



October 6, 2023

Attention: Mrs. Monica Clarke
ALEXANDER BUDREVICS + ASSOCIATES LTD.
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Re: Erin Heights Golf Course - Erin - Arborist Report and TPP

Mrs. Clarke,

As per your request, I have completed a site visit to Erin Heights Golf Course - Erin, in preparation for an arborist report and tree preservation with regards to the proposed subdivision.

The enclosed report inventories all trees greater than 10cm DBH, both on and within 6m of the subject site. This inventory will include individual tag #s, both common and botanical names, DBH and condition. Additionally, it will determine if any regulated trees are to be negatively impacted by the proposed development and provide a preservation strategy for all trees recommended for preservation.

Four hundred and sixty-six (466) trees have been inventoried as part of this project, none of which are Town owned. Three hundred and ninety-six (396) privately owned trees located on the subject site are in conflict with the proposed grading and are to be removed. Four trees located on the subject site cannot maintain 100% of their prescribed TPZs and are to be injured. Five trees located on the adjacent properties are in conflict with proposed grading and are to be removed. Additionally, twenty-five trees on the adjacent property cannot maintain 100% of their prescribed TPZs and are to be injured. Authorization from the Town and the appropriate neighbors is required prior to the removal of four hundred and one trees and the injury of twenty-nine.

I trust this report meets your needs, if you have any questions or concerns feel free to contact me at cgavin@canopyconsulting.ca.

Regards,

Cletus Gavin *B.Sc. Earth Science & Biology*
President & Consulting Arborist
ASCA Registered Consulting Arborist #613
ISA Certified Arborist (ON-1576A)
Butternut Health Assessor # 439
TRAQ Certified



Arborist Report
&
Tree Protection Plan

Erin Heights Golf Course
Erin, ON

Prepared for:

Mrs. Monica Clarke

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Landscape Architects

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INTRODUCTION:

I have been commissioned by Mrs. Monica Clarke of *Alexander Budrevics & Associates*, to complete an arborist report and tree protection plan for the proposed development located at the Erin Heights Golf Course - Erin. The report will identify all trees greater than 10cm DBH, provide a preservation strategy with recommendations and a tree protection plan depicting the trees' locations, the existing conditions and any proposed work. All field work and data collection were completed by Cletus Gavin, RCA #613 on December 21, 2021.

HISTORY AND ASSIGNMENT:

Mrs. Clarke has provided a survey and grading plan identifying the proposed development at Erin Heights Golf Course - Erin as per the Tree Protection Plan – TPP-1 in Appendix I. Upon the request of the client or municipality, *Canopy Consulting*, can be further retained beyond the current scope of work to provide on-site monitoring services and to provide any remedial actions deemed necessary.

Scope of work:

1. Inventory all trees regulated by the municipality, both on and within 6m of the subject site. The inventory will include a tag #, species, DBH, condition, comments and recommendations.
2. Determine if any regulated trees are to be negatively impacted by the proposed development.
3. Provide a preservation strategy for all trees recommended for preservation.

ASSUMPTION AND LIMITING CONDITIONS:

1. Care has been taken to obtain all information from reliable sources. *Canopy Consulting* can neither guarantee nor be responsible for the accuracy of information provided by others.
2. This report may not be used for any expressed purpose other than its intended purpose and alteration of any part of this report invalidates the report. Excerpts or alterations to the report, without the authorization of the author or his company invalidates its intent and/or implied conclusions.
3. Unless expressed otherwise: 1) information contained in this report covers only those items that were examined and reflect the condition of those items at the time of inspection; and 2) the inspection was made using accepted arboricultural practices and is limited to visual examination of accessible items without climbing, dissection, probing or coring and detailed root examination involving excavation. While reasonable efforts have been made to assess trees outlined in this report, there is no warranty or guarantee, expressed or implied, that problems or deficiencies with the tree(s) or any part(s) of them may not arise in the future. All trees should be inspected and reassessed periodically.
4. The determination of ownership of any subject tree(s) is the responsibility of the owner and any civil or common-law issues, which may exist between property owners with respect to trees, must be resolved by the owner. A recommendation to remove or maintain tree(s) does not grant authority to encroach in any manner onto adjacent private properties.

TREE SURVEY AND RECOMMENDATIONS:

See TPP-1 plan in Appendix I for tree location, Table #1 for species identification, condition, and recommendations and Appendix II for corresponding Digital Images.

Table #1: Erin Heights Golf Course - Erin

Tree #	Species Common Name (Biological Name)	D ¹ B H (cm)	Condition ²	Category ³	Comments	Recommendation ⁴	M ⁵ T P Z (M)
912	Eastern White Cedar <i>Thuja occidentalis</i> (5)	25-32	F	1	- topped - in conflict with proposed grading	R	
913	Manitoba Maple <i>Acer negundo</i>	83	P	1	- hollow, cavity in trunk, large storm break, decay, in decline - in conflict with proposed grading	R	
914	Douglas Fir <i>Pseudotsuga menziesii</i>	23	P	1	- multiple cavities, fruiting bodies, in decline - in conflict with proposed grading	R	
915	Douglas Fir <i>Pseudotsuga menziesii</i>	26	F	1	- deadwood, in decline, cavity in trunk - in conflict with proposed grading	R	
916	Manitoba Maple <i>Acer negundo</i>	14	P	1	- severe lean, poor form, deadwood - in conflict with proposed grading	R	
917	Manitoba Maple <i>Acer negundo</i>	39	P	1	- severe lean, cavity at base, poor union with included bark - in conflict with proposed grading	R	
918	Manitoba Maple <i>Acer negundo</i>	63	P	1	- multi-stem, poor form and union, large cavity, fruiting bodies - in conflict with proposed grading	R	
919	Manitoba Maple <i>Acer negundo</i>	21	F	1	- poor form, deadwood, unbalanced - in conflict with proposed grading	R	
920	Manitoba Maple <i>Acer negundo</i>	51	P	1	- large cavity, seam in trunk, decay, storm break, in decline - in conflict with proposed grading	R	

¹ **DBH:** Diameter at Breast Height is a measurement in centimeters, using a caliper tape, of the tree stem at 1.37 meters above existing grade.

