



Muncaster
Environmental
Planning Inc.

August 12, 2019

Mr. Anthony Nicolini
NiVO Developments Inc.
255 Michael Cowpland Drive
Ottawa Ontario,
K2M 0M5

Dear Mr. Nicolini:

RE: 1164/1166 Highcroft Drive, Manotick
Tree Conservation Report and Environmental Impact Statement

This Environmental Impact Statement (EIS) and Tree Conservation Report (TCR) assesses an urban residential development for an approximately 0.37 hectare site in the central portion of Manotick. The municipal addresses are 1164 and 1166 Highcroft Drive and the site begins about 50 metres west of Manotick Main Street, northwest of the intersection of Main Street and Bridge Street/Maple Avenue (Map 1). For the purposes of this report Highcroft Drive is considered to be in an east-west orientation.

Proposed Development

Eleven detached residential units are proposed for the site, which currently contains two residences to be demolished. A new private lane south of Highcroft Drive will provide access to the townhomes, with four of the units fronting directly onto Highcroft Drive. The development will be on full municipal services. As shown on Map 2, retaining walls are required on the site due to the existing slopes, generally from west to east. Stormwater quality treatment is not required for the site, with stormwater quantity to be addressed using underground cisterns. Existing servicing infrastructure on Manotick Main Street will be extended west to the site.

Site Context

The site and adjacent lands are designated *Village* on Schedule A of the City of Ottawa Official Plan. There are no lands designated *Rural Natural Features Area*, *Major Open Space*, *Natural Environment Area*, or *Significant Wetlands* in the general vicinity of the site. No components of the City's Natural Heritage System are on or adjacent to the site, as shown on the Schedule L2 overlay. There are no natural areas, as identified in the former Region's Natural Environment System Strategy, in proximity to the site, with the closest Natural Area being the moderately-rated Century Road Complex about three kilometres to the south. No environmental constraints are shown for the site on Schedule K of the Official Plan, with unstable slopes associated with the Rideau River corridor about 150 metres to the northeast. No potential aquatic habitat is

mapped or was observed between the site and the west branch of the Rideau River to the northeast and east.

Other than the existing residences, the site is generally open with large manicured grassed areas and driveways. As described below, scattered deciduous and coniferous trees are along portions of the site peripheries. The site is surrounded by the developed portions of Manotick.

Methodology

This report includes an assessment of the natural environment features, including the potential for specimen trees and Species at Risk. Colour aerial photography (1976-2017) was used to assess the natural environment features in the general vicinity of the site. A survey of the site and adjacent lands was completed on December 15th, 2018 from 10:45 to 12:15. Weather conditions during the survey included a light breeze, an air temperature of 4° C, and sunny skies. Snow cover was scattered on the site, with several bare areas. Another survey was completed on May 22nd, 2019 from 10:05 to 11:20. Weather conditions during the May 22nd survey included calm winds, an air temperature of 15° C, and partly cloudy skies. The site and adjacent lands were walked in a systematic manner to ensure the entire site and adjacent lands were observed.

The field survey and this report were completed by Bernie Muncaster, who has a Master's of Science in Biology and over thirty years of experience in completing natural environment assessments. The purpose of the Tree Conservation Report component is to establish which vegetation should be retained and protected on the site and to assess adjacent trees. The site is owned by NiVO Developments Inc. It is anticipated that the woody vegetation not proposed for retention will be removed in 2019 after the breeding bird period.

Potential Species at Risk

The Ministry of Natural Resources and Forestry (MNR) 's Make a Map: Natural Heritage Areas website was reviewed on December 12th, 2018 (www.gisoeapp.lrc.gov.on.ca/web/MNR/NHLUPS/NaturalHeritage/Viewer/Viewer.html). This site allows for a search of Threatened and Endangered species covered by the 2008 *Endangered Species Act*, as well as other species of interest. A search was conducted on the 1 km squares including the site and adjacent lands (18VR40–58 and -68). No Species at Risk were noted for these squares, with snapping turtle, a Species of Special Concern, identified. Snapping turtle and Blanding's turtle, a threatened Species at Risk, were identified for the overall 10 km square 18VR40 in the Ontario Reptile and Amphibian Atlas. Snapping turtle and Blanding's turtle are likely found in the Rideau River corridor to the east. There are no wetlands or potential turtle habitat on or adjacent to the site.

