# 355 FRANKTOWN

## Environmental Impact Study

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**Date:**
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## List of Acronyms and Definitions

ABBO - Atlas of Breeding Birds of Ontario
ANSI – Area of Natural and Scientific Interest
BHA - Butternut Health Assessments/Butternut Health Assessor
CC - Co-Efficient of Conservation
COSEWIC - Committee on the Status of Endangered Wildlife in Canada
DBH - Diameter at breast height
EIS – Environmental Impact Study
ELC - Ecological Land Classification
ESA - Endangered Species Act (Provincial)
FWCA – Fish and Wildlife Conservation Act
GPS – Global Positioning System
NAD 83: North American Datum 1983
UTM: Universal Transverse Mercator
LIO - Land Information Ontario
NHIC – Natural Heritage Information Centre
MBCA - Migratory Bird Convention Act (Federal)
MECP - Ministry of Environment, Conservation and Parks
MNRF - Ministry of Natural Resources and Forestry
MVCA – Mississippi Valley Conservation Authority
NHIC – Natural Heritage Information Centre
OMNR/MNRF - Ontario Ministry of Natural Resources (old name)
-Ministry of Natural Resources and Forestry (new name)
OP – Official Plan
OWES - Ontario Wetland Evaluation System
PSW - Provincially Significant Wetland
SAR - Species at Risk (in this report they refer to species that are provincially or federally listed as endangered or threatened and receive protection under ESA or SARA)
SARA - Species at Risk Act (Federal)
SARO - Species at Risk in Ontario

**SRANK DEFINITIONS**

S1 Critically Imperiled in the nation or state/province because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province.

S2 Imperiled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.

S3 Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.
S4 Apparently Secure; uncommon but not rare; some cause for long-term concern due to declines or other factors.
S5 Secure; Common, widespread, and abundant in the nation or state/province.
? Inexact Numeric Rank—Denotes inexact numeric rank
SNA Not Applicable, A conservation status rank is not applicable because the species is not a suitable target for conservation activities.
S#B Breeding
S#N Non-Breeding

**SARA STATUS DEFINITIONS**
END Endangered: a wildlife species facing imminent extirpation or extinction.
THR Threatened: a wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.
SC Special Concern, a wildlife species that may become threatened or endangered because of a combination of biological characteristics and identified threats.

**SARO STATUS DEFINITIONS**
END Endangered: A species facing imminent extinction or extirpation in Ontario which is a candidate for regulation under Ontario's ESA.
THR Threatened: A species that is at risk of becoming endangered in Ontario if limiting factors are not reversed.
SC Special concern: A species with characteristics that make it sensitive to human activities or natural events.

**Coefficient of Conservatism Ranking Criteria**
0 Obligate to ruderal areas.
1 Occurs more frequently in ruderal areas than natural areas.
2 Facultative to ruderal and natural areas.
3 Occurs less frequent in ruderal areas than natural areas.
4 Occurs much more frequently in natural areas than ruderal areas.
5 Obligate to natural areas (quality of area is low).
6 Weak affinity to high-quality natural areas.
7 Moderate affinity to high-quality natural areas.
8 High affinity to high-quality natural areas.
9 Very high affinity to high-quality natural areas.
10 Obligate to high-quality natural areas.

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# 1.0 INTRODUCTION

11309455 Canada Inc. is proposing to develop the land behind the existing commercial development at 355 Franktown Road, Carleton Place. It is their intent to construct two four story 48-units with underground parking and one 6-unit town house block. This residential development would be fully serviced. The lands to be developed are roughly 1.3 ha and form part of Lot 15, Concession 11 in the Municipality of Beckwith, within the Town of Carleton Place. They are bordered by commercial and residential lots to the southwest and south, forest habitat to the north, east and west, and recently cleared lands to the northeast.

The Official Plan (OP) of Carleton Place notes that there are no provincially significant natural features within the Town's boundaries (i.e. no provincially significant wetlands, or significant areas of natural and scientific interest). However, it identifies what is considered significant and these have been grouped into the Provincial Policy Statement (PPS) feature types below:

- Woodlands
    - Old growth woodlands
    - Hackberry stands
- Fish Habitat
    - Fish habitat
    - Riparian areas
- Endangered or Threatened Species and their habitats

The designation given to the woodland and fish habitat significant natural features in the OP is Natural Environment Districts (NED) on Schedule A. For their protection, the habitats of Endangered and threatened species are not shown on the schedules.

In Carleton Place, an Environmental Impact Study (EIS) is triggered when development is proposed within 50 m of a Natural Environment District, 30 m from fish habitat, or 120 m for endangered or threatened species[1]. The EIS is to evaluate the potential for negative impact to these features based on the principals of the Provincial Policy Statement (PPS) (see Section 5.0).

The following report provides a summary of the findings and an assessment of the functions and values of the natural features found within the site boundaries and its adjacent lands. It assesses the features to determine their significance following the applicable guidelines as referred to in the OP. The potential impacts to significant natural features are assessed and avoidance and mitigation measures provided.

[1] Note the distance between SAR habitat and the potential for development to impact the species is species specific and this report follows the provincial guidelines described further below.

Figure 1: General Location of Site

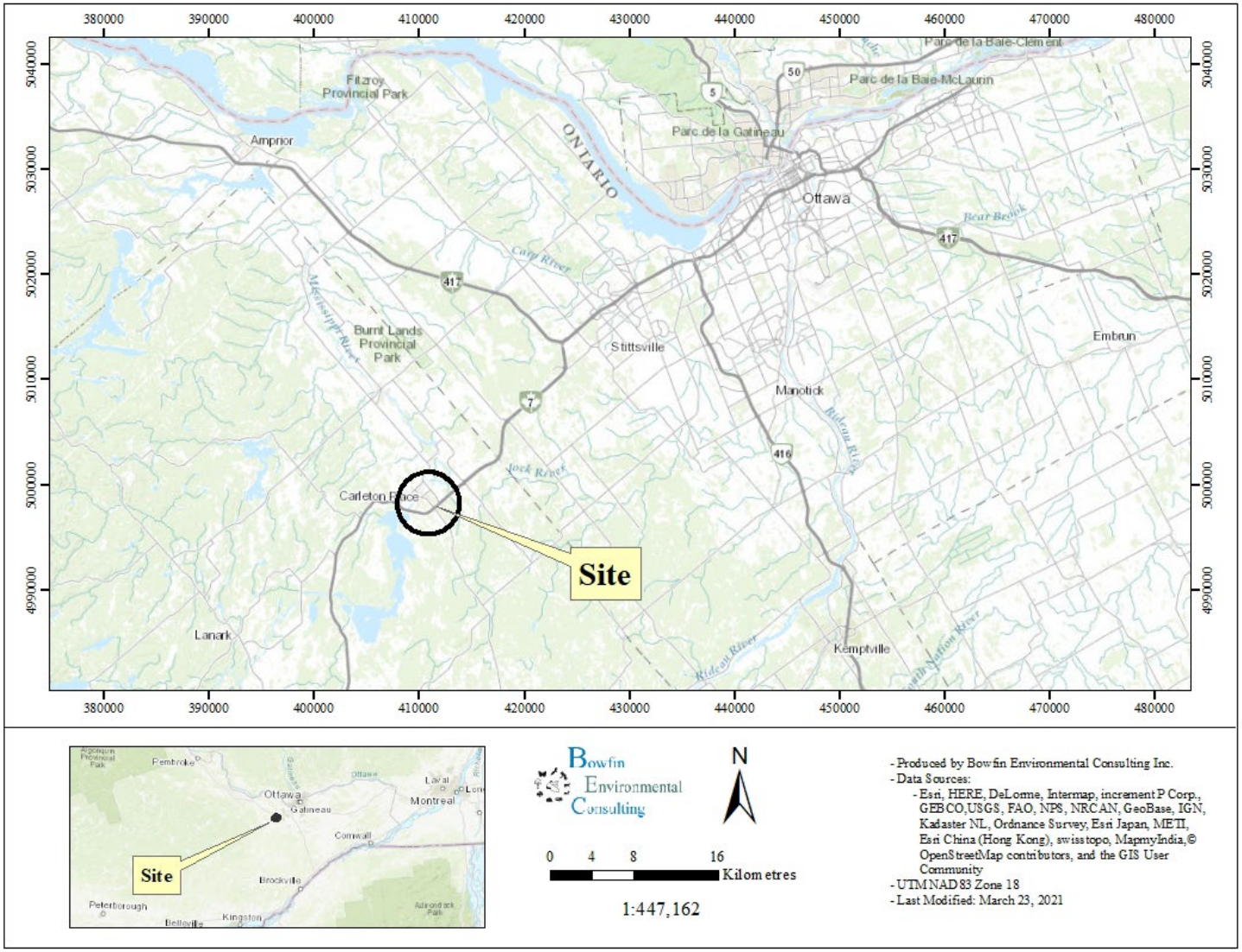
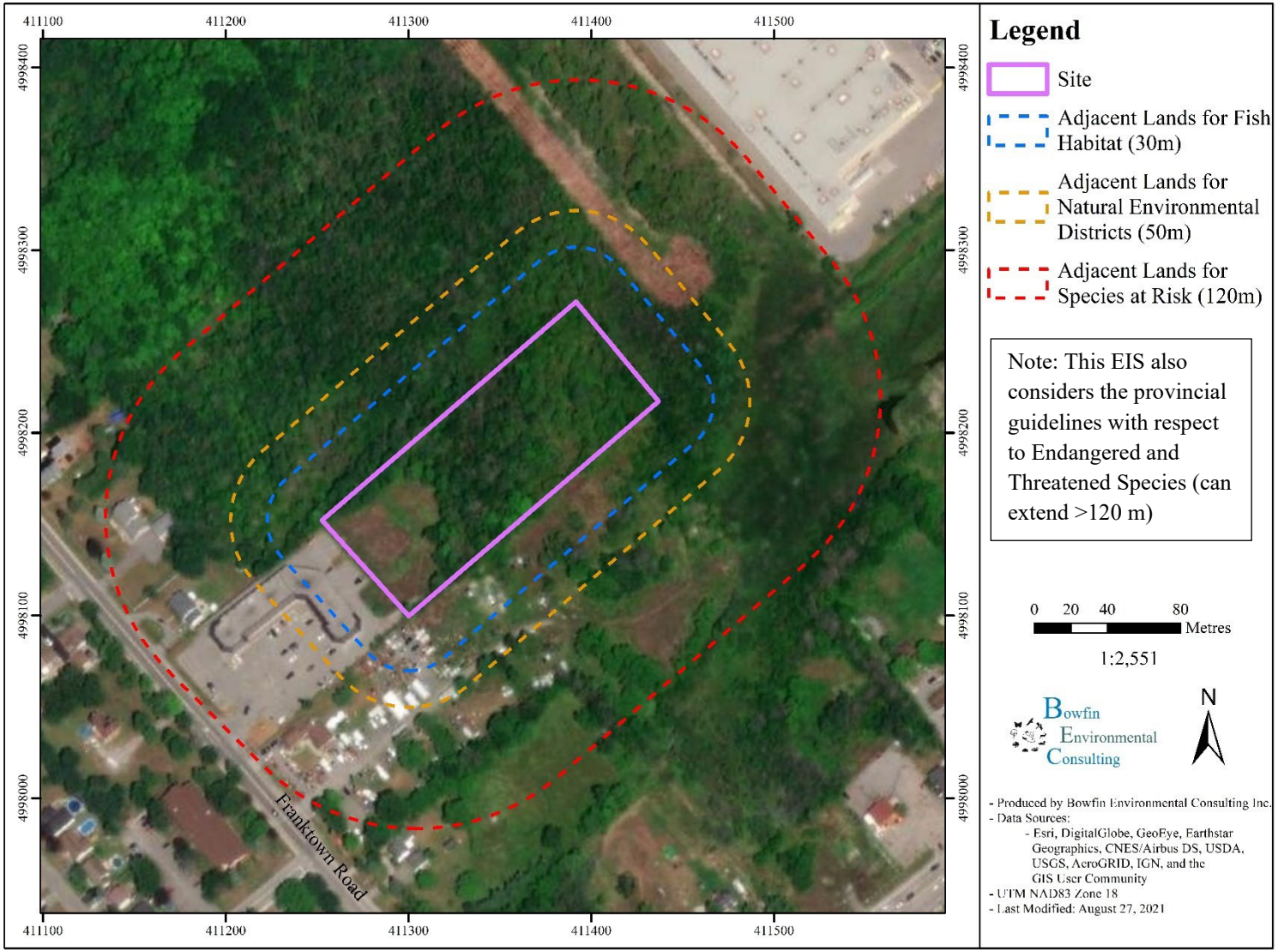


Figure 2: Site and the Adjacent Lands



# 2.0 METHODOLOGY

## 2.1 Study Area

For the most part, the OP calls for an evaluation of the areas to be impacted directly and the adjacent up to 50 m for Natural Environmental Districts. This is shortened to within 30 m of fish habitat and widened when analyzing the potential for species at risk (SAR). However, since the writing of this OP, there is more up to date guidance from the province with respect to endangered and threatened species and their protected habitats. This report follows the current guidance from the province.

