

# **TREE CONSERVATION REPORT**

## **HEMPHILL STREET SUBDIVISION HEMPHILL STREET AND SHEA DRIVE RICHMOND, CITY OF OTTAWA**

Prepared for:

Holzman Consultants Inc.  
1076 Castle Hill Crescent  
Ottawa, Ontario K2C 2A8  
(613) 226-1386

Prepared by:

Ruhland & Associates Limited  
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Ottawa, ON K2C 2B5  
(613) 224-4744

November 24, 2017

## PROJECT INFORMATION

PROJECT NAME: Hemphill Subdivision, Hemphill Street and Shea Drive, Ottawa

OWNER: 1737814 Ontario Inc.  
Attn: Adrian Schouten

APPLICANT: Holzman Consultants Inc.  
Attn: Bill Holzman

PREPARED BY: Ruhland & Associates Limited,  
1750 Courtwood Crescent, Suite 200, Ottawa, ON  
K2C 2B5 613-224-4744  
Attn: Marietta Ruhland

CONTRACTOR: unknown at this time

MUNICIPAL ADDRESS: 3244 Shea Drive, Part of Lot 25 Concession 4,  
geographic Township of Goulbourn, City Of Ottawa

OFFICIAL PLAN & ZONING DESIGNATIONS: Site Zoning As Per Ottawa  
Zoning By-law 2008-250  
Site Designation V1C, Village of Richmond, City Of  
Ottawa

PURPOSE FOR REPORT: in support for an application for site plan control

SCHEDULE OF PROPOSED WORKS: Construction of 8 lot subdivision

OTHER APPLICATIONS AFFECTING SUBJECT LANDS: none

## **TREE CONSERVATION REPORT**

The subject lands are located on the northwest corner of the Shea Drive and Hemphill Street, Ottawa, ON.

The subject lands are approximately 1.16 hectares (2.87 acres) in size. The area affected by the proposed site development is 100% of the site.

It is bounded on the north and west sides by existing agricultural lands, on the east by existing residential lot and Shea Drive and on the South by Hemphill Street and existing residential lots.

The subject lands were visited by Ruhland & Associates Ltd. on November 08, 2017 and November 17, 2017.

Included in this report: aerial overlain with plan of subdivision, Map #1 – Current Vegetation, Map #2 – Proposed Development and Conserved Vegetation, plus Sketch LD-01 – Tree Preservation Details.

Note that the exact locations of trees are not surveyed; they are taken from field observations and aerial photographs.

### **GENERAL**

The subject lands consists of agricultural land with mature hedgerows along the south boundaries and adjacent to the existing residential lot. A portion of the existing established residential lot is included in the proposed Lot 1 and part of Lot 2.

Distinctive trees can be found within the south hedgerow along Hemphill Street.

### **SURFACE WATER FEATURES**

No significant water features. However, a small drainage swale exists running along the south hedgerow of the subject lands.

### **STEEP SLOPES**

No significant slopes were found on site.

### **WILDLIFE**

No evidence of larger mammals was found on the site during any site reviews. Evidence of small mammals such as squirrels was observed. The subject lands are conducive to a range of wildlife such as small mammals, including small predators and a good variety of birds.

## **SIGNIFICANT VEGETATION / SPECIES**

No significant species or species at risk have been found on site during site visits.

## **VEGETATION INVENTORY**

### **EXISTING VEGETATION**

The lands consist mainly of agricultural fields with hedgerows along Hemphill Street and adjacent residential lot.

Lot 1 and portion of Lot 2 contains cultural landscape.

#### **AGRICULTURAL LANDS:**

Currently used for the production of corn, and includes the majority of Lots 2-8.

#### **CULTURAL | MAINTAINED LANDSCAPE:**

Western portion of the existing adjacent residential (facing Shea Drive) (proposed to become Lot 1 and part of Lot 2).

±4.0m metre high white cedar hedge along west and south portions. Multi-stem sugar and red maples, multi-stem Basswood and apple, fir, spruce, mountain ash sapling. The majority of the existing trees within the cultural | maintained landscape have either co-dominant stems or are sparse due to overcrowding.

Age: Predominately mature. Multistem maples and apple consist of 4-10 co-dominant stems per tree, range in size from 20-35cm DBH. Stems split below breast height.

Size: range from 20-35cm DBH.

