Tree Conservation Report

Barrhaven South – 3872 Greenbank Road

Prepared for:

The Minto Group
200-180 Kent Street
Ottawa, ON K1P 0B6

Prepared by:

McIntosh Perry Consulting Engineers Ltd.
115 Walgreen Road
Carp, ON K0A 1L0

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www.mcintoshperry.com
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1.0 OVERVIEW

This Tree Conservation Report has been prepared for the Minto Group in support of a Re-zoning and Plan of Subdivision application to permit the development of the 3872 Greenbank Road, Ottawa, Ontario. This report was originally submitted in September 2012 and required revisions due to significant changes made to the overall Plan of Subdivision and because of the addition of a 2.46 hectares parcel located at the southeast of the original study area.

The property at 3872 Greenbank Road is situated north of Barnsdale Road. Based on the addition of a new parcel, the study area now equals approximately 26.5 hectares. The study area consists of one parcel of land currently developed as agricultural fields with an existing access road, vestiges of farm buildings and crop fields separated by hedgerows. The site is described legally as Part of lots 6 and 7, Concession 3 (Rideau Front), Geographic Township of Nepean, now in the City of Ottawa.

This Tree Conservation Report summarizes the condition of the current vegetation, defines which trees will be impacted by the development of this project and recommends mitigation measures to preserve a variety of vegetation that will improve the overall subdivision plan and promote a diverse vegetative landscape. The development of this project is planned to happen in 2015.
2.0 INTRODUCTION

This Tree Conservation Report outlines the condition of all existing vegetation on site, the impact of development on the vegetation and the mitigation measures recommended to preserve and minimize impact on the conserved vegetation. The protection of a variety of trees on site will serve to improve the overall subdivision and promote a diverse vegetative landscape.

Vegetation field surveys were conducted on June 11, June 21 and August 27, 2012, by Chris Heffernan, Heather Lunn, and Isabelle Lalonde from McIntosh Perry Consulting Engineers (McIntosh Perry) to review the species and basic conditions of the trees and large shrubs located at 3872 Greenbank Road in Ottawa, north of Barnsdale Road. Based on the City of Ottawa comments received early 2013 regarding the overall Plan of Subdivision a revised plan was developed and made available to the design and environmental team in May 2014. Due to the fast decline of ash trees in the City of Ottawa area, a new field investigation was conducted on June 10, 2014, by Isabelle Lalonde from McIntosh Perry to confirm existing vegetation species and update the health condition situation of existing vegetation. In addition, during this site investigation, we have collected new information regarding a new portion of land added to the subdivision boundary and located at the southeastern corner of the original study area.

The objectives of this Tree Conservation Report are:

- To describe the existing woody vegetation (trees and large shrubs) growing on site including species composition, size, vigour and health condition;
- To assess the woody vegetation functions including environmental value, ecological function, aesthetics, sensitivity to grade changes, drainage, sun and wind exposure, etc.;
- To produce a document describing the forested area including stands of trees and individual trees which may be candidates for consideration of conservation measures; and
- To provide a professional opinion on the retention of woody vegetation.

2.1 Definitions

Some of the basic terms used within this document and on the plans have been defined below. Potential protection techniques and remediation measures have been noted.

Critical Root Zone (CRZ): Zone under a tree where there should be no disturbance before, during and after construction. The CRZ is established as being 10 centimetres from the trunk of a tree for every centimetre of trunk diameter.

Diameter at Breast Height (DBH): Diameter of a tree trunk measured at 1.4 metre above ground, standardized by the Council of Tree and Landscape Appraisers and the International Society of Arboriculture.
Dieback: Condition in which the ends of the branches are dying.

Drip Line: Perimeter of the area under a tree delineated by the crown.

Leader: The primary terminal shoot or trunk of a tree.

Scaffold Branches: The permanent or structural branches of a tree.

Significant Tree: Tree / shrub deemed valuable because it is unusually beautiful or distinctive, comparatively old, distinctive in size or structure for its species, rare or unusual in the subject area, provides a habitat for rare or unusual wildlife species in the subject area, or has an historical, cultural, or landmark significance.

Significant Woodland: Woodland that contain mature stands of trees 80 years or older, have interior forest habitat more than 100 metres from forest edge, and are adjacent to a surface water feature.

Specimen Tree: Individual tree located in the middle of a field or open space. A specimen tree is not automatically a significant tree.

Stress: Any factor that negatively affects the health of a tree.

Structural Defect: Flaws, decay, or other faults in the trunk, branches, or root collar of a tree, which may lead to failure.

Topping (Topped): Cutting back a tree to buds, stubs, or laterals not large enough to become a new leader on the tree.

Tree Protection Zone (TPZ): The area surrounding a tree that is marked and fenced off and where there is no storage of materials of any kind, no parking or moving of vehicles, and no disturbance of the soil or grade.

Tree Shoots: Tree shoots are sprouts that emerge from dormant buds along the trunk or branch of a tree. In an urban environment shoots are often associated with stress to the tree. Trees with severe dieback due to winter injury, drought and salt spray often produce many shoots as a means of compensating for the loss of leaf surface due to stress or injury.

Tree Suckers: Tree suckers are sprouts that form from the roots of existing trees and tend to form new trees or shrubs. In an urban environment suckers can be associated with stress to the tree and are prevalent after a
disturbance such as when mature trees are cut down. Some tree species have the tendency to sucker.

Vigour: Overall health; capacity to grow and resist stress.
3.0 CURRENT VEGETATION

This inventory and analysis was a visual inspection of the tree species and their condition. The species were determined based on leaf, bark and buds identification. The vigour was assessed based on visible defects only.

3.1 Methodology

The property consists of a large agricultural field separated by hedgerows growing inside a stone fence, with an existing access road leading to vestiges of farm buildings. In general the site is flat with a gradual slope leading towards Greenbank Road located east of the property.

The complete assessment of every tree was not possible on such a large site. The inventory of all hedgerows was visually assessed to determine the composition of each hedgerow and to divide the property into zones of vegetation as indicated in Appendix A: Table 1 – Hedgerows and Grouping of Trees. Table 1 is to be read in conjunction with the Current Vegetation Plan (TC-1) accompanying this report. An average Diameter at Breast Height (DBH) was calculated for each vegetation zone. The approximate DBH noted in this report were measured on site during the tree inventory site visit conducted in the summer of 2012. During our June 2014 site inventory, a visual investigation was completed to confirm our 2012 observations and two new grouping of trees located within the new parcel of land were added to Table 1.

An inventory of selected individual trees was also completed and can be found in Appendix B: Table 2 – Individual Tree Survey. Four new trees located along Greenbank Road were inventoried during our 2014 field investigation and added to Table 2. The individual trees listed in Table 2 were selected if they met one of the following characteristic:

- Tree bigger than 40 centimetres DBH;
- Tree species unusual for the site or vegetation zone; or
- Specimen tree.

The approximate location of individual trees on the property was established on site based on physical characteristic of the site and is for reference purposes only. It should be noted that the location of these trees and their size should be confirmed by a tree inspector when establishing the limit of protected vegetation. The location of all trees listed in Table 2 is indicated on the Current Vegetation Plan (TC-1).

In addition to the selected individual trees, Table 2 also indicates the location of all dead trees or trees in poor condition due to structural defects or natural damages collected during our initial site survey in 2012 in order to get a general understanding of the overall health condition of the existing vegetation growing within the limit of the study area. Between our initial site survey in 2012 and the field investigation conducted in 2014, we have detected a noticeable decline in the health condition of the existing vegetation found on site. The list of all trees in poor condition observed during the 2014 investigation was not updated to add these
declining trees but health condition of any selected trees from the 2012 survey was updated. A detailed description of the 2014 vegetation condition is indicated in section 3.3 of this report.

### 3.2 2012 Observations

In general the trees inventoried on this property appeared to be in healthy conditions, are mature in size and show no signs of disease. Tree species composition included a mix of sugar maple (Acer saccharum), Manitoba maple (Acer negundo), green ash (Fraxinus pennsylvanica), common apple (Malus pumila), trembling aspen (Populus tremuloides), black cherry (Prunus serotina), American basswood (Tilia americana), and American elm (Ulmus americana) with a large number of hawthorn (Crataegus spp.) and European buckthorn (Rhamnus cathartica) as the main shrub species. The trees growing on this site have an average DBH of 15 centimetres to 25 centimetres.

The area west of Vegetation Zones B, C1, E and F (refer to Table 1 – Hedgerows and Current Vegetation Plan (TC-1)) consists in a mineral shallow marsh ecosite suspected to be an old pond used when the farm was active. At the time of our site inventory there was no signs of water. The area surrounding this depression can be characterized as an old orchard and meadow consisting mainly of grasses and plants typical of disturbed sites but also including apple trees, green ash, American elm, and hawthorn. Vegetation Zone C consists of a green ash mineral deciduous swamp.

During our 2012 field survey we did not observe any visible signs of Emerald Ash Borer (EAB) on ash trees. Dead trees observed on site consisted primarily in young American elm trees.

