



Muncaster
Environmental
Planning Inc

November 30, 2009

Mr. Fred Farsi
2183144 Ontario Ltd.
1285 Byrnes Terrace
Ottawa, ON
K4C 1A9

Dear Mr. Farsi:

RE: 1730 Wilhaven Drive
Tree Conservation Report

This Tree Conservation Report has been prepared following the Revised Guidelines for City of Ottawa Tree Conservation Report, found at www.ottawa.ca/residents/healthy_lawns/forestry/urban_tree_conservation/guidelines_en.html. The field survey and this report were completed by Bernie Muncaster, who has a Master's of Science in Biology and over twenty years experience in completing natural environment assessments. The purpose of this Tree Conservation Report is to establish which vegetation should be retained and protected on the site. The owner of the site is 2183144 Ontario Ltd. Rural residential development is proposed for the site. Any woody vegetation that cannot be retained will be removed as each lot is developed.

Site Context

The site is on the south side of Wilhaven Drive, with O'Toole Road along the east side, in parts of Lots 'D' and 'E', Concession 7 of the Geographic Township of Cumberland, City of Ottawa. The site is 19.91 hectares and is dominated by agricultural fields, with areas of cultural woodlands and thickets and deciduous hedgerows (Map 1).

The site is designated *General Rural Area* on Schedule A of the City of Ottawa Official Plan. There are no environmental constraints designated for the site or adjacent lands on Schedule K of the Official Plan. The site is not part of a natural area, however the south boundary of the Wilhaven Drive Natural Area is to the north of the site, north of Wilhaven Drive, and the east portion of a northwest fragment of the O'Toole Road Natural Area is to the west of the site (Map 1). The portions of these natural areas in immediate proximity to the site are not designated *Rural Natural Features Area* on Schedule B of the Official Plan, with the closest *Rural Natural Features* designation about 300 metres to the south of the site. The Wilhaven Drive Natural Area, identified as Natural Area 44 in the former Region of Ottawa-Carleton's Natural

Environment System Strategy, was rated low overall, with none of the nine evaluation criteria scored as high. The O'Toole Road Natural Area, identified as Natural Area 48 in the Natural Environment System Strategy, was rated moderate overall. The rare vegetation community/landform evaluation criterion was scored as high. No large scale movement corridors or habitat for seasonal wildlife concentrations were identified in the site summaries of the adjacent natural areas. The rare forest vegetation communities identified for the adjacent natural areas were not found on the site. Fragmentation of both natural areas was considered high. No Provincially significant wetlands or Areas of Natural and Scientific Interest are in the general area of the site.

Sandy loam deposits dominate the soils on the site, with the drainage of the soils varying between good in the west and poor in the east portion of the site. The better drained soils are generally very stony. The topography of the site is generally level, with portions gently sloping to the north and east. Scratch ditch features are along the north-south hedgerows in the east portion of the site. The ditches enter the roadside ditches on the south side of Wilhaven Drive or the west side of O'Toole Road and do not connect to any channels with potential fish habitat.

Colour aerial photography (2008) was used to assess the natural environment features in the general vicinity of the site. A field review of the site was conducted on November 29th, 2009 under sunny and calm conditions and an air temperature of 6° C. No snow cover was present. Notes were made on wildlife usage and potential for wildlife habitat.

The site is isolated from an environmental perspective due to agricultural activity to the west, south and east and Wilhaven Drive to the north. Several rural residential developments are within the natural area to the north of Wilhaven Drive.

Existing Conditions

The site is dominated by hay fields in the west and cultivated soybean fields in the east, with areas of cultural woodlands and thickets and deciduous hedgerows (Map 1). Non-native and/or invasive species such as brome grass, barnyard grass, bluegrass, reed canary grass, wild carrot, Canada goldenrod, tall goldenrod, asters, red clover, white clover, butter-and-eggs, wild parsnip, common dandelion, blueweed, ox-eye daisy, broad-leaved cattail and common plantain are common in and adjacent to the hay fields and other cultural meadow habitat. Crabapple, staghorn sumac, red-osier dogwood, alternate-leaved dogwood, slender willow, pussy willow and red raspberry are common in the cultural thicket, along with regenerating white elm, white cedar, Manitoba maple, ash and poplar stems. Scattered trees include white elm up to 32cm diameter at breast height (dbh), along with coppice Manitoba maple and smaller white ash. Fungus development is extensive on some of the trees. Bluegrass, goldenrod, asters, evening primrose, wild parsnip, common milkweed, common burdock, common dandelion, marginal wood fern, common strawberry, sensitive fern, heal-all and brome grass are common ground flora.

