Muncaster Environmental Planning Inc.

April 2, 2019

Kris Norris and Dana Norris
NCM Hydrovac Services
200 Maple Creek Court
Carp, ON
K0A 1L0

Dear Mr. Norris:

RE: 200 Maple Creek Court – Proposed Warehouse
Environmental Impact Statement and Tree Conservation Report

This Environmental Impact Statement (EIS) and Tree Conservation Report (TCR) address a proposed pre-fabricated warehouse which will be used to store large vacuum trucks. The site is on the east side of Maple Creek Court, approximately 500 metres east of Carp Road. The 1.75 hectare site is in the north-central Part of Lot 7, Concession 2 of Huntley Geographic Township, City of Ottawa. Historically the site was generally treed with some open areas. Between 2005 and 2008 much of the woody vegetation was removed from the site. The balance of the woody vegetation was removed between 2014 and 2017, except for trees along the north periphery and a couple along the south edge. In December 2018 much of the site had a dirt base and was actively used for parking and storage, with stockpiles of material.

For the purposes of this report Maple Creek Court and Carp Road are considered to be in a north-south orientation.

Methodology

This EIS and TCR was prepared in accordance with Section 4.7.8 of the City of Ottawa Official Plan (2010) following the EIS Guidelines and the Guidelines for City of Ottawa Tree Conservation Report, found at http://ottawa.ca/en/city_hall/planningprojectsreports/planning/dev_review_process/guide/environmental_impact/ and http://ottawa.ca/en/env_water/tlg/trees/preservation/guidelines/index.html respectively, and with guidance from the Natural Heritage Reference Manual (OMNR, 2010). The field survey and this report were completed by Bernie Muncaster, who has a Master's of Science in Biology and over thirty-one years of experience completing natural environment assessments. The purpose of the Tree Conservation Report component is to determine any tree stands that should be retained and protected and the associated protection measures. It is proposed to remove any additional trees not identified for retention in 2019, after the breeding bird period. The owner of the site is NCM Hydrovac Services.

The EIS will provide the methodology to mitigate as required negative impacts on significant features and functions. Potential Species at Risk in the general area were identified from Ministry of Natural Resources and Forestry databases, the Ontario Breeding Bird Atlas, the Ontario Reptile and Amphibian Atlas, Species at Risk reported for the overall City of Ottawa, and our work on several projects in this portion of Ottawa.

A field survey of the site and adjacent lands was completed well outside of the growing season on December 20th, 2018 from 14:10 to 16:15. Weather conditions included a light breeze, partly sunny skies, and an air temperature of 4° C. Scattered snow and ice cover were present throughout the site.

Environmental Features

The site is zoned *Rural General Industrial* (RG5) and designated *Rural Employment Area* on Schedule A of the City of Ottawa Official Plan, with the forested lands to the east designated *General Rural Area*. The original forested portions of the site are part of the Natural Heritage System, as shown on the Schedule L3 overlay of the City's Official Plan (see pink line on Map 1). The central and west portions of the site are also part of the Huntley Natural Area, identified as Natural Area 417 in the former Region of Ottawa-Carleton's Natural Environment System Strategy (White, 1997). However, as noted above the vast majority of the woody vegetation cover on the site was removed since this study was done in the 1990s. The 85 hectare Huntley Natural Area was assigned a low overall assessment, with none of the eight evaluation criteria scoring above average. Two evaluation criteria (rare vegetation community/landform representation, and vegetation community/landform diversity) were scored as average, with the balance of the evaluation criteria given a low score or not rated. No large-scale linkages were identified for the Huntley Natural Area by White (1997), with no endangered, threatened or rare species noted, although many species have been added since the 1990s. The regionally rare vegetation community/landform types identified by White (1997) for the overall Natural Area were not observed on or adjacent to the site. No specific seasonal wildlife concentrations were reported and the extent of site fragmentation was considered moderated. White (1997) summarized the Huntley Natural Area as a range of mixed forest communities that appears to have been much disturbed.

No Provincially Significant Wetlands or Areas of Natural and Scientific Interest are in proximity to the site. No channels are mapped or were observed on or adjacent to the site. The Huntley Creek corridor is approximately 200 metres to the southwest of the site. No constraints are identified for the site on Schedule K of the Official Plan, with organic soils shown to the east of the site.

