Kilgour & Associates Ltd.
Environmental Consultants

May 4, 2023 **Our File: Tremblay 1559**

Mr. Richard Tremblay
4715 Birchgrove Road, Cumberland, ON, K4B 1R3
By email: Richard.tremblay@colliers.com

**Subject: Proposal to provide an Environmental Impact Study for a property severance at 4715 Birchgrove Road, Cumberland, ON**

## 1.0 INTRODUCTION

Richard Tremblay has requested that Kilgour & Associates Ltd. ("KAL") prepare an Environmental Impact Study (EIS) to address a severance application for a property located at 4715 Birchgrove Road in Cumberland, Ontario (the "Site"; Figure 1). This letter proposal details our proposed scope of work, staff, schedule, deliverables, pricing, and assumptions related to our delivery of the work plan.

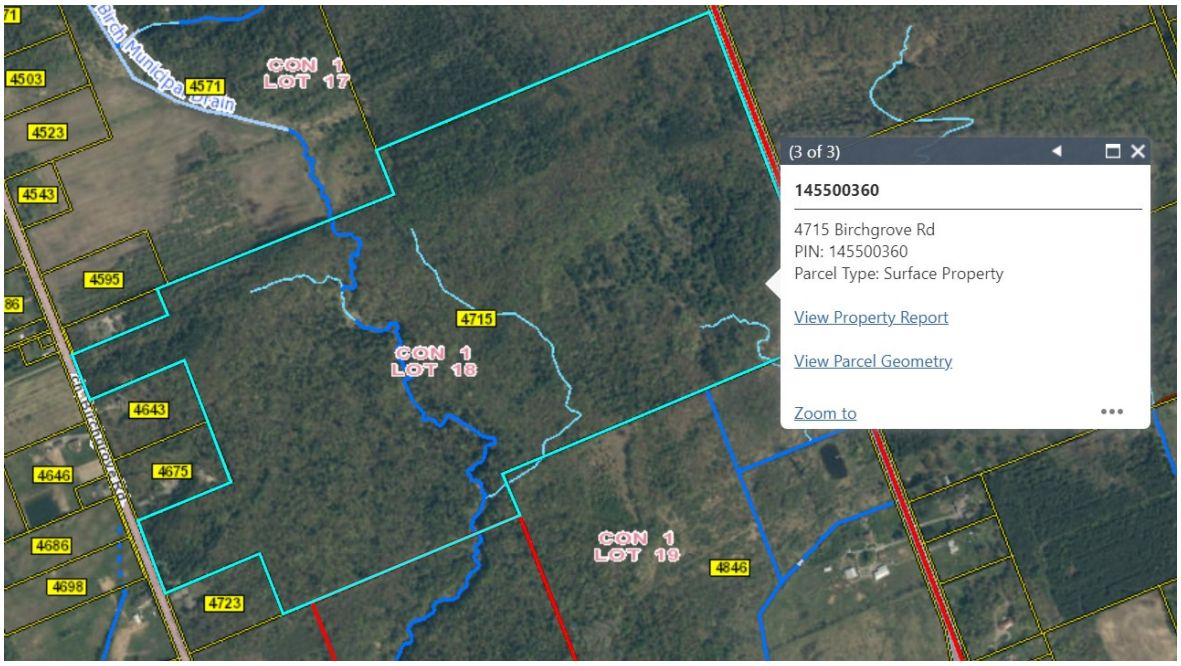


**Figure 1. Site context for 4715 Birchgrove Road, Cumberland, Ontario**

## 2.0 SCOPE OF WORK

## 2.1 Background

It is our understanding that the Site will be subject to a severance application to sever a ~184 m wide parcel from the east side, with an ~84 m road frontage, with a total size of 8.25 ha (Figure 1). The retained parcel will have a road frontage of ~136 m and is anticipated to be ~60.25 ha.

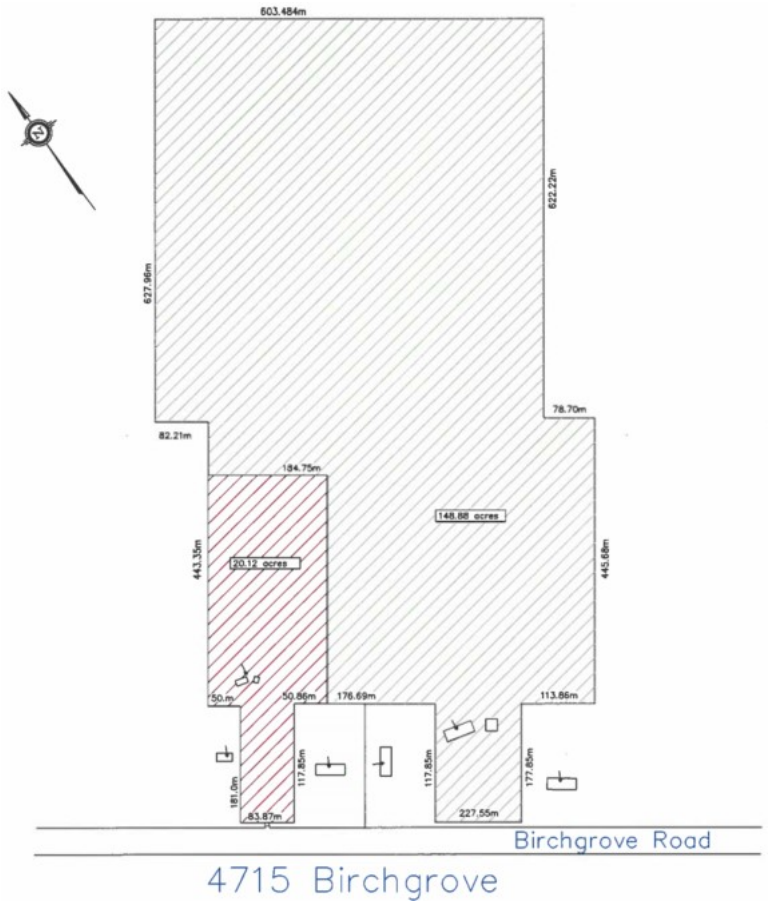


**Figure 2 Proposed severance of 4715 Birchgrove Road, Cumberland, Ontario (dimensions to be confirmed)**

Severances are considered a form of development. An EIS is generally required when development or site-alteration is proposed in or adjacent to natural heritage system elements. The purposes of an EIS are 1) to identify natural heritage system elements on or adjacent to a site, 2) to identify potential impacts of the development to those elements, and 3) to identify mitigation measures to minimize or eliminate those impacts.

The EIS for a property severance is required in advance of specific development plans to determine whether the proposed new lot lines will allow enough area per lot to complete potential future projects consistent with a property zoning in a manner unlikely to have significant impacts to

natural heritage system elements. The objective is to avoid creating new lots with little or no potential to be used as zoned given existing environmental restrictions or setbacks.

The protection of natural heritage features on site under a future (i.e., not yet determined) construction plan is typically achieved through the establishment of a development envelope ("DE") and/or the identification of mitigation measures to employed during construction. The DE is specific portion of a parcel, located outside of a sensitive natural heritage feature, within which the construction of future site building would be restricted. Any DE or mitigation measures indicated within the EIS are then typically included within the land deed for the severed parcel and will be imposed by a municipality as conditions on any future construction permits that they might issue.

## 2.2 Approach and Schedule

We propose a phased approach to the EIS and supporting studies:

**Phase 1 – Project Scoping and Background Review**

In this phase we propose the following tasks:

- Consultation with the client to confirm whether the size and location of the proposed DEs are acceptable. The final details measurement details, once confirmed by the client, will form the basis of the mitigation plan presented within the EIS.
- Consultation with the City of Ottawa (the "Municipality") to confirm the scope and study approach of the EIS; and,
- Desktop species at risk (SAR) screening.

**Phase 2 – Field Studies**

For most development projects, an EIS is generally required to confirm the presence or absence of absences of species at risk (SAR) through detailed field studies, with the study list to be confirmed based on the finding in Phase 1. For a severance project such as this, with no existing plans or project timing future construction works on the site, detailed species surveys are unlikely to be helpful at the current time. Available construction options, species regulations, and the actual species mix on the Site may all change between the drafting of the EIS and the start of construction.

As such, based on similar projects completed in the vicinity, we anticipate that a single field visit will be sufficient to describe the general character and boundaries of significant woodland areas, confirm the absence of wetland and/or other surface water features from the future development areas, and to note the likely habitat potential within the severed parcels.

This will be done using **Ecological Land Classification** (ELC) to delineate terrestrial and (if present, though not anticipated) wetland vegetation communities. ELC describes the type of terrestrial and wetland habitat available which is used to assess the potential use by SAR and other wildlife. The ELC would be completed in late May or early June.

Please refer to Attachment 1 which provides the detailed protocols that we intend to use for this project for the above surveys.

**Phase 3 – EIS Completion**

Following completion of the field studies, we will prepare a draft EIS that will include mitigation measures to limit impacts to ecological functions of natural heritage features. Please note that mitigation measures proposed by the EIS will most likely focus on (but may not be limited to) the detailed DE and the imposition of requirements for future species surveys and construction timing windows on the future owners of the severed parcels.

We will finalize the EIS within 5 days of receipt of comments from the Clients.

## 2.3 Deliverables

The specific "Deliverables" for this assignment are:

- EIS report (1 digital draft, and 1 digital final).

# 3.0 PERSONNEL

Anthony Francis will serve as Project Director providing senior review and oversight. Nick Moore will manage the field program and report writing with assistance from other KAL biologists.

# 4.0 COSTS

Our cost estimate is $6,035 based on the justification table below. The estimate does not include HST. To proceed, we require a deposit of $3000. The outstanding balance will be payable in full upon receipt of our draft report. A signed copy of our final report will be provided upon receipt of the remaining balance.

**Table 1 Cost justification**

| Tasks | KAL Standard Rates | | Total Fees | Disbursements | Total Disb. | Grand Total |
|---|---|---|---|---|---|---|
| | Project Director | Biologist | | Vehicle | | |
| | | | | day | | |
| | 169 | 113 | | $210 | | |
| | | | | | | |
| Project Scoping / SAR Screening | 1 | 7 | $960 | | | $960 |
| Site Visit | | 6 | $678 | 0.5 | $105 | $783 |
| Reporting | 4 | 32 | $4,292 | | | $4,292 |
| | | | | | | |
| Total Hours | 5 | 45 | | 1 | | |
| **Totals** | $845 | $5,085 | **$5,930** | $105 | **$105** | **$6,035** |

# 5.0 ASSUMPTIONS

The above scope of work was created based on the following assumptions:

- The Clients will provide permission to access the site. KAL will not access lands without written permission to enter those lands.
- The estimated price does not include fees charged by reviewing agencies (i.e., MECP and/or the Municipality). These fees can be paid directly by the Client as may be required.
- The EIS will indicate the appropriate processes to obtain relevant permits as necessary, including suggestions for mitigation/compensation plans for SAR. Other ancillary works, including SAR negotiations or site registrations with the MECP, or the development or implementation of formal SAR mitigation/compensation plans require additional time and resources that would be addressed through additional contracts. Please note that the Municipality may deem an EIS complete but delay authorization for a development project until MECP accepts SAR mitigation/compensation plans and authorizes changes to habitat accordingly. We can provide all of these services under separate proposals if and as required.

## 6.0 CLOSURE

Thank you for the opportunity to provide a proposal on this work. We look forward to the possibility of working with you on this project. Our proposal here is warranted for a period of 15 days, after which we cannot guarantee rates or availability of staff. To authorize us to proceed, we require on one of the following: (1) the attached form be signed acknowledging limitations, and providing detailed instructions for submitting invoices including a billing code and/or purchase order; (2) an alternative signed contract.

Respectfully submitted,

**KILGOUR & ASSOCIATES LTD.**

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cc: Bruce Kilgour

# Attachment 1
# Protocols

KAL will complete the proposed Survey(s) in accordance with the protocols and professional and industry guidance documents listed below (the "Protocols").

- SAR screening will be completed following the Client's Guide to Preliminary Screening for Species at Risk[1].
    - Databases including the following will be searched for SAR occurrences:
        - Natural Heritage Information Centre[2]
        - Land Information Ontario Provincially Tracked Species Grid Detail[3]
        - Species at Risk in Ontario List[4]
        - Species at Risk Public Registry[5]
        - Aquatic Species at Risk Map from Fisheries and Oceans Canada (DFO)[6]
        - Atlas of the Breeding Birds of Ontario 2001-2005[7]
        - Herp Atlas[8]
        - iNaturalist[9]
        - eBird[10]
        - Bumble Bee Sightings Map from Bumble Bee Watch[11]
        - Ontario Butterfly Atlas[12]

[1] MECP (Ontario Ministry of Environment, Conservation and Parks). 2019. Client's Guide to Preliminary Screening for Species at Risk. Ontario Ministry of Natural Resources and Forestry (MNRF). 2000. Significant Wildlife Habitat Technical Guide.

[2] MNRF (Ontario Ministry of Natural Resources and Forestry). 2023a. Natural Heritage Information Centre: Make Natural Heritage Map. Available online at: https://www.ontario.ca/page/make-natural-heritage-area-map

[3] MNRF (Ontario Ministry of Natural Resources and Forestry). 2023b. Land Information Ontario Provincially Tracked Species Grid Detail. Available online at: https://geohub.lio.gov.on.ca/datasets/provincially-tracked-species-grid-detail

[4] MECP (Ontario Ministry of Environment, Conservation and Parks). 2023. Species at Risk in Ontario List. Available online at: https://www.ontario.ca/page/species-risk-ontario

[5] Government of Canada. 2023. Species at Risk Public Registry. Available online at: http://www.registrelep-sararegistry.gc.ca/sar/index/default_e.cfm

[6] Fisheries and Oceans Canada (DFO). 2022. Aquatic Species at Risk Map. Available online at: https://www.dfo-mpo.gc.ca/species-especes/sara-lep/map-carte/index-eng.html

[7] Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of Nature Resources, and Ontario Nature. 2009. Atlas of the Breeding Birds of Ontario 2001-2005 (Atlas 2). Available online at: https://www.birdsontario.org/atlas-2/

[8] Ontario Nature. 2019. Herp Atlas. Available online at: https://ontarionature.org/programs/citizen-science/reptile-amphibian-atlas/species/

[9] California Academy of Sciences and National Geographic Society. 2023. iNaturalist. Available online at: https://www.inaturalist.org/

[10] The Cornell Lab of Ornithology. 2023. eBird: An online database of bird distribution and abundance. Available online at: https://ebird.org/home

[11] Bumble Bee Watch. 2023. Bumble Bee Sightings Map. Available online at: https://www.bumblebeewatch.org/app/#/bees/map?filters=%7B%22sightingstatus_id%22:%5B%5D,%22species_id%22:%5B%2237%22%5D,%22province_id%22:%5B%5D%7D

[12] Toronto Entomologists' Association. 2023. Ontario Butterfly Atlas. Available online at: https://www.ontarioinsects.org/atlas/

- Recovery Strategy for the Little Brown Myotis (*Myotis lucifugus*), Northern Myotis (*Myotis septentrionalis*), and Tri-colored Bat (*Perimyotis subflavus*) in Ontario [13]
- Recovery Strategy for the Eastern Small-footed Myotis (*Myotis leibii*) in Ontario [14]

- Headwater Drainage Features Assessment will be conducted following Evaluation, Classification, and Management of Headwater Drainage Features Guidelines[15].
- Vegetation communities in the study area will be identified and mapped in the field using standard Ecological Land Classification (ELC) methods for Ontario[16]. This method provides a consistent approach to identify, describe, name, and map vegetation communities or physiographic features on the landscape based on soils and plant species composition. This method results in a standardized description of each vegetation community to determine the natural diversity and variability of communities within a site, and to provide insight into available habitat and the type of species that may be present. More specifically, the classifications from ELC provide a basis for determining whether potential habitat for a given SAR or other ecological value may be present.
- Night-time bird surveys to confirm the presence/absence of at-risk nightjars (Eastern Whip-poor-will and Common Nighthawk) and their potential breeding territories will be conducted following the Draft Survey Protocol for Eastern Whip-poor-will in Ontario[17]. This protocol calls for three separate night-time surveys between May 18 and June 30 that are timed based on moon conditions.
- Anuran surveys will be performed following the Marsh Monitoring Program[18]. This protocol calls for multiple survey stations at a site to capture spatial and habitat variability. The Marsh Monitoring Program advises that each station be visited a minimum of three times at night, no less than 15 days apart, during the spring and early summer.
- Owl surveys will be conducted following Ontario Nocturnal Owl Surveys in Central Ontario: A Citizen Scientist's Guide[19]. Surveys involve two rounds of evening surveys during the first two weeks of April that utilize playback calls to detect owls.

[13] Humphrey, C. and H. Fotherby. 2019. Recovery Strategy for the Little Brown Myotis (Myotis lucifugus), Northern Myotis (Myotis septentrionalis) and Tri-colored Bat (Perimyotis subflavus) in Ontario. Ontario Recovery Strategy Series. Prepared by the Ministry of the Environment, Conservation and Parks, Peterborough, Ontario. vii + 35 pp. + Appendix. Adoption of the Recovery Strategy for the Little Brown Myotis (Myotis lucifugus), the Northern Myotis (Myotis septentrionalis), and the Tri-colored Bat (Perimyotis subflavus) in Canada (Environment and Climate Change Canada 2018). Available online at: https://files.ontario.ca/mecp-rs-bats-2019-12-05.pdf

[14] Humphrey, C. 2017. Recovery Strategy for the Eastern Small-footed Myotis (Myotis leibii) in Ontario. Ontario Recovery Strategy Series. Prepared for the Ontario Ministry of Natural Resources and Forestry, Peterborough, Ontario. vii + 76 pp. Available online at: https://files.ontario.ca/mnrf_sar_rs_esfm_final_accessible.pdf

[15] Credit Valley Conservation and Toronto and Region Conservation Authority. 2014. Evaluation, Classification, and Management of Headwater Drainage Features Guidelines. January 2014. Available online at: https://cvc.ca/wp-content/uploads/2014/02/HDFA-final.pdf

[16] Lee, H.R., W. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig, and S. McMurray. 1998. Ecological Land Classification for Southern Ontario: First Approximation and its Application. Ontario Ministry of Natural Resources, North Bay.

[17] MNRF (Ontario Ministry of Natural Resources and Forestry). 2014. Draft Survey Protocol for Eastern Whip-poor-will (*Caprimulgus vociferus*) in Ontario. OMNRF Species at Risk Branch, Peterborough, Ontario. iii + 10 pp.

[18] Bird Studies Canada, United States Environmental Protection Agency, and Environment Canada. 2008. Marsh Monitoring Program Participant's Handbook for Surveying Amphibians (Revised). Available online at: https://www.birdscanada.org/bird-science/marsh-monitoring-program/

[19] Birds Canada. Undated. Nocturnal Owl Surveys in Central Ontario: A Citizen Scientist's Guide. Available online at: https://www.birdscanada.org/on_owls/

- Visual encounter surveys for turtles will be completed following MNRF's Survey Protocol for Blanding's Turtle in Ontario[20]. Although this protocol is intended primarily for Blanding's Turtle, all turtle species generally occurring in the area would be detectable under this protocol. The protocol calls for five rounds of turtle surveys spread over a period of at least three weeks, starting after ice-off and ending before June 15.
- Bats will be monitored following acoustic surveys under the MNRF's (2017) Survey Protocol for Species at Risk Bats within Treed Habitats[21]. This is currently the recommended protocol for confirming the presence/absence of Little Brown Myotis, Northern Myotis, and Tri-coloured Bat, where it is determined that potentially suitable habitat for the establishment of maternity roosts is present. All species of bats are detectable under this protocol if ultrasonic acoustic monitors are used and the signal to noise ratio can be analyzed from sonogram displays to identify bat calls to species level. Under the protocol, acoustic monitors are to be installed for a minimum of 10 nights between June 1 and June 30, with recordings commencing after dusk and continuing for five hours.
- Morning breeding bird surveys will be performed using point counts following the Ontario Breeding Bird Atlas Guide for Participants[22]. Breeding bird surveys are to be completed from survey stations that, combined, provide suitable viewing of all habitats on a site on calm weather days with light wind (less than 3 on the Beaufort Scale) and no precipitation. Three rounds of surveys will take place between sunrise and five hours after sunrise between May 24 and July 10, with a minimum of 15 days between survey dates.
- Snake surveys will be conducted following the Survey Protocol for Ontario's Species at Risk Snakes[23]. This protocol calls for 10 rounds of surveys throughout the spring and early summer, with a search effort of 1-2 hours per hectare of suitable habitat during each survey round.

Evaluation of ecological function of natural heritage features on the site will be undertaken following relevant guides such as the Natural Heritage Reference Manual[24] and Significant Wildlife Habitat Technical Guide[25].

[20] MNRF (Ontario Ministry of Natural Resources and Forestry). 2015. Survey Protocol for Blanding's Turtle (*Emydoidea blandingii*) in Ontario. OMNRF, Species Conservation Policy Branch. Peterborough, Ontario. ii + 16 pp.

[21] MNRF (Ontario Ministry of Natural Resources and Forestry). 2017. Survey Protocol for Species at Risk Bats within Treed Habitats: Little Brown Myotis, Northern Myotis & Tri-Colored Bat. OMNRF Guelph District. 13 pp.

[22] Bird Studies Canada, Ontario Field Ornithologists, Environment Canada, Ontario Nature, Ministry of Natural Resources, and Federation of Ontario Naturalists. 2001. Ontario Breeding Bird Atlas Guide for Participants. Available online at: https://www.birdsontario.org/download/atlas_feb03.pdf

[23] MNRF (Ontario Ministry of Natural Resources and Forestry). 2016. Survey Protocol for Ontario's Species at Risk Snakes. Ontario Ministry of Natural Resources and Forestry, Species Conservation Policy Branch. Peterborough, Ontario. ii + 17 pp.

[24] MNR (Ontario Ministry of Natural Resources). 2010. Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005. Available online at: http://docs.files.ontario.ca/documents/3270/natural-heritage-reference-manual-for-natural.pdf

[25] MNR (Ministry of Natural Resources). 2000. Significant Wildlife Habitat Technical Guide. Available online at: https://www.ontario.ca/document/guide-significant-wildlife-habitat

# Attachment 2
# Authorization to Proceed and Limitations

By signing below, you (the "Client") authorize us to proceed on this assignment, acknowledge that our (Kilgour & Associates Ltd.) insurance limitations (below) are acceptable, and agree to our billing terms and technical limitations. This Authorization to Proceed includes terms that limit KAL's civil and regulatory liability and the personal civil and regulatory liability of KAL's employees. Please review this Authorization to Proceed carefully and ask us if you have any questions before signing.

**Standard of Care**

In the event that surveys of the site to document fish, wildlife and their habitats are required for this project, understand that such surveys have limitations. Even a comprehensive survey program conducted in accordance with established protocols may not detect species at risk or migratory birds present at the Project area.

KAL shall complete any required Survey(s) and prepare the Deliverable(s) in accordance with the scope of work, and in a manner consistent with the degree of skill and care ordinarily exercised by members of the profession currently performing similar services under similar conditions in the same geographic area. The applicable standard of care shall be the standard of care that exists at the time the work is completed and the Deliverables are prepared.

KAL shall exercise professional judgement in completing the work and preparing the Deliverables, and in providing options and recommendations to the Client. The Client recognizes that KAL's conclusions, opinions and recommendations arising from the Survey(s) and contained in the Deliverable(s) are made on the basis of professional judgement and are not guarantees.

KAL makes no other warranties, express or implied, with respect to the scope of work, surveys or the deliverables.

**Information Produced or Withheld by Others**

In performing the Survey(s) and preparing the Deliverable(s), KAL may rely on information produced by parties other than KAL, including but not limited to the Ontario Ministry of Natural Resources, Ontario Ministry of Environment Conservation and Parks, Fisheries and Oceans Canada, and iNaturalist. Such information may affect KAL's opinions and recommendations. KAL shall not be responsible for the accuracy or the reliability of such information. KAL shall also not be responsible if others withhold pertinent information relevant to the Project or Survey from KAL.

**Limitation of Civil and Regulatory Liability**

KAL, including KAL's directors, officers, employees, agents and subcontractors shall only be liable for direct damages that result from KAL's negligence in the performance of the Scope of Work and the preparation of the Deliverables. KAL shall not be liable for indirect, consequential, special, or punitive damages.

The Client agrees KAL's directors, officers, and employees shall have no personal liability to the Client in respect of any civil claim arising from the Scope of Work, the Deliverables, or the Project.

KAL shall not be responsible for any regulatory liability or associated costs (including legal costs) arising from the project. KAL shall not be responsible for compliance with regulatory demands, directives, or orders, or for defending prosecutions or paying fines arising from the Scope of Work, the Deliverables or the Project ("Regulatory Claims"). The Client agrees to indemnify KAL and hold KAL harmless from any such Regulatory Claims.

**Reliance**

The Client acknowledges that only the Client is entitled to rely on KAL's Deliverable(s). KAL is not responsible for the accuracy of any data, the analysis, or the conclusion and recommendations contained in the Deliverables when the Deliverables are relied on by a party other than the Client without KAL's written consent.

**Client's Responsibilities**

The Client is responsible for complying with all environmental laws, including requirements to obtain consents, approvals, permits or licenses form applicable regulatory authorities.

KAL's Scope of Work is a point in time assessment of the ecological conditions, including the potential for presence of specific species at the Project area. The results of the assessment can become obsolete quickly, as new species may move into the Project area following the assessment. Where time passes between completion of the assessment and commencement of the Project, it may be prudent to re-survey prior to commencing the Project to confirm that new species have not moved into the Project Area. The Client is responsible for proceeding with the Project, or re-surveying, within the timeframes recommended by KAL.

KAL recognizes that the Client may choose not to follow KAL's recommendations (e.g., recommendations to re-test for species after a period of time has elapsed) for business reasons or otherwise. The Client is responsible for the consequences of any decision to not follow KAL's recommendations.

**Confidentiality**

Information collected, analyzed, and reported on during work addressed by this agreement shall not be used or divulged by KAL, its agents or employees without prior written approval of the Client. This agreement shall not prohibit KAL from acting to report or correct a situation for which they are compelled to do so by professional/legal obligations. If such a situation arises, KAL will immediately information the Client of the requirement to do so.

**Insurance Limitations**
Kilgour & Associates Ltd. maintains the insurance indicated below:

- Workers Insurance Board of Ontario (WSIB);
- Commercial General Liability Insurance in the amount of $5,000,000 CDN;
- Owned Automobile Insurance in the amount of $2,000,000 CDN; and,
- Errors and Omissions Insurance in the amount of $2,000,000 CDN.

**Billing Terms**

KAL will submit invoices monthly, on a time and materials basis to the estimate as indicated in our included budget and scope of work, and per the following terms:

- The Client will receive an invoice each month for services and reimbursable expenses charged/incurred by KAL during the previous month;
- Invoices are due upon receipt;
- KAL will work to stay within the proposed estimate, but any work that is outside of scope will charged at the rates indicated in the budget detail. Work that is out of scope may include;
    - New tasks;
    - Conversations, communications, emails, etc., beyond those included in the original budget;
    - Changes to the Clients project resulting in KAL increasing effort to carry out the assessment.
- Accounts requiring invoices be split across clients will be subject to a split management fee (2%);

- Accounts outstanding for more than 60 days from date of issue will immediately be subject to an interest rate of 2% per month;
- Accounts outstanding for more than 90 days may be suspended until accounts are cleared; and,
- Where accounts are outstanding for more than 90 days and split across clients, all project work may be suspended until the split invoices are cleared across all participating clients.

| **Please fill in all fields in this form** |
|---|
| **Company Name and Address:** |
| **Purchase Order or Job Number:** |
| **Email address to receive invoices:** |

**Authorized Client Signature**

| | | |
|---|---|---|
| Print Name | Signature | Date signed |

# Environmental Impact Study for a Proposed Severence at 4715 Birchgrove Road, Cumberland, ON



**2023-07-18**

**KILGOUR & ASSOCIATES LTD.**
www.kilgourassociates.com

Project Number: Tremblay 1559

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# 1.0 INTRODUCTION

This report is an Environmental Impact Study (EIS) prepared by Kilgour & Associates Ltd. (KAL; Appendix A) on behalf of Richard Tremblay in support of a proposed severance at 4715 Birchgrove Road, Cumberland, ON, K4B 1R3 (hereafter referred to as "the Site"). The proposed severance would remove approximately 8.1 ha from the existing 68.5 ha parcel. The proposed new lot would have approximately 84 m of road frontage, while the retained parcel will have a road frontage of approximately 136 m and be approximately 60.1 ha in size. The areas where building construction can occur and are ultimately affected by the planned severance are referred to as the "Study Area" and will remain the focus of this EIS (Figure 1).

In the City of Ottawa, an EIS is required when development or site alteration is proposed within 120 m of a Natural Environment area as mapped on Schedule "C11" of the City of Ottawa Official Plan (2021). The purposes of the EIS are to:

- Identify natural heritage features on or adjacent to the Site;
- Assess potential impacts of the proposed development to existing features; and,
- Recommend mitigation measures to minimize or eliminate identified impacts.

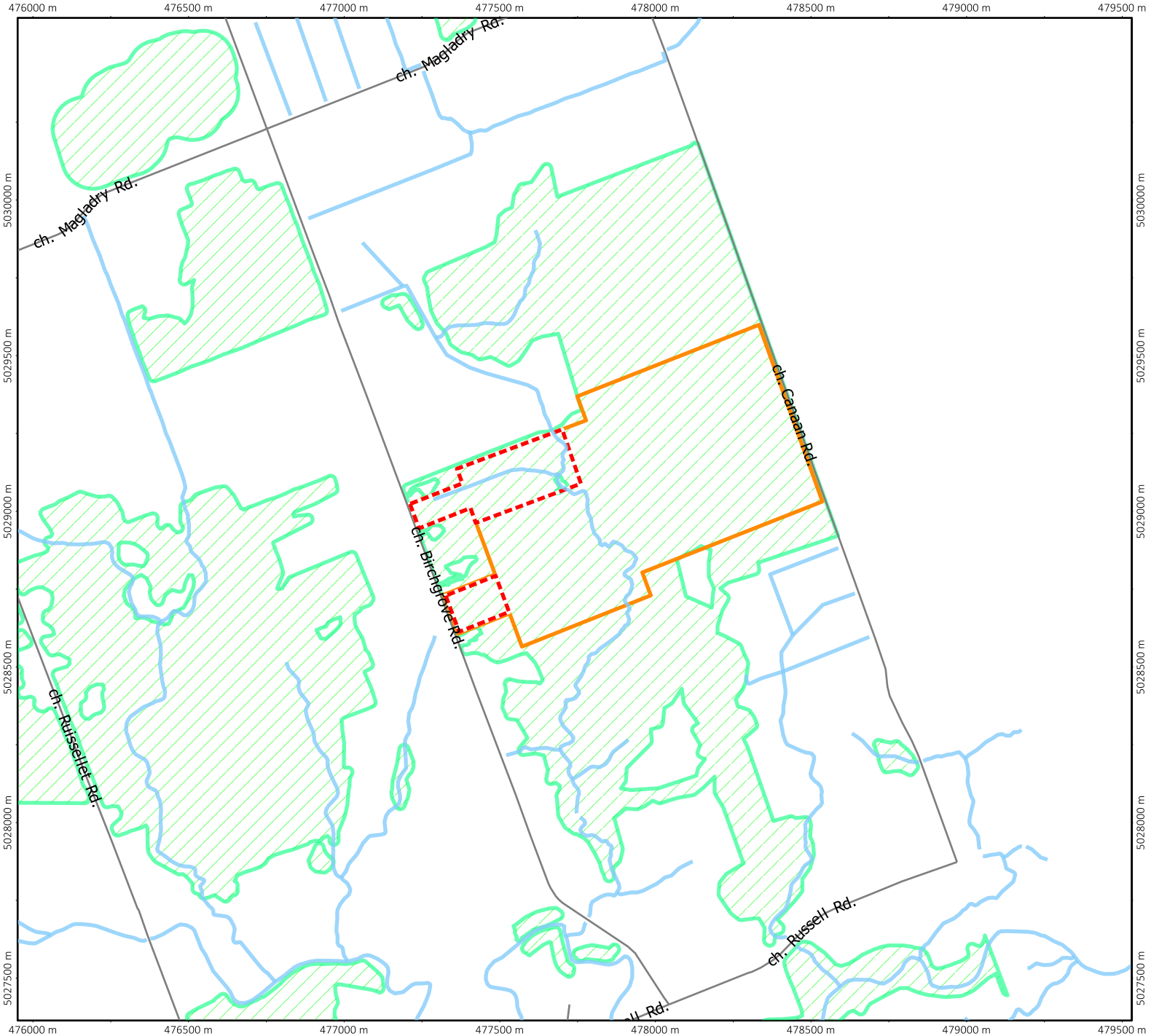


**Figure 1** Property location and area context

Property Boundary
Study Area
Water
Significant Woodland

N

0 250 m

Project: TRMB 1559
Map File: Tremblay 1559 Maps.map
Universal Transverse Mercator - Zone 18 (N)
Printed on: 2023-06-27

KILGOUR & Associates

# 2.0 ENVIRONMENTAL POLICY CONTEXT

Natural heritage policies and legislation relevant to this EIS are outlined below.

## 2.1 The Provincial Policy Statement, 2020

The Provincial Policy Statement (PPS) was issued under Section 3 of the *Planning Act* (Government of Ontario, 1990a). The current PPS came into effect May 1, 2020 (Government of Ontario, 2020). Natural features are afforded protections under Section 2.1 of the PPS. Protections may include maintenance, restoration, and improved function of diversity, connectivity, ecological function, and biodiversity of natural heritage systems. These protections restrict development and site alteration in significant natural areas (e.g., woodlands, wetlands, wildlife habitat) unless it can be demonstrated that there will be no negative effects on the features and ecological functions of those natural areas. Technical guidance for implementing the natural heritage policies of the PPS is found within the second edition of the Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005 (NHRM: Ministry of Natural Resources (MNR), 2010). This manual recommends the approach and technical criteria for protecting natural heritage features and areas in Ontario.

## 2.2 City of Ottawa Official Plan

The City of Ottawa Official Plan (2021) provides direction for future growth in the City and is a policy framework to guide physical development to 2031. The Official Plan was developed in accordance with the PPS (and relevant provincial legislation). The City of Ottawa reviews development applications within its boundaries, which must be in accordance with the Official Plan. The Site is designated 'Rural Countryside' and a portion of the Site is included in the 'Bedrock Resource Area Overlay' in Schedule B9 of the Official Plan. The Site is located within the Natural Heritage System Core Area and the majority of the Site is included in the Natural Heritage Features Overlay in Schedule C11-C. Section 5.6.4.1 of the Official Plan requires that development or site alteration proposed in or adjacent to natural heritage features must be supported by an EIS prepared in accordance with the City's guidelines.

## 2.3 *Conservation Authorities Act*, 1990

Conservation Authorities were created to address erosion, flooding, and drought concerns regionally by managing at the watershed level. Conservation Authorities were given the ability to regulate under Section 28 of the Conservation Authorities Act (Government of Ontario, 1990). The Act provides mechanisms to regulate works and site alterations that have potential to affect erosion, flooding, land conservation, and alterations to waterbodies within their jurisdiction. It is the obligation of all Conservation Authorities to implement Ontario Regulations 42/06 and 146/06 to 182/06 Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses under Section 28 of the Conservation Authorities Act for relevant works.

## 2.4 *Species at Risk Act*, 2002

The federal *Species at Risk Act* (SARA; Government of Canada, 2002) is administered by Environment and Climate Change Canada (ECCC) and provides direction to protect and ensure the survival of wildlife species in Canada. The purpose of the SARA is to prevent populations of wildlife from becoming Extirpated,

Endangered, or Threatened, provide recovery Endangered or Threatened species, and to manage other species to prevent them from becoming Endangered or Threatened.

All species listed on Schedule 1 of SARA are afforded protection on federal lands. Aquatic species and species of migratory birds protected by the *Migratory Birds Convention Act* (MBCA; 1994) and listed as Endangered, Threatened, or Extirpated under Schedule 1 of SARA are protected wherever they occur in Canada, regardless of land ownership.

## 2.5 *Endangered Species Act*, 2007

The provincial *Endangered Species Act* (ESA; Government of Ontario, 2007) is administered by the Ministry of Environment, Conservation, and Parks (MECP) and provides protection for species at risk (SAR) and their habitat. The ESA states that it is illegal to harm the habitat of species listed as Extirpated, Endangered, and Threatened. It is also illegal to kill, harm, harass, possess, transport, buy or sell Extirpated, Endangered, and Threatened species, whether it is living or dead. Species listed as Endangered, Threatened, or Extirpated and their habitats (e.g., areas essential for breeding, rearing, feeding, hibernation, and migration) are automatically afforded legal protection under the ESA.

## 2.6 *Fisheries Act*, 1985

The federal *Fisheries Act* (Government of Canada, 1985) is administered by Fisheries and Oceans Canada (DFO) and provides protections to fish, fish habitat, and fisheries. Specifically, the *Fisheries Act* in its current version provides:

- Protection for all fish and fish habitat
- Prohibition against the "harmful alteration, disruption or destruction of fish habitat"
- Prohibition against causing "the death of fish by means other than fishing"

Projects with a scope that does not fall within DFO's defined standards and codes of practice require submission of a request for review to DFO.

## 2.7 *Migratory Birds Convention Act*, 1994

Nesting migratory birds are protected under the MBCA (Government of Canada, 1994). No work is permitted that would result in the destruction of active nests (nests with eggs or young birds) or the wounding or killing of bird species protected under the MBCA and/or associated regulations (e.g., SARA). The "incidental take" of migratory birds and the disturbance, destruction, or taking of the nest of a migratory bird is prohibited. "Incidental take" is the killing or harming of migratory birds due to actions that are not primarily focused on taking migratory birds (e.g., economic development) and no permits exist for the incidental take of migratory birds or their nest/eggs as a result of activities that are not focused on taking migratory birds. These prohibitions apply throughout the year. The Government of Canada has compiled nesting calendars that apply across Canada that can be used to greatly reduce the risk of harming/destroying active nests by ensuring works that may impact nests are performing outside of the nesting period.

Effective July 30, 2022, a list of 18 species of migratory birds identified on Schedule 1 of the MBCA are provided year-round nest protection until they can be deemed abandoned. The Schedule includes this list for birds that re-use their own nest from one year to the next. If the nest of a Schedule 1 species has not been occupied by a migratory bird for the entirety of the waiting time indicated in the MBCA, it is considered to be abandoned, and to no longer have high conservation value for migratory birds.

### 2.8 *Fish and Wildlife Conservation Act*, 1997

The provincial *Fish and Wildlife Conservation Act* (FWCA; Government of Ontario, 1997) governs the hunting and trapping of a variety of wildlife including mammals, birds, reptiles, amphibians, and fish in Ontario, thereby facilitating the protection of wildlife and their habitat. The FWCA outlines the prohibition of hunting or trapping specially protected species and the requirement for provincially issued licenses for the hunting or trapping of "furbearing" or "game" animals. Examples of specifically protected animals include, for example, Southern Flying Squirrel (*Glaucomys volans*), Northern Harrier (*Circus cyaneus*), American Kestrel (*Falco sparverius*), Blue Jay (*Cyanocitta cristata*), Midland Painted Turtle (*Chrysemus picta marginata*), Northern Watersnake (*Nerodia sipedon*) and Gray Treefrog (*Hyla versicolor*). In particular, raptors that are not protected under the MBCA (including Peregrine Falcon) are protected under the FWCA.

## 3.0 PROPERTY IDENTIFICATION

The Site is located at 4715 Birchgrove Road in the City of Ottawa and is approximately 68.5 ha in size. The Site is bounded by Birchgrove Road to the west, Canaan Road to the east, forests and farmland before Magladry Road to the north, and forest before Russell Road to the south. The surrounding areas are primarily forested rural residential properties. Agricultural areas include livestock and cash crop operations along Birchgrove Road.

The current zoning for the Site is Rural (RU). The Site is primarily forested, with a tributary/drainage feature traversing from the southern boundary to the northern boundary, eventually draining into the George Birch Municipal Drain located in the adjacent property to the north. The central portion of the Site is comprised of relatively mature forest; forest in the eastern portions of the Site is relatively young, arising after 1976. Forest ages along the western edge of the are mixed with Site patches of open space and very young forest evident in the 1976 GeoOttawa air photo.

Provincial mapping layers suggest the presence of pockets of unevaluated wetland across the Site (Ontario GeoHub, 2023). Much of the western end of the Site was severely impacted by the derecho storm in May 2022, which downed many of the trees and saplings in this area.

## 4.0 METHODOLOGY

### 4.1 Desktop and Background Data Review

#### 4.1.1 Background Review

Background information was obtained from online databases and geographic information system mapping applications to review relevant information. Aerial imagery was used to identify existing features

and confirm information found in the background review. Background information was obtained from available resources, which include:

- Species at Risk in Ontario (SARO; Ministry of Environment, Conservation, and Parks (MECP, 2022);
- Species at Risk Public Registry (Government of Canada, 2022);
- Natural Heritage Information Centre (NHIC; Ministry of Natural Resources, and Forestry (MNRF, 2022a);
- Land Information Ontario (MNRF, 2022b);
- Aquatic Species at Risk Map (DFO, 2022);
- Ontario Reptile and Amphibian Atlas (Ontario Nature, 2019);
- Ontario Breeding Birds Atlas (Birds Canada et al., 2009);
- Ontario Butterfly Atlas (Toronto Entomologists' Association, 2022);
- eBird (Cornell Lab of Ornithology, 2022a);
- iNaturalist (California Academy of Sciences and National Geographic Society, 2022);
- Bumble Bee Watch (Wildlife Preservation Canada et al., 2022);
- Recovery Strategy for the Little Brown Myotis (*Myotis lucifugus*), Northern Myotis (*Myotis septentrionalis*), and Tri-colored Bat (*Perimyotis subflavus*) in Ontario (Humphrey and Fotherby, 2019);
- Recovery Strategy for the Eastern Small-footed Myotis (*Myotis leibii*) in Ontario (Humphrey, 2017); and,
- Fish ON-Line (MNRF, 2022c).

### 4.1.2 Agency Consultation

The review of existing information included a preliminary SAR screening for species listed under the federal SARA and provincial ESA. The screening identified SAR having some potential to occur on or near the Site. The screening was completed following the *Draft Client's Guide to Preliminary Screening for Species at Risk* (MECP, 2019). The results of the screening process inform the initial list of species to be considered in the assessment of the potential for development to impact(s) to SAR or SAR habitat. Where it is determined through the EIS process that there is an anticipated impact of the development on SAR, an Information Gathering Form (IGF) is submitted to MECP for further review.

## 4.2 Field Surveys

KAL Biologist Kurtis Westbury completed a site visit on May 12, 2023, to document existing ecological conditions in the Study Area and confirm the results of the background review. Weather conditions were clear and sunny, with limited breeze and a high temperature of 24°C.

The Study Area was the focus of the field studies as this area directly pertains to any potential effects of the proposed severance (Figure 1). The site visit involved surveying the Study Area with a particular focus on characterizing vegetation communities and determining the potential for the presence of SAR or their habitat.

During the site visit on May 12, 2023, the dominant plant species were recorded within and adjacent to the proposed severance area. Representative photos of current conditions in the Study Area were taken and are included with the vegetation descriptions in this EIS. Incidental observations of wildlife species observed on the Site were also recorded during the site visit.

The existing vegetation communities in the Study Area were delineated based on the standard Ecological Land Classification (ELC; Figure 2) methods for Ontario (Lee et al., 1998). ELC provides a consistent approach to identify, describe, and map vegetation communities or physiographic features on the landscape based on dominant plant species and soil composition. ELC provides a standardized description of each vegetation community to capture the natural diversity and variability of communities within a site. ELC allows insight into available habitat and species that may be present in each community, including potential habitat suitable for SAR. Observed vegetation communities were mapped to the most detailed level of ELC based on the dominant plant species present. Incidental observations of wildlife species observed on the Site were also recorded during the site visit.

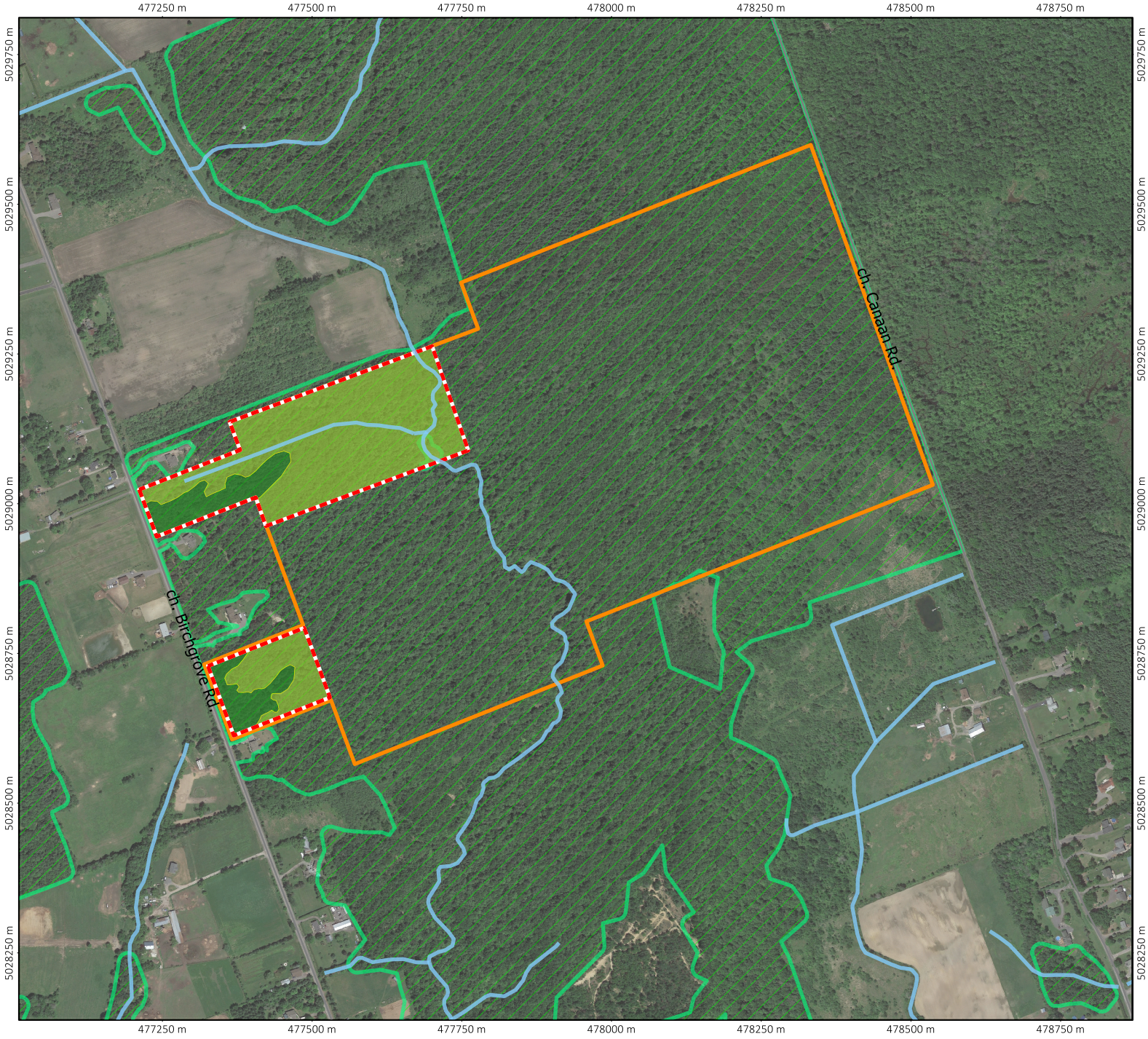


**Figure 2** Existing conditions within the Study Area

Property Boundary
Study Area
Water
Significant Woodland

**ELC**
FOMM9-2
FOD8-1

N
0
250 m

Project: TRMB 1559
Map File: Tremblay 1559 Maps.map
Universal Transverse Mercator - Zone 18 (N)
Printed on: 2023-06-27

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# 5.0 SITE CONDITIONS

## 5.1 Landforms, Soils and Geology

The Site (Figure 2) is located within the Ottawa Valley Clay Plains physiographic region (Chapman & Putnam, 1984). The Site was characterized as generally level and moist overall. The western and northern portions of the Site are predominantly mapped as part of the Cheney soil series and the southeastern portion of the Site are mapped as part of the St. Thomas soil series in Report No. 58 of the Ontario Institute of Pedology, *The Soils of The Regional Municipality of Ottawa-Carleton* (Schut & Wilson, 1987). Smaller portions of Escarpment and Eroded Channel soils are present on the Site. Cheney soils are poorly drained, coarse textured loamy fine sand fluvial soils with a high acidity and organic content (1987). St. Thomas soils are well drained, coarse textured fluvial soils. A mineral parent material is present on the Site.

Soil layers were evident in craters around the Site where trees had tipped over during the derecho. While some puddles were present due to earlier rainfall, the organic layer throughout the Study Area was minimal and exposed mineral soils did not appear hydric in nature, suggesting no long-term soil saturation or no general wetland presence.

## 5.2 Vegetation Cover (Ecological Land Classification)

The dominant vegetation cover within the Study Area consists mostly of coniferous forest (much of which was damaged during the May 2022 derecho) with smaller amounts of deciduous trees scattered throughout (Figure 2).

Much of the Study Area was characterized as a FOMM9-2 Fresh – Moist White Pine – Hardwood Mixed Forest. The coniferous trees were dominated by Eastern White Pine (*Pinus strobus*), many of which were damaged in the May 2022 derecho (Figure 3). The surrounding deciduous trees are predominantly Trebling Aspen (*Populus tremuloides*) with occasional Red Maple (*Acer rubrum*). The surrounding understory vegetation is predominantly Red Trillium (*Trillium erectum*) and Red Raspberry (*Rubus idaeus*).


**Figure 3 Fallen White Pine trees in the FOMM9-2 Fresh – Moist White Pine – Hardwood Mixed Forest Type in the southeast portion of the Study Area**

### 5.2.1 Fresh – Moist Poplar Deciduous Forest (FOD8-1)

Further into the Study Area past the fallen pine trees, the forested area is dominated by Trembling Aspen (*Populus tremuloides*). The FOD8-1 Fresh – Moist Poplar Deciduous Forest there was noted to also occur at the northernmost part of the Study Area. The understory in this portion of the Study Area is composed of Sensitive Fern (*Onoclea sensibilis*), Common Dandelion (*Taraxacum officinale*), Poison Ivy (*Toxicodendron radicans*), Sugar Maple saplings (*Acer saccharum*), Canada Mayflower (*Maianthemum canadense*), various grasses, Dwarf Red Blackberry (*Rubus pubescens*), Log fern (*Dryopteris celsa*), Virginia Creeper (*Parthenocissus quinquefolia*), and Black Cherry saplings (*Prunus serotina*). This forested area occupies the remainder of the Site northeast until Canaan Road (City of Ottawa, 2023).

**Figure 4 FOD8-1 Fresh – Moist Poplar Deciduous Forest predominated by Trembling Aspen**

## 5.3 Surface Water, Groundwater, and Fish Habitat

Mapping from Ontario GeoHub (MNRF, 2023) suggests the potential presence of pockets of unevaluated wetland across the Site. The site survey, however, indicated no wetland ecosites to be present within the Study Area. A small permanent stream traversing the center of the property from south to north is located at the eastern end of the Study Area (Figure 2). As future site development other than legal lot line changes that would be supported or addressed by this EIS (See Section 6.0) will be more than 100 m from this feature, it was not subject to further study or review.

A small headwater drainage feature extends along the northern edge of the Study area beginning ~60 m from Birchgrove Road and continuing northeast to meet the permanent stream traversing the property. With no upwellings or other local sources evident, the shallow, standing water (i.e. no flow) in the headwater drainage feature likely represented accumulated rain water supporting an ephemeral to intermittent hydrology. While no fish were evident in the headwater drainage feature, the feature is situated within a forest setting and does eventually connect to the larger downstream watercourse. As

such, it should be considered to potentially support fish habitats downstream as a source of water and allochthonous inputs.

## 5.4 Species at Risk

An assessment of species listed under SARA and ESA was completed to identify species that have some potential to occur on or near the Site, including Extirpated, Endangered, Threatened, and Special Concern species. Species listed as Extirpated, Endangered, and Threatened are afforded species and habitat protection under the ESA. Federal protections under SARA are always in force for listed species of fish and migratory birds. For species of other groups, SARA normally only applies on federal lands or on projects having some level of participation with or oversight by the federal government. However, SARA-based protections can be imposed by ministerial order on a case-by-case basis in situations where provincial-level protections are deemed inadequate to otherwise protect a species. Such protections are not expected to apply to the Site.

A total of 20 SAR were initially identified with some potential to occur within the broader vicinity of the Site based on a desktop review observation records and publicly available databases (Appendix B). Considering general habitat availability on the Site based on the ELC and site review, the potential for those species to occur within the project area, and /or for them or their protected habitats to interact with future development of the Site was assessed (Appendix C). Of those 20 species, 12 were considered to have moderate to high potential to occur on the Site and/or interact with the project (MECP, 2019). Four of the listed bird species, however, are only listed provincially as Special Concern. As such they are not directly protected under the ESA; mitigation considerations for these species will be addressed under the general review of wildlife as rather than as SAR.

**Table 1 SAR with potential to interact with future development on the Site**

| Species Name (*Scientific name*) | Status under Endangered Species Act | Status under Species at Risk Act (Schedule 1) | Potential to Interact with Development of the Site |
|---|---|---|---|
| **Birds** | | | |
| Canada Warbler (*Cardellina canadensis*) | Special Concern | Threatened | Moderate |
| Eastern Whip-poor-will (*Antrostomus vociferus*) | Threatened | Threatened | High |
| Eastern Wood-Pewee (*Contopus virens*) | Special Concern | Special Concern | High |
| Rusty Blackbird (*Euphagus carolinus*) | Special Concern | Special Concern | Moderate |
| Wood Thrush (*Hylocichla mustelina*) | Special Concern | Threatened | Moderate |
| **Mammals** | | | |
| Eastern Small-footed Myotis (*Myotis leibii*) | Endangered | Endangered | Moderate |
| Little Brown Myotis (*Myotis lucifugus*) | Endangered | Endangered | Moderate |
| Northern Myotis / Northern Long-eared Bat (*Myotis septentrionalis*) | Endangered | Endangered | Moderate |
| Tri-colored Bat / Eastern Pipistrelle (*Perimyotis subflavus*) | Endangered | Endangered | Moderate |
| **Reptiles** | | | |
| Blanding's Turtle (*Emydoidea blandingii*) | Threatened | Endangered | Moderate |
| **Vascular Plants** | | | |
| Black Ash (*Fraxinus nigra*) | Endangered | No Status | Moderate |
| Butternut (*Juglans cinerea*) | Endangered | Endangered | Moderate |

## 5.5 Incidental Wildlife Observations

While completing the site visit on May 12, 2023, any incidental wildlife observations on and adjacent to the Site were recorded. Bird species observed in the south portion of the Study Area included Eastern Phoebe (*Sayornis phoebe*), Northern Flicker (*Colaptes auratus*), Song Sparrow (*Melospiza melodia*), House Wren (*Troglodytes aedon*), and Mourning Dove (*Zenaida macroura*). American Toad (*Anaxyrus americanus*) and Gray Treefrog (*Dryophytes versicolor*) were heard calling in a property across Birchgrove Road.

Species observed in the northern portion of the Study Area include the Gray Treefrog (*Dryophytes versicolor*), Black-capped Chickadee (*Poecile atricapillus*), Mourning Dove (*Zenaida macroura*), Song Sparrow (*Melospiza melodia*), Blue Jay (*Cyanocitta cristata*), American Robin (*Turdus migratorius*), Chipping Sparrow (*Spizella passerina*), Ovenbird (*Seiurus aurocapilla*), and House Wren (*Troglodytes aedon*).

## 5.6 Significant Natural Heritage Features

The forest cover located within the Study Area is part of a broader (185 ha), contiguously wooded feature. As the Property is located outside of the urban area, the City of Ottawa (2019) Significant Woodlands Policy calls of the identification of woodland significance base on criteria per the provincial Natural Heritage Reference Manual (MNR, 2010).The contiguously wooded area:

- Does meet Criterion 1 - Size*:*
    - The Site falls within the Ottawa East - Bearbrook Rural Planning Area where forest cover is estimated to be 29.9%. To meet the size criterion, woodlands in this rural planning area should be ≥20 ha to be considered significant. The forest block is 185 ha and therefore does meet the size criterion.
- Does meet Criterion 2 - Ecological Functions:
    - The interior woodland extends approximately 87 ha, exceeding the threshold value of 8 ha over tenfold, thereby meeting the requirements to qualify as Significant.
    - While the broader forested area likely serves generally as a linkage between other natural areas, the potential corridor functionality across the Study Area itself is likely already limited by the existing residential lots along that stretch of Birchgrove Road.
- Does not meet Criterion 3 - Uncommon Characteristics:
    - The forest types within the Study Areas do not present unique species composition; provincially significant vegetation communities, or; rare, common, or restricted plant species. While some small portions of the extended feature existed prior to 1976 (City of Ottawa, 2023), most of the wooded area is younger the forest does not constitute old growth.

- Does not meet Criterion 4 - Economic and Social Values:
    - As a private, residential property in a rural area, the forest does not produce economically valuable products or high value in special services (such as air quality improvement or recreation), and does provide identified appreciation, education, cultural, or historical values to the broader community.

# 6.0 DESCRIPTION OF THE PROPOSED PROJECT

It is our understanding that the proposed project includes the establishment of two separate parcels within the existing area of the Property (Figure 5). A single 8.1 ha lot will be severed near the northwest corner of the Site. The retained lot will maintain a 20 m wide corridor between the severed lot and the south property line.

The severed lot would have 84 m of road frontage on Birchgrove Road and would extend 100 m back. Following the Zoning Bylaw for the City of Ottawa, setbacks of 10 m from Birchgrove Road are required for any building. The severed lot will include a development envelope ("DE"). No future infrastructure (house, building or septic system) would be permitted on the severed lot outside of the DE, other than single driveway connections to Birchgrove Road. The DE will be 70 m wide at Birchgrove Road but will narrow along the north side towards the east to respect a 15 m water feature setback. The approximate length of the DE will be 250 m.

The DE on the retained lot will be approximately 158 m long and 124m wide. It is intended to keep development on that lot along Birchgrove Road, and out of the broader section of the Significant Woodland to the east.

The DEs have been sized and located to allow some future flexibility for future site planning but are not intended to be developed in their entirety. Elements comprising the development footprints (i.e. houses, garages and/or associated infrastructure) of nearby properties along Birchgrove Road, and that are situated within the forest setting, range from 0.2 to 0.4 ha. Within the DEs for this project, the total development footprint for those elements will not exceed 0.4 ha. Those elements may be located anywhere within the DE, but the remaining portion of the DE will not otherwise to be cleared for development purposes.

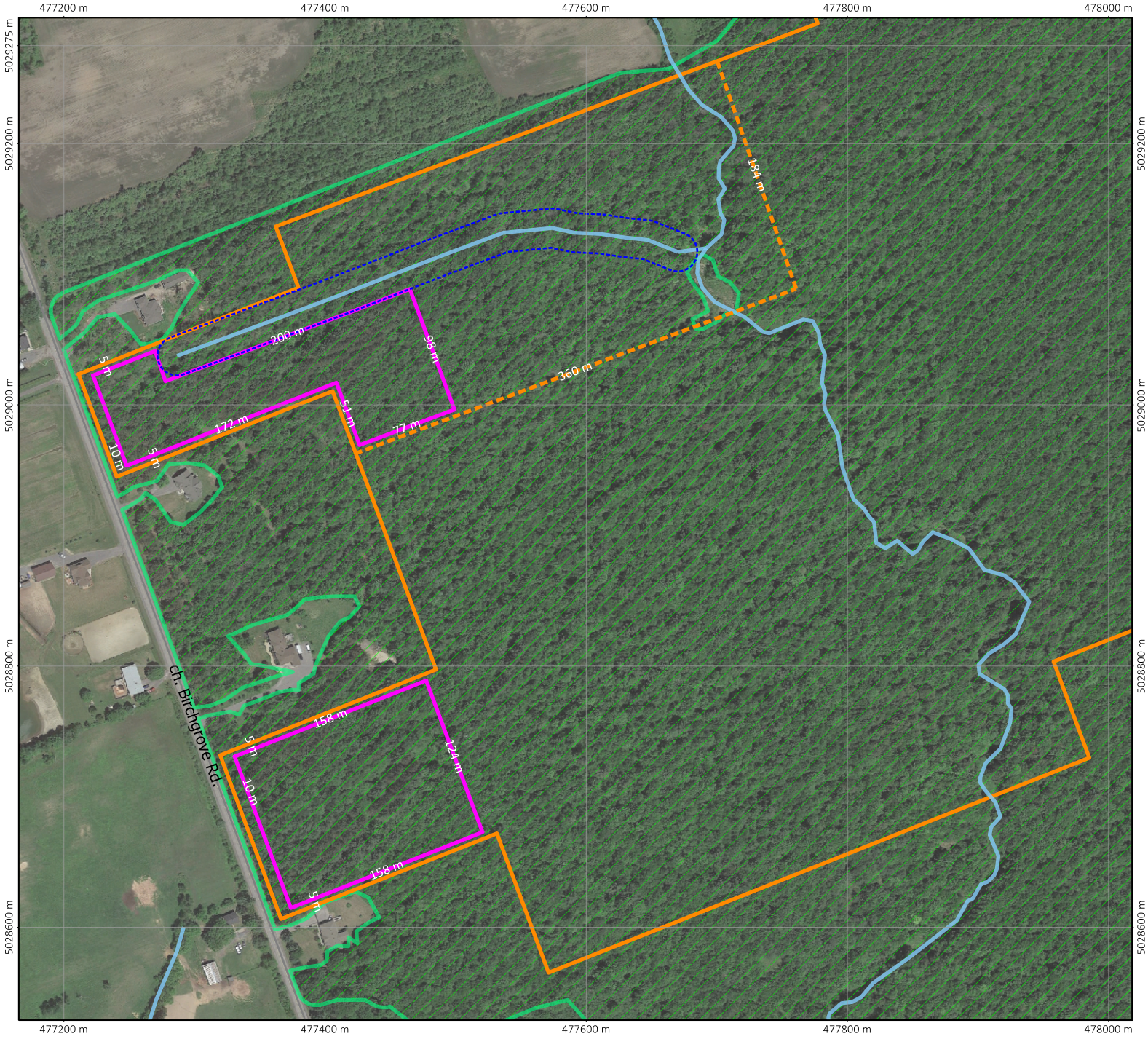


**Figure 5** Proposed severence

Property Boundary
Development Envelopes
Severence Line

Water
15m Watercourse Setback

N

0 100 m

Project: TRMB 1559
Map File: Tremblay 1559 2307b.map
Universal Transverse Mercator - Zone 18 (N)
Printed on: 2023-07-10

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# 7.0 IMPACT ASSESSMENT AND MITIGATION

## 7.1 Surface Water, Groundwater and Fish Habitat

The small, ephemeral/intermittent headwater drainage feature extending along the northern side of the severance parcel potentially supports fish habitats downstream as a source of water and allochthonous inputs. As the feature is not a permanent channel and does not provide direct fish habitat, a 15 m setback is anticipated to be sufficient to protect the drainage feature from adjacent development, which would be limited to a single residence in a forest setting. The DE for the parcel respects a 15 m setback from the drainage feature.

During construction of future site infrastructure, an erosion sediment control (ESC) measures to reduce the potential for site runoff will be employed and should include following considerations:

- Retention of existing vegetation and stabilization of exposed soils with native vegetation where possible;
- Limiting the duration of soil exposure and phasing project works;
- Limiting the size of disturbed areas by minimizing nonessential clearing and grading;
- Minimizing the total slope length and the gradient of disturbed areas;
- Refueling of machinery should occur >30 m from surface water features;
- Maintaining overland sheet flow and avoiding concentrated flows;
- Storing/stockpiling materials >30 m away from the wetland and other surface water features;
- Fencing stockpiled material (<150 mm gravel) during the turtle nesting period (late May to early July) (MNRF, 2015c);
- Regularly inspecting the Site for signs of sedimentation during all phases of work and taking corrective action if required;
- Developing a response plan to be implemented immediately in the event of a spill of a deleterious substance;
- Keeping an emergency spill kit on the Site;
- Stopping work and containing deleterious substances to prevent dispersal; and,
- Reporting any spills of sewage, oil, fuel, or other deleterious material whether near or directly into a surface water feature.

## 7.2 Vegetation/Trees

No rare or unique vegetation communities or at-risk vegetation species were observed on the Site. Some tree clearing, however, is anticipated to be required to support future residential development of the severed parcels. To limit impacts to area trees under future site development:

- Tree removal for site development will only occur within the DEs (and/or for a single driveway per lot) and will be limited to that which is necessary to accommodate construction. The total area of tree clearing will not exceed 0.4 ha.

- To minimize impacts to retained trees during development:

    - Erect a fence beyond the critical root zone (CRZ; i.e., 10x the diameter at breast height) of trees. The fence should be highly visible (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 trees;

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

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

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

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

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

## 7.3 Species at Risk

Seven SAR ranked as Threatened or Endangered under the ESA have a moderate to high potential to interact with future development on the Site (i.e., could be present during development), based on previous observation records and the presence of potentially suitable habitat. The purpose of the site visit was to confirm the presence of potential habitat for SAR.

Additional mitigation SAR-specific mitigation measures are provided as required below.

### 7.3.1 Eastern Whip-poor-will

Eastern Whip-poor-will may use the forested areas on the Site as nesting habitat. To prevent potential impacts to Eastern Whip-poor-will under future site developments, no clearing of trees should take place between May 15 and September 15 (i.e., open work timing window from September 16 to May 14, inclusive), the total area to be cleared will not exceed 0.4 ha, and clearing will not occur outside of the development envelopes. Moreover, prior to the commencement of future site construction, the property owner will consult with MECP prior to the submission of a building permit request to determine whether targeted Whip-poor-will surveys will be required before the issuance of a building permit. If the MECP

identifies a need for Whip-poor-will surveys at that time and Whip-poor-will are found to occur on the Site, the property owner would be required to obtain a "Net Benefit" permit for the species and comply with all permit stipulations in order to commence site development.

### 7.3.2 Bats

Eastern Small-footed Myotis, Little Brown Myotis, Northern Myotis and Tri-coloured Bat may forage in open areas and roost in trees on-site or on buildings on adjacent properties. Listed bat species in the area receive "general habitat protection" under the ESA. While the relatively young forest cover across the severance could support bat species, it does not appear to provide unique or especially high quality as habitat in the context of the broader area. As such, SAR bat occurrences would likely be transient in nature, and the presence of single residential units, within a forested context and separated from adjacent neighbours by >50 m, would not be anticipated to reduce the general habitat suitability of the broader area or to disturb individual bats. To prevent direct harm to individual bats, no clearing of site trees should take place between May 1 and September 30 (inclusive; (MNRF, 2015a)). If tree clearing is conducted between October and March, no interactions with bats are anticipated, with no significant negative impacts to SAR bats.

### 7.3.3 Blanding's Turtles

Blanding's Turtles are semi-aquatic as they utilize both aquatic and terrestrial habitats. They breed and overwinter in wetlands (e.g., marshes, swamps, bogs, fens), slow-flowing rivers, and lakes with shallow water, soft substrates, and abundant vegetation. They nest in open areas and use vernal pools as staging areas during the nesting season (ECCC, 2018).

Blanding's Turtle nests, overwintering sites, and the surrounding 30 m are protected as sensitive Category 1 habitat under the ESA (MECP, 2021d). Waterbodies and wetlands that extend up to 2 km from a Blanding's Turtle occurrence and the 30 m around those waterbodies are protected as Category 2 habitat. Category 2 habitat is important for a range of life processes including feeding, mating, thermoregulation, movement, and protection from predators (MECP, 2021d). Lastly, the area between 30 m and 250 m around Category 2 habitat is considered Category 3 habitat, which is protected for usage as a movement corridor (MECP, 2021d). Since the future residential development area following a severance would be located more than 30 m from the watercourse on the Site, and is currently forested (i.e. is not generally suitable for nesting), the project is not expected to impact potential Category 1 or 2 habitats. A small forest clearing associated with the future construction of two single residences, would not be expected to impeded turtle movements between wetland areas, and thus would not represent a negative impact on Category 3 habitat.

The potential for impacts to Blanding's Turtles directly can be minimized or eliminated by implementing the following mitigation measures:

- If the proponent conducts excavation work during the turtle active season (April through October; MNRF, 2015c), temporary exclusion fence (e.g., silt fence) is to be installed prior to the turtle active season and should follow recommendations in Reptile and Amphibian Exclusion Fencing: Best Practices (MNR, 2013). Temporary exclusion measures should be inspected and repaired when necessary.

- If a turtle is encountered, the MECP should be contacted for advice. If a turtle is in immediate harm's way, it should be safely and humanely relocated to appropriate habitat. Encounters with Threatened and Endangered species should be reported to the MECP within 24 hrs.

- Consult with the MECP to ensure their satisfaction with these proposed mitigation measures.

### 7.3.4 Black Ash

Black Ash is a predominantly wetland species that occurs in swamps, floodplains, and fens (COSEWIC, 2018b). Black Ash was listed as Endangered under the ESA on January 26, 2022; subsequently, however, the Minister of MECP ordered by regulation O.Reg. 23/22 that ESA protections for Black Ash be temporarily suspended for a two-year period following its listing (Government of Ontario, 2022a). The regulation allows activities that impact Black Ash and its habitat to proceed without the requirement for an ESA authorization or exemption during the two-year period (until January 26, 2024). A recovery strategy and associated policy will be developed during this time.

No Black Ash were observed within the DEs. With the species absent from the area, no negative impacts are possible. Future tree clearing for site development, however, must recognize the possibility of new Black Ash growth in the area and should confirm the species' absence prior to commencing clearing works. If the species is found to be present, the project proponent would be required to consult with the MECP as to the appropriate steps to follow at that time.

### 7.3.5 Butternut

As an Endangered Species, both individual Butternut trees and their habitats are protected. If detected, a Butternut Health Assessment (BHA) is required to assess the health of the tree and explore implications for development in the area. The site visit conducted by KAL on May 12, 2023 included a search for Butternut trees, and none were observed within the DEs. With the species absent from the area, no negative impacts are possible. Future tree clearing for site development, however, must recognize the possibility of new Butternut growth in the area and should confirm the species' absence prior to commencing clearing works. If the species is found to be present, the project proponent would be required to consult with the MECP as to the appropriate steps to follow at that time.

## 7.4 Significant Natural Heritage Features Mitigation Measures

Forest cover on the Site is contiguous with a broader forested area covering 185 ha. Per the guidelines provided in the Natural Heritage Reference Manual (MNRF, 2010), forested areas of this size (i.e. > 50 ha) constitute Significant Woodland. Clearing of both DEs to the fullest permissible extent for future development would lead to a maximum loss of 0.8 ha (0.4% reduction).

Apart from size, the determination of woodland significance for the woodland was also based on the potential of the feature to serve as a movement corridor (i.e. linkage) between other habitat areas and for its protection of surface water features. The DEs limit future site development to near Birchgrove Road in line with other residences along that road and within the are of forest that was significantly disturbed by the 2022 derecho event. The DEs ensure the retention of a minimum 900 m width of forest space behind them. General guidance for minimum wooded corridor width is 50 to 100 m (Environment Canada,

2013). As such, the future presence of two future residences along the northwest edge of the Significant Woodland, as would be made allowable under the severance, is not anticipated to significantly reduce the linkage functionality of the broader woodland.

## 7.5 General Wildlife Habitat Mitigation Measures

The following mitigation measures shall be implemented during future construction to generally protect wildlife and potential Significant Wildlife Habitat areas:

- Areas shall not be altered or cleared during sensitive times of year for wildlife (breeding season; early spring to early summer) unless mitigation measures are implemented and/or the habitat has been inspected by a qualified Biologist.
    - The MBCA protects the nests and young of migratory breeding birds in Canada. The timing of nesting for birds in the area spans April 15 to August 30 (Government of Canada, 2018);
    - The breeding and roosting period for bats is recognized as May 1 to September 30 (MNRF, 2015b); and,
    - **Considering MBCA guidelines, and the potential presence of SAR birds and bats, the total, combined season through which tree clearing is not to be conducted is from April 1 to September 30 of any given year.**
- Install sediment control fence around construction sites and inspect/maintain it periodically and after each rain event to ensure its integrity and continued function.
- Check the entire work site for wildlife prior to beginning work each day.
- Do not harm, feed, or unnecessarily harass wildlife.
- Manage waste to prevent attracting wildlife to the work site. Effective mitigation measures include litter prevention and keeping all trash secured in wildlife-proof containers and promptly removing it from the work site, especially during warm weather.
- Drive slowly and avoid hitting wildlife.

# 8.0 CONCLUSION

This EIS provides recommended mitigation measures for implementation in the design and construction of the proposed development. The assessment of the potential for impacts to the natural heritage system is based on the implementation of mitigation measures. It is our professional opinion that we do not expect the severance and potential future development on the severed parcel to negatively impact existing natural features or ecological functions if the recommended mitigation measures provided in this report are implemented.

# 9.0 CLOSURE

This report was prepared for exclusive use by Mr. Richard Tremblay and may be distributed only by Mr. Richard Tremblay. Questions relating to the data and interpretation can be addressed to the undersigned.

Respectfully submitted,

**KILGOUR & ASSOCIATES LTD.**

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# 10.0 LITERATURE CITED

Chapman, J., L., & Putnam, D., F. (1984). *The Physiography of Southern Ontario* (3rd ed.). Ontario Ministry of Natural Resources.

City of Ottawa. (2023). *GeoOttawa*. https://maps.ottawa.ca/geoottawa/

Environment Canada. (2013). *How Much Habitat is Enough? Third Edition*. https://publications.gc.ca/collections/collection_2013/ec/CW66-164-2013-eng.pdf

Government of Canada. (2018). *Nesting periods for Ottawa region*. https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods/nesting-periods.html

MECP. (2019). *Client's Guide to Preliminary Screening for Species at Risk. Draft – May 2019* (Species at Risk Branch, Permission and Compliance, p. 9). Ministry of Environment, Conservation and Parks. https://www.lambtonshores.ca/en/invest-and-build/resources/Documents/Building-and-Renovating/Client-Guide-to-Preliminary-Screening-May-2019.pdf

MNR. (2010). *Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005. Second Edition*. Ministry of Natural Resources. https://docs.ontario.ca/documents/3270/natural-heritage-reference-manual-for-natural.pdf

MNRF. (2015a). *Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E* (OMNRF Regional Operations Division: Southern Region Resources Section, p. 39). Ministry of Natural Resources and Forestry. https://dr6j45jk9xcmk.cloudfront.net/documents/4775/schedule-6e-jan-2015-access-ver-final-s.pdf

MNRF. (2015b). *Technical Note: Species at Risk (SAR) Bats* (OMNRF Regional Operations Division, p. 37). Ministry of Natural Resources and Forestry.

Schut, L. W., & Wilson, E. A. (1987). *The Soils of the Regional Municipality of Ottawa-Carleton (Excluding the Ottawa Urban Fringe)—Volume 1 and 2*.

https://sis.agr.gc.ca/cansis/publications/surveys/on/on58/index.html

# Appendix A Qualifications of Report Authors

**Anthony Francis, PhD**

Dr. Francis is a Senior Ecologist with 24 years' consulting experience to both government agencies and private industry. He has worked on a diversity of projects relating to species at risk, invasive species, terrestrial and aquatic habitat, environmental effects monitoring and mitigation, and fate/effects of contaminants. Within each of these subject areas, Dr. Francis has completed projects addressing specific site concerns and broader policy initiatives. He has extensive experience in preparing Environmental Impact Statements, Integrated Environmental Reviews and Tree Conservation Reports in support of land development and property severances. He has carried out literature reviews for government agencies, performed complex geospatial analyses of plant and animal distributions, and completed numerous field programs in support of environmental impact statements and assessments.

**Nicholas Moore, BSc**

Nick is a Field Ecologist with a background in Aquatic Biology. He graduated from Sir Sandford Fleming in 2018 with two Technical Diplomas for Environmental Technician and Environmental Technologist, as well as completing his Bachelor of Science with Honors in Biology and Environmental and Resource Studies at Trent University. He has worked with Kilgour & Associates Ltd. for two years. With us, he has been involved in dozens of land-development projects where he has written several Environmental Impact Studies and has used his academic training to characterize the flora and fauna of natural environments. Nick is a certified wetland evaluator under Ontario's Wetland Evaluation System (OWES) process.

**Kurtis Westbury, MSc**

Kurtis is a Biologist with formal training in aquatic ecology. He completed his Master of Science degree at Queens in Kingston, where he studied the respiratory physiology of water fleas. Kurtis joined Kilgour & Associates Ltd. in 2022. As a member of our team, he has completed dozens of ecological inventories of amphibians, turtles, birds and trees in support of environmental impact statements for property developments. Kurtis has carried out numerous erosion and sediment control inspections. He has led water quality sampling programs and analyzed water quality data sets.

# Appendix B Results from Initial SAR Screening

| Species Name (*Scientific name*) | Information Source | Prov. Status | Fed. Status |
|---|---|---|---|
| **Birds** | | | |
| Bald Eagle (*Haliaeetus leucocephalus*) | California Academy of Sciences and National Geographic Society (2023), Cornell Lab of Ornithology (2023) | SC | - |
| Bank Swallow (*Riparia riparia*) | Birds Canada et al. (2009), California Academy of Sciences and National Geographic Society (2023), Cornell Lab of Ornithology (2023) | THR | THR |
| Barn Swallow (*Hirundo rustica*) | Birds Canada et al. (2009), California Academy of Sciences and National Geographic Society (2023), Cornell Lab of Ornithology (2023) | SC | THR |
| Bobolink (*Dolichonyx oryzivorus*) | Birds Canada et al. (2009), California Academy of Sciences and National Geographic Society (2023), Cornell Lab of Ornithology (2023), MNRF (2023a), MNRF (2023b) | THR | THR |
| Canada Warbler (*Cardellina canadensis*) | Birds Canada et al. (2009), Cornell Lab of Ornithology (2023) | SC | THR |
| Chimney Swift (*Chaetura pelagica*) | Birds Canada et al. (2009), Cornell Lab of Ornithology (2023) | THR | THR |
| Common Nighthawk (*Chordeiles minor*) | California Academy of Sciences and National Geographic Society (2023), Cornell Lab of Ornithology (2023) | SC | THR |
| Eastern Meadowlark (*Sturnella magna*) | Birds Canada et al. (2009), California Academy of Sciences and National Geographic Society (2023), Cornell Lab of Ornithology (2023), MNRF (2023a), MNRF (2023b) | THR | THR |
| Eastern Whip-poor-will (*Antrostomus vociferus*) | Cornell Lab of Ornithology (2023), MNRF (2023a), MNRF (2023b) | THR | THR |
| Eastern Wood-Pewee (*Contopus virens*) | Birds Canada et al. (2009), Cornell Lab of Ornithology (2023), MNRF (2023a) | SC | SC |
| Evening Grosbeak (*Coccothraustes vespertinus*) | Birds Canada et al. (2009), California Academy of Sciences and National Geographic Society (2023), Cornell Lab of Ornithology (2023), MNRF (2023a) | SC | SC |
| Lesser Yellowlegs (*Tringa flavipes*) | Cornell Lab of Ornithology (2023) | SC | - |
| Peregrine Falcon (*Falco peregrinus*) | Cornell Lab of Ornithology (2023) | SC | SC |
| Rusty Blackbird (*Euphagus carolinus*) | Cornell Lab of Ornithology (2023) | SC | SC |
| Wood Thrush (*Hylocichla mustelina*) | Birds Canada et al. (2009), Cornell Lab of Ornithology (2023), MNRF (2023a), MNRF (2023b) | SC | THR |
| **Mammals** | | | |
| Eastern Small-footed Myotis (*Myotis leibii*) | Humphrey (2017) | END | - |
| Little Brown Myotis (*Myotis lucifugus*) | Humphrey and Fotherby (2019) | END | END |
| Northern Myotis (*Myotis septentrionalis)* | Humphrey and Fotherby (2019) | END | END |
| Tri-colored Bat (*Perimyotis subflavus*) | Humphrey and Fotherby (2019) | END | END |
| **Reptiles** | | | |
| Blanding's Turtle (*Emydoidea blandingii*) | MNRF (2023a), MNRF (2023b) | THR | END |
| Eastern Milksnake (*Lampropeltis triangulum*) | Ontario Nature (2019) | - | SC |

| | | | |
|---|---|---|---|
| Midland Painted Turtle (*Chrysemys picta marginata*) | MNRF (2023a), MNRF (2023b), Ontario Nature (2019) | - | SC |
| Northern Map Turtle (*Graptemys geographica*) | MNRF (2023b) | SC | SC |
| Snapping Turtle (*Chelydra serpentina*) | MNRF (2023a), MNRF (2023b), Ontario Nature (2019) | SC | SC |
| **Arthropods** | | | |
| Monarch (*Danaus plexippus*) | California Academy of Sciences and National Geographic Society (2023), Toronto Entomologists' Association (2023) | SC | SC |
| **Vascular Plants** | | | |
| Black Ash (*Fraxinus nigra*) | California Academy of Sciences and National Geographic Society (2023), MNRF (2023b) | END | - |
| Butternut (*Juglans cinerea*) | California Academy of Sciences and National Geographic Society (2023), MNRF (2023a), MNRF (2023b) | END | END |

# Appendix C SAR Potential to Interact with Development Assessment

| Species Name (*Taxonomic Name*) | Status under *Endangered Species Act* (ESA) | Status under Schedule 1 of the *Species at Risk Act* (SARA) | General Habitat Requirements | Site Suitability | Potential for Protected Elements[1] | | Potential for Negative Interactions with Protected Elements[2] |
|---|---|---|---|---|---|---|---|
| | | | | | Habitat | Individuals | |
| **Birds** | | | | | | | |
| Bald Eagle (*Haliaeetus leucocephalus*) | **Special Concern** | **Not at Risk** | Nest in mature forests near open water. In large trees such as pine and poplar. | The Site does not include suitable feeding areas | Negligible | Negligible | Negligible |
| Bank Swallow (*Riparia riparia*) | **Threatened** | **Threatened** | Colonial nester; burrows in eroding silt or sand banks, sand pit walls, and human-made sand piles. Often found on banks of rivers and lakes. | The level Site lacks banks to support nesting or open areas as feeding habitat | Negligible | Negligible | Negligible |
| Barn Swallow (*Hirundo rustica*) | **Special Concern** | **Threatened** | Nests on barns and other structures. Forages in open areas for flying insects. Lives in close association with humans and prefers to nest on structures such as open barns, under bridges, and in culverts. | The Site does not contain suitable feeding habitat to support the species | Negligible | Negligible | Negligible |
| Bobolink (*Dolichonyx oryzivorus*) | **Threatened** | **Threatened** | Breeds in hayfields, pastures, agricultural fields, and abandoned fields with tall grass that are ≥5 ha, and preferably >30 ha. | The Site does not contain suitable open habitat | Negligible | Negligible | Negligible |
| Canada Warbler (*Cardellina canadensis*) | **Special Concern** | **Threatened** | Prefers moist forests with dense shrub layers. Nests located on or near the ground on mossy logs or roots, along stream banks or on hummocks. Area-sensitive species that usually require a minimum of 30 ha of continuous forest for breeding habitat (OMNR, 2000). | The portions of the broader site likely provide suitable habitat but both the canopy and understory within the Study area itself are currently too open (following the derecho) to be optimal | Low | Moderate | Moderate |
| Chimney Swift (*Chaetura pelagica*) | **Threatened** | **Threatened** | Nests in traditional-style open brick chimneys (and rarely in hollow trees). Tends to stay close to water. | The Site mostly does not contain suitable habitat. Hollow trees on the Site could potentially provide habitat. | Low | Low | Low |
| Common Nighthawk (*Chordeiles minor*) | **Special Concern** | **Threatened** | Nests in a wide variety of open sites, including beaches, fields, and gravel rooftops with little to no ground vegetation. They also nest in cultivated fields, orchards, urban parks, mine tailings and along gravel roads/railways but tend to occupy more natural sites. | The study area is too forested to be considered useful habitat | Low | Low | Low |

| Species Name (*Taxonomic Name*) | Status under *Endangered Species Act* (ESA) | Status under Schedule 1 of the *Species at Risk Act* (SARA) | General Habitat Requirements | Site Suitability | Potential for Protected Elements[1] | | Potential for Negative Interactions with Protected Elements[2] |
|---|---|---|---|---|---|---|---|
| | | | | | Habitat | Individuals | |
| Eastern Meadowlark (*Sturnella magna*) | **Threatened** | **Threatened** | Breeds in hayfields, pastures, agricultural fields, and abandoned fields with tall grass that are ≥5 ha, and preferably >30 ha. | The Site does not contain suitable habitat. | Negligible | Negligible | Negligible |
| Eastern Whip-poor-will (*Antrostomus vociferus*) | **Threatened** | **Threatened** | Suitable breeding habitats generally include open and half treed areas and often exhibit a scattered distribution of treed and open space. Lays eggs directly on the forest floor. Roosts are typically located in forest habitat on a low branch or directly on the ground. Home range size varies from 20 to 500 ha (mean 136 ha) (ECCC, 2018a). | Most of the site provides suitable habitat and there are multiple records of the species the vicinity. | High | Moderate | High |
| Eastern Wood-Pewee (*Contopus virens*) | **Special Concern** | **Special Concern** | Woodland species often found in the mid-canopy layer near clearings and edges of intermediate age and mature deciduous and mixed forests with little understory. | The mature deciduous forest on the Site may provide suitable habitat. | High | High | High |
| Evening Grosbeak (*Coccothraustes vespertinus*) | **Special Concern** | **Special Concern** | Nests in trees or large shrubs. Prefers mature coniferous forests (fir and/or spruce dominated), but will also use deciduous forests, parklands, and orchards. Its abundance is strongly linked to the cycle of Spruce Budworm. | Coniferous forest areas lack preferred conifer species. | Low | Low | Low |
| Lesser Yellowlegs (*Tringa flavipes*) | **Threatened** | **No Status** | Breeds in boreal wetlands. Nests on dry ground or forest openings near peatlands, marshes, and ponds in the boreal forest and taiga (Government of Canada, 2021). Migrant only; nests in far north. | The Site does not contain suitable habitat. | Negligible | Negligible | Negligible |
| Peregrine Falcon (*Falco peregrinus*) | **Special Concern** | **Special Concern** | Nests on tall, steep cliff ledges close to large bodies of water. Urban peregrines raise their young on ledges of tall buildings, even in busy downtown areas. | The Site does not contain suitable habitat. | Negligible | Negligible | Negligible |
| Rusty Blackbird (*Euphagus carolinus*) | **Special Concern** | **Special Concern** | Prefers wet wooded or shrubby areas. Nests at edges of boreal wetlands and coniferous forests. These areas include bogs, marshes, and beaver ponds. | The wooded area near the watercourse could provide suitable habitat. | Moderate | Moderate | Moderate |
| Wood Thrush (*Hylocichla mustelina*) | **Special Concern** | **Threatened** | Lives in mature deciduous and mixed forests. They seek moist stands of trees with well-developed undergrowth | The mature deciduous forest on the Site has some suitability as habitat but lacks preferred tree species | Moderate | Moderate | Moderate |

| Species Name (*Taxonomic Name*) | Status under *Endangered Species Act* (ESA) | Status under Schedule 1 of the *Species at Risk Act* (SARA) | General Habitat Requirements | Site Suitability | Potential for Protected Elements[1] | | Potential for Negative Interactions with Protected Elements[2] |
|---|---|---|---|---|---|---|---|
| | | | | | Habitat | Individuals | |
| | | | and tall trees for singing and perching. Prefers nesting in large forest mosaics, but will also use fragmented forests. Usually build nests in Sugar Maple or American Beech. | | | | |
| **Mammals** | | | | | | | |
| Eastern Small-footed Myotis (*Myotis leibii*) | **Endangered** | **Not Listed** | In the spring and summer, Eastern Small-footed Myotis will roost in a variety of habitats, including in or under rocks, in rock outcrops, in buildings, under bridges, or in caves, mines, or hollow trees. Overwinters in caves and abandoned mines. | Forested area could provide suitable habitat. | Moderate | Moderate | Moderate |
| Little Brown Myotis (*Myotis lucifugus*) | **Endangered** | **Endangered** | During the day they roost in trees and buildings. They often select attics, abandoned buildings, and barns for summer colonies where they can raise their young. They can squeeze through very tiny spaces (as small as six millimetres across) allowing them access to many different roosting areas. | Forested area could provide suitable habitat. | Moderate | Moderate | Moderate |
| Northern Myotis / Northern Long-eared Bat (*Myotis septentrionalis*) | **Endangered** | **Endangered** | Associated with deciduous and mixed forests, choosing to roost under loose bark and in the cavities of trees. They forage along and within forests as well as in hayfields and pastures adjacent to mixed forests. | Forested area could provide suitable habitat. | Moderate | Moderate | Moderate |
| Tri-colored Bat / Eastern Pipistrelle (*Perimyotis subflavus*) | **Endangered** | **Endangered** | Roosts mainly in trees during summer; overwinters in caves and mines along with other species, but often uses deeper parts of the hibernaculum. Foraging occurs in forested riparian areas, over water, and within gaps in forest canopies. | Forested area could provide suitable habitat. | Moderate | Moderate | Moderate |
| **Reptiles** | | | | | | | |
| Blanding's Turtle (*Emydoidea blandingii*) | **Threatened** | **Endangered** | Quiet lakes, streams, and wetlands with abundant emergent vegetation. Also frequently occurs in adjacent upland forests. | With existing forest cover, the Site would not be sunny enough to support nesting, The watercourse on the other side of Birchgrove Road, however, appears to be suitable as general summer habitat (but the headwater drainage feature does not). With occurrence records within 2 km of the Site, Category 2 habitat would extend 30 m from this feature, which would not include the | High | Moderate | A single future residential development, located at the edge of a habitat zone with limited potential to support turtle transit, an situated between other existing residential developments, would not be anticipated to interfere with turtle movement. The potential for negative interactions is considered: |

| Species Name (*Taxonomic Name*) | Status under *Endangered Species Act* (ESA) | Status under Schedule 1 of the *Species at Risk Act* (SARA) | General Habitat Requirements | Site Suitability | Potential for Protected Elements[1] | | Potential for Negative Interactions with Protected Elements[2] |
|---|---|---|---|---|---|---|---|
| | | | | | Habitat | Individuals | |
| | | | | Study Area. Category 3 habitat (250 m from the main category would just reach the edge of the Study area. | | | Moderate |
| Eastern Milksnake (*Lampropeltis triangulum*) | **Not Listed** | **Special Concern** | Found in a variety of open and edge habitats, including meadows, rocky outcrops, and forest edges. They can also inhabit forests. Further, they are often associated with human-made structures such as barns (Environment Canada, 2015b). | The mosaic of habitats (thicket, forest, watercourse) across the Site may provide suitable habitat to support all life stages. | Low | Moderate | None. Project not on Federal Land. |
| Midland Painted Turtle (*Chrysemys picta marginata*) | **Not Listed** | **Special Concern** | Inhabits waterbodies, such as ponds, marshes, lakes, and slow-moving creeks that have a soft bottom and provide abundant basking sites and aquatic vegetation. Often bask on shorelines or on logs and rocks that protrude from the water. | The watercourse that traverses the Site could provide suitable habitat. | Low | Moderate | None. Project not on Federal Land. |
| Northern Map Turtle (*Graptemys geographica*) | **Special Concern** | **Special Concern** | Lives in rivers and lakeshores where it basks on emergent rocks and fallen trees throughout the spring and summer. In winter, they hibernate on the bottom of deep, slow-moving sections of river. | The Site does not contain suitable habitat | Negligible | Negligible | Negligible |
| Snapping Turtle (*Chelydra serpentina*) | **Special Concern** | **Special Concern** | Spend most of their lives in the water. Prefer shallow waters so they can hide under the soft mud and leaf litter with only their noses exposed to the surface to breathe. | The watercourse that traverses the Site could provide suitable habitat. | Low | Low | Low |
| **Vascular Plants** | | | | | | | |
| American Chestnut (*Castanea dentata*) | **Endangered** | **Endangered** | Typical habitat is upland deciduous forests on sandy acidic soils. Occurs with Red Oak, Black Cherry, Sugar Maple, and beech. In Ontario, it is only found in the Carolinian Zone between Lake Erie and Lake Huron. | The Site does not contain suitable habitat. | Negligible | Negligible | Negligible |
| Black Ash (*Fraxinus nigra*) | **Endangered** | **No Status** | Predominantly a wetland species found in swamps, floodplains, and fens. | The Site could provide suitable habitat in the forested area. | Moderate | Low | Moderate |
| Butternut (*Juglans cinerea*) | **Endangered** | **Endangered** | Commonly found in riparian habitats but is also found on rich, moist, well-drained loams and well-drained gravels, especially those of limestone origin. | The Site could provide suitable habitat in the forested area. | Moderate | Low | Moderate |