## 2.2 Background Review

Where the OP indicated that the features to be considered were those identified on their schedules, these took precedent. Other information collected from outside sources was used to help inform the functions of these features and to identify those not found on the schedules (i.e. Endangered and Threatened species habitat). Outside sources included: Natural Heritage Information Centre (NHIC) database, iNaturalist, Atlas of Breeding Birds of Ontario (ABBO), Make-a-Map Land Information Ontario (LIO), and LIO databases. Information from personal knowledge has also been included as appropriate. The desktop review included a larger area (~5 km).

## 2.3 Field Studies

### 2.3.1 Habitat Descriptions and Flora Observations

Habitat mapping was completed through the use of satellite imaging and ground truthed during the field visits. The field studies were completed by systematically cruising the study area. Specific habitat types within the study area, identified during the preliminary mapping exercise were also targeted for community description. Habitat descriptions were based on the appropriate methodologies such as: *Ontario Wetland Evaluation System, Southern Manual* (OWES) for wetland habitats and the *Ecological Land Classification for Southern Ontario* (ELC) for terrestrial habitats. The MNRF's ELC and OWES definition of wetlands do not match one another. Since wetlands are to be evaluated following OWES, the determination of the presence/absence of wetland habitat was based on the OWES definition of wetland habitat:

> *"Lands that are seasonally or permanently flooded by shallow water as well as lands where the water table is close to the surface; in either case the presence of abundant water has caused the formation of hydric soils and has favored the dominance of either hydrophytic or water tolerant plants".*

Specific attention was paid to locating species at risk (SAR) or species of conservation value listed as potentially occurring within the study area. If these species were observed, they would be photographed, and their coordinates recorded on a hand-held GPS using NAD83. Plants that could not be identified in the field were collected for a more detailed examination in the laboratory. Nomenclature used in this report follows the Southern Ontario Plant List (Bradley, 2007) for both common and scientific names which are based on Newmaster *et al.* (1998). Authorities for scientific names are given in Newmaster *et al.* (1998).

### 2.3.2 Butternut Inventory

Butternuts are an endangered species. The search followed the provincial guidelines for Butternut Health Assessments. It included the entire original site and the adjacent 50 m around the site (where access was possible). Any individuals noted would be marked with white spray paint and/or white flagging tape and numbered sequentially. Their UTMs, using a GPS unit set at NAD83, would be recorded. When butternuts are located, they are assessed by a certified Butternut Health Assessor.

### 2.3.3 Bird Surveys

Information on bird use of the area was collected through a raptor nest survey, daytime breeding bird surveys and nighttime surveys for eastern whip-poor-will. The raptor nest survey consisted of looking for evidence of nesting (such as stick nests, food caches, whitewashing of branches and foliage, accumulation of feathers/fur or prey remains on the ground or in shrubs as per the *Significant Wildlife Habitat Technical Guide* (SWHTG) Appendix O) as well as the raptors themselves.

The general daytime breeding bird surveys methods were as follows:

- Two visits were completed for the forest and swamp habitats and these two visits were a minimum of 15 days apart.
- Surveys began no earlier than 30 minutes after dawn and completed by midday.
- Visits were conducted on days with no rain, little to no wind and good visibility.
- The survey type was point counts.
    - Consisted of 5-min point count stations spaced 300 m apart (or as near as 100 m if needed to obtain information from all habitat types)
    - Point counts consisted of listening and observing over the specified time period and recording the number of birds heard/seen, their sex, location, behavior and interactions with others; and
    - While walking between points, any additional observations were recorded.
- Birds were identified by sound and/or sight.

Nighttime surveys were completed as per the province's guidelines. These methods consist of:

- Three surveys completed at least 1 week apart between May 18th and June 30th and on nights with appropriate conditions [over 10°C, calm winds (less than 3 on the Beaufort Scale), 50% or more visible moon face illuminated & moon over the horizon].
- Began at least 30 minutes after sunset and no later than 15 minutes before sunrise.
- Completed when the moon is above the horizon.
- Point observations consisted of a minimum of 6 minutes/station spaced approx. 500 m apart.

Survey point locations are depicted on Figure 3 and Figure 4.

#### 2.3.4 Incidental Fauna Observations

During all visits, any wildlife observations were recorded. Incidental observations included observations of an individual, its tracks, burrows, feces and/or kill sights.

Figure 3: Breeding Bird Survey Points

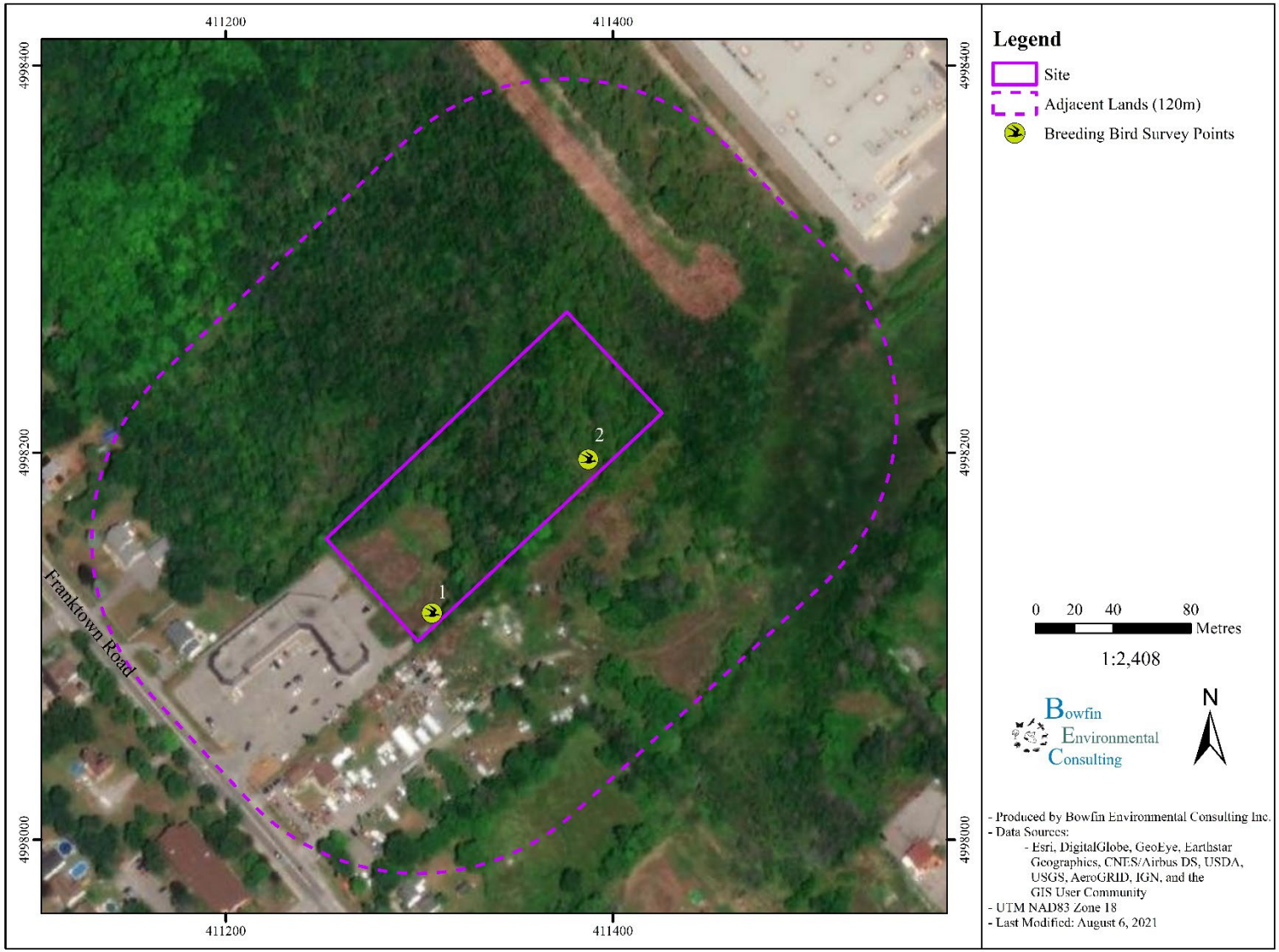
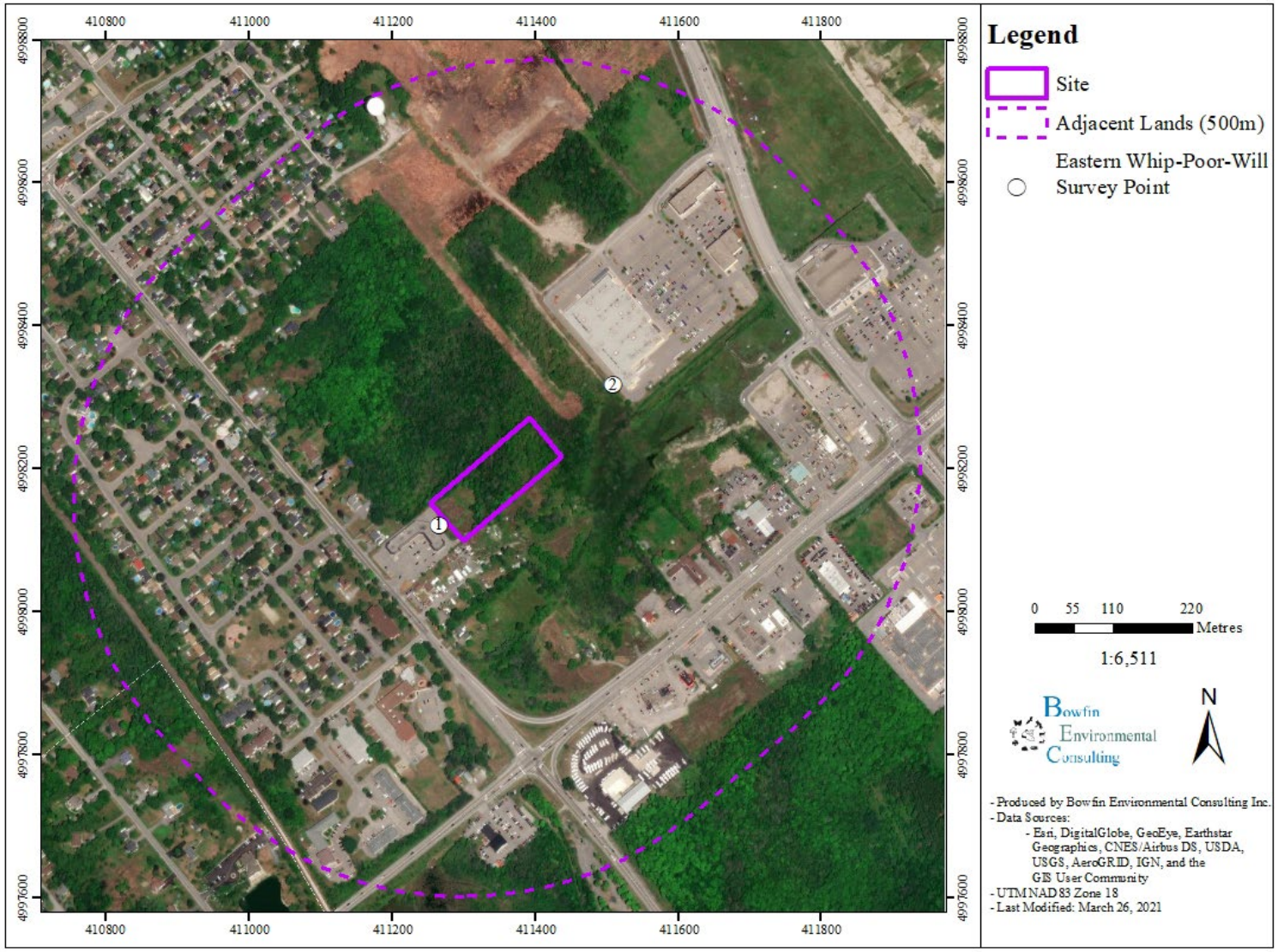


Figure 4: Eastern Whip-Poor-Will Survey Points



# 3.0 BACKGROUND INFORMATION

## 3.1 Location

This project includes ±1.3 ha and is situated in part of Lot 15, Concession 11 in the Municipality of Beckwith, Town of Carleton Place (UTM 18T 411332m E; 4998094m N, Lat 45.130753 Long -76.127578). These lands are bordered by commercial and residential lots to the southwest and south, forest habitat to the north, east and west, and recently cleared habitat to the northeast. The clearing of the habitat to the northeast is very new and not seen on the available satellite imagery for the Site.

## 3.2 Natural Heritage Features

The schedules associated with the Carleton Place official plan do not identify the any natural environment districts in or within 50 m of the site or any fish habitat in or within 30 m of the site. Further afield, both schedules identify the nearest Natural Environment Districts as being over 1 km from the Site (1.7 km north, 1.5 km northwest and 1.9 km southwest) and the Mississippi River (1.7 km west).