Condition: the majority of the trees are in good condition and health, but poor habit due to low level co-dominant stem branching on all deciduous trees. The 10 x stem red maple had flower buds present at the time of the site visit (November 08, 2017) and should be reassessed at time of construction. Multi-stem Apple has had a major stem broken off at ground level with notable scarring. Spruce and fir are sparse and in fair to poor condition. Cedar hedge is mature and in good condition.

#### **HEDGEROWS:**

Southern portions of Lots 2-6 and within proposed roadway bullnose.

Predominately Bur Oak, Ash, Elm, Manitoba Maple, saplings of oak, maple, basswood, ash, elm. Shrub understory of dogwood, viburnum, honeysuckle, bush honeysuckle, buckthorn, witch hazel. Some Virginia creeper was also observed.

Age: Predominately semi-mature to mature with some saplings.

The predominant tree species within the hedgerow are the mature and semi-mature Bur Oak. These are intermixed with White and Green Ash (poor or dead - EAB), American Elm (poor).

Understory vegetation will allow for future regeneration of the hedgerow.

Size: average range from 20-60cm DBH.

Condition: the majority of the trees are in good condition and health.

#### UNOPENED ROAD ALLOWANCE – HEMPHILL STREET:

Western portions adjacent to proposed roadway bullnose.

Predominately White and Green Ash (poor or dead - EAB), and Manitoba Maple (poor habit).

Age: Semi-mature.

Size: average range from 20-35cm DBH.

Condition: the majority of the trees are in poor condition with poor habit (Manitoba Maple is multi-stem growing at an acute angle to the ground).

#### **DISTINCTIVE TREES**

Distinctive trees (as described in the City of Ottawa tree bylaw 2009-200: 'means any tree with a DBH of 50 centimetres or greater').

Three distinctive trees were noted on site, all within the Hedgerow (50-60cm DBH Bur Oak). 2 reside within the proposed road extension. The 60cm DBH Bur Oak is located along the front of Lot 6, close to Lot 4, which should be feasible to retain.

### **VEGETATION CONSERVATION**

#### **VEGETATED AREAS TO BE RETAINED**

The existing vegetation within the hedgerow is mature, established and healthy and require priority for retention.

#### CULTURAL | MAINTAINED LANDSCAPE:

Existing mature trees at the back of Lot 1 and Lot 2, condition of co-dominant stem Red Maples to be assessed by a qualified arbourist prior to construction, if canopy is within 3 metres of proposed house footprint. Portions of the cedar hedge along Hemphill Street (Lot 1) and back of cedar hedge (Lot 2), plus the apple, basswood, spruce and fir can be retained at homeowner's discretion.

#### HEDGEROWS:

Existing mature and immature trees within hedgerow, including understory plants along Hemphill Street in front of lots 2-4 and portions of lot 6, except where removal is required to install driveways and servicing to lots. Driveways and servicing to be adjusted to allow for the retention of the larger Bur Oaks (including one Distinctive 60cm DBH Bur Oak), plus groupings of immature and semi mature oaks, saplings and understory shrubs. It is recommended that vegetation be preserved in groupings allowing for the understory plants to remain and regenerate (with the exception of invasives such as buckthorn and honeysuckle). Where viability of individual large trees are in question due to unavoidable servicing or driveway, trees are to be assessed for retention and health by a qualified arbourist prior to construction.

## **VEGETATED AREAS TO BE REMOVED**

Existing vegetation to be removed includes those within the unopened road allowance and proposed road bullnose, within proposed building footprints, minimal removals for construction of driveways and servicing. Removal of trees at homeowner's discretion would include those of poor habit and cedar hedge / conifers where partial retention may be detrimental to tree's stability.

### **CULTURAL | MAINTAINED LANDSCAPE:**

Removal of mature cedar hedge within Lot 2 (would be within home footprint),

Removal of mature cedar hedge along Hemphill Street and at back of Lot 2, apple, spruce, fir, basswood at future homeowner's discretion and for driveway, servicing.

Discretionary removal due to habit and condition of vegetation, especially where removal of cedar hedge will negatively impact viability of tree survival, plus potential impingement on home footprint.

### **HEDGEROWS:**

Removal of invasive shrubs and small trees (vines, buckthorn and honeysuckle along Hemphill Street frontage), dead or dying ash and elm, Manitoba Maple with poor habit (overhanging branches would pose a safety concern or interfere with driveways, roadways) within the hedge row along Hemphill Street. Removal of remaining vegetation only where required to install driveways and servicing to lots.

