Muncaster Environmental Planning Inc.

July 9, 2019

Mr. James Beach
Director Real Estate Development
Broccolini Real Estate Group
16766 Transcanadienne
Suite 500
Kirkland, Quebec
H9H 4M7

Dear Mr. Beach:

RE: 1966 Roger Stevens Drive, North Gower, Proposed Warehouse
Tree Conservation Report and Environmental Impact Statement

This Environmental Impact Statement (EIS) and Tree Conservation Report (TCR) assesses a proposed warehouse to the southwest of the intersection of Highway 416 and Roger Stevens Drive in the rural area of the City of Ottawa. The municipal address is 1966 Roger Stevens Drive and the 65 hectare site is described as Lot 21 and the north portion of Lot 22, Concession 2 of North Gower Geographical Township. For the purposes of this report Roger Stevens Drive is considered to be in an east-west orientation.

Proposed Development

The proposed development includes a warehouse of approximately 700,000 sq. ft. (65,000 m^2) warehouse with extensive surface parking. Three access points are proposed south off Roger Stevens Drive (Map 2). There will be two stormwater management facilities and a new sewage treatment plant in the southeast corner. New drilled water wells will also service the warehouse.

Site Context

The site and lands to the west are designated *Village* on Schedule A of the City of Ottawa Official Plan, while the lands to the south of the site, to the north, north of Roger Stevens Drive, and east of Highway 16 are designated *Agricultural Resource Area*. 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. The forest in the southwest portion of the site and forests to the south are part of the City's Natural Heritage System, as shown on the Schedule L2 overlay and the purple line on Map 1. These areas are also generally part of the Lochhead Road Complex Natural Area, as identified in the former Region's Natural Environment System Strategy as Natural Area 502 (Brunton, 1997). Floodplain associated with the Dillon-Wallace Municipal Drain north of Roger Stevens Drive, extends onto the northwest

portion of the site, as shown on Schedules K and L2 of the Official Plan and the dashed blue line on Map 1. The Johnston Municipal Drain runs along the east portion of the south site boundary. No other channels were observed or are mapped for the site.

The former farmhouse has been removed from the site, with barns, a silo and other structures remaining in the centre of the site. The balance of the site is dominated by cultivated fields, with corn and soybeans planted in 2018 and 2019, and forests in the central and southwest portions. Several hedgerows are also present. Rural residences are to the west of the site, on the east side of Third Line Drive South, with forests to the south, and agricultural activity to the north of Roger Stevens Drive, east of Highway 416, and further south of the site.

Methodology

This report includes an assessment of the natural environment features, including the potential for specimen trees, significant woodlands, aquatic habitat, 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 20th, 2018 from 11:05 to 14:10. Weather conditions during the survey included a light breeze, an air temperature of 4° C, and partly cloudy skies. Snow cover was scattered on the site, with several bare areas. A survey during the growing season was completed on June 18th, 2019 from 09:20 to 13:00. Weather conditions during the June survey were good for observations, including a light breeze, an air temperature of 22° C, and sunny skies. The site and adjacent lands were walked in a systematic manner to ensure the entire site and adjacent lands were observed. A detailed search for butternuts was completed by Shaun St. Pierre, a certified butternut health assessor, on June 7th, 2019. Searches for barn swallow around the structures in the middle portion of the site were completed during the mornings of June 7th, June 18th, and June 25th under appropriate weather conditions, including sunny skies and calm winds or a light breeze.

Other than the June 7th barn swallow and butternut surveys, the field surveys and this report were completed by Bernie Muncaster, who has a Master's of Science in Biology and over thirty-one 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 currently owned by MCU Holdings Inc. It is anticipated that the woody vegetation not proposed for retention will be removed in 2019 after the breeding bird period.

Lochhead Road Complex Natural Area

The Lochhead Road Complex Natural Area, identified as Area 502 in the former Region of Ottawa-Carleton's Natural Environment System Strategy (NESS), is a small, 76 hectare, Natural Area which was rated low overall by Brunton (1997). The Natural Area is composed of five separate parcels, with the largest parcel including the southwest portion of the site and the forests to the south and southwest. No evaluation criteria were rated a high significance by Brunton (1997), with one criterion, rare vegetation community/landform representation, assigned a moderate significance. The balance of the evaluation criteria was rated low (endangered, threatened and rare species, rare vegetation community/landform, and seasonal wildlife

concentration), with landscape attributes, common vegetation community/landform representation, condition of the natural area and hydrological features assigned no significance. The summary report noted that the Natural Area consists of a complex of loosely-connected drumlinized till deposits on the marine clay plain over limestone bedrock (Brunton, 1997). Brunton (1997) further noted the vegetation is dominated by late successional deciduous forest, including some exceptionally tall, large hardwoods. The Natural Area appeared to be in fair condition. Seeps and springs were noted, along with good habitat diversity in the portions of the Natural Area surveyed as part of the NESS study. The rare vegetation communities identified for the overall Natural Area by Brunton (1997) were not noted on or adjacent to the site. The degree of human disturbance and site fragmentation were considered high, with the impact of alien species noted as moderate in the Natural Area (Brunton, 1997).