² **Condition:** A rating of **Hazardous/Dead/Poor/Fair/Good/Excellent** was determined for each tree by visually assessing all the above ground components of the tree, using acceptable arboricultural procedures as recommended in the "Guide for Plant Appraisal," prepared under contract by the "Council of Tree & Landscape Appraisers (CTLA), an official publication of the International Society of Arboriculture (I.S.A.), 9th Edition, 2000".

³ **Category #:**

1. Trees with diameters of 10 cm or more, situated on private property on the subject site.
2. Trees with diameters of 10 cm or more, situated on private property, within 6 m of the subject site.
3. Trees of all diameters situated on Town owned parkland within 6 m of the subject site.
4. Trees of all diameters situated within the Municipal road allowance.

⁴ **Recommendation:** Preserve (**P**), Preserve with Injury (**PI**), Remove (**R**), Transplant (**T**)

⁴ **MTPZ:** Minimum tree protection zone distance as recommended by Canopy Consulting.

Tree #	Species Common Name (Biological Name)	D B H (cm)	Condition	Category	Comments	Recommendation	M T P Z (M)
921	Manitoba Maple <i>Acer negundo</i>	57	F	1	- deadwood, poor union, seam in trunk - in conflict with proposed grading	R	
922	Sugar Maple <i>Acer saccharum</i>	34	F	1	- deadwood, poor union with included bark - in conflict with proposed grading	R	
923	Black Walnut <i>Juglans nigra</i>	14	F	1	- deadwood, cavity in trunk - in conflict with proposed grading	R	
924	Manitoba Maple <i>Acer negundo</i>	34	F	1	- lean, cavity at base, deadwood, in decline - in conflict with proposed grading	R	
925	Manitoba Maple <i>Acer negundo</i>	60	P	1	- large split, poor union with included bark, deadwood, multiple storm breaks - in conflict with proposed grading	R	
926	Manitoba Maple <i>Acer negundo</i>	32	H	1	- failure at union, lean, in decline - in conflict with proposed grading	R	
927	Manitoba Maple <i>Acer negundo</i>	28	P	1	- severe lean, 95% dead - in conflict with proposed grading	R	
928	Manitoba Maple <i>Acer negundo</i>	20	P	1	- trunk failure - in conflict with proposed grading	R	
929	White Ash <i>Fraxinus americana</i>	28	P	1	- terminally infested with EAB - in conflict with proposed grading	R	
930	Sugar Maple <i>Acer saccharum</i>	40	F	1	- deadwood, poor union, unbalanced - in conflict with proposed grading	R	
931	Sugar Maple <i>Acer saccharum</i>	35	F	1	- deadwood, in decline, storm break - encroached upon by 12%	PI	2.4
932	Cherry <i>Prunus spp.</i>	27	P	1	- 80% dead - in conflict with proposed grading	R	
933	Sugar Maple <i>Acer saccharum</i>	36	P	1	- deadwood, in decline, large cavity in trunk - in conflict with proposed grading	R	
934	Cherry <i>Prunus spp.</i>	16	P	1	- lean, vines, in decline - in conflict with proposed grading	R	
935	Cherry <i>Prunus spp.</i>	25	P	1	- 85% dead - in conflict with proposed grading	R	
936	Sugar Maple <i>Acer saccharum</i>	31	G	1	- in conflict with proposed grading	R	
937	Sugar Maple <i>Acer saccharum</i>	29	F	1	- deadwood, unbalanced, poor union - encroached upon by 10%	PI	1.8
938	Apple <i>Malus spp.</i>	16	P	1	- deadwood, in decline, severe lean - in conflict with proposed grading	R	
939	Cherry <i>Prunus spp.</i>	24	P	1	- 70% dead - in conflict with proposed grading	R	
940	Black Cherry <i>Prunus serotina</i>	26	D	1	- 100% dead - in conflict with proposed grading	R	

Tree #	Species Common Name (Biological Name)	D B H (cm)	Condition	Category	Comments	Recommendation	M T P Z (M)
941	Sugar Maple <i>Acer saccharum</i>	28	F	1	- deadwood, unbalanced - in conflict with proposed grading	R	
942	Sugar Maple <i>Acer saccharum</i>	69	F	1	- deadwood, cavity in trunk - in conflict with proposed grading	R	
943	Manitoba Maple <i>Acer negundo</i>	21	F	1	- poor form, lean, unbalanced - in conflict with proposed grading	R	
944	White Ash <i>Fraxinus americana</i>	50	P	1	- terminally infested with EAB - in conflict with proposed grading	R	
945	Sugar Maple <i>Acer saccharum</i>	32	G	1	- deadwood - in conflict with proposed grading	R	
946	Sugar Maple <i>Acer saccharum</i>	18	F	1	- deadwood, unbalanced, poor form - in conflict with proposed grading	R	
947	Apple <i>Malus spp.</i>	19	P	1	- deadwood, in decline, severe lean - in conflict with proposed grading	R	
948	Sugar Maple <i>Acer saccharum</i>	54	F	1	- deadwood, poor union with included bark - in conflict with proposed grading	R	
949	Douglas Fir <i>Pseudotsuga menziesii</i>	11	F	1	- deadwood, in decline - in conflict with proposed grading	R	
950	Douglas Fir <i>Pseudotsuga menziesii</i>	12	F	1	- deadwood, in decline - in conflict with proposed grading	R	
951	Norway Maple <i>Acer platanoides</i>	20	F	1	- deadwood, poor union - in conflict with proposed grading	R	
952	Douglas Fir <i>Pseudotsuga menziesii</i>	18	F	1	- deadwood, - in conflict with proposed grading	R	
953	Eastern White Cedar <i>Thuja occidentalis</i> (5)	12- 27	F	1	- in conflict with proposed grading	R	
954	Sugar Maple <i>Acer saccharum</i>	28	F	1	- deadwood - in conflict with proposed grading	R	
955	Black Walnut <i>Juglans nigra</i>	12	F	1	- deadwood, in decline, unbalanced - in conflict with proposed grading	R	
956	Manitoba Maple <i>Acer negundo</i>	23	F	1	- deadwood, lean - encroached upon by 6%	PI	1.8
957	Black Cherry <i>Prunus serotina</i>	56	P	1	- 90% dead - in conflict with proposed grading	R	
958	Manitoba Maple <i>Acer negundo</i>	30	F	1	- deadwood, lean, unbalanced - in conflict with proposed grading	R	
959	Silver Maple <i>Acer saccharinum</i>	34	F	1	- deadwood, lean, unbalanced - in conflict with proposed grading	R	
960	Silver Maple <i>Acer saccharinum</i>	50	F	1	- deadwood, in decline, poor union - in conflict with proposed grading	R	