### 3.3 2014 Observations

The new portion of site included in the revised Plan of Subdivision is located within an agricultural field and was naturally ponding at the time of our site investigation with water extending in the portion of the site north of the southern original limit. Consequently, and because this area of the site is one of the lowest point, Vegetation Zones W, X and Y were surrounded and covered with water. Vegetation found within the new portion of land consists essentially in sporadic trees growing along the agricultural fence line adjacent to Greenbank Road. Tree species consist in green ash (Fraxinus pennsylvanica) and common apple (Malus pumila). All trees at this location appear to be in good health condition.

The mineral shallow marsh ecosite located west of Vegetation Zones B, C1, E and F was filled with water during our 2014 site investigation.

Considering the large number of ash trees growing within the study area and the fast decline of ash trees in Ottawa, the 2014 site investigation was utilised to confirm the overall health condition of these trees. Our site investigation revealed the severity of the problem. As of June 10, 2014, we can almost estimate that approximately 50% of the ash trees growing within the study area are showing signs of EAB. Signs present on site at this date include the following:
- Loss of leaves;
- Dead branches in the upper part of the trees;
- Thin tree crowns.

Other physical signs such as bark splitting and exit holes were not observed as it was not possible to access these trees due to the density of the understory. It should be noted that the number of affected ash trees varies in the different areas on site with a higher quantity of affected trees in the north eastern portion of the site. Infected trees vary in size from young trees with DBH of approximately 15-20 cm to more mature trees of approximately 30 cm DBH.

### 3.4 Environmental Value of the Trees and Their Ecological Function

Overall the majority of the trees composing the hedgerows on this property are not of significance. As indicated in Appendix A: Table 1 – Hedgerows, trees found in larger number on the subject land are Manitoba maple and green ash. The Manitoba maple is a fast growing tree that establishes itself independently and flourishes on many inhospitable sites. This tree is considered a weed species. The ash tree is commonly found in wooded areas throughout Ottawa and the rest of Ontario. Since 2008 ash trees located in the Ottawa region are affected by the Emerald Ash Borer (EAB). The EAB is a non-native, wood boring beetle attacking and destroying all species of ash trees. Because of the impacts on ash trees and to limit the spread of EAB the Canadian Food Inspection Agency has issued a ministerial order to prohibit movement of firewood and ash tree products such as nursery stock, logs, branches and wood chips from areas of Ottawa to any other surrounding regions. Due to the presence of EAB on site, special precaution will be required when removing and working around any ash tree. Special mitigation measures are described in section 5 of this report.

None of the trees on the site are considered to be species at risk but there is potential to preserve sections of some hedgerows and wooded areas for aesthetic reasons and to provide a more mature character to new development in keeping with the existing character of the adjacent neighbourhood. All efforts should be made to protect and preserve as much natural vegetation as possible if it fits in with the proposed development. Factors influencing preservation will be the amount of grading required at the base of the trees and the proximity of access roads, concrete curbs, servicing and/or built structures. Care will have to be taken to reduce the impact of construction on any trees that are to be preserved. Most of the construction impacts for this project will be in the form of new hard surfaces and the grade changes impacts on the roots of the trees.
4.0 PROPOSED DEVELOPMENT AND CONSERVED VEGETATION

The project for 3872 Greenbank Road involves the development of the property into a new residential subdivision. The proposed development shown on the Proposed Development and Conserved Vegetation Plan (TC-2) indicates the location of the proposed residential lots, school property, park space, streets, and stormwater management pond. Overall land use is as shown in the 2012 Plan of Subdivision with a review in the general layout of the Plan.

4.1 Conserved Vegetation

The Plan of Subdivision proposes different locations where trees and hedgerows can be conserved. These include the park space, the linear block 184, and block 188 where the new stormwater management pond is proposed. Both blocks 184 and 188 are located at the southern portion of the proposed Plan of Subdivision. In addition some significant trees located on the northern property line are potential trees to be retained. The trees and hedgerows to be retained are indicated on the Proposed Development and Conserved Vegetation Plan (TC-2). The list of all specimen trees, significant trees and hedgerow vegetation zones to be conserved is indicated in Appendix A and B. Special mitigation measures will be required when working around these trees. All conserved vegetation on site should be preserved at all times using the mitigation measures indicated below.

4.2 Impacted Vegetation

A number of existing trees and large shrubs will be impacted by the development of this site. The complete list of all specimen trees / shrubs and hedgerow vegetation zones to be removed due to the development of the new subdivision can be found in Appendix A and B. This Table is to be read in conjunction with the Proposed Development and Conserved Vegetation Plan (TC-2) accompanying this report. Impact on vegetation can be due to construction of roads, grade change, changes to drainage patterns, and effects of impervious surfaces and new buildings.

The trees recommended to be removed are all the trees located in the road right-of-ways, on the school property and in all residential lots due to the proposed density of building and the amount of grading required. A review of the preliminary grading plan prepared by JLR, in accordance with the macro-grading design approved in the “Barrhaven South Master Servicing Study” (Stantec, June 2007), anticipates the elevations for all proposed streets to be increased by more than 150 millimetres which will impact all vegetation located inside the property. An approximate area of 23,500 square metres of hedgerows / wooded area and a total of 39 specimen trees or large shrubs will be impacted by the development of this project. In addition to the impacted vegetation all 30 dead trees or trees in poor condition listed in Table 2 – Individual Tree Survey will also be removed. Special precaution to adjacent vegetation to remain should be taken when removing any trees.
5.0 TREE PROTECTION MEASURES

Tree protection measures described in this section are not only to ensure tree survival during the construction period but to ensure trees will continue to grow and stay healthy for many years. The tree protection strategy is to create a safe environment for the property users during construction but also preserving the trees and ensuring they do not become a hazard element in the long term. Trees can be damaged in a number of ways during construction. At any time no root system, trunk or branches of any tree should be damaged. Adequate protection of the trees to be retained and their immediate environment is crucial for their survival. The Contractor shall take every precaution necessary to prevent damage to the trees to be retained / conserved.

5.1 Temporary Tree Protection Fencing

The most common injury to a tree is to the crown or trunk. These injuries are visible and permanent and in some cases can be fatal to the tree. The roots are susceptible to physical injury through the cutting of the roots, soil compaction and/or smothering of the roots. The roots of a tree are located in the top 150 to 250 millimetres of soil and can very easily be inadvertently damaged. A vehicle parking inside the root zone of a tree can compact the soil reducing the roots ability to absorb nutrients and uptake water.

To ensure protection of the root system of trees to be retained, temporary tree protection fencing should be erected at the critical root zone (CRZ) of trees located inside or adjacent to the construction area. Tree protection barriers shall be installed according to information indicated on the Tree Conservation Details (TC-3) drawing. Fencing shall be maintained erect and in good repair at all times during construction operations, and shall be removed upon completion when agreed by City staff. Temporary removal of fencing will not be considered without City approval.

Within the critical root zone (CRZ) of trees to be retained / conserved and located within construction limits there must be:

- No disturbance or alteration of the existing grade of any kind without approval;
- No addition of fill, excavating, or scraping to change the grade;
- No signs, notices or posters to be attached to any trees;
- No storage of construction materials or equipment;
- No storage of surplus soil, construction waste, or debris over the root systems of the protected trees;
- No disposal (dumping or flushing) of contaminants or liquids; and,
- No movement of vehicles (personal or business), equipment or pedestrians.
5.2 Work within Protected Areas

5.2.1 Excavation Work

At any time during construction, root systems of trees to be retained should not be damaged. The roots should only be cut by hand with a sharp spade or knife at the limit of disturbance prior to any construction activities. This will ensure the roots are not disturbed more than necessary. All excavation within the critical root zone (CRZ) of trees shall be by hand or hydro excavation using the smallest tools. In the event that a tree has roots that will be impacted by the construction of trenches, the Contractor shall only tunnel or bore within the CRZ.

Any root pruning requires the service of a Certified Arborist or Qualified Tree Worker under the supervision of a Certified Arborist. Any roots that are exposed must be covered with native topsoil immediately, to ensure that the roots do not dry out or have any further damage occur to them. All remedial works must be conducted by a certified care professional to ensure proper care is administered in order to enable the continued health of the trees.

5.2.2 Grading Work

A change in grade of more than 150 millimetres over the roots will reduce its health and vigour. Where re-grading is required within the CRZ, it should be performed by hand under the supervision of a Certified Arborist.

5.2.3 Vegetation Removal

a) Vegetation to be retained should be adequately protected. Vegetation removal located within protected areas should be done by hand with no construction equipment being permitted within the area.

b) Where entire hedgerows are identified for retention, as indicated in Appendix A - Table 1, some undesirable existing vegetation will require removal. Due to the fast spreading of EAB and the large quantity of ash trees within the study area, the City of Ottawa Forester shall assess the value and benefit for the retention of any hedgerow prior to the selection of vegetation. Where hedgerows are identified as being retainable, the selection of all vegetation to be removed should be completed by a certified arborist and approved by the City of Ottawa Forestry Services prior to removal. It is recommended to remove the following vegetation located within protected areas:

- All dead trees;
- All trees in poor condition or showing an hazardous condition;
- All invasive species such as European buckthorn (*Rhamnus cathartica*);
- All ash trees (refer to section 5.3 for details and requirements related to ash trees removal).