### **UNOPENED ROAD ALLOWANCE – HEMPHILL STREET:**

Vegetation within the unopened road allowance and proposed road bullnose in front of Lots 6-8. Ash and Manitoba Maple along the south and west property lines are within the proposed road construction. Vegetation requiring removal within the proposed road bullnose includes 2 Distinctive Bur Oak, 50-55cm DBH.

Refer to aerial showing existing vegetation overlain with proposed subdivision, Map #1 – Existing Vegetation and Map #2 - Proposed Development and Conserved Vegetation Layout.

All removals to be done in accordance with the City of Ottawa tree bylaw 2009-200 and this Tree Conservation Report.

## **POTENTIAL IMPACTS AND MITIGATION MEASURES**

### **POTENTIAL IMPACTS**

Potential grade changes to road extension, driveways and elevation of home footprint may impact vegetation within the hedgerow.

Addition of impervious surfaces (e.g. driveways and proposed buildings) would not significantly impact the amount of water infiltrating into the site's ground.

### **MEASURES PROPOSED TO LESSEN IMPACT ON EXISTING VEGETATION**

Adjust locations of driveways and lot servicing to mitigate impacts on existing vegetation, especially the semi mature and mature trees. Retention of understory including saplings of native trees will help to regenerate the hedgerow.

Minimize grade changes along the existing trees to be retained.

### **PROTECTION MEASURES**

Preliminary root cutting at the edge of proposed excavation areas prior to any on site excavation would protect the integrity of the existing root system of trees in proximity of the proposed development, refer to Map #2 and Tree Preservation Details, LD-01.

In accordance with the Municipal Trees and Natural Areas Protection By-law No. 2006 – 279, a protection fence is to be erected at vegetation that is to be preserved and set up along the property lines on the south and west sides of the site, and includes portions of the r.o.w. to the south as indicated on Map #2. The protection fence shall be erected as per Tree Preservation Details, D-L1. The protection fence shall be maintained throughout all phases of the development. No work is to be done within the tree protection fence.

The developer is to provide necessary protection against any construction site runoff into the treed areas.

No storage, vehicular traffic or other construction activities to take place within the treed areas.

### **SPECIFIC PROTECTION MEASURES**

All protection measures shall follow Municipal Trees and Natural Areas Protection By-law No. 2006 – 279

## **PLANTING RECOMMENDATIONS**

Planting a mix of indigenous deciduous street trees along Hemphill Street and Shea Drive, including the south and west sides of the unopened road allowance.

If any of the trees slated to remain require removal due to proximity of construction, they should be replaced at a replacement ratio of 2:1 for any tree from 25 to 40cm DBH, and at a ratio of 4:1 for any tree over 40cm DBH. Replace with 70mm diameter indigenous deciduous trees such as Common Hackberry, Sugar or Black Maple, Ironwood, Elm (Dutch Elm Disease resistant), Red Oak, and Bur Oak.

Prepared by



A handwritten signature in black ink, appearing to read "Marietta Ruhland".

Marietta Ruhland, OALA  
Senior Landscape Architect  
Ruhland & Associates Limited

November 24, 2017





Ash and Manitoba Maple in unopened road allowance, plus  
hedge row in front of Lots 6 - 8