Tree #	Species Common Name (Biological Name)	D B H (cm)	Condition	Category	Comments	Recommendation	M T P Z (M)
961	Silver Maple <i>Acer saccharinum</i>	50	F	1	- deadwood, lean, poor union, storm break, in decline - in conflict with proposed grading	R	
962	Manitoba Maple <i>Acer negundo</i>	20	F	1	- deadwood, lean - in conflict with proposed grading	R	
963	White Elm <i>Ulmus americana</i>	26	F	1	- deadwood, lean, unbalanced - in conflict with proposed grading	R	
964	Sugar Maple <i>Acer saccharum</i>	30	G	1	- encroached upon by 9%	PI	2.4
965	Sugar Maple <i>Acer saccharum</i>	14	F	1	- deadwood, vines - in conflict with proposed grading	R	
966	White Ash <i>Fraxinus americana</i> (10)	10-15	P	1	- terminally infested with EAB - in conflict with proposed grading	R	
967	Eastern White Cedar <i>Thuja occidentalis</i> (54)	24-86	F-G	1	- in conflict with proposed grading	R	
968	Black Cherry <i>Prunus serotina</i>	95	F	1	- large deadwood, in decline, cavity at base, multiple large storm breaks, poor union, multi-stem - in conflict with proposed grading	R	
969	Willow <i>Salix spp.</i>	56	P	1	- 90% dead - in conflict with proposed grading	R	
970	Manitoba Maple <i>Acer negundo</i>	20	F	1	- deadwood - in conflict with proposed grading	R	
971	Scots Pine <i>Pinus sylvestris</i>	28	F	1	- deadwood, unbalanced - in conflict with proposed grading	R	
972	Douglas Fir <i>Pseudotsuga menziesii</i> (5)	28-39	G	1	- in conflict with proposed grading	R	
973	Eastern White Cedar <i>Thuja occidentalis</i>	31	F	1	- deadwood, poor union - in conflict with proposed grading	R	
974	Douglas Fir <i>Pseudotsuga menziesii</i>	32	G	1	- in conflict with proposed grading	R	
975	Scots Pine <i>Pinus sylvestris</i>	26	F	1	- deadwood, poor form - in conflict with proposed grading	R	
976	Honey Locust <i>Gleditsia triacanthos</i>	70	F	1	- deadwood, poor union, in decline - in conflict with proposed grading	R	
977	Eastern White Cedar <i>Thuja occidentalis</i>	45	F	1	- deadwood, poor union, multi-stem - in conflict with proposed grading	R	
978	Eastern White Cedar <i>Thuja occidentalis</i> (49)	17-49	F	1	- in conflict with proposed grading	R	
979	Douglas Fir <i>Pseudotsuga menziesii</i>	32	F	1	- deadwood - in conflict with proposed grading	R	
980	Douglas Fir <i>Pseudotsuga menziesii</i>	29	F	1	- deadwood, in decline - in conflict with proposed grading	R	

Tree #	Species Common Name (Biological Name)	D B H (cm)	Condition	Category	Comments	Recommendation	M T P Z (M)
981	Eastern White Cedar <i>Thuja occidentalis</i>	34	F	1	- deadwood, poor union - in conflict with proposed grading	R	
982	Apple <i>Malus spp.</i>	13	F	1	- deadwood - in conflict with proposed grading	R	
983	Douglas Fir <i>Pseudotsuga menziesii</i>	31	F	1	- deadwood - in conflict with proposed grading	R	
984	Eastern White Cedar <i>Thuja occidentalis</i>	37	F	1	- deadwood, poor union - in conflict with proposed grading	R	
985	White Spruce <i>Picea glauca</i>	47	F	1	- deadwood - in conflict with proposed grading	R	
986	Eastern White Cedar <i>Thuja occidentalis</i>	34	F	1	- deadwood, poor union - in conflict with proposed grading	R	
987	Douglas Fir <i>Pseudotsuga menziesii</i>	40	G	1	- deadwood - in conflict with proposed grading	R	
988	White Spruce <i>Picea glauca</i>	59	F	1	- deadwood - in conflict with proposed grading	R	
989	Norway Spruce <i>Picea abies</i>	86	F	1	- deadwood, poor union, girdled roots - in conflict with proposed grading	R	
990	Norway Spruce <i>Picea abies</i>	69	G	1	- deadwood - in conflict with proposed grading	R	
991	Norway Spruce <i>Picea abies</i>	72	F	1	- deadwood, in decline - in conflict with proposed grading	R	
992	Willow <i>Salix spp.</i>	149	F	1	- poor form, in decline, decay, cavity in trunk - in conflict with proposed grading	R	
993	Eastern White Cedar <i>Thuja occidentalis</i> (4)	45- 79	F	1	- in conflict with proposed grading	R	
994	Sugar Maple <i>Acer saccharum</i>	67	F	1	- deadwood, unbalanced - in conflict with proposed grading	R	
995	Sugar Maple <i>Acer saccharum</i>	58	P	1	- large deadwood, in decline, unbalanced, storm break - in conflict with proposed grading	R	
996	Sugar Maple <i>Acer saccharum</i>	60	F	1	- deadwood, in decline, unbalanced - in conflict with proposed grading	R	
997	Sugar Maple <i>Acer saccharum</i>	56	F	1	- deadwood, unbalanced, in decline - in conflict with proposed grading	R	
998	American Beech <i>Fagus grandifolia</i>	70	F	1	- 60% dead, codominant, large deadwood, in decline, poor form - in conflict with proposed grading	R	
999	Eastern White Cedar <i>Thuja occidentalis</i>	48	F	1	- deadwood, poor union - in conflict with proposed grading	R	
1000	Black Cherry <i>Prunus serotina</i>	82	P	1	- multiple limb failures, large deadwood, in decline, poor union with included bark - in conflict with proposed grading	R	