5.3 Removal of Ash Trees
As identified in section 3.3 2014 Observations, we did see signs of EAB on a number of ash trees. In order to limit the infestation and prevent EAB from spreading into new parts of Canada, the Contractor will be required to follow special measures when removing or pruning ash trees for the development of the new subdivision. Because the City of Ottawa is located inside the EAB Regulated Area any non-processed (not debarked) ash products (logs, branches, etc.) should be kept inside the regulated area. The Owner and Contractor shall ensure that any ash products will not be moved outside the EAB Regulated Area. In order to restrain the movement of ash products for long distances within the City of Ottawa boundary the contractor should confirm with the City of Ottawa Forestry Department where to dispose of the wood. Possible options available for the Contractor when processing ash products are:

- Moving logs and firewood from large branches (more than four inches in diameter and four feet in length) to a private sawmill as close to Barrhaven as possible;
- Moving all ash products to the Trail Road Waste Disposal Facility.

When cutting ash trees the Contractor shall use the services of a certified arborist and separate ash products from other timber species on site to ensure the products are easily identified for processing.

5.4 Additional Protection Measures

When working near vegetation the Contractor shall ensure that exhaust fumes from all equipment are NOT directed towards any tree’s canopy.

Where limbs or portions of trees are removed to accommodate construction work, they will be removed carefully in accordance with accepted arboricultural practices.

Where necessary, the trees will be given an overall pruning to restore the appearance of the trees. Not more than one-third of the total branching shall be removed at a single operation.

5.5 Monitoring of Tree Health

Trees located adjacent to construction works will experience the change in their immediate environment. As a result, tree health should be monitored. Photographs of each tree to remain should be taken prior to construction, when the trees are in full leaf, as a record of its condition. Monitoring tree health both during and after construction should be made a priority. Actions should be taken as early as possible when detecting distress of trees that are being protected. Services of a Certified Arborist should be used in order to give adequate care to the tree.

Trees that have died or have been damaged beyond repair by the Contractor shall be removed and replaced by the Contractor at their own expense with trees of equal size and species or as directed by City staff. Damages will include:

- Any physical damage on tree bark;
• Any broken branches;
• Equipment and materials stored within the protected areas and beyond the limits of the contract; and
• Refueling of equipment within the protected areas.

5.6 Clearing and Grubbing Activities

5.6.1 Tree Removal

Any trees designated for removal and located outside a protected area will have the stumps completely excavated and removed unless such removal will adversely affect existing trees / ecology to remain, in which case trunks will be cut flush to existing grades.

5.6.2 Wildlife Protection

Clearing operations are prohibited during the nesting periods which extend from April 15 to July 31 for most birds. Should tree removal during bird nesting season be unavoidable, the contractor is required to conduct a nesting survey by a registered professional avian biologist to identify and ensure there are no nesting activities. Tree removal will be allowed within five days of conducting the survey.
6.0 TREE PLANTING RECOMMENDATIONS

Tree planting for 3872 Greenbank Road should implement the natural character of the conserved vegetation on site. Based on our field observations and the proposed development for the site, the following represent a list of tree planting recommendations:

- Where possible the use of native, non-invasive tree species should be preferred.
- Tree planting for all residential lots, school property, park space and streets should take into account the tree species currently found on site and comply with site specific soil conditions.
- Where hedgerows will be retained, compensation planting shall be considered in order to counterbalance the gaps left by the removal of unhealthy, undesirable vegetation as indicated in section 5.2.3. Selected plant material should implement the natural character of the hedgerows.
- Street tree planting should be provided to frame the space and create a continuous canopy giving a human scale to the streets.
7.0 CONCLUSION

Should you have any questions regarding the information presented within this package, please contact the undersigned.

Sincerely,

Isabelle Lalonde, BLA, OALA, AAPQ, CSLA
Landscape Architect
115 Walgreen Road, R R 3, Carp, ON K0A 1L0
T. 613.836.2184 (2283) | M. 613.229.2773
F. 613.836.3742
i.lalonde@mcintoshperry.com | www.mcintoshperry.com
Appendix A –  Table 1 – Hedgerows and Grouping of Trees
### Table 1 – Hedgerows and Grouping of Trees

<table>
<thead>
<tr>
<th>Vegetation Zone</th>
<th>Description</th>
<th>DBH (cm)</th>
<th>Health Condition</th>
<th>Design Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>75% Manitoba Maple (<em>Acer negundo</em>) 15% Hawthorn (<em>Crataegus spp.</em>) 8% American Elm (<em>Ulmus americana</em>) 2% Siberian Elm (<em>Ulmus pumila</em>)</td>
<td>15 to 25</td>
<td>Good to Fair</td>
<td>Despite not being of significance this entire hedgerow is to be conserved and protected during construction.</td>
</tr>
<tr>
<td>B</td>
<td>70% Green Ash (<em>Fraxinus pennsylvanica</em>) 15% Hawthorn (<em>Crataegus spp.</em>) 10% American Elm (<em>Ulmus americana</em>) 5% Common Apple (<em>Malus pumila</em>)</td>
<td>15 to 25</td>
<td>Good to Poor</td>
<td>This hedgerow is not of significance and is located in proposed street right-of-ways, inside residential blocks, and within the park. Despite a section of this hedgerow is located within the proposed park its entirety shall be removed because of predominance of infected ash trees at this particular location. In addition, re-grading will be required in the new residential blocks.</td>
</tr>
<tr>
<td>C</td>
<td>60% Green Ash (<em>Fraxinus pennsylvanica</em>) 20% Common Apple (<em>Malus pumila</em>) 10% Hawthorn (<em>Crataegus spp.</em>) 5% Manitoba Maple (<em>Acer negundo</em>) 5% American Elm (<em>Ulmus americana</em>)</td>
<td>15 to 25</td>
<td>Fair</td>
<td>Ash trees show signs of EAB therefore they should all be removed. In addition, entire zone is to be removed as it is not of significance and is located in proposed street right-of-ways and inside residential blocks. Re-grading will be required in both cases.</td>
</tr>
<tr>
<td>D₁ / D₂</td>
<td>60% Manitoba Maple (<em>Acer negundo</em>) 30% Green Ash (<em>Fraxinus pennsylvanica</em>) 5% European Buckthorn (<em>Rhamnus cathartica</em>) 5% American Elm (<em>Ulmus americana</em>)</td>
<td>15 to 25</td>
<td>Fair to Poor</td>
<td>Ash trees show signs of EAB therefore they should all be removed. Entire vegetated area to be removed. The vegetated area is not of significance and is located at the back of residential lots.</td>
</tr>
<tr>
<td>E</td>
<td>100% American Basswood (<em>Tilia americana</em>)</td>
<td>15 to 25</td>
<td>Good</td>
<td>Entire zone to be removed as it is a tree species that is intolerant of construction disturbance and is located at the back of residential lots.</td>
</tr>
<tr>
<td>Vegetation Zone</td>
<td>Description</td>
<td>DBH (cm)</td>
<td>Health Condition</td>
<td>Design Recommendations</td>
</tr>
<tr>
<td>----------------</td>
<td>------------------------------------------------------------------------------</td>
<td>----------</td>
<td>------------------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>F</td>
<td>60% Green Ash (<em>Fraxinus pennsylvanica</em>) 30% Common Apple (<em>Malus pumila</em>) 10% American Elm (<em>Ulmus americana</em>)</td>
<td>15 to 25</td>
<td>Fair to Poor</td>
<td>Ash trees show signs of EAB therefore they should all be removed. Entire zone to be removed as it is not of significance and is located in proposed street right-of-way and inside residential blocks where re-grading will be required.</td>
</tr>
<tr>
<td>G</td>
<td>65% Manitoba Maple (<em>Acer negundo</em>) 15% Common Apple (<em>Malus pumila</em>) 10% Green Ash (<em>Fraxinus pennsylvanica</em>) 10% European Buckthorn (<em>Rhamnus cathartica</em>)</td>
<td>15 to 25</td>
<td>Good to Fair</td>
<td>Ash trees show signs of EAB therefore they should all be removed. Entire hedgerow to be removed as it is not of significance and is located at the back of residential lots. Part of the hedgerow is also located in a proposed street right-of-way where re-grading will be required.</td>
</tr>
<tr>
<td>H₁ / H₂</td>
<td>75% Manitoba Maple (<em>Acer negundo</em>) 15% Hawthorn (<em>Crataegus spp.</em>) 10% Common Apple (<em>Malus pumila</em>)</td>
<td>15 to 25</td>
<td>Good</td>
<td>Entire zone H₁ / H₂ to be removed as it is not of significance and is located in a proposed street right-of-way, inside proposed residential lots and within the school property. Re-grading will be required in all cases.</td>
</tr>
<tr>
<td>I</td>
<td>100% Manitoba Maple (<em>Acer negundo</em>)</td>
<td>15 to 25</td>
<td>Good</td>
<td>Entire zone to be removed as it is not of significance and is located within the proposed school property where re-grading will be required.</td>
</tr>
<tr>
<td>J</td>
<td>35% American Elm (<em>Ulmus americana</em>) 25% Manitoba Maple (<em>Acer negundo</em>) 10% Hawthorn (<em>Crataegus spp.</em>) 10% Green Ash (<em>Fraxinus pennsylvanica</em>) 10% Black Cherry (<em>Prunus serotina</em>) 5% Common Apple (<em>Malus pumila</em>) 5% European Buckthorn (<em>Rhamnus cathartica</em>)</td>
<td>15 to 25</td>
<td>Good</td>
<td>Entire zone to be removed as it is not of significance and is located at the back of residential lots.</td>
</tr>
</tbody>
</table>
### Barrhaven South – 3872 Greenbank Road