The Carp River Watershed/Subwatershed Study (Robinson, 2004) considered most of the site to be a high recharge area and a 'priority two area' for control of point source nutrient management. Portions of the forests further east of the site were identified as older than 50 years of age by Robinson (2004). No forest interior habitat was identified by Robinson (2004) on or adjacent to the site, however as discussed below forest interior habitat is present to the east of the site. No areas of rare vegetation or Centres of Ecological Significance were identified by Robinson (2004) in proximity to the site.

Proposed Warehouse

The proposed development consists of a single-storey garage/truck storage building with an adjoining two-story building section consisting of office space. The total building footprint is approximately 1013 m² (McIntosh Perry, 2019). The warehouse will be used to store large vacuum trucks, with a fueling station and gravel surface parking proposed adjacent to the warehouse. A gravel driveway east off Maple Creek Court will access the new warehouse and surface parking. The existing water well in the north-central portion of the site will be used, with a new water line to connect the new building to the existing well. A new private septic system will be installed south of the new warehouse. Snow storage will be in the central portion of the site, to the east of the gravel surface parking. Two surface ponds dug in the east portion of the site between 2014 and 2017 are not proposed to be altered (Photo 4). McIntosh Perry (2019) concluded that the proposal can be developed without a requirement for stormwater management due to the combined runoff coefficient being less than 0.775.

Existing Conditions

The topography of the overall site is generally level, with a gentle slope to the east. Fill appears to be over much of the site, which is currently used for surface parking and storage. McIntosh Perry (2019b) noted that fill was present at the top of all five boreholes advanced on the site. The native soils were mapped by Schut and Wilson (1987) as imperfectly-drained fine sandy loams. McIntosh Perry (2019b) described the soils below the fill as silty sands with some gravel and silty gravelly sand tills. Groundwater was observed by McIntosh Perry (2019b) in three of the boreholes at elevations between 0.68 and 1.9 metres below the ground surface.

<u>On-Site</u>

The site has been highly disturbed with vegetation removal and addition of dirt fill and stockpiles (Photo 1). A west-east deciduous hedgerow is along the north site edge. The hedgerow is dominated by trembling aspen and white ash (Photo 2). Bur oak, sugar maple, white cedar, white elm, and white birch are also present. The largest trees were aspens, bur oak, and sugar maple in the 35cm diameter at breast height (dbh) range, with a mature 64cm dbh white ash in the east portion of the north deciduous hedgerow. The larger poplars appeared to be in poorer condition with trunk damage and many of the white ash, including the larger trees, were infected with emerald ash borer. Trunk damage was common on the white elm, with fungus well established on many of the white birch. Regenerating poplar stems were common along and adjacent to the hedgerow, with regenerating elm and white cedar stems, common buckthorn and red raspberry shrubs, common mullein, wild carrot, asters, goldenrods, white-sweet clover, evening primrose, and Canada thistle also present. Wild grape coverage was common on the lower branches of many of the poplars.

The only other trees on the site were a mature 60cm dbh bur oak along the south edge (Photo 3) and regenerating bur oaks adjacent to the mature bur oak. The larger bur oak had damage to the trunk and many of the smaller branches. A few tartarian honeysuckle and common buckthorn shrubs were also along the south edge of the site.

Mixed Forest to the East

No woody vegetation of note was to the south, west, or north of the site, with a mixed forest to the east (Photo 6). White ash, green ash, white cedar, white elm, and black cherry are the common species in the mixed forest. Much of the forest adjacent to the east edge of the site is open. The largest trees appearing to be in average or good condition are black cherry up to 36cm dbh. The critical root zones of these trees would extend up to three metres into the east edge of the site, although most trees along the edge are smaller and their critical root zones would extend only a couple of metres into the site (Photo 5). The existing elevation along the east edge of the site is between one and three metres higher than the forest to the east. The grade raise may have impacted some of the adjacent trees to the east. Larger white ash are present adjacent to the southeast corner of the site but these trees appear to be in poor condition with extensive evidence of emerald ash borer. Windthrow is common in the mixed forest. Prickly ash, red raspberry and common buckthorn are well established in the understory of the mixed forest adjacent to the east edge of the site. Further east and south white cedar appear much more common and the forest would be considered coniferous. Areas of the forest could have wetland affinities.

Wildlife observations during the December survey well outside of the growing season included, American crow, black-capped chickadee, red squirrel, and white-tailed deer tracks. No trees with potential wildlife cavities were noted on or adjacent to the site, with woodpecker cavities in a couple of smaller white cedars trees in the mixed forest to the east.