Potential Species at Risk

The Ministry of Natural Resources and Forestry (MNRF)'s Make a Map: Natural Heritage Areas website was reviewed on December 12th, 2018 (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 squares including the site and adjacent lands (18VQ49 – 58, - 68 and - 69). One Species at Risk, bobolink, was noted for these squares. Bobolink and eastern meadowlark utilize larger grassland areas such as hayfields, habitat not present on or adjacent to the site. The cultivated fields do not represent potential nesting habitat for these grassland Species at Risk. The scattered cultural meadows are too small, too irregular in shape to provide required interior habitat, and contain too much woody vegetation for nesting by these grassland Species at Risk.

The other Species at Risk breeding bird listed in the Ontario Breeding Bird Atlas for the 10 km square 18VQ49 was barn swallow. The decaying barn and other structures in the central portion of the site could be used for nesting by barn swallow and a pair of barn swallows were observed during each of three June surveys, with a nest noted in the southern barn (Photo 3). Other potential Species at Risk in the general area include bank swallow, which use the open face of sand banks; habitat not observed on or adjacent to the site. Chimney swift nests in larger brick chimneys without a metal liner. The farmhouse has been removed and no chimneys were on the site. 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 deciduous forest in the southwest corner appeared suitable but the understory of the cedar coniferous forest to the south of the site was much denser. The total size of the maple forest onsite and extending a bit to the west is about 3.7 hectares, less than the required 9 hectares identified in the MNRF's general habitat description for eastern whip-poor-will. Also, eastern whip-poor-will was not reported in the breeding bird atlas for this area.

Blanding's turtle and snapping turtle, a species of special concern, were identified in the Ontario Reptile and Amphibian Atlas for the overall 10km square 18VQ49 that includes the site and general area. No wetland habitat was observed or is mapped for the site. Turtle utilization in the Municipal Drains is not anticipated as there is no adjacent wetland habitat, and the channels are straight with a typical ditch trapezoid cross-section and minimal aquatic habitat features. The

closest unevaluated wetland mapped on geoOttawa is approximately 110 metres to the south of the southwest site edge.

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.

Butternut trees are found in a variety of habitats and 41 butternuts were identified on the site and adjacent lands (Map 3, Photo 12). Over half of these butternuts were assessed as unhealthy (24 Category 1 trees), with just over forty percent assessed as healthy (16 Category 2 trees and one Category 3 butternut). As described below, the stormwater management and parking areas were modified to avoid removing and the potential for harming the healthy butternuts as much as possible. A few cavity trees that could potentially be used as maternal summer colonies for bats were observed in the southwest forest, although the density appeared less than the 10 per hectare MNRF threshold and the forest will not be disturbed.

Existing Conditions

The topography of the site is generally flat with a raised portion in the centre and associated gentle slopes to the north and south from there. Test pits on the site indicated a combination of surficial soils, with clays generally dominant where cultivated fields are present and glacial tills in the forests and other non-cultivated portions of the site. In addition, sands were identified in the southeast fields.

The Johnston Municipal Drain runs along the east portion of the south site boundary (Photo 13). The channel flows to the east and is a typical straight agricultural channel with a trapezoid cross-section. Good canopy cover was provided by a deciduous hedgerow and an upland mixed forest to the south. The exposed substrate was dominated by soft clay. In-stream structure was limited but included large woody debris and some vegetation. The banks were well vegetated with spotted touch-me-not, thicket creeper, Philadelphia fleabane, Canada goldenrod, June meadow grass, wild grape, field horsetail, and white snakeroot.

