



FINAL

Environmental Impact Study

9226 County Road 93, Midland, Ontario

Prepared for:

Plaza Reit

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Toronto, Ontario M2N 2Y8

October 20, 2023

Pinchin File: 295383



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Issued on: October 20, 2023
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TABLE OF CONTENTS

1.0 INTRODUCTION 1

2.0 POLICY CONTEXT 1

 2.1 Provincial Policy Statement 2

 2.2 County of Simcoe Official Plan 2

 2.2.1 Forest Conservation By-law 2

 2.3 Town of Midland Official Plan 2

3.0 STUDY METHODOLOGY 3

 3.1 Background Review and Agency Consultation 3

 3.2 Field Assessment 4

 3.2.1 Vegetation Surveys 4

 3.2.3 Breeding Bird Surveys 5

 3.2.4 Snake Surveys 5

 3.2.5 Species at Risk 5

 3.2.6 Incidental Wildlife Observations 6

4.0 EXISTING CONDITIONS 6

 4.1 Landform, Physiography and Geology 6

 4.2 Vegetation Surveys 7

 4.2.1 Vascular Plants 7

 4.2.2 Vegetation Communities 7

 4.3 Breeding Bird Surveys 9

 4.4 Snake Surveys 9

 4.5 Incidental Wildlife Observations 10

 4.6 Woodland Assessment 11

 4.7 Species at Risk Screening 11

 4.8 Significant Wildlife Habitat Screening 13

 4.9 Natural Heritage System and Ecological Connectivity 13

5.0 PROPOSED DEVELOPMENT 14

 5.1 Development Constraints 14

6.0 IMPACT ASSESSEMENT 15

 6.1 Direct Impacts 15

 6.2 Indirect Impacts 15

 6.3 Residual and Cumulative Effects Assessment 16

7.0 RECOMMENDED AVOIDANCE AND MITIGATION MEASURES 17

8.0 CONCLUSION 18

9.0 CLOSURE 19

10.0 REFERENCES 19

11.0 LIMITATIONS 21



APPENDICES

APPENDIX A	FIGURES
APPENDIX B	SUPPLEMENTARY INFORMATION
APPENDIX C	AGENCY CONSULTATION RECORD
APPENDIX D	VASCULAR PLANT LIST
APPENDIX E	SELECTED SITE PHOTOGRAPHS
APPENDIX F	BREEDING BIRD SURVEY TABLE
APPENDIX G	SPECIES AT RISK AND SIGNIFICANT WILDLIFE HABITAT SCREENING
APPENDIX H	FIELD DATA FORMS



1.0 INTRODUCTION

Pinchin Ltd. (Pinchin) was retained by Plaza Reit (Client) to conduct an Environmental Impact Study (EIS) for the subject property located at 9226 Country Road 93, Midland, Ontario (Site) in support of a proposed mixed-use designation. The location of the Site with general surrounding area is shown on Figure 1 in **Appendix A**. Based on the pre-consultation meeting held October 19, 2021, and March 1, 2023, with the Town of Midland, an application for an Official Plan Amendment is required to facilitate the proposed mixed-use designation. Agency consultation with planning and ecology staff from the Town of Midland and the Severn Sound Environmental Association (SSEA) to scope this EIS was conducted prior to the completion of this EIS.

The Site is located southwest of County Road 93 in a commercial area. The Site is bounded by commercial plazas to the north, residential areas to the north and south, and natural woodlands to the west. Currently the majority of the Site is developed with structures, parking areas, and sections of manicured lawn with landscape trees. The Site and its immediate surrounding area as the identified Study Area for this EIS can be seen on Figure 2 in **Appendix A**. As shown on Figure 2, the Site can be visualized in two different sections, developed and undeveloped. The undeveloped portion is towards the rear of the Site and consists of natural heritage features including meadow, woodlands, and a stormwater management pond.

This EIS report was prepared to: identify key natural heritage features present on or immediately adjacent to the Site and characterize their ecological functions; evaluate the environmental effects that a development proposal that might reasonably be expected to have an impact on the natural features; and provide recommendations of mitigation measures to avoid or minimize the potential impacts. This EIS report will be prepared in general accordance with the policies and guidelines from the Town of Midland Official Plan and Simcoe County Official Plan.

2.0 POLICY CONTEXT

The following provincial, regional, and municipal legislation and policies were reviewed prior to an evaluation of the natural heritage features and functions of the Site and adjacent area was undertaken:

- Provincial Policy Statement (2020);
- County of Simcoe Official Plan (2016 Consolidation); and
- Town of Midland Official Plan (2021 Consolidation).

The sections below provide a summary of the above legislation and policies applicable to the development planning of the Site.



2.1 Provincial Policy Statement

The Provincial Policy Statement (PPS) 2020 sets a policy foundation for regulating development and land use in the Province of Ontario. It sets out guidelines for development while protecting resources of interest to the province, public health and safety and the quality of the natural environment. The PPS does support development and improved land use for planning, management, and growth, but it does so in ways to enhance communities through efficient land use and environmental management and protection. The PPS states that Site alteration shall not be permitted unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions (Ministry of Municipal Affairs and Housing, 2020).

2.2 County of Simcoe Official Plan

The Study Area is subject to the policies and designations of the County of Simcoe Official Plan (CSOP). The most recent consolidation of the CSOP was released in 2016. The entirety of the Site is classified as “Settlements” as seen in Schedule 5.1 – Land Use Designations. This map can be seen in **Appendix B** for reference. ‘Settlements’ are areas which are intended to be developed as mixed-use to build strong and vibrant central places for the community (County of Simcoe, 2016). As stated in the CSOP, a development application must include an EIS in order to be considered complete. As the Site includes a proposed development taking place marginally within the present natural heritage features, an EIS is required to assess the existing conditions of the Site.

2.2.1 Forest Conservation By-law

The County of Simcoe Forest Conservation By-law 6894 is intended to prohibit and regulate the destruction of trees and to conserve the forest landscape and prevent over harvesting (County of Simcoe, 2020). It sets out restrictions on tree destruction or removal in order to achieve the objectives of the County’s Official Plan by contributing to ecosystem health. As the proposed development will require vegetation alteration and/or removal, an assessment of the woodland and a permit may be required in order to continue development and ensure that the appropriate buffers are in place.

2.3 Town of Midland Official Plan

The most recent consolidation of the Town of Midland Official Plan (TMOP) was released in 2021. The Site is classified as “Commercial Corridor” and “Natural Heritage” as seen in Schedule C – Land Use Map of the TMOP. This map can be seen in **Appendix B** for reference. As stated in the TMOP, development within natural heritage features is prohibited unless there are no reasonable alternatives; additionally, applications must be accompanied by an EIS (Town of Midland, 2019). As the proposed development will take place at the edge of existing natural heritage features, an EIS is required for regulatory review and approval prior to the development construction.



