Muncaster Environmental Planning Inc.

May 24, 2023

Ms. Melanie Riddell, P. Eng.
Senior Project Manager, Land Development
NOVATECH
Suite 200, 240 Michael Cowpland Drive
Kanata, Ontario
K2M 1P6

Dear Ms. Riddell:

RE: Provence Orleans Subdivision, Phase 6
Tree Conservation Report and Environmental Impact Statement - Updated

This Environmental Impact Statement (EIS) and Tree Conservation Report (TCR) assesses an urban residential development for Phase 6 of the Provence Orleans subdivision (formerly called the Legault Lands) in the southeast portion of Orleans. The Phase 6 lands are located between Portobello Boulevard and Provence Avenue south of Newcarlisle and Calico Crescents and have a municipal address of 2065 Portobello Boulevard (Map 1). The Phase 6 lands are approximately 10.94 hectares, including approximately 3.3 hectares of forest to remain as passive parkland in the central portion of the site. This retained forest represents the core of the Nantes Street Woods Urban Natural Area.

This report has been updated in support of a Draft Plan Amendment Application for the Provence Orleans Phase 6 subdivision. All revisions to the report have been noted with track changes. Pursuant to a February 28th, 2023 discussion with City Staff, the review of this report shall be limited to the track change revisions in this document.

Thirty-nine single detached residences are proposed for the east portion of the Phase 6 lands (Map 2). One 1.54 hectare medium density residential block is proposed for the west portion of the overall site (Map 2). This block will be accessed directly off Portobello Boulevard and the development of the block is on-going under a registered Site Plan Agreement. Access for the east portion of the Phase 6 lands will be via an extension of Plainridge Crescent to the north and looping to the west and south to complete the crescent from a temporary cul-de-sac and road stub. As referred to above, an approximately 3.3 hectare passive forested park will be retained in the central portion of the site. The retained parcel has been expanded since the original application and this report has been updated to reflect that expansion. As shown on Map 2, portions of the agricultural fields adjacent to the forest will also not be developed. A block of land along the north is being set aside for the Southeast Transitway. This section of the transitway will be built much later than this residential development as it is not included in the City's Rapid Transit and Transit Priority Network - 2031 (Map 5 of the City of Ottawa's 2013

Master Transportation Plan). The urban residential development will be on full municipal services. As detailed by NOVATECH (2023), the development will be required to attenuate post development flows to an equivalent release rate of 70 L/s/ha to the existing storm sewers within Nantes Street, Plainridge Crescent and Provence Avenue for all storms up to and including the 100-year storm event. This will be facilitated through a combination of inlet control devices and surface ponding (NOVATECH, 2023). Water quality will be provided by the downstream city-owned Cardinal Creek Stormwater Management Facility.

Site Context

The general area is dominated by urban residential land use in the southeast portion of Orleans, within the urban area of the City of Ottawa. The Nantes Street Woods Urban Natural Area and adjacent lands between Portobello Boulevard and Provence Avenue north of Nantes Street are designated Urban Natural Features on Schedule B of the Official Plan (see pink line on Map 1). All other lands in the general area, including the balance of the Phase 6 lands, are designated General Urban Area. The lands designated Urban Natural Features on Schedule B are also shown as part of the City's Natural Heritage System on the Schedule L1 overlay. No other terrestrial components of the Natural Heritage System or environmental constraints on Schedule K are shown for the Phase 6 or adjacent lands. There are no Provincially Significant Wetlands or Areas of Natural and Scientific Interest in this area of Orleans and there are no unevaluated wetlands, as shown on geoOttawa, on or adjacent to the Phase 6 lands.

The Nantes Street Woods Urban Natural Area is a 3.6 hectare Natural Area, including the central portion of the Phase 6 lands, assigned a low overall environmental rating in the Urban Natural Areas Environmental Evaluation Study. The Natural Area scored below average for all nine evaluation criteria and was assigned the lowest score for the significant flora and fauna, natural communities, connectivity and wildlife habitat (Muncaster and Brunton, 2005). The site summary for Nantes Street Woods concludes that the natural area is a small, isolated, very dry woodland fragment with minimal potential to support significant natural environment values. Significant features of the Urban Natural Area are one regionally uncommon plant species, small skullcap in the woodland habitat, and atypical presence of wetland species Canada bluejoint and small skullcap in dry upland woods. Invasive species, including Manitoba maple and swallowwort were noted as representing only a modest impact in the early 2000s. Swallowwort appeared common in portions of the west forest in the 2018 field surveys. No connectivity or interior habitat is associated with the Urban Natural Area. Disturbances noted within the Urban Natural Area include heavily used informal trails, dumping of yard waste along the south edge, tree forts, and edge effect through the area (Muncaster and Brunton, 2005).

The land use in the vicinity of the site is dominated by urban residential developments in the southeast portion of Orleans. In addition to the adjacent urban residential units, the Des Sentiers Public Elementary School is to the south of the site, with the École élémentaire catholique De La Découverte and associated playing fields to the north.