Cultural Habitats

The site is dominated by cultivated fields, planed in soybeans or corn in 2018 and 2019 and shown as vegetation community 1 on Map 1 (Photos 1, 2 and 3). Cultural meadows are in the centre and south-central portions of the site (Photo 4). Common vegetation in the cultural meadows include orchard grass, bluegrass, reed canary grass, common brome grass, June meadow grass, timothy, common mullein, wild grape, common dandelion, chicory, evening primrose, wild carrot, wild parsnip, common milkweed, lesser stitchwort, red clover, white-sweet clover, stinging nettle, ground ivy, common burdock, New England aster, and Canada goldenrod. Slender willow, hawthorn, prickly ash, red raspberry, red-osier dogwood, blackberry, tartarian honeysuckle, and common buckthorn shrubs are common in the meadow habitat, along with

regenerating Manitoba maple, Norway maple, sugar maple, ash, white cedar, white elm, and red maple stems up to 25cm diameter at breast height (dbh). Larger Manitoba maple, white ash, and Norway spruce up to 50cm dbh are in the meadow habitat in the vicinity of the remaining structures in the central portion of the site. A mature sugar maple with cavities is in the east portion of the cultural meadow representation along the west-central portion of the south boundary.

A rectangular-shaped cultural thicket is along the north half of the west portion of the site. Apple, common buckthorn, and prickly ash shrubs are dominant in this area, with nannyberry, red raspberry. red-osier dogwood, slender willow, tartarian honeysuckle, and hawthorn also present. Regenerating white elm and white cedar stems are common in the thicket habitat, along with a few white spruce. Ground flora included Canada goldenrod, rough-stemmed goldenrod, asters, reed canary grass, barnyard grass, field horsetail, wild carrot, creeping charlie, wild parsnip. evening primrose, common milkweed, and common mullein. Rock at the surface and stone piles are common in the cultural thicket. Old electric fencing indicates this area was historically used for pasture. A dog walking trail was noted in the northwest cultural thicket.

Where the extent of tree cover is greater in the cultural habitats, the areas are shown as cultural woodlands (vegetation community 4) on Map 1. Sugar maple, Norway maple, basswood, white elm, Manitoba maple, white ash, and white cedar are the dominant trees in these areas (Photo 5). Staghorn sumac and apple shrubs are common in the understory, with common buckthorn, prickly gooseberry, red raspberry, grey dogwood, and regenerating ash stems also present. White bedstraw was a dominant ground flora in many areas, with wild carrot, common strawberry, common burdock, cow vetch, Philadelphia fleabane, hog peanut, eastern bracken, thicket creeper, black medic, and Canada goldenrod well represented.

Hedgerows

A north-south coniferous hedgerow dominated by white spruce is in the central portion of the site, on the west side of the laneway to the former farmhouse (Photo 6). The spruce were up to 55cm dbh and appeared to be in good condition. Deciduous hedgerows to the west of the coniferous hedgerow in the central portion of the site are dominated by sugar maple and white ash, with smaller white elm, basswood, and Manitoba maple. The largest maples are in the range of 75cm dbh. Cavities were present in some of the maples, along with dead smaller branches. Many of the white ash showed emerald ash borer damage while several of the white elm were dead with no functional bark. A smaller north-south coniferous hedgerow in the west part of the central area is dominated by smaller white cedar up to 26cm dbh.

A north-south deciduous hedgerow along the east side of the northwest cultural thicket described above is dominant by white elm, with white cedar, bur oak, and white ash also present (Photo 7). The largest trees were elm and bur oak in the 40cm dbh range. Many of the elm were in very poor condition. White elms are also dominant in an intermittent north-south deciduous hedgerow in the south-central portion of the site.

Hawthorn, gray dogwood, prickly gooseberry, red raspberry and nannyberry shrubs were common among the hedgerow trees, along with bloodroot, thicket creeper, wild grape, thicket creeper, red clover, and Canada goldenrod.

Upland Sugar Maple Deciduous Forest

Sugar maple is dominant in the upland deciduous forest in the southwest portion of the site (shown as vegetation community 7 on Map 1, Photo 8). Many mature sugar maples up to 80cm dbh are in the forest, along with a few basswoods up to 75cm dbh. An old sugar shack in the central portion of the forest indicates the maples were formerly tapped. Stacks of firewood were also present. In addition to the dominant maple and some basswoods, ironwoods up to 20cm dbh are common, with a few white elm, American beech and white ash trees in the south portion of the deciduous forest. Several of the ash and beech are in poor condition, with extensive trunk decay on the beech and evidence of emerald ash borer damage on the ash. A few of the larger sugar maples have cavities (Photo 9), fungus and broken limbs, but the leaf-out was generally good. Regenerating maple stems were dominant in many areas of the forest, with young ironwood, bur oak, white cedar (in the south portion), and basswood also in the understory. A good amount of natural deadfall adds to the ecological functions of the forest. Ground flora was generally reflected of a rich forest, with blue cohosh dominant in several areas. Clintonia, white trillium, jack-in-the-pulpit, false Solomon-seal, sharp-lobed hepatica, thicket creeper, lady fern, ostrich fern, sensitive fern, thicket creeper, and evergreen woodfern. Rock and boulders were common at the surface in the forest. Chairs and windchimes indicate some social use of the forest.