Photo 1 – South portion of the site with view looking east to the mixed forest to the east

Photo 2 – White ash, white elm, and trembling aspen in the deciduous hedgerow along the north edge of the site. View looking east

Photo 3 – Mature bur oak along the south edge of the site about 50 metres east of Maple Creek Court. View looking east

Photo 4 – Dug pond in the east portion of the site. View looking south

Photo 5 – East edge of the site, with mixed forest to the east (left) and dug pond to the right (west). View looking south

Photo 6 – Mixed forest to the east of the site

Species at Risk and Other Species of Special Interest

On December 19th, 2018, the Ministry of the Natural Resources and Forestry's Make a Map: Natural Heritage Areas website was reviewed (www.giscoeapp.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 square including the site and adjacent areas (18VR21 - 37). No Species at Risk or other species of special interest were noted for this square.

The Breeding Bird Atlas results for the 10 km square 18VR21 were reviewed, with the threatened bobolink, eastern meadowlark, barn swallow, bank swallow, and eastern whip-poor-will reported for the overall 10km square. Bobolink and eastern meadowlark utilize larger areas of grasslands, including hay fields. The site is open but too disturbed with fill and stockpiles to represent suitable nesting habitat for these grassland Species at Risk. No structures are present on the site that may be used for nesting by barn swallow (barns, garages, and other structures with access to open rafters) or chimney swift (open unlined chimneys). Bank swallow is a colonial nester; burrowing in eroding silt or sand banks and sand pit walls. The on-site stockpiles did not appear to be of fine material and did not have open faces. Eastern whip-poor-will utilize rock or sand barrens with scattered trees, savannahs, old burns, or other disturbed sites in a state of early to mid-forest succession, or open conifer plantations. The understory of the forests to the east appeared too thick for eastern whip-poor-will utilization. Regardless this forest will not be disturbed.

Blanding's turtle and snapping turtle, a species of special concern, are reported for the 10 km square 18VR21 in the Ontario Reptile and Amphibian Atlas. Any turtle utilization in the area is anticipated to be along the Huntley Creek corridor to the southwest and snapping turtle was observed along the corridor to the west of Carp Road. The Huntley Creek corridor is approximately 200 metres to the southwest of the site and will not be disturbed.

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, butternut, 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. Except for butternut, no specific habitat characteristics related to these potential Species at Risk were observed on the site. No butternut trees were observed on or within 50 metres of the site.

Significant Woodlands

As the site is in the rural portion of the City of Ottawa, the significance of woodlands is evaluated using the criteria in the Natural Heritage Reference Manual (OMNR, 2010). There are no on-site forests remaining but the adjacent forest to the east would be considered significant as part of a contiguous forest extending to the east and south. The criteria fulfilled for significant woodlands include the presence of significant fish habitat within Huntley Creek, a significant natural heritage feature within 30 metres of the forest, the size of the contiguous forest size to the east, northeast and further to the south, which is greater than 50 hectares, and interior forest habitat greater than 8 hectares in the adjacent forest further to the east, northeast, and south of the site.

Significant Wildlife Habitat

The potential for significant wildlife habitat is assessed using the guidance in OMNR (2010) and MNRF (2015). Potential components which may lead to a designation of significant wildlife habitat include seasonal concentration areas of animals, rare vegetation communities or specialized habitat for wildlife, habitat for species of conservation concern, and animal movement corridors.

As there is no remaining forest onsite, eastern wood pewee and wood thrush, both Species of Special Concern, are not anticipated to be on the site but may be in the forests to the east. The on-site habitat is too disturbed with very minimal early successional habitat to be used by Species of Conservation Concern indicators (MNRF, 2015) such as brown thrasher, clay-coloured sparrow, field sparrow, eastern towhee, upland sandpiper, or grasshopper sparrow. No evidence of animal movement corridors, such as those for deer or amphibians, were noted.

Other field observations would not trigger a significant wildlife habitat designation with respect to the ELC communities present. 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. No rare vegetation communities or rare or specialized habitats as described in MNRF (2015) were observed. No wetlands with the potential to support amphibians were

observed on the site outside of the dug ponds and the east portion of the site which will not be disturbed. The site in its current condition would not support raptor wintering areas. No seeps or springs, potential bat hibernacula or maternity colonies, or suitable turtle nesting or wintering areas were noted. Stone piles and areas of broken and fissured rock for potential use by snakes, including potential reptile hibernaculum, were not observed.