Tree #	Species Common Name (Biological Name)	D B H (cm)	Condition	Category	Comments	Recommendation	M T P Z (M)
301	Eastern White Cedar <i>Thuja occidentalis</i>	39	G	1	- in conflict with proposed grading	R	
302	American Beech <i>Fagus grandifolia</i>	86	P	1	- multiple large storm breaks, large deadwood, fruiting bodies, cavity, poor union - in conflict with proposed grading	R	
303	American Beech <i>Fagus grandifolia</i>	51	P	1	- multiple storm breaks, large deadwood, in decline, unbalanced - in conflict with proposed grading	R	
304	Apple <i>Malus spp.</i>	50	P	1	- deadwood, poor form, large cavity in trunk, in decline - in conflict with proposed grading	R	
305	Eastern White Cedar <i>Thuja occidentalis</i>	47	F	1	- multi-stem, deadwood, poor union - in conflict with proposed grading	R	
306	Eastern White Cedar <i>Thuja occidentalis</i>	41	F	1	- poor union, deadwood - in conflict with proposed grading	R	
307	Eastern White Cedar <i>Thuja occidentalis</i>	52	F	1	- poor union, deadwood - in conflict with proposed grading	R	
308	Eastern White Cedar <i>Thuja occidentalis</i>	66	P	1	- poor union, deadwood, multi-stem, multiple storm breaks - in conflict with proposed grading	R	
309	Eastern White Cedar <i>Thuja occidentalis</i> (15)	30-65	F	1	- in conflict with proposed grading	R	
310	Eastern White Cedar <i>Thuja occidentalis</i> (8)	30-40	F	1	- in conflict with proposed grading	R	
311	Sugar Maple <i>Acer saccharum</i>	34	G	1	- in conflict with proposed grading	R	
312	Willow <i>Salix spp.</i>	70	P	1	- poor form, in decline, deadwood, multiple cavities, multiple storm breaks - in conflict with proposed grading	R	
313	Eastern White Cedar <i>Thuja occidentalis</i> (5)	45-65	F	1	- in conflict with proposed grading	R	
314	White Spruce <i>Picea glauca</i> (4)	44-63	G	1	- in conflict with proposed grading	R	
315	Scots Pine <i>Pinus sylvestris</i> (6)	43-63	G	1	- in conflict with proposed grading	R	
316	Eastern White Cedar <i>Thuja occidentalis</i> (16)	35-58	F	1	- in conflict with proposed grading	R	
317	Willow <i>Salix spp.</i>	35	F	1	- poor form, in decline, deadwood, storm break - in conflict with proposed grading	R	
318	Willow <i>Salix spp.</i>	40	F	1	- poor form, in decline, deadwood, storm break, poor union - in conflict with proposed grading	R	

Tree #	Species Common Name (Biological Name)	D B H (cm)	Condition	Category	Comments	Recommendation	M T P Z (M)
319	Willow <i>Salix spp.</i>	33	F	1	- poor union, in decline, deadwood, storm break - in conflict with proposed grading	R	
320	Sugar Maple <i>Acer saccharum</i>	99	F	1	- deadwood, storm break, poor union with included bark - in conflict with proposed grading	R	
321	White Spruce <i>Picea glauca</i>	54	G	1	- deadwood - in conflict with proposed grading	R	
322	Larch <i>Larix spp.</i>	26	F	1	- deadwood - in conflict with proposed grading	R	
323	Larch <i>Larix spp.</i>	27	F	1	- deadwood - in conflict with proposed grading	R	
324	Willow <i>Salix spp.</i>	92	F	1	- poor union, in decline, deadwood, storm break - in conflict with proposed grading	R	
325	White Spruce <i>Picea glauca</i> (4)	32-48	F	1	- deadwood, in decline - in conflict with proposed grading	R	
326	Silver Maple <i>Acer saccharum</i>	78	F	1	- deadwood, storm break, poor union - in conflict with proposed grading	R	
327	Eastern White Cedar <i>Thuja occidentalis</i> (4)	50-76	G	1	- in conflict with proposed grading	R	
328	White Spruce <i>Picea glauca</i>	54	F	1	- deadwood - in conflict with proposed grading	R	
329	Eastern White Cedar <i>Thuja occidentalis</i>	50	F	1	- poor union, deadwood, unbalanced - in conflict with proposed grading	R	
330	Eastern White Cedar <i>Thuja occidentalis</i> (2)	17-31	F	1	- deadwood, poor form and union - in conflict with proposed grading	R	
331	Douglas Fir <i>Pseudotsuga menziesii</i>	39	F	1	- deadwood - in conflict with proposed grading	R	
332	Eastern White Cedar <i>Thuja occidentalis</i>	42	F	1	- poor union, deadwood - in conflict with proposed grading	R	
333	Eastern White Cedar <i>Thuja occidentalis</i> (43)	21-60	F	1	- Deadwood, poor form and union - in conflict with proposed grading	R	
334	White Spruce <i>Picea glauca</i>	61	F	1	- deadwood, in decline - in conflict with proposed grading	R	
335	Eastern White Cedar <i>Thuja occidentalis</i> (5)	32-45	F	1	- in decline, discoloured - in conflict with proposed grading	R	
336	Willow <i>Salix spp.</i> (stump)		F	1	- trunk failure - in conflict with proposed grading	R	