Upland White Cedar Coniferous Forest

The upland sugar maple deciduous forest transitions to an upland white cedar forest to the south of the site. A few large sugar maples up to 75cm dbh are along the south property line in this area. The upland white cedar coniferous extends slightly onto the site from the south to the east of the maple deciduous forest, with white cedars up to 46cm dbh. A larger, approximately one hectare, representation of upland white cedar coniferous forest is in the central portion of the site, to the east of the laneway. The cedars are up to 42cm dbh, with smaller white ash, white elm, and Manitoba maple also present. Windthrow was extensive in the central cedar forest (Photo 10). Otherwise the cedars appeared to be in generally good condition. The understory includes hawthorn, tartarian honeysuckle, prickly ash, common buckthorn, and red raspberry shrubs, along with regenerating ash, cedar, bur oak, basswood, maple, and elm stems. The ground flora was representative of more disturbed conditions relative to the southwest maple forest and included wild carrot, orchard grass, common mullein, Canada goldenrod, eastern bracken, wild grape, thicket creeper, tall buttercup, enchanter's nightshade, yellow violet, herb Robert, poison ivy, stinging nettle, creeping charlie, wild cucumber, lady fern, and evening primrose.

Wildlife observed during the 2018 and 2019 surveys included American crow**,** wild turkey, mourning dove, northern flicker, pileated woodpecker, red-winged blackbird, black-capped chickadee, least flycatcher, barn swallow, gray catbird, yellow warbler, common yellowthroat, American redstart, red-eyed vireo, American robin, chipping sparrow, white-throated sparrow, song sparrow, American goldfinch, blue jay, cedar waxwing, eastern garter snake, coyote scat,

white-tailed deer, woodchuck, eastern chipmunk, and red squirrel. There was no evidence of nesting in a bird nesting box in the west cultural thicket. A couple of squirrel dreys were in the larger deciduous trees in the cultural habitats. Several stone fences and piles were scattered at the field edges (Photo 11). These features could be used by hibernating snakes and other wildlife. A few of the older maples in the southwest deciduous forest and maples and ash in the cultural meadows contained potential wildlife cavities and smaller woodpecker holes. Road noise from Highway 416 could be heard throughout the site.

Photo 1 – Cultivated field in the southwest portion of the site.
View looking north from the south site edge

Photo 2 – Cultivated field in the northwest portion of the site.
View looking west from the central laneway

Photo 3 –South cultivated field with view looking north to silo and other structures.
Barn swallows were observed nesting in the dilapidated barn on the far right

Photo 4 –Cultural meadow in the south portion of the site.
View looking north

Photo 5 – Cultivated woodland in the south-central portion of the site.
View looking northeast

Photo 6 – North-south coniferous hedgerow of white spruce in the centre portion of the site. View looking northeast

Photo 7 – North-south deciduous hedgerow in the west portion of the site between cultivated field and cultural thicket. View looking northwest

Photo 8 – Mature trees are common in the southwest upland maple forest. View looking west to former sugar shack

Photo 9 – Upper portion of sugar maple in the southwest forest with a potential wildlife cavity. View looking northeast

Photo 10 – Windthrow was extensive in the upland cedar forest in the centre portion of the site. View looking northeast

Photo 11 – There are many stone piles on the site which could be used by overwinter wildlife. This example is in the centre portion of the site. View looking northeast to spruce hedgerow

Photo 12 – Butternuts in the south-central cultural woodland. View looking northeast

Photo 13 – Johnston Municipal Drain along the east portion of the south site edge. View looking east, downstream

Significant Woodlands

The criteria for significant woodlands in the rural area of Ottawa are found in OMNR (2010). The forest in the southwest portion of the site is contiguous with forests to the south of the site. Based on the wooded area cover provided in the City of Ottawa's Characterization of Ottawa's Watersheds (March, 2011), the Lower Rideau subwatershed has 33 percent wooded cover. Following OMNR (2010), the corresponding amount of forest interior habitat required for the woodland interior criteria is eight hectares. There is no forest interior habitat on the site, but a small amount, approximately 0.5 hectares total, of forest interior habitat is in two parcels to the south of the site. This amount is well under the criterion threshold. The corresponding threshold size for woodland size is 50 hectares, while the southwest forest and adjacent contiguous forest cover has an area of approximately 37 hectares. Note that Third Line Drive South was not considered to provide a break in forest cover and the forest to the west of Third Line Drive South is included in the above area. However, the southwest forest may be a significant woodland for other reasons. For example, the presence of trails and chairs indicate the forest has a social function, although this may not be considered an 'important' function for appreciation, education, cultural, or historical value (OMNR, 2010). Several larger sugar maples are present in the southwest forest and it is possible that the larger tree size structure defined in OMNR (2010) as 10 or more trees per hectare greater than or equal to 50cm dbh or a basal area of 8 or more m^2/ha in tree that have a dbh of at least 40cm is met for this portion of the forest. The portions of the forest under different ownership would need to be surveyed to determine if the larger tree size structure is met on average over the entire contiguous forest. The southwest forest is not within 30 metres of a significant natural heritage feature that is receiving an ecological benefit from the forest and does not appear to be providing a connecting link between other significant natural features. No water protection function was observed for the southwest forest with no evidence of sensitive groundwater discharge. No rare vegetation communities, habitats, tree, or plant species were observed.