3.0 STUDY METHODOLOGY

3.1 Background Review and Agency Consultation

A desktop background review of available information sources relating to the Study Area was conducted prior to a site reconnaissance. Included in the review were natural heritage features present on the Site and in the surrounding area, historical species occurrences available from the Natural Heritage Information Centre (NHIC), existing wildlife data records, Species of Conservation Concern lists and other relevant information. Information and documents available from the Client including site history and Site plan were also reviewed for this Site. Applicable policies and guidelines including the Town of Midland Official Plan and County of Simcoe Official Plan. This document references the Ministry of Northern Development, Mining, Natural Resources and Forestry's (NDMNRF) Natural Heritage Reference Manual (NDMNRF, 2010) and the PPS which were reviewed for this report.

Additionally, an agency consultation with the Town of Midland planning staff was carried out by the Client and designated planner for the proposed mixed-use designation on the Site. The EIS report was requested as part of the proposed Amendment. As mentioned above, a scoping with the SSEA for this EIS was conducted prior to the completion of this EIS. An agency consultation record is included in **Appendix C** for reference. The basis of these agency consultations along with the results of the background and field reviews was used to establish the scope of this EIS report.

Natural heritage resources with the potential to be present on the Study Area were identified through the following information sources:

- An assessment of habitat through aerial photographs and online mapping:
 - Land Information Ontario (MNRF, 2020a); and
 - Google Earth.
- A review of historical occurrence records for Species of Conservation Concern within or adjacent to the Study Area:
 - Natural Heritage Information Centre (MNRF, 2020b);
 - Atlas of the Breeding Birds of Ontario (BSC, 2020);
 - Atlas of the Mammals of Ontario (Dobbyn, 1994);
 - Ontario Reptile and Amphibian Atlas (ON, 2020);
 - Ontario Butterfly Atlas (TEA, 2020);
 - Ontario Regulation 230/08 Species at Risk in Ontario List (COSSARO, 2020); and
 - Provincial and federal assessments, recovery strategies, and management plans.



3.2 Field Assessment

Pinchin conducted field studies to characterize the natural heritage features present on the Site and in the surrounding landscape. Field data forms for Ecological Land Classification, Breeding Bird Surveys, and Snake Surveys as requested by the SSEA can be found in **Appendix H** for reference. A summary of methodologies for the field work completed by Pinchin is provided below for reference.

3.2.1 Vegetation Surveys

Vegetation communities within the Study Area were assessed and described using the provincial Ecological Land Classification system. The *Ecological Land Classification for Southern Ontario: First Approximation and its Application* (Lee et al., 1998) was referenced to classify the habitats to ecosite. Ecosites classified within the Study Area were then applied to ELC polygons mapped using aerial imagery.

The vegetation communities in summer were sampled for their structure, species composition and habitat characteristics. This information was supplemented by floristic surveys at the time of the visit. Species names generally follow the nomenclature of Flora Ontario (Newmaster and Ragupathy, 2012) and the NHIC.

3.2.2 Woodland Assessment

The woodlands present on Site are assessed based on ecological importance, species composition, age and history of woodland, and contributions to the surrounding landscape. Other factors which are considered are the size, location, and proximity to other natural heritage features in the surrounding area. These factors are assessed based on the observations made in the field and literature reviewed during the desktop background review. The County of Simcoe utilizes the criteria outlined by the MNRF to be identified as Significant Woodlands. For municipalities with woodland cover of 16-30%, such as the one where the Site is located, one or more of the following criteria must be met for a woodland to be considered significant (MNRF, 2012):

- a) Woodlands 20 ha in size or larger
- b) 8 ha of interior habitat (>100 m from woodland edge)
- c) 0.5-20 ha in size (depending on circumstances) and within 30 m of a significant natural feature or fish habitat.
- d) 1-20 ha in size (depending on circumstances) and located between two other significant features, each of which is within 120 m.
- e) 0.5- 10 ha in size (depending on circumstances) and within 50 m of a sensitive groundwater discharge, sensitive recharge, sensitive headwater area, watercourse of fish habitat.



- f) 0.5-10 ha in size (depending on circumstances) and greater than 100 years old or with rare species composition.

Each of these woodland evaluation criteria will be discussed in Section 4.0 below.

3.2.3 *Breeding Bird Surveys*

Breeding bird surveys were carried out during the breeding bird season according to the Ontario Breeding Bird Atlas (OBBA; Cadman and Kopysh, 2001) protocol. Surveys were conducted between dawn and five hours after dawn during appropriate weather and consisted of both standardized 5-minute point counts at six pre-determined sites within the property and active searching for evidence of breeding birds according to the OBBA breeding evidence guidelines.

Point count sites were selected to minimize overlap and to incorporate a variety of habitat types. During the five-minute period, the surveyor recorded all birds seen or heard from the stationary position and indicated whether individuals were within a 100 m radius.

In addition, the surveyor recorded any breeding behaviours (i.e., nest building, courtship displays, etc.) that were observed on Site. Two breeding bird surveys, one week apart, were conducted on the Site as part of the field assessment program.

3.2.4 *Snake Surveys*

Visual Encounter Surveys (VES) for snakes should be carried out under 1). sunny conditions and when air temperature is between 10 and 25 °C or 2). overcast conditions and when air temperature is between 15 and 30 °C (OMNRF, 2016). Surveys can be carried out between 9 am and 5 pm. Surveys for basking snakes should not be carried out on days with wind speeds higher than 24 km/h. Surveys with Artificial Cover Objects (ACO) can be used to create suitable microhabitat for snakes that can be easily and systematically searched. ACO can include a wide range of materials, but flat pieces of metal or wood (typically plywood) are most commonly used for snake surveys. ACO should be deployed in open and semi-open habitats that receive ample sun exposure. ACO should be in place for two weeks prior to beginning surveys. ACO can be a very effective method of detecting cryptic, difficult-to-survey-for snake species, especially in environments where natural cover is limited or cannot be easily searched (OMNRF, 2016).

3.2.5 *Species at Risk*

The *Endangered Species Act* (ESA) 2007 provides protection from harm, harassment, or captures to species listed as extirpated, endangered, or threatened on the Species at Risk Ontario List.

Additional protection is provided to the habitat of endangered or threatened species on the Species at Risk Ontario List. Species habitat includes anywhere the species depends on for reproduction, rearing, hibernation, migration, or feeding; or prescribed habitat as defined in Ontario Regulation 242/08 of the General Regulation.