Methodology

This report includes an assessment of the natural environment features, including the potential for specimen trees and Species at Risk. Aerial photography (1960-2017) was used to assess the natural environment features in the general vicinity of the site. A survey of the Phase 6 lands and adjacent areas was completed on July 4th, 2018 from 09:50 to 11:55. Weather conditions during the early July survey included a light breeze, an air temperature of 24 ° C, and sunny skies. Another field review was completed on September 4th, 2018 from 08:20 to 10:40. Weather conditions during the September survey included a light breeze, an air temperature of 24 ° C, and sunny skies. The non-agricultural portions of the site were systematically walked and thoroughly searched for butternut and other features. The peripheries of the agricultural fields were also walked.

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 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 Provence Orleans Realty Investments Inc. It is proposed to remove any remaining woody vegetation not proposed for retention in 2024 outside of the breeding bird period.

For the purposes of this report Portobello Boulevard and Provence Avenue are considered to be in a north-south orientation.

Potential Species at Risk

The Ministry of Natural Resources and Forestry (MNRF)'s Make a Map: Natural Heritage Areas website was reviewed on June 10th, 2018 and April 1st, 2019. 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 Phase 6 and adjacent lands (18VR63 – 34 and - 35). No Species at Risk or Species of Special Concern were reported for these squares.

The Breeding Bird Atlas results for the 10 km square 18VR63 were reviewed, with the threatened bobolink, eastern meadowlark, barn swallow, bank swallow, and chimney swift reported for the overall 10km square that includes the Phase 6 lands and this area of Orleans. Bobolink and eastern meadowlark utilize larger areas of grasslands, including hay fields. The cultivated fields on the site do not represent suitable nesting habitat for these grassland Species at Risk. Areas of cultural meadow in the east portion of the Phase 6 lands to the west of Provence Avenue total about 0.4 hectares. This size of meadow is much less than the five hectare minimum area of continuous suitable habitat identified as required for bobolink and eastern meadowlark in the General Habitat Descriptions for these species. The extent of woody vegetation is too great in the remaining cultural habitats for nesting by the 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; habitat also not observed on or adjacent to the site.

In a May 1st, 2018 response to an information request (Appendix A), the Kemptville District Office of the MNRF indicated that other potential Species at Risk in the general area include butternut, Henslow's sparrow, little brown myotis, northern long-eared bat, and tri-colored bat. Large cavity trees that may be used by bats for summer maternal colonies were observed in the Nantes Street Woods Urban Natural Area in the central portion of the Phase 6 lands. Five potential cavity trees were observed, less than the ten per hectare required for additional bat studies following MNRF protocol. The north potential cavity tree will not be retained and measures are presented below to mitigated potential harm to any wildlife using the cavities. Henslow's sparrow utilizes unmaintained tall weedy fields (Ehrlich et al., 1988). This bird has not been reported in the overall City of Ottawa for several years. There were no observations of this bird in Ottawa during the 2001 -2005 breeding bird atlas field work. As discussed below, the habitat in the area of the Phase 6 lands is suitable for butternut.

Many other endangered and threatened species have historically been reported in the overall City, including butternut, American ginseng, eastern prairie fringed-orchid, wood turtle, spiny softshell, Blanding's turtle, musk turtle, loggerhead shrike, little brown myotis, northern long-eared bat, olive hickorynut, bald eagle, golden eagle, cerulean warbler, least bittern, eastern cougar, lake sturgeon, and American eel.

Based on the habitat present on and adjacent to the site, a potential Species at Risk for the site and adjacent lands is butternut. On August 9th, 2018, Shaun St. Pierre (Butternut Health Assessor # 281) searched the Phase 6 site and adjacent lands for 50 metres. No butternuts were observed in the survey area including the 50 metres adjacent lands, or during any of the other surveys other than one butternut to the south of the Phase 6 lands. The butternut appeared to be planted and it was confirmed to be a hybrid by the Forest Gene Conservation Association of Ontario. As a hybrid, this butternut is not covered under the Endangered Species Act.

Existing Conditions

Paterson (2018) described the surficial soils on the Phase 6 lands as a thin layer of topsoil layer underlaid by a sensitive firm-to-soft brown-to-grey silty clay, with glacial till observed in the northeast portion of the Phase 6 lands. The overburden thickness ranged from greater than 10 metres is the west portion of the Phase 6 lands to less than 5 metres in the east part. The local bedrock is anticipated to consist of interbedded limestone and shale (Paterson, 2018). The site is generally flat with a gentle slope to the northeast in many areas. The farmed fields are tiled drained with outlets to an existing swale described below.

Expected long-term groundwater levels were noted by Paterson (2018) to range between three and five metres below ground elevation. Grade raise restrictions for the Phase 6 lands of 1.5 metres were identified by Paterson (2018).