Although portions of the contiguous forest to the south of the site could not be surveyed to determine if the overall forest is significant woodlands, the southwest forest on site clearly provides ecological functions such as mature trees in good condition. wildlife habitat, including some cavities, and a larger area of tree cover and associated climate, air quality, wildlife, and nature appreciation benefits. To the south of the site the Johnston Municipal Drain is within the overall contiguous forest. As such the southwest forest is considered a feature to be retained and no site alterations are proposed within the forest at this time.

Significant Wildlife Habitat and Linkages

The potential for significant wildlife habitat on the site was 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.

No Species of Conservation Concern, indicator species associated with marsh, open country, or shrub/early successional breeding bird habitat, or Provincially rare species were observed. No

forest interior habitat is present on the site 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, however many stone piles are present. The stone piles represent potential reptile hibernaculum. There are no wetlands on site and no evidence of habitats that support waterfowl stopover or staging areas, extensive amphibian use, colonial nesting bird breeding habitat, or other examples of seasonal concentration areas. No rare vegetation communities as noted in MNRF (2015) or rare or specialized habitats were observed. No seeps or springs were observed. No potential bat hibernacula areas were present. A few cavity trees were observed in the southwest forest, although the density appeared less than the 10 per hectare MNRF threshold for summer maternal bat use and the forest will be retained. Only a few deer tracks were observed and there was no evidence of extensive winter use such as a large number of pellets, browse, or tracks

Significant linkage functions are not anticipated for the site due to Highway 416 to the east, rural residences and North Gower to the west, and an abundance of agricultural activity in all directions from the site.

The stone piles may represent significant wildlife habitat. Where removal is required, the mitigation measures below will ensure overwintering or nesting activity is not disturbed.

Impact Analysis and Recommendations

Species at Risk and other Significant Natural Heritage Features

Two Species at Risk were observed on the site: butternut and barn swallow. The cultivated fields do not represent potential nesting habitat for the grassland Species at Risk bobolink and eastern meadowlark. The scattered cultural meadows are too small, too irregular in shape to provide required interior habitat, and contain too much woody vegetation for nesting by these grassland Species at Risk.

The development footprint has been modified to retain as many butternuts as possible, including relocating the south stormwater management facility. It is anticipated four butternuts will require removal (#s 25, 26, 40, and 41 – each between 3cm and 14cm dbh) and three butternuts may be harmed (#s 27, 38, and 39 – also each between 3cm and 14cm dbh). Under the current process in place at the Ministry of Environment, Conservation and Parks, the removal and harm of these butternuts can be compensation for with an on-line registration for 29 plantings of pure butternut stems. The location of the compensation plantings will be finalized when the on-line registration is completed.

Removal of the barn currently used for nesting by barn swallow can also be compensated for using the on-line registration under the current process. The barn removal must occur outside of the May 1st to July 31st breeding window for barn swallow and will be compensated for with installation of a nesting structure in the southeast corner of the site adjacent to the south stormwater management facility. Changes to the above compensation measures may be implemented pending the details of the current 10-year Endangered Species Act review.

Other significant natural heritage features on and adjacent to the site include anticipated forage fish habitat in the Johnston Municipal Drain. To protect any fish habitat in this typical trapezoid drain shaped straight channel, no site alterations will occur within a 30 metre setback of the channel, as shown on Map 2. To provide an enhancement over the existing cultivated field, the portion of the 30 metre setback on the site will be allowed to naturalize. Another channel, the Dillon-Wallace Municipal Drain is to the north of the site, north of Rogers Stevens Drive. This Drain is more than 30 metres from the site, although the floodplain does extend onto the northwest portion of the site.

Significant wildlife habitat may be associated with the many stone piles on the site. Where these piles must be disturbed, mitigation measures are presented below to ensure no over-wintering wildlife are impacted. Specific mitigation measures are also provided for potential wildlife cavities as some of the older maples and ash proposed for removal in the deciduous hedgerows in the central portion of the site contained cavities. Otherwise these trees appear to be in generally poor condition, with disease and/or broken major limbs. The other cavity trees are in the southwest forest and will be retained.