Tree #	Species Common Name (Biological Name)	D B H (cm)	Condition	Category	Comments	Recommendation	M T P Z (M)
337	Little Leaf Linden <i>Tilia cordata</i>	57	F	1	- poor union, in decline, deadwood, multi-stem - in conflict with proposed grading	R	
338	Scots Pine <i>Pinus sylvestris</i>	44	F	1	- deadwood, poor form and union - in conflict with proposed grading	R	
339	Eastern White Cedar <i>Thuja occidentalis</i>	48	F	1	- poor union, deadwood, multi-stem - in conflict with proposed grading	R	
340	Eastern White Cedar <i>Thuja occidentalis</i> (5)	41- 59	G	1	- in conflict with proposed grading	R	
341	White Spruce <i>Picea glauca</i> (4)	51- 59	G	1	- in conflict with proposed grading	R	
342	Sugar Maple <i>Acer saccharum</i>	79	F	1	- deadwood, storm break, poor union with included bark - in conflict with proposed grading	R	
343	Sugar Maple <i>Acer saccharum</i>	125	F	1	- deadwood, storm break, poor union with included bark, in decline - in conflict with proposed grading	R	
344	White Spruce <i>Picea glauca</i> (3)	40- 49	F	1	- deadwood, in decline - in conflict with proposed grading	R	
345	Larch <i>Larix spp.</i>	24	G	1	- deadwood - in conflict with proposed grading	R	
346	Eastern White Cedar <i>Thuja occidentalis</i> (5)	44- 59	F	1	- in conflict with proposed grading	R	
347	White Spruce <i>Picea glauca</i>	51	F	1	- deadwood - in conflict with proposed grading	R	
348	Red Oak <i>Quercus rubra</i>	18	G	1	- in conflict with proposed grading	R	
349	Red Oak <i>Quercus rubra</i>	21	F	1	- deadwood, poor union - in conflict with proposed grading	R	
350	Red Oak <i>Quercus rubra</i>	18	G	1	- in conflict with proposed grading	R	
351	Larch <i>Larix spp.</i> (6)	11- 15	F	1	- deadwood - in conflict with proposed grading	R	
352	White Spruce <i>Picea glauca</i> (2)	19- 20	G	1	- in conflict with proposed grading	R	
353	Eastern White Cedar <i>Thuja occidentalis</i> (2)	42& 58	F	1	- in conflict with proposed grading	R	
354	Silver Maple <i>Acer saccharinum</i>	65	F	1	- deadwood, poor form, and union - in conflict with proposed grading	R	

Tree #	Species Common Name (Biological Name)	D B H (cm)	Condition	Category	Comments	Recommendation	M T P Z (M)
355	Sugar Maple <i>Acer saccharum</i>	74	F	1	- deadwood, storm break, poor union with included bark - in conflict with proposed grading	R	
356	Trembling Aspen <i>Populus tremuloides</i>	61	F	1	- deadwood, storm breaks - in conflict with proposed grading	R	
357	Norway Spruce <i>Picea abies</i>	69	G	1	- in conflict with proposed grading	R	
358	Willow <i>Salix spp.</i>	39	F	1	- poor union, deadwood, poor form - in conflict with proposed grading	R	
359	Willow <i>Salix spp.</i>	28	F	1	- poor union, deadwood, poor form - in conflict with proposed grading	R	
360	Black Cherry <i>Prunus serotina</i>	63	P	1	- multiple limb failures, large deadwood, in decline, split - in conflict with proposed grading	R	
361	Manitoba Maple <i>Acer negundo</i>	35	F	1	- deadwood, in decline, poor form, vines - in conflict with proposed grading	R	
362	Larch <i>Larix spp.</i>	12	F	1	- deadwood - in conflict with proposed grading	R	
363	Silver Maple <i>Acer saccharinum</i>	120	F	1	- deadwood, storm break, poor union with included bark - in conflict with proposed grading	R	
364	White Spruce <i>Picea glauca</i>	48	G	1	- in conflict with proposed grading	R	
365	Eastern White Cedar <i>Thuja occidentalis</i>	64	F	1	- poor union, deadwood, multi-stem - in conflict with proposed grading	R	
366	Scots Pine <i>Pinus sylvestris</i>	52	F	1	- deadwood, poor form - in conflict with proposed grading	R	
N1	Horse Chestnut <i>Aesculus hippocastanum</i>	11	F	2	- poor union - cannot maintain 100% of its prescribed TPZ	PI	1.8
N2	White Spruce <i>Picea glauca</i>	12	F	2	- clear of proposed construction - shall retain its prescribed TPZ	P	1.8
N3	Manitoba Maple <i>Acer negundo</i>	24	F	2	- deadwood, in decline, poor form, lean - cannot maintain 100% of its prescribed TPZ	PI	1.8
N4	Black Cherry <i>Prunus serotina</i>	30	F	2	- deadwood, unbalanced, storm break - clear of proposed construction - shall retain its prescribed TPZ	P	2.4
N5	Sugar Maple <i>Acer saccharum</i>	61	F	2	- deadwood, storm break - cannot maintain 100% of its prescribed TPZ	PI	4.2
N6	Manitoba Maple <i>Acer negundo</i>	15	F	2	- deadwood - cannot maintain 100% of its prescribed TPZ	PI	1.8
N7	Sugar Maple <i>Acer saccharum</i>	39	F	2	- deadwood, poor union, unbalanced - cannot maintain 100% of its prescribed TPZ	PI	2.4
N8	Sugar Maple <i>Acer saccharum</i>	78	F	2	- deadwood, storm break, poor union - cannot maintain 100% of its prescribed TPZ	PI	4.8
N9	Sugar Maple <i>Acer saccharum</i>	32	F	2	- deadwood, poor union, unbalanced - cannot maintain 100% of its prescribed TPZ	PI	4.2