The breeding birds listed in the Ontario Breeding Bird Atlas for the 10 km squares 18VR40 identified bank swallow, barn swallow, eastern meadowlark, and bobolink as Species at Risk in the overall 10 km square including the site. Eastern meadowlark and bobolink utilize larger grassland areas such as hayfields, habitat not present on or adjacent to the site. Bank swallows use the open face of sand banks; habitat also not observed on or adjacent to the site. No

structures with open rafters that may be used by barn swallow were present. Chimney swift, another potential Species at Risk, nests in larger brick chimneys without a metal liner. The chimneys on the existing residences and adjacent ones were vented, preventing potential bird access to the inside.

Given that two residences will be demolished, bats are a potential concern. However, the residences are in the range of sixty years old, continue to be occupied, and appear to be well maintained. An inspection of the exterior of the buildings revealed no potential areas of entry for bats or other wildlife, including the vented chimneys described above or potential access to the attics.

The potential Species at Risk historically reported for the overall City of Ottawa and their habitat requirements were also reviewed, including butternut, American ginseng, eastern prairie fringed-orchid, wood turtle, spiny softshell, Blanding's turtle, Henslow's sparrow, loggerhead shrike, eastern meadowlark, barn swallow, bobolink, eastern whip-poor-will, bald eagle, golden eagle, least bittern, little brown bat, eastern small-footed myotis, northern long-eared bat, olive hickorynut, eastern cougar, lake sturgeon, cerulean warbler, and American eel. No larger cavity trees for potential bat utilization were observed on or adjacent to the site and no butternut trees were noted on or within 50 metres of the site. In summary, other than for butternut, specific habitat characteristics for potential Species at Risk appear lacking for the site and adjacent lands. No butternut was observed.

Existing Conditions

The topography of the site slopes to the east, with a change in elevation of approximately seven metres. A grass swale along the south side of Highcroft Drive is not connected to any potential aquatic habitat. Under a layer of topsoil, the soils on the site are dominated by silty clays, with a layer of silt and sand till under the silty clays in the northwest portion.

The site is dominated by two existing residences and associated large manicured grassed lands (Photos 4 and 5) to the north and south of the residences. In addition to the dominant bluegrass, common dandelion, ground ivy, common burdock, and goldenrod were observed.

Woody vegetation on the site included a north-south row of five Scot's pine south of Highcroft Drive just east of the lot line between 1164 and 1166 Highcroft Drive (Photo 2). The Scot's pine ranged in size between 25cm and 37cm diameter at breast height (dbh) and appeared to be in average condition with some trunk damage. A 42cm dbh white spruce in apparently good condition was to the north of the existing residence at 1166 Highcroft Drive (Photo 1). A 100cm dbh black locust cultivar was to the west of the residence at 1166, approximately 1.5 metres east of the west property line (Photo 3). The tree appeared to be in average condition with some branch damage. A twin-stem white birch up to 30cm dbh was to the south of the existing residence at 1164 Highcroft Drive, with crabapples up to 18cm dbh and highbush cranberry and common lilac shrubs scattered in the rear yard of 1164.

**1164/1166 HIGHCROFT DRIVE, MANOTICK
TREE CONSERVATION REPORT and ENVIRONMENTAL IMPACT STATEMENT**

Several trees are co-owned along the site boundaries or are close enough to the site that their critical root zones would extend onto the site. Starting in the northwest corner, a 30cm dbh sugar maple with extensive fungus and vine growth was just east of the property line, with white elms up to 20cm dbh and smaller regenerating Manitoba maple stems along the west property line. A very large silver maple cultivar was about ten metres west of the west property line to the south of Highcroft Drive and west of the driveway for 1172 Highcroft Drive. A 30cm dbh black locust was along the west property line to the southwest of the on-site mature locust described above (Photo 3). Approaching the southwest corner of the site, a 35cm dbh white ash with very few live buds was along the property line and the trunk of a 36cm dbh Manitoba maple was badly bent to the east and extending well onto the site. Winterberry euonymus, black currant, and common buckthorn were also along the west property line, along with regenerating Manitoba maple stems.