Table 1: Summary of Available Background Information on the Identified Natural Features (PSW, Woodlands, Valleylands, ANSIs, ESA, SWH, and Fish Habitat)

| Natural Heritage Feature | Present within Site | Present within 120 m of Site | Additional Notes |
|---|---|---|---|
| Provincially Significant Wetlands (PSW) | No, these are not present within the Town's boundary. | | None |
| Areas of Natural and Scientific Interest (ANSIs) | No, these are not present within the Town's boundary. | | None |
| Habitats or species designated by ESA (Provincial) | Potential for endangered or threatened species needs to be determined following assessment of the suitable habitats in or near the site. Preliminary review of the satellite images suggest that there is a potential for Eastern Whip-poor-will, Chimney Swift, Barn Swallow, bats, and Butternuts at this site. See section 5 of this report for more information. | | |
| Significant Woodlands | No, these are restricted to Old Growth and Hackberry Stands and are identified as NED on the OP Schedules. There are no NED classified lands in or within 50 m of this site. | | None |
| Significant Valleylands | No, these are not present within the Town's | | None |

| Natural Heritage Feature | Present within Site | Present within 120 m of Site | Additional Notes |
|---|---|---|---|
| | boundary. | | |
| Significant Wildlife Habitat (SWH) | None identified on Schedules. Potential for SWH will be considered during site investigations. | | None |
| Fish Habitat | None | | Mississippi River (1.7 km W) |

Figure 5: Official Plan Schedule A

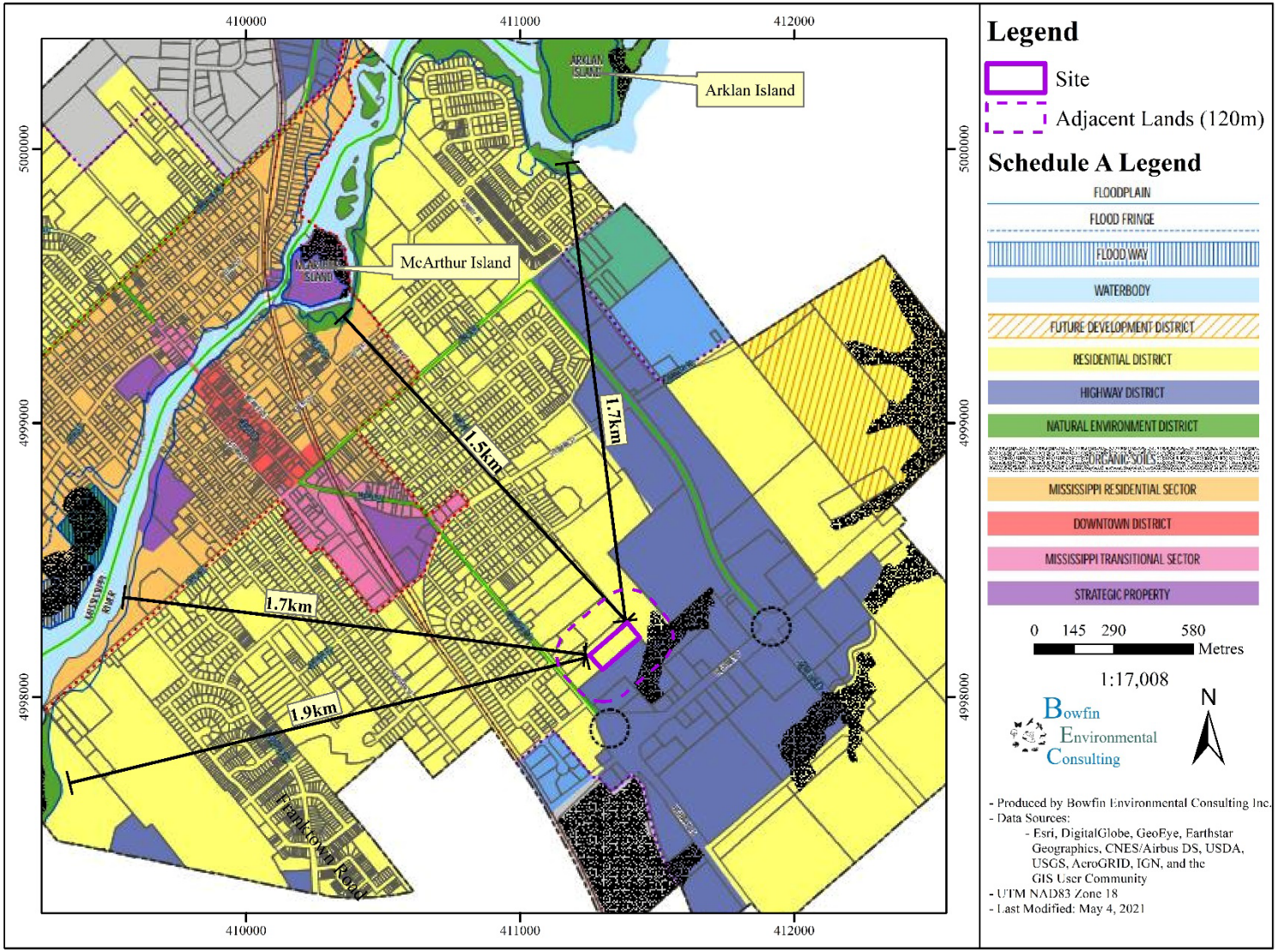
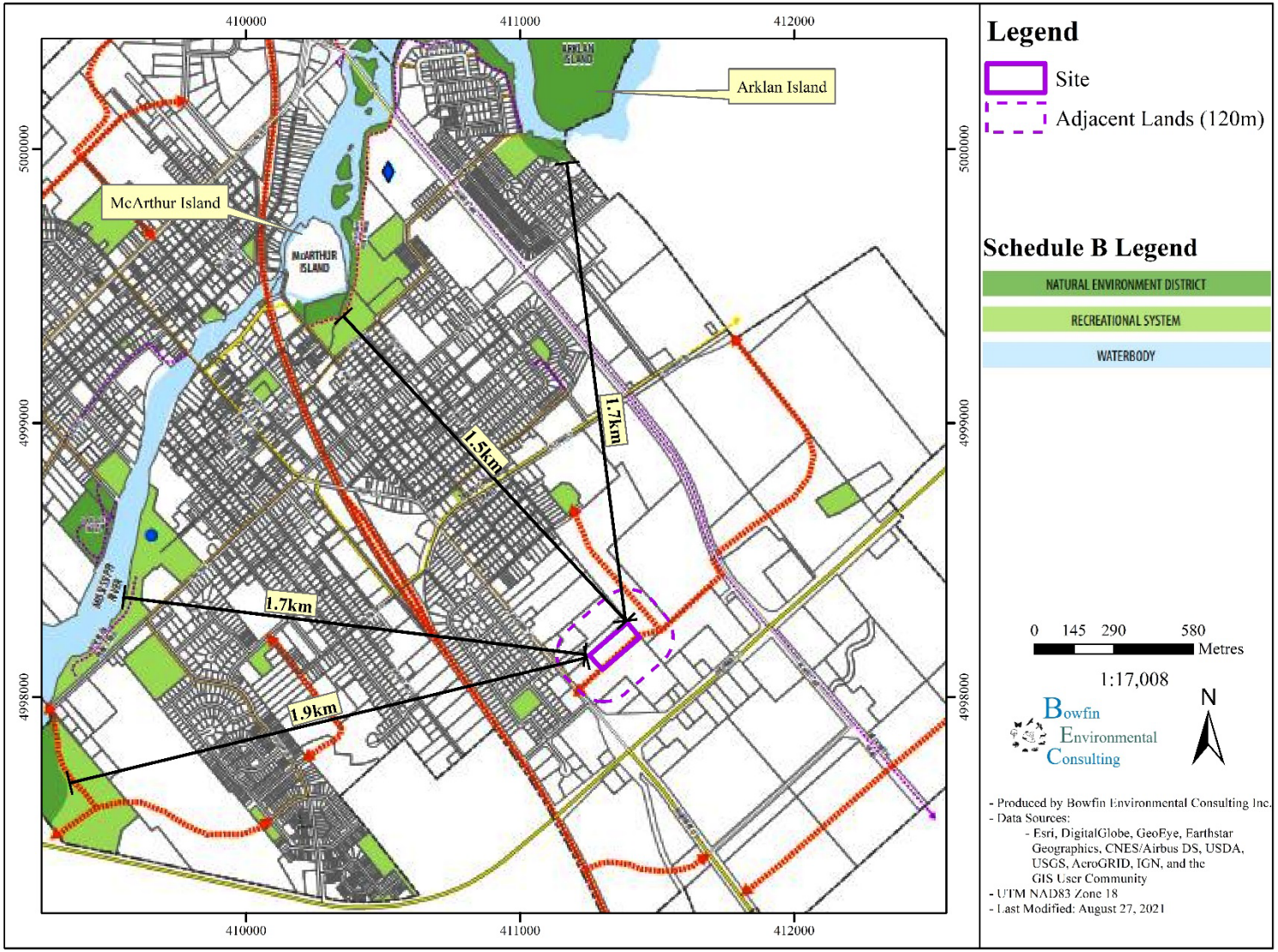


Figure 6: Official Plan Schedule B



# 4.0 SITE INVESTIGATION RESULTS

## 4.1 Site Investigation Dates and Purpose

The site investigations took place between early April and August 2021. The table below provides a summary of the dates, weather conditions and purpose of the site investigations.

Table 2: Summary of Dates, Times, Conditions and Purpose of Site Investigations

| Date | Time (h) | Staff | Air Temperature (Min-Max) °C | Cloud Cover (%) Beaufort Wind Scale [Descriptor (scale)] | Moon Visibility (%) | Purpose |
|---|---|---|---|---|---|---|
| April 9, 2021 | 1300-1400 | A. Quinsey, S. Lafrance, M. Lavictoire | 21.0 (7.0-23.5) | Hazy Wind: light breeze (2) to gentle breeze (3) | n/a | - Initial Visit -Raptor Nest Survey |
| May 19, 2021 | 2300-2315 | S. Lafrance | 20.0 (9.9-30.2) | Hazy Wind: calm (0) | 52.1 | - Eastern Whip-poor-will Survey #1 |
| May 25, 2021 | 0145-0215 | A. Quinsey | 13.0 (11.0-27.3) | Hazy Wind: light breeze (2) | 100 | - Eastern Whip-poor-will Survey #2 |
| | N/A | M. Lavictoire | 12.0 (11.0-27.3) | Overcast Wind: light breeze (2) | n/a | - Breeding Bird Survey #1 -Butternut Inventory |
| June 10, 2021 | 0915-0945 | A. Quinsey | 20.0 (11.8-24.0) | Hazy Wind: gentle breeze (3) | n/a | - Breeding Bird Survey #2 |
| June 15, 2021 | 1415-1545 | S. Lafrance, J Malcolm | 18.0 (12.8-23.3) | Partially cloudy Wind: gentle breeze (3) | n/a | - Butternut Inventory |
| June 22, 2021 | 2130-2145 | A. Quinsey | 13.0 (7.0-17.0) | Clear Wind: light air (1) | 96.1 | - Eastern Whip-poor-will Survey #3 |
| July 1, 2021 | 1115-1400 | A. Quinsey | 23.0 (14.2-25.3) | Partially cloudy Wind: light breeze (2) | n/a | - Butternut Inventory - Vegetation Description |
| August 5, 2021 | 1130-1345 | A. Quinsey M. Lavictoire | 22.0 (14.3-28.8) | Clear Wind: gentle breeze (3) | n/a | - Vegetation Description |

M. Lavictoire – Michelle (Nunas) Lavictoire – B.Sc. Wildlife Resources and M.Sc. Natural Resources
S. Lafrance – Sophie Lafrance – B.Sc. Biology and graduate diploma in Ecosystem Restoration
J. Malcolm – Janessa Malcolm – Student (B. Sc. Environmental Sciences)
A. Quinsey – Al Quinsey – B.Sc. Environmental Biology

*Min-Max Temp Taken From: Environment Canada. National Climate Data and Information Archive. Ottawa International Airport. Available https://climate.weather.gc.ca/ [August 6, 2021]