No large-scale linkages were associated with the Huntley Natural Area (White, 1997). The many industrial and commercial operations along the Carp Road corridor and cultivated lands and large aggregate operations further from the site have greatly reduced the potential linkage functions of the general area, including very minimal natural setbacks along Huntley Creek west of the site to the east of Carp Road.

Impact Assessment and Mitigation Measures

No significant natural heritage features, as defined in the Provincial Policy Statement, were identified for the site, with significant woodlands to the east. The site has been highly disturbed with vegetation removal, fill, surfacing parking, and stockpiling of material. The east portion of the deciduous hedgerow along the north edge of the site will be maintained as shown on Map 2. Where the adjacent construction permits other trees will be retained in the west portion of the hedgerow. The mature bur oak along the south will be removed as part of the gravel roadway upgrading in this area. As this tree is considered a co-owned tree with at least a portion of the trunk on the adjacent land, the removal of this tree must be discussed with the adjacent landowner. No other features for potential retention were observed on the site.

Any infiltration function associated with the site is anticipated to continue as large portions of the site will continue to be pervious include the gravel roadways and surface parking, other open areas of the site and the ponds in the east end. McIntosh Perry (2019) concluded that the infiltration targets of the Carp River Watershed/Subwatershed Study (Robinson, 2004) will be met through the use of roof leaders and associated ponding areas. Temperature mitigation measures will also be put in place to lessen the effects of development on the Huntley Creek fish community (McIntosh Perry, 2019). These measures include use of a light-coloured material on the building rooftop to reduce radiant heat transfer to stormwater runoff from the roof area, installation of a ponding area to the northeast of the gravel surface parking, and grassed swales to convey runoff to the ponding area (McIntosh Perry, 2019).

No new forest edge will be created, with a west edge of the significant woodlands immediately to the east of the site. Existing fill on the site may have already impacted some of the trees immediately to the east of the site as the current elevation is raised between one and three metres along the east site edge relative to the forest to the east. The critical root zones of the adjacent trees to the east will extend up to three metres into the east edge of the site, although most trees along the edge are smaller and their critical root zones would extend only a couple of metres into the site. Given the lack of larger trees in good condition along the west edge of the adjacent forest, a setback and buffer distance of five metres would appear appropriate to protect the critical root zones and other features and functions of the adjacent significant woodlands. As shown on the Site Plan and Map 2, no additional work is proposed in the east portion of the site. In addition, a ten metre setback for development is required along the east edge of the site.

The portion of the deciduous hedgerow to be retained along the north edge of the site is to be protected with temporary fencing at least 1.2 metres in height installed from the tree trunk, where possible, a distance of ten times the retained tree's diameter (the critical root zone). 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 is to occur within three metres of the critical root zone 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 unless necessary. Exposed roots of retained trees are to be either kept moist and protected until they can be backfilled, or as advised by a certified arborist, the roots cut cleanly and as far from the tree as possible at a proper angle to facilitate healing. Overhanging branches that may be damaged by the construction are to be trimmed by a certified arborist prior to construction. Exhaust fumes from all equipment during construction will not be directed towards the canopy of the 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 trees' critical root zones, the barrier should be kept in place until all site construction has been completed in the vicinity of the trees.

There are no planting sensitivities for the site. Plantings of native trees and shrubs are recommended to add to the natural attributes of the site. A mix of coniferous and deciduous species such as sugar maple, red maple, tamarack, white spruce, white pine, red oak, basswood, native dogwoods, and nannyberry is recommended. It is important that native stock from a local seed source be used whenever possible to maximize the potential for successful plantings.

Many helpful wildlife oriented mitigation measures are detailed in the City's Protocol for Wildlife Protection during Construction (City of Ottawa, 2015). Contractors are to review in detail and understand the City's Protocol for Wildlife Protection during Construction prior to commencement of construction. Listed below are specific mitigation measures associated with the Protocol for Wildlife Protection during Construction (City of Ottawa, 2015).