The southwest upland deciduous forest may represent significant woodlands. No site alterations will occur in the forest at this time, with mitigation measures below to protect the critical root zones of the trees along the forest edge. The coniferous forest in the central portion of the site is too small and contains no other features or functions for which it would be considered significant woodlands.

Tree Retention

The southwest forest, and other trees along the west, south and east site peripheries will be retained (see green lens areas on Map 2). Tree removal for the warehouse and associated surface parking and servicing is proposed for the central and south-central portions of the site, outside of the southwest forest. This will result in the loss of local wildlife habitat and aesthetic, climate and air quality benefits. As no development will occur along the west, south and east site edges, no co-owned trees will be impacted.

The long-term aesthetics and local wildlife activity for the site can be enhanced with post-construction plantings of native trees and shrubs. In terms of planting sensitivities, where clay soils are present tree and shrub species that have a high water demand are not recommended for these portions of 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. To enhance the buffer for the residences along Third Line Drive South, it is recommended that a priority for the plantings be in the cultural thicket and meadow and cultivated fields along the northwest portion of the site, north of the southwest forest. Other recommended planting locations are in the Johnston Municipal Drain setback in the southeast portion of the site and along the north and east site peripheries.

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. Any excavations that must take place within the critical root zones of adjacent retained trees is to be done by hand. 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. Stone piles were observed in several areas along the field edges. Where required, disturbances to stone piles are to occur outside of the winter and spring periods to protect wildlife, with the ideal time for removal in August and September. City of Ottawa (2015) contains mitigation measures for the removal of stone piles including retaining a biologist to inspect habitat for occupancy prior to removal during the more sensitive periods, and in cases where occupancy is uncertain, the stone piles are to be disassembled slowly (by hand where possible) to reduce potential impacts and allow wildlife time to relocate;

4. The ideal time for removal of trees with potential wildlife cavities is between August 15th and October 15th to protect both breeding birds and overwintering wildlife in cavity trees. Depending on the year, April may also be a suitable time. If winter tree removal is anticipated, surveys should be undertaken ahead of time to determine no overwintering wildlife use in trees with suitable cavities;

5. 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;

6. The contractor is to be aware of Species at Risk in the vicinity of the site including butternut and barn swallow. 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;

7. Any landscaping is to use only locally appropriate native species, such as those native species listed in this report and others found in the Lochhead Road Complex Natural Area;

8. 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 forested areas to the south of the site. 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;

9. 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;

10. 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; and,

11. Extensive efforts are required to ensure the outdoor lighting is directed only to areas where it is needed and does not interfere with the features and functions of the southwest forest or lands to the west or south of the site.

Schedule of Proposed Works

It is proposed to remove the woody vegetation not identified for retention in 2019 after 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

A large warehouse with extensive surface parking is proposed for the central and east portions of the 65 hectare site southwest of the Roger Stevens Drive and Highway 416 interchange within the Village of North Gower. The portion of the site proposed for development is dominated by cultivated fields, with coniferous and deciduous hedgerows and cultural habitats containing some woody vegetation. A mature upland sugar maple forest in the southwest portion of the site will be retained at this time and the setback from the Johnston Municipal Drain in the southeast will be naturalized. There are no co-owned trees or adjacent trees with critical root zones extending onto the site which are anticipated to be damaged. Tree plantings to the north of the southwest forest will further assist in screening the development from the residences to the west, with plantings of native trees and shrubs also recommended along the other site peripheries. These plantings will add to the features and functions of the site and over time assist in replacing the functions of the trees to be removed from the central and south-central portions of the site.

Two Species at Risk were documented on the site: butternut and barn swallow. Compensation for the removal or harm of the butternuts and removal of the former farm structures used by barn swallow will be compensated for with on-line registration under the current Endangered Species Act processes.

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

References

Brunton, D.F. 1997. Summary: Natural Area Reports for Natural Areas West of Rideau River (500 series). Prepared for the Regional Municipality of Ottawa-Carleton, Planning and Development Approvals Department. 164 pp.

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.