Scot's pine up to 40cm dbh were just to the south of the south property line, with the trunks within 0.5 metres of the property line based on property line stakes (Photo 6). The lower branches of many of the pines extended well onto the site. A reduced number of needles in good condition were observed on many of the Scot's pine. A 28cm dbh sugar maple with major trunk decay, very little leaf-out, and extensive vine growth was also along the south property line in the southwest corner, along with common lilac and European mountain ash.

Along the east site boundary, a 44cm dbh white ash is about one metre to the east of the property line approximately 20 metres south of Highcroft Drive (Photo 7). Vine growth was extensive on the ash and very few live buds were observed. Many regenerating Manitoba maple and white elm stems up to 15cm dbh are also along the property line in this area. Further south, a hedgerow of white cedars up to 12cm dbh are along the property line and west of a commercial parking lot. Several of the smaller cedar stems appeared dead. Manitoba maples up to 30cm dbh and common lilac shrubs were among the cedars. Many of the Manitoba maples had badly bent trunks.

Wildlife observed during the 2018 and 2019 surveys included American crow, house wren, black-capped chickadee, yellow warbler, American robin, norther cardinal, common grackle, blue jay, American goldfinch, chipping sparrow, song sparrow, Canada goose, European starling, and grey squirrel. A robin's nest was noted over a light at the rear of the residence at 1166 Highcroft Drive and a house wren was using a bird box in a large apple shrub to the southwest of the residence. No stone fences or trees with potential wildlife cavities were observed.

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*Photo 1 – Spruce tree in the front yard of 1166 Highcroft Drive.
View looking east, with Highcroft Drive to the left*



*Photo 2 – Scot's pines between 1164 and 1166 Highcroft Drive, south of Highcroft Drive.
View looking east*



Photo 3 – Mature locust in the west portion of 1166 Highcroft Drive, with smaller locust along the west property line to the left. View looking northwest



Photo 4 –South portion of the site. View looking east from west site edge

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*Photo 5 – South portion of 1164 Highcroft Drive.
From southeast corner of the site view looking north to residence to be removed*



Photo 6 – Scot's pines immediately to the south of the site. View looking east



Photo 7 – White ash with no live buds of note, smaller Manitoba maple, and vines along the east property line south of Highcroft Drive. View looking north to Highcroft

Significant Woodlands

The criteria for significant woodlands in the rural area of Ottawa are found in OMNR (2010). There are no forests on or contiguous with the site. Residences and manicured grassed areas to the south of the site separate the site from a deciduous forest beginning approximately 50 metres to the south of the south site edge.

Significant Wildlife Habitat

The potential for significant wildlife habitat was assessed using the guidance in OMNR (2010) and MNR (2015). No flora, fauna, or ecological conditions identified in the background review or field survey that would trigger a Significant Wildlife Habitat designation with respect to the ELC communities present were observed on the site. For example, the cultural habitats do not support waterfowl stopover or staging areas, colonial nesting bird breeding habitat or other examples of seasonal concentration areas, rare vegetation communities as noted in MNR (2015), or rare or specialized habitats including seeps or springs.

No forest interior habitat is present and thus potential nesting of species of special concern such as wood thrush and eastern wood-pewee is not expected. No evidence of raptor wintering areas was noted and old growth forests are not present. Areas of broken and fissured rock for potential use by snakes were not observed.

The site is isolated from an environmental perspective as it is surrounded by existing residences and the commercial activity along the Manotick Main Street corridor to the east and Maple Avenue to the south.