No channels with aquatic habitat potential were identified on or adjacent to the site. A swale was observed along the north edge of the Phase 6 lands. No standing water was observed in the

swale on July 4th or September 4th, which was vegetated throughout and had no aquatic features (Photo 5). The swale connects to the existing urban infrastructure along the Portobello Boulevard corridor and is not connected directly to potential downstream natural aquatic habitat.

The Phase 6 lands have three general components: cultivated fields in the west, north-central and northeast portions. There is an intermittent deciduous hedgerow adjacent to the north edge of the fields. Secondly, the central portion of the site is within the Nantes Street Woods Urban Natural Area and is dominated by an upland maple deciduous forest over bedrock. Lastly, cultural habitats are in the east portion, west of Plainridge Crescent.

Cultivated Fields and Deciduous Hedgerow

Cultivated fields, planted in soybeans in 2018, are in the west, north-central and northeast portions (Photos 1 and 2). An intermittent deciduous hedgerow is along the north edge of the site. Red maple and white elm up to 20cm and 30cm dbh (Photo 3), respectively are common, along with smaller trembling aspen, white ash, and white elm. Many of the ash and elm appear to be in poor condition. Staghorn sumac, glossy buckthorn, red raspberry, and hawthorn shrubs are common among the intermittent hedgerow trees. In several areas, adjacent residents appear to have planted trees and extended gardens south of their property line. In other areas there are no trees along the north edge of the site and the area is mowed for about five metres south of the property line. Several trees to the north of the property line would have critical root zones extending onto the north edge of the site, including red maple and white elm in the 40cm dbh range approximately two metres north of the property line and smaller ornamental cherries and maples closer to the property line. The encroaching gardens and adjacent trees to the north will not be an issue for the Phase 6 development as these features are associated with the future transitway portion of the site.

Small areas of cultural meadows are in the east and southeast portions of the site. Typical ground flora in these areas include orchard grass, bluegrass, June meadow grass, timothy, common milkweed, Canada thistle, bird's-foot trefoil, cow vetch, wild carrot, red clover, white-sweet clover, daisy fleabane, bladder campion, and ox-eye daisy, along with red raspberry shrubs.

A twin-stem cottonwood with stems up to 32cm dbh is immediately west of the site, within the Portobello Boulevard right away and about four metres east of the sidewalk adjacent to the east curb.

Cultural Thicket and Woodlands

Red raspberry, staghorn sumac, nannyberry, common buckthorn, hawthorn, steeplebush, and red-osier dogwood are common shrub species in the east thicket habitat west of Plainridge Crescent (Photo 4). Regenerating white ash, white elm, and Manitoba maple stems are also present.

Where the tree cover is greater than 35 percent, the vegetation community on Map 1 is shown as a cultural woodland (Photos 12 and 13). Trembling aspen and Manitoba maple are common up to 18cm dbh, with smaller white ash and white elm. Sugar maples up to 40cm dbh are present

adjacent to the east edge of the upland maple forest in the central portion of the site described below. In this area white ash, white elm and bur oak are in the 25cm – 35cm dbh range. Many of the ash and elm had very little to no leaf-out. Common buckthorn and red raspberry shrubs are common in the cultural woodlands. In the southwest corner of the site, a thin strip of cultural woodland is dominated by regenerating ash, white elm, poplar, and grey birch stems up to 25cm dbh (Photo 13). Larger bur oak and trembling aspen in the 25cm dbh range are also present. As elsewhere, many of the ash and elm appeared to be in poor condition.

Staghorn sumac, purple-flowering raspberry, nannyberry, round-leaved dogwood, hawthorn, glossy buckthorn, red-osier dogwood, and red raspberry shrubs are common in the cultural woodlands.

Ground vegetation in the cultural thicket and woodland habitats include orchard grass, awnless brome grass, June meadow grass, timothy, common burdock, black swallowwort, red clover, wild carrot, common milkweed, Canada goldenrod, early goldenrod, tall goldenrod, New England aster, small white aster, calico aster, panicled aster, poison ivy, heal-all, common yarrow, thimbleweed, spreading dogbane, bird's-foot trefoil, cow vetch, common dandelion, butter-and-eggs, common strawberry, silvery cinquefoil, ox-eye daisy, chicory, tall buttercup, white avens, garden valerian, common ragweed, field sow-thistle, Canada thistle, curled dock, wild grape, thicket creeper, eastern bracken, bladder campion, common mullein, and lamb's quarter.

Upland Sugar Maple Deciduous Forest

Several mature sugar maples up to 88cm dbh are scattered in the west and central portions of the upland sugar maple deciduous forest (Photo 6). This forest represents the core of the Nantes Street Woods Urban Natural Area. Exposed bedrock, boulders, and bedrock fissures are common throughout the forest. Bedrock outcrops to be retained in the west portion of the forest are noteworthy features in an urban landscape (Photo 8). In addition to the dominant sugar maple, trembling aspen, bur oak, red maple, white elm, grey birch, black cherry, ironwood, white birch, basswood, and white ash are also present (Photo 7). Historically, some of the sugar maple had been tapped. Many of the ash and elm had greatly reduced or no leaf-out. Some fill and debris were observed, along with a couple of tree forts.