<u>Summary of Mitigation Measures</u>

1. The extent of exposed soils shall be kept to a minimum at all times. Re-vegetation of exposed, non-developed areas shall be achieved as soon as possible;

2. During construction, sediment and erosion control measures will be implemented as required, including filtering of pumped groundwater, properly installed and maintained silt fencing, and seepage barriers deployed in any temporary drainage ditches, until the construction is completed. These control measures must be properly maintained to maximize their function during construction. For example, the silt fencing must be properly keyed in to filter runoff and be maintained as required, including repair of broken panels and removal of accumulated sediment;

3. The contractor is to be aware of potential Species at Risk in the vicinity of the site such as butternut. Appendix 1 of City of Ottawa (2015) describes these species. The contact biologist for this project, as described in Appendix 1, is myself, Bernie Muncaster (613-748-3753). Any Species at Risk sightings are to be immediately reported to the project manager and the Ministry of the Environment, Conservation and Parks and activities are to be stopped until further direction is received from the Ministry;

4. As recommended in City of Ottawa (2015), prior to beginning work each day thorough visual inspections of the work space and immediate surroundings are to be completed for wildlife. See Section 2.5 of the City's Protocol for Wildlife Protection during Construction (City of Ottawa, 2015) for additional recommendations on construction site management. Any turtles and snakes in the work area are to be relocated to the east. 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;

5. To protect breeding birds, no tree or shrub 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 trees or shrubs. No stick nests or other evidence of raptor utilization was observed on or adjacent to the site;

6. Sturdy temporary fencing to be installed at least 1.2 metres in height to protect the east portion of the deciduous hedgerow to be retained along the north edge of the site and additional tree protection measures are described above. Where possible other trees in the deciduous hedgerow will be retained in proximity to the new warehouse;

7. Municipal by-laws and provincial regulations for noise will be followed and utilities will be located as required in the vicinity of the site prior to construction;

8. In addition to the large surface areas of gravel, to further promote infiltration roof runoff from the new warehouse will be directed to a grass swale and a ponding area. As described above measures will be employed to mitigate potential temperature impacts to Huntley Creek; and,

9. 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

Additional removal of woody vegetation is anticipated to be minimal and is proposed for 2019, after the breeding bird season. City of Ottawa forestry staff are to be contacted at least two business days prior to any tree removal so staff have the opportunity to verify that the protective fencing has been properly constructed.

Conclusion

No significant natural heritage features, as defined in the Provincial Policy Statement, were identified for the site, with a significant woodlands to the east. The site has been highly disturbed with vegetation removal, fill, and stockpiling of material. The east portion of the deciduous hedgerow along the north edge of the site will be retained, with no work to occur in the vicinity of the significant woodlands to the east. A mature bur oak with trunk damage will be removed from the southwest portion of the site.

This EIS and TCR concludes that it is the professional opinion of the author that the construction and operation of the proposed warehouse will not have a negative impact, as defined in the Provincial Policy Statement, on the significant natural heritage features and functions of the general area, including the significant woodlands to the east, provided the above recommended mitigation measures are properly implemented.

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.

McIntosh Perry. 2019. Servicing and Stormwater Management Report. 200 Maple Creek Court – Storage Building. Project No.: CP-18-0512. 10 pp & Append.

McIntosh Perry. 2019b. Geotechnical Report. 200 Maple Creek Court. Project No.: CP-18-0512. 9 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.

Robinson Consultants Inc. 2004. Carp River Watershed/Subwatershed Study. December, 2004 Prepared for the City of Ottawa. Project No. 00056. 224 pp & append.

Schut, L.W. and E.A. Wilson. 1987. The soils of the Regional Municipality of Ottawa-Carleton (excluding the Ottawa Urban Fringe). Report No. 58 of the Ontario Institute of Pedology.