The likelihood of occurrence for Species at Risk was assessed qualitatively based on the ability of the habitat to meet one or more life requisites for each Species at Risk identified during the desktop assessment. If habitat suitable for Species at Risk was identified, additional survey effort was applied in that area. If incidental Species at Risk were observed, they were recorded throughout the field assessment within and adjacent to the Site.

3.2.6 *Incidental Wildlife Observations*

Wildlife was surveyed as part of general wildlife surveys during the Site visits. These surveys involved general coverage recording all species observations and signs, including tracks / trails, scat, burrows, dens, browse, and vocalizations. The wildlife surveys occurred during the coincident surveys for vegetation communities and vascular plants. Significant wildlife habitat was assessed according to the MNRF Natural Heritage Reference Manual (MNRF 2010), Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNRF, 2015), and the MNRF Significant Wildlife Habitat Technical Guide (MNRF 2000).

4.0 EXISTING CONDITIONS

4.1 Landform, Physiography and Geology

The Site is bounded by a pathway and forested land to the north, a commercial plaza to the east, Sundowner Road and residential dwellings to the south, and meadows and forested land to the west. The western portion of the Site was formerly being part of the function of the plaza at its rear with a septic bed, transformer and a stormwater management pond still being operated and maintained. The field around these structures became overgrown when the commercial plaza was switched to municipal services. The Ontario Geological Survey classifies the bedrock of the Site as being of the Shadow Lake Formation consisting of limestone, dolostone, shale, arkose and sandstone. The surficial geology of the Site consists of sand, gravel, minor silt, and clay described as foreshore and basinal deposits (Ontario Geological Survey, 1991).

The Study Area is situated on the boundary of Ecodistrict 6E – 6, this is also known as the Barrie Ecodistrict. This ecodistrict reaches from Collingwood in the west to Bolsover in the east. The landscape throughout this ecodistrict consists of rolling topography with cropland, pasture and extensive areas of lake beds and shorelines. The soils in the Study Area are classified by Agriculture Canada and the Ministry of Agriculture and Food as primarily luvisol soils (Soils of Canada, 2021).

Soil samples taken at the time of Site visit indicated primarily loam and sandy loam soils. Wetland indicators (mottles and gley) were not observed in the vegetation communities described below. Gley occurs when the oxygen in the soil becomes depleted (due to water saturation) resulting in the iron being completely reduced taking on a blue-grey colouration. This reduced iron is also mobile and can re-oxidize, producing reddish, yellow, or orange spotting, which is known as mottling.



Both of these are indicators of wetland presence due to the water table being close to the surface.

A detailed review and analysis on the vegetation communities and potential natural features on the Site are provided in Section 4.2 below.

4.2 Vegetation Surveys

4.2.1 Vascular Plants

The vegetation survey was conducted in the spring and summer seasons on July 15, 2021, April 17, 2023, and July 12 2023. The weather was overcast with light showers and a high of 24° Celsius on July 1, 2021, 6° Celsius and partly cloudy on April 17, 2023, and 18° Celsius and partly cloudy on July 12, 2023. A total of 41 plant species were identified on the Site from the vegetation surveys. None of these species were listed as a provincially *Endangered* or *Threatened* species under the *Endangered Species Act 2007*. A full vascular plant species inventories as observed on the Site during the field assessment program throughout the Site is catalogued in **Appendix D**.

4.2.2 Vegetation Communities

In total, five vegetation communities were identified on the Site as a result of the survey conducted. These communities present on the Site include a Stormwater Management Pond, Power Generation (a Transformer), a Dry-Fresh Poplar Deciduous Forest, a Dry-Fresh Poplar Mixed Forest, and a Dry-Fresh Mixed Meadow. These vegetation communities with their ELC polygons surveyed on the Site and the surrounding area are mapped on Figure 3 in **Appendix A**. Selected site photographs of the vegetation communities are included in **Appendix E** for reference.

Stormwater Management Pond (CVI_3): This community is found in the western portion of the Site adjacent to the northwest property boundary. It consists of a manmade pond surrounded by vegetation. The species within the vegetated area are mostly common successional species consisting of Willow (*Salix spp*), Balsam Poplar (*Populus balsamifera*), Canada Goldenrod (*Solidago canadensis*), Queen Anne's Lace (*Daucus carota*), Common Daisy (*Bellis perennis*), Ostrich Fern (*Matteuccia struthiopteris*), White Pine (*Pinus strobus*), Red Oak (*Quercus rubra*) and Horsetail (*Elocharis*).

Power Generation (CVI_4): This area of manmade structure is located in the east central portion of the Site and consists of a transformer. It is surrounded by Dry – Fresh Poplar Deciduous to the east and west and Dry – Fresh Mixed Meadow to the north and south.



Dry-Fresh Mixed Meadow (MEMM3): This vegetated community occupies the majority of the Site. It appears that this area was cleared before and has since been allowed to naturalize. The community primarily consists of common native and successional species; however, some invasive and exotic species were also observed throughout. The observed species include Queen Anne's Lace, Common Selfheal (*Prunella vulgaris ssp. Vulgaris*), Common Daisy, Common Violet (*Viola sororia*), Bird's-foot Trefoil (*Lotus corniculatus*), Spotted Knapweed (*Centaurea stoebe*), Cow Vetch (*Vicia cracca*), Common Milkweed (*Asclepias syriaca*), Spreading Dogbane (*Apocynum androsaemifolium*), Bouncing Bet (*Saponaria officinalis*), Smooth Brome (*Bromus inermis*), Viper's Bugloss (*Echium vulgare*), Hoary Alysum (*Berteroa incana*), Virginia Creeper (*Parthenocissus quinquefolia*), Orchard Grass (*Dactylis glomerata*) and White Sweet Clover (*Melilotus albus*). Along the edges of this community saplings of Trembling Aspen (*Populus tremuloides*) and Staghorn Sumac (*Rhus typhina*) were also observed. Within the meadow community are several manholes and pipes throughout that are associated with a septic field buried under the meadow community. Additionally in April 2023, several tents were observed throughout the community suggesting that individuals may be squatting on the Site.