The east portion of the forest is younger, with the majority of trees in the 15cm dbh range (Photo 9). This is reflected in the 1960 aerial photography which shows much of the east portion of the current forest open (see Figure 1 below). A few older trees are in this area including sugar and red maples in the 45cm – 50cm dbh range. In addition to the maples, regenerating ironwood, white elm, trembling aspen, and white birch are common in the east portion of the forest.

Regeneration of sugar maple is very good in many areas of the forest, with regenerating stems of white elm, ash, and bur oak common in areas. Hawthorn and staghorn sumac shrubs are common in the periphery of the forest, with purple-flowering raspberry, prickly gooseberry, beaked hazel, highbush cranberry, fly honeysuckle, black currant, narrow-leaved meadowsweet, round-leaved dogwood, and tartarian honeysuckle also present in the understory. Poison ivy is dominant in most portions of the forest. Other ground vegetation includes eastern bracken,

thicket creeper, common dandelion, heart-leaved aster, thimbleweed, white avens, yellow avens, timothy, white baneberry, white trillium, enchanter's nightshade, and false Solomon's-seal.

Wildlife observed on and adjacent to the Phase 6 lands included American crow**,** ring-billed gull, norther harrier, mourning dove, downy woodpecker, house wren, European starling, rock pigeon, red-winged blackbird, common grackle, black-capped chickadee, blue jay, red-eyed vireo (agitated), American robin with immatures, grey catbird, song sparrow, chipping sparrow, American goldfinch, northern cardinal, eastern cottontail, eastern chipmunk, red squirrel, and grey squirrel. No stick nests or other evidence of raptor use were observed. A few large trees with cavities for potential summer bat roosts were observed in the upland deciduous forest in the central portion of the Phase 6 lands (Photo 6).

Photo 1 – Soybean field in the west portion of the site, with maple forest in the background. View looking east from Portobello Boulevard

Photo 2 – Soybean field in the east portion of the site, with maple forest in the background. View looking west from Plainridge Crescent

Photo 3 – White elm and smaller trembling aspen in the intermittent deciduous hedgerow along the north edge of the site. View looking west

Photo 4 – Cultural thicket habitat in the southeast portion of the site. View looking west

Photo 5 - Vegetation is established throughout the swale along north edge of the site. View looking west from the north-central portion of the site.

Photo 6 – Mature sugar maple with potential wildlife cavities to be retained along the east edge of the passive park area. View looking north

Photo 7 - Typical conditions of upland maple deciduous forest to be retained as a passive park in the central portion of the site. This example is in the west portion with view looking northeast

Photo 8 – Fissures in the exposed bedrock are common in the upland maple forest. This example is in the east portion of the forest

Photo 9 – Younger portion of the upland maple deciduous forest in the east portion of the forest. This portion of the forest is proposed for development. View looking north

Photo 10 – A few mature sugar maple trees are proposed for removal. This example is at the northeast edge of the forest. View looking north

Photo 11 – Typical deciduous trees proposed for removal for road construction in the southwest portion of the upland maple deciduous forest. View looking north

Photo 12 – Cultural woodland to east of the upland maple forest. View looking north

Photo 13 – Cultural woodland in the southwest portion of the site. View looking southeast

Significant Woodlands and Valleylands

The updated criteria for significant woodlands in the urban area of Ottawa are found in the recent document 'Significant Woodlands: Guidelines for Identification, Evaluation, and Impact Assessment'. Following Flowchart 'D', *Established Urban Area Process*, the contiguous forested lands in the central portion of the site would be considered significant woodlands as they are over 60 years old and the contiguous portion in 1960, see below, is over 0.8 hectares in size. There is no Community Design Plan or Secondary Plan that defines the Natural Heritage System for this area. Figure 1 below is 1960 aerial photography of the site and general area. The Phase 6 lands are outlined in red, with the portion of the forest proposed for retention shaded in green. This overlay indicates that contiguous forest as present in 1960 will be retained, with some outlying 1960 trees proposed for removal.

The Natural Heritage Reference Manual (OMNR 2010) provides criteria for identifying significant valleylands. No significant valleylands are present on or adjacent to the Phase 6 lands.

Figure 1 – 1960 aerial photography with site outlined in red and forest to be retained shaded in green

Significant Wildlife Habitat

The potential for significant wildlife habitat was assessed using the guidance in OMNR (2010) and MNRF (2015). A couple of potential significant wildlife habitat features are associated with the core wooded area to be retained. Areas of broken and fissured exposed bedrock for potential use by snakes were common. Also, several of the older maple trees contained cavities which could be used by hibernating or nesting wildlife. No other flora, fauna or ecological conditions were identified in the background review or field surveys that would trigger a significant wildlife

habitat designation with respect to the ELC communities present. For example, no wetlands are present for potential amphibian breeding, waterfowl stopover or staging areas, or colonial nesting bird breeding habitat. Rare vegetation communities, as noted in MNRF (2015), and rare or specialized habitats. including seeps or springs, were not observed. There was no evidence of deer yarding or other examples of seasonal concentration areas.

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. The cultural meadows and thickets were not large enough to support grassland or early successional breeding birds of special interest.

The site is isolated from an environmental perspective by the adjacent urban residential developments of Orleans and associated transportation network and other servicing infrastructure.

Impact Analysis and Recommendations

Species at Risk and other Significant Natural Heritage Features

No Species at Risk were observed and none are anticipated to have the potential to utilize the Phase 6 lands other than butternut. No pure butternuts were observed on or with 50 metres of the Phase 6 lands, with one hybrid detected to the south of the south-central edge. The majority of the potential cavity trees will be retained with mitigation measures presented below for the removal of one in the northeast edge the upland maple forest. No potential structures for chimney swift or barn swallow were present. No channels with aquatic habitat potential were observed or are mapped for the Phase 6 lands.

Significant woodlands are present in the upland maple forest and significant wildlife habitat may be associated with snake use in the exposed bedrock fissures and cavity trees in the forest. The contiguous forest, as it was present in 1960, will be retained and protected as a passive Woodland Park as per the City of Ottawa's Park Development Manual 2nd edition with removal of some trees at the north edge of the forest and in the southwest corner for the road extension and the east portion of a couple of lots.

Tree Retention

In order to meet stormwater management overland flow routes and similar to typical developments in the area, NOVATECH (2023) anticipate grade raises for the development portion of the site in the range of 1 to 1.5 metres. Thus, no tree retention potential is anticipated for the development portion of the site, although the vast majority of the on-site forest will now be preserved. The trees and associated drainage channel along the north edge of the site will not be impacted at this time as this is within the future transitway corridor, which is not part of this Application. Where possible, based on grading and other urban servicing constraints determined at the detailed design stage, trees will be retained along the southwest site periphery.

The central forest will be retained in its existing condition as a Woodland Park. The forest has several existing trails which can be used and enhanced as required. It is important to note that there is a large amount of poison ivy ground cover in many areas of the forest and pathways users must be aware of this. Where lots back onto the retained forest, the rear trees should be retained to provide protection for the forest. Ideally there would be five metres of minimal disturbance at the rear of these lots to assist in protecting the critical root zones of the retained outer forest trees if the site grading allows it. Trees to be retained at the rear of these lots, where grading permits, should be in good condition with a healthy leaf-out. Where dead or dying ash, white elm, and other trees in very poor condition are along the edge of the retained forest or at the rear of the adjacent lots, these trees should be removed under the supervision of a certified arborist.

There will likely be indirect impact on wildlife using the forest from adjacent urban development, although the majority of the adjacent lands to be developed are cultivated fields with minimal contribution to the forest fauna. However, there will be an increase in the extent of noise, light, and dust during the construction and operational phases and a greater number of users are anticipated for the trails in the forest. A small portion of the younger eastern portion of the forest will be removed, with an associated loss of local wildlife habitat, although the features and functions for which the forest would be considered significant woodlands and wildlife habitat, including the older portion of the forest and many areas of exposed bedrock and outcrops, will remain.

Portions of the agricultural fields adjacent to the retained forest will also not be developed. Restoration activities are recommended for these areas to enhance the retained natural environment feature, including a functional buffer. Plantings of native ground vegetation, shrubs and trees are the primary recommended restoration activity. In addition, control of non-native vegetation along the forest edge and scattered in the agricultural fields, including black swallowwort, will assist in the establishment of the native plantings. It is important that native trees from a local seed stock be used whenever possible and the plantings are well tended. Recommended tree species for planting include a mix of native coniferous and deciduous trees such as sugar maple, basswood, bur oak, red oak, white pine, white spruce, trembling aspen, black cherry, ironwood, and white birch. Recommended shrub species include hawthorn, staghorn sumac, prickly gooseberry, beaked hazel, ninebark, highbush cranberry, fly honeysuckle, black currant, and round-leaved or other native dogwoods. Recommended ground vegetation includes non-aggressive goldenrods and asters such as blue-stem goldenrod, zig-zag goldenrod, large-leaved aster, and heart-leaved aster. Wild sarsaparilla, eastern bracken, white and red baneberry, rose twisted stalk, white trillium, and false Solomon's-seal are also good choices.

In terms of planting sensitivities, where clay soils are present, tree and shrub species that have a high water demand are not recommended for the site. These species include willows, poplars, and elm. Due to the sensitive clay soils, Paterson (2018) identified tree planting setback recommendations for the development portion of the site including large trees (mature height over 14 metres) can be planted provided a tree to foundation setback equal to the full mature height of the tree can be provided (e.g. in a park or other green space). Paterson (2018) noted that the tree planting setback limits may be reduced to 4.5 metres for small (mature tree height up

to 7.5 metres) and medium size trees (mature tree height 7.5 to 14 metres) provided that the conditions with respect to available soil volume, mature tree size, local grading, and reinforced foundation walls are met as outlined in Section 6.8 of Paterson (2018).

With respect to soil volumes, as outlined in the draft Street Tree Manual, a medium size tree planted in clay soils must be provided with a minimum of 30 m^3 of available soil volume (25 m^3 where clay soils are not present), while a small size tree must be provided with a minimum of 25 m^3 of available soil volume (20 m^3 where clay soils are not present). The soil must be protected from excessive compaction during construction. Note that the soil volume calculation must be based on a depth of 1.5 metres below finished grade (e.g. 5m length x 4m width x 1.5m depth = 30 m^3).

The following important additional 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. It is very important that the permanent fencing at the rear of the lots backing onto the Woodland Park is functional and gates are not installed. Also, the grading in the rear of these lots is to be designed to not overload the woodlot with surface drainage;

3. 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. Overhanging branches from retained trees that may be damaged during construction are to be pruned by a qualified arborist prior to 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;

4. Tree removal along the north edge of the site will not occur until the Transitway is constructed. Where the critical root zones (ten times the trunk diameter) of shared trees along the southwest edge of the Phase 6 lands may be impacted, discussions are required with the adjacent landowner to the south to determine whether these trees should be retained or replaced with suitable, agreed upon plantings;

5. The removal of a mature maple tree with potential wildlife cavities in the north-central edge of the forest and any bedrock fissures is to occur in early April or late August to end of October to ensure wildlife that may use these features are not impacted;

6. Where required 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;

7. 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 MECP, and activities modified to avoid impacts until further direction by the Ministry;

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 retained upland maple forest. 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. It is important that residents with lots backing onto the adjacent forest retain trees at the rear of their property and understand that no access points or other intrusions associated with backyard creeping will be permitted. A permanent 1.5 metre black vinyl chain link fence will be installed along the rear property lines. No gates will be permitted in the fencing;

10. Users of the forest must stick to the existing pathways for the benefit of flora and fauna in the forest and their own protection from the abundant poison ivy. Signage will be an important component to implementing this mitigation measure;

11. 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;

12. Black swallowwort appears to be spreading in the west portion of the upland maple forest. A program should be considered aimed at removing or controlling this highly invasive species, recognizing that caution will be required for poison ivy contact during the swallowwort removal; and,

13. 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 2024 outside of the breeding bird period. City of Ottawa staff (Forester – Planning) is to be contacted at least two business days prior to any tree removal so that staff have the opportunity to verify that the protective fencing has been properly constructed. A Tree Cut Permit will be required for all trees greater than 10cm dbh.

Conclusion

Urban residential developments are proposed for the Phase 6 lands in the southeast portion of Orleans between Portobello Boulevard and Provence Avenue in the City of Ottawa. The Phase 6 lands are dominated by cultivated agricultural fields with a central upland maple forest. The vast majority of the forest, including the older portion will be retained and protected. Some tree removal will occur in the southeast corner of the forest and to the east. Significant natural heritage features on the Phase 6 lands are limited to the significant woodlands to be retained and potential significant wildlife habitat within the significant woodlands. The retained forest represents the core of the Nantes Street Woods Urban Natural Area.

Due to grading and other urban servicing requirements no tree retention is anticipated for the site outside of the central forest**.** Where possible trees at the rear of the lots abutting onto the central forest should be retained to provide additional protection for the outer trees in the forest. Planting of native trees and shrubs throughout the site will add to the features and functions of the site outside of the forest.

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.

Muncaster, B.W. and D.F. Brunton. 2005. Urban Natural Areas Environmental Evaluation Study. Prepared for the City of Ottawa.

NOVATECH. 2023. Provence Orleans Subdivision, 2065 Portobello Boulevard, Site Serving and Stormwater Management Design Brief.

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.

Paterson Group. 2018. Geotechnical Investigation, Proposed Residential Development. Legault Lands, Trim Road, Ottawa. July 5, 2018. Report PG4278-1. 24 pp & Append.

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

Yours Sincerely,
MUNCASTER ENVIRONMENTAL PLANNING INC.

Bernie Muncaster, M.Sc.
Principal

Legault Phase 6 EISTCR23

Legend

- Phase 6 Lands
- Nantes Street Woods UNA
- NHS (Schedule L1) & UNF (Schedule B)

Vegetation Communities

1. Cultivated fields
2. Cultural meadow
3. Cultural thicket
4. Cultural woodland
5. Deciduous hedgerow
6. Upland sugar maple deciduous forest

Approx. Scale 1:3,300

0 50 100 150 200 METRES

Map 1	FILE: 17 - 26	September 4, 2018

Prepared for: Provence Orleans Realty Investments Inc.

Prepared by: Muncaster Environmental Planning Inc.

PROVENCE ORLEANS SUBDIVISION
CURRENT VEGETATION

Orleans, City of Ottawa

Legend

- Phase 6 Lands
- Nantes Street Woods UNA
- NHS (Schedule L1) & UNF (Schedule B)
- Proposed Tree Retention

Vegetation Communities

1. Cultivated fields
2. Cultural meadow
3. Cultural thicket
4. Cultural woodland
5. Deciduous hedgerow
6. Upland sugar maple deciduous forest

Approx. Scale 1:3,300

0 50 100 150 200 METRES

Map 2	FILE: 17 - 26	May 17, 2023

Prepared for: Provence Orleans Realty Investments Inc.

Prepared by: Muncaster Environmental Planning Inc.

PROVENCE ORLEANS SUBDIVISION
PROPOSED CONSERVED VEGETATION

Orleans, City of Ottawa

APPENDIX A

MINISTRY of NATURAL RESOURCES and FORESTRY

CORRESPONDENCE

Ministry of Natural Resources and Forestry

Kemptville District

10 Campus Drive
Postal Box 2002
Kemptville ON K0G 1J0
Tel.: 613 258-8204
Fax: 613 258-3920

Ministère des Richesses naturelles et des Forêts

District de Kemptville

10, promenade Campus
Case postale, 2002
Kemptville ON K0G 1J0
Tél.: 613 258-8204
Téléc.: 613 258-3920

Ontario

Tue. May 1, 2018

Bernie Muncaster
Muncaster Environmental Planning Inc
491 Buchanan Crescent
Ottawa
K1J 7V2
(613) 748-3753
bmuncaster@rogers.com

Attention: Bernie Muncaster

Subject: Information Request - Developments
Project Name: Legault Lands, Orleans
Site Address: 2128 Trim Road, City of Ottawa
Our File No. 2018_CUM-4514

Natural Heritage Values

The Ministry of Natural Resources and Forestry (MNRF) Kemptville District has carried out a preliminary review of the above mentioned area in order to identify any potential natural resource and natural heritage values.

The following Natural Heritage values were identified for the general subject area:

- Unevaluated Wetland (Not evaluated per OWES)

Municipal Official Plans contain information related to natural heritage features. Please see the local municipal Official Plan for more information, such as specific policies and direction pertaining to activities which may impact natural heritage features. For planning advice or Official Plan interpretation, please contact the local municipality. Many municipalities require environmental impact studies and other supporting studies be carried out as part of the development application process to allow the municipality to make planning decisions which are consistent with the Provincial Policy Statement (PPS, 2014).

The MNRF strongly encourages all proponents to contact partner agencies and appropriate municipalities early on in the planning process. This provides the proponent with early knowledge regarding agency requirements, authorizations and approval timelines; Ministry of the Environment and Climate Change (MOECC) and the local Conservation Authority may require approvals and permitting where natural values and natural hazards (e.g., floodplains) exist.

As per the Natural Heritage Reference Manual (NHRM, 2010) the MNRF strongly recommends that an ecological site assessment be carried out to determine the presence of natural heritage

features and species at risk and their habitat on site. The MNRF can provide survey methodology for particular species at risk and their habitats.

The NHRM also recommends that cumulative effects of development projects on the integrity of natural heritage features and areas be given due consideration. This includes the evaluation of the past, present and possible future impacts of development in the surrounding area that may occur as a result of demand created by the presently proposed project.

Wildland Fire

MNRF woodland data shows that the site contains woodlands. The lands should be assessed for the risk of wildland fire as per PPS 2014, Section 3.1.8 "*Development shall generally be directed to areas outside of lands that are unsafe for development due to the presence of hazardous forest types for wildland fire. Development may however be permitted in lands with hazardous forest types for wildland fire where the risk is mitigated in accordance with wildland fire assessment and mitigation standards*". Further discussion with the local municipality should be carried out to address how the risks associated with wildland fire will be covered for such a development proposal. Please see the Wildland Fire Risk Assessment and Mitigation Guidebook (2016) for more information.

Significant Woodlands

Section 2.1.5 b) of the PPS states: *Development and site alteration shall not be permitted in significant woodlands unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.* The 2014 PPS directs that significant woodlands must be identified following criteria established by the Ontario Ministry of Natural Resources and Forestry, i.e. the Natural Heritage Reference Manual (NHRM), 2010. Where the local or County Official Plan has not yet updated significant woodland mapping to reflect the 2014 PPS, all wooded areas should be reviewed on a site specific basis for significance. The MNRF Kemptville District modelled locations of significant woodlands in 2011 based on NHRM criteria. The presence of significant woodland on site or within 120 metres should trigger an assessment of the impacts to the feature and its function from the proposed development.

Significant Wildlife Habitat

Section 2.1.5 d) of the PPS states: *Development and site alteration shall not be permitted in significant wildlife habitat unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.* It is the responsibility of the approval authority to identify significant wildlife habitat or require its identification. The MNRF has several guiding documents which may be useful in identification of significant wildlife habitat and characterization of impacts and mitigation options:

- Significant Wildlife Habitat Technical Guide, 2000
- The Natural Heritage Reference Manual, 2010
- Significant Wildlife Habitat Mitigation Support Tool, 2014
- Significant Wildlife Habitat Criteria Schedule for Ecoregion 5E and 6E, 2015

The habitat of special concern species (as identified by the Species at Risk in Ontario list) and Natural Heritage Information Centre tracked species with a conservation status rank of S1, S2 and S3 may be significant wildlife habitat and should be assessed accordingly.

Species at Risk

A review of the Natural Heritage Information Centre (NHIC) and internal records indicate that there is a potential for the following threatened (THR) and/or endangered (END) species on the site or in proximity to it:

- Bobolink (THR)
- Butternut (END)
- Eastern Meadowlark (THR)
- Henslow's Sparrow (END)
- Little Brown Bat (END)
- Northern Long-eared Bat (END)
- Sensitive Species (END)
- Tri-Colored Bat (END)

All endangered and threatened species receive individual protection under section 9 of the ESA and receive general habitat protection under Section 10 of the ESA, 2007. Thus any potential works should consider disturbance to the individuals as well as their habitat (e.g. nesting sites). General habitat protection applies to all threatened and endangered species. Note some species in Kemptville District receive regulated habitat protection. The habitat of these listed species is protected from damage and destruction and certain activities may require authorization(s) under the ESA. For more on how species at risk and their habitat is protected, please see: https://www.ontario.ca/page/how-species-risk-are-protected.

If the proposed activity is known to have an impact on any endangered or threatened species at risk (SAR), or their habitat, an authorization under the ESA may be required. It is recommended that MNRF Kemptville be contacted prior to any activities being carried out to discuss potential survey protocols to follow during the early planning stages of a project, as well as mitigation measures to avoid contravention of the ESA. Where there is potential for species at risk or their habitat on the property, an Information Gathering Form should be submitted to Kemptville MNRF at sar.kemptville@ontario.ca.

The Information Gathering Form may be found here:
http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/FormDetail?OpenForm&ACT=RDR&TAB=PROFILE&ENV=WWE&NO=018-0180E

For more information on the ESA authorization process, please see:
https://www.ontario.ca/page/how-get-endangered-species-act-permit-or-authorization

One or more special concern species has been documented to occur either on the site or nearby. Species listed as special concern are not protected under the ESA, 2007. However, please note that some of these species may be protected under the Fish and Wildlife Conservation Act and/or Migratory Birds Convention Act. Again, the habitat of special concern species may be significant wildlife habitat and should be assessed accordingly. Species of special concern for consideration:

- Snapping Turtle (SC)

If any of these or any other species at risk are discovered throughout the course of the work, and/or should any species at risk or their habitat be potentially impacted by on site activities, MNRF

should be contacted and operations be modified to avoid any negative impacts to species at risk or their habitat until further direction is provided by MNRF.

Please note that information regarding species at risk is based largely on documented occurrences and does not necessarily include an interpretation of potential habitat within or in proximity to the site in question. Although this data represents the MNRF's best current available information, it is important to note that a lack of information for a site does not mean that additional features and values are not present. It is the responsibility of the proponent to ensure that species at risk are not killed, harmed, or harassed, and that their habitat is not damaged or destroyed through the activities carried out on the site.

The MNRF continues to strongly encourage ecological site assessments to determine the potential for SAR habitat and occurrences. When a SAR or potential habitat for a SAR does occur on a site, it is recommended that the proponent contact the MNRF for technical advice and to discuss what activities can occur without contravention of the Act. For specific questions regarding the Endangered Species Act (2007) or SAR, please contact MNRF Kemptville District at sar.kemptville@ontario.ca.

The approvals processes for a number of activities that have the potential to impact SAR or their habitat have recently changed. For information regarding regulatory exemptions and associated online registration of certain activities, please refer to the following website: https://www.ontario.ca/page/how-get-endangered-species-act-permit-or-authorization.

Please note: The advice in this letter may become invalid if:

- The Committee on the Status of Species at Risk in Ontario (COSSARO) re-assesses the status of the above-named species OR adds a species to the SARO List such that the section 9 and/or 10 protection provisions apply to those species; or
- Additional occurrences of species are discovered on or in proximity to the site.

This letter is valid until: Wed. May 1, 2019

The MNRF would like to request that we continue to be circulated on information with regards to this project. If you have any questions or require clarification please do not hesitate to contact me.

Sincerely,

Dom Ferland
Management Biologist
dominique.ferland@ontario.ca

Encl.\
-ESA Infosheet
-NHIC/LIO Infosheet