



## Mount Pleasant, Caledon Tree Preservation Plan

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**NATURAL RESOURCE SOLUTIONS INC.**

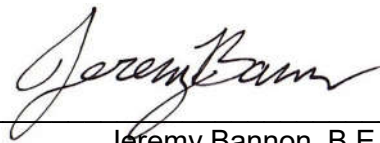
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## 1.0 Introduction

Natural Resource Solutions Inc. (NRSI) was retained by The Biglieri Group Ltd. to complete an Environmental Impact Study (EIS) for a proposed 8-lot residential development on the partial Lot 27, Concession 8, along Mount Pleasant Road in the village of Palgrave (Map 1). The landowner is proposing to develop the subject property into 8 single detached lots, including 2 roads with LID grass swales, and a 4ha reforestation area. One hedgerow is present adjacent to Mount Pleasant Road, largely containing Norway Spruce (*Picea abies*), Scots Pine (*Pinus sylvestris*) and Manitoba Maple (*Acer negundo*). The proposed partial removal of this hedgerow triggered the requirement of a Tree Preservation Plan, as requested by the Town of Caledon.

The Tree Preservation Plan conforms to the Town of Caledon By-Law No. 2000-100, which only applies to woodlands within the Town of Caledon. The By-Law states that: *“This by-law applies to all trees in a woodland.”* And that a permit for the destruction of trees is not required when *“the destruction of trees is on lands under a forest management plan and a copy of the plan has been given to the director at least 30 days before the destruction and, the destruction is in accordance with good forestry practices”*.

All proposed tree removal, as outlined in this document, is outside of any woodland feature (Map 1).

As the hedgerow is adjoining to a woodland feature, and tree removal is specifically required for the proposed development, and not for the establishment of the proposed Reforestation Management Plan, this Tree Preservation Plan has been completed to ensure proper documentation and assessment of any discrepancies in interpretation of the By-Law, and also to ensure a full package submission for the proposed site plan.

This report provides the findings of the tree inventory, analysis of construction plans against the overall health and the structural integrity (referring to the potential for structural failure) of trees, protection measures for trees to be retained, and recommended mitigation and compensation measures. The tree data and mapping has been compared to the layout of the proposed Site Plan prepared by MMH Architects Inc.

(2018) and preliminary grading plan prepared by Valdor Engineering Inc. (2018). Map 2 shows the tree inventory data overlaying the proposed development plan. This plan shows the proposed grading, lot and stormwater management layout, road, reforestation management polygons and trees inventoried. The existing overall health and/or potential for structural failure was compared to the layout and grading to determine whether existing trees would be impacted by the proposed undertaking. Avoidance, mitigation, and protection measures for trees were examined to determine which trees would be impacted and which could be retained. In the case of trees requiring removal, compensation for removal is discussed.

This report summarizes the following:

- findings of the tree inventory,
- assessment of overall health and potential for structural failure of inventoried trees,
- tree retention analysis based on details of the proposed development,
- protection measures for trees to be retained and,
- recommended mitigation and compensation measures.

## 2.0 Tree Inventory and Methodology

A comprehensive inventory of trees  $\geq 10\text{cm}$  in Diameter at Breast Height (DBH) within the development footprint, and all trees with the potential to be impacted by the proposed development was completed by an NRSI Certified Arborist on July 16, 2018. The location of trees inventoried was simultaneously surveyed using an SXBlue II GNSS GPS unit by the Certified Arborist and are shown on Map 2. A complete list of the tree inventory results is included in Appendix I.

The following information was recorded for each tree:

- species,
- Diameter at Breast Height measurement (DBH),
- crown radius (metres),
- general health (excellent, good, fair, poor, very poor, dead),
- potential for structural failure (improbable, possible, probable, imminent),
- tree location (on-site/off-site) and,
- general comments (i.e. disease, aesthetic quality, development constraints, sensitivity to development).

The overall health of each tree was assessed based on the criteria outlined in **Error! Reference source not found.**, and the potential for structural failure was assessed based on the criteria outlined in Table 2. In carrying out these assessments, NRSI has exercised a reasonable standard of care, skill and diligence as would be customarily and normally provided in carrying out these assessments. The assessments have 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, the condition of any visible root structures, the degree and direction of lean (if any), the general condition of the tree and the surrounding site, and the proposed proximity of property and people. None of the trees examined on the property were dissected, cored, probed, or climbed and detailed root crown examinations involving excavation were not undertaken. The conditions for this assessment, including restrictions, professional responsibility, and third-party liability are in Appendix II.



**Table 1. Tree Health Assessment Criteria**

<b>Assessment Criteria*</b>	<b>Definition<sup>1</sup></b>
Excellent	Represents a tree in near perfect form, health, and vigor. This tree would exhibit no deadwood, no decline, and no visible defects.
Good	Represents a tree ranging from a generally healthy tree to a near perfect tree in terms of health, vigor and structure. This tree exhibits a complete, balanced crown structure with little to no deadwood and minimal defects as well as a properly formed root flare.
Fair	Represents a tree with minor health, balance or structural issues with minimal to moderate deadwood. Branching structure shows signs of included bark or minor rot within the branch connections or trunk wood. The root flare shows minimal signs of mechanical injury, decay, poor callusing, or girdling roots. Trees in the category require minor remedial actions to improve the vigor and structure of the tree.
Poor	Represents a tree that exhibits a poor vigor, reduced crown size (<30% of crown typical of species caused by overcrowding or decline), extreme crown unbalance, or extensive rot in the branching and trunk wood. Fungus could be seen from these rotting areas, suggesting further decay. These trees have extensive crown die back with a large amount of deadwood, and possibly dead sections. These weakened areas can lead to a potential failure of tree sections. Rooting zones show signs of extensive root decay or damage (fruiting bodies or mechanical damage) or girdling roots. Trees in this category require more extensive actions to prevent failure. A tree identified as poor would be a candidate for removal in the near future.
Very Poor	Represents a tree that exhibits major health and structural defects. Quite often the defects or diseases affecting this tree will be fatal. Large quantities of fungus, large dead sections with possible cavities and bark falling off all are signs that a tree is in a major state of decline and would be identified as very poor. These trees have a probable or imminent potential for structural failure. These trees should be identified for removal.
Dead	Represents a tree that exhibits no sign of new growth, including buds, foliage, or shoot growth. These trees have a probable or imminent potential for structural failure. These trees should be identified for removal.

<sup>1</sup>Dunster 2009

**Table 2. Tree Risk Assessment Criteria**

<b>Assessment Criteria*</b>	<b>Definition<sup>1</sup></b>
Improbable	The tree or branch is not likely to fail during normal weather conditions and may not fail in many severe weather conditions within the specified time frame.
Possible	Failure could occur, but it is unlikely during normal weather conditions within the specified time frame.
Probable	Failure may be expected under normal weather conditions within the specified time frame.
Imminent	Failure has started or is most likely to occur in the near future, even if there is no significant wind or increased load. This is a rare occurrence for a risk assessor to encounter, and it may require immediate action to protect people from harm.

\*A specified time frame of 1 year will be used when assessing potential for structural failure.

<sup>1</sup>Dunster et al. 2013



## 2.1 Bat Habitat Assessment Methodology

Three bat species known from the area are listed as Endangered provincially and are afforded general habitat protection under the Endangered Species Act (2007). Bat Species at Risk (SAR) include Little Brown Myotis (*Myotis lucifugus*), Northern Myotis (*Myotis septentrionalis*), and Eastern Small-Footed Myotis (*Myotis leibii*).

These species are known to roost in tree cavities, hollows, or under loose bark, as well as within buildings (OMNR 2000). As part of the tree health assessments, NRSI's Certified Arborists, who are trained and experienced in the Ministry of Natural Resources and Forestry (MNRF) bat habitat assessment protocols (OMNR 2011, MNRF 2014), visually scanned all trees  $\geq 10\text{cm}$  DBH for the presence of features (i.e. cavities, loose bark, etc.) that may provide bat maternity colony habitat.

Information considered (and recorded, where applicable) for cavity trees included tree species, location, DBH, canopy cover, tree height, decay class according to Watt and Caceres (1999), and number of potentially suitable cavities. Other criteria were also considered, including the use of cavities by other wildlife, the potential for cavities to be used by predators, supporting/surrounding habitat, and other characteristics which may contribute to the habitat requirements of these species, such as temperature regulation.

### 3.0 Summary of Tree Inventory

In total, 88 trees were inventoried, including 7 species. Of the trees inventoried and assessed, 23 (26.1%) are native species and 65 (73.9%) are non-native. A complete list of trees inventoried is provided in Appendix I and tree locations within the subject property are shown on Map 2.

Table 3 provides a list of tree species inventoried within the subject property, whether they are native or non-native and their overall health.

**Table 3. Summary of Inventoried Trees**

Common Name	Scientific Name	Good	Fair	Poor	Very Poor	Dead	Total
<b>Native Species</b>							
Manitoba Maple	<i>Acer negundo</i>		13	1	1	1	16
Red Pine	<i>Pinus resinosa</i>			1	1	1	3
White Spruce	<i>Picea glauca</i>		3				3
Eastern White Pine	<i>Pinus strobus</i>		1				1
<b>Total</b>		<b>0</b>	<b>17</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>23</b>
<b>Non-Native Species</b>							
Common Apple	<i>Malus domestica</i>		1				1
Scots Pine	<i>Pinus sylvestris</i>	1	45	6		2	54
Norway Spruce	<i>Picea abies</i>	5	5				10
<b>Total</b>		<b>6</b>	<b>51</b>	<b>6</b>		<b>2</b>	<b>65</b>
<b>Overall Total</b>		<b>6</b>	<b>68</b>	<b>8</b>	<b>2</b>	<b>4</b>	<b>88</b>

Table 4 provides a summary of the overall health of trees inventoried, along with their potential for structural failure. A majority of the trees inventoried are in fair health with an improbable potential for structural failure.

**Table 4. Overall Health of Trees Inventoried**

Potential for Structural Failure Rating	Overall Condition					Total
	Good	Fair	Poor	Very Poor	Dead	
Improbable	6	67	8	1	3	<b>85</b>
Possible		1		1		<b>2</b>
Probable						<b>0</b>
Imminent					1	<b>1</b>
<b>Total</b>	<b>6</b>	<b>68</b>	<b>8</b>	<b>2</b>	<b>4</b>	<b>88</b>

## 4.0 Tree Removal and Retention Analysis

Tree removal and retention was based on two considerations:

- 1) Trees identified as having a probable or imminent potential for structural failure or poor or very poor health, or identified as dead. The removal of these trees would be recommended for safety etc., especially if they are located within striking distance of a component of the proposed development, or existing off-site sidewalks, roads or buildings. For the purpose of this report, trees which fall into this category are identified for removal,
- 2) Trees that require removal based on the extent of proposed site grading. This was determined by comparing the location of the trees to the location of the components of the development proposal as shown on Map 2.

Detailed grading will be required in order to refine this retention analysis. If any of the trees outlined for retention cannot be retained, any changes must be documented and provided to the Town of Caledon for approval prior to removal. Of the 88 trees inventoried, 37 are anticipated to be removed. This includes 4 trees that have been identified as being in poor or very poor health, and/or have a probable or imminent potential for structural failure, and/or have been identified as dead.

Most of the trees proposed to be removed are in fair health with an improbable potential for structural failure, and range in size from 10cm DBH to 55cm DBH. Species proposed to be removed are Scots Pine, Norway Spruce, Manitoba Maple and Common Apple.

## **5.0 Tree Cavity Assessment Findings**

No cavities were found during the tree inventory and cavity assessment.

## 6.0 Tree Compensation Plan

A total of 37 trees are expected to require removal in order to effectively service the lands. It is recommended that trees in Fair to Excellent condition be compensated at a 2:1 ratio, as is standard practice in the Town of Caledon. Table 5 provides a summary of the trees inventoried throughout the subject property, total number proposed for removal and the proposed compensation plan. A complete list of inventoried trees, including a determination of whether trees require compensation, is provided in Appendix I.

**Table 5. Summary of Trees to be Removed and Recommended Compensation Plan**

<b>Tree Inventory</b>	<b>Total</b>
Total number of trees inventoried	88
Total number of trees expected to be removed	37
→ Non-native trees to be removed	5
→ Native trees to be removed	32
<b>Tree Compensation</b>	
Trees in poor to very poor health and/or a probable or imminent potential for structural failure	4
Trees in excellent to fair health to be removed	33
<b>2:1 Compensation for native/non-native trees in excellent to fair health</b>	<b>66</b>

Detailed landscaping plans will be required for the property as a condition of draft plan of subdivision approval; however, it is anticipated that compensation plantings can be provided within the additional 0.16ha of reforestation management area not required for increased density, as outlined in the Reforestation Management Plan (NRSI 2018), as well as along the hedgerow feature adjacent to Mount Pleasant Road.

## **7.0 Tree Protection Measures and Recommended Mitigation**

### **7.1 Prior to Construction**

Temporary tree protection fencing will be situated where trees are adjacent to the limit of disturbance/grading as shown on Map 2. A combined sediment and erosion control fence (i.e. silt fence) and tree protection fence is recommended where trees are situated adjacent to the limit of disturbance. This tree protection fencing is to take the form of 1200mm high heavy-duty paige-wire fencing.

The temporary tree protection fencing will be installed and maintained by the Developer. Prior to any construction activities (rough grading, vegetation and tree removal), the tree protection fencing, in the form of 1200mm high heavy-duty paige-wire, will be installed at the limit of the associated buffer (minimum 5m beyond the dripline) of trees to be retained in order to protect the root systems. Prior to works commencing on-site, fence installation and location is to be inspected by a Certified Arborist and/or the on-site Environmental Inspector. Signage indicating the purpose of protection fencing will be attached to the paige-wire fencing as shown on Map 2.

The Tree Preservation Plan is to be reviewed and approved by the Town of Caledon. Upon approval of the Tree Protection Plan, and prior to any on-site works (i.e. rough grading, tree removal), a qualified environmental consultant is to submit written verification to the Town that all of the recommended tree protection measures have been installed in accordance with the Tree Protection Plan.

### **7.2 During Construction**

Temporary tree protection fencing is to be maintained by the Developer during the entire construction period to ensure that trees being retained and their root systems are protected. Any minimal damage (i.e. damage to limbs or roots) to trees to be retained during construction must be pruned using proper arboricultural techniques. Should any of the trees intended to be retained be seriously damaged or die as a result of construction activities, the owner will remove and replace the tree at their own expense at a 2:1 ratio. Replacement species are to be reviewed by a Certified Ontario

Landscape Architect (OLA) or Certified Arborist. Watering and pruning of newly planted trees will be carried out by the owner/contractor as required during the warranty period (approximately 2 years).

### **7.3 Post-Construction**

It is recommended that the temporary tree protection fencing be removed upon completion of construction activities and adjacent areas are stabilized with a vegetative cover (i.e. sod in residential area or native vegetation along the swale and in the reforestation area) to the satisfaction of the Environmental Inspector or qualified biologist.

### **7.4 Mitigation**

The recommendations provided below are aimed at protecting the proposed trees to be retained. Species used for replacement/enhancement plantings, with the exception of street trees, should be native to the Region of Peel and not include any species that are listed as introduced, or locally, provincially or federally significant. The use of hardy species will ensure successful early establishment and minimize the potential for invasive species proliferation. For street tree plantings, the use of non-native species that are sometime more tolerant of urban conditions (i.e. salt and drought tolerant) may be suitable as long as they do not include invasive species such as Norway maple (*Acer platanoides*) or Sweet Cherry (*Prunus avium*).

At the detailed design stage, it is recommended that the following criteria be followed during the development of proposed planting plans:

- plantings outside of the road ROW will be limited to native, non-invasive tree and shrub species indigenous to the Region of Peel that complement the surrounding natural features,
- tree species to be situated in close proximity to roads should be salt tolerant,
- avoid ash species due to the risk of the emerald ash borer (*Agrilus planipennis*),
- avoid 'messy trees', such as fruiting trees or poplars (*Populus* spp.) where plantings occur in close proximity to driveways and roadways,

- all plant material is to conform to the latest edition of the *Canadian Nursery Trades Association Specifications and Standards*,
- plantings installed as per specifications outlined in planting plans to be prepared by an OLA or Certified Arborist (e.g. place a minimum of 10cm of shredded pine-bark mulch or equivalent around all planted material),
- spacing of plant material should account for the ultimate size and form of the selected species and also the purpose of the planting, whether it be for screening, shade, naturalizing, rehabilitation, etc.,
- special attention to location and height of trees in proximity to utilities, and,
- ensure that there is sufficient soil volume for all plantings.



## 8.0 References

- Dunster, J.A. 2009. Tree Risk Assessment in Urban Areas and the Urban/Rural Interface: Course Manual. Silverton, Oregon: Pacific Northwest Chapter, International Society of Arboriculture.
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**APPENDIX I**  
Mount Pleasant – Tree Inventory Data

Mount Pleasant Tree Preservation Plan  
Tree Inventory Data

Tree Number	Common Name	Scientific Name	Native/ Non-native	Stem Count	DBH (cm)	Crown Radius (m)	Potential for Structural Failure Rating	Overall Condition	Location	Proposed Action	Rationale for Removal	Compensation Required	Comments
1	Norway Spruce	<i>Picea abies</i>	Non-Native	1	65	10.0	Improbable	Good	ROW	Retain		No	Scaffold branches below DBH.
2	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	2	16	2.0	Improbable	Fair	Off-Property	Retain		No	No visible defects.
3	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	14	2.0	Improbable	Good	Off-Property	Retain		No	No visible defects.
4	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	13	2.0	Improbable	Fair	Off-Property	Retain		No	No visible defects.
5	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	11	2.0	Improbable	Fair	Off-Property	Retain		No	No visible defects.
6	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	2	14	2.0	Improbable	Fair	Off-Property	Retain		No	No visible defects.
7	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	14	2.0	Improbable	Fair	Property Boundary	Retain		No	No visible defects, phototropic growth in stem.
8	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	16	2.5	Improbable	Fair	Off-Property	Retain		No	No visible defects, phototropic growth in stem, codominant leaders.
9	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	16	2.0	Improbable	Fair	Off-Property	Remove	Swale regrading footprint	Yes	No visible defects, codominant leaders.
10	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	14	2.0	Improbable	Fair	Off-Property	Remove	Swale regrading footprint	Yes	Codominant leaders, forming spreading crown, wound where lower scaffold branch broke.
11	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	10	1.5	Improbable	Fair	Off-Property	Remove	Swale regrading footprint	Yes	No visible defects.
12	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	13	1.5	Improbable	Poor	Off-Property	Remove	Swale regrading footprint	No	Many leaders, no apical stem, major crown dieback.
13	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	12	2.5	Improbable	Fair	Off-Property	Remove	Swale regrading footprint	Yes	Phototropic growth in stem.
14	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	11	2.0	Improbable	Fair	Subject Property	Remove	Swale regrading footprint	Yes	No visible defects.
15	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	11	2.5	Improbable	Fair	Property Boundary	Remove	Swale regrading footprint	Yes	No definitive apical stem.
16	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	13	2.0	Improbable	Fair	Property Boundary	Retain		No	Codominant leaders.
17	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	14	2.5	Improbable	Fair	Off-Property	Retain		No	Codominant leaders.
18	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	17	2.0	Improbable	Fair	Subject Property	Retain		No	Some needle discoloration.
19	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	16	2.0	Improbable	Fair	Off-Property	Retain		No	No visible defects.
20	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	15	2.0	Improbable	Fair	Off-Property	Retain		No	Codominant leaders, stem angles toward property
21	Manitoba Maple	<i>Acer negundo</i>	Native	1	25	3.0	Improbable	Fair	ROW	Remove	Swale regrading footprint	Yes	Asymmetrical crown, stem leans into site.
22	Manitoba Maple	<i>Acer negundo</i>	Native	3	33	4.0	Improbable	Fair	ROW	Remove	Swale regrading footprint	Yes	Asymmetrical crown, stem leans into property, one primary stem.
23	Manitoba Maple	<i>Acer negundo</i>	Native	3	50	4.0	Possible	Very Poor	ROW	Remove	Swale regrading footprint	No	Adventitious leader forming at broken stem, fruiting bodies on primary stem, large wound on upper stem where broken.
24	Manitoba Maple	<i>Acer negundo</i>	Native	1	52	4.0	Possible	Fair	ROW Boundary	Remove	Swale regrading footprint	Yes	3 codominant leaders.
25	Manitoba Maple	<i>Acer negundo</i>	Native	1	40	0.5	Imminent	Dead	ROW	Remove	Safety	No	3m tall snag
26	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	15	2.0	Improbable	Fair	ROW	Retain		No	No visible defects.
27	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	12	1.5	Improbable	Poor	ROW	Retain		No	Crown dieback.
28	Norway Spruce	<i>Picea abies</i>	Non-Native	1	57	5.0	Improbable	Good	ROW	Retain		No	One dominant stem, but lower scaffold branches forming apical leaders.
29	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	14	2.0	Improbable	Fair	ROW	Retain		No	No visible defects.
30	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	18	1.0	Improbable	Fair	ROW	Remove	Road connection footprint	Yes	Codominant leaders.
31	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	22	2.5	Improbable	Fair	ROW	Remove	Road connection footprint	Yes	Phototropic growth in stem.
32	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	12	2.0	Improbable	Fair	ROW	Remove	Road connection footprint	Yes	Asymmetrical crown.
33	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	10	1.5	Improbable	Fair	ROW	Remove	Road connection footprint	Yes	Lower crown thinning.
34	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	21	1.5	Improbable	Fair	ROW	Remove	Road connection footprint	Yes	Lower crown thinning, phototropic growth in stem.
35	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	40	4.5	Improbable	Fair	ROW	Remove	Road connection footprint	Yes	Lower crown thinning.
36	Norway Spruce	<i>Picea abies</i>	Non-Native	1	50	5.0	Improbable	Good	ROW	Remove	Road connection footprint	Yes	No visible defects.
37	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	25	3.0	Improbable	Fair	ROW	Remove	Road connection footprint	Yes	Codominant leaders.
38	Common Apple	<i>Malus domestica</i>	Non-Native	2	30	3.0	Improbable	Fair	ROW	Remove	Road connection footprint	Yes	Scaffold branch below DBH, dying back, crown dieback.
39	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	25	2.0	Improbable	Fair	ROW	Remove	Road connection footprint	Yes	Lower crown dieback, asymmetrical crown.
40	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	20	2.0	Improbable	Fair	ROW	Remove	Road connection footprint	Yes	Lower crown dieback.
41	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	18	2.0	Improbable	Fair	ROW	Remove	Road connection footprint	Yes	Lower crown thinning, asymmetrical crown.
42	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	28	2.0	Improbable	Fair	ROW	Remove	Road connection footprint	Yes	Lower crown thinning, asymmetrical crown.
43	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	32	2.5	Improbable	Fair	ROW	Remove	Road connection footprint	Yes	Lower crown thinning.
44	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	2	12	2.0	Improbable	Fair	ROW	Remove	Road connection footprint	Yes	Lower crown thinning.
45	Norway Spruce	<i>Picea abies</i>	Non-Native	1	55	5.0	Improbable	Good	ROW Boundary	Remove	Road connection footprint	Yes	Discoloured mass of needles on one upper stem.
46	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	13	1.5	Improbable	Fair	ROW	Remove	Road connection footprint	Yes	Codominant leaders.
47	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	23	1.5	Improbable	Fair	ROW	Remove	Road connection footprint	Yes	Lower crown thinning.
48	Norway Spruce	<i>Picea abies</i>	Non-Native	1	40	5.0	Improbable	Fair	ROW	Remove	Road connection footprint	Yes	No visible defects.
49	Norway Spruce	<i>Picea abies</i>	Non-Native	1	31	4.0	Improbable	Good	ROW	Remove	Road connection footprint	Yes	No visible defects.
50	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	10	1.0	Improbable	Fair	ROW	Remove	Road connection footprint	Yes	Asymmetrical crown.
51	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	33	1.5	Improbable	Fair	ROW	Remove	Road connection footprint	Yes	Asymmetrical crown.
52	Norway Spruce	<i>Picea abies</i>	Non-Native	1	38	2.5	Improbable	Fair	ROW	Remove	Road connection footprint	Yes	Lower crown thinning, asymmetrical crown.
53	Norway Spruce	<i>Picea abies</i>	Non-Native	1	47	3.0	Improbable	Fair	ROW	Remove	Road connection footprint	Yes	Lower crown thinning, asymmetrical crown.
54	Norway Spruce	<i>Picea abies</i>	Non-Native	1	54	3.0	Improbable	Fair	ROW Boundary	Retain		No	Lower crown thinning, asymmetrical crown, one main stem but lower scaffold branch exhibiting apical growth.
55	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	22	1.0	Improbable	Poor	ROW	Remove	Road connection footprint	No	Asymmetrical crown, crown thinning and dieback.
56	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	27	2.5	Improbable	Fair	ROW	Retain		No	Crown thinning.
57	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	16	2.0	Improbable	Fair	Subject Property	Retain		No	Crown thinning.
58	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	24	1.5	Improbable	Poor	ROW Boundary	Retain		No	Crown thinning, asymmetrical crown, codominant leaders leaning toward property, crown dieback.
59	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	18	1.0	Improbable	Poor	ROW	Retain		No	Crown thinning, asymmetrical crown.
60	Norway Spruce	<i>Picea abies</i>	Non-Native	1	40	3.0	Improbable	Fair	ROW	Retain		No	Crown thinning, asymmetrical crown.

Mount Pleasant Tree Preservation Plan  
Tree Inventory Data

Tree Number	Common Name	Scientific Name	Native/ Non-native	Stem Count	DBH (cm)	Crown Radius (m)	Potential for Structural Failure Rating	Overall Condition	Location	Proposed Action	Rationale for Removal	Compensation Required	Comments
61	Red Pine	<i>Pinus resinosa</i>	Native	1	20	1.0	Improbable	Dead	ROW	Retain		No	Dead.
62	White Spruce	<i>Picea glauca</i>	Native	1	28	1.5	Improbable	Fair	ROW	Retain		No	Asymmetrical crown, small secondary leader initiating below DBH.
63	White Spruce	<i>Picea glauca</i>	Native	1	16	1.0	Improbable	Fair	ROW	Retain		No	Asymmetrical crown, lower crown thinning.
64	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	26	2.5	Improbable	Fair	ROW	Retain		No	Asymmetrical crown, lower crown thinning.
65	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	24	2.0	Improbable	Fair	ROW Boundary	Retain		No	Asymmetrical crown, lower crown thinning.
66	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	21	1.5	Improbable	Fair	ROW	Retain		No	Asymmetrical crown, lower crown thinning, large galls on branches.
67	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	14	1.0	Improbable	Dead	Subject Property	Retain		No	Large galls on branches.
68	Red Pine	<i>Pinus resinosa</i>	Native	1	22	1.5	Improbable	Poor	ROW	Retain		No	Crown dieback.
69	White Spruce	<i>Picea glauca</i>	Native	1	32	2.5	Improbable	Fair	ROW	Retain		No	Crown thinning.
70	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	18	2.0	Improbable	Fair	ROW	Retain		No	Crown thinning, asymmetrical crown.
71	Manitoba Maple	<i>Acer negundo</i>	Native	1	12	3.0	Improbable	Poor	ROW	Retain		No	Crown thinning, asymmetrical crown, phototropic growth, stem parallel to ground for 2m.
72	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	22	1.5	Improbable	Poor	ROW	Retain		No	Asymmetrical crown, galls on branches.
73	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	23	1.5	Improbable	Fair	ROW	Retain		No	Asymmetrical crown.
74	Red Pine	<i>Pinus resinosa</i>	Native	1	28	1.0	Improbable	Very Poor	ROW	Retain		No	Few bundles remain, 99% crown loss.
75	Manitoba Maple	<i>Acer negundo</i>	Native	1	13	2.0	Improbable	Fair	ROW	Retain		No	asymmetrical crown, codominant leaders leaning toward road.
76	Manitoba Maple	<i>Acer negundo</i>	Native	1	13	2.0	Improbable	Fair	ROW	Retain		No	Epicormic shoots.
77	Manitoba Maple	<i>Acer negundo</i>	Native	2	15	2.0	Improbable	Fair	ROW	Retain		No	Epicormic shoots, asymmetrical crown, 1 secondary stem under 10 dbh.
78	Manitoba Maple	<i>Acer negundo</i>	Native	1	20	2.5	Improbable	Fair	ROW Boundary	Retain		No	Phototropic growth in stem.
79	Manitoba Maple	<i>Acer negundo</i>	Native	1	13	3.0	Improbable	Fair	ROW	Retain		No	phototropic growth in stem, asymmetrical crown.
80	Manitoba Maple	<i>Acer negundo</i>	Native	1	17	3.0	Improbable	Fair	ROW	Retain		No	phototropic growth in stem, asymmetrical crown.
81	Manitoba Maple	<i>Acer negundo</i>	Native	1	27	4.0	Improbable	Fair	ROW	Retain		No	phototropic growth in stem, asymmetrical crown, lower scaffold branch broken, still attached, large wound at junction.
82	Manitoba Maple	<i>Acer negundo</i>	Native	1	21	3.5	Improbable	Fair	ROW	Retain		No	phototropic growth in stem, asymmetrical crown.
83	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	29	1.0	Improbable	Dead	ROW	Retain		No	Woodpecker damage.
84	Manitoba Maple	<i>Acer negundo</i>	Native	1	15	2.5	Improbable	Fair	ROW	Retain		No	Asymmetrical crown, stem leans into property, phototropic growth.
85	Manitoba Maple	<i>Acer negundo</i>	Native	1	23	3.0	Improbable	Fair	Subject Property	Retain		No	Asymmetrical crown, phototropic growth in stem.
86	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	37	3.0	Improbable	Fair	ROW	Retain		No	Lower crown thinning.
87	Scots Pine	<i>Pinus sylvestris</i>	Non-Native	1	30	2.0	Improbable	Fair	ROW	Retain		No	Lower crown thinning, asymmetrical crown, phototropic growth in stem.
88	Eastern White Pine	<i>Pinus strobus</i>	Native	1	22	2.0	Improbable	Fair	ROW	Retain		No	Asymmetrical crown, lower crown thinning.

**APPENDIX II**  
Conditions of Assessment

## Conditions of Tree Assessment

### *Limitations*

This tree inventory and assessment is based on the circumstances and observations as they existed at the time of the site inspection of the Client's Mount Pleasant Property in Caledon, Ontario (the "Property") and the trees situated thereon by NRSI and upon information provided by the Client to NRSI. The opinions in this assessment are given based on observations made and using generally accepted professional judgment, however, because trees 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 at the date any such observations and analysis took place. No guarantee, warranty, representation or opinion is offered or made by NRSI 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, where required (i.e. within 1 year).

### *Further Services*

Neither NRSI, nor any assessor employed or retained by NRSI (the "Assessor") for the purpose of preparing or assisting in the preparation of this assessment shall be required to provide any further consultation or services to the Client, save and except as already carried out in the preparation of this assessment and including, without limitation, to act as an expert witness or witness in any court in any jurisdiction unless the Client has first made specific arrangements with respect to such further services, including, without limitation, providing the payment of the Assessor's regular hourly billing fees.

NRSI accepts no responsibility for the implementation of all or any part of the assessment, unless specifically requested to examine the implementation of such activities recommended herein. In the event that inspection or supervision of all or part of the implementation is requested, that request shall be in writing and the details agreed to in writing by both parties.

### *Assumptions*

The Client is hereby notified and does hereby acknowledge and agree that where any of the facts and information set out and referenced in this assessment are based on assumptions, facts or information provided to NRSI, the Client and/or third parties and unless otherwise set out within this assessment, NRSI will in no way be responsible for the veracity or accuracy of any such information and further, the Client acknowledges and agrees that NRSI has, for the purposes of preparing their assessment, assumed that the Property, which is the subject of this assessment is in full compliance with all applicable federal, provincial, municipal and local statutes, regulations, by-laws, guidelines and other related laws. NRSI explicitly denies any legal liability for any and all issues with respect to non-compliance with any of the above-referenced statutes, regulations, by-laws, guidelines and laws as it may pertain to or affect the Property to which this assessment applies.

### *Restriction of Assessment*

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

### *Professional Responsibility*

In carrying out this assessment, NRSI and any Assessor appointed for and on behalf of NRSI 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, discolored foliage (during the leaf-on period), 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 NRSI 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; and
- d) the accuracy of any other information provided to NRSI 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.

### *Third Party Liability*

This assessment was prepared by NRSI exclusively for the Client. The contents reflect NRSI's best assessment of the trees situated on the Property in light of the information available to it at the time of preparation of this assessment. Any use which a third party makes of this assessment, or any reliance on or decisions made based upon this assessment, are made at the sole risk of any such third parties. NRSI accepts no responsibility for any damages or loss suffered by any third party or by the Client as a



result of decisions made or actions based upon the use or reliance of this assessment by any such party.

*General*

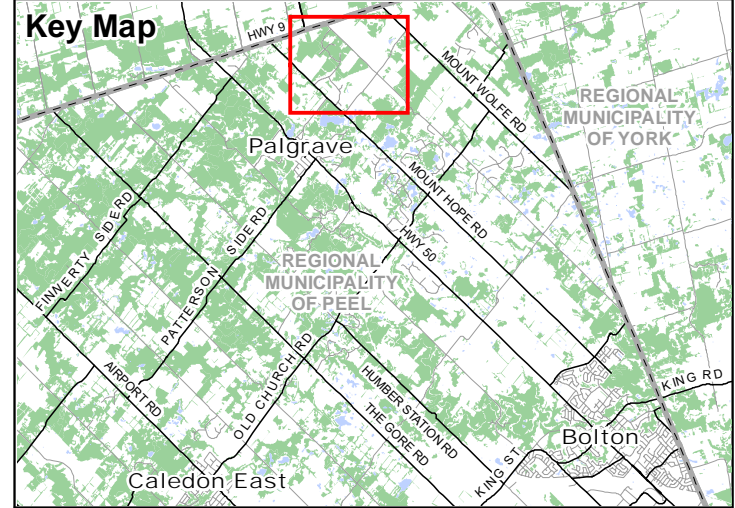
Any plans and/or illustrations in this assessment are included only to help the Client visualize the issues in this assessment and shall not be relied upon for any other purpose.

This report shall be considered as a whole, no sections are severable, and the assessment shall be considered incomplete if any pages are missing.

**MAPS**

# Mount Pleasant, Caledon

## Subject Property and Natural Features



- Legend**
- Subject Property
  - Railway
  - Highway
  - Primary Road
  - Secondary Road
  - Permanent Watercourse
  - Intermittent Watercourse
  - Water Body
  - Provincially Significant Wetland (PSW)
  - Unevaluated Wetland
  - Wooded Area
  - Tertiary Watershed Boundary
  - Municipal Boundary



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Project: 1930 Date: July 17, 2018	NAD83 - UTM Zone 17 Size: 11x17" 1:10,000	