<table>
<thead>
<tr>
<th>Vegetation Zone</th>
<th>Description</th>
<th>DBH (cm)</th>
<th>Health Condition</th>
<th>Design Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>K</strong></td>
<td>50% Sugar Maple (<em>Acer saccharum</em>)&lt;br&gt;15% American Elm (<em>Ulmus americana</em>)&lt;br&gt;10% Green Ash (<em>Fraxinus pennsylvanica</em>)&lt;br&gt;10% Hawthorn (<em>Crataegus spp.</em>)&lt;br&gt;10% European Buckthorn (<em>Rhamnus cathartica</em>)&lt;br&gt;5% Manitoba Maple (<em>Acer negundo</em>)</td>
<td>15 to 25</td>
<td>Good</td>
<td>Ash trees show signs of EAB therefore they should all be removed. Entire hedgerow to be removed with the exception of tree ID #50 (refer to Table 2). The hedgerow is not of significance and is located at the back of residential lots and inside proposed street right-of-way. Where possible, sugar maples growing on the property line should be protected and preserved as site features.</td>
</tr>
<tr>
<td><strong>L</strong></td>
<td>85% Green Ash (<em>Fraxinus pennsylvanica</em>)&lt;br&gt;10% European Buckthorn (<em>Rhamnus cathartica</em>)&lt;br&gt;5% White Oak (<em>Quercus alba</em>)</td>
<td>15 to 25</td>
<td>Good</td>
<td>Ash trees show signs of EAB therefore they should all be removed. Entire hedgerow to be removed as it is not of significance. One part of the hedgerow is located in a proposed street right-of-way while the other part is located within residential blocks. Re-grading will be required in both cases.</td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>90% American Basswood (<em>Tilia americana</em>)&lt;br&gt;10% Common Apple (<em>Malus pumila</em>)</td>
<td>15 to 25</td>
<td>Good</td>
<td>Entire hedgerow to be removed as the American basswood is a tree species that is intolerant of construction disturbance and due to the re-grading of the school property.</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>65% Manitoba Maple (<em>Acer negundo</em>)&lt;br&gt;10% Green Ash (<em>Fraxinus pennsylvanica</em>)&lt;br&gt;10% American Elm (<em>Ulmus americana</em>)&lt;br&gt;5% American Basswood (<em>Tilia americana</em>)&lt;br&gt;5% Common Lilac (<em>Syringa vulgaris</em>)&lt;br&gt;5% Bebb’s Willow (<em>Salix bebbiana</em>)</td>
<td>15 to 25</td>
<td>Good</td>
<td>Ash trees show signs of EAB therefore they should all be removed. Entire hedgerow to be removed as it is not of significance. Part of the hedgerow is located in a proposed street right-of-way, on residential blocks, and within the school property. Re-grading will be required in both cases.</td>
</tr>
<tr>
<td><strong>O</strong></td>
<td>75% Manitoba Maple (<em>Acer negundo</em>)&lt;br&gt;10% Black Cherry (<em>Prunus serotina</em>)&lt;br&gt;10% Hawthorn (<em>Crataegus spp.</em>)&lt;br&gt;5% Common Apple (<em>Malus pumila</em>)</td>
<td>15 to 25</td>
<td>Good</td>
<td>Entire hedgerow to be removed as it is not of significance. Part of the hedgerow is located within the school property where re-grading will be required.</td>
</tr>
<tr>
<td>Vegetation Zone</td>
<td>Description</td>
<td>DBH (cm)</td>
<td>Health Condition</td>
<td>Design Recommendations</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------------------------------------------</td>
<td>----------</td>
<td>------------------</td>
<td>---------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>P</td>
<td>80% Hawthorn (<em>Crataegus</em> spp.) 20% European Buckthorn (<em>Rhamnus cathartica</em>)</td>
<td>15 to 25</td>
<td>Good</td>
<td>Entire zone to be removed as it is not of significance and located in a proposed street right-of-way where re-grading will be required.</td>
</tr>
<tr>
<td>Q</td>
<td>50% Black Cherry (<em>Prunus serotina</em>) 30% Manitoba Maple (<em>Acer negundo</em>) 10% Hawthorn (<em>Crataegus spp.</em>) 5% American Basswood (<em>Tilia americana</em>) 5% American Elm (<em>Ulmus americana</em>)</td>
<td>15 to 25</td>
<td>Good</td>
<td>Entire zone to be removed as it is not of significance and black cherry is a tree species that is intolerant of construction disturbance. The entire zone is located inside a proposed street right-of-way where re-grading will be required.</td>
</tr>
<tr>
<td>R</td>
<td>90% American Basswood (<em>Tilia americana</em>) 10% Black Cherry (<em>Prunus serotina</em>)</td>
<td>15 to 25</td>
<td>Good</td>
<td>Entire zone to be removed as it is not of significance and tree species are intolerant of construction disturbance. The entire zone is located inside a proposed street right-of-way where re-grading will be required.</td>
</tr>
<tr>
<td>S</td>
<td>60% Green Ash (<em>Fraxinus pennsylvanica</em>) 20% Manitoba Maple (<em>Acer negundo</em>) 10% Hawthorn (<em>Crataegus spp.</em>) 5% European Buckthorn (<em>Rhamnus cathartica</em>) 5% American Elm (<em>Ulmus americana</em>)</td>
<td>15 to 25</td>
<td>Good to Fair</td>
<td>Some ash trees show signs of EAB therefore all ash trees should be removed. Entire zone to be removed as it is not of significance and is located in a proposed street right-of-way where re-grading will be required.</td>
</tr>
<tr>
<td>T</td>
<td>55% Manitoba Maple (<em>Acer negundo</em>) 20% Black Cherry (<em>Prunus serotina</em>) 10% Common Apple (<em>Malus pumila</em>) 5% Green Ash (<em>Fraxinus pennsylvanica</em>) 5% American Basswood (<em>Tilia americana</em>) 5% European Buckthorn (<em>Rhamnus cathartica</em>)</td>
<td>15 to 25</td>
<td>Good to Fair</td>
<td>Some ash trees show signs of EAB therefore all ash trees should be removed. Entire zone to be removed as it is not of significance and is located in proposed street right-of-ways and inside residential blocks. Re-grading will be required in both cases.</td>
</tr>
<tr>
<td>Vegetation Zone</td>
<td>Description</td>
<td>DBH (cm)</td>
<td>Health Condition</td>
<td>Design Recommendations</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------</td>
<td>----------</td>
<td>------------------</td>
<td>------------------------</td>
</tr>
</tbody>
</table>
| U              | 50% Green Ash (*Fraxinus pennsylvanica*)  
25% Manitoba Maple (*Acer negundo*)  
5% Black Cherry (*Prunus serotina*)  
5% American Elm (*Ulmus americana*)  
5% Choke Cherry (*Prunus virginiana*)  
5% White Ash (*Fraxinus americana*)  
5% European Buckthorn (*Rhamnus cathartica*) | 15 to 25 | Good to Fair | Despite not being of significance the entire zone which is located inside block 184 is to be conserved should the City of Ottawa Forester decides to retain the hedgerow. Removal of some tree species and hazardous trees is required. Some ash trees show signs of EAB therefore all ash trees should be removed. Refer to section 5.2.3 in the Tree Conservation Report for details. |
| V              | 100% Staghorn Sumac (*Rhus typhina*) | 15 to 25 | Good | |
| W              | 80% Manitoba Maple (*Acer negundo*)  
10% Black Cherry (*Prunus serotina*)  
10% Common Apple (*Malus pumila*) | 15 to 25 | Good | Despite not being of significance the entire zone which is located inside block 184 is to be conserved should the City of Ottawa Forester decides to retain the hedgerow. Removal of some tree species and hazardous trees is required. Refer to section 5.2.3 in the Tree Conservation Report for details. |
| X              | 50% Manitoba Maple (*Acer negundo*)  
20% White Ash (*Fraxinus americana*)  
10% Hawthorn (*Crataegus spp.*)  
5% American Basswood (*Tilia americana*)  
5% Bur Oak (*Quercus macrocarpa*)  
5% Nannyberry (*Viburnum lentago*) | 15 to 25 | Good | Despite not being of significance the entire zone which is located inside block 184 is to be conserved should the City of Ottawa Forester decides to retain the hedgerow. Removal of some tree species and hazardous trees is required. Some ash trees show signs of EAB therefore all ash trees should be removed. Refer to section 5.2.3 in the Tree Conservation Report for details. |
### Vegetation Zone Description