Tree #	Species Common Name (Biological Name)	D B H (cm)	Condition	Category	Comments	Recommendation	M T P Z (M)
N10	Sugar Maple <i>Acer saccharum</i>	41	F	2	- lean, deadwood, unbalanced - clear of proposed construction - shall retain its prescribed TPZ	P	3.0
N11	Black Cherry <i>Prunus serotina</i>	26	F	2	- deadwood, in decline, unbalanced - cannot maintain 100% of its prescribed TPZ	PI	1.8
N12	Sugar Maple <i>Acer saccharum</i>	56	F	2	- deadwood, poor union, storm break - cannot maintain 100% of its prescribed TPZ	PI	3.6
N13	Black Cherry <i>Prunus serotina</i>	31	F	2	- deadwood, in decline, unbalanced, lean - cannot maintain 100% of its prescribed TPZ	PI	2.4
N14	Sugar Maple <i>Acer saccharum</i>	66	F	2	- deadwood, poor union, storm break - cannot maintain 100% of its prescribed TPZ	PI	4.2
N15	Sugar Maple <i>Acer saccharum</i>	49	F	2	- deadwood, cavity, storm break - cannot maintain 100% of its prescribed TPZ	PI	3.0
N16	Black Cherry <i>Prunus serotina</i>	22	P	2	- deadwood, unbalanced, severe lean - clear of proposed construction - shall retain its prescribed TPZ	P	1.8
N17	Sugar Maple <i>Acer saccharum</i>	49	F	2	- deadwood, cavity, storm break - cannot maintain 100% of its prescribed TPZ	PI	3.0
N18	Sugar Maple <i>Acer saccharum</i>	25	G	2	- cannot maintain 100% of its prescribed TPZ	PI	1.8
N19	Sugar Maple <i>Acer saccharum</i>	21	G	2	- cannot maintain 100% of its prescribed TPZ	PI	1.8
N20	Apple <i>Malus spp.</i>	28	F	2	- deadwood, in decline, unbalanced - cannot maintain 100% of its prescribed TPZ	PI	1.8
N21	Sugar Maple <i>Acer saccharum</i>	54	F	2	- deadwood, storm break - cannot maintain 100% of its prescribed TPZ	PI	3.6
N22	Apple <i>Malus spp.</i>	27	F	2	- deadwood, in decline, vines - cannot maintain 100% of its prescribed TPZ	PI	1.8
N23	Apple <i>Malus spp.</i>	30	P	2	- deadwood, in decline, poor form - cannot maintain 100% of its prescribed TPZ	PI	2.4
N24	Eastern White Cedar <i>Thuja occidentalis</i>	19	F	2	- deadwood, poor union - clear of proposed construction - shall retain its prescribed TPZ	P	1.8
N25	Apple <i>Malus spp.</i>	32	P	2	- deadwood, in decline, poor form, lean - cannot maintain 100% of its prescribed TPZ	PI	2.4
N26	Sugar Maple <i>Acer saccharum</i>	19	G	2	- clear of proposed construction - shall retain its prescribed TPZ	P	1.8
N27	Manitoba Maple <i>Acer negundo</i>	18	F	2	- deadwood, in decline, poor form, lean - cannot maintain 100% of its prescribed TPZ	PI	1.8
N28	Eastern White Cedar <i>Thuja occidentalis</i>	18	F	2	- deadwood - cannot maintain 100% of its prescribed TPZ	PI	1.8
N29	Black Cherry <i>Prunus serotina</i>	66	P	2	- deadwood, in decline, multiple large storm breaks - cannot maintain 100% of its prescribed TPZ	PI	4.2

Tree #	Species Common Name (Biological Name)	D B H (cm)	Condition	Category	Comments	Recommendation	M T P Z (M)
N30	White Ash <i>Fraxinus americana</i>	44	P	2	- terminally infested with EAB - cannot maintain 100% of its prescribed TPZ	PI	3.0
N31	Apple <i>Malus spp.</i>	37	D	2	- 100% dead - cannot maintain 100% of its prescribed TPZ	P	2.4
N32	White Spruce <i>Picea glauca</i>	22	G	2	- clear of proposed construction - shall retain its prescribed TPZ	P	1.8
N33	Manitoba Maple <i>Acer negundo</i>	62	P	2	- deadwood, in decline, poor form, severe lean, multiple storm breaks - cannot maintain 100% of its prescribed TPZ	PI	4.2
N34	Sugar Maple <i>Acer saccharum</i>	20	F	2	- poor form, in decline, unbalanced - clear of proposed construction - shall retain its prescribed TPZ	P	1.8
N35	Manitoba Maple <i>Acer negundo</i>	39	F	2	- deadwood, lean, poor form - clear of proposed construction - shall retain its prescribed TPZ	P	2.4
N36	Manitoba Maple <i>Acer negundo</i>	41	F	2	- deadwood, lean, poor form - clear of proposed construction - shall retain its prescribed TPZ	P	3.0
N37	Black Cherry <i>Prunus serotina</i>	61	D	2	- 100% dead - cannot maintain 100% of its prescribed TPZ	P	4.2
N38	Manitoba Maple <i>Acer negundo</i>	33	F	2	- deadwood, lean, unbalanced - clear of proposed construction - shall retain its prescribed TPZ	P	2.4
N39	Black Cherry <i>Prunus serotina</i>	42	P	2	- large deadwood, in decline, multiple large storm breaks - cannot maintain 100% of its prescribed TPZ	PI	3.0
N40	White Ash <i>Fraxinus americana</i>	29	P	2	- terminally infested with EAB - clear of proposed construction - shall retain its prescribed TPZ	P	1.8
N41	Sugar Maple <i>Acer saccharum</i>	59	G	2	- clear of proposed construction - shall retain its prescribed TPZ	P	3.6
N42	Black Cherry <i>Prunus serotina</i>	15	F	2	- deadwood, unbalanced - clear of proposed construction - shall retain its prescribed TPZ	P	1.8
N43	White Elm <i>Ulmus americana</i>	30	P	2	- 90% dead - clear of proposed construction - shall retain its prescribed TPZ	P	2.4
N44	White Ash <i>Fraxinus americana</i>	38	P	2	- terminally infested with EAB - clear of proposed construction - shall retain its prescribed TPZ	P	2.4
N45	Black Cherry <i>Prunus serotina</i>	34	F	2	- deadwood, in decline - clear of proposed construction - shall retain its prescribed TPZ	P	2.4
N46	Apple <i>Malus spp.</i>	39	F	2	- deadwood, poor union - clear of proposed construction - shall retain its prescribed TPZ	P	2.4
N47	Sugar Maple <i>Acer saccharum</i>	26	F	2	- poor union, deadwood - clear of proposed construction - shall retain its prescribed TPZ	P	1.8
N48	Apple <i>Malus spp.</i>	48	P	2	- deadwood, poor union, in decline, cavity - clear of proposed construction - shall retain its prescribed TPZ	P	3.0

