November 15, 2022 BEL 220074

Vaughn Gibbons
2175725 Ontario Inc.
1755 Stevensville Road
Stevensville, ON L0S 1S0

Re: Arborist Report and Tree Saving Plan – The Enclave, Fort Erie

Dear Mr. Gibbons:

Beacon Environmental Limited (Beacon) was retained to prepare an Arborist Report and Tree Saving Plan in support of a draft plan of condominium for a vacant parcel located north of Hazel Street between Prospect Point Drive and Ridge Road in the Town of Fort Erie. Prior to a recent severance, the property was part of 546 Ridge Road. The location of the subject property is illustrated in **Figure 1**.

Methods

A tree inventory of the subject property was originally completed on July 1, 2020 by an ISA Certified Arborist with Beacon. Trees were re-assessed on January 27, 2022. The property contains a small natural woodlot as well as trees located within an existing manicured lawn setting. For the majority of the woodlot, rather than tag and assess all trees individually, this grouping was delineated and characterized based on the following:

- Number of trees;
- Species composition;
- Size of trees (DBH range); and
- Tree Condition.

Individual trees ≥10 cm DBH located along the property limits within the woodland as well as trees located within the existing yard were individually tagged and assessed. For individual trees, the following information was collected:

- Species;
- Trunk diameter at breast height (DBH, measured 1.2 m above grade); and
- Health and condition.

Tree condition was assessed in terms of overall health and structural integrity based on indicators such as live buds and leaves, dead wood, decay, wounds, structural defects, and presence of disease.

Limitation of the assessment are provided in **Attachment A**.

Results

Most of the trees on the subject property are associated with a small woodlot. These trees were assessed by tallying and not individually tagged. An additional 43 trees were individually tagged and assessed on or immediately adjacent to the property. A summary and evaluation of the trees is provided in **Attachment B**. Tree locations are illustrated in **Figure TP-1 (Attachment C)**.

The tree grouping (Group A) consists of a small deciduous woodlot. Within this woodlot, 196 trees >10 cm DBH were documented, the majority of which are Sugar Maple, Norway Maple, and Black Walnut. The majority (75%) of the trees are less than 40 cm DBH. Trees less than 20 cm DBH account for 40% of the trees.

Of the 196 trees identified within the woodland (Group A), the majority are in fair or good condition and 14 were assessed to be in poor condition. Of the 43 individually tagged trees located along the property limits,18 were determined to be in poor health and/or exhibited poor form/structural defects (see **Figure TP-1**).

Impact Assessment and Recommendations

The proposal for the subject property consists of a 17-unit townhouse development with a private roadway between Prospect Point Road and Hazel Street.

Based on a review of the proposed development and our understanding of the general grading requirements, the majority of trees from Tree Group A will require removal. Approximately 65% of tree Group A is impacted by development; therefore, it is estimated that 126 tree will be removed.

Of the 43 individual trees that were inventoried, 31 are identified for removal to accommodate the proposed development. Of these, four (4) are dead and six are in poor health or structural condition. An additional seven (7) trees along the southern property boundary are also recommended for removal due to poor condition or significant structural defects.

A number of trees identified for removal are located on the property line. If any part of the trunk of a tree spans the property line, the tree is considered a “boundary tree.” To harm or remove a boundary tree requires the consent of both owners. Therefore, written permission should be obtained from adjacent landowners prior to removing a boundary tree.

Tree Preservation Recommendations

An approximately 0.25 ha portion of tree Group A has been identified as tree preservation area (see **Figure TP-1**). Aside from trees located along the southern property line, a detailed tree inventory has not been competed for this area. Given that this area is approximately 35% of tree Group A, it is estimated that it contains 70 trees to preservation.

A detailed tree inventory of this area is recommended to determine if there are any additional potentially hazardous trees that require mitigation or removal.

Outside of the tree protection area, three trees located along the property lines have been identified for preserving ((Tree 1, 6, and 40).

Trees can be negatively impacted through grade changes, soil compaction, root cutting, and mechanical damage to trunks and branches resulting from the operation of construction equipment.

The following recommendations are provided to mitigate potential construction-related impacts.

Trees to be retained are to be protected through the establishment of a minimum tree protection zone (TPZ) as per **Table 1** and illustrated in **Figure TP-1**.

Table 1. Minimum Tree Protection Zone

Trunk Diameter (DBH)	Minimum Protection Distances[1]
10 – 30 cm	2.4 m
31 – 50 cm	3.0 m
51 – 60 cm	3.6 m
61 – 70 cm	4.2 m
71 – 80 cm	4.8 m
81 – 90 cm	5.4 m
91 – 100 cm	6.0 m

[1]to be measured from the outside edge of the base of the tree

Within a TPZ there should be:

- No construction;
- No altering of grade by adding fill, excavating, trenching, scraping, or dumping;
- No storage of construction materials, equipment, soil, or waste/debris;
- No disposal of any liquids e.g. concrete sleuth, gas, oil, paint;
- No movement of vehicles, equipment or pedestrians; and
- No parking of vehicles or machinery.

