

Arborist Report

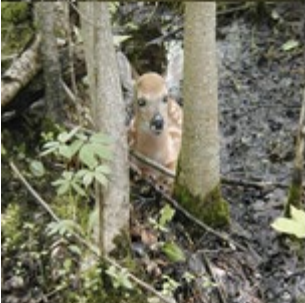
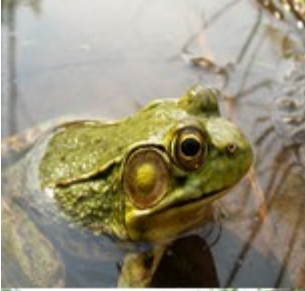
6439 REGIONAL ROAD 25 AND 321 YATES DRIVE TOWN OF MILTON

for:

Sixteen Mile Land Corporation
by:

LGL Limited
environmental research associates

JULY 2020
LGL FILE TA8818



6439 REGIONAL ROAD 25 AND 321 YATES DRIVE, TOWN OF MILTON

ARBORIST REPORT

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TABLE OF CONTENTS

| | | |
|------------|--|----------|
| 1.0 | Introduction | 1 |
| 2.0 | Methodology | 1 |
| 3.0 | Results..... | 1 |
| 3.1 | West of Sixteen Mile Creek -6349 Regional Road 25 | 1 |
| 3.2 | East of Sixteen Mile Creek -321 Yates Drive | 2 |
| 3.3 | Species at Risk | 2 |
| 4.0 | Proposed Plan..... | 2 |
| 4.1 | East of Sixteen Mile Creek – 3210 Yates Drive | 2 |
| 4.2 | West of Sixteen Mile Creek – 6439 Regional Road 25 | 2 |
| 5.0 | Common and Potential Impacts | 3 |
| 6.0 | Impact Assessment | 3 |
| 6.1 | West of Sixteen Mile Creek- 6439 Regional Road 25 | 4 |
| 6.1.1 | <i>Trees Identified for Removal</i> | <i>4</i> |
| 6.1.2 | <i>Tree Identified as Injured</i> | <i>4</i> |
| 7.0 | Mitigation Recommendations | 4 |
| 8.0 | Summary and Conclusion..... | 6 |
| 9.0 | Disclaimer..... | 7 |
| 9.1 | Limitations of this Assessment..... | 7 |
| 9.2 | Restriction of Assessment | 7 |
| 9.3 | Professional Responsibility..... | 7 |
| 9.4 | General..... | 8 |

LIST OF APPENDICES

Figures

Appendix A Tree Inventory

Appendix B Town of Milton Tree Protection Hoarding Specification No. P-2

1.0 INTRODUCTION

LGL Limited (LGL) was retained by Sixteen Mile Land Corporation SMLC to prepare an Arborist Report for the residential development of 6439 Regional Road 25 and 321 Yates in the Town of Milton (Figure 1). This report identifies tree resources and provides recommendations for tree preservation as they relate to the proposed residential development on either side of Sixteen Mile Creek. The information, interpretation and analysis contained within this Assessment is to be used solely for the purposes outlined within this Assessment.

2.0 METHODOLOGY

The tree inventory was completed on April 9 and 16, 2020, to identify potential tree constraints within the study area. The inventory focused on trees within the table land on either side of the Sixteen Mile Creek, and along an existing, remnant driveway traversing into the valley. The disturbance limits were designed and provided by Jennifer Lawrence Planning, and used the greatest limits of a combination of dripline, stable top of bank, and significant woodland to form the tree inventory study area.

Tree locations were matched to existing topographic survey data where feasible using an iPad and ArcGIS software and trees were uniquely tagged with ISA standard metal tags from 501 to 792.

Collected information specific to individual trees includes species, diameter at breast height (DBH), tree condition assessed in a matrix of trunk integrity (TI), canopy structure (CS), and crown vigour (CV- health), and general comments as warranted. As the assessment was conducted out of growing season characteristics such as branching patterns, presence of buds and condition of bark were used to assess health.

A screening has been conducted to identify if inventoried tree species regulated by the Ontario *Endangered Species Act*, (2007) are present within the study area or 50 metres beyond.

3.0 RESULTS

A total of 188 trees were identified and assessed within the study area. These are limited to private rural amenity trees, riparian trees and trees that have naturalized following the abandonment of the existing driveway. Tree resources are summarized in Appendix A and tree identification numbers correspond with identification numbers on the Figures 2a and 2b. Description of the investigation will be described by properties within the Subject Lands.