Tree #	Species Common Name (Biological Name)	D B H (cm)	Condition	Category	Comments	Recommendation	M T P Z (M)
N49	Black Cherry <i>Prunus serotina</i>	33	F	2	- deadwood, storm break - clear of proposed construction - shall retain its prescribed TPZ	P	2.4
N50	Sugar Maple <i>Acer saccharum</i>	46	F	2	- poor union, deadwood - clear of proposed construction - shall retain its prescribed TPZ	P	3.0
N51	Sugar Maple <i>Acer saccharum</i>	37	F	2	- poor union, deadwood - clear of proposed construction - shall retain its prescribed TPZ	P	2.4
N52	Black Cherry <i>Prunus serotina</i>	35	F	2	- poor union, deadwood, in decline - clear of proposed construction - shall retain its prescribed TPZ	P	2.4
N53	Silver Maple <i>Acer saccharinum</i>	65	F	2	- deadwood, poor union with included bark - clear of proposed construction - shall retain its prescribed TPZ	P	4.2
N54	Douglas Fir <i>Pseudotsuga menziesii</i>	19	F	2	- clear of proposed construction - shall retain its prescribed TPZ	P	1.8
N55	Sugar Maple <i>Acer saccharum</i>	69	G	2	- deadwood, poor union with included bark - clear of proposed construction - shall retain its prescribed TPZ	P	4.2
N56	Eastern White Cedar <i>Thuja occidentalis</i>	38	F	2	- deadwood, poor union, codominant - clear of proposed construction - shall retain its prescribed TPZ	P	2.4
N57	Eastern White Cedar <i>Thuja occidentalis</i>	46	F	2	- deadwood, poor union, codominant, lean - in conflict with proposed grading	R	
N58	White Spruce <i>Picea glauca</i>	44	F	2	- deadwood, in decline - in conflict with proposed grading	R	
N59	White Ash <i>Fraxinus americana</i>	37	P	2	- terminally infested with EAB - in conflict with proposed grading	R	
N60	White Spruce <i>Picea glauca</i> (3)	49- 55	F	2	- deadwood - in conflict with proposed grading	R	
N61	Sugar Maple <i>Acer saccharum</i>	95	F	2	- deadwood, storm break, poor union - in conflict with proposed grading	R	
N62	Eastern White Cedar <i>Thuja occidentalis</i> (3)	63- 75	F	2	- deadwood, poor union - clear of proposed construction - shall retain its prescribed TPZ	P	4.8

Discussion:

Town Owned Trees:

1. As listed above, there are four hundred and sixty-six (466) regulated trees involved with this project, none of which are Town owned.

Privately Owned Trees Located within 6.0m of the Subject Site:

1. There are sixty-six regulated trees located on the adjacent private property within 6m of the subject site, being trees no. N1-N62 (Trees no. N60 and N62 are groups containing three trees each). Trees no. N2, N4, N10, N16, N17, N24, N26, N31, N32, N34, N35, N36, N37, N38, N40, N41, N42, N43, N44, N45, N46, N47, N48, N49, N50, N51, N52, N53, N54, N55, N56 and N62 are clear do the proposed development, shall retain their prescribed TPZ and as such, will not be disturbed during construction.
2. Trees no. N57-N61 are in conflict with proposed grading and are recommended for removal. Authorization from the Town and the corresponding neighbor is required prior to the removal of these seven trees.
3. Trees no. N1, N3, N5-N9, N11-N15, N18-N23, N25, N27-N30, N33 and N39. are encroached upon by the proposed grading and retaining wall. Such an encroachment is located outside the critical root zone on the outer edge of the TPZ. Roots disturbed in this area are likely to be 2-5cm in diameter. It is recommended a qualified arborist be on site to supervise excavation/grading within the TPZ, root prune as required and to provide any other remedial actions deemed necessary. This disturbance is minor and should have a minimal effect on the trees current conditions. Authorization from the Town and the corresponding neighbor is required prior to the injury of twenty-five trees.

Privately Owned Trees Located on the Subject Site:

1. There are four hundred trees located on the subject site, being tree no. 912-100 and 301-366 (Trees no. 912, 953, 966, 967, 972, 978, 993, 309, 310, 313, 314, 315, 316, 325, 327, 330, 333, 335, 340, 341, 344, 346, 351, 352, 353 are groups of trees – See Table #1 for number of trees in each group). Trees no. 931, 937, 956 and 964 are encroached upon by the proposed grading by 6%-12%. Such an encroachment is located outside the critical root zone on the outer edge of the TPZ. Grade changes in this area will have little to no affect on the trees current condition. Authorization from the Town is required prior to the injury of these trees.
2. The remaining three hundred and ninety-six trees are in conflict with the proposed grading and are to be removed. Authorization from the Town is required prior to the removal of these trees.
3. All other trees located on or within 6.0m of the subject site have a DBH of less than 10cm and as such, were not included in this report.
4. To further protect each tree scheduled for preservation from the potential of construction disturbance, it is recommended that the below listed tree preservation recommendations are implemented.