### 4.2 Vegetation Description and Butternut Survey Results

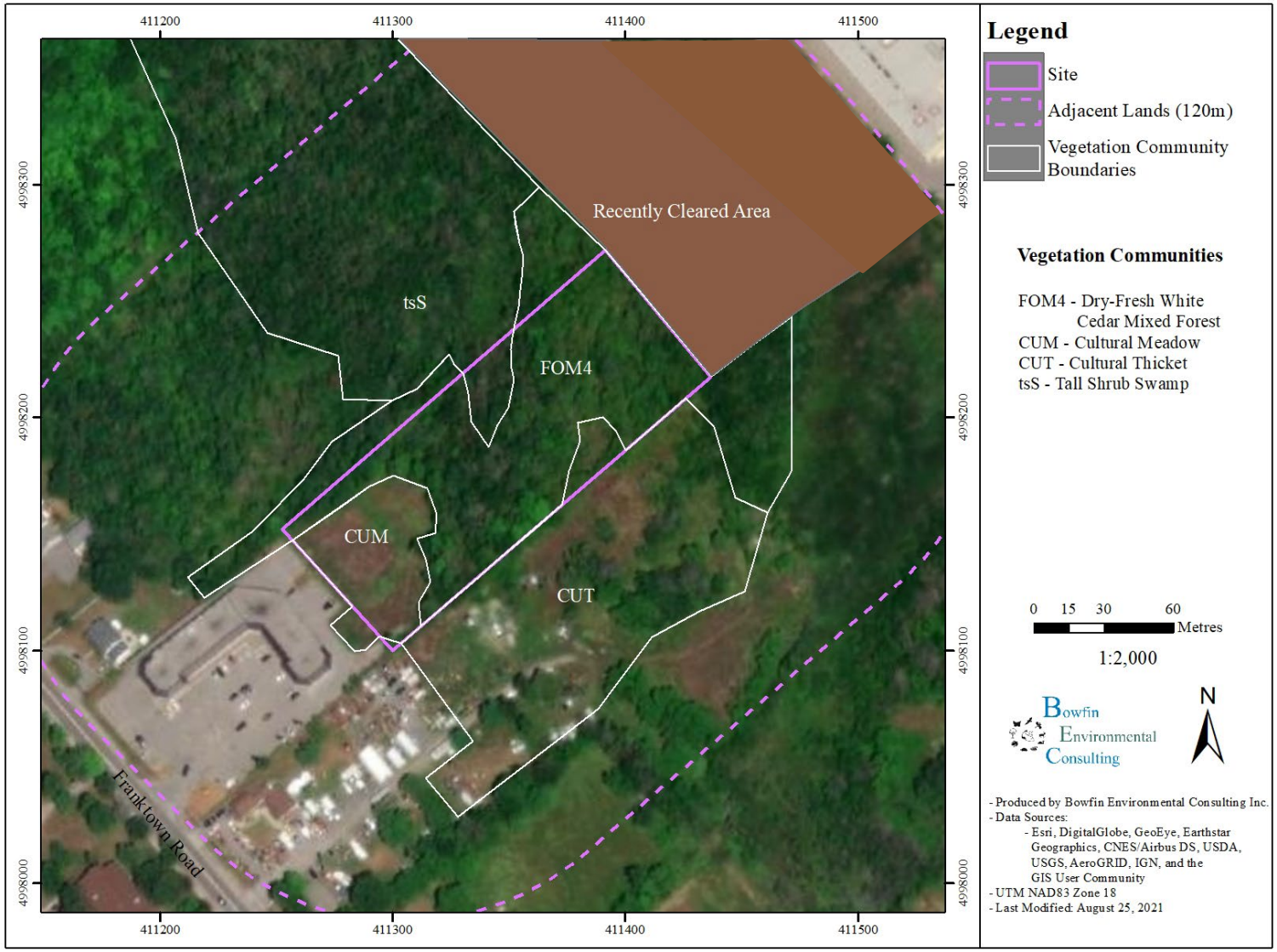
The Site was primarily a Fresh-Moist White Cedar Mixed Forest with a small portion of a tall shrub swamp community and of a cultural meadow/cultural thicket along with a cultural meadow inclusion (<0.5 ha in size). The tall shrub swamp and the cultural meadow/ cultural thicket continued into the adjacent lands. As already noted, the lands to the northeast have been recently cleared. The edge of the swamp community that was on the Site was delineated in the field using a hand-held GPS (all other communities were delineated based on imaging). Below is a description of the communities with a representative photograph. The plant species are listed in order of abundance.

**Dry-Fresh White Cedar Mixed Forest (FOM4)**

This mixed forest community (1.4 ha, of which 0.9 ha was on Site) took up a majority of the site. It was disturbed by trails, stumps (evidence of selective tree removal), rock piles, and brush piles. The upper layer of the soil was sampled (auger refusal at 29 cm) and there the soil was a sandy loam. It is characterised by a canopy layer (8-14 m tall; 80 % cover ) of dense white cedar (with an average diameter-at-breast height (dbh) of 24 cm) with patches of trembling aspen (avg. dbh 34 cm) and scattered deciduous trees (basswood, large-toothed aspen, ironwood, and green ash). The sub canopy (3-7 m tall; 15% cover) was comprised of white cedar with some sugar maple and common buckthorn. The understory (1-3 m tall; 10% cover) was characterised by common buckthorn, prickly ash, and common juniper. Ground cover (10%) existed in small patches and was composed primarily of grasses. Other species noted were river grape, prickly ash, bracken fern, and spreading dogbane.


Photo 1: Looking south from center of Mixed Forest (July 1, 2021)

Figure 7: Vegetation Community Boundaries



**Tall Shrub Swamp (tsS)**

This community (assumed to be 1.9 ha based on satellite images, of which 0.06 ha is on Site) was to the north of the Site with only a small section protruding into the Site. It was fairly disturbed with several brush piles and stumps as well as emerald ash borer, and glossy buckthorn. In some areas the glossy buckthorn was the only species present. The soil was sampled to a depth of 58 cm. The upper layer was a silty clay loam (0-32 cm) with a silty sand underneath (32-58 cm). The water table was 47 cm below the surface. The wetland was a tall shrub swamp with three forms. These were: dead deciduous trees (mostly dead ash), tall shrub (glossy buckthorn, green ash, white ash, black ash, slender willow, and nanny berry (note that these individual trees were <6 m tall), and ground cover (purple loosestrife, spotted joe-pyeweed, sensitive fern, river grape, Virginia creeper, swamp milkweed, bittersweet nightshade, boneset and spotted jewelweed.). Other species encountered were reed canary grass, broad-leafed cattail, silver maple, Freeman's maple, scouring rush, and sedges.


Photo 2: Looking north from center of Tall Shrub Swamp (July 1, 2021)

**Cultural Thicket (CUM/CUT)**

This community was on the south side of the site, and it continued offsite to the southeast. There were posted no trespassing signs present, as such information was only collected from the edge. From what could be observed, the community (1.3 ha of which 0.05 ha was on Site) consisted of a cultural meadow community interspersed with clumps of thicket and short coniferous trees. The meadow habitat appeared to be dominated by smooth brome and timothy and the thicket by common buckthorn and the trees by eastern white cedar. Other common species noted were:

common juniper, red juniper, cow vetch, oxeye daisy, common buttercup, bur oak, trembling aspen, and green ash.


Photo 3: Looking southeast from fence line (August 5, 2021)

**Cultural Meadow (CUM)**

This cultural meadow community occupied the area between forest and parking lot. At 0.3 ha in size it was technically an inclusion to the forest community described below. This site was characterized by herbaceous species (primarily smooth brome and Kentucky bluegrass) on sandy fill with a few shrubs (<5%) (common buckthorn and juniper) scattered throughout. The site also had a few wet patches which contained purple loosestrife, bulrush, reed canary grass, and glossy buckthorn. Other species noted were: quack grass, Canada goldenrod, common milkweed (15% cover), viper's bugloss, cow vetch, sweet white-clover, ragweed, Manitoba maple, chicory, yarrow, Canada thistle, common burdock, common dandelion, plantain, black medic, bladder campion, bird's-foot trefoil, common mullein, daisy fleabane, bedstraw, goat's-beard, spreading dogbane, and bur oak.


Photo 4: Looking south from center of Cultural Meadow (July 1, 2021)

**Cleared Adjacent Lands**

As mentioned above, the clearing of the habitat to the northeast is very new and not seen on the available satellite imagery for the Site.


Photo 5: Looking at the cleared lands (adjacent lands to the northeast) (April 9, 2021)

### Plant Species Discussion (including results from Butternut Inventory)

Plants observed were reviewed in terms of their provincial rank (SRank), presence of species of conservation value (provincial SRank of S1-S3 or listed as special concern), and species at risk (endangered or threatened provincially).

All species noted are considered secure in Ontario (S4 and S5) or SNA which is given to species not suitable for conservation (i.e. invasives). There were no S1-S3 and no species with a coefficient of conservatism (cc) higher than 7. The only species with a cc value of 7 was Black Ash and this was found in the tall shrub swamp community. There were no endangered or threatened or special concern. The butternut inventory did not locate any *Juglans* species. The invasive species common and glossy buckthorns were noted throughout, and in all communities. The Site's vegetation could be reflective of its being heavily disturbed, with fill, trails, signs of selective logging (stumps, brush piles), invasive species, and signs of human activity (garbage).

Table 3: Observed Plant List

| Common Name | Scientific Name | SRank | ESA Reg. 230/08 SARO List Status | SARA Schedule 1 List of Wildlife SAR Status) | Coefficient Of Conservatism |
|---|---|---|---|---|---|
| **Horsetail Family** | | | | | |
| Scouring Rush | *Equisetum hyemale* | S5 | None | None | 2 |
| **Ferns & Allies** | | | | | |
| Bracken Fern | *Pteridium aquilinum* | S5 | None | None | 2 |
| Sensitive Fern | *Onoclea sensibilis* | S5 | None | None | 4 |
| **Cedar Family** | | | | | |
| Common Juniper | *Juniperus communis* | S5 | None | None | 4 |
| Eastern Red Cedar | *Juniperus virginiana* | S5 | None | None | 4 |
| Eastern White Cedar | *Thuja occidentalis* | S5 | None | None | 4 |
| **Maple Family** | | | | | |
| Freeman's Maple | *Acer ×freemanii* | SNA | None | None | |
| Manitoba Maple | *Acer negundo* | S5 | None | None | 0 |
| Silver Maple | *Acer saccharinum* | S5 | None | None | 5 |
| Sugar Maple | *Acer saccharum* | S5 | None | None | 4 |
| **Dogbane Family** | | | | | |
| Spreading Dogbane | *Apocynum androsaemifolium* | S5 | None | None | 3 |
| **Milkweed Family** | | | | | |
| Swamp Milkweed | *Asclepias incarnata* | S5 | None | None | 6 |
| Common Milkweed | *Asclepias syriaca* | S5 | None | None | 0 |
| **Composite or Aster Family** | | | | | |

| Common Name | Scientific Name | SRank | ESA Reg. 230/08 SARO List Status | SARA Schedule 1 List of Wildlife SAR Status) | Coefficient Of Conservatism |
|---|---|---|---|---|---|
| Yarrow | *Achillea millefolium* | SNA | None | None | |
| Ragweed | *Ambrosia artemisiifolia* | S5 | None | None | 0 |
| Common Burdock | *Arctium minus* | SNA | None | None | |
| Chicory | *Cichorium intybus* | SNA | None | None | |
| Canada Thistle | *Cirsium arvense* | SNA | None | None | |
| Daisy Fleabane | *Erigeron annuus* | S5 | None | None | 0 |
| Boneset | *Eupatorium perfoliatum* | S5 | None | None | 2 |
| Canada Goldenrod | *Solidago canadensis* | SNA | None | None | 1 |
| Common Dandelion | *Taraxacum officinale* | SNA | None | None | |
| Goat's-Beard | *Tragopogon pratensis* | SNA | None | None | |
| **Touch-me-not or Jewel-weed Family** | | | | | |
| Spotted Jewel-weed | *Impatiens capensis* | S5 | None | None | 4 |
| **Birch Family** | | | | | |
| Iron Wood | *Ostrya virginiana* | S5 | None | None | 4 |
| **Borage Family** | | | | | |
| Viper's Bugloss | *Echium vulgare* | SNA | None | None | |
| **Pink Family** | | | | | |
| Bladder Campion | *Silene vulgaris* | SNA | None | None | |
| **Pea Family** | | | | | |
| Bird's-Foot Trefoil | *Lotus corniculatus* | SNA | None | None | |
| Black Medic | *Medicago lupulina* | SNA | None | None | |
| White Sweet-Clover | *Melilotus alba* | SNA | None | None | |
| Black Locust | *Robinia pseudo-acacia* | SNA | None | None | |
| Cow Vetch | *Vicia cracca* | SNA | None | None | |
| **Beech Family** | | | | | |
| Bur Oak | *Quercus macrocarpa* | S5 | None | None | 5 |
| **Loosestrife Family** | | | | | |
| Purple Loosestrife | *Lythrum salicaria* | SNA | None | None | |
| **Olive Family** | | | | | |
| White Ash | *Fraxinus americana* | S4 | None | None | 4 |
| Black Ash | *Fraxinus nigra* | S4 | None | None | 7 |
| Green Ash | *Fraxinus pennsylvanica* | S4 | None | None | 3 |
| **Plantain Family** | | | | | |
| Common Plantain | *Plantago major* | SNA | None | None | |
| **Crowfoot or Buttercup Family** | | | | | |
| Common Buttercup | *Ranunculus acris* | SNA | None | None | |
| **Buckthorn Family** | | | | | |

| Common Name | Scientific Name | SRank | ESA Reg. 230/08 SARO List Status | SARA Schedule 1 List of Wildlife SAR Status) | Coefficient Of Conservatism |
|---|---|---|---|---|---|
| Common Buckthorn | *Rhamnus cathartica* | SNA | None | None | |
| Glossy Buckthorn | *Rhamnus frangula* | SNA | None | None | |
| **Madder Family** | | | | | |
| Bedstraw | *Gallium sp.* | SNA | None | None | |
| **Rue Family** | | | | | |
| Prickly-ash | *Zanthoxylum americanum* | SNA | None | None | |
| **Willow Family** | | | | | |
| Largetooth Aspen | *Populus grandidentata* | S5 | None | None | 5 |
| Trembling Aspen | *Populus tremuloides* | S5 | None | None | |
| Slender Willow | *Salix petiolaris* | S5 | None | None | 3 |
| **Figwort Family** | | | | | |
| Mullein | *Verbascum thapsus* | SNA | None | None | |
| **Nightshade Family** | | | | | |
| Bittersweet Nightshade | *Solanum dulcamara* | SNA | None | None | |
| **Linden Family** | | | | | |
| Basswood | *Tilia americana* | S5 | None | None | 4 |
| **Elm Family** | | | | | |
| American Elm | *Ulmus americana* | S5 | None | None | 3 |
| **Grape Family** | | | | | |
| Virginia Creeper | *Parthenocissus vitacea* | S5 | None | None | 3 |
| River Grape | *Vitis riparia* | S5 | None | None | 0 |
| **Sedge Family** | | | | | |
| Sedges | *Carex sp.* | SNA | None | None | |
| Bulrush | *Sircpus sp.* | SNA | None | None | |
| **Grass Family** | | | | | |
| Smooth Brome | *Bromus inermis* | SNA | None | None | |
| Quack Grass | *Elymus repens* | SNA | None | None | |
| Reed Canary Grass | *Phalaris arundinacea* | SNA | None | None | |
| Timothy | *Phleum pratense* | SNA | None | None | |
| Kentucky Blue Grass | *Poa pratensis* | S5 | None | None | 0 |
| **Cattail Family** | | | | | |
| Broad-leaved Cattail | *Typha latifolia* | S5 | None | None | 3 |

**SRANK DEFINITIONS**

S4 Apparently Secure, Uncommon but not rare; some cause for long-term concern due to declines or other factors.