3.1 WEST OF SIXTEEN MILE CREEK -6349 REGIONAL ROAD 25

A total of 83 trees were identified and assessed along the edge of the agricultural field, abandoned driveway west of Sixteen Mile Creek (Figure 2a). Trees range in size from 10 to 80 cm DBH. Refer to Figure 2b for tree locations and Appendix A for their corresponding information. Many of the Ash trees on the property are considered to be in very poor condition or are dead. The only live tissue remaining is small sucker shoots that have sprouted as a result of the Emerald Ash Borer. With the exception of Ash trees, most are generally in good health and range in size between 10 and 80 cm.

3.2 EAST OF SIXTEEN MILE CREEK -321 YATES DRIVE

A total of 105 trees were identified and assessed within the private residential property east of Sixteen Mile Creek. Only the trees within the buffer are identified on Figure 2b at this time as they have the potential to be affected by the removal of the barn and shed during this application. Refer to the figure for their locations and Appendix A for their corresponding information. Trees are generally in good health and range in size between 10 and 120 cm. Many of the Ash trees on the property are considered in very poor condition or are dead. Many only have small sucker shoots that remain alive as a result of the Emerald Ash Borer. Trees within the tableland will be discussed and finalized when development plans for this portion of the study area are moved forward in the future.

3.3 SPECIES AT RISK

There were no species regulated by the Endangered Species Act, 2007 observed within the study area.

4.0 PROPOSED PLAN

Sixteen Mile Creek Corporation is proposing to develop several storey residential buildings on either side of Sixteen Mile Creek within the Town of Milton. Development details for each property are described further below.

4.1 EAST OF SIXTEEN MILE CREEK – 3210 YATES DRIVE

The owner has not yet obtained allocation for the lands east of the Main Sixteen Mile Creek valley. The data collected is for information purposes only and will be used in the future when plans for a residential development are prepared.

4.2 WEST OF SIXTEEN MILE CREEK – 6439 REGIONAL ROAD 25

SMLC is proposing three six-storey residential buildings and a one-storey amenity building, along with stormwater management infrastructure and above and below ground parking. This portion of the Subject Lands will contain two access points for the residences. The first access point is the main entry into the Subject Lands and is located off Regional Road 25. The second entrance is located along Louis St. Laurent near the bridge.

Stormwater management infrastructure will consist of underground storage tanks within the parking garage. The outlet pipe will be constructed through open cut trenching along the existing abandoned driveway. The proposed route takes advantage of the existing driveway alignment and limits open cut trenching in riparian areas. An 8 m wide work zone along the driveway will be required for the installation of the pipe, 4 manholes (MH) and the outfall.

5.0 COMMON AND POTENTIAL IMPACTS

Potential Impacts to trees resulting from construction and staging activities typically include:

- Physical injury;
- Severing of roots; and,
- Root compaction.

Physical injury to the main stem or branches of a tree will occur if construction equipment is permitted to operate close to the tree.

Root cutting is a type of injury that can significantly affect the health of a tree. Root systems are responsible to nutrient uptake, carbohydrate storage, and structural anchorage. Excavation for the development may tear or break tree roots if the excavation is too close to the trees. The majority of tree roots are found in the upper 30 to 60 cm of soil. Trees can also become destabilized and may fall if structural root supports are severed. A preferred method of mitigating impacts is to employ hydrovac excavation which utilizes water pressure to loosen soil, which is then vacuumed from the pit, or air-spading which utilizes pressurized air to excavate. These techniques result in a method of excavation that avoids tearing, ripping, or breaking roots typical of tradition bucket excavators, and allows for clean hand-saw root pruning, which is less damaging, or preferably avoidance all-together. This method of excavation has been considered for lateral tie-in locations where trees are in proximity.

Compaction of the soil in which tree roots grow is one of the leading causes of decline for trees. Soil compaction primarily occurs due to vehicle traffic, stock piling and equipment moving across the root zone. Soil compaction causes the reduction of pore space in the soil, which is detrimental for root growth. Without space available for oxygen and water transport, tree roots will suffocate, and the decline of the tree will follow. Impacts such as these may not be immediate, and the decline could take up to 5 years to become evident. Mitigation includes applying wood chips/mulch to a depth of 100mm and overlaying steel sheeting to dissipate the weight of machinery driven overtop.