Areas of cultural woodland in the south-central portion of the site are identified as vegetation community 3 on Map 1. White cedar, trembling aspen, red ash, white elm and white ash are the common tree species. The largest trees are trembling aspen in the range of 30cm dbh. Ice storm damage is extensive and the woodlands are very scrubby. The canopy is open in most areas, with some small patches of thick cedar growth. Crabapple shrubs are common in the west woodland representation, with red-osier dogwood and slender willow common in the east area. Goldenrods and grasses are established throughout.

Sugar maple, basswood, white ash, trembling aspen and white elm are the dominant species in the deciduous hedgerows, with white birch, Manitoba maple and red ash also present. Sugar maples up to 54cm dbh are the largest trees in the hedgerows. Regenerating red oak, white cedar, white spruce and white pine stems are scattered among the hedgerow trees. Most of the hedgerow trees appear to be in good condition with wild grape covering the lower portion of some of the trees. An over-mature basswood at the south end of the west hedgerow has major trunk and bark damage. Staghorn sumac, slender willow, common juniper, pussy willow and red raspberry shrubs are among the hedgerow trees. The hedgerow along the west portion of the site is two trees in width, with the other hedgerows generally a single tree in width.

Mature coniferous and deciduous trees are adjacent to the existing laneway in the northwest portion of the site and around the residence. The largest trees are mature sugar maples, Norway spruce and white pines up to 90cm, 60cm and 58cm dbh, respectively. Smaller white elm, red maples, trembling aspen, white cedar, red ash, Manitoba maple and white ash are also present, along with staghorn sumac shrubs. Some of the larger trees are over-mature with major trunk decay and broken limbs.

The east portion of a fragment of the O'Toole Road Natural Area, adjacent to the south portion of the west site boundary, is a young dry-fresh deciduous forest with many areas of open canopy. Manitoba maple, white elm and basswood are the common tree species, with black cherry also present. The largest trees are up to 28cm dbh, but most stems are less than 15cm dbh. The wooded area is scrubby, with extensive ice storm damage resulting in many broken limbs and trunks, and lots of wild grape growth on the trees. The ground flora appears disturbed including garlic mustard, goldenrod, avens and common burdock.

The Wilhaven Drive Natural Area to the north of the site, north of Wilhaven Drive is dominated by a dry-fresh deciduous forest of sugar maple, red oak, basswood, bur oak, ironwood, poplar and white pine. Several residences are among the forest, and rural residential developments are common to the northeast of the site.

Wildlife observed during the field survey out of the growing season included black-capped chickadee, hairy woodpecker, Canada goose, American crow, blue jay, dark-eyed junco, woodchuck, a squirrel drey and white-tailed deer.

No butternuts or other Species at Risk were observed during the field survey or are reported in the vicinity of the site in the Natural Heritage Information Database. The closest report is for long-stemmed waterwort, along the Ottawa River corridor approximately 2.2 kilometres to the northeast of the site.

Recommendations

Twenty-one rural residential lots are proposed for the site, with a single detached residence planned for each lot (Map 2). The rural residential lots vary in size between 0.8 and 1.1 hectares. No natural environment features of note were observed or are recorded for the site. The woodlands are too young and narrow, with a maximum width in the range of 85 metres, to be considered significant, and no hydrologic features are associated with the small woodlands. Many of the hedgerow tree species are generally not recommended for retention including Manitoba maple, white ash, red ash, trembling aspen and white elm. However a few trees of preferred species (such as sugar maple, basswood and white pine) and in good condition along the periphery of the site and the rear of Lots 1, 3, 7, 9, 15, 16, 18, 20 and 21 are recommended for retention on Map 2, along with examples of regenerating stems of preferred species.