Dry-Fresh Poplar Mixed Forest (FOMM5-2): This vegetated community begins at the edge of the Meadow and is located in the southeastern and northeastern portion of the vegetated area within the Site, as well as to the south of the Stormwater Management Pond. The species composition of the canopy layer in this area consists of mostly common successional Trembling Aspen, Balsam Poplar (*Populus balsamifera*), White Ash (*Fraxinus americana*), Large-toothed Aspen (*Populus grandidentata*), Sugar Maple (*Acer saccharum*) and the introduced Scot's Pine (*Pinus sylvestris*). A subcanopy of juvenile White Ash, Trembling Aspen, Scot's Pine and White Pine, along with Staghorn Sumac was present in this area. A sparse ground cover layer in this area consists of Musk Mallow (*Malva moschata*), Canada Goldenrod, Poison Ivy (*Toxicodendron radicans*), Virginia Creeper (*Parthenocissus quinquefolia*), Orange Day Lily (*Hemerocallis fulva*), Timothy (*Phleum pratense*), False Solomon Seal (*Maianthemum racemosum*) and Ox-Eye Daisy (*Leucanthemum vulgare*). The presence of exotic and invasive species within the community is likely a result of being introduced while the Site was previously managed.

Dry – Fresh Poplar Deciduous Forest (FODM3-1): This vegetated community occurs in two small patches, centrally in the vegetated area of the Site and to the north and south of the on-Site transformer. The community is surrounded by the Dry-Fresh Mixed Meadow. The forest is dominated by White Ash, Trembling Aspen and Balsam Poplar. While the groundcover and subcanopy is composed of Orchard Grass (*Dactylis glomerata*), Queen Anne's Lace, Cow Vetch, Prairie Fleabane (*Erigeron strigosus*), Canada Goldenrod, Timothy, Wild Grape (*Vitis cinifera*), Bush Honeysuckle (*Diervilla lonicera*).

4.3 Breeding Bird Surveys

A total of 20 avian species was seen or heard at or in the vicinity of the Site during the breeding bird season on June 30, 2021, and July 9, 2021. Breeding Bird Surveys were taken by a qualified Avian Biologist. The weather on the first survey was 23 °C and sunny, with a windspeed of 1 based on the Beaufort wind scale and 20% cloud cover. Further, the weather on the second survey was 16 °C and sunny, with a windspeed of 1 based on the Beaufort wind scale and 10% cloud cover. The survey route and point count locations of these two breeding bird surveys as per the OBBA protocol are shown on Figure 4 in **Appendix A** for reference.

Of the 20 species surveyed three species were confirmed to be breeding, plus an American Crow fledged young that may have been from the site (or elsewhere), 16 species were possible breeders. None of the avian species surveyed are protected as *Threatened* or *Endangered* under the Species at Risk Act 2002 (SARA) and the Ontario Endangered Species Act 2007 (ESA). All the species observed are ranked as S5 (secure), S4 (apparently secure) or SNA (non-native). The statuses of observed species, their provincial NHIC rank (SRank), and the likelihood of their breeding at the Site are summarized in **Appendix F**. As mentioned above, Breeding Bird Forms are found in **Appendix H** for reference.

4.4 Snake Surveys

For this Site to date a total of seven rounds of targeted VES and five rounds of ACO snake surveys took place in the summer of 2023, with a total of four sightings of Not-at-Risk snakes. These surveys were started on July 12, 2023, and completed on September 7, 2023, with a map of the survey locations found on Figure 5 in **Appendix A**.

On July 12, ACO boards were initially placed according to NDMNRF's survey methodology, and the first VES were conducted on the Site. Five ACOs were laid in suitable habitats and in the meadow community on the Site, with their locations shown on Figure 5. The VES took place between 9 – 11 am and weather conditions were 18° and partly cloudy. During this survey an adult Eastern Gartersnake (*Thamnophis sirtalis sirtalis*) was observed at the eastern edge of the mixed meadow community. On July 20, VES and ACO surveys were conducted from 10:24 – 11:43 am with weather conditions of 23° and cloudy. During this survey an adult Eastern Garter Snake was also observed slithering in the mixed meadow between ACO 2 and ACO 3. On July 25, VES and ACO surveys were conducted between 10:34 – 11:37 am with weather conditions of 23° and partly cloudy. During this survey no snakes were observed. On July 26, VES and ACO surveys were conducted from 8:00-9:20 am with weather conditions of 22° and sunny. During this survey an Eastern Gartersnake was observed slithering in the mixed meadow between ACO 2 and ACO 3. On August 1, VES and ACO surveys were conducted between 9:55 – 11:01 am with weather conditions of 20° and sunny. During this survey, no snakes were observed. On August 14, VES and ACO surveys were conducted from 8:20-9:20 am with weather conditions ranging from 17-18° and sunny.



During this survey no snakes were observed. On August 16, VES and ACO surveys were conducted from 10:35-11:40 am with weather conditions of 22° and sunny. During these surveys one Eastern Gartersnake was observed slithering through the mixed meadow north of ACO 1. It is noteworthy that during snake surveys, off-leash dogs were observed traversing in the mowed meadow and at forest edges on the Site.

On August 22, VES and ACO surveys were conducted from 8:00- 9:02 am with weather conditions of 19-20° and sunny. During this survey no snakes were observed. On August 25, VES and ACO surveys were conducted from 8:18-9:19 am with weather conditions of 18° and overcast. During these surveys one Eastern Gartersnake was observed under coverboard 5. On August 30, VES and ACO surveys were conducted from 9:30-10:30 am with weather conditions of 16° and overcast. During these surveys one Eastern Gartersnake was observed under coverboard 4. On August 30, VES and ACO surveys were conducted from 9:30-10:30 am with weather conditions of 16° and partially cloudy. During these surveys one Eastern Gartersnake was observed under coverboard 4. On August 31, VES and ACO surveys were conducted from 9:30-10:30 am with weather conditions of 16-17° and partially cloudy. During these surveys one Eastern Gartersnake was observed under coverboard 5. On September 7, VES and ACO surveys were conducted from 9:45-10:45 am with weather conditions of 18-19° and sunny. During this survey no snakes were observed.

In summary, after the VES and ACO surveys were completed, no SAR snakes were observed on the Site. An adult Eastern Gartersnake was observed slithering in the mixed meadow during the VES surveys on July 12, July 20, July 26, August 16, August 25, August 30 and August 31. As mentioned above, Snake Survey Forms are found in **Appendix H** for reference.

4.5 Incidental Wildlife Observations

A limited number of wildlife were encountered on the Site during the field surveys conducted in the spring and summer seasons likely due to the anthropogenic influences on and north of the Site. The following incidental wildlife were observed during the vegetation survey within the Study Area:

- American Goldfinch (*Spinus tristis*)
- American Robin (*Turdus migratorius*)
- Black-capped Chickadee (*Poecile atricapillus*)
- Monarch (*Danaus plexippus*)
- Ring-billed Gull (*Larus delawarensis*)
- Turkey Vulture (*Cathartes aura*)
- Wild Turkey (*Meleagris gallopavo*)



All species observed incidentally on the Site are common to the area with the exception of the Monarch which is a Special Concern species. No other SAR species were observed incidentally on the Site.