It is recommended that these trees be protected by installing tree protection hoarding at the limit of the TPZ as illustrated in **Figure TP-1**. Recommended hoarding consists of 1.2 m high plastic mesh affixed to paige wire fencing supported by metal t-bar posts spaced a minimum of 2.4 m apart, with a top 2x4 wood rail for additional support as illustrated in **Figure TP-1**. Erosion and sediment control fencing (silt fence) fitted with orange mesh fencing may double as tree protection fencing.

Tree protection fencing should be erected prior to the commencement of any construction activity that may injure a tree on the site and are to remain in place throughout the entire duration of the project. Any injury to a tree during construction should be evaluated by a qualified arborist.

Any pruning of trees for construction clearance should be performed by a qualified arborist in accordance with standard best management practices for pruning.

Should you have any questions concerning this assessment, please do not hesitate to contact the undersigned.

Prepared by:
Beacon Environmental

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

Reviewed by:
Beacon Environmental

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

Site Location	Figure 1
546 Ridge Road EIS	
BEACON ENVIRONMENTAL	Project: 220074 Last Revised: March 2021
Client: 2175725 Ontario Inc.	Prepared by: DU Checked by: DW
N 1:5,000	Inset Map:1:50,000

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Attachment A

Attachment A

Limitations of Tree Assessment

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

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

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

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

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

Attachment B

Attachment B

Tree Evaluation

Tag	Species	Common Name	DBH (cm)	TPZ (m)	Health	Structure			Comments	Location	Preservation or Removal
						Root flare	Trunk	Branch/Crown			
1	*Acer platanoides*	Norway Maple	28,15	3	Good	Good	Good	Fair	uneven crown, codominant stems with included bark	Adjacent	Preserve
2	*Acer saccharum*	Sugar Maple	12	2.4	Good	Good	Good	Fair-Good		Property line	Remove
3	*Prunus serotina*	Black Cherry	34,37	3.6	Dead				uneven crown, codominant stems with included bark	On-site	Remove
4	*Acer saccharum*	Sugar Maple	34	3	Good	Good	Good	Fair		On-site	Remove
5	*Prunus serotina*	Black Cherry	60	4.8	Dead					On-site	Remove
6	*Acer saccharum*	Sugar Maple	18	2.4	Good	Good	Good	Good		Adjacent	Preserve
7	*Acer saccharum*	Sugar Maple	38	3	Good	Good	Good	Good		On-site	Remove
8	*Prunus serotina*	Black Cherry	42	3.6	Dead					On-site	Remvoe
9	*Acer saccharum*	Sugar Maple	39	3	Good	Good	Good	Good		On-site	Remove
10	*Acer saccharum*	Sugar Maple	29	2.4	Fair	Good	Good	Fair	Codominant leaders, one dead leader bend in other leader	On-site	Remove
11	*Tilia americana*	Basswood	27	2.4	Good	Good	Good	Good		On-site	Remove
12	*Prunus serotina*	Black Cherry	38,48,39	4.2	Dead					Adjacent	Remove
13	*Prunus serotina*	Black Cherry	31	3	Poor	Fair-Good	Fair	Poor	small wound at base, lean	On-site	Remove
14	*Acer saccharum*	Sugar Maple	44	3.6	Good	Good	Good	Fair-Good		Property line	Remove
15	*Acer platanoides*	Norway Maple	16	2.4	Good	Good	Fair	Good	fence embedded in trunk	On-site	Remove
16	*Acer platanoides*	Norway Maple	14	2.4	Good	Fair	Fair	Fair	fence embedded in trunk	Adjacent	Remove
17	*Acer platanoides*	Norway Maple	25	2.4	Good	Good	Fair	Fair	fence embedded in trunk	On-site	Remove
18	*Acer platanoides*	Norway Maple	21	2.4	Good	Good	Fair	Fair	fence embedded in trunk	Property line	Remove
19	*Acer platanoides*	Norway Maple	21	2.4	Good	Good	Good	Fair-Good	fence embedded in trunk	On-site	Remove
20	*Acer platanoides*	Norway Maple	12	2.4	Good	Fair	Fair	Fair	fence embedded in trunk	Property line	Remove
21	*Fraxinus pennsylvanica*	Green Ash	12	2.4	Good	Good	Good	Fair		Property line	Remove
22	*Juglans nigra*	Black Walnut	42	3.6	Good	Good	Good	Good		On-site	Remove
23	*Juglans nigra*	Black Walnut	60	4.8	Good	Good	Good	Good		On-site	Remove
24	*Acer saccharinum*	Silver Maple	50	4.2	Fair	Fair	Good	Poor		On-site	Remove
25	*Acer saccharinum*	Silver Maple	>100	7.5	Poor	Poor	Poor	Poor	significant dieback, dead/broken branches, fungal bodies on trunk and branches, cavity at 3 m, muliptle leaders from one point, "pedestalling" of root flare indicative of root decay	Property line	Remove - Condition
26	*Acer saccharinum*	Silver Maple	75	5.4	Dead					Property line	Remove - Dead
27	*Acer saccharum*	Sugar Maple	75	5.4	Good	Good	Good	Fair	several large dead branches, overextended lower branch to the south	Property line	Preserve
28	*Acer saccharum*	Sugar Maple	80	6	Good	Fair-Good	Fair-Good		patch of decay at base	Property line	Preserve
29	*Acer saccharum*	Sugar Maple	125	7.5	Fair	Good	Fair-Poor	Poor	small cavity at base, lion-tailing, lack of good scaffold branches, massive wound at 2-3 m	Property line	Remove - Condition
30	*Acer saccharum*	Sugar Maple	80	6	Poor	Poor	Poor	Poor	2 live side branches, extensive deacay at base thorugh trunk	Property line	Remove - Condition