Hedgerow adjacent to Hemphill Street,  
viewed from the corn field



Spruce and cedar hedge in Lot 2





Multistem maples in Lots 1 and 2



Multistem red maple in Lot 2

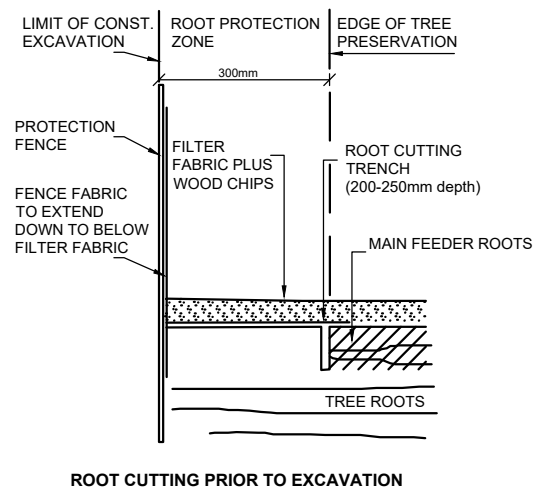
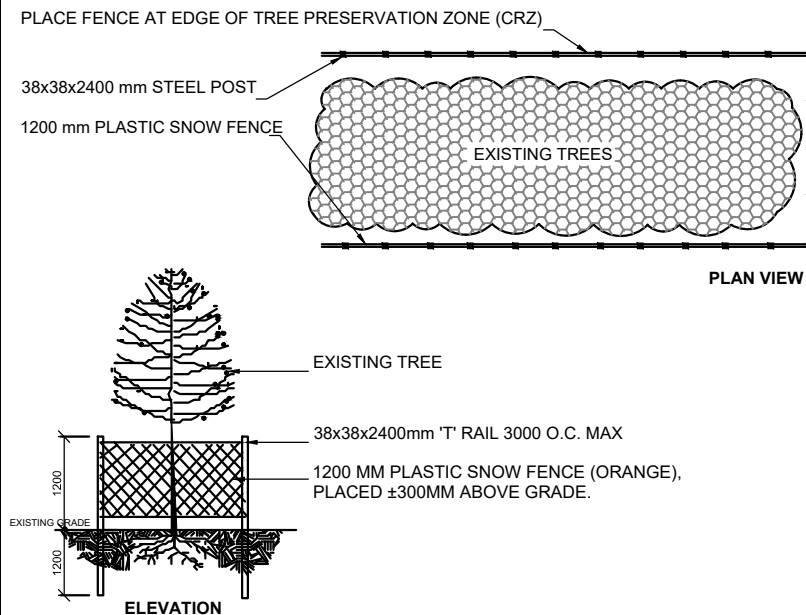


Multistem maples in Lots 1 and 2



Multistem Apple with crack in trunk





#### NOTES:

1. PROVIDE PROTECTION FOR TREES SHOWN AS REQUIRING PROTECTION ON CONTRACT DRAWINGS USING METHOD SHOWN. WHERE OPERATIONS THREATEN OTHER NEARBY TREES, APPLY SAME MEASURES.
2. PROTECT ROOTS OF ALL TREES AS SHOWN ABOVE. NO EXCAVATION, FILLING, STORAGE OF MATERIALS, DISPOSAL OF CHEMICALS, VEHICLE TRAFFIC, OR OTHER ACTIVITY WHICH COULD CAUSE DISTURBANCE OF SOIL ROOT AREA, INCLUDING SOIL COMPACTION SHALL TAKE PLACE WITHIN THE PROTECTED AREA.

THE CITY OF OTTAWA TREES BY- LAW REQUIRES THAT CONTRACTORS WORKING NEAR TREES MUST:

- ERECT A FENCE AT THE CRITICAL ROOT ZONE (CRZ) OF TREES;
- NOT PLACE ANY MATERIAL OR EQUIPMENT WITHIN THE CRZ OF THE TREE;
- NOT ATTACH ANY SIGNS, NOTICES OR POSTERS TO ANY TREE;
- NOT RAISE OR LOWER THE EXISTING GRADE WITHIN THE CRZ WITHOUT APPROVAL;
- TUNNEL OR BORE WHEN DIGGING WITHIN THE CRZ OF A TREE;
- NOT DAMAGE THE ROOT SYSTEM, TRUNK OR BRANCHES OF ANY TREE;
- ENSURE THAT EXHAUST FUMES FROM ALL EQUIPMENT ARE NOT DIRECTED TOWARDS ANY TREE'S CANOPY.

#### CRITICAL ROOT ZONE (CRZ) OF A TREE:

$D$  (DIAMETER OF TRUNK IN CENTIMETERS)  $\times$  10CM = CRITICAL ROOT ZONE. THE CRITICAL ROOT ZONE IS ESTABLISHED AS BEING 10 CENTIMETRES FROM THE TRUNK OF A TREE FOR EVERY CENTIMETRE OF TRUNK DIAMETER. THE TRUNK DIAMETER IS MEASURED AT A HEIGHT OF 1.2 METRES FOR TREES OF 15 CENTIMETRES DIAMETER AND GREATER AND AT A HEIGHT OF 0.3 METRES FOR TREES OF LESS THAN 15 CENTIMETRES DIAMETER. THE CONTRACTOR MUST OBTAIN ALL PERMITS AND APPROVALS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CALL A CITY TREE INSPECTOR WHEN WORK IS REQUIRED NEAR A CITY TREE.

project

**HEMPHILL SUBDIVISION**

drawing

**TREE PROTECTION & ROOT CUTTING DETAIL**

**Ruhland & Associates Ltd**

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scale

NTS

date

November 2017

project no.

17-1542

dwg. no.

**LD-01**

drawn by

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M.Ruhland

revision no.