4.6 Woodland Assessment

The Site contains two woodland communities including a Dry-Fresh Poplar Deciduous Forest and a Dry-Fresh Poplar Mixed Forest, both of which are early successional forests. The following criteria are from the Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement. Woodlands meeting one of more of the following criteria should be considered as candidate significant woodlands.

- a) Woodlands 20 ha in size or larger
- b) 8 ha of interior habitat (>100 m from woodland edge)
- c) 0.5-20 ha in size (depending on circumstances) and within 30 m of a significant natural feature or fish habitat.
- d) 1-20 ha in size (depending on circumstances) and located between two other significant features, each of which is within 120 m.
- e) 0.5- 10 ha in size (depending on circumstances) and within 50 m of a sensitive groundwater discharge, sensitive recharge, sensitive headwater area, watercourse of fish habitat
- f) 0.5-10 ha in size (depending on circumstances) and greater than 100 years old or with rare species composition.

Based on the significant woodland assessment criteria above, the woodland patches (Dry-Fresh Poplar Deciduous Forest and Dry-Fresh Poplar Mixed Forest) on the Site would not be considered significant as assessed in **Table 1** below, as it is small and fragmented and does not contain any natural heritage features or old growth/rare species. However, the large woodland to the west of the Site and further northwest beyond the SWM management pond would be considered significant due to it containing or being larger than 20 ha, contiguous, interior habitat, and potentially linking other significant features in this region of the County of Simcoe. A 5 m setback from the off-site Dry-Fresh Poplar Mixed Forest at the Site border is recommended to be implemented within the area identified as significant woodland, as shown on Figure 6 in **Appendix A**.

4.7 Species at Risk Screening

Upon a comprehensive Species at Risk (SAR) screening, a total of 24 SAR was identified as having potential occurrence on the Study Area, resulting from the background review of the NHIC records and other available data sources for the Study Area surrounding the Site.



The details on these 24 species screened, including the listing status, last observed date and sources used to identify their presence in the Study Area, and their habitat requirements are all summarized in the Species at Risk Screening Table in **Appendix G**. Based on the background review and field assessment, 14 of 24 SAR were determined to have suitable habitat within the Study Area, with none of these species having confirmed observations in the Study Area.

The Mixed Meadow on the Site provides suitable habitat for the Monarch (*Danaus plexippus*). The meadow also provides suitable habitat to the Monarch as observed with milkweed and Monarchs present during the Site assessment. However, the size of the meadow is too small to provide significant habitat for Monarch.

Residential buildings and manmade structure throughout the Study Area act as suitable habitat for two more avian SAR, including the Barn Swallow (*Hirundo rustica*) and Chimney Swift (*Chaetura pelagica*). These species utilize structures for nesting, the residential area provides suitable habitat within the Study Area, but none were observed (birds, nests, etc.) during the vegetation surveys.

The deciduous woodland on the Site could provide suitable habitat to another eight SAR, including the Canada Warbler, Eastern Wood-pewee (*Contopus virens*), Red-shouldered Hawk (*Buteo lineatus*), Whip-poor-will (*Caprimulgus vociferus*) and Wood Thrush (*Hylocichla mustelina*).

These species utilize the upper and mid canopy forested areas. Specifically, the deciduous woodland communities on-Site do not contain oak or beech species and are combined with heavy anthropogenic influences (i.e., transformer stations, mowed lawns, and stormwater management pond), which are likely to deter Whip-poor-will based on its habitat preference. Due to factors listed above and the fact that the woodlands on the Site represent edge habitat, no targeted Whip-poor-will surveys were required to be conducted on the Site. Further, Canada Warbler, Wood Thrush, and Red-Shouldered Hawk requires mature forest, which do not coincide with the early successional poplar forests on-Site. Additionally, forest edges and areas with dry conditions could also offer suitable habitat for the Eastern Hognose Snake (*Heterodon platirhinos*) and Massasauga (*Sistrurus catenatus pop. 1*); however, abundant areas for basking were not observed and no encounters of them or associated habitats such as hibernacula were observed on the Site during field surveys. Further, no SAR snakes were encountered during the most recent targeted VES and ACO surveys for this EIS. Finally, dense areas of woodland or thicket conditions could offer suitable habitat for the Gray Fox (*Urocyon cinereoargenteus*) as they like to build their dens in woodlands near water. None of these species were observed during the Site assessment. It should be noted that although the avian species were not observed within the Site, as there is abundant woodland to the west and these species are able to adapt to various woodlands, they would likely be able to relocate easily if mitigation measures were in place during development if it were to move forward.



Three species of endangered bats have potential to occur on the Site. During the day, bats roost in trees, and in buildings. These include the Little Brown Bat (*Myotis lucifugus*), Eastern Small-footed Bat (*Myotis leibii*) and Northern Myotis (*Myotis septentrionalis*). They often will roost in attics, abandoned buildings, barns and dead trees/snags where they can raise their young. The residential and forested area could allow for suitable habitat with openings in attics and crevices in trees. Maternity colonies require mature deciduous or mixed forest stands with snags. Although targeted surveys (i.e., bat snag surveys, and bat acoustic surveys) were not completed for bats, the abundance of Poplar trees within the successional forests suggest that there is minimal suitable habitat. Additionally, no evidence of bats or suitable habitat (roost trees, snags, etc.,) were observed during field surveys.

One last SAR species which was found to have potential habitat in the area was the Speckled Giant Lacewing (*Polystoechotes ounctata*). This insect is known to prefer habitats in herbaceous fields and meadows; however, the species is believed to be extirpated in Ontario so it is unlikely to be present in urban/suburban areas.

Potential impacts to the above avian and bat species from the proposed development can be avoided or minimized by timing restrictions of tree removals on the west side of the Site. Further, a 5 m buffer will be applied to the off-Site woodland to reduce the potential impacts to the wildlife with the Study Area.

4.8 Significant Wildlife Habitat Screening

The Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNRF, 2015) was consulted to screen the wildlife habitat for significance in the Study Area. Field assessments were also undertaken to assess the quality of the habitat in relation to Significant Wildlife Habitat. Based on observations during the vegetation surveys, Significant Wildlife Habitat may be present within the Study Area. The details on each Significant Wildlife Habitat which can be found within the Study Area can be seen in **Appendix G**.

According to the Significant Wildlife Habitat Criteria reviewed for this EIS, there are potentially candidate Significant Wildlife Habitat areas in the Study Area, notably Woodland Area including Woodland Raptor Nesting Habitat. The deciduous forest acts as suitable habitat woodland raptor nesting habitat. Although it fits the conditions required for the SWH described above, there was a lack of stick nests observed during the field assessment. This would suggest a lack of presence for raptors in the Study Area. Additionally, none of the species were encountered during the breeding bird survey conducted on the Site.