Designation of tree protection measures (TPZ) is imperative for the protection of trees (roots, trunks, branches) adjacent to construction works. The TPZ will restrict construction related machinery and activities from damaging trees identified for retention. Physical protection (plywood hoarding, Fast Fence, or other as approved by the Town) shall be considered for all trees in proximity to construction. Protection measures are listed in Appendix A-Tree Inventory.

6.0 IMPACT ASSESSMENT

An impact assessment was completed by comparing the extent of the tree dripline with direct conflicts with the proposed development and associated storm sewer features. Trees that have been identified as requiring removal are such that construction is proposed within the dripline and covering more than 25-30% (approximately) of the dripline area and may sever important structural roots. If works proposed encroach upon the dripline of a tree (less than 25%) is considered impacted, as damage for machinery and disturbance to root zones is a potential.

6.1 WEST OF SIXTEEN MILE CREEK- 6439 REGIONAL ROAD 25

6.1.1 Trees Identified for Removal

A total of 44 trees have been identified for removal as a result of grading and construction required. Removal of 21 trees is required as a direct result of the development plans within the tablelands/agricultural field, and removal of 23 trees is required for the installation of the storm water outfall within the riparian area. Many of the trees are Manitoba Maple (*Acer negundo*), Eastern Cottonwood (*Populus deltoides*) and Red Ash (*Fraxinus pennsylvanica*).

6.1.2 Tree Identified as Injured

Tree impacts were identified along the disturbance limits for the installation. All impacted and remaining trees are considered retained and should be protected during construction according to the Town of Milton protection specification. Trees identified as impacted are those that will require some form of root or limb pruning and are found along the development edge to accommodate the overhead and below ground clearance of the excavator. The extent of pruning proposed is considered acceptable in terms of maintenance according to good arboricultural practices. . A total of 6 trees are in close proximity to the installation of the storm sewer and will have disturbance within the dripline and protection zones of the tree.

7.0 MITIGATION RECOMMENDATIONS

The following recommendations should be considered during detail design to prevent or mitigate impacts to trees near construction:

- Any works within Conservation Halton's regulated area are to be conducted under Conservation Halton permit;
- For project planning and scheduling purposes, removal of vegetation shall occur outside of the bat roosting period, considered locally by the Ministry of Environment, Conservation, and Parks (MECP) to be April 1 to September 30;
- The Site Supervisor, design engineers, landscape architects shall be familiar with the Town's Tree Protection standards and understand the purpose and function of Tree Protection Zones (TPZ) and Tree Protection Fence (TPF);
- No trees shall be pruned or removed or impacted without prior approval from the Town of Milton;
- It is the responsibility of the project team to become directly acquainted with the site, to carefully examine the location of the proposed work, and to notify the Town of any discrepancies in the site conditions;
- Appendix A lists the recommended tree protection zone for each tree identified for protection/avoidance. It should be noted however that tree protection will be located at the limit of disturbance which encompasses dripline, valley slope, and watercourse setbacks. Appendix B provides specifications for tree hoarding/TPF required by the Town of Milton;

- Delineation of the TPF's should be clearly defined on drawings and on site with appropriate fencing prior to construction;
- Prior to the start of any site work, the Contractor shall supply and install tree protection barriers around the disturbance limits to the satisfaction of the Town of Milton Arborist (identified in Figures 2a to 2b);
- Tree Protection Fencing as outlined in Tree Protection Hoarding Standard No. P-2 (Appendix B) to delineate the work zone and restrict machinery from access to tree protection zones (identified in Figure 2a to 2b) shall be installed prior to construction activities;
- The Proponent shall ensure that construction operations do not cause flooding or sediment deposits within the designated Tree Protection Zone;
- No fill, machinery, chemicals, fuel or materials are to be placed within the protective barrier; heavy machinery is not to be operated within the TPZ (including overhead swinging of machine arms);
- No re-grading, including filling or excavation, is to take place within the TPZ unless permitted by the Town Arborist or part of the development plan;
- No signs or objects should be displayed or affixed to any retained trees;
- All supports and bracing should be installed outside of the protection zone to minimize root damage;
- Tree protection measures are to remain in place until all site works have been completed, at which point they shall be removed;
- Should any additional, incidental or accidental tree injury occur during construction, a qualified Arborist or Town Arborist should be consulted to determine additional mitigation measures should be employed;
- Giant Hogweed is prevalent within the Sixteen Mile Creek Valley. Workers should take precaution to mitigate risk of contact with this species. It is recommended that this species be removed in locations near trees that are identified for removal prior to tree clearing for the safety of workers;
- Removal and disposal of Ash trees is to comply with CFIA phytosanitary requirements to prevent the introduction into and spread within Canada of Emerald Ash Borer;
- Periodic inspections of TPF's during construction and assessments of hazard potential post-construction should be conducted to ensure adequate protection is provided for trees identified for preservation and to ensure the risk of hazard is kept to a minimum; and,
- Tree removals are subject to permitting and replacement compensation. It is the responsibility of the proponent to acquire all permits and approvals from agencies such as the Town of Milton, Conservation Halton, and the Ministry of Environment, Conservation, and Parks.