Impact Analysis and Recommendations

Species at Risk and other Significant Natural Heritage Features

Based on the disturbed habitats present and lack of suitable structures, including open rafters and open, unlined brick chimneys, the only potential Species at Risk utilization on or adjacent to the site is butternut. No butternut was observed on or adjacent to the site. No other significant natural heritage features, including significant wildlife habitat and aquatic habitat, as defined in the Provincial Policy Statement and MNRF (2015), were observed or are anticipated for the site.

Tree Retention

A few scattered trees are on the site, including five Scot's pine in a north-south hedgerow and larger trees in the front and northwest corner of the rear yard of 1166 Highcroft Drive. The potential for tree retention was reviewed in conjunction with the Grading Plan prepared by D.B. Gray Engineering Inc. (Drawing C-2, revised August 9th, 2019). Grade raises between one and three metres throughout the site in combination with the location of the trees in areas proposed for the north-south road or the townhome will generally preclude tree retention on the site. One potential exception is the trees in the northwest portion of 1166 Highcroft Drive. The grade raises are minimal in this area and a small area of potential tree retention is shown on Map 2 for this portion of the site.

The Grading Plan also shows retaining walls along much of the site periphery not fronting onto Highcroft Drive. This will preclude retention of trees along the site peripheries other than the northwest area as shown on Map 2. The Scot's pine just to the south of the site will also likely need to be removed as a large portion of their critical root zone will likely be impacted by the retaining wall construction and on-site grade raises. Discussions are required with the adjacent landowners to identify the need for tree removal and to develop a planting plan to replace the removed trees with new plantings post-construction.

The long-term aesthetics and local wildlife activity for the site can be enhanced with post-construction plantings of native trees and shrubs where feasible. In terms of planting sensitivities, due to the clay soils, tree and shrub species that have a high water demand are not recommended for the site. These species include willows, poplars, and elm. It is important that native trees from a local seed stock be used whenever possible. Recommended species for planting include a mix of coniferous and deciduous trees such as sugar maple, red maple, basswood, red oak, white pine, and white spruce, along with nannyberry, elderberry, and dogwood shrubs. Use of invasive non-native plant material is strongly discouraged.

The following important mitigation measures are to be properly implemented:

1. To protect breeding birds, no tree removal should occur between April 15th and August 15th, unless a breeding bird survey conducted by a qualified biologist within five days of the woody vegetation removal identifies no active nests in the vegetation to be removed;
2. Trees to be retained are to be protected with sturdy temporary fencing at least 1.2 metres in height installed from the tree trunk a distance of ten times the retained tree's diameter where possible. Signs, notices, or posters are not to be attached to any tree. No grading, heavy machinery traffic, stockpiling of material, machinery maintenance and refueling, or other activities that may cause soil compaction are to occur within the critical root zones of the trees to be retained and protected. The root system, trunk, or branches of the trees to be retained are to be protected and not damaged. 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, burlap, or woodchips and kept moist until the roots can be buried permanently. A covering of plastic should be used to retain moisture during an extended period when watering may not be possible. Any roots that must be cut are to be cut cleanly to facilitate healing and as far from the tree as possible. A qualified arborist is to prune prior to construction any branches from retained trees on or adjacent to the site that may be damaged during construction. Exhaust fumes from all equipment during construction will not be directed towards the canopies of retained trees.

All of the supports and bracing for the protective fencing should be placed outside of the protected area and should be installed in such a way as to minimize root damage. Also, since the desired effect of the barrier is to prevent construction traffic from entering the tree's critical root zone, the barrier should be kept in place until all site servicing and construction has been completed;

3. Where required, temporary seepage barriers such as silt fencing, straw bale check dams, and other sediment and erosion control measures will be installed to OPSD requirements in any temporary drainage ditches, around disturbed areas during construction, and stockpiles of fine material. These control measures must be properly maintained to maximize their function during construction and will be removed at the completion of construction once the site has stabilized. Any dewatering of groundwater is to be properly treated before release or directed to the sanitary system. Re-vegetation of exposed, non-developed areas with native species is to be achieved as soon as possible to reduce surface erosion;
4. The contractor is to be aware of potential Species at Risk in the vicinity of the site including butternut. Appendix 1 of City of Ottawa (2015) describes these species. The project biologist for this development is Bernie Muncaster (613-748-3753). Any Species at Risk sightings are to be immediately reported to the project biologist and the MNRF, and activities modified to avoid the potential for impacts until further direction is received by the Ministry;