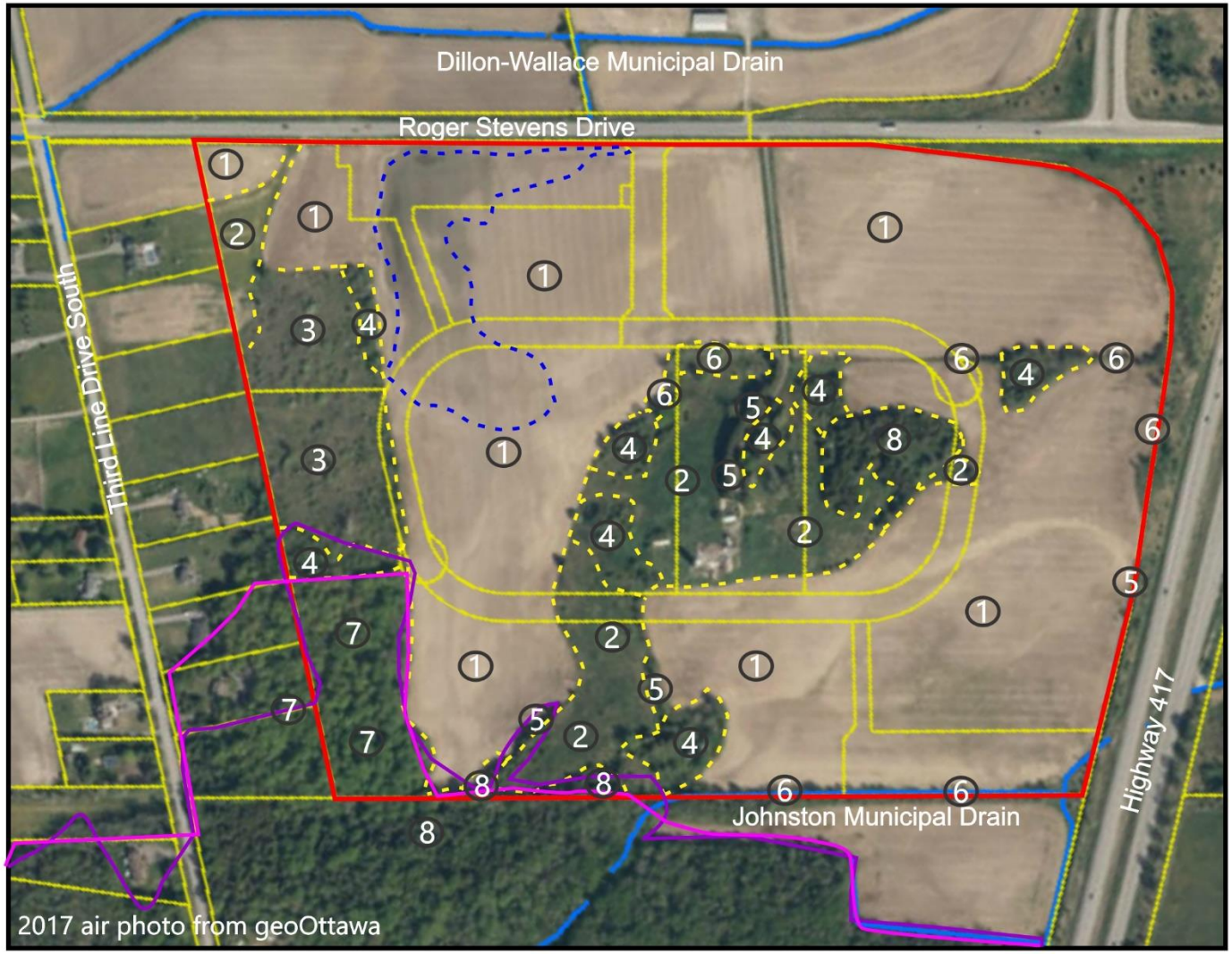
Ontario Ministry of Natural Resources and Forestry. 2015. Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E. January, 2015. 38 pp.

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

\Roger Stevens EISTCR



Legend

- Site
- Vegetation Communities
- Natural Heritage System per Schedule L2
- Lochhead Road Natural Area
- Floodplain

Vegetation Communities

1. Cultivated field
2. Cultural meadow
3. Cultural thicket
4. Cultural woodland
5. Coniferous hedgerow
6. Deciduous hedgerow
7. Upland sugar maple deciduous forest
8. Upland cedar coniferous forest