4.9 Natural Heritage System and Ecological Connectivity

The Study Area is located in a business sector residential area, surrounded by residential developments to the south, naturalized areas to the west and business sectors to the north and east.



Looking at the surrounding landscape, the woodlands on Site appear to be the edge of a more extensive community of woodland communities to the west as shown on the TMOP Schedule C in **Appendix B**, as it highlights the Natural Heritage System features. The woodlands west and northwest of the Site offer over 50-ha of habitat to wildlife and vegetation within the surrounding landscape, as a result of this they are considered significant woodlands (County of Simcoe, 2016). As the edge of woodland within the Site is so close to existing development, it is likely considered edge and early successional habitats.

The woodlands on Site are recognized as early successional habitat and adjacent to Significant Woodlands by the County of Simcoe. However, based on the abundance of successional species within this edge habitat, and proximity to the developed business sector, it is believed that the woodlands within the Site offer minimal ecological value. It is believed that the meadow and woodlands within the Site have naturalized over the years. For these reasons it is recognized that the woodlands and meadow on Site have some ecological values to plants, wildlife, as well as human residents in this region.

5.0 PROPOSED DEVELOPMENT

The Site consisting of an approximately 16.0-hectare parcel of land that is currently occupied by plaza buildings and associated parking areas. The rear of the Site contains a stormwater management pond, meadows and woodlands. As mentioned above, the Client is proposing to redesignate and sever the rear of the Site at approximately 4.6 ha for future development.

The future development will take place throughout most of the successional natural heritage features present, preserving the existing stormwater pond on the western portion of the Site and on already disturbed areas such as the abandoned structures (i.e., abandoned septic tank and transformer). The proposed designation would occupy the majority of the Site, with the exceptions of the SWM Pond and a recommended 5 m development buffer to the offsite woodland that falls onto the edge of the Site, as seen in Figure 6 of **Appendix A** and further discussed in Section 6.0 below.

The purpose of this EIS is to understand the current natural heritage constraints on the Site and within the Study Area for the proposed mixed-use designation, as well as the impacts from development proposal in those areas. The following impact assessment in Section 6.0 is based on the proposed mixed-use designation brought forth by the Client.

5.1 Development Constraints

Although the development proposals are at the concept plans stage, some development constraints should be considered when designing the development and detailed site plans. It is noteworthy that the proposed mixed-use designation is within the natural heritage features and as such are subject to the submission of an EIS according to the Town of Midland Official Plan.



It is anticipated that the majority of the woodlands and meadow within the Site would be impacted in order to make way for a proposed development. As these communities are adjacent to development and are primarily composed of early successional species influenced by anthropogenic practices, it is anticipated that there will be minimal impacts to the ecological functions of the existing natural heritage network. The stormwater management (SWM) pond at the northwest corner of the Site will be preserved entirely from the proposed development and serve as a SWM control facility.

6.0 IMPACT ASSESSEMENT

There are potential direct and indirect impacts to the natural heritage features on and adjacent to the Site from the development proposal, as described in Section 6.1 and 6.2 below.

6.1 Direct Impacts

Should the development be limited to the area outlined above, the direct impacts from the development proposals on natural heritage features may include the following:

- Stripping of vegetation and topsoil throughout the meadow and woodland;
- Removal of trees and shrubs on the Site; and
- Displacement of wildlife on the Site

To accommodate the proposed mixed-use designation, the stripping of vegetation and topsoil will take place throughout the vegetated area of the Site, excluding the existing pond. The meadow and woodlands potentially provide seasonal habitat to birds and other wildlife that may use it seasonally for foraging and feeding. They will be displaced from the proposed construction and immediately surrounding areas as a result of construction and site alteration. The impact to wildlife can be avoided by properly timing the vegetation and topsoil removal.

A Tree Inventory and Preservation Plan may be needed prior to the construction of the mixed used development in order to determine the tree species and number of trees that will be removed as well as the restoration and preservation plan to mitigate impacts. Additionally, adequate development buffers may need to be put in place or a dripline staking exercise may be needed to assess the extend of the protected woodlands to the west of the Site.

6.2 Indirect Impacts

The potential indirect impacts to the natural heritage features (i.e., woodlands and meadow) based on the development proposals may include the following:

- Effects on plants and wildlife by construction noise, dust, and vibration;
- Sedimentation of the woodland by construction activities; and



- Alteration of water quality and flow regime in the adjacent natural heritage features

Indirect impacts on the woodland and meadow communities and its plants and wildlife are likely limited to the species located within the Site, provided the proposed development is contained within the Site.

It is likely that during the construction periods, wildlife including birds and mammals that occasionally use the woodlands and meadow for foraging and breeding may be disrupted and are likely to abandon the disturbed edges due to indirect impacts of noise and vibration. The wildlife living in the forest and adjacent habitats will be disturbed temporarily, while over time the wildlife will likely return to the forest edge area on the Site. Additionally, there is potential sedimentation buildup in the edge of the forest from construction activities on the Site. With the application of a protective buffer to the surrounding forest, the adjacent natural heritage features will continue to perform its landscape and ecological functions.

Stormwater runoff from the construction Site has potential impacts to the woodland from surface runoffs during construction due to their close proximity to construction activities. A Stormwater Management Report with an Erosion and Sediment Control Plan may be required prior to the construction of the proposed mixed used designation in order to mitigate the impacts to the natural heritage features on the Site.

6.3 Residual and Cumulative Effects Assessment

Residual environmental effects are any permanent, non-mitigable change in an identified valued ecosystem component. As residual environmental effects on the natural environment cannot be completely addressed through mitigation, they are likely to persist following project completion. Residual effects may result in cumulative effects through the interaction between residual effects of the project and those associated with other identified project and/or activities. Due to the short-term, local construction of the proposed mixed used designation within the Site surrounded by roadways, business sector and woodlands, the residual effects from the Site construction are projected to be low significance in magnitude, geographic extent, duration and frequency. Residual adverse effects are not expected from the proposed mixed used designation on the Site as all of the direct and indirect impacts identified above can be addressed through appropriate mitigation.

With sufficient mitigation measures implemented prior to the construction activities, no cumulative impacts are anticipated as a result of the proposed mixed used designation and associated roadways.

This further supports the Provincial Policy Statement rule regarding no negative impacts to the Key Features present on the Site. Recommendations and mitigation measures for the potential impacts are detailed in Section 7.0 below.