5. As recommended in City of Ottawa (2015), prior to beginning work each day, wildlife is to be checked for by conducting a thorough visual inspection of the work space and immediate surroundings. See Section 2.5 of City of Ottawa (2015) for additional recommendations on construction site management with respect to wildlife. It is the responsibility of the contractor to be familiar with all components of City of Ottawa (2015). Any turtles, snakes, or other sensitive wildlife in the work area are to be relocated to the Rideau River corridor to the northeast. Animals should be moved only far enough to ensure their immediate safety. See Appendix 1 and the links in Section 4 of City of Ottawa (2015) for suggestions on how to effectively relocate turtles and snakes;
6. Municipal by-laws and provincial regulations for noise will be followed and utilities will be located in the vicinity of the site prior to construction; and,
7. Waste will be managed in accordance with provincial regulations. The contractor will have a spill kit on-hand at all times in case of spills or other accidents.

Schedule of Proposed Works

It is proposed to remove the woody vegetation not identified for retention in 2019 outside of the breeding bird period. City of Ottawa staff is to be contacted at least two business days prior to any tree removal so that staff have the opportunity to verify that any required protective fencing has been properly constructed.

Conclusion

Eleven detached residences are proposed for the urban residential development on the 0.37 hectare site south of Highcroft Drive within the existing built-up portion of the Village of Manotick. The site is disturbed from a natural environment perspective by two existing residences, driveways, and larger manicured areas. Scattered coniferous and deciduous trees are on and adjacent to the site. Due to the density of development and extensive grade raises and retaining walls, tree retention does not appear feasible for the site except for the northwest corner. No Species at Risk utilization or other significant natural heritage features were observed or are anticipated for the disturbed site other than butternut, which was not noted.

There are co-owned trees or adjacent trees with critical root zones extending onto the site which are likely to be damaged from the townhome construction. Discussions are required with the adjacent landowners to develop a suitable planting plan for replacement of these trees. Planting of native trees and shrubs will add to the features and functions of the site and over time replace the limited functions of the trees to be removed.

It is important that mitigation measures outlined in this report are properly implemented and maintained.

References

City of Ottawa. 2010. City of Ottawa Official Plan. As adopted by City Council, May, 2003 and Updated 2010. Publication: 1-28. 227 pp & Sched.

City of Ottawa. 2015. Protocol for Wildlife Protection during Construction. August, 2015. 14 pp & Append.

Ontario Ministry of Natural Resources. 2010. Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005. Second Edition. March 2010. 233 pp.

Ontario Ministry of Natural Resources and Forestry. 2015. Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E. January, 2015. 38 pp.

Please call if you have any questions or comments on this Environmental Impact Statement and Tree Conservation Report.

Yours Sincerely,
MUNCASTER ENVIRONMENTAL PLANNING INC.