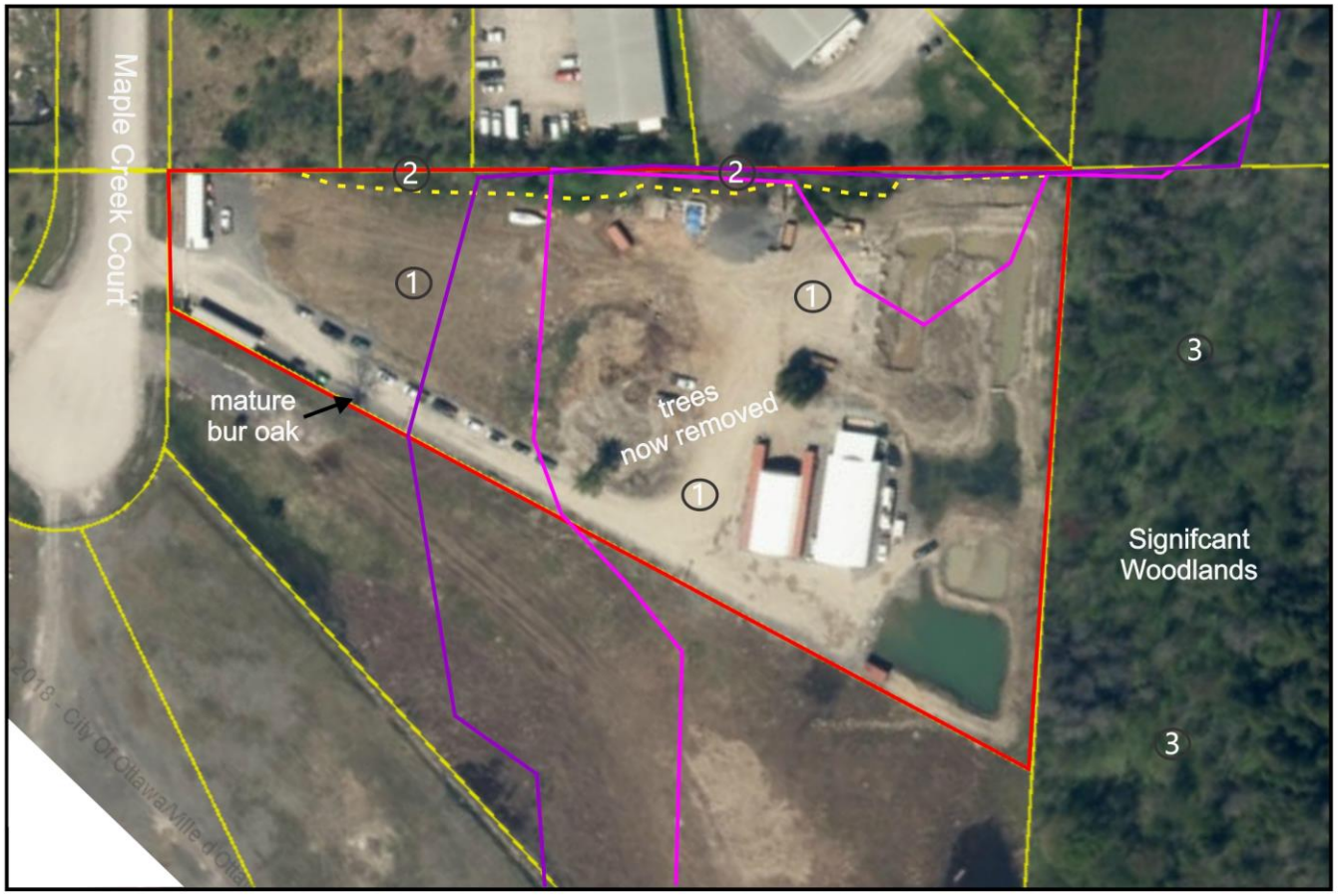
White, D.J. 1997. Summary: Natural Area Reports for Natural Areas West of the Rideau River (400 Series). Prepared for the Regional Municipality of Ottawa-Carleton, Planning and Development Approvals Department. Report #28-08c. 120 pp.

Please call if you have any questions regarding this EIS and TCR

Yours Sincerely,
MUNCASTER ENVIRONMENTAL PLANNING INC.

Bernie Muncaster, M.Sc.
Principal

\200 Maple Creek Court EISTCR



Legend

- Site
- Vegetation Communities
- Huntley Natural Area
- Natural Heritage System per Schedule L3

