Environmental Impact Statement and Tree Conservation Report 1919 Maple Grove Road

Final Report

August 10, 2018

Submitted To:

Formasian Development Crop.

Attention: Mr. Vincent Li

KILGOUR & ASSOCIATES LTD.
2285C St. Laurent Boulevard, Unit 16
Ottawa, Ontario,
K1G 4Z6
Canada
T:613.260.5555
F: 877.260.4420
www.kilgourassociates.com
Project Number FORM 663

TABLE OF CONTENTS

List of Figures

List of Tables

List of Appendices

1.0 INTRODUCTION

This report is an Environmental Impact Statement (EIS) prepared by Kilgour & Associates Ltd. (KAL) to inform the development of a new residential subdivision at 1919 Maple Grove Rd. (the site). The trigger for this EIS is the potential presence of Species at Risk (SAR) within 120 m of the site. This EIS includes a review of trees on site and thus also serves as the Tree Conservation Report (TCR) for this project.

2.0 PROPERTY INFORMATION

The subject property (Huntley, CON 1 PT LOTS 1 RP; 5R2175, Part 2 S & E PT 1 ON RP; 5R6898 Part 1 ON RP; 5R11374: PIN: 044870347) is a 7.6 hectare (ha) parcel owned by Formasian Development Corp. in the west end of Ottawa (Figure 1). The property is bordered by Maple Grove Road to the south, a housing development to the east, and early successional forest growth to the north and west.

The property at 1919 Maple Grove Road is zoned as Development Reserve Zone (DR). This zone recognizes lands intended for future urban development, limits the range of permitted uses to those which will not preclude future development options, imposes regulations that ensure a low scale and intensity of development to reflect the characteristics of existing land use, and permits limited lot creation on existing public streets in villages that will not preclude future development options in the Development Reserve Subzone 3.

The site is included include within the lands of the Kanata West Community Design Plan, which was approved by the City in 2003.

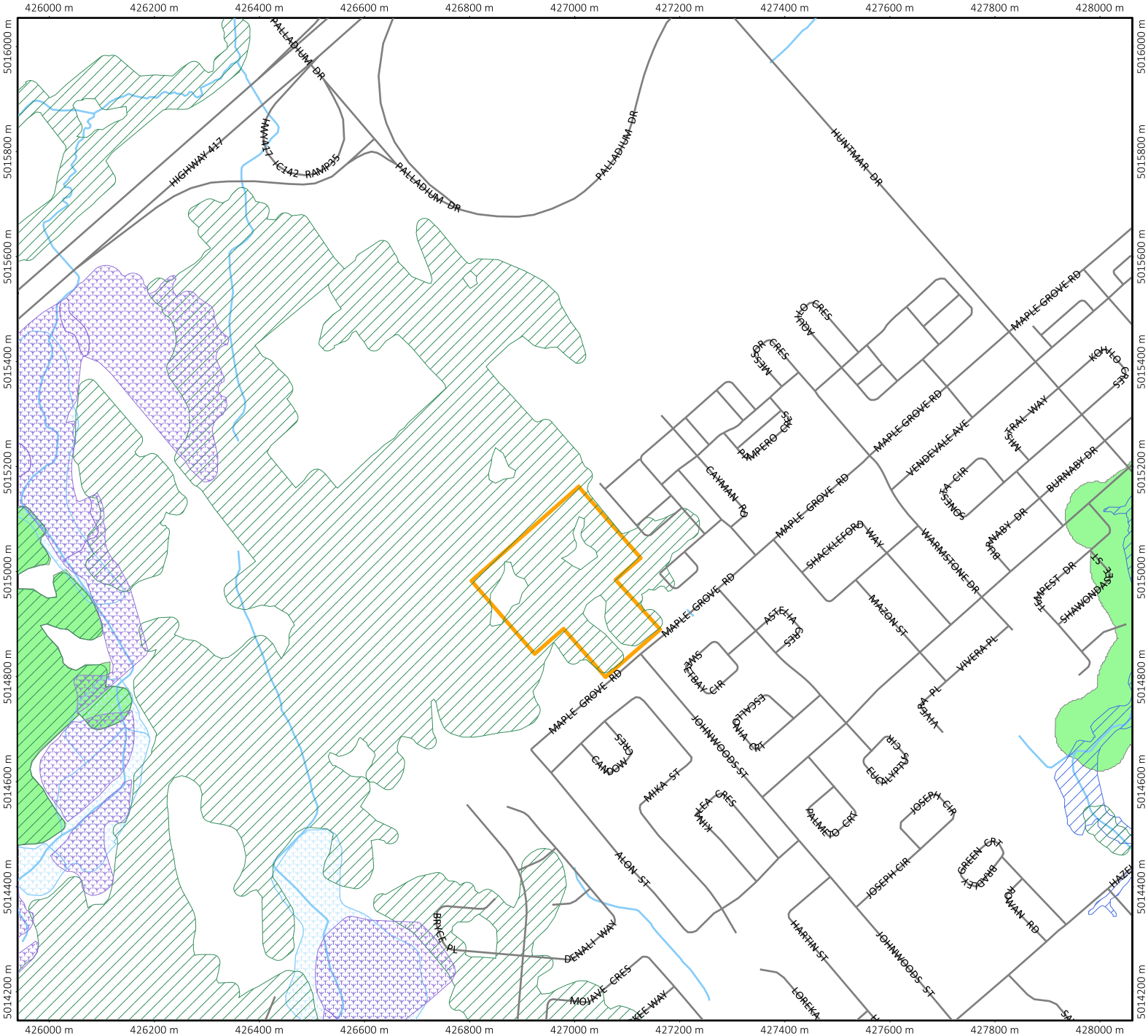


Figure 1 Area context

Legend

- Property Line

Natural Heritage Considerations

- Open Water
- Wetland
- Floodplain
- PSW
- Schedule L - Natural Heritage Potential
- Wooded area

Project File: FORM573-2
Created By: AF
Checkeg By: TH
Universal Transverse Mercator - Zone 18 (N)
Printed on: 2016-11-23

KILGOUR & Associates

Figure 2 Current site conditions

Legend

Property Line

ELC

- CUT1
- FOC1
- FOC2-2
- FOD4
- FOM2
- FOM5
- Residental

Trees

- Tree Note
- Butternut
- Additional Butternut

BBS Station

N

0 75 m

Project File: FORM663
Created By: TH
Checked By: AF
MTM Zone 9
(NAD 83)
Printed on: 2018-08-21

KILGOUR & Associates

3.0 SITE AND THE NATURAL ENVIRONMENT

3.1 Landform, Soils and Geology

The property is located within the Ottawa Valley Clay Plains, which are composed of areas of Champlain Sea deposits, glacial deposits and drumlins, glaciofluvial deposits, shallow and exposed bedrock, and peat and muck from wetlands (Schut and Wilson, 1987). On a more local scale, the property occurs within the Castor association, which is comprised of a 40 to 100 cm thick veneer of medium-textured materials composed of Orthic Humic Gleysols, originating from fluvial, estuarine, lacustrine, or marine sources. The property extends in to areas of the North Gower associates, which are composed of Orthic Humic Gleysol subgroup and are moderately fine textured materials. These soils are considered to be poorly drained and highly susceptible to surface puddling and sheet flow after heavy rain.

The property was previous cleared and used for agriculture, but has been regenerating natural land cover more recently. Topography of the area is nearly level. No wetlands, streams, or aquatic habitats were observed on the property.

There are no rocky outcrops on the property and no Earth Science Areas or Natural and Scientific Interest as designated by the Ministry of Natural Resources identified in OP Schedule K.

3.2 Surface Water, Groundwater and Fish Habitat

The property and adjacent lands lie within the Carp River watershed. The property is approximately 450 m to the east of the Carp River, but no tributaries or drains were observed on or adjacent to the property. Additionally, no wetland habitats were observed on or adjacent to the property. The nearest significant wetland is located 550 m to the southwest.

3.3 Site Flora

Much of the property is currently treed with contiguously treed areas extending onto adjacent lands westward and northward. Most of this forested area however, is young, early successional regrowth on former agricultural fields. Forested areas on the property likely provide some ecological services as habitat areas for common, suburban-tolerant fauna. Trees there will also provide a significant contribution to canopy cover within the broader vicinity with all the associated benefits (urban cooling, wind breaks, carbon capture, improvement of air quality, enhanced infiltration of surface runoff and recreational potential). As the area however, is located within the urban boundary, and is included within an approved CDP area, none of the wooded portions of the site constitute Significant Woodland.

3.3.1 Ecological Land Classification

Ecological Land Classification and vegetation community surveys were completed on the property on November 10, 2016 by KAL biologist Terry Hams. The property includes four general ELC communities (deciduous forest, coniferous forest, mixed forest, and shrubland) partially subdivided into six, more-detailed, ecosites (Figure 2).

The most extensive ELC ecosite on the property is Dry Pine Non-Calcareous Shallow Coniferous Forest (FOC1) (Figure 2). The ecosite is composed mainly of White Pine (*Pinus strobus*) in high density clusters. In areas where the White Pines density is lower, subordinate trees species include Trembling Aspen (*Populus tremuloides*), White Birch (*Betula papyrifera*), Tamarack (*Larix laricina*), White Elm (*Ulmus americana*), and White Cedar (*Thuja occidentalis*). The oldest trees on site (i.e. pre 1976) are located within this ecosite. Trees within other ecosites are generally younger than 40 years of age, though they do each include some larger, older individuals.

The northwest corner of the property is a Dry – Fresh White Pine – Hardwood Mixed Forest (FOM2) ecosite. The main trees species in this habitat are a mix of White Pine and Sugar Maple (*Acer saccharum*), with subordinate species of White Cedar, White Elm, White Ash (*Fraxinus americana*), Ironwood (*Ostrya virginiana*), Red Oak (*Quercus rubra*), and White Spruce (*Picea glauca*). This habitat contains a few large White Pines but most of the deciduous species are much smaller. A somewhat more mature Sugar Maple forest with large deciduous trees occurs to the west of this habitat, and this habitat is likely a transition zone between the White Pine forest to the east and Sugar Maple forest to the west.

The north central section of the property consists of Dry White Cedar Coniferous Forest (FOC2-2). The main tree species in this habitat are White Spruce and White Cedar, with subordinate trees species of White Elm, White Birch, Trembling Aspen, and White Pine.

The center of the property includes a small Dry – Fresh Upland Deciduous Forest (FOD4) ecosite. Forest cover in this area consists of American Basswood (*Tilia americana*), White Elm, White Ash, and apple trees (*Malus pumila*). Some of the basswood trees are large, mature though the remaining species are much smaller. This ecosite is a regeneration area of former agricultural land use.

The southeast corner of the property is a Dry – Fresh White Birch – Poplar – Conifer Mixed Forest (FOM5) ecosite. Tree cover consists primarily of Trembling Aspen, White Birch, White Spruce, and White Cedar with subordinate species of White Elm and White Ash. The most mature individuals here are several Trembling Aspen and White Spruce, though again, this area is primarily early successional regrowth.

The northeast corner of the property is a shrubland area of Mineral Cultural Thicket (CUT1). This habitat was clear-cut prior to the 2005 air photo (geoOttawa, 2018) and now is overgrown with shrubs such as Red Osier Dogwood (*Cornus sericea*), Glossy Buckthorn (*Frangula alnus*), Common Buckthorn (*Rhamnus cathartica*), and willows (*Salix* sp.). Regrowth of trees in this area is stymied by the amount of woody debris covering the ground and rapid shrub growth (mainly Buckthorn), which prevents saplings from getting a foothold due to lack of sunlight reaching the ground.

3.3.2 Site Trees

The tree inventory survey was performed on November 10, 2016. Because much of the site is contiguous forest habitat, it is unrealistic to count and measure the Diameter at Breast Height (DBH) of each tree on site. Instead, we estimated species composition of each ELC habitat on site (Section 3.3.1; Figure 2) by abundance of each tree species and gave a range of DBH for each species per each ELC habitat. Lone trees or trees of some distinction (especially large individuals, rare or protected species) were identified and measured individually. Results are presented in Table 1.

Tree ages were not specifically determined; however, the 1976 GeoOttawa air photo shows patches of trees on the property in the west, centre and north east, with some scattered small trees on rest of the property. It is likely that forests on the property are the result of woodland regeneration in agricultural fields that were allowed to go fallow. Subsequently, we estimate that the ages of the majority of trees on the property are under 40 years old. The forest in the west section of the property contains many large White Pines that are likely older than 80 years, though large gaps have developed between individuals. The northeast section of the property was clear-cut prior to the 2005 and is now composed of regenerating shrubland.

Table 1. Results of the tree inventory survey of the property in November, 2016.

Location	Tree Species	Quantity	DBH (range - cm)	Condition
FOC1	White Pine*	>100	15 – 65	Many small snags (15-20 cm dbh) but larger trees are generally healthy, a few large trees >65 cm
-	White Elm	~80	10 - 30	Many sapling <10 cm
-	White Birch	~80	20 – 40	Varying health, many young trees <10 cm
-	Trembling Aspen	~30	20 – 45	Mostly healthy with some large snags
-	White Cedar	~30	10 – 25	Mostly healthy and occurring in patches
-	Apple trees	~10	10 - 20	Mostly healthy and sporadically observed
-	Tamarack	~10	20 - 45	Mostly healthily and spread throughout
-	Bur Oak	~10	10 – 30	Mostly healthy
	Butternut	1	~35	Mostly dead
FOM2	Sugar Maple	~40	10 - 30	Healthy
-	White Elm	~30	10 - 30	Many small snags and young trees coming in
-	White Ash	~20	10 - 25	Some evidence of emerald ash borer.
-	White Spruce	~20	10 - 20	Healthy
-	Ironwood	~20	10 - 20	Healthy
-	White Pine*	~15	40 - 65	Twp large snags, but overall healthy
-	Red Oak	~10	10 - 30	Healthy
-	Butternut	4	35 – 50	Mostly dead or with canker
FOC2-2	White Spruce*	~30	20 – 60	Healthy, with a few large trees > 65 cm
-	White Cedar	~20	10 - 30	Healthy
-	White Birch	~20	10 - 30	Some snags, but overall healthy
-	White Elm	~15	10 - 20	Many small snags, and young trees
-	Ironwood	~15	10 - 20	Healthy
-	Tamarack	~10	20 - 40	Healthy
-	Apple trees	~5	10 – 20	Mostly healthy
	Butternut	1	~50	Mostly dead
FOD4	White Elm	~20	10 – 30	Many small snags, and young trees
-	White Ash	~25	10 - 30	Mostly healthy, some snags
-	American Basswood*	~10	20 – 50	A few large trees > 65 cm, healthy
-	Apple tree	4	10 – 20	Mostly healthy
-	Butternut	2	~50, ~55	Mostly dead
FOM5	Trembling Aspen	~80	20 - 40	Mostly healthy, with some large snags
-	White Birch	~60	20 - 30	Mostly healthy with some large snags
-	White Elm	~40	10 - 30	Many snags with many young trees
-	White Spruce	~30	20 - 30	Healthy
-	White Cedar	~20	10 - 30	Healthy
-	Tamarack	~10	20 – 30	Healthy
Patch 1	White Cedar	11	<10 - 30	Healthy
-	White Spruce	7	10 - 30	Healthy
-	White Pine*	2	~65, ~75	Large trees mostly healthy
Patch 2	White Pine*	1	~70	Healthy
-	White Cedar	1	43	Healthy
Tree 1	White Cedar	1	23	Healthy
Tree 2	White Cedar	1	21	Mostly dead
Tree 3	White Pine	1	26	Healthy
Tree 4	White Pine	2	31, 37	Healthy

* = Distinctive tree

Large trees on the property may be considered distinctive (*i.e*. > 50 cm DBH, in good health and/or of regionally significance or rare species). Most of these distinctive trees are large White Pines in ELC habitats FOC1, FOM2, and patches of trees in CUT1. These are likely trees that were visible in the 1976 air photo of the property, and therefore are likely greater than 80 year of age. Additional to that, large White Spruce were observed in FOC2-2 and Large American Basswood were observed in FOD4.

The original tree survey in 2016 found 8 Butternuts on site, all of which appeared to be in very poor condition. As the tree survey however, was completed in November, it was not possible to a Butternut Health Assessment (BHA) at that time. A BHA was completed for the site on July 19, 2017 by KAL biologist Rob Hallett. That assessment found the eight identified Butternuts, as well as two additional saplings, to be highly impacted by Butternut Canker and to be classed as non-retainable.

3.4 Site Fauna

3.4.1 Breeding Bird Surveys

Methods

Breeding bird surveys were completed on site in 2018. Breeding bird surveys (BBS) follow guidelines from Bird Studies Canada (Bird Studies Canada, 2001). For forest birds, two rounds of surveys are required. The period for BBS in the Ottawa region begins on May 24 and ends on July 10; BBS rounds must be a minimum of 10 days apart.

The surveys are conducted on calm weather days with no precipitation from one half hour before sunrise until 10:00 a.m. Surveys are five minutes in duration with a two-minute habituation period preceding the surveys. All birds seen and heard are recorded along with associated breeding codes, and the estimated distance from the observer.

Results

Two rounds of BBS were completed at the site on June 13 and June 26, 2018, beginning at ~6 am each time. Breeding bird surveys were completed from six survey stations located such that they covered all potential habitat areas on site. These were completed on calm weather days with light wind (less than 3 on the Beaufort scale) and no precipitation.

Overall, 26 bird species were observed on or near the site during the two rounds of surveys (Table 1). All of the birds observed were common species in the Ottawa region. A single individual of a listed species, Eastern Wood-pewee (*Contopus virens* – Special Concern), was noted on the first survey. This bird was heard calling from both Stations 1 and 6. Its general location was noted as being over a 100 m from either station with calls appearing to come from somewhere near 1939 Maple Grove (i.e. two lots further west). The species was not noted at all during the second survey.

Table 2: Bird species observed during field surveys of Carlington Park site in 2018.

Common Name	Scientific Name
American Crow	*Corvus brachyrhynchos*
American Goldfinch	*Spinus tristis*
American Redstart	*Setophaga ruticilla*
American Robin	*Turdus migratorius*
Baltimore Oriole	*Icterus galbula*
Black-capped Chickadee	*Poecile atricapillus*
Blue Jay	*Cyanocitta cristata*
Cedar Waxwing	*Bombycilla cedrorum*
Chipping Sparrow	*Spizella passerina*
Common Grackle	*Quiscalus quiscula*
Common Yellowthroat	*Geothlypis trichas*
Downy Woodpecker	*Picoides pubescens*
Eastern Wood-pewee	*Contopus virens*

Common Name	Scientific Name
European Starling	*Sturnus vulgaris*
Great Crested Flycatcher	*Myiarchus crinitus*
Grey Catbird	*Dumetella carolinensis*
Hairy Woodpecker	*Leuconotopicus villosus*
Northern Cardinal	*Cardinalis cardinalis*
Oven Bird	*Seiurus aurocapilla*
Red-breasted Nuthatch	*Sitta canadensis*
Red-eyed Vireo	*Vireo olivaceus*
Red-shouldered Hawk	*Buteo lineatus*
Song Sparrow	*Melospiza melodia*
White-breasted Nuthatch	*Sitta carolinensis*
White-throated Sparrow	*Zonotrichia albicollis*
Yellow Warbler	*Setophaga petechia*

3.4.2 Incidental/Additional Species Observations

Detailed surveys were not completed for other animal species as no other faunal groups were considered to be at risk for significant negative impacts. Incidental observations of other species however, were noted during every field visit. Additional species observed on site on various occasions since November 2016 include: Eastern Gray Squirrel (*Sciurus carolinensis*), Porcupine (*Erethizon dorsatum*), Red Squirrel (*Tamiasciurus hudsonicus*), Ruffed Grouse (*Bonasa umbellus*), Common Raven (*Corvus corax*), and White-tailed Deer (*Odocoileus virginianus*).

3.1 Species at Risk

KAL submitted an information request to the Kemptville MNRF office for the property. At the time of this report no reply to this information request was received. Therefore, we formulated our own list of SAR with the potential to occur on site using information gathered from the NIHC database, OBBA, and other species atlases for Ontario (Section 3.1).

Our information review indicated a potential for 12 SAR listed under the *Endangered Species Act* (Ontario, 2007) and *Species at Risk Act* (Canada, 2002) to occur on or in proximity to the property (Table 3). These species include Bank Swallow (*Riparia riparia*), Barn Swallow (*Hirundo rustica*), Bobolink (*Dolichonyx oryzivorus*), Eastern Meadowlark (*Sturnella magna*), Eastern Wood-pewee (*Contopus virens*), Wood Thrush (*Hylocichla mustelina*), Little Brown Myotis (*Myotis lucifuga*), Northern Long-eared Myotis (*Myotis septentrionalis*), Eastern Small-footed Myotis (*Myotis leibii*), Tri-colored Bat (*Pipistrellus subflavus*), Snapping Turtle (*Chelydra serpentine*), and Butternut (*Juglans cinerea*).

For full due diligence, Table 3 indicates the habitat requirements of these SAR plus others SAR potentially present within the broader area and whether the property may provide significant habitat.

Table 3. Species at risk potential

Species Name	Provincial (ESA) Status	Habitat Requirement	Habitat on Site	Project Concerns Associated with Habitat on Site
Birds				
Bank Swallow (*Riparia riparia*)	Threatened	Colonial nester; burrows in eroding silt or sand banks, sand pit walls, and other similar habitats	No suitable nesting or foraging habitat on or adjacent to the property. No individuals observed. Could forage in open habitats in the broader vicinity, but not within 120 m of the site.	Negligible potential for presence Not a concern to the project.
Barn Swallow (*Hirundo rustica*)	Threatened	Species prefers to nest on manmade structures such and bridges, barns, and buildings near open terrestrial and aquatic habitats where it forages.	No suitable nesting or foraging habitat on or adjacent to the property. No individuals observed. Could forage in open habitats in the broader vicinity, but not within 120 m of the site.	Negligible potential for presence Not a concern to the project.
Bobolink (*Dolichonyx oryzivorus*)	Threatened	Periodically mown, dry meadow for nesting. Habitat (meadow) should be > 10 ha, and preferably > 30 ha before bobolink are attracted to the site. Not near tall trees.	No suitable nesting or foraging habitat on or adjacent to the property. No individuals observed.	Negligible potential for presence Not a concern to the project.
Eastern Meadowlark (*Sturnella magna*)	Threatened	Prefers grasslands and pastures >5 ha in area with moderately tall grasses (25 to 50 cm) and abundant litter cover. High proportion of grasses to forbs and shrubs (<35% forbs and shrubs).	No suitable nesting or foraging habitat on or adjacent to the property. No individuals observed.	Negligible potential for presence Not a concern to the project.
Eastern Wood-pewee (*Contopus virens*)	Special Concern	Prefers mature and intermediate-aged deciduous and mixed forest with an open understory. Often nests and forages near open areas and forest edges.	Forests on site could provide nesting and foraging habitat for this species. No individuals observed on site though one was observed adjacent to the property.	Species may breed in forest edge areas adjacent to the site. No individuals observed directly on site and the one individual noted nearby was only heard once (suggesting it may not be a successful breeder. Presence within contiguously forested areas could indicate Significant Wildlife Habitat (SWH).
Wood Thrush (Hylocichla mustelina)	Special Concern	Moist deciduous hardwood or mixed forests with trees >16 m in height, a closed canopy (>70%), moderate sub-canopy and shrub layer, fairly open forest floor, and moist soil.	Forests on site could provide suitable nesting and foraging habitat for this species, but no individuals were ever noted.	Potential habitat area but no species presence. Not a concern to the project.
Mammals				
Little Brown Myotis (*Myotis lucifuga*)	Endangered	Widespread, roosting in trees and buildings. Hibernate in caves or abandoned mines.	Some large snags with cavities were observed on the property; however, not at the ≥10 snags (≥25 cm DBH) per hectare abundance that is required for potential maternity roosts. No potential hibernacula observed on the property.	Property does not meet criteria for maternity roost habitat though there is still a low probability of transient presence in the summer. The project would not entail any habitat loss, but tree removal should be completed outside of the potential bat season (i.e. between November and March. Mitigatable concern to the project.
Northern Long-eared Myotis (*Myotis septentrionalis*)	Endangered	Associated with boreal forests, choosing to roost under loose bark and in the cavities of trees. Hibernate in caves or abandoned mines.	Some large snags with cavities were observed on the property; however, not at the ≥10 snags (≥25 cm DBH) per hectare abundance that is required for potential	Property does not meet criteria for maternity roost habitat though there is still a low probability of transient presence in the summer. The project would not entail any habitat loss, but tree removal should be

Species Name	Provincial (ESA) Status	Habitat Requirement	Habitat on Site	Project Concerns Associated with Habitat on Site
			maternity roosts. No potential hibernacula observed on the property.	completed outside of the potential bat season (i.e. between November and March. Mitigatable concern to the project.
Eastern Small-footed Myotis (*Myotis leibii*)	Endangered	Species roosts in a range of habitats including under rocks, rocky outcroppings, buildings, under bridges, caves, mines, and hollow trees. Hibernate in smaller caves subject to air movement.	No rocky outcroppings were observed on or adjacent to the property, but some large snags were observed on the property.	Property does not meet criteria for maternity roost habitat and there is a very limited probability of transient presence in the summer. Not a concern to the project.
Tri-colored Bat (*Pipistrellus subflavus*)	Endangered	Prefers to roost in trees in old forests but sometimes uses buildings. Forage over water courses or open fields with large trees nearby. They never forage in deep woods. Hibernate in caves or abandoned mines.	Some large snags with cavities were observed on the property; however, not at the ≥10 snags (≥25 cm DBH) per hectare abundance that is required for potential maternity roosts. No potential hibernacula observed on the property.	Property does not meet criteria for maternity roost habitat though there is still a low probability of transient presence in the summer. The project would not entail any habitat loss, but tree removal should be completed outside of the potential bat season (i.e. between November and March. Mitigatable concern to the project.
Turtles				
Snapping Turtle (*Chelydra serpentina*)	Special Concern*	Freshwater habitat characterized by slow-moving water with a soft mud bottom and dense aquatic vegetation.	No wetland habitat or streams were observed on or adjacent to the property.	Negligible potential for presence Not a concern to the project.
Vascular Plants				
Butternut (*Juglans cinerea*)	Endangered	Variable but typically on well-drained soils.	The entire property provides suitable habitat. Species was observed on the property.	All individuals observed on site were found to be non-retainable. As such these trees are not subject to, or protected by, the *ESA*. Not a concern to the project.

Species occurring or having high potential to occur on site due to presence of habitat.

3.2 Other Natural Heritage Features

There are no Provincially or Locally Significant Wetlands, Life Science Areas of Natural and Scientific Interest, or Significant Valleylands on or adjacent to the site.

3.2.1 Significant Woodland

The oldest (i.e. predating 1976) forested portion of the property – located primarily within the FOM2 ecosite – is sufficiently large at ~1.1 ha to be potentially deemed as Significant Woodland under the City's newly updated Significant Woodland policy. However, as noted within section 3.0 above, the feature is located entirely within an approved CDP area, and is thus exempt from this designation.

3.2.2 Significant Wildlife Habitat

Following the MNRF's Significant Wildlife Habitat Ecoregion 6E Criterion guide, SWH for various species or species groups is generally defined based on combinations of factors such as a minimum area of suitable habitat and presence of sufficient number of individuals of a sufficient number of species. No such specifically-defined SWH is present on the site. The final category within the SWH Ecoregion 6E Criterion guide however, provides a "catch-all"; any habitat that actively supports a species of Special Concern may also be identified as SWH.

Eastern Wood-pewee, a species of Special Concern was noted within the forest-edge areas to the west of the site. The species however, was not observed within any portion of the forest on the site. Moreover, as it was not present during the second site visit, it is unlikely the species is breeding in the vicinity regardless. The site therefore does not appear to provide SWH.

4.0 PROJECT DESCRIPTION

The proposed project is the development of a residential subdivision within the Kanata West Community Design area. The existing residence on property will be retained on a 0.63 ha lot. The remainder of the property will be developed to include 36 “front & back” townhouse units, 39 townhouses, and 7 four-storey residential apartment buildings. The area will also include 0.35 ha of a 0.68 ha park (with the remainder of the park extending on to adjacent properties also planned for residential development, but not addressed by this EIS).

Site preparation is anticipated to begin in the late fall of 2018, and to be completed within two years of commencing.

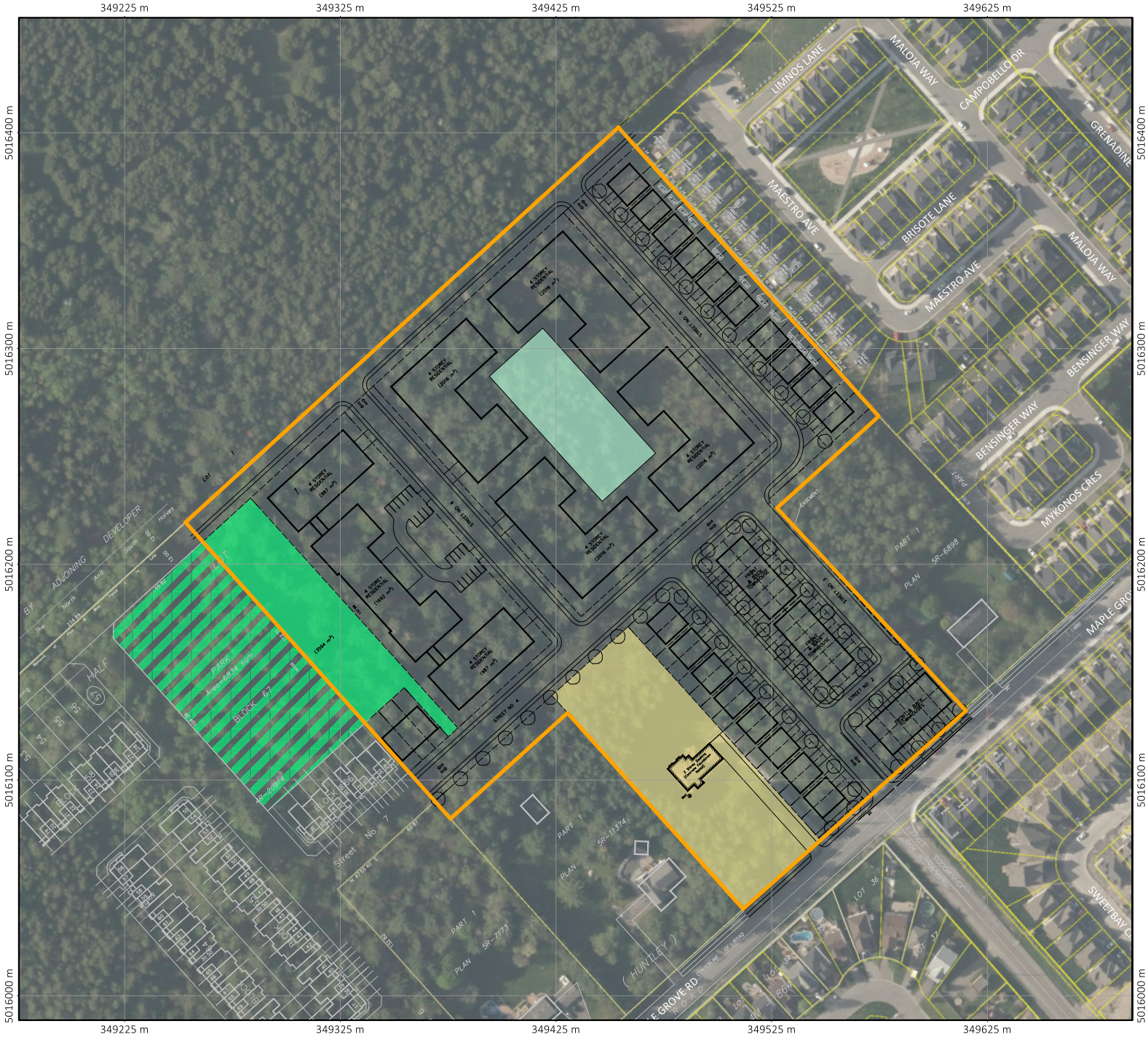


Figure 3 Proposed development

Legend

- **Property Line**
- CDP
- Proposed Community
- Other
- Open Space
- Park
- Retained

0 75 m

Project File: FORM663
Created By: TH
Checked By: AF
MTM Zone 9
(NAD 83)
Printed on: 2018-08-21

KILGOUR & Associates

5.0 IMPACT ASSESSMENT

5.1 Impacts to Natural Features

There are no Provincially or Locally Significant Wetlands, Life Science Areas of Natural and Scientific Interest, Significant Valleylands or Significant Woodlands on or adjacent to the site and so no impacts are anticipated to any such features.

A single Wood-pewee was noted adjacent to the site, but never on the site. Moreover, the single noted individual was only observed at the start of the breeding season, and was not found again, suggesting it did not establish a successful nest there. As such, the site it self does not constitute SWH and so no impacts are anticipated. The species however, does generally use forest-edge areas and could use such habitat space near the site. The species was not found to used more interior forest areas anywhere on the site or on elsewhere within forested areas set back from Maple Grove. The proposed development would see wooded areas removed from the site, but with an extensive forest area retained beyond the site (i.e. the to north). Potential habitat areas for the species (i.e. forest edges) would thus shift away from Maple Grove, but would not otherwise be reduced. No significant impacts are thus anticipated to the habitat potential for this species.

5.2 Impacts to Trees

All trees on site will be removed to accommodate grading and site prep, and the proposed roadway and residential development. Details of trees to planted on site will provided within the landscape plan for the development. No trees will be removed from the retained parcel.

5.3 Impacts to Species at Risk

No SAR subject to the Ontario Endangered Species Act (*ESA*) are present on or adjacent to the site. Eastern Wood-pewees, listed as Special Concern, are present on occasion in the broader vicinity, but are not covered by the *ESA*. Regardless, impacts to their habitat are discussed in Section 5.1. and any individuals present either nearby or potentially transiently on site, will be protected by standard mitigations for the protection of wildlife indicated in Section 6.2.

Healthy Butternuts are protected under the *ESA* but all individuals of that species occurring on site were found to be non-retainable. As such, these trees, and/or any proposed impacts to them, are not subject to that Act.

6.0 MITIGATIONS

6.1 Mitigations for Trees

Please note that the City's acceptance of this report does not constitute permission under the Municipal Trees and Natural Areas Protection By-law 2006-279 to remove any trees. Removal of trees can only be undertaken upon the issuance of a tree removal permit from the City of Ottawa. This report however, in conjunction with the landscape plan, may be used to support the application for that permit and to advise mitigation measures imposed by the permit.

To minimize impacts to trees located on the retained parcel, and to trees adjacent to the site, the following protection measures are indicated as necessary during construction:

- Erect a fence beyond the critical root zone (CRZ, i.e. 10 x the trunk diameter at breast height) of trees. The fence should be highly visible (e.g. orange construction fence) and paired with erosion control fencing. Pruning of branches is recommended in areas of potential conflict with construction equipment;

- Do not place any material or equipment within the CRZ of the tree;

- Do not attach any signs, notices or posters to any tree;

- Do not raise or lower the existing grade within the CRZ without approval;

- Tunnel or bore when digging within the CRZ of a tree;

- Do not damage the root system, trunk or branches of any tree; and

- Ensure that exhaust fumes from all equipment are NOT directed towards any tree's canopy.

- The *Migratory Bird Convention Act* (Canada, 1994) protects the nests and young of migratory breeding birds in Canada. The City of Ottawa guidelines stipulate no clearing of trees or vegetation between April 1 and August 15, unless a qualified biologist has determined that no nesting is occurring within 5 days prior to the clearing .

Specific trees to be planted on site will be identified in the landscape plan for the development. Trees species to be planted must be non-invasive and should be native to the Ottawa area. Recommended tree species to consider in the landscaping plan include Red Maple, White Pine, White Spruce, White Birch, Black Cherry, and White Cedar. Burr Oak may be considered where spacing allows for future showcase trees. Common Juniper, Maple-leaf Viburnum, Nannyberry, Serviceberry and Northern Bush-honeysuckle may be considered as appropriate shrub species. Trees must be planted within housing areas to a density equivalent to at least one per unit, though the distribution of specific planting locations may be varied from necessarily planting on every lot, as may be dictated by individual lot considerations. The landscape plan must include additional tree planting within park space as may be accommodated by the final configuration of that area.

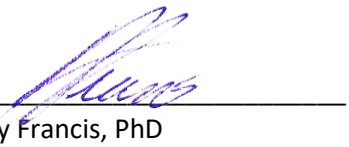
6.2 Mitigations for Wildlife

Common wildlife species were observed on site during the field visit, all of which are represented throughout the adjacent landscape. The following mitigation measures shall be implemented on site during construction of the project:

- Areas shall not be cleared during sensitive times of the year for wildlife, unless mitigation measures are implemented and/or the habitat has been inspected by a qualified biologist.
- Site clearing should begin from the developed area in the south and proceed northward to drive any wildlife towards the remaining forest areas.
- Do not harm, feed, or unnecessarily harass wildlife.
- Food wastes and other garbage – effective mitigation measures include waste control (prevent littering); keeping all trash secured in wildlife-proof containers, and prompt removal from the site (especially in warm weather).
- Drive slowly and avoid hitting wildlife where possible.
- Shelter – effective mitigation measures include covering or containing piles of soil, fill, brush, rocks and other loose materials; capping ends of pipes where necessary to keep wildlife out; ensuring that trailers, bins, boxes, and vacant buildings are secured at the end of each work day to prevent access by wildlife.
- Checking the work site (including previously cleared areas) for wildlife, prior to beginning work each day.
- Inspecting protective fencing or other installed measures daily and after each rain event to ensure their integrity and continued function.
- Monitoring construction activities to ensure compliance with the project-specific protocol (where applicable) or any other requirements.

7.0 SUMMARY AND RECOMMENDATIONS

It is my professional opinion that no negative impacts are anticipated to listed SAR or other natural heritage features under the proposed property development so long as the mitigation recommendations provided within this report are followed.



Anthony Francis, PhD
KILGOUR & ASSOCIATES LTD.

8.0 REFERENCES

Bird Studies Canada. 2001. Ontario Breeding Bird Atlas - Guide for Participants. Bird Studies Canada.

Canada. 1994. Migratory Birds Convention Act, 1994 (S.C. 1994, c. 22). http://laws-lois.justice.gc.ca/eng/acts/m-7.01/

Canada. 2002. Species at Risk Act, S.C. 2002, c. 29. http://laws-lois.justice.gc.ca/eng/acts/s-15.3/

geoOttawa. 2018. http://maps.ottawa.ca/geoottawa/

Ontario. 2007. Endangered Species Act, 2007, S.O. 2007, c. 6. https://www.ontario.ca/laws/statute/07e06

Appendix 1
Qualifications of Report Author

Anthony Francis, PhD

Dr. Francis is an ecologist with over 18 years of experience in both terrestrial and aquatic projects. His doctoral thesis work on global plant diversity patterns included conducting tree surveys across North America. As a consulting ecologist he has worked on diverse ecological projects including literature reviews of forestry management and species-at-risk; environmental studies of contaminants (metals and suspended particulates); geomatic and statistical analyses for federal and provincial ministries as well as for private industry; and aquatic and terrestrial species inventories. He has contributed to environmental impact statements and federal environmental screening assessments for creek realignments and other infrastructure projects across Ontario.