Bernie Muncaster, M.Sc.
Principal

Manotick Highland EISTCR





2017 air photo from geoOttawa

Legend

-  Site
-  Vegetation Communities

Vegetation Communities

-  Cultural Meadow
-  Coniferous hedgerow



Approx. Scale 1: 860



Map 1

FILE: 18 - 20

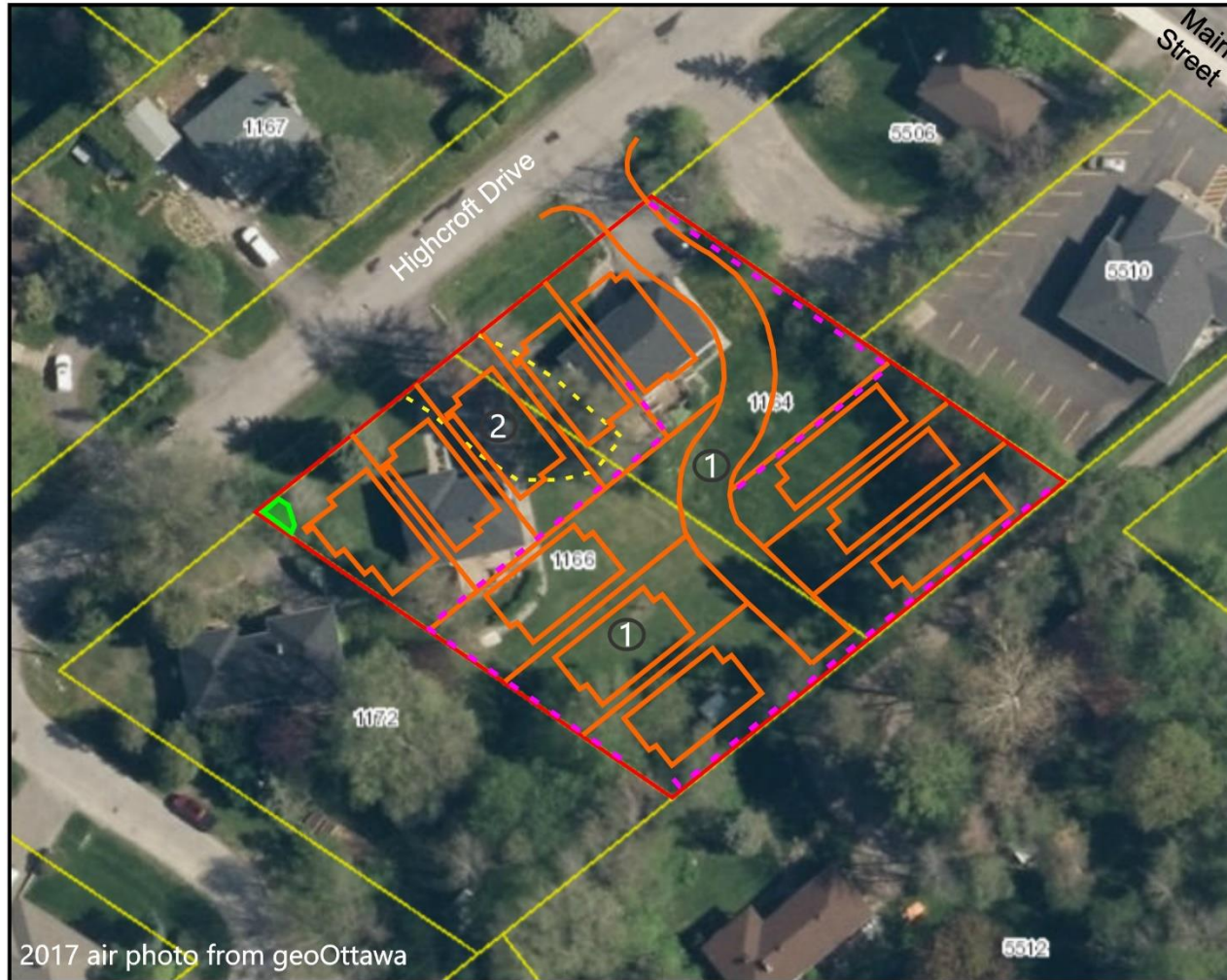
December 18, 2018

Prepared for: NIVO Developments Inc.

Prepared by:  Muncaster Environmental Planning Inc.

**ENVIRONMENTAL IMPACT STATEMENT/
TREE CONSERVATION REPORT**

**1164 - 1166 Highcroft Drive
Manotick, City of Ottawa**



2017 air photo from geoOttawa

Legend

- Site
- Vegetation Communities
- Residence Outline
- Retaining Wall
- Proposed Tree Retention

Vegetation Communities

- Cultural Meadow
- Coniferous hedgerow



Approx. Scale 1: 860



Map 2

FILE: 18 - 20

August 8, 2019

Prepared for: NIVO Developments Inc.

Prepared by:



Muncaster
Environmental
Planning Inc.

**PROPOSED CONSERVED VEGETATION
TREE CONSERVATION REPORT**

**1164 - 1166 Highcroft Drive
Manotick, City of Ottawa**