Approx. Scale 1: 6,100

0 50 100 150 200 METRES

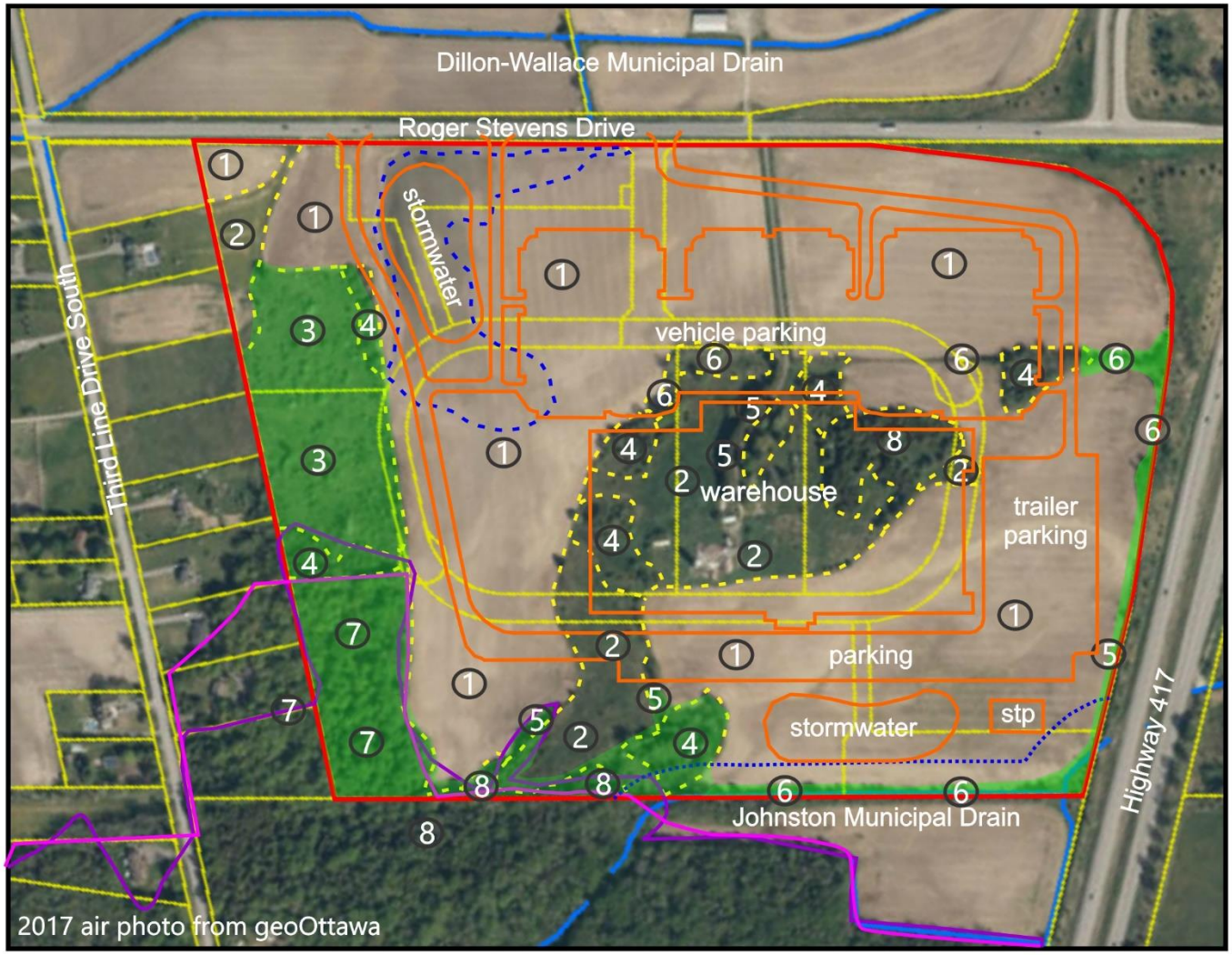
Map 1	FILE: 18 - 22	December 31, 2018

Prepared for: Broccolini

Prepared by: Muncaster Environmental Planning Inc.

ENVIRONMENTAL IMPACT STATEMENT/ TREE CONSERVATION REPORT

1966 Roger Stevens Drive
North Gower, City of Ottawa



Legend

- Site
- Vegetation Communities
- Natural Heritage System per Schedule L2
- Lochhead Road Complex Natural Area
- Floodplain
- 30 metre channel setback
- Proposed Tree Retention

Vegetation Communities

1. Cultivated field
2. Cultural meadow
3. Cultural thicket
4. Cultural woodland
5. Coniferous hedgerow
6. Deciduous hedgerow
7. Upland sugar maple deciduous forest
8. Upland cedar coniferous forest

Approx. Scale 1: 6,100

0 50 100 150 200 METRES

Map 2	FILE: 18 - 22	June 30, 2019

Prepared for: Broccolini

Prepared by: Muncaster Environmental Planning Inc.

TREE CONSERVATION REPORT
PROPOSED CONSERVED VEGETATION

1966 Roger Stevens Drive
North Gower, City of Ottawa

MAP 3 – RESULTS of the BUTTERNUT HEALTH ASSESSMENT

(Study Area included MTO Interchange to the Northeast of this Site)