S5 Secure, Common, widespread, and abundant in the nation or state/province.

SNA Not Applicable, A conservation status rank is not applicable because the species is not a suitable target for conservation activities.

Coefficient of Conservatism Ranking Criteria

0 Obligate to disturbed areas.
1 Occurs more frequently in disturbed areas than natural areas.
2 Facultative to disturbed and natural areas.
3 Occurs less frequent in disturbed areas than natural areas.
4 Occurs much more frequently in natural areas than disturbed areas.
5 Obligate to natural areas (quality of area is low).
6 Weak affinity to high-quality natural areas.
7 Moderate affinity to high-quality natural areas.

## 4.3 Terrestrial Species-Specific Surveys

### 4.3.1 Breeding Birds

#### Daytime Breeding Bird

The breeding bird surveys included two visits. Both took place in the early morning, as per the protocols listed in Section 2, and on days with appropriate weather conditions. A total of 13 species were recorded during the daytime breeding bird visits. Most of the observations consisted of calling males or fly overs. No females, pairs, or young were noted. All species are common and secure in Ontario (S4 or S5) or introduced (SNA). No endangered or threatened species protected by the *Endangered Species Act* (ESA) were observed or heard. No species of conservation value (special concern provincially; the SARA designation of threatened only applies to federal lands) were heard or observed.

Table 4: List of Birds Observed during Breeding Bird Surveys (On and Off-site)

| Common Name | Scientific Name | SRank | ESA Reg. 230/08 SARO List Status | SARA Schedule 1 List of Wildlife SAR Status) |
|---|---|---|---|---|
| Warbling Vireo | *Vireo gilvus* | S5B | None | None |
| Red-eyed Vireo | *Vireo olivaceus* | S5B | None | None |
| Blue Jay | *Cyanocitta cristata* | S5 | None | None |
| American Crow | *Corvus brachyrhynchos* | S5B | None | None |
| American Robin | *Turdus migratorius* | S5B | None | None |
| Gray Catbird | *Dumetella carolinensis* | S4B | None | None |
| European Starling | *Sturnus vulgaris* | SNA | None | None |
| Yellow Warbler | *Dendroica petechia* | S5B | None | None |
| Common Yellowthroat | *Geothlypis trichas* | S5B | None | None |
| Eastern Towhee | *Pipilo erythrophthalmus* | S4B | None | None |
| Song Sparrow | *Melospiza melodia* | S5B | None | None |
| Red-winged Blackbird | *Agelaius phoeniceus* | S4 | None | None |

| Common Name | Scientific Name | SRank | ESA Reg. 230/08 SARO List Status | SARA Schedule 1 List of Wildlife SAR Status) |
|---|---|---|---|---|
| Common Grackle | *Quiscalus quiscula* | S5B | None | None |
| American Goldfinch | *Carduelis tristis* | S5B | None | None |

Updated August 13, 2021

**SRANK DEFINITIONS**

S4 Apparently Secure, Uncommon but not rare; some cause for long-term concern due to declines or other factors.

S5 Secure, Common, widespread, and abundant in the nation or state/province.

S#B Breeding

SNA Not Applicable, A conservation status rank is not applicable because the species is not a suitable target for conservation activities.

### Nighttime Surveys

Three nighttime surveys were completed for eastern whip-poor-wills. The surveys were completed on nights with appropriate conditions and following the current guidelines. No eastern whip-poor-wills were heard or observed.

### 4.3.2 Incidentals

During the site investigations, evidence of the presence of or observations of various species were noted. This list includes bird species observed outside of their targeted surveys period. The incidental fauna included: Monarch, emerald ash-borer, American toad, black-capped chickadee, common raven, cedar waxwing, turkey vulture, ruffed grouse, downy woodpecker, white-breasted nuthatch, eastern phoebe, northern cardinal, raccoon, rabbit (pellets) and deer (tracks). There was no evidence of any significant wildlife habitat.

## 5.0 ANALYSIS OF POTENTIAL TO IMPACT THE NATURAL FEATURES

As per the background information, the natural heritage features (apart from endangered and threatened species) are shown as NEDs on the Schedules of the OP. A review found that there were no NEDs, and no fish habitat in or within the adjacent lands. During the site investigations, there were no endangered or threatened species identified or habitat of significant wildlife. The Site was composed primarily of mixed forest and was located within an area that is heavily developed. This was highlighted by the recent developments and clearing of vegetation to the north and northeast. Based on the above, the assessment below has been scoped to the potential for SAR.

### 5.1 Review of Project Activities

The assessment of the potential impacts is completed by analyzing the impact of various activities associated with the project. The development of the residences would include the following activities:

- Clearing of all terrestrial vegetation. Note that while there will be a development setback from the neighbouring properties, there may be a need to clear the vegetation to the edge of the property line for grading purposes. As such, this assessment assumes that all vegetation will be removed.
- Excavation, grading, and backfilling
- Construction of residences and services.

The site will be fully serviced, no stormwater management facility is shown on Site.

It is anticipated that clearing of vegetation would begin during summer 2022 and construction would be completed by the end of 2023.

The Site will be accessed from the east (new road to be constructed as part of other unrelated development).

### 5.2 Impact Assessment Methods

The purpose of the EIS is to identify natural features, and provide guidance in the form of avoidance, mitigation or enhancement measures. For those features which may be negatively impacted, mitigation measures and, where appropriate, the next steps for offsetting measures are recommended. The Provincial Policy Statement describes a negative impact as:

> *"a) in regard to policy 2.2, degradation to the quality and quantity of water, sensitive surface water features and sensitive ground water features, and their related hydrologic functions, due to single, multiple or successive development or site alteration activities;*
> *c) in regard to fish habitat, any permanent alteration to, or destruction of fish habitat, except where, in conjunction with the appropriate authorities, it has been authorized under the Fisheries Act;*
> *d) in regard to other natural heritage features and areas, degradation that threatens the health and integrity of the natural features or ecological functions for which an area is identified due to single, multiple or successive development or site alteration activities."*

The significance of the potential impacts is measured using four different criteria:

1. Area affected may be:
    a. local in extent signifying that the impacts will be localized within the project area
    b. regional signifying that the impacts may extend beyond the immediate project area.

2. Nature of Impact:
    a. negative or positive
    b. direct or indirect

3. Duration of the impact may be rated as:
    a. short term (construction phase, 2 years)
    b. medium term (3-7years)
    c. long term (>7 years).
    d. permanent

4. Magnitude of the impact may be:
    a. negligible signifying that the impact is not noticeable
    b. minor signifying that the project's impacts are perceivable and require mitigation
    c. moderate signifying that the project's impacts are perceivable and require mitigation as well as monitoring and/or compensation
    d. major signifying that the project's impacts would destroy the environmental component within the project area.

5. Likelihood
    a. Whether an impact is likely to occur is described.

## 5.3 Evaluation of Potential Impacts

### 5.3.1 Endangered and Threatened Species

Terrestrial and wetland Endangered and Threatened Species at Risk, on private land, are protected under provincial *Endangered Species Act*. It is noted that bird species protected under the *Species at Risk Act* (SARA) are protected by the *Migratory Bird Convention Act* (MBCA) on private lands. Within this report, the acronym SAR refers to only Endangered or Threatened species. Special Concern species do not receive protection from ESA or SARA.

A list of potential SAR was compiled using various sources and identified up to roughly 5 km from the Site. The resulting list includes 12 potential SAR: 1 reptile (Blanding's turtle), 8 birds

(eastern whip-poor-will, chimney swift, bank swallow, barn swallow, bobolink, and eastern meadowlark), 4 mammals (little brown myotis, northern myotis, eastern small-footed myotis, and the tri-colored bat), and 1 plant (butternut) (Table 5). Of these, many were determined not to be present or had no triggers for review based on guidance from the province. Table 5 notes the relevant MECP guidelines and triggers and indicates whether the species is brought forward for discussion.

NOTE: The ESA has now been transferred to the Ministry of Environment, Conservation and Parks (MECP) (as of April 1, 2019). To date MECP has not changed the protocols or process for assessing the potential to impact SAR. References to dealing with MNRF have been left in this report as they were the responsible Ministry at the time of the field work.

Table 5: Summary of Potential Endangered and Threatened Species

| Common Name/ Population | Scientific Name | SRank | ESA Reg. 230/08 SARO List Status | SARA Schedule 1 List of Wildlife SAR Status | Preferred Habitat | Reference | MECP Guidelines/Triggers for Review | Brought Forward (Yes/No) |
|---|---|---|---|---|---|---|---|---|
| **REPTILES** | | | | | | | | |
| Blanding's Turtle | *Emydoidea blandingii* | S3 | THR | THR | Shallow water, large marshes, shallow lakes or similar such water bodies. | COSEWIC 2016a | There are occurrences with 2 km<br>There is possible Category 2 habitat within the Site and adjacent lands. No individuals were noted on Site. | Yes |
| **BIRDS** | | | | | | | | |
| Eastern Whip-poor-will | *Caprimulgus vociferus* | S4B | THR | THR | Rock or sand barrens with scattered trees, savannahs, old burns or other disturbed sites in a state of early to mid-forest succession, or open conifer plantations | COSEWIC 2009 | Surveys completed as per protocol. No individuals in or within 500 m | No |
| Chimney Swift | *Chaetura pelagica* | S4B, S4N | THR | THR | Cities, towns, villages, rural, and wooded areas. When selecting trees, they prefer those that are >50 cm in diameter and that are within 1 km of waterbodies. | COSEWIC 2007 | Surveys completed. No individuals observed in 2021. | No |
| Bank Swallow | *Riparia riparia* | S4B | THR | THR | Variety of forest types, most common in wet, mixed deciduous-coniferous forest with a well-developed shrub layer. It is often found in shrub marshes, red maple stands, cedar stands, conifer swamps dominated by black spruce and larch and riparian woodlands along rivers and lakes. It is also associated with ravines and steep brushy slopes near these habitats | COSEWIC 2013 | No habitat is present.<br>Surveys completed. No individuals observed in 2021 | No |
| Barn Swallow | *Hirundo rustica* | S4B | THR | THR | Open or semi-open lands: farms, field, marshes. | COSEWIC 2011a | Surveys completed. No individuals observed in 2021.<br>No structures present within the Site or | No |

| Common Name/ Population | Scientific Name | SRank | ESA Reg. 230/08 SARO List Status | SARA Schedule 1 List of Wildlife SAR Status | Preferred Habitat | Reference | MECP Guidelines/Triggers for Review | Brought Forward (Yes/No) |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | within 5 m. Houses and buildings are present within 200 m, but these will not be impacted by this project. | |
| Bobolink | *Dolichonyx oryzivorus* | S4B | THR | THR | Primarily in forage crops, and grassland habitat. | COSEWIC 2010 | No suitable habitat is present. None observed during the two breeding bird surveys or as incidentals in 2021. | No |
| Eastern Meadowlark | *Sturnella magna* | S4B | THR | THR | Fields, meadows and prairies. | COSEWIC 2011b | No suitable habitat is present. None observed during the two breeding bird surveys or as incidentals in 2021. | No |
| **MAMMALS** | | | | | | | | |
| Little Brown Myotis | *Myotis lucifugus* | S4 | END | END | Buildings, attics, roof crevices and loose bark on trees or under bridges. Always roost near waterbodies. | Eder 2002 | MECP recommends the use of avoidance timing window for clearing of trees (>10 cm in diameter) if this can be accomplished then no impacts. | Yes |
| Northern Myotis/Northern Long-eared Bat | *Myotis septentrionalis* | S3 | END | END | Older (late successional or primary forests) with large interior habitat. | Menzel et al. 2002, Broders et al. 2006, SWH 6E Ecoregion Criterion Schedule | | |
| Eastern Small-footed Myotis | *Myotis leibii* | S2S3 | END | No Status | Found within deciduous or coniferous forests in hilly areas. | Eder 2002 | | |
| Tri-colored Bat | *Perimyotis subflavus* | S3? | END | END | Prefers shrub habitat or open woodland near water. | Eder 2002 | | |
| **PLANTS** | | | | | | | | |
| Butternut | *Juglans cinerea* | S3? | END | END | Variety of sites, grows best on well-drained fertile soils in shallow valleys and on gradual slopes | COSEWIC 2003 | Inventory completed in 2021 and none found. Inventory has a shelf-life of 2 years | Yes |

Status updated: August 10, 2021

**SRANK DEFINITIONS**

S2 Imperiled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.
S3 Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.
S4 Apparently Secure; uncommon but not rare; some cause for long-term concern due to declines or other factors.
S5 Secure; Common, widespread, and abundant in the nation or state/province.
? Inexact Numeric Rank—Denotes inexact numeric rank
SNA Not Applicable, A conservation status rank is not applicable because the species is not a suitable target for conservation activities.
S#B Breeding
S#N Non-Breeding

**SARA STATUS DEFINITIONS**
END Endangered: a wildlife species facing imminent extirpation or extinction.
THR Threatened: a wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.