The trees at the rear of Lot 3 should be retained to protect the adjacent portion of the O'Toole Road Natural Area. In addition no excavation or other site disturbances should occur within five metres of the west boundary of Lot 4 to protect the adjacent deciduous forest within the natural area. The west edge of this portion of the O'Toole Road Natural Area has a low sensitivity due to the young disturbed wooded area, extensive ice storm damage, dominance of Manitoba maple and white elm, and open canopy in many areas. The width of the wooded area and natural area in proximity to the site is only about 100 metres.

Retention of healthy trees and regenerating tree stems is easily done on rural residential lots. An 8000 m² lot will allow for significant tree retention, even after considering room for building footprint, septic system, driveway and a lawn. It is estimated that less than twenty percent of each lot will be disturbed for construction.

Tree retention will assist in providing a future source of seeds and regenerating stems. Concentrating the existing natural state on one side or rear of a lot with similar concentration of retention on the adjoining lot can increase the amount of tree retention. This will add to the aesthetic and wildlife value of the trees as nodes of woody vegetation are retained, as well as reducing the risk of potential impacts from sunscald and wind throw. A good example of this would be along the west side of Lot 7 and the east side of Lot 6.

On lots with both open and treed areas, tree retention can also be maximized by concentrating development on the non-treed portion of the lot. For example, consideration should be given to locating the building footprints further to the west in Lots 5, 6, 8, 10 and 19 – 21, in the east portion of Lots 3 and 18, and in the north portion of Lot 9. The north portion of Lot 1 should be utilized, leaving the wooded south portion to be retained in association with the retained wooded area of the rear (west) portion of Lot 3.

In addition to the recommendations for tree protection identified above, the following trees, identified on Map 2, are representative of larger trees in good condition and/or desired species that should be retained if any grading and other engineering constraints permit. If these specific trees cannot be retained, similar alternatives are generally present. However many of the trees on-site are species that are generally not preferred for retention due to poor form, short longevity

and/or susceptibility to disease. These less desirable species include ash, Manitoba maple, poplar and white elm.

- A. sugar maples up to 90cm dbh and mature Norway spruce in the south-central portion of Lot 21, on the east side of the existing driveway;
- B. sugar and red maples up to 42cm and 33cm dbh, respectively in the south-central portion of Lot 21, on the west side of the existing driveway;
- C. sugar maples up to 26cm dbh in the south-central portion of Lot 20;
- D. sugar maples up to 54cm dbh, along with smaller basswood trees in the south portion of Lot 1;
- E. basswood and sugar maples up to 46cm and 38cm dbh, respectively in the northwest corner of Lot 3;
- F. a 40cm dbh basswood in the southwest corner of Lot 5;
- G. white cedars up to 25cm dbh along the east boundary of Lot 7;
- H. white cedars up to 28cm dbh and regenerating bur oak stems in the southeast corner of Lot 7;
- I. white cedars up to 22cm dbh along the south-central boundary of Lot 7;
- J. regenerating red oak, white spruce, white pine and white cedar stems along the central portion of the south boundary of Lot 8;
- K. regenerating red oak, white spruce and balsam fir white stems along the west portion of the south boundary of Lot 9;
- L. a 24cm dbh basswood in the northeast portion of Lot 9;
- M. regenerating red oak stems along the central portion of the south boundary of Lot 11;
- N. a coppice red maple and regenerating red oak, white cedar and white pine stems in the northeast portion of Lot 15;
- O. regenerating red oak, white spruce and white pine stems in the northwest portion of Lot 16;
- P. white pines up to 32cm dbh, along with regenerating white spruce and white cedar stems in the northwest portion of Lot 18; and,
- Q. white pines up to 58cm dbh, along with regenerating sugar maple stems in the northeast portion of Lot 21.