7.0 RECOMMENDED AVOIDANCE AND MITIGATION MEASURES

Based upon the above impact assessment, there are identified direct impacts and indirect impacts on the natural environment, including meadow and woodlands present on the Site and adjacent woodland within the Study Area. The woodland, located to the west of the Site, forms part of a contiguous Significant Woodland status to the west associated with the Natural Heritage System. Proposed mitigation measures, including recommendations for timing windows or other specifications for implementation, for all potential negative impacts is included in the EIS. Furthermore, mitigation measures relating to the protection of setbacks and buffers during onsite works (such as fencing) must be implemented prior to the commencement of those works. Therefore, exclusion fencing to the sensitive natural features to the west should be established and protected from the proposed development.

As avoidance is the most effective approach to mitigating environmental impacts, the proposed development will not impact the adjacent woodland as a Natural Heritage System. Other natural heritage features including the meadow, and small woodlands within Site boundaries will be removed to accommodate the proposed mixed-used designation. A minimum 5 m setback with exclusion fencing installed is recommended to protect the off-site woodland to the west prior to tree removals within Site boundaries, as seen in Figure 6 of **Appendix A**. Protective fencing and tree barriers should be established so that no development activities including Site grading and construction will take place.

The following recommendations are provided for the protection of the above key natural features prior to construction or site alteration. Additionally, restoration and enhancement plans must be timely developed and effectively implemented on the Site to ensure that no negative impacts will occur to the significant woodland to the west post construction.

Tree and vegetation removal:

- To minimize or avoid impacts to breeding and nesting birds, the removal of vegetation will be outside of the critical breeding period between April 15 and August 15.
- A Tree Protection and Preservation Plan may need to be developed for the Site and approved by the reviewing agencies prior to construction and site alteration.
- The dripline of the western woodland may need to be staked with an arborist from the Town of Midland, if required, to set out appropriate setbacks for development.

Erosion and sediment control:

- An Erosion and Sediment Control Plan with ecological protection measures as part of the SWM Report will need to be developed for the construction on the Site.



- Prior to construction and site alteration, adequate erosion and sediment control (ESC) measures including a sediment fencing should be established around the Site upgradient from the natural heritage features until the disturbed area is restored upon construction completion. Sufficient buffers to the adjacent natural features through protection zones will be established.
- If required, repairs and maintenance of the installed ESC measures are conducted regularly until construction completion. Disturbed areas should be stabilized immediately post construction to prevent site erosion and/or sedimentation.

Wildlife and Species at Risk encounter protocol:

- If wildlife are encountered during construction, work should cease immediately and allow the animal to naturally move out of the construction zone. If the animal does not leave the area for a prolonged period of time, please consult with a qualified biologist for possible response or mitigation measures.
- If an animal is injured or deceased or if a Species at Risk is found on the Site, the Ministry of Environment, Conservation and Parks will be contacted for guidance and handling.

Restoration and enhancement:

- A Landscape Plan may be required for any restoration and enhancement on the Site. Appropriate restoration for the replaced or removed trees on the Site through this restoration plan is utmost important to ensure that no negative impact will occur to the natural features as a result of the construction.
- It is recommended that any removed trees are to be compensated with the planting of native deciduous or coniferous tree species on the Site to provide for enhanced natural habitats.

8.0 CONCLUSION

This EIS has demonstrated through the ecological surveys, results and associated analysis that the Site does not contain high ecological value and that no adverse negative impacts to the ecological integrity of the Site will result from the proposed Official Plan Amendment and mixed used designation, taken into account the recommendations and implemented diligently on the Site. When the proposed mixed use development proceeds, Pinchin suggests the recommendations put forward in this EIS report be implemented. The assessed impacts, including direct and indirect impacts, can be avoided or mitigated through effective stormwater and environmental management measures.



With the implementation of the environmental plans sought out in this EIS and provided that supportive documents including a Stormwater Management Report, a Landscape Plan, and a Tree Inventory and Preservation Plan, the proposed development would preserve the ecological functions of the adjacent natural features and enhance natural landscape on the Site through the installation of planned mitigation and enhancement measures on the Site post construction.

9.0 CLOSURE

The enclosed Environmental Impact Study report has been prepared to assess the natural heritage features including the terrestrial and aquatic conditions on the Site within the Study Area. The information contained herein as a result of the EIS regarding the proposed mixed-use designation is solely provided to the Client and approval agencies as a reference only.

In the event that clarifications or further information is required by the Client and approval agencies, please do not hesitate to contact the primary Pinchin contact indicated in the contact page of this document.

10.0 REFERENCES

- Alan Macnaughton, Ross Layberry, Rick Cavasin, Bev Edwards and Colin Jones. 2018. Ontario Butterfly Atlas - Toronto Entomologists Association. Accessed July 2021 at: www.ontarioinsects.org/atlas_online.htm
- Alan Macnaughton, Ross Layberry, Rick Cavasin, Bev Edwards and Colin Jones. 2018. Ontario Reptile and Amphibian Atlas - Toronto Entomologists Association. Accessed July 2021 at: <https://www.ontarioinsects.org/herp/>
- Bird Studies Canada. 2018. Atlas Data Summary. Retrieved in July 2021 from Atlas of the Breeding Birds of Ontario: <https://www.birdsontario.org/jsp/datasummaries.jsp>
- BJC Architects Inc, 2021. Preliminary Site Design Options for Plaza REIT – Drawing Format – June 10, 2021.
- County of Simcoe, 2014. Forest Conservation By-law No. 6894. Accessed February 2022 from <https://www.simcoe.ca/dpt/fbl/bylaw#ui-id-1>
- County of Simcoe, 2014. Official Plan of the County of Simcoe – 2016. Retrieved February 2022 from <https://www.simcoe.ca/dpt/pln/county-official-plan>
- Dobbyn, J. (S.) 1994. Atlas of the Mammals of Ontario. Federation of Ontario Naturalists.
- Lee, H., Bakowsky, W., Riley, J., Bowles, J., Puddister, M., Uhlig, P., & McMurray, S. 1998. Ecological Land Classification for Southern Ontario: First Approximation and its Application. North Bay: Ontario Ministry of Natural Resources, Southcentral Science Section, Science Development and Transfer Branch.



- Ministry of Natural Resources. 2010. Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005 Second Edition. Toronto, ON: Queen's Printer for Ontario.
- Ministry of Natural Resources and Forestry. 2000. Significant Wildlife Habitat Technical Guide. Peterborough, ON.
- Ministry of Natural Resources and Forestry. 2015. Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E. Queen's Printer for Ontario
- Ministry of Natural Resources and Forestry. 2017. Survey Protocols for Species at Risk Bats within Treed Habitats; Little Brown Myotis, Northern Myotis and Tri-coloured Bat. Queen's Printer for Ontario.
- Ministry of Natural Resources and Forestry. 2020. Make a Natural Heritage Area Map. Retrieved in July 2020 from Natural Heritage Information Centre Website: <https://www.ontario.ca/page/natural-heritage-information-centre>
- Newmaster, S.G. and S. Ragupathy. 2012. Flora Ontario – Integrated Botanical Information System (FOIBIS), Phase I. University of Guelph, Canada. Accessed in July 2018 at <http://www.uoguelph.ca/foibis/>
- Ministry of Municipal Affairs and Housing. 2020. Provincial Policy Statement Under the *Planning Act*.
- Ontario Geological Survey. 1991. Bedrock geology of Ontario, southern sheet. Ontario Geological survey, Map 2544, scale 1:1 000 000. Retrieved online from <http://www.geologyontario.mndmf.gov.on.ca/mndmfiles/pub/data/imaging/M2544/M2544.pdf>
- Ontario Ministry of Agriculture, Food and Rural Affairs. 2020. Soil Mapping. Retrieved online from <http://www.omafra.gov.on.ca/english/landuse/gis/mapgallery.htm>
- Town of Midland, 2021. Official Plan for the Town of Midland – 2021. Retrieved February 2022 from <https://www.midland.ca/Pages/officialplan.aspx>

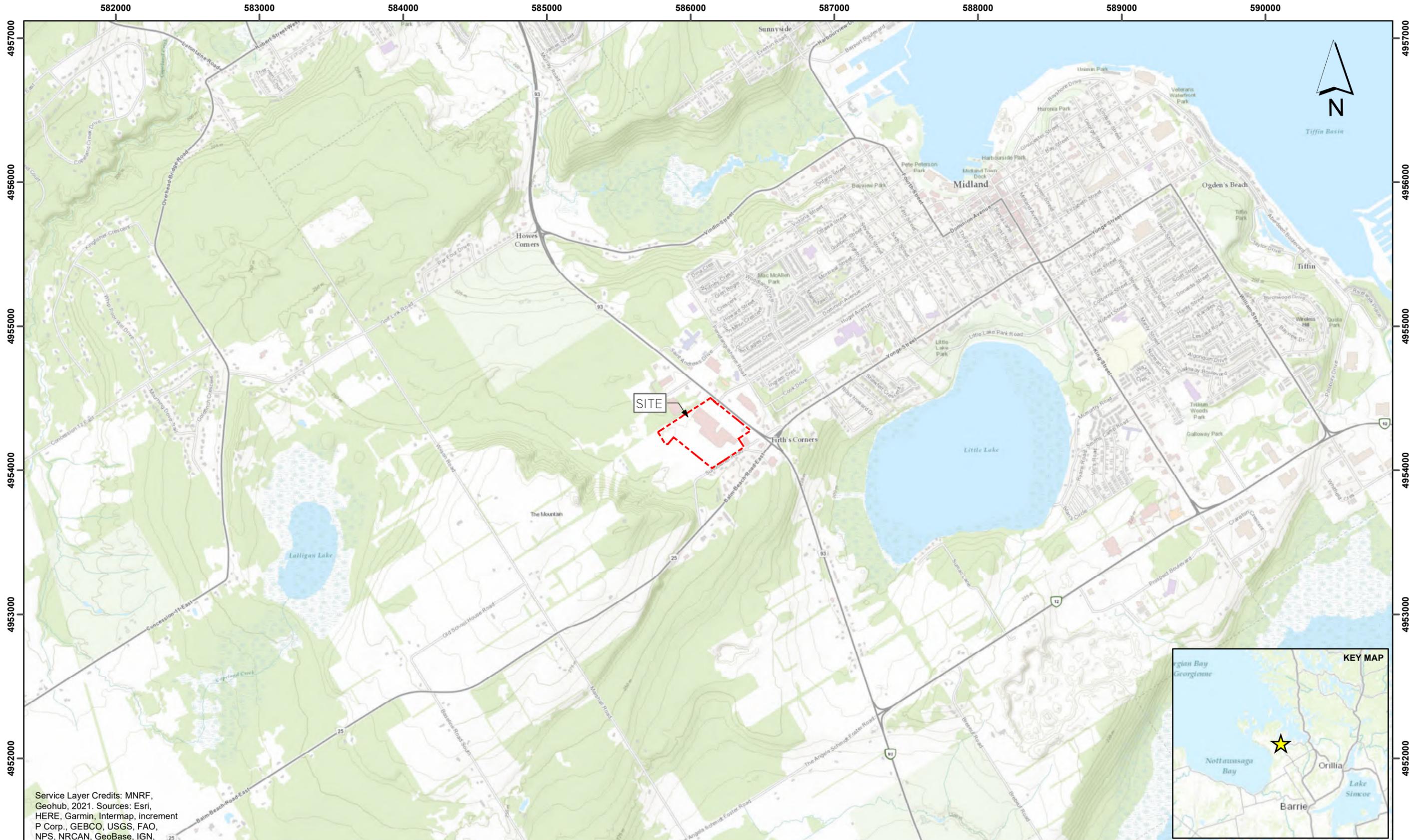


11.0 LIMITATIONS

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295383 FINAL Environmental Impact Study 9226 County Road 93 Midland ON Oct 20 2023.docx

**APPENDIX A
FIGURES**



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PROJECT NAME: Environmental Impact Study
CLIENT NAME: Plaza REIT
PROJECT LOCATION: 9226 County Road 93, Midland, Ontario
FIGURE NAME: Site Location

PROJECT NO. 295383.000
DATE: August 2021
SCALE: 1:25,000
FIGURE NO. 1

LEGEND
 Site Boundary



Coordinate System: NAD 1983 CSRS UTM Zone 17N
 Projection: Transverse Mercator
 Datum: North American 1983 CSRS

DRAWN BY: MH REVIEWED BY: RY REVISION: 0



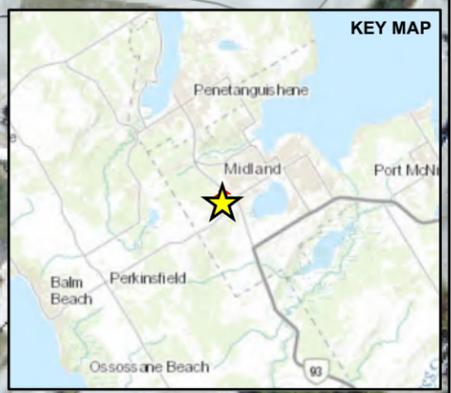
Service Layer Credits: MNRF, Geohub, 2021. © OpenStreetMap (and) contributors, CC-BY-SA Source: Esri, Maxar, GeoEye, Earthstar Geographics.