Tree removals may also be subject to the requirements and provisions of other legislation, regulations or bylaws, such as the *Migratory Birds Convention Act* (MBCA), *Conservation Authorities Act*, *Endangered Species Act*, or the *Fisheries Act*. With respect to the MBCA, it is recommended that vegetation removals be avoided during the breeding bird season (mid-March to late August). If construction during this timing window is deemed necessary, a nest survey is required and the results may dictate consultation with Environment Canada, avoidance of nests, or delays in construction to accommodate nesting birds. Other approvals or due diligence with respect to tree removals are outside of the scope of this assessment.

8.0 SUMMARY AND CONCLUSION

An evaluation of tree resources within the study area was conducted during April 9 and 16, 2020. A summary regarding construction near trees in the study area include:

East Side of Sixteen Mile Creek – 321 Yates Drive

- No trees will be removed in this area at this time. Removals will be proposed when development plans are finalized in the future.

West Side of Sixteen Mile Creek – 6439 Regional Road 25

- A total of 21 trees are expected to be removed on the tableland for the residential development
- A total of 23 trees are expected to be removed within the valley lands to accommodate stormwater management infrastructure.
- A total of 6 trees are expected to be injured

9.0 DISCLAIMER

9.1 LIMITATIONS OF THIS ASSESSMENT

This Assessment is based on the circumstances and observations as they existed at the time of the site inspection of the Client's Property and the trees situate thereon and upon information provided by the Client to LGL Limited. The opinions in this Assessment are given based on observations made and using generally accepted professional judgment, however, because trees and plants are living organisms and subject to change, damage and disease, the results, observations, recommendations, and analysis as set out in this Assessment are valid only as at the date any such testing, observations and analysis took place and no guarantee, warranty, representation or opinion is offered or made as to the length of the validity of the results, observations, recommendations and analysis contained within this Assessment. As a result, the Client shall not rely upon this Assessment, save and except for representing the circumstances and observations, analysis and recommendations that were made as at the date of such inspections. It is recommended that the trees discussed in this Assessment should be re-assessed periodically.

9.2 RESTRICTION OF ASSESSMENT

The Assessment carried out was restricted to the Property. No assessment of any other trees or plants has been undertaken by LGL. LGL is not legally liable for any other trees or plants on the Property except those expressly discussed herein. The conclusions of this Assessment do not apply to any areas, trees, plants or any other property not covered or referenced in this Assessment.

9.3 PROFESSIONAL RESPONSIBILITY

In carrying out this Assessment, LGL Limited and any Assessor appointed for and on behalf of LGL Limited to perform and carry out the Assessment has exercised a reasonable standard of care, skill and diligence as would be customarily and normally provided in carrying out this Assessment. The Assessment has been made using accepted arboricultural techniques. These include a visual examination of each tree for structural defects, scars, external indications of decay such as fungal fruiting bodies, evidence of insect attack, 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 current or planned proximity of property and people. Except where specifically noted in the Assessment, none of the trees examined on the property were dissected, cored, probed, or climbed and detailed root crown examinations involving excavation were not undertaken.

While reasonable efforts have been made to ensure that the trees recommended for retention are healthy, no guarantees are offered, or implied, that these trees, or all parts of them will remain standing. It is professionally impossible to predict with absolute certainty the behaviour of any single tree or group of trees, or all their component parts, in all given circumstances. Inevitably, a standing tree will always pose some risk. Most trees have the potential to fall, lean, or otherwise pose a danger to property and persons in the event of adverse weather conditions, and this risk can only be eliminated if the tree is removed.

Without limiting the foregoing, no liability is assumed by LGL or its directors, officers, employers, contractors, agents or Assessors for:

- a) any legal description provided with respect to the Property;
- b) issues of title and or ownership respect to the Property;
- c) the accuracy of the Property line locations or boundaries with respect to the Property;
- d) the accuracy of any other information provided to LGL by the Client or third parties;
- e) any consequential loss, injury or damages suffered by the Client or any third parties, including but not limited to replacement costs, loss of use, earnings and business interruption; and,
- f) the unauthorized distribution of the Assessment.