**SARO STATUS DEFINITIONS**
END Endangered: A species facing imminent extinction or extirpation in Ontario which is a candidate for regulation under Ontario's ESA.
THR Threatened: A species that is at risk of becoming endangered in Ontario if limiting factors are not reversed.

## Reptiles

### Blanding's Turtle

Blanding's turtle is associated with a variety of shallow slow aquatic habitats with submergent and emergent plants. These turtles require basking sites located near the water such as exposed rocks or partially submerged logs. The nesting sites are located within areas of loose substrates varying from sand to cobblestone and may occur along roadways as far as 400 m away. Marsh habitat is important for the juveniles for protection from predators. The species overwinters within permanent water bodies (COSEWIC, 2005). This species can migrate far distances of up to 6 km (OMNR, 2013b). Migration routes can include overland movement.

The habitat guidelines for Blanding's turtle provide protection to the areas surrounding a nest, or perceived nest area. The level of protection varies with the distance from the nest and has been categorized by MNRF into three categories. These, along with their protection level are:

| | |
|---|---|
| Category 1 | Nest and the area within 30 m or Overwintering sites and the area within 30 m |
| Category 2 | The wetland complex (i.e., all suitable wetlands or waterbodies within 500 m of each other) that extends up to 2 km from an occurrence, and the area within 30 m around those suitable wetlands or waterbodies |
| Category 3 | Area between 30 m and 250 m around suitable wetlands/waterbodies identified in Category 2, within 2 km of an occurrence |

The Site is situated within a well -developed portion of Carleton Place and is isolated from other natural areas by the high density housing to the north and west and by commercial developments and County Road 29 and Highway 7 to the east and south. The lands immediately adjacent to this Site on the northeast were being cleared during 2021 for development.

The only wetland/waterbody habitat found (in or within 30 m of the Site) is the small piece on the north side. This wetland did not provide overwintering habitat (<30 cm deep in early April and fully vegetated; dry by early summer). There was no potential nesting habitat on or near this Site. No turtles were observed during the three visits that took place during the turtle survey period. The Site does not provide a natural movement corridor that would encourage turtles to cross through the upland or wetland habitats on their way to critical habitats (i.e. overwintering, nesting areas). This Site does not provide linkages.

A review of background information identified four NHIC squares within which there are Blanding's Turtle occurrences. Any potential Blanding's turtle habitat of three of these squares is separated from this Site by more than 500 m (isolated by the high development areas and no stepping stones or suitable waterbody/wetland complexes). These three occurrences do not

trigger the MECP criteria for category habitat for this species. The fourth occurrence is within 2 km to the southeast and is assumed to be associated with a wetland that extends on both sides of Highway 7 in that NHIC square. That wetland is more than 800 m from this Site, and more than 500 m from the unevaluated wetland that is roughly 118 m south of this Site. The Ministry of Environment, Conservation and Parks (MECP) will be consulted to discuss the implications and avoidance and mitigation measures for this species. Typical measures for this species are included herein.

### Bats

The potential SAR bats within the general area are: little brown myotis, northern myotis, eastern small-footed myotis and tri-colored bat. There are three types of habitats required by bats: hibernation, maternity sites and day-roost sites. The latter is not considered critical habitat. These four bat species prefer to hibernate in caves or mines. They can hibernate in buildings but that is rare for these species (COSEWIC, 2013a). No caves, buildings, or mines were present.

The northern myotis tends to prefer larger expanses of older forests (late successional or primary forests) and chose maternity sites in snags that are in the mid-stage of decay. They prefer habitat with intact interior habitat and is shown to be negatively correlated with edge habitat (Menzel et al., 2002; Broders et al., 2006; Yates et al., 2006; OMNRF, 2015). This habitat is absent.

The recovery strategy for the eastern small-footed myotis indicates that the preferred maternity habitat of this species consists of open rock habitats and that it rarely uses old buildings as roosting/maternity sites (Humphrey, 2017). There was no suitable rocky habitat present or buildings. Based on this information, this species' maternity sites are considered absent.

The Atlas of Mammals of Ontario (Dobbyn, 1994) suggests that the tri-colored bat is not present within this part of Ontario however, the NatureServe mapping in the COSSARO (2015) includes all of southeastern Ontario. Based on this information, this species is considered to have a very low potential of occurring.

This leaves only the little brown myotis as potentially using the study area for maternity sites. The Site consists of a mixed forest with some deciduous trees that could provide habitat for little brown myotis maternity or day-roots for the other species of bats. MECP's avoidance measures (timing window for clearing of trees) is recommended for this site and detailed further below.

### Plants

#### Butternuts

As discussed above, no butternuts were identified in or within 50 m of this site by the surveyor in 2021. No measures are required for this species other than noting that Butternut inventories are good for 2-years (in this case until August 5, 2023).

## SAR Mitigation Measures

**General:**

- Endangered and Threatened species are protected and cannot be harmed, harassed, or killed and in some cases their habitats are also protected. These individuals will only be handled by qualified person and only if the individual is in imminent threat of harm. An authorization under the ESA 2007 would be required to handle individuals that are not in imminent threat of harm.
- If a SAR enters the work area during the construction period, any work that may harm the individual is to stop immediately and the supervisor will be contacted. No work will continue until the individual has left the area.
- Should an individual be harmed or killed then work will stop, and the Ministry of Environment, Conservation and Parks (MECP) will be contacted immediately.
- Educate staff and contractors on the potential for SAR to be in the area and their significance.
- Mitigation measures listed elsewhere in this report are also applicable to this section.
- If a SAR is encountered, this information will be provided to the Natural Heritage Information Centre (Report rare species (animals and plants) | Ontario.ca)

**SAR Turtles:**

***Construction:***

- During construction, temporary turtle exclusion fencing will be installed around the west, north and east sides with turn-arounds along both ends. The portion fronting the existing commercial development along Franktown Road does not need to have the exclusion fence as long as the turn arounds are installed, and the measures are followed. Reptile and Amphibian Exclusion Fencing: Best Practices (OMNR, 2013d) will be followed for exclusion fence design.
- The temporary fencing can consist of sediment fencing that is properly countersunk and maintained.
- Clearing of vegetation will take place during the turtle inactive season when they are hibernating. Since hibernation typically occurs between April 16-October 15, clearing of vegetation is to occur between October 16 and April 15. Otherwise, additional surveys (sweeps for turtles by fish and wildlife technician or biologist familiar with the species are needed). **Note that the timing constraint for tree removal is more restrictive (see bats).**
- Educate construction workers of the potential for Blanding's Turtle to be present and that this is a protected species from harm and injury under the provincial *Endangered Species*

*Act*. Ensure to inform workers that there is a high potential for the species to occur in this area.

- Educate workers, that this species is known to travel far from aquatic habitats and as such, they are to perform a mandatory daily sweep of the work area when they first arrive on-site during the turtle active season (typically April 16-October 15; timing affected by weather conditions).
- A speed limit of 15 km/h is recommended for vehicles used during construction or to access the stormwater management facility. The speed limit is to be posted.
- Additional fencing is recommended around any stockpiles that might provide suitable nesting substrate (i.e. gravel, soil) to help prevent turtles from nesting in the work area. **Note that should suspected Blanding's Turtle nesting occur, the work would be shut down until hatching and MECP would need to be contacted for guidance. As such, it is imperative that the temporary exclusion fence and this additional fencing be maintained.**
- If a turtle is observed, then all work that may harm the individual must stop and the worker should notify their supervisor. Try to take a photograph but do not chase the turtle in order to do so.
- Turtles encountered on-site cannot be harmed or harassed.
- Turtles should be allowed to leave the area on their own.
- It is also important that the individual be watched, from afar, to ensure that it does not enter an area where it may come to harm.
- If an individual has been impacted, the supervisor should contact MECP (and if applicable the project biologist) immediately.

***Operations:***

- The need to install permanent turtle exclusion fence will be discussed with MECP. If required, it is anticipated to only be needed on the southern edge as the lands to the northeast, and west are or will soon be developed.

| Activity | Area | Nature | Duration | Magnitude/Likelihood |
|---|---|---|---|---|
| Construction | Local | Negative Direct (accidental harm to individual) | Permanent if an individual is killed. | If temporary turtle exclusion fence is installed and maintained then there is a low potential of interaction. Further, if the work within the Blanding's Turtle habitat takes place during outside of the active turtle season, then it is unlikely to impact this species. |

| Activity | Area | Nature | Duration | Magnitude/Likelihood |
|---|---|---|---|---|
| Operations | Local | Negative Direct (accidental harm to individual) | Permanent if an individual is killed. | If required, permanent exclusion fence could be added along any side that could allow turtle access (anticipated to either not be needed or to only be required on the south side) |

**Bats:** The Site is unlikely to provide bat maternity habitat for anything other than little brown. The most likely interaction with SAR bats would be restricted to day-roosts. Recent discussions with MECP on this species indicate that they do not need to be approached if the timing window below can be adhered to.

- Educate contractors by informing them that most bats in Ontario are protected.
- **Remove trees (>10 cm in diameter) between October 1 and March 31 (Bat active season is currently assumed to be April 1 to September 30).** If this is not possible, conduct exit survey prior to cutting them down. If the exit survey identifies bats, contact MECP or biologist for additional guidance. Note that there are other species that are also protected by this timing window. Additional measures would be required to ensure that they are not impacted (see turtles (above) and other (below)).

| Area | Nature | Duration | Magnitude |
|---|---|---|---|
| Local | Negative Direct | Permanent Term (removal of trees) | Low potential (since no maternity or hibernacula are present) |

**Plants:** The only SAR (Endangered or Threatened) plant species in the area was butternuts. None are present on Site, and none will be impacted by this development.

**Mitigation Measures:**

- Note that BHAs are only good for 2-years as such if work is not completed prior to August 5, 2023, a new BHA would be required. If a new BHA is required, plan to complete the BHA during the green-leaf period (mid-May to end of August) to confirm lack of butternuts no earlier than 2 years prior to construction.
- If a butternut is situated within 25 m or 50 m (for Category 3s), then a sturdy fence (highly visible such as snow fencing) is to be erected along the edge of the appropriate buffer (25 m for Category 1s and 2s and 50 m for Category 3s). Note that if a BHA is submitted to MECP, Category 1s can be removed following a 30-day review period. No

activities that disturb the vegetation or soil (including movement of vehicles or stockpiling of material) are permitted beyond this area.

- Educate contractors by informing them that butternuts are protected. Note that there is a large number of walnuts on-site and these are similar in appearance to butternuts, but walnuts are not protected.

| Area | Nature | Duration | Magnitude |
|---|---|---|---|
| Local | Negative Direct | Permanent Term (removal of trees) | Low potential since none have been found to date near the work area and as there are well-known measures for offsetting should any be identified |

### 5.3.2 Other

The measures outlined above serve to protect the identified or potentially present endangered or threatened species. However, there are also some other items that should be mentioned.

1. Almost all birds in Ontario are protected by either MBCA or FWCA.
2. Most reptiles are protected by the FWCA

**Mitigation Measures:**

- Almost all breeding birds are protected under the MBCA and/or FWCA. The only species not protected are: American crow, brown-headed cowbird, common grackle, house sparrow, red-winged blackbird, and starling. It is prohibited to destroy or disturb an active nest of other birds, or to take or handle nests, eggs, or nestlings. In this part of Ontario, the current standard nesting period is between April 5$^{th}$ to August 28$^{th}$. Outside of this timing window, it is considered unlikely that birds would be nesting. Note, there are some birds (birds of prey, herons etc.) that do begin nesting earlier in the year. It should also be noted, that if an active nest is present before or after the above dates that it is still protected. These dates only serve as a guideline. Note that due to the vegetation on the back and east side of the site, looking for active bird nests at this site would be difficult and could lead to false negatives. Proponent is strongly encouraged to follow timing windows.
- During construction, there is a potential for suitable habitat for ground nesting birds (i.e. killdeer) to be created. These include bare soil or gravel areas. Perform regular walks of the cleared areas looking for ground nesters. If any are present, the contact a biologist for guidance.
- Work during the daytime hours to prevent light disturbances.
- Ensure that all equipment have the appropriate mufflers to reduce noise disturbances.
- If a turtle nest is suspected, then flag a 10 m buffer to protect the nest. Contact MECP (for SAR) and MNRF (all other species).

