

Environmental Impact Statement for Southminster Church Re-development (1040 Bank Street)

**Final Report
April 26, 2017**

Submitted To:

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1.0 INTRODUCTION

Kilgour & Associates Ltd. (KAL) was retained by Windmill Development Group to prepare a scoped Environmental Impact Statement (EIS) for the Southminster Church property at 1040 Bank Street (the site). The proposed development has the potential to impact species-at-risk (SAR) and natural heritage features on and adjacent to the site.

The City of Ottawa has requested a Scoped EIS be completed as part of the Zoning By-Law Amendment submission. There are two main natural heritage triggers for this EIS including: 1) the presence of potential habitat for SAR including Butternut (*Juglans cinerea*) and SAR bats; 2) the presence of the Rideau Canal within 120 m of the site.

A single field visit of the site was completed on March 29, 2017 to perform a tree inventory survey and site assessment.

2.0 PROPERTY INFORMATION

The subject property (Capital Ward, PLAN 36 Lot 3 Bank W Plan 36; Lot 6 to 8 Galt Less PT 1&2 on RP4R-885) is a 0.3 ha parcel in Ottawa (Figure 1). The property is bordered by Aylmer Avenue to the South, Bank Street to the East, Echo Drive and Colonel By Drive to the North, and Galt Street to the west (Ottawa, 2017a).

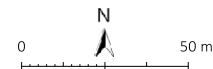
The property at 1040 Bank Street is zoned as Institutional Zones (I1A). This zone permits a range of community uses, institutional accommodation and emergency service uses with the greater General Urban Area or central Area in the Official Plan (Ottawa, 2017b).



Figure 1 Location of
1040 Bank Street project site.

Legend

— Project Area



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3.0 SITE AND THE NATURAL ENVIRONMENT

3.1 Methodology and Area of Detailed Assessment

KAL biologist Terry Hams conducted a natural heritage assessment and tree inventory survey of the property and adjacent lands on March 29, 2017. The purpose of the site visit was to complete a site assessment and tree inventory survey, but also to determine the potential for SAR and SAR habitat presence and to characterize natural features of the site.

Additional information on natural heritage features and wildlife species for the property was obtained from online sources, which include but are not limited to:

- Natural Heritage Information Centre (MNRF, 2017a);
- Rideau Valley Conservation Authority (RVCA, 2017);
- Species at Risk Public Registry (Canada, 2017);
- Ontario Species at Risk List (MNRF, 2017b);
- Breeding Bird Atlas of Ontario (OBBA) (Cadman *et al.* 2007);
- Bat Conservation International species profiles (BCI, 2017); and
- Reptiles and Amphibians of Ontario (Ontario Nature, 2017).

Colour digital aerial photographs from geoOttawa (Ottawa, 2017a) and GoogleEarth were used to identify natural environment features on the property through a desktop review. Ontario Base Map (OBM), geoOttawa, and Ottawa OP Schedules 'L' and 'K' layers (Ottawa, 2014a and 2014b) were used to demarcate surface water, potential wetland areas, and other natural heritage system features and were overlaid on the aerial photographs to aid interpretation. During the field visit the KAL biologist surveyed for potential habitat for SAR. This information was used to complement desktop background review for the SAR section of this report.

3.2 Surface Water, Groundwater and Fish Habitat

The property and adjacent lands lie within the Ottawa River West and Rideau River-Rideau Falls subwatersheds (RVCA, 2017). The site is approximately 35 m to the south of the Rideau Canal and separated by paved sidewalks, Echo Drive and Colonel By Drive. The property contains no surface water features or wetland habitats, and therefore no fish habitat. Additionally, no potential groundwater sources were identified on site according to City of Ottawa Official Plan Schedule 'K' (Ottawa, 2014a).

3.3 Vegetation and Land Cover

The site is composed of manicured lawns, and planted trees and shrubs, befitting its location in an Ottawa residential neighborhood. According to air photos from geoOttawa (Ottawa, 2017a) the building on the property have been standing since 1958 with very little change in the surrounding area. A small woodland

strip occurs north of the property on the National Capital Commission lands and continues both to the east and west acting as a buffer between Colonel By Drive, Echo Drive and the residential areas to the south.

The residential composition and small size of the site does not allow for a meaningful Ecological Land Classification of the property. An inventory survey was performed on March 29, 2017 of trees on or adjacent to the property (i.e. of trees sufficiently close such that they could potentially be impacted by activities on, or uses of, the site). Tree ages were not specifically determined; however, the 1958 geoOttawa air photo includes trees, mature then, that are still present, indicating some site tree-ages of >90 yrs. The results of the tree inventory survey are presented in Figure 2 and Table 1.

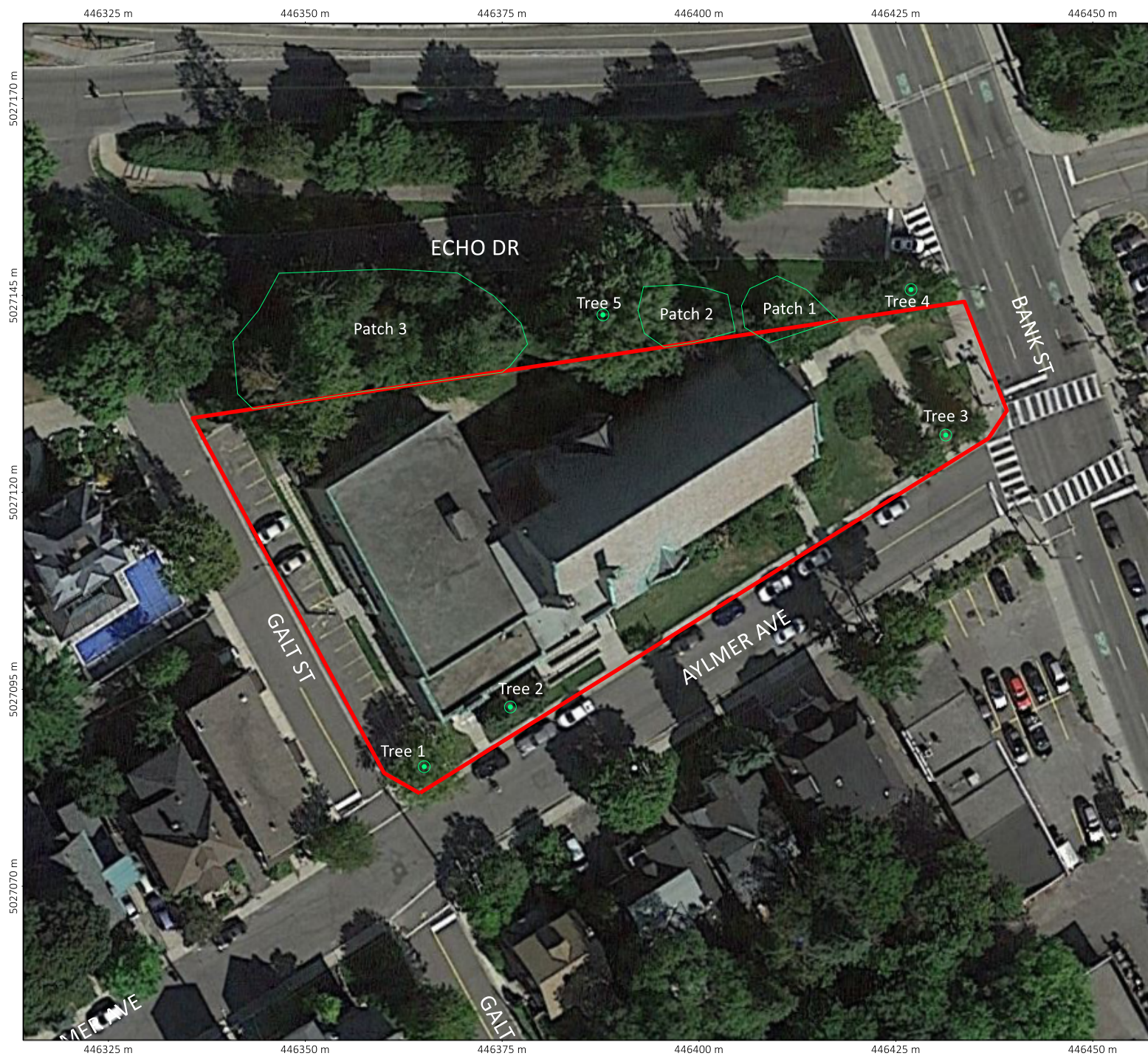


Figure 2 Location of trees and tree patches on project site in relation to site plan.

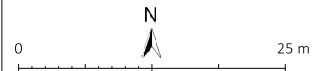
Legend

— Project Area

Existing Trees

Tree Patch

● Trees



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Table 1. Results of the tree inventory survey of the property on March, 2017.

Location	Tree Species	Quantity	DBH (range) (cm)	Condition	Retained
Tree 1	Apple species	1	21	3 stems, healthy	No
Tree 2	Blue Spruce	2	20, 25		No
Tree 3	Red Oak	2	20, 21		Yes
Tree 4	Red Oak	2	24, 26		Yes
Patch 1	White Spruce	1	21		Yes
-	Manitoba Maple	1	16		Yes
-	American Elm	1	24		Yes
Patch 2	White Spruce	2	38, 26		Yes
-	White Ash	1	23		Yes
-	Manitoba Maple	1	17		Yes
Tree 5	Sugar Maple*	1	120	Multi-stem (6), some dieback	Yes
Patch 3	White Spruce	2	40-45		Yes
-	Red Pine	5	35-45		Yes
-	Yellow Birch	1	43	Mostly dead	Yes
-	Black Cherry	6	10-20	Many saplings	Yes
-	White Ash	3	20-30	A few saplings	Yes
-	American Elm	3	20-30	A few saplings	Yes
-	Sugar Maple*	2	70-90	Some dieback	Yes
-	White Cedar	1	27		Yes

* = Potential specimen tree

Three trees are designated for removal during the proposed project development of the site (Trees 1 and 2; Table 1). All other trees observed on or adjacent to the property (Figure 2) shall be protected during project development and will not be negatively impacted by future site usage.

Large trees adjacent to the property may be considered distinctive trees (*i.e.* > 50 cm DBH, in good health and/or of regionally significance or rare species). The distinctive trees were three large Sugar Maple (*Acer saccharum*) that were present in the 1958 air photo (Ottawa, 2017a). These trees were showing some dieback but overall were in good health. Section 6.2 provides mitigations to protect retained and neighbouring trees.

3.4 Incidental Wildlife Observations

Incidental wildlife observations were conducted during the field visit on March 29, which is outside the active season for many wildlife species. Therefore, species observed on site were not fully representative of those that may nest or use the area later in the season. Wildlife on the site however, will be quite limited at any time of year given the site's urban context. Species observed on site were common wildlife species in Ottawa urban areas and included: American Robin (*Turdus migratorius*), European Starling (*Sturnus vulgaris*), Gray Squirrel (*Sciurus carolinensis*), Black-capped Chickadee (*Poecile atricapillus*), White-breasted Nuthatch (*Sitta carolinensis*), and Rock Pigeon (*Columba livia*).

3.5 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 had yet been 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 10 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*), Chimney Swift (*Chaetura pelagica*), Little Brown Myotis (*Myotis lucifuga*), Northern Long-eared Myotis (*Myotis septentrionalis*), Eastern Small-footed Myotis (*Myotis leibii*), Tri-colored Bat (*Pipistrellus subflavus*), Blanding's Turtle (*Emydoidea blandingii*), Snapping Turtle (*Chelydra serpentina*), and Butternut (*Juglans cinerea*). No further species are anticipated to be deemed potentially present through the MNRF information request.

For full due diligence, Table 2 indicates the habitat requirements of these SAR plus others SAR potentially present within the broader area and whether the property may provide significant habitat. The list also includes additional entries for species under consideration for listing within the next two years.

Table 2. Species at risk potential for occurrence on the site at 1040 Bank Street.

Species Name	Provincial (ESA) Status	Habitat Requirement	Habitat on Site	Project Concerns Associated with Habitat on Site
Birds				
Bank Swallow (<i>Riparia riparia</i>)	Threatened	Colonial nester; burrows in eroding silt or sand banks, sand pit walls, and other similar habitats	Limited potential for nesting on the site and lack of foraging areas nearby.	Negligible potential for presence. Not a concern.
Barn Swallow (<i>Hirundo rustica</i>)	Threatened	Species prefers to nest on manmade structures such as bridges, barns, and buildings near open terrestrial and aquatic habitats where it forages.	Limited potential for nesting on the site and lack of foraging areas nearby.	Negligible potential for presence. Not a concern.
Chimney Swift (<i>Chaetura pelagica</i>)	Threatened	Nests in open chimneys and sometimes in tree hollows (tree > 60 cm diameter). Tend to forage close to water as this is where the flying insects they eat congregate.	Chimneys on site appear to be capped and are unlikely to provide nesting habitat for this species.	Negligible potential for presence on site. Not a concern.
Mammals				
Little Brown Myotis (<i>Myotis lucifuga</i>)	Endangered	Widespread, roosting in trees and buildings. Hibernates in caves or abandoned mines.	Buildings on site may be used as day roosts by species, but it is unlikely that these buildings would provide maternity roosts or hibernaculum.	Moderate potential for presence. Potential impacts however can be mitigated through timing windows (See Section 6.2)
Northern Long-eared Myotis (<i>Myotis septentrionalis</i>)	Endangered	Associated with boreal forests, choosing to roost under loose bark and in the cavities of trees. Hibernates in caves or abandoned mines.	No suitable habitat on or near the site.	Negligible potential for presence. Not a concern.
Eastern Small-footed Myotis (<i>Myotis leibii</i>)	Endangered	Species roosts in a range of habitats including under rocks, rocky outcroppings, buildings, under bridges, caves, mines, and hollow trees. Hibernates in smaller caves subject to air movement.	Buildings on site may be used as day roosts by species, but it is unlikely that these buildings would provide maternity roosts or hibernaculum.	Low potential for presence. Mitigation and timing windows will be applied to project development.
Tri-colored Bat (<i>Pipistrellus subflavus</i>)	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. Hibernates in caves or abandoned mines.	Buildings on site may be used as day roosts by species, but it is unlikely that these buildings would provide maternity roosts or hibernaculum.	Low potential for presence. Mitigation and timing windows will be applied to project development.
Turtles				

Species Name	Provincial (ESA) Status	Habitat Requirement	Habitat on Site	Project Concerns Associated with Habitat on Site
Blanding's Turtle (<i>Emydoidea blandingii</i>)	Threatened	Prefer shallow water usually in large wetlands or shallow lakes with a high abundance of emergent vegetation and hibernate in the mud at the bottom of permanent water bodies from late October until the end of April. Species can be found hundreds of meters from water when looking for mates and nesting sites.	No wetland habitat or potential nesting areas are located on or adjacent to the property. Species may use the Rideau Canal, but there is no access to the property from this waterway.	Negligible potential for presence. Not a concern.
Snapping Turtle (<i>Chelydra serpentina</i>)	Special Concern*	Freshwater habitat characterized by slow-moving water with a soft mud bottom and dense aquatic vegetation. Can use habitats ranging in size from lakes to ditches. Hibernates in mud or silt bottoms of lakes and rivers. Uses gravel or sandy areas near aquatic habitats for nesting.	No wetland habitat or potential nesting areas are located on or adjacent to the property. Species may use the Rideau Canal, but there is no access to the property from this waterway.	Negligible potential for presence. Not a concern.
Vascular Plants				
Butternut (<i>Juglans cinerea</i>)	Endangered	Variable but typically on well-drained soils.	Species was not observed on or adjacent to the property during the field survey.	Negligible potential for presence. Not a concern.

* Species status is, or will soon be, under review and thus may change in the near future.

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

No SAR or SAR habitat were observed on the site during the field visit. Little Brown Myotis has a moderate potential, and Eastern Small-footed Myotis and Tri-colored Bat have low potential to occur on the property, where they might use the building as day roosts, but are unlikely to use them for maturity roosts or hibernaculum.

3.6 Other Natural Heritage Features

There are no Significant Woodlands, Provincially or Locally Significant Wetlands, Life Science Areas of Natural and Scientific Interest, or Significant Valleylands on or adjacent to the site (Figure 1).

4.0 PROJECT DESCRIPTION

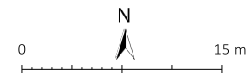
The proposed project entails the removal of the CD-wing of the on the west side of the Southminster Church at 1040 Bank Street. This ancillary building and associated parking lot along Galt Street will be removed to allow for the construction of townhomes and condominiums. The Southminster Church building will be retained on site as a functioning place of worship going forward. The new townhomes and condominiums will be built in the areas to the west and northwest of the Southminster Church and bordering Galt Street and Aylmer Street (Figure 3).



Figure 3 Proposed site plan for property at 1040 Bank Street.

Legend

- Property Line**
- Trees - Post Development**
 - Tree Patch
 - Retained
 - Removed
- Tree Fencing**



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5.0 IMPACT ASSESSMENT

5.1 Impacts to Surface Water Features

No surface water features or wetland habitat were observed on site during the field visit or during review of the City of Ottawa Official Plan Schedule K and L (Ottawa, 2014a; 2014b). The Rideau Canal is approximately 35 m north of the property, but is buffered from potential project impacts by Colonel By Drive, Echo Drive, and paved sidewalks and a woodland strip. Therefore, no impacts are predicted to surface water features from project development.

5.2 Impacts to Trees/ Significant Woodlands

No Significant Woodlands were observed on site during the field visit or during review of the City of Ottawa Official Plan Schedule K and L (Ottawa, 2014a; 2014b). Trees on site were typical urban tree species and are unlikely to affect wildlife communities if some are removed during project development. Mitigation measures (Section 6.1) shall be implemented for the site during project development to protect retained trees.

The proposed project development will result in the removal of three trees ("Tree 1" – an apple tree, and "Tree 2" – a pair of blue spruces) from the site (Figure 2; Table 1). These are relatively small ornamental trees that offer negligible habitat for wildlife. Compensation trees will be planted on the property after project development to maintain the treed aspect of the neighborhood. Other trees on site will be retained. Neighbouring trees immediately north of the property will be protected and will not be impacted by the proposed development.

5.3 Impacts to Species at Risk

No SAR or SAR habitat was observed on the property during the field visit. The urban nature of the site and adjacent lands is unlikely to support SAR species and their specific habitat requirements.

The buildings on site have a moderate potential to provide day roosts for bats, including potential SAR bats. Although, it is unlikely that these buildings would support maternity colonies or hibernaculum for SAR bats. Mitigation measure and timing windows will be implemented for project works; therefore, no impacts are predicted to SAR bats from the project.

5.4 Impacts to Wildlife

The urban landscape of the property and surrounding area are unlikely support a large wildlife community. Typical urban wildlife species were observed on site during the field visit. The section of the property that is slated to be developed is already occupied by an ancillary building for Southminster Church, and therefore no wildlife habitat is likely to be removed. A few trees may be removed during project development for which mitigation measures will be implemented to protect wildlife species (Section 6.3). Because of these factors we do not predict any impacts to wildlife from project development.

6.0 MITIGATIONS

6.1 Mitigations for Trees

Please note that this report does not constitute permission to remove any trees from the site. Removal of trees can only be undertaken upon the issuance of a tree removal permit from the City of Ottawa. This report may be used to support the application for that permit and to advise mitigation measures imposed by the permit. Accordingly, to minimize impact to the remaining trees on the property, the following protection measures are indicated as necessary during construction:

- Tree removal on site should be limited to that which is necessary to accommodate site construction, i.e. the three trees indicated for removal in Table 1 and discussed in Section 5.2 .
- To minimize impact to remaining trees during future site development:
 - Construction fencing should normally be installed beyond the critical root zone (CRZ, i.e. 10 x the trunk diameter) of retained trees adjacent to areas of construction. For this project, trees adjacent to construction areas are limited to Tree 5 and those in Patch 3. Construction fencing along the north development edge (i.e. just inside the west half of the north property line) will thus provide this level of protection for most trees here, though some tree will be within ~9 x the trunk diameter. Trees species here however, are all moderately tolerant to tolerant of root damage. This level of protecting is thus still deemed sufficient to prevent negative impacts to the 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 beyond the fencing, i.e. within the CRZ. Soil compaction is by far the most common way construction damage can harm and kill trees. Trees can die several years after the original damage;
 - Do not attach any signs, notices or posters to any tree;
 - Do not raise or lower the existing grade within the CRZ. This can smother roots cutting off their oxygen supply. This cuts off the water supply, too. For some tree species, only a few centimeters of fill is enough to do serious damage. Roots can also be smothered by temporary piles of soil placed inside a tree's dripline or by pools of water impounded by construction activities.;
 - Tunnel or bore when digging within the CRZ of a tree. No such activity however, is anticipated to be necessary for this project;
 - Do not damage the trunk or branches of any retained tree (limited pruning by a certified arborist is acceptable where necessary), and limit damage to root systems by only cutting those roots extending into the fenced work where necessary. Always cut roots cleanly. Vibratory plows and chain trenchers leave cleaner cuts than bulldozers and backhoes. When working inside the dripline, use only hand tools; 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 require 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 (Ottawa, 2017c).

Tree removed during project development will be replaced at a minimum 1:1 ratio with trees similar to those found on site and in the adjacent areas. The manicured lawn strip between Southminster Church and the Alymer Avenue would support compensation tree species such as Hackberry (*Celtis occidentalis*), Flowering Crabapple (*Malus* spp.), Red Oak, spruce species, White Cedar, or other urban trees species of the Ottawa region. American Elm and ash species will not be planted due to the amount of dieback they are suffering in this regions from disease and invasive pest species.

6.2 Mitigations for Species at Risk

Buildings on site have a moderate potential to provide day roosting locations for SAR bats. We recommend the following timing windows be incorporated into project plans to reduce the potential for impacts to bats:

- Project work that involves building removal can be completed any time during the bat hibernation period from November through early April.
- If building removal is to occur outside of the bat hibernation period, works should be preceded by a bat roosting/emergency survey. Surveys of buildings can be completed any time between late April and mid October. If no bats are observed, building demolition may proceed at any time.
- If SAR bats are observed during this period, they can be removed by trained wildlife technicians prior to building demolition. Importantly however, bat removals CANNOT be conducted between June 1 and August 1.

6.3 Mitigations for Wildlife

Common wildlife species were observed on site during the field visit. The following mitigation measures shall be implemented during construction of the project on site:

- Areas shall not be cleared during sensitive time of the year for wildlife, unless mitigation measures are implemented and/or the habitat has been inspected for a qualified biologist.
- Site clearing should begin at the south end of the site and proceed northward to drive any wildlife towards the wooded strip.
- 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; and,
- Monitoring construction activities to ensure compliance with the project-specific protocol (where applicable) or any other requirements.

These mitigations will constitute the Wildlife Construction Protocol for this project.

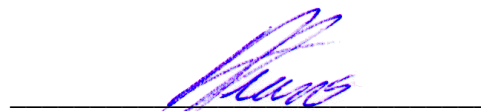
7.0 SUMMARY AND RECOMMENDATIONS

It is our professional opinion that no species-at-risk or their habitat or natural heritage features are likely to be impacted by the proposed development project. The proposed project will replace existing structures, and therefore not impacted adjacent wildlife habitat. Three ornamental trees on site will need to be removed during project development and mitigation measures will be implemented to protect retained trees on site and wildlife species that may use the area. Although we do not believe that the ancillary building supports bat maternity colonies, it may be used as a day roost location. Project work should be timed to outside the bat active season from May through October if possible; otherwise, roosting and emergence surveys should be completed and ecological monitoring should be used during removal of the ancillary building.

Respectfully submitted,
KILGOUR & ASSOCIATES LTD.



Terry Hams, MSc
Project Biologist



Anthony Francis, PhD
Project Manager

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Appendix 1
Qualifications of Report Authors

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.

Terry Hams M.Sc.

Terry is a terrestrial ecologist with over 10 years of experience in terrestrial field work and five years of experience in ecological consulting. He has worked on various projects across the United States and Canada surveying for terrestrial plants and wildlife. Terry has worked on Environmental Assessments for potash mines, Environmental Impact Statements, Constraints Assessments, and Species at Risk Assessments. He has experience performing of Species at Risk surveys across Canada and has extensive knowledge of terrestrial plant and wildlife species.