Tag	Species	Common Name	DBH (cm)	TPZ (m)	Health	Structure			Comments	Location	Preservation or Removal
						Root flare	Trunk	Branch/Crown			
31	*Acer saccharum*	Sugar Maple	80	6	Good	Fair	Fair	Fair-Poor	2 cracks in lower trunk and foot flare, unbalanced crown	Property line	Remove - Condition
32	*Acer saccharum*	Sugar Maple	80	6	Fair	Good	Fair	Poor	large cavity at 6 m, two large dead branches over property, codomnant leaders, lion's tailing	Property line	Remove - Condition
34	*Acer saccharum*	Sugar Maple	57	4.2	Fair	Good	Fair-Good	Poor	embedded fence, unblanced crown, crossing branches fused together, lion's tailing	Property line/adjacent	Remove - Condition
35	*Acer saccharinum*	Silver Maple	105	6.3	Fair	Good	Poor	Poor	forked at 4 m, one leader broken, massive wound in trunk	On-site	Remove
36	*Acer saccharinum*	Silver Maple	101	6	Good	Good	Good	Fair	broken branhces, irregular crown	On-site	Remove
37	*Acer saccharinum*	Silver Maple	143	8.58	Fair--Good	Good	Good	Poor	broken branches, large decaying leader, large wound in lower branch	On-site	Remove
38	*Acer saccharinum*	Silver Maple	64	4.8	Poor	Poor	Fair	Poor	nearly dead	On-site	Remove
39	*Acer saccharinum*	Silver Maple	91	6	Fair	Fair	Fair-Poor	Poor	poor form, broken branches, massive wound in trunk	On-site	Remove
40	*Juglans nigra*	Black Walnut	41	3.6	Good	Good	Good	Good		Adjacent	Preserve
41	*Acer saccharinum*	Silver Maple	91	6	Fair	Good	Good	Poor	Poor branch structure, uneven crown	On-site	Remove
42	*Juglans nigra*	Black Walnut	27	2.4	Good	Good	Good	Fair		On-site	Remove
44	*Acer saccharinum*	Silver Maple	44,28	4.2	Good	Good	Good	Fair		On-site	Remove
45	*Acer saccharinum*	Silver Maple	30,30,20,25,32,43	5.4	Good	Good	Good	Fair		On-site	Remove

Attachment C

TREE GROUP A

PRIVATE ROAD

PROSPECT POINT ROAD NORTH

#546 RIDGE ROAD

#3650 HAZEL STREET

#3660 HAZEL STREET

#3640 HAZEL STREET

#3632 HAZEL STREET

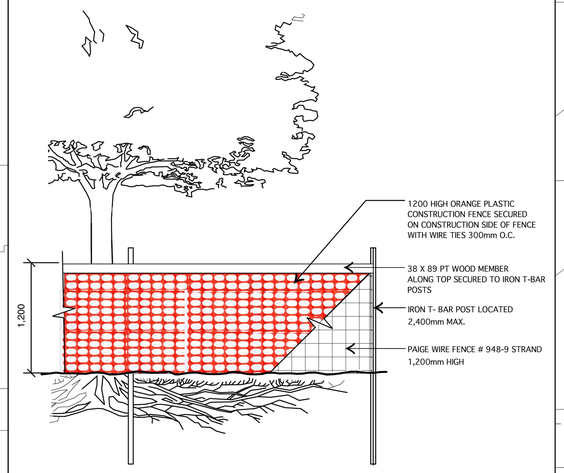
#3624 HAZEL STREET

HAZEL STREET

HAZEL STREET

HAZEL STREET

TREE PROTECTION FENCE DETAIL



NTS

BEACON ENVIRONMENTAL | TREE PROTECTION FENCE DETAIL | DETAIL NO 1

KEYMAP NTS

LEGEND

- Property Limit
- Tree Preservation Fencing
- Minimum Tree Protection Zone
- Tree Location
- Trees for Preservation
- Trees to be Removed
- Tree Preservation Area

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

Nº	REVISIONS	DATE:	BY:
6			
5			
4			
3			
2			
1	Issued		

SCALE 1:400 — 0 2 5 10 20m

NORTH ARROW

CERTIFIED ARBORIST ISA® DAN WESTERHOF #ON-1536A

BEACON ENVIRONMENTAL

CLIENT

PROJECT

546 RIDGE ROAD

SHEET TITLE

TREE INVENTORY AND PRESERVATION PLAN

PROJECT Nº: 220074

DRAWN BY: NC

CHECKED BY: DW

DATE: 03 November 2022

FIGURE Nº: TP-1