9.4 GENERAL

Any plans and/or illustrations in this Assessment are included only to help the Client visualize the issues in this Assessment and shall not be relied upon for any other purpose.

Figures

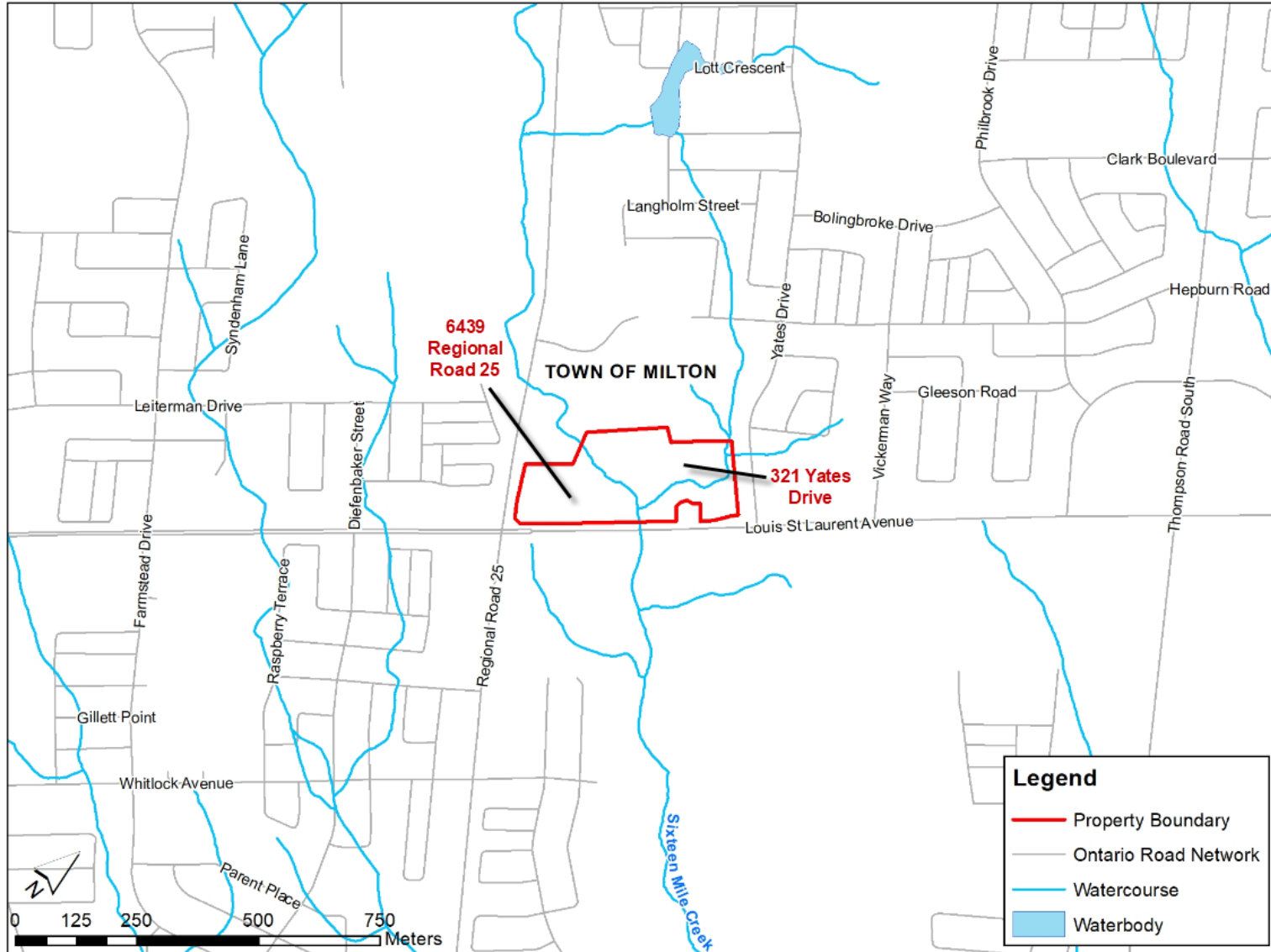


Figure 1: Key Map of Subject Lands.

Appendix A Tree Inventory

Appendix B Town of Milton Tree Protection Hoarding Specification No. P-2