The above tree retention can be enhanced through:

- minimizing the extent of woody vegetation removal as much as possible where urban servicing constraints permit;
- transplanting by the homeowners of some of the regenerating white cedar, white spruce, maple and oak stems among the hedgerows and in the cultural thicket and woodlands, where the stems will be in conflict with site alterations; and,
- pruning of branches on trees to be retained to improve their condition and anticipated longevity.

Trees to be retained must be protected with sturdy fencing installed a distance of ten times the trunk diameter from the trunk or the dripline edge. No grading or activities that may cause soil compaction such as heavy machinery traffic and stockpiling of material are permitted within the fencing. No machinery maintenance or refuelling, storage of construction materials or stockpiling of earth is to occur within five metres of the outer edge of the dripline of the trees to be retained and protected. The existing grade is not to be raised or lowered within the fencing and no digging is permitted within the fencing. The root system, trunk or branches of the trees to be retained must not be damaged. Exhaust fumes from all equipment during future construction will not be directed towards the canopy of the retained trees. If any roots of trees to be retained are exposed during site alterations, the roots shall be immediately reburied with soil or covered with filter cloth or woodchips and kept moist until the roots can be buried permanently.

Any woody vegetation that cannot be retained will be removed as each lot is developed. To protect breeding birds, no tree or shrub removal should occur between May 15th and July 10th, unless a breeding bird survey conducted within five days of the woody vegetation removal identifies no active nests in the trees or shrubs.

There are no specific sensitivities for plantings on the site. Homeowners are encouraged to plant only native species of local origin, including a mix of coniferous and deciduous species such as sugar maple, red maple, basswood, bur oak, red oak, tamarack, white cedar and white spruce trees, along with nannyberry, other native *Viburnums*, elderberry and dogwood shrubs. Where possible the woody vegetation should be planted in clusters to improve the wildlife benefit.

Schedule of Proposed Works

Any woody vegetation that cannot be retained will be removed as each lot is developed. Forestry Services of the City of Ottawa is to be contacted at least 24 hours prior to any tree removal so that Staff can verify the protective fencing has been properly constructed.

Conclusion

Twenty-one rural residential lots are proposed for the site, with a single detached residence planned for each lot. The rural residential lots vary in size between 0.8 and 1.1 hectares. No natural environment features of note were observed or are recorded for the site. The deciduous woodlands are too small, in the range of 0.5 – 0.9 hectares to be considered significant. No valued woodlands, urban natural areas, rare communities, wetlands, steep slopes or valleys were observed on or adjacent to the site, however some specific trees are recommended for retention. The site is isolated from a natural environment perspective by adjacent agricultural and rural residential activity.

The rural lot size will permit significant tree retention on many of the lots as described above.

Please call if you have any questions on this Tree Conservation Report.

Yours Sincerely,
MUNCASTER ENVIRONMENTAL PLANNING INC.







Bernie Muncaster, MSc.
Principal

\treewilhaven




cc Mark Purchase



Legend

-  Site
-  Wilhaven Drive Natural Area
-  O'Toole Road Natural Area
-  Vegetation community

Vegetation Communities

-  Cultural meadow
-  Cultural thicket
-  Cultural woodland



Approx. Scale 1:4,600

2008 airphoto base from City's web site

November 28, 2009

FILE: 09-33

Map 1

Prepared for: **2183144 Ontario Ltd.**

Prepared by:



Muncaster
Environmental
Planning Inc.






**TREE CONSERVATION REPORT
CURRENT VEGETATION**

**1730 WILHAVEN DRIVE
CUMBERLAND, CITY of OTTAWA**






2008 airphoto base from City's web site

Legend

-  Site
-  Wilhaven Drive Natural Area
-  O'Toole Road Natural Area
-  Vegetation community
-  Examples of tree clusters with potential for retention (see text for details)

Vegetation Communities

-  Cultural meadow
-  Cultural thicket
-  Cultural woodland



Approx. Scale 1:4,750

November 28, 2009

FILE: 09-33

Map 2

Prepared for: **2183144 Ontario Ltd.**

Prepared by:



**TREE CONSERVATION REPORT
PROPOSED CONSERVED VEGETATION**

**1730 WILHAVEN DRIVE
CUMBERLAND, CITY of OTTAWA**