Vegetation Communities

1. Disturbed land
2. Deciduous hedgerow
3. Cedar-ash mixed forest

2017 air photo from geoOttawa

Approx. Scale 1:1,700

0 20 40 60
METRES

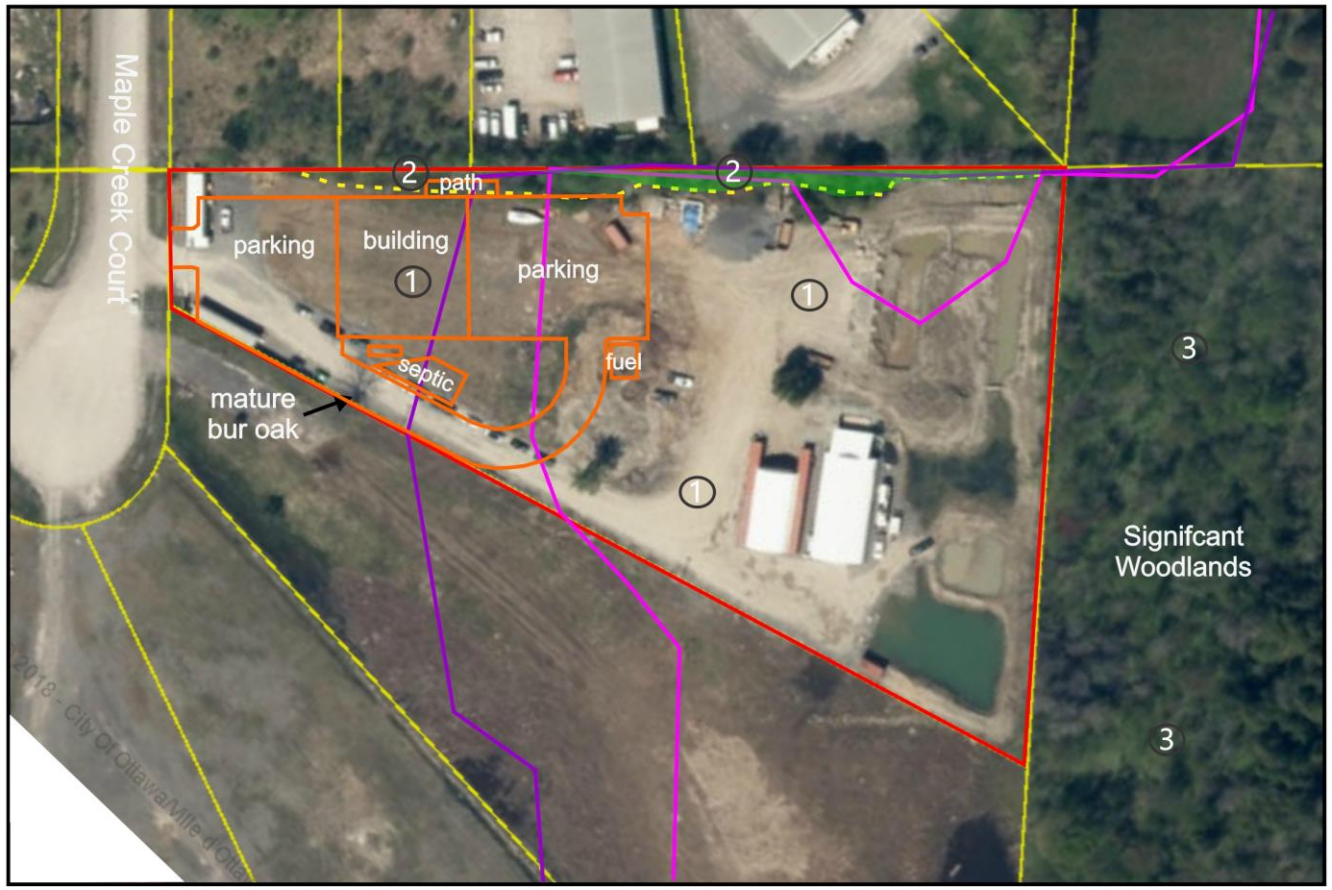
Map 1	FILE: 18 - 24	December 27, 2018

Prepared for: **NCM Hydrovac Services**

Prepared by: Muncaster Environmental Planning Inc.

CURRENT VEGETATION

200 MAPLE CREEK COURT
HUNTLEY, CITY of OTTAWA



Legend

- Site
- Vegetation Communities
- Huntley Natural Area
- Natural Heritage System per Schedule L3
- Proposed Tree Retention

Vegetation Communities

1. Disturbed land
2. Deciduous hedgerow
3. Cedar-ash mixed forest

2017 air photo from geoOttawa

Approx. Scale 1:1,700

0 20 40 60
METRES

Map 2	FILE: 18 - 24	December 27, 2018

Prepared for: **NCM Hydrovac Services**

Prepared by: Muncaster Environmental Planning Inc.

PROPOSED CONSERVED VEGETATION

200 MAPLE CREEK COURT
HUNTLEY, CITY of OTTAWA