylvestris</i>	12	12	3				Excellent	Proponent	Remove (conflicts with site plan)	4.0	0.7	1.4	Required
G	Eastern White-cedar	<i>Thuja occidentalis</i>	27	7	2	st			Excellent	Adjacent Landowner	Retain	3.0	1.6	3.2	N/A
H	Manitoba Maple	<i>Acer negundo</i>	18	6	4	st			Good	Adjacent Landowner	Retain	5.0	1.1	2.2	N/A
I	Eastern White-cedar	<i>Thuja occidentalis</i>	18	8	2	st			Excellent	Proponent	Remove (conflicts with site plan)	3.0	1.1	2.2	Required
J	Eastern White-cedar	<i>Thuja occidentalis</i>	30	8	3	st			Excellent	Proponent	Remove (conflicts with site plan)	4.0	1.8	3.6	Required
K	Manitoba Maple	<i>Acer negundo</i>	25	16	7	st	bl		Fair	Adjacent Landowner	Retain	8.0	1.5	3.0	N/A

¹**Minimum Tree Protection Zone (MTPZ):** Distance from trunk, measured in metres (calculated by using 6 cm per 1 cm DBH), or dripline plus 1 m, whichever is greater.

²**Potential Rooting Area (PRA):** Measured in metres (calculated by using 12 cm per 1 cm DBH), or dripline plus 1 m, whichever is greater.

Tree Inventory Table Legend

Trunk Integrity	
r	root damage or decay
st	split stem/weak crotch
br	butt rot
l	excessive lean (e.g. 30° to 45°)
h	upper stem holes/decay
w	wound (bark damage, large pruning cuts)
f	fungus (conks)
ib	insect borers
b	burl
wh	woodpecker holes
s	seam or cracks
c	cankers
Crown Structure	
bt	broken top
bl	broken or severed primary limbs
p	pollarded (severe and improper pruning)
ab	adventitious branching (clusters of new shoots on main trunk)
Crown Vigour	
dl	moderate dead wood (e.g. 11 to 35% secondary branches mostly)
d	significant crown dieback (e.g. >35% dead wood in primary limbs)
u	undersized leaves
fc	foliar chlorosis/yellowing
fn	foliar necrosis/browning
id	insect defoliators (species if known)
di	disease (species if known)

Tree Vigour Classes	
<i>Class 1 Excellent Condition, No Risk Trees</i>	Sound, thrifty, full crowned trees of natural shape with no dead limbs in the top of the crown and no significant evidence of decline
<i>Class 2 Good Condition, Low Risk Trees</i>	Full to medium crowned trees of natural shape with a live crown ratio $\geq 40\%$ that exhibit no more than minor dead wood (e.g. up to 10% secondary branches only and mainly in the lower crown) and no more than one moderate trunk defect or indicator of decline.
<i>Class 3 Fair Condition, Medium Risk Trees</i>	Full to small crowned trees with a live crown ratio $\geq 25\%$ that exhibit no more than moderate dead wood (e.g. 11 to 35% secondary branches mostly) and no more than two moderate trunk defects or indicators of decline.
<i>Class 4 Poor Condition, High Risk Trees</i>	Medium to very small crowned trees (e.g. live crown ratio < 25%) that exhibit one or more of the following conditions. a) Trees with significant foliage of poor colour and less than normal size. b) Trees with significant crown dieback (e.g. > 35% dead wood in primary limbs). c) Trees with major trunk defects or decay (e.g. one extensive problem, or 3 or more distinct but moderate decline indicators).
<i>Class 5 Very Poor Condition, Very High Risk Trees</i>	Dying trees with very little live crown.
<i>Class 6 Dead, Very High Risk Trees</i>	Dead trees with no live crown.