### 5.3.3 Accidents and Malfunctions

Although the likelihood of accidents and malfunctions occurring would be minimized by following the mitigation measures outlined below, should accidents and/or malfunctions occur they have the possibility of presenting serious impacts and require consideration.

**Contaminant and Spill Management**

- All equipment will be clean and free of mud to help prevent the spread of invasive plant species.
- All equipment working in or near the wetland should be well maintained, clean and free of leaks. Maintenance on construction equipment such as refueling, oil changes or lubrication would only be permitted in designated area located at a minimum of 30 m from the shoreline in an area where erosion and sediment control measures and all precautions have been made to prevent oil, grease, antifreeze or other materials from inadvertently entering the ground or the surface water flow.
- Emergency spill kits will be located on site. The crew will be fully trained on the use of clean-up materials to minimize impacts of any accidental spills. The area would be monitored for leakage and in the unlikely event of a minor spillage the project manager would halt the activity and corrective measures would be implemented. Any spills would be immediately reported to the MOECC Spills Action Centre (1800 268-6060).
- Following the completion of construction, all construction materials will be removed from site.

Table 6 Summary of Impacts, Mitigation Measures and Residual Effects

**Note that the reader is directed to Section 5.2 for a more thorough list of mitigation measures. Any discrepancies between those listed in Section 5.2 and this table, those in 5.2 shall be considered accurate.**

| Activity | Natural Heritage Feature/Function | Potential Effect | Proposed Mitigation | Residual Effect |
|---|---|---|---|---|
| **Construction** | | | | |
| Vegetation Clearing in preparation development | Bird nests protected by MBCA or FWCA | No SAR or their habitat were found on Site with the possible exceptions of: the potential for Blanding's Turtle habitat (wetland) or for individuals to wander to enter the area and for bats to day-roost.<br><br>Removal of vegetation would destroy (temporarily or permanently) breeding habitat for birds.<br><br>Accidental harm to trees on neighbouring lands. | All vegetation clearing must occur outside all timing windows (Blanding's turtle active season, breeding birds, all species, and bat active season). Vegetation is to be cleared between October 16 and March 31.<br><br>Temporary turtle exclusion fencing shall be installed around the site during construction to prevent turtles from entering the site. Turn-arounds to be added to opening along the west side (short side near Franktown commercial development (as per the province's guidelines).<br><br>Workers will be educated on the potential for SAR in general.<br><br>If a SAR enters the work area | None |

| Activity | Natural Heritage Feature/Function | Potential Effect | Proposed Mitigation | Residual Effect |
|---|---|---|---|---|
| | | | during the construction period, any work that may harm the individual is to stop immediately and the supervisor will be contacted. No work will continue until the individual has left the area. These sightings will be reported to MECP and NHIC.<br><br>Should an individual be harmed or killed then work will stop and MECP will be contacted immediately. Sightings will be reported to NHIC.<br><br>Educate workers, that Blanding's Turtle is known to travel far from aquatic habitats and as such, they are to perform a daily sweep of the work area when they first arrive on-site during the turtle active season (typically April 16-October 15; timing affected by weather conditions). Also note that nests of other turtle species (i.e. Snapping Turtle) are protected. | |

| Activity | Natural Heritage Feature/Function | Potential Effect | Proposed Mitigation | Residual Effect |
|---|---|---|---|---|
| Construction of infrastructure, buildings and Grading | Urban wildlife habitat | Noise from machinery may also cause a disturbance to wildlife. | The recommended temporary exclusion fence during construction will also help keep other reptiles out of the site. Maintain sediment fencing as needed.<br><br>No work outside of limit of development.<br><br>Work during the daytime hours to prevent light disturbances.<br><br>Ensure that all equipment have the appropriate mufflers to reduce noise disturbances.<br><br>Construction staff will be informed of the SAR in the area (Appendix C).<br><br>Complete any other measures deemed necessary by MECP, following their review. | None provided that mitigation measures are properly implemented and maintained. |
| Accidents or Malfunctions | Soil and groundwater. | Spills or accidents during construction could impact the soil/groundwater. | All equipment should be well maintained, clean and free of leaks. | Unlikely |

| Activity | Natural Heritage Feature/Function | Potential Effect | Proposed Mitigation | Residual Effect |
|---|---|---|---|---|
| | Vegetation | Equipment brought in from other areas can increase the spread of invasive plant species. | Maintenance of construction equipment should occur where all precautions have been made to prevent oil, grease, antifreeze or other materials from inadvertently entering the ground or surface water.<br><br>Any machine coming from offsite should be cleaned and free of mud (to prevent the transfer of non-native vegetation).<br><br>Emergency spill kits should be located on site and the crew trained on their use.<br><br>Any spills will be reported immediately to MECP Spills Action Centre (1.800.268.6060). | |

## 6.0 CONCLUSION

The lands to be developed are situated at 355 Franktown Road and will be accessed from a new road being constructed on the east side of the development. The Site will be fully serviced. It is anticipated that most, if not all, of the existing vegetation will be removed (roughly 1.3 ha of mostly mixed white cedar forest). There were no waterbodies on the Site, but a small sliver of a tall shrub swamp extended from the lands to the north.

With respect to the potential for Endangered or Threatened habitat or species, the surveys found none (no birds or butternuts). The presence of the small piece of wetland means that there is a small potential for Blanding's turtle habitat. There was no turtle overwintering or nesting habitat, and the location of this Site is such that there is no movement corridor (lands are fully developed to the north, east and west). Precautionary measures during construction will be needed for this species (temporary exclusion fence and no clearing of vegetation during its active season). Whether any other measures are needed will be discussed with MECP. Since there are trees that are >10 cm in diameter (dbh), the recommended avoidance measure for bats is mandatory unless exit surveys are completed. The bat timing window also includes that of breeding birds which will avoid the potential of contravening the *Migratory Bird Convention Act*. The combined timing window (bats, turtles, birds) for clearing of vegetation will need to be adhered to clearing of vegetation between October 16 and March 31 **(no clearing of vegetation between April 1 and October 15).**

Since butternut health assessments are only valid for 2-years, it is recommended that a new BHA be completed between 1-2 years prior to construction.

All of the impacts can be mitigated through the use of common mitigation measures and no residual negative impacts to the natural environment are anticipated as a result of the development of the items included within this report. Any additional recommendations from MECP will be adhered to.

I trust that this report will meet your requirements. Should you have any questions or comments, please contact the undersigned.

Sincerely,

Bowfin Environmental Consulting Inc.

Michelle Lavictoire,

Biologist / Principal

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Appendix A: Background Information

**ATLAS OF Breeding Birds in Ontario**
Squares 18VQ19, 18VQ09, 18VR10, and 18VR00

| Common Name | Scientific Name | ABBO Category | SRank | ESA Reg. 230/08 SARO List Status | SARA Schedule 1 List of Wildlife SAR Status |
|---|---|---|---|---|---|
| Canada Goose | *Branta canadensis* | Confirmed | S5 | no status | no status |
| Wood Duck | *Aix sponsa* | Confirmed | S5 | no status | no status |
| Gadwall | *Anas strepera* | Possible | S4 | no status | no status |
| American Black Duck | *Anas rubripes* | Confirmed | S4 | no status | no status |
| Mallard | *Anas platyrhynchos* | Confirmed | S5 | no status | no status |
| Northern Shoveler | *Anas clypeata* | Probable | S4 | no status | no status |
| Green-winged Teal | *Anas crecca* | Probable | S4 | no status | no status |
| Blue-winged Teal | *Anas discors* | Confirmed | S4 | no status | no status |
| Common Goldeneye | *Bucephala clangula* | Possible | S5 | no status | no status |
| Hooded Merganser | *Lophodytes cucullatus* | Confirmed | S5B,S5N | no status | no status |
| Common Merganser | *Mergus merganser* | Confirmed | S5B,S5N | no status | no status |
| Ring-necked Pheasant | *Phasianus colchicus* | Possible | SNA | no status | no status |
| Ruffed Grouse | *Bonasa umbellus* | Confirmed | S4 | no status | no status |
| Wild Turkey | *Meleagris gallopava* | Confirmed | S5 | no status | no status |
| Common Loon | *Gavia immer* | Confirmed | S5B, S5N | no status | no status |
| Pied-billed Grebe | *Podilymbus podiceps* | Confirmed | S4B, S4N | no status | no status |
| American Bittern | *Botaurus lentiginosus* | Confirmed | S4B | no status | no status |
| Great Blue Heron | *Ardea herodias* | Confirmed | S4 | no status | no status |
| Green Heron | *Butorides virescens* | Confirmed | S4B | no status | no status |
| Turkey Vulture | *Cathartes aura* | Confirmed | S5B | no status | no status |
| Osprey | *Pandion haliaetus* | Confirmed | S5B | no status | no status |
| Northern Harrier | *Circus cyaneus* | Confirmed | S4B | no status | no status |
| Sharp-shinned Hawk | *Accipiter striatus* | Probable | S5 | no status | no status |
| Cooper's Hawk | *Accipiter cooperii* | Probable | S4 | no status | no status |
| Northern Goshawk | *Accipiter gentilis* | Confirmed | S4 | no status | no status |
| Red-shouldered Hawk | *Buteo lineatus* | Probable | S4B | no status | no status |
| Broad-winged Hawk | *Buteo platypterus* | Possible | S5B | no status | no status |
| Red-tailed Hawk | *Buteo jamaicensis* | Confirmed | S5 | no status | no status |

| Common Name | Scientific Name | ABBO Category | SRank | ESA Reg. 230/08 SARO List Status | SARA Schedule 1 List of Wildlife SAR Status |
|---|---|---|---|---|---|
| American Kestrel | *Falco sparverius* | Confirmed | S4 | no status | no status |
| Merlin | *Falco columbarius* | Probable | S5B | no status | no status |
| Virginia Rail | *Rallus limicola* | Confirmed | S5B | no status | no status |
| Sora | *Porzana carolina* | Confirmed | S4B | no status | no status |
| Common Gallinule | *Gallinula galeata* | Possible | S4B | no status | no status |
| American Coot | *Fulica americana* | Possible | S4B | no status | no status |
| Killdeer | *Charadrius vociferus* | Confirmed | S5B, S5N | no status | no status |
| Spotted Sandpiper | *Actitis macularia* | Confirmed | S5 | no status | no status |
| Upland Sandpiper | *Bartramia longicauda* | Probable | S4B | no status | no status |
| Common Snipe | *Gallinago delicata* | Confirmed | S5B | no status | no status |
| American Woodcock | *Scolopax minor* | Confirmed | S4B | no status | no status |
| Common Tern | *Sterna hirundo* | Confirmed | S4B | no status | no status |
| Rock Pigeon | *Columba livia* | Confirmed | SNA | no status | no status |
| Mourning Dove | *Zenaida macroura* | Confirmed | S5 | no status | no status |
| Black/Yellow-billed Cuckoo | *Coccyzus erythropthalmus/americanus* | Possible | S5B, S4B | no status | no status |
| Black-billed Cuckoo | *Coccyzus erythropthalmus* | Probable | S5B | no status | no status |
| Eastern Screech-Owl | *Megascops asio* | Possible | S4 | no status | no status |
| Great Horned Owl | *Bubo virginianus* | Confirmed | S4 | no status | no status |
| Barred Owl | *Strix varia* | Confirmed | S5 | no status | no status |
| Northern Saw-whet Owl | *Aegolius acadicus* | Probable | S4 | no status | no status |
| Common Nighthawk | *Chordeiles minor* | Confirmed | S4B | SC | THR |
| Eastern Whip-poor-will | *Caprimulgus vociferus* | Possible | S4B | THR | THR |
| Chimney Swift | *Chaetura pelagica* | Probable | S4B, S4N | THR | THR |
| Ruby-throated Hummingbird | *Archilochus colubris* | Confirmed | S5B | no status | no status |
| Belted Kingfisher | *Ceryle alcyon* | Confirmed | S4B | no status | no status |
| Yellow-bellied Sapsucker | *Sphyrapicus varius* | Confirmed | S5B | no status | no status |
| Downy Woodpecker | *Picoides pubescens* | Confirmed | S5 | no status | no status |
| Hairy Woodpecker | *Picoides villosus* | Confirmed | S5 | no status | no status |
| Northern Flicker | *Colaptes auratus* | Confirmed | S4B | no status | no status |
| Pileated Woodpecker | *Dryocopus pileatus* | Confirmed | S5 | no status | no status |
| Olive-sided | *Contopus cooperi* | Probable | S4B | SC | THR |