ESTABLISH TREE PROTECTION ZONE

The purpose of the tree protection zone (TPZ) is to prevent root damage, soil compaction and soil contamination. Workers and machinery shall not disturb the tree protection zone in any way. To prevent access, the following is required:

- 1.1 Install hoarding as per attached Tree Protection Plan in Appendix I.
- 1.2 Hoarding shall consist of single heavy duty silt fence, which will be maintained for the duration of the project.
- 1.3 No fill, equipment or supplies are to be stored within the tree protection zone.
- 1.4 Activities, which are likely to injure or destroy tree(s), are not permitted within the TPZ.
- 1.5 No objects may be attached to tree(s) within the TPZ.
- 1.6 Tree protection barriers are to be erected prior to the commencement of any construction or grading activities on the site and are to remain in place in good condition throughout the entire duration of the project.
- 1.7 Once all tree/site protection measures have been installed, you must notify Urban Forestry staff to arrange for an inspection of the site and approval of the site protection requirements.
- 1.8 No Hoarding shall be removed until all construction activity is complete.
- 1.9 A sign that is like the illustration below must be mounted on all sides of a tree protection barrier for the duration of the project. The sign should be a minimum of 40cm X 60cm and made of white gator board, laminates or equivalent material.



2.0 ROOT PRUNING

Where possible, hand dig areas closest to each tree to prevent any unnecessary tearing or pulling of roots. Removal of roots that are greater than 2.5 centimetres in diameter or roots that are injured or diseased should be performed as follows:

- 2.1 Preserve the root bark ridge (similar in structure to the branch bark ridge). Directional Root Pruning (DRP) is the recommended technique and should be used during hand excavation around tree roots. Roots are like branches in their response to pruning practices. With DRP, objectionable and severely injured roots are properly cut to a lateral root that is growing downward or in a favorable direction.
- 2.2 All roots needing to be pruned or removed shall be cut cleanly with sharp hand tools, by a Certified Arborist or by the PCA.
- 2.3 No wound dressings\pruning paint shall be used to cover the ends of each cut.
- 2.4 All roots requiring pruning shall be cut using any of the following tools:
 - Large or small loppers
 - Hand pruners
 - Small hand saws
 - Wound scribers
- 2.5 Avoid prolonged exposure of tree roots during construction - keep exposed roots moist and dampened with mulching materials, irrigation or wrap in burlap if exposed for longer than 4 hours.

3.0 ESTABLISH MAINTENANCE PROGRAM

All maintenance work must be completed by the approved Project Consulting Arborist or an equivalent qualified arborist.

Pre-Construction:

- 3.1 Prune trees to remove deadwood, objectionable limbs while maintaining crown form.

During- Construction:

- 3.2 Irrigate tree preservation zones during drought conditions, June – September, to reduce drought stress.
- 3.3 Inspect the site every month to ensure that all hoarding is in place and in good condition. Inspect the trees to monitor condition.

Post-Construction:

- 3.4 Inspect the trees two times per year – May and September – to monitor condition for a minimum of two additional years.

4.0 LANDSCAPING

Any landscaping completed within the tree preservation zones, after construction is completed and hoarding has been removed, cannot cause damage to any of the trees or their roots. The trees must be protected for the same reasons listed above but without using hoarding.

4.1 **No grade changes** are permitted which include adding and/or removing soil.

4.2 **No excavation** is permitted that can cause damage to the roots of the tree.

4.3 **No heavy equipment** can be used to compact the soil within the tree preservation zone.

4.4 Any hard -surface sidewalks, paths, etc. should be constructed using permeable products such as interlocking stone, etc.

SUMMARY TABLE:

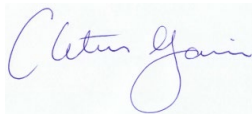
Tree Category	Total	Preserve	Preserve with Injury	Remove	Transplant
1 (Privately owned tree located on the subject site)	400	0	4	396	0
2 (Private tree located on adjacent property)	66	36	25	5	0
Total	466	36	29	401	0

CONCLUSIONS:

As listed in the Summary Table above, four hundred and sixty-six (466) trees have been inventoried as part of this project, none of which are Town owned. Three hundred and ninety-six (396) privately owned trees located on the subject site are in conflict with the proposed grading and are to be removed. Four trees located on the subject site cannot maintain 100% of their prescribed TPZs and are to be injured. Five trees located on the adjacent properties are in conflict with proposed grading and are to be removed. Additionally, twenty-five trees on the adjacent property cannot maintain 100% of their prescribed TPZs and are to be injured. Authorization from the Town and the appropriate neighbors is required prior to the removal of four hundred and one trees and the injury of twenty-nine. Finally, with the above in mind, it is the consultant's opinion that if the above tree preservation recommendations are implemented, which includes installing tree protection hoarding as outlined in this report, proposed construction will not adversely affect the long-term health, safety and/or existing condition of all trees scheduled for preservation.

Trusting this report meets your needs. For further information, you may contact me directly at (416) 300-2957 or by email at cgavin@canopyconsulting.ca.

Sincerely,



Cletus Gavin *B.Sc. Earth Science & Biology*
President & Consulting Arborist
ASCA Registered Consulting Arborist #613
ISA Certified Arborist (ON-1576A)
Butternut Health Assessor # 439
TRAQ Certified

Appendix I: Tree Protection Plan – TPP-1 & Grading Plan



Appendix II: Digital Images



Photo #1: Trees no. 315-323 looking south.



Photo #2: Trees no. 335 looking west.



Photo #3: Trees no. 347-351 looking southeast.



Photo #4: Trees no. 355-362 looking northeast.



Photo #5: Trees no. 363-364 and 967 looking southeast.



Photo #6: Trees no. 365-366 and N62 looking northeast.