<table>
<thead>
<tr>
<th>Vegetation Zone</th>
<th>Description</th>
<th>DBH (cm)</th>
<th>Health Condition</th>
<th>Design Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Y</strong></td>
<td>100% Trembling Aspen (<em>Populus tremuloides</em>)</td>
<td>15 to 25</td>
<td>Good to Fair</td>
<td>Despite not being of significance the entire zone which is located inside block 184 is to be conserved should the City of Ottawa Forester decides to retain the hedgerow. Some of the trembling aspens show signs of structural defect that should be eliminated. Removal of some tree species and hazardous trees is required. Refer to section 5.2.3 in the Tree Conservation Report for details.</td>
</tr>
<tr>
<td><strong>Z</strong></td>
<td>70% White Ash (<em>Fraxinus americana</em>)&lt;br&gt;15% Staghorn Sumac (<em>Rhus typhina</em>)&lt;br&gt;10% American Basswood (<em>Tilia americana</em>)&lt;br&gt;5% American Elm (<em>Ulmus americana</em>)</td>
<td>15 to 25</td>
<td>Good to Fair</td>
<td>Despite not being of significance the entire zone which is located inside block 184 is to be conserved should the City of Ottawa Forester decides to retain the hedgerow. Removal of some tree species and hazardous trees is required. Some ash trees show signs of EAB therefore all ash trees should be removed. Refer to section 5.2.3 in the Tree Conservation Report for details.</td>
</tr>
<tr>
<td><strong>AA</strong></td>
<td>100% Green Ash (<em>Fraxinus pennsylvanica</em>)</td>
<td>15 to 30</td>
<td>Good</td>
<td>Grouping of trees located along Greenbank Road and adjacent to proposed stormwater management pond. Because ash trees on the property show signs of EAB all ash trees should be removed.</td>
</tr>
<tr>
<td><strong>BB</strong></td>
<td>80% Common Apple (<em>Malus pumila</em>)&lt;br&gt;20% Green Ash (<em>Fraxinus pennsylvanica</em>)</td>
<td>10 to 15</td>
<td>Good</td>
<td>Grouping of trees located along Greenbank Road and adjacent to proposed stormwater management pond. Because ash trees on the property show signs of EAB all ash trees should be removed. Common apple trees should be protected during construction.</td>
</tr>
</tbody>
</table>
Appendix B – Table 2 – Individual Tree Survey
## Table 2 – Individual Tree Survey

<table>
<thead>
<tr>
<th>TREE ID</th>
<th>Species – Common Name</th>
<th>Species – Botanical Name</th>
<th>DBH (cm)</th>
<th>Health Condition</th>
<th>Remarks</th>
<th>Design Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Common Apple</td>
<td>Malus pumila</td>
<td>3 x 25</td>
<td>Good</td>
<td>Specimen tree</td>
<td>Tree to be removed as it is not a tree of significance and is located inside a residential block where re-grading will be required.</td>
</tr>
<tr>
<td>2</td>
<td>Hawthorn</td>
<td>Crataegus spp.</td>
<td>4 x 10</td>
<td>Good</td>
<td>Specimen large shrub</td>
<td>Large shrub to be removed as it is not a shrub of significance and is located inside a residential block where re-grading will be required.</td>
</tr>
<tr>
<td>3</td>
<td>Hawthorn</td>
<td>Crataegus spp.</td>
<td>4 x 15</td>
<td>Good</td>
<td>Specimen large shrub</td>
<td>Large shrub to be removed as it is not a shrub of significance and is located inside a residential block where re-grading will be required.</td>
</tr>
<tr>
<td>4</td>
<td>Green Ash</td>
<td>Fraxinus pennsylvanica</td>
<td>8 x 25</td>
<td>Good</td>
<td>Specimen tree</td>
<td>Tree to be removed because all ash trees are being removed from site due to fast spreading of EAB.</td>
</tr>
<tr>
<td>5</td>
<td>American Elm</td>
<td>Ulmus americana</td>
<td>40</td>
<td>Good</td>
<td>Specimen tree</td>
<td>Tree to be removed as it is not a tree of significance and is located inside a residential block where re-grading will be required.</td>
</tr>
<tr>
<td>6</td>
<td>Hawthorn</td>
<td>Crataegus spp.</td>
<td>4 x 15</td>
<td>Good</td>
<td>Specimen large shrub</td>
<td>Large shrub to be removed as it is not a shrub of significance and is located inside a residential block where re-grading will be required.</td>
</tr>
<tr>
<td>7a</td>
<td>Common Apple</td>
<td>Malus pumila</td>
<td>5 x 15</td>
<td>Good</td>
<td>Specimen tree; Trees are growing together in a tight grouping</td>
<td>Tree to be removed as it is not a tree of significance and is located inside a residential block where re-grading will be required.</td>
</tr>
<tr>
<td>7b</td>
<td>Green Ash</td>
<td>Fraxinus pennsylvanica</td>
<td>40</td>
<td>Good</td>
<td>Specimen tree; Trees are growing together in a tight grouping</td>
<td>Tree to be removed because all ash trees are being removed from site due to fast spreading of EAB.</td>
</tr>
</tbody>
</table>
# Tree Conservation Report

**Barrhaven South – 3872 Greenbank Road**

**Revised: July 2014**

<table>
<thead>
<tr>
<th>TREE ID</th>
<th>Species – Common Name</th>
<th>Species – Botanical Name</th>
<th>DBH (cm)</th>
<th>Health Condition</th>
<th>Remarks</th>
<th>Design Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Green Ash</td>
<td>Fraxinus pennsylvanica</td>
<td>40; 50</td>
<td>Good</td>
<td>Specimen tree</td>
<td>Tree to be removed because all ash trees are being removed from site due to fast spreading of EAB.</td>
</tr>
<tr>
<td>9</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Dead</td>
<td>N/A</td>
<td>Tree to be removed due to its poor condition.</td>
</tr>
<tr>
<td>10</td>
<td>Hawthorn</td>
<td>Crataegus spp.</td>
<td>7 x 15</td>
<td>Good</td>
<td>Specimen large shrub</td>
<td>Despite not being of significance this large shrub is to be conserved if possible as it is located inside the proposed park space.</td>
</tr>
<tr>
<td>11</td>
<td>Manitoba Maple</td>
<td>Acer negundo</td>
<td>N/A</td>
<td>Dead</td>
<td>Tree has fallen down</td>
<td>Tree to be removed due to its poor condition.</td>
</tr>
<tr>
<td>12</td>
<td>American Elm</td>
<td>Ulmus americana</td>
<td>40; 50</td>
<td>Good</td>
<td>Selected Individual tree</td>
<td>Despite not being of significance this tree is to be conserved if possible as it is located inside the proposed park space.</td>
</tr>
<tr>
<td>13</td>
<td>Siberian Elm</td>
<td>Ulmus pumila</td>
<td>50</td>
<td>Good</td>
<td>Selected Individual tree</td>
<td>Despite not being of significance this tree is to be conserved if possible as it is located inside the proposed park space.</td>
</tr>
<tr>
<td>14</td>
<td>American Elm</td>
<td>Ulmus americana</td>
<td>5 x 10 to 30</td>
<td>Dead</td>
<td>Tree to be removed due to its poor condition.</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>American Elm</td>
<td>Ulmus americana</td>
<td>N/A</td>
<td>Dead</td>
<td>Tree has fallen down</td>
<td>Tree to be removed due to its poor condition.</td>
</tr>
<tr>
<td>16</td>
<td>American Elm</td>
<td>Ulmus americana</td>
<td>N/A</td>
<td>Dead</td>
<td>Tree to be removed due to its poor condition.</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>American Elm</td>
<td>Ulmus americana</td>
<td>N/A</td>
<td>Dead</td>
<td>Tree to be removed due to its poor condition.</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Green Ash</td>
<td>Fraxinus pennsylvanica</td>
<td>80</td>
<td>Poor</td>
<td>Ash tree shows signs of EAB.</td>
<td>Tree to be removed due to its poor condition.</td>
</tr>
<tr>
<td>19</td>
<td>Green Ash</td>
<td>Fraxinus pennsylvanica</td>
<td>40</td>
<td>Fair</td>
<td>Specimen tree</td>
<td>Tree to be removed because all ash trees are being removed from site due to fast spreading of EAB.</td>
</tr>
<tr>
<td>20</td>
<td>Hawthorn</td>
<td>Crataegus spp.</td>
<td>6 x 15</td>
<td>Good</td>
<td>Specimen large shrub</td>
<td>Large shrub to be removed as it is not a shrub of significance and is located inside a residential block.</td>
</tr>
<tr>
<td>TREE ID</td>
<td>Species – Common Name</td>
<td>Species – Botanical Name</td>
<td>DBH (cm)</td>
<td>Health Condition</td>
<td>Remarks</td>
<td>Design Recommendations</td>
</tr>
<tr>
<td>---------</td>
<td>------------------------</td>
<td>--------------------------</td>
<td>----------</td>
<td>------------------</td>
<td>---------</td>
<td>------------------------</td>
</tr>
<tr>
<td>21</td>
<td>Hawthorn</td>
<td>Crataegus spp.</td>
<td>10 x 10 to 15</td>
<td>Good</td>
<td>Specimen large shrub</td>
<td>This large shrub is to be removed as it is not of significance and located inside a residential block.</td>
</tr>
<tr>
<td>22</td>
<td>Green Ash</td>
<td>Fraxinus pennsylvanica</td>
<td>4 x 20 to 25</td>
<td>Fair</td>
<td>Specimen tree</td>
<td>Tree to be removed because all ash trees are being removed from site due to fast spreading of EAB.</td>
</tr>
<tr>
<td>23</td>
<td>Hawthorn</td>
<td>Crataegus spp.</td>
<td>8 x 10 to 15</td>
<td>Good</td>
<td>Specimen large shrub</td>
<td>This large shrub is to be removed as it is not of significance and located inside a residential block.</td>
</tr>
<tr>
<td>24</td>
<td>Green Ash</td>
<td>Fraxinus pennsylvanica</td>
<td>30</td>
<td>Fair</td>
<td>Specimen tree</td>
<td>Tree to be removed because all ash trees are being removed from site due to fast spreading of EAB.</td>
</tr>
<tr>
<td>25</td>
<td>American Elm</td>
<td>Ulmus americana</td>
<td>20</td>
<td>Good</td>
<td>Specimen tree</td>
<td>Tree to be removed as it is not a tree of significance and is located inside a residential block.</td>
</tr>
<tr>
<td>26</td>
<td>Green Ash</td>
<td>Fraxinus pennsylvanica</td>
<td>25</td>
<td>Fair</td>
<td>Specimen tree</td>
<td>Tree to be removed because all ash trees are being removed from site due to fast spreading of EAB.</td>
</tr>
<tr>
<td>27</td>
<td>Green Ash</td>
<td>Fraxinus pennsylvanica</td>
<td>30; 40</td>
<td>Poor</td>
<td>Damaged</td>
<td>Tree to be removed due to its poor condition.</td>
</tr>
<tr>
<td>28</td>
<td>Hawthorn</td>
<td>Crataegus spp.</td>
<td>6 x 15</td>
<td>Good</td>
<td>Specimen large shrub</td>
<td>This large shrub is to be removed as it is not of significance and located inside a residential block.</td>
</tr>
<tr>
<td>29</td>
<td>Green Ash</td>
<td>Fraxinus pennsylvanica</td>
<td>2 x 40</td>
<td>Fair</td>
<td>Specimen tree</td>
<td>Tree to be removed because all ash trees are being removed from site due to fast spreading of EAB.</td>
</tr>
<tr>
<td>30</td>
<td>Manitoba Maple</td>
<td>Acer negundo</td>
<td>15</td>
<td>Good</td>
<td>Specimen tree; considered a weed species</td>
<td>Tree to be removed as it is not a tree of significance and is located inside a residential block.</td>
</tr>
<tr>
<td>31</td>
<td>Green Ash</td>
<td>Fraxinus pennsylvanica</td>
<td>80</td>
<td>Poor</td>
<td>Dying</td>
<td>Tree to be removed due to its poor condition.</td>
</tr>
<tr>
<td>TREE ID</td>
<td>Species – Common Name</td>
<td>Species – Botanical Name</td>
<td>DBH (cm)</td>
<td>Health Condition</td>
<td>Remarks</td>
<td>Design Recommendations</td>
</tr>
<tr>
<td>---------</td>
<td>-----------------------</td>
<td>--------------------------</td>
<td>----------</td>
<td>------------------</td>
<td>---------</td>
<td>------------------------</td>
</tr>
<tr>
<td>32</td>
<td>European Buckthorn</td>
<td>Rhamnus cathartica</td>
<td>N/A</td>
<td>Good</td>
<td>Specimen large shrub; considered a weed species</td>
<td>Large shrub to be removed as it is not a shrub of significance and is located in road right-of-way.</td>
</tr>
<tr>
<td>33</td>
<td>American Elm</td>
<td>Ulmus americana</td>
<td>15</td>
<td>Poor</td>
<td>Damaged</td>
<td>Tree to be removed due to its poor condition.</td>
</tr>
<tr>
<td>34</td>
<td>Green Ash</td>
<td>Fraxinus pennsylvanica</td>
<td>N/A</td>
<td>Dead</td>
<td>Tree has fallen down</td>
<td>Tree to be removed due to its poor condition.</td>
</tr>
<tr>
<td>35</td>
<td>Green Ash</td>
<td>Fraxinus pennsylvanica</td>
<td>25</td>
<td>Dead</td>
<td>Tree to be removed due to its poor condition.</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>Green Ash</td>
<td>Fraxinus pennsylvanica</td>
<td>50</td>
<td>Fair</td>
<td>Specimen tree</td>
<td>Tree to be removed because all ash trees are being removed from site due to fast spreading of EAB.</td>
</tr>
<tr>
<td>37</td>
<td>Common Apple</td>
<td>Malus pumila</td>
<td>20</td>
<td>Good</td>
<td>Specimen tree</td>
<td>Tree to be removed as it is not a tree of significance and is located in road right-of-way.</td>
</tr>
<tr>
<td>38</td>
<td>Hawthorn</td>
<td>Crataegus spp.</td>
<td>8 x 15 to 20</td>
<td>Good</td>
<td>Specimen large shrub</td>
<td>Large shrub to be removed as it is not a shrub of significance and is located inside a residential block.</td>
</tr>
<tr>
<td>39</td>
<td>Hawthorn</td>
<td>Crataegus spp.</td>
<td>8 x 10 to 15</td>
<td>Good</td>
<td>Specimen large shrub</td>
<td>Large shrub to be removed as it is not a shrub of significance and is located inside a residential block.</td>
</tr>
<tr>
<td>40</td>
<td>Manitoba Maple</td>
<td>Acer negundo</td>
<td>80</td>
<td>Good</td>
<td>Selected Individual tree; considered a weed species</td>
<td>Tree to be removed as it is not a tree of significance and is located inside a residential block.</td>
</tr>
<tr>
<td>41</td>
<td>Green Ash</td>
<td>Fraxinus pennsylvanica</td>
<td>40</td>
<td>Good to Fair</td>
<td>Selected Individual tree</td>
<td>Tree to be removed because all ash trees are being removed from site due to fast spreading of EAB.</td>
</tr>
<tr>
<td>42</td>
<td>Green Ash</td>
<td>Fraxinus pennsylvanica</td>
<td>40</td>
<td>Good to Fair</td>
<td>Selected Individual tree</td>
<td>Tree to be removed because all ash trees are being removed from site due to fast spreading of EAB.</td>
</tr>
<tr>
<td>43</td>
<td>Bitternut Hickory</td>
<td>Carya cordiformis</td>
<td>4 x 25 to 30</td>
<td>Good</td>
<td>Selected Individual tree</td>
<td>Tree to be removed as it is not a tree of significance and is located inside a residential block.</td>
</tr>
</tbody>
</table>
### Tree Conservation Report
Revised: July 2014

<table>
<thead>
<tr>
<th>TREE ID</th>
<th>Species – Common Name</th>
<th>Species – Botanical Name</th>
<th>DBH (cm)</th>
<th>Health Condition</th>
<th>Remarks</th>
<th>Design Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>44</td>
<td>Manitoba Maple</td>
<td>Acer negundo</td>
<td>4 x 20</td>
<td>Poor</td>
<td>Dying</td>
<td>Tree to be removed due to its poor condition.</td>
</tr>
<tr>
<td>45</td>
<td>Manitoba Maple</td>
<td>Acer negundo</td>
<td>6 x 20 to 40</td>
<td>Poor</td>
<td>Dying</td>
<td>Tree to be removed due to its poor condition.</td>
</tr>
<tr>
<td>46</td>
<td>Manitoba Maple</td>
<td>Acer negundo</td>
<td>N/A</td>
<td>Dead</td>
<td>Tree has fallen down</td>
<td>Tree to be removed due to its poor condition.</td>
</tr>
<tr>
<td>47</td>
<td>Manitoba Maple</td>
<td>Acer negundo</td>
<td>N/A</td>
<td>Dead</td>
<td>Tree has fallen down</td>
<td>Tree to be removed due to its poor condition.</td>
</tr>
<tr>
<td>48</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Dead</td>
<td>N/A</td>
<td>Tree to be removed due to its poor condition.</td>
</tr>
<tr>
<td>49</td>
<td>Manitoba Maple</td>
<td>Acer negundo</td>
<td>60</td>
<td>Fair to Poor</td>
<td>Selected Individual tree; considered a weed species; structural defect.</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>Sugar Maple</td>
<td>Acer saccharum</td>
<td>120</td>
<td>Good</td>
<td>Significant tree</td>
<td>Tree to be conserved as it is a tree of significant size. Tree to be removed as it is not a tree of significance and is located inside a residential block where re-grading will be required.</td>
</tr>
<tr>
<td>51</td>
<td>Bur Oak</td>
<td>Quercus macrocarpa</td>
<td>3 x 35</td>
<td>Good</td>
<td>Selected Individual tree</td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>Green Ash</td>
<td>Fraxinus pennsylvanica</td>
<td>2 x 50</td>
<td>Fair</td>
<td>Selected Individual tree</td>
<td>Tree to be removed because all ash trees are being removed from site due to fast spreading of EAB.</td>
</tr>
<tr>
<td>53</td>
<td>Manitoba Maple</td>
<td>Acer negundo</td>
<td>4 x 30</td>
<td>Good</td>
<td>Selected Individual tree; considered a weed species</td>
<td>Tree to be removed as it is not a tree of significance and is located within the school property where re-grading will be required.</td>
</tr>
<tr>
<td>54</td>
<td>American Elm</td>
<td>Ulmus americana</td>
<td>N/A</td>
<td>Dead</td>
<td>Tree to be removed due to its poor condition.</td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>Manitoba Maple</td>
<td>Acer negundo</td>
<td>N/A</td>
<td>Poor</td>
<td>Dying</td>
<td>Tree to be removed due to its poor condition.</td>
</tr>
<tr>
<td>56</td>
<td>Manitoba Maple</td>
<td>Acer negundo</td>
<td>N/A</td>
<td>Poor</td>
<td>Dying</td>
<td>Tree to be removed due to its poor condition.</td>
</tr>
<tr>
<td>TREE ID</td>
<td>Species – Common Name</td>
<td>Species – Botanical Name</td>
<td>DBH (cm)</td>
<td>Health Condition</td>
<td>Remarks</td>
<td>Design Recommendations</td>
</tr>
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<td>---------</td>
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<td>--------------------------</td>
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<td>------------------</td>
<td>---------</td>
<td>------------------------</td>
</tr>
<tr>
<td>57</td>
<td>Manitoba Maple</td>
<td>Acer negundo</td>
<td>N/A</td>
<td>Dead</td>
<td>Tree has fallen down</td>
<td>Tree to be removed due to its poor condition.</td>
</tr>
<tr>
<td>58</td>
<td>Manitoba Maple</td>
<td>Acer negundo</td>
<td>6 x 20 to 35</td>
<td>Poor</td>
<td>Damaged</td>
<td>Tree to be removed due to its poor condition.</td>
</tr>
<tr>
<td>59</td>
<td>Manitoba Maple</td>
<td>Acer negundo</td>
<td>Good</td>
<td>Specimen tree; considered a weed species</td>
<td>Tree to be removed as it is not a tree of significance and is located on a proposed street right-of-way where re-grading will be required.</td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>Manitoba Maple</td>
<td>Acer negundo</td>
<td>5 x 15 to 30</td>
<td>Poor</td>
<td>Dying</td>
<td>Tree to be removed due to its poor condition.</td>
</tr>
<tr>
<td>61</td>
<td>Manitoba Maple</td>
<td>Acer negundo</td>
<td>10 x 20</td>
<td>Poor</td>
<td>Structural defect</td>
<td>Tree to be removed due to its poor condition.</td>
</tr>
<tr>
<td>62</td>
<td>Manitoba Maple</td>
<td>Acer negundo</td>
<td>4 x 25 to 30</td>
<td>Good</td>
<td>Specimen tree; considered a weed species</td>
<td>Despite not being of significance this tree is to be conserved if possible as it is located inside the proposed park space.</td>
</tr>
<tr>
<td>63</td>
<td>Manitoba Maple</td>
<td>Acer negundo</td>
<td>Good</td>
<td>Specimen tree; considered a weed species</td>
<td>Despite not being of significance this tree is to be conserved if possible as it is located inside the proposed park space.</td>
<td></td>
</tr>
<tr>
<td>64</td>
<td>Manitoba Maple</td>
<td>Acer negundo</td>
<td>15 to 20</td>
<td>Good</td>
<td>Specimen tree; considered a weed species</td>
<td>Despite not being of significance this tree is to be conserved if possible as it is located inside the proposed park space.</td>
</tr>
<tr>
<td>65</td>
<td>Common Lilac</td>
<td>Syringa vulgaris</td>
<td>N/A</td>
<td>Good</td>
<td>Specimen large shrub; Shrub: 5m wide x 5m high</td>
<td>Despite not being of significance this large shrub is to be conserved if possible as it is located inside the proposed park space.</td>
</tr>
<tr>
<td>66</td>
<td>Common Apple</td>
<td>Malus pumila</td>
<td>45</td>
<td>Good</td>
<td>Specimen tree</td>
<td>Tree to be removed as it is not a tree of significance and is located on a proposed street right-of-way where re-grading will be required.</td>
</tr>
<tr>
<td>67</td>
<td>Common Apple</td>
<td>Malus pumila</td>
<td>45</td>
<td>Good</td>
<td>Specimen tree</td>
<td>Tree to be removed as it is not a tree of significance and is located on a proposed street right-of-way where re-grading will be required.</td>
</tr>
<tr>
<td>TREE ID</td>
<td>Species – Common Name</td>
<td>Species – Botanical Name</td>
<td>DBH (cm)</td>
<td>Health Condition</td>
<td>Remarks</td>
<td>Design Recommendations</td>
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<td>---------</td>
<td>-----------------------</td>
<td>--------------------------</td>
<td>----------</td>
<td>------------------</td>
<td>---------</td>
<td>------------------------</td>
</tr>
<tr>
<td>68</td>
<td>American Basswood</td>
<td>Tilia americana</td>
<td>8 x 15 to 30</td>
<td>Good</td>
<td>Selected Individual tree; tree species intolerant of construction disturbance.</td>
<td>Tree to be removed as it is not a tree of significance and is located within the school property where re-grading will be required.</td>
</tr>
<tr>
<td>69</td>
<td>Common Lilac</td>
<td>Syringa vulgaris</td>
<td>N/A</td>
<td>Good</td>
<td>Significant large shrub; Shrub: 5m wide x 5m high</td>
<td>Large shrub to be removed as it is not of significance and is located within the school property where re-grading will be required.</td>
</tr>
<tr>
<td>70</td>
<td>Manitoba Maple</td>
<td>Acer negundo</td>
<td>10 x 15 to 25</td>
<td>Poor</td>
<td>Structural defect</td>
<td>Tree to be removed due to its poor condition.</td>
</tr>
<tr>
<td>71</td>
<td>Black Cherry</td>
<td>Prunus serotina</td>
<td>N/A</td>
<td>Poor</td>
<td>Half-dead</td>
<td>Tree to be removed due to its poor condition.</td>
</tr>
<tr>
<td>72</td>
<td>Green Ash</td>
<td>Fraxinus pennsylvanica</td>
<td>4 x 20</td>
<td>Poor</td>
<td>Damaged</td>
<td>Tree to be removed due to its poor condition.</td>
</tr>
<tr>
<td>73</td>
<td>Manitoba Maple</td>
<td>Acer negundo</td>
<td>N/A</td>
<td>Dead</td>
<td>Tree has fallen down</td>
<td>Tree to be removed due to its poor condition.</td>
</tr>
<tr>
<td>74</td>
<td>Manitoba Maple</td>
<td>Acer negundo</td>
<td>N/A</td>
<td>Dead</td>
<td>Tree to be removed due to its poor condition.</td>
<td></td>
</tr>
<tr>
<td>75</td>
<td>Manitoba Maple</td>
<td>Acer negundo</td>
<td>N/A</td>
<td>Dead</td>
<td>Tree to be removed due to its poor condition.</td>
<td></td>
</tr>
<tr>
<td>76</td>
<td>Green Ash</td>
<td>Fraxinus pennsylvanica</td>
<td>40</td>
<td>Good to Fair</td>
<td>Tree crown is light; potential for EAB</td>
<td>Tree to be removed because all ash trees are being removed from site due to fast spreading of EAB.</td>
</tr>
<tr>
<td>77</td>
<td>Common Apple</td>
<td>Malus pumila</td>
<td>3 x 15</td>
<td>Good</td>
<td>Multistem</td>
<td>Tree to be protected during construction.</td>
</tr>
<tr>
<td>78</td>
<td>Green Ash</td>
<td>Fraxinus pennsylvanica</td>
<td>15</td>
<td>Good</td>
<td>Tree to be removed because all ash trees are being removed from site due to fast spreading of EAB.</td>
<td></td>
</tr>
<tr>
<td>79</td>
<td>Green Ash</td>
<td>Fraxinus pennsylvanica</td>
<td>15</td>
<td>Good</td>
<td>Tree to be removed because all ash trees are being removed from site due to fast spreading of EAB.</td>
<td></td>
</tr>
</tbody>
</table>
Appendix C – Current Vegetation Plan (TC-1)
Proposed Development and Conserved Vegetation Plan (TC-2)
Tree Conservation Details (TC-3)
1. TEMPORARY TREE PROTECTION FENCE

TC-3

N.T.S.

This tree conservation plan is consistent with the proposed plan of subdivision as
submitted by [Client] for Plan of Subdivision Approval.

The tree conservation plan is to be read in conjunction with all other drawings, notes and specifications in the contract
documents. This drawing forms part of a set and may not be separated. The drawing is to be read
consistent with all other drawings, notes and specifications in the contract
documents.

Any variation in this drawing or accompanying details is to be reported to the
landscaping and arboriculture department, or in writing to:

[Client]

3872 Greenbank Road

Ottawa ON K1P 0B6

BARRHAVEN SOUTH

THE MINTO GROUP

345 Sussex Drive

Ottawa ON K1N 9Z3

The contractor shall take every precaution necessary to prevent damage to the
trees located within the critical root zone (CRZ)

Any open face cuts outside of a CRZ that are consistent with
construction practices

With any open face cuts located outside of the CRZ, the contractor
shall be required to provide a minimum 1.5-metre buffer around
the tree(s) within the protected area.

Where roots systems of trees are exposed directly adjacent to or
are damaged by construction work, they shall be trimmed neatly and
the area backfilled with appropriate materials to prevent
decrepitation.

Where necessary, the trees shall be given an overall pruning to
restore the appearance of the trees.

Where root systems of trees are exposed directly adjacent to or
are damaged by construction work, they shall be trimmed neatly and
the area backfilled with appropriate materials to prevent
decrepitation.

Where some fill must be temporarily located near the CRZ, a
fabric barrier must be used to ensure no material enters the
critical root zone. The CRZ is established as being 10 centimetres
beneath the trunk of the tree for every centimetre of trunk
diameter.

There should be no disturbance before, during and after
construction. The CRZ is established as being 10 centimetres
beneath the trunk of the tree for every centimetre of trunk
diameter.

There must be:

- No movement of vehicles (personal or business), liquids; and,
- No disposal (dumping or flushing) of contaminants or
- No signs, notices or posters should be attached to any
- No addition of fill, excavating, or scraping to change
- No disturbance or alteration of any kind of the existing
- No rigging cables shall be wrapped around or installed in trees.
- Surplus soil, equipment, debris or materials shall not be placed
over root systems of the protected trees.
- No rigging cables shall be wrapped around or installed in trees.
- Surplus soil, equipment, debris or materials shall not be placed
over root systems of the protected trees.
- There shall be no disturbance before, during and after
construction. The CRZ is established as being 10 centimetres
beneath the trunk of the tree for every centimetre of trunk
diameter.

Where necessary, the trees shall be given an overall pruning to
restore the appearance of the trees.

Where root systems of trees are exposed directly adjacent to or
are damaged by construction work, they shall be trimmed neatly and
the area backfilled with appropriate materials to prevent
decrepitation.

Where necessary, the trees shall be given an overall pruning to
restore the appearance of the trees.

Where root systems of trees are exposed directly adjacent to or
are damaged by construction work, they shall be trimmed neatly and
the area backfilled with appropriate materials to prevent
decrepitation.
1. This tree conservation plan is consistent with proposed plan of subdivision as submitted by the consulting engineer.

2. All existing trees, which are to remain, shall be fully protected with tree protection fencing as per detail 1/TC-3, erected at critical root zone (CRZ) at the discretion of city staff.

3. Groups of trees and other existing planting to be protected shall be treated in a like manner with fencing around the entire clump(s). Protective fencing shall be erected at CRZ for groups of trees or a minimum of 1.5 meters beyond the drip line for shrubs and shall not be used for the storage of building materials or equipment, or parking of vehicles.

4. Areas within the protective fencing shall remain undisturbed and shall not be used for the storage of building materials or equipment, or parking of vehicles.

5. No rigging cables shall be wrapped around or installed in trees. Surplus soil, equipment, debris or materials shall not be placed over root systems of the tree(s) within the protective fencing.

6. The contractor shall take every precaution necessary to prevent damage to the trees to be retained.

7. Where limbs or portions of trees are removed to accommodate construction work, they shall be removed carefully in accordance with accepted arboricultural practices.

8. Where roots of trees or portions thereof are exposed, they shall be trimmed neatly and the area backfilled with appropriate material to prevent desiccation.

9. Where necessary, the trees will be given an overall pruning to restore the appearance of the trees.

10. Trees that have died or have been damaged beyond repair, shall be removed and replaced by the contractor at their own expense, with trees of equal size and species as indicated by city staff.

**Tree Conservation Plan Notes:**

1. This drawing forms part of a set and may not be separated. This drawing is to be read in conjunction with all other drawings, notes and specifications in the contract documents.

2. This drawing shall not be used for construction unless stamped and signed by the landscape architect.

3. Any ambiguity in this drawing or accompanying details is to be reported to the landscape architect for direction. Do not proceed in uncertainty.

4. Drawings not to be scaled. Use figure dimensions only.

5. Design and Project No.: PP-11-951

6. Date: AUG/23/2012

7. Scale: 1:1000

8. STAMP: Do not scale drawings before proceeding with the work.

9. Check and verify all dimensions.

10. TO BE READ IN CONJUNCTION WITH CONTRACT DOCUMENTS.

**Project:** The Minto Group

**Client:** THE MINTO GROUP

**Address:** 200-180 Kent Street

**City:** Ottawa ON K1P 0B6

**Barrhaven South Project Number:** 3872 Greenbank Road

**Proposed Development & Conserved Vegetation Plan:**

**Designed by:**

**Drawn by:**

**Checked by:**

**Issued for Plan of Subdivision Approval:** SEP/10/2012

**Re-issued for Plan of Subdivision Approval:** JUN/30/2014

**Proportionate Scale:** 1:1000

**Legend:**

- [ ] Existing deciduous tree or large deciduous shrub
- [ ] Existing coniferous tree or large coniferous shrub
- [ ] Existing deciduous tree or large deciduous shrub
- [ ] Existing coniferous tree or large coniferous shrub
- [ ] Existing deciduous tree or large deciduous shrub
- [ ] Existing coniferous tree or large coniferous shrub
- [ ] Temporary tree protection fencing
- [ ] Study area

**Key Plan:**

- [ ] Greenbank Rd
- [ ] Site

**Scale:** 1:1000

**General Notes:**

- [ ] This tree conservation plan is consistent with proposed plan of subdivision as submitted by the consulting engineer.
- [ ] All existing trees, which are to remain, shall be fully protected with tree protection fencing as per detail 1/TC-3, erected at critical root zone (CRZ) at the discretion of city staff.
- [ ] Groups of trees and other existing planting to be protected shall be treated in a like manner with fencing around the entire clump(s). Protective fencing shall be erected at CRZ for groups of trees or a minimum of 1.5 meters beyond the drip line for shrubs and shall not be used for the storage of building materials or equipment, or parking of vehicles.
- [ ] Areas within the protective fencing shall remain undisturbed and shall not be used for the storage of building materials or equipment, or parking of vehicles.
- [ ] No rigging cables shall be wrapped around or installed in trees. Surplus soil, equipment, debris or materials shall not be placed over root systems of the tree(s) within the protective fencing.
- [ ] The contractor shall take every precaution necessary to prevent damage to the trees to be retained.
- [ ] Where limbs or portions of trees are removed to accommodate construction work, they shall be removed carefully in accordance with accepted arboricultural practices.
- [ ] Where roots of trees or portions thereof are exposed, they shall be trimmed neatly and the area backfilled with appropriate material to prevent desiccation.
- [ ] Where necessary, the trees will be given an overall pruning to restore the appearance of the trees.
- [ ] Trees that have died or have been damaged beyond repair, shall be removed and replaced by the contractor at their own expense, with trees of equal size and species as indicated by city staff.

**Tree Conservation Plan Notes:**

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- [ ] Drawings not to be scaled. Use figure dimensions only.

**General Notes:**

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**Tree Conservation Plan Notes:**

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- [ ] Any ambiguity in this drawing or accompanying details is to be reported to the landscape architect for direction. Do not proceed in uncertainty.
- [ ] Drawings not to be scaled. Use figure dimensions only.

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- [ ] This tree conservation plan is consistent with proposed plan of subdivision as submitted by the consulting engineer.
- [ ] All existing trees, which are to remain, shall be fully protected with tree protection fencing as per detail 1/TC-3, erected at critical root zone (CRZ) at the discretion of city staff.
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