| Common Name | Scientific Name | ABBO Category | SRank | ESA Reg. 230/08 SARO List Status | SARA Schedule 1 List of Wildlife SAR Status |
|---|---|---|---|---|---|
| Flycatcher | | | | | |
| Eastern Wood-Pewee | *Contopus virens* | Confirmed | S4B | SC | SC |
| Yellow-bellied Flycatcher | *Empidonax flaviventris* | Possible | S5B | no status | no status |
| Alder Flycatcher | *Empidonax alnorum* | Confirmed | S5B | no status | no status |
| Willow Flycatcher | *Empidonax traillii* | Confirmed | S5B | no status | no status |
| Least Flycatcher | *Empidonax minimus* | Confirmed | S4B | no status | no status |
| Eastern Phoebe | *Sayornis phoebe* | Confirmed | S5B | no status | no status |
| Great Crested Flycatcher | *Myiarchus crinitus* | Confirmed | S4B | no status | no status |
| Eastern Kingbird | *Tyrannus tyrannus* | Confirmed | S4B | no status | no status |
| Blue-headed Vireo | *Vireo solitarius* | Possible | S5B | no status | no status |
| Warbling Vireo | *Vireo gilvus* | Confirmed | S5B | no status | no status |
| Red-eyed Vireo | *Vireo olivaceus* | Confirmed | S5B | no status | no status |
| Blue Jay | *Cyanocitta cristata* | Confirmed | S5 | no status | no status |
| American Crow | *Corvus brachyrhynchos* | Confirmed | S5B | no status | no status |
| Common Raven | *Corvus corax* | Confirmed | S5 | no status | no status |
| Purple Martin | *Progne subis* | Confirmed | S3S4B | no status | no status |
| Tree Swallow | *Tachycineta bicolor* | Confirmed | S4B | no status | no status |
| Northern Rough-winged Swallow | *Stelgidopteryx serripennis* | Confirmed | S4B | no status | no status |
| Bank Swallow | *Riparia riparia* | Confirmed | S4B | THR | THR |
| Barn Swallow | *Hirundo rustica* | Confirmed | S4B | THR | THR |
| Black-capped Chickadee | *Poecile atricapilla* | Confirmed | S5 | no status | no status |
| Red-breasted Nuthatch | *Sitta canadensis* | Probable | S5 | no status | no status |
| White-breasted Nuthatch | *Sitta carolinensis* | Confirmed | S5 | no status | no status |
| Brown Creeper | *Certhia familiaris* | Probable | S5B | no status | no status |
| Carolina Wren | *Thryothorus ludovicianus* | Possible | S4 | no status | no status |
| House Wren | *Troglodytes aedon* | Confirmed | S5B | no status | no status |
| Winter Wren | *Troglodytes troglodytes* | Probable | S5B | no status | no status |
| Sedge Wren | *Cistothorus platensis* | Possible | S4B | no status | no status |
| Marsh Wren | *Cistothorus palustris* | Confirmed | S4B | no status | no status |
| Ruby-crowned | *Regulus calendula* | Possible | S4B | no status | no status |

| Common Name | Scientific Name | ABBO Category | SRank | ESA Reg. 230/08 SARO List Status | SARA Schedule 1 List of Wildlife SAR Status |
|---|---|---|---|---|---|
| Kinglet | | | | | |
| Eastern Bluebird | *Sialia sialis* | Confirmed | S5B | no status | no status |
| Veery | *Catharus fuscescens* | Confirmed | S4B | no status | no status |
| Swainson's Thrush | *Catharus ustulatus* | Probable | S4B | no status | no status |
| Hermit Thrush | *Catharus guttatus* | Probable | S5B | no status | no status |
| Wood Thrush | *Hylocichla mustelina* | Confirmed | S4B | SC | THR |
| American Robin | *Turdus migratorius* | Confirmed | S5B | no status | no status |
| Gray Catbird | *Dumetella carolinensis* | Confirmed | S4B | no status | no status |
| Northern Mockingbird | *Mimus polyglottos* | Probable | S4 | no status | no status |
| Brown Thrasher | *Toxostoma rufum* | Confirmed | S4B | no status | no status |
| European Starling | *Sturnus vulgaris* | Confirmed | SNA | no status | no status |
| Cedar Waxwing | *Bombycilla cedrorum* | Confirmed | S5B | no status | no status |
| Golden-winged Warbler | *Vermivora chrysoptera* | Possible | S4B | SC | THR |
| Nashville Warbler | *Vermivora ruficapilla* | Confirmed | S5B | no status | no status |
| Yellow Warbler | *Dendroica petechia* | Confirmed | S5B | no status | no status |
| Chestnut-sided Warbler | *Dendroica pensylvanica* | Confirmed | S5B | no status | no status |
| Magnolia Warbler | *Dendroica magnolia* | Probable | S5B | no status | no status |
| Black-throated Blue Warbler | *Dendroica caerulescens* | Possible | S5B | no status | no status |
| Yellow-rumped Warbler | *Dendroica coronata* | Probable | S5B | no status | no status |
| Black-throated Green Warbler | *Dendroica virens* | Confirmed | S5B | no status | no status |
| Pine Warbler | *Dendroica pinus* | Probable | S5B | no status | no status |
| Black-and-white Warbler | *Mniotilta varia* | Confirmed | S5B | no status | no status |
| American Redstart | *Setophaga ruticilla* | Confirmed | S5B | no status | no status |
| Ovenbird | *Seiurus aurocapillus* | Confirmed | S4B | no status | no status |
| Northern Waterthrush | *Seiurus noveboracensis* | Confirmed | S5B | no status | no status |
| Mourning Warbler | *Oporornis philadelphia* | Possible | S4B | no status | no status |
| Common Yellowthroat | *Geothlypis trichas* | Confirmed | S5B | no status | no status |
| Canada Warbler | *Wilsonia canadensis* | Probable | S4B | SC | THR |

| Common Name | Scientific Name | ABBO Category | SRank | ESA Reg. 230/08 SARO List Status | SARA Schedule 1 List of Wildlife SAR Status |
|---|---|---|---|---|---|
| Eastern Towhee | *Pipilo erythrophthalmus* | Possible | S4B | no status | no status |
| Chipping Sparrow | *Spizella passerina* | Confirmed | S5B | no status | no status |
| Field Sparrow | *Spizella pusilla* | Probable | S4B | no status | no status |
| Vesper Sparrow | *Pooecetes gramineus* | Confirmed | S4B | no status | no status |
| Savannah Sparrow | *Passerculus sandwichensis* | Confirmed | S4B | no status | no status |
| Song Sparrow | *Melospiza melodia* | Confirmed | S5B | no status | no status |
| Swamp Sparrow | *Melospiza georgiana* | Confirmed | S5B | no status | no status |
| White-throated Sparrow | *Zonotrichia albicollis* | Confirmed | S5B | no status | no status |
| Dark-eyed Junco | *Junco hyemalis* | Possible | S5B | no status | no status |
| Scarlet Tanager | *Piranga olivacea* | Confirmed | S4B | no status | no status |
| Northern Cardinal | *Cardinalis cardinalis* | Confirmed | S5 | no status | no status |
| Rose-breasted Grosbeak | *Pheucticus ludovicianus* | Confirmed | S4B | no status | no status |
| Indigo Bunting | *Passerina cyanea* | Confirmed | S4B | no status | no status |
| Bobolink | *Dolichonyx oryzivorus* | Confirmed | S4B | THR | THR |
| Red-winged Blackbird | *Agelaius phoeniceus* | Confirmed | S4 | no status | no status |
| Eastern Meadowlark | *Sturnella magna* | Confirmed | S4B | THR | THR |
| Common Grackle | *Quiscalus quiscula* | Confirmed | S5B | no status | no status |
| Brown-headed Cowbird | *Molothrus ater* | Confirmed | S4B | no status | no status |
| Baltimore Oriole | *Icterus galbula* | Confirmed | S4B | no status | no status |
| Purple Finch | *Carpodacus purpureus* | Confirmed | S4B | no status | no status |
| House Finch | *Carpodacus mexicanus* | Confirmed | SNA | no status | no status |
| Pine Siskin | *Carduelis pinus* | Probable | S4B | no status | no status |
| American Goldfinch | *Carduelis tristis* | Confirmed | S5B | no status | no status |
| Evening Grosbeak | *Coccothraustes vespertinus* | Confirmed | S4B | SC | SC |
| House Sparrow | *Passer domesticus* | Confirmed | SNA | no status | no status |

Status updated May 4, 2021

**SRANK DEFINITIONS**

**S2** Imperiled, Imperiled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.

**S3** Vulnerable, Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.

**S4** Apparently Secure, Uncommon but not rare; some cause for long-term concern due to declines or other factors.

**S5** Secure, Common, widespread, and abundant in the nation or state/province.
**SNA** Not Applicable, A conservation status rank is not applicable because the species is not a suitable target for conservation activities.
**S#B** Breeding
**S#N** Non-Breeding

**SARO STATUS DEFINITIONS**
**THR** Threatened: A species that is at risk of becoming endangered in Ontario if limiting factors are not reversed.
**SC** Special Concern: A species with characteristics that make it sensitive to human activities or natural events.

**SARA STATUS DEFINITIONS**
**THR** Threatened, a wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.
**SC** Special Concern, a wildlife species that may become threatened or endangered because of a combination of biological characteristics and identified threats.

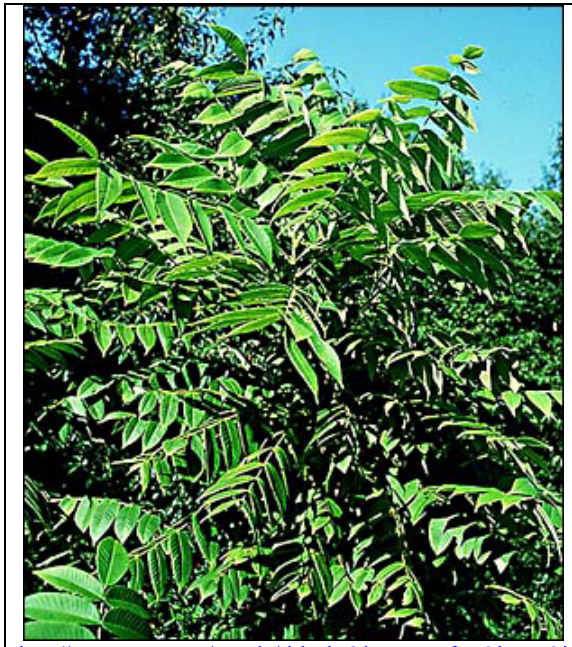
Appendix B: SAR Hand-Out

The following table provides photographs and general descriptions of potential species at risk that may occur within the project area and information on what actions to take should any of these species be observed.

- Endangered and Threatened species are protected and cannot be harmed, harassed, or killed and in some cases their habitats are also protected. These individuals will only be handled by qualified person and only if the individual is in imminent threat of harm. An authorization under the ESA 2007 would be required to handle individuals that are not in imminent threat of harm.
- If a SAR enters the work area during the construction period, any work that may harm the individual is to stop immediately and the supervisor will be contacted. No work will continue until the individual has left the area.
- Should an individual be harmed or killed then work will stop, and the Ministry of Environment, Conservation and Parks (MECP) will be contacted immediately.
- Educate staff and contractors on the potential for SAR to be in the area and their significance.
- Mitigation measures listed elsewhere in this report are also applicable to this section.
- If a SAR is encountered, this information will be provided to the Natural Heritage Information Centre (Report rare species (animals and plants) | Ontario.ca)

| Photograph | Description | Action to be Taken |
|---|---|---|
|  <br>http://birdweb.org/Birdweb | **Barn Swallow**<br>• Swallow with a long tail which is deeply forked in adult males<br>• An orange front (no white on the forehead)<br>• Narrow pointed wings<br>• Juveniles have a white band across the top of the tail.<br><br>THREATENED | • Stop any activity that may cause harm to this specie and contact project Supervisor.<br>• Individuals should only be encouraged to move if it is in immediate harm's way. These animals can only be handled by a qualified biologist when it is in imminent threat of harm, otherwise an ESA 2007 authorization will be required. |

| Photograph | Description | Action to be Taken |
|---|---|---|
|  <br>Photo: Royal Ontario Museum website<br>http://www.rom.on.ca/ontario/risk.php | **Blanding's Turtle**<br>• Medium sized turtle (12.5-28 cm)<br>• Bright yellow on chin and throat<br>• Shall is dark light-coloured sports or lines<br><br>THREATENED | • Take a photograph and record the date observed, name of person who observed it<br>• If turtle is located within the construction site, then construction activities that may impact it must STOP until the turtle is clear of the site.<br>• Contact supervisor |

| | | |
|---|---|---|
|  <br>http://www.rom.on.ca/ontario/risk.php?doc_type=fact&lang=&id=298 | **Butternut**<br>• Medium sized tree with multiple leaflets.<br>• Similar to walnuts, but walnuts usually have a small or missing leaflet at the tip<br><br>**ENDANGERED** | • Note that none have been found on-site.<br>• If any are located, any construction activities within 50 m of an induvial to be retained shall be carried out carefully in order to ensure that no harm comes to the tree (i.e. no heavy machinery, no excavation or stockpiling within 50 m of the tree, no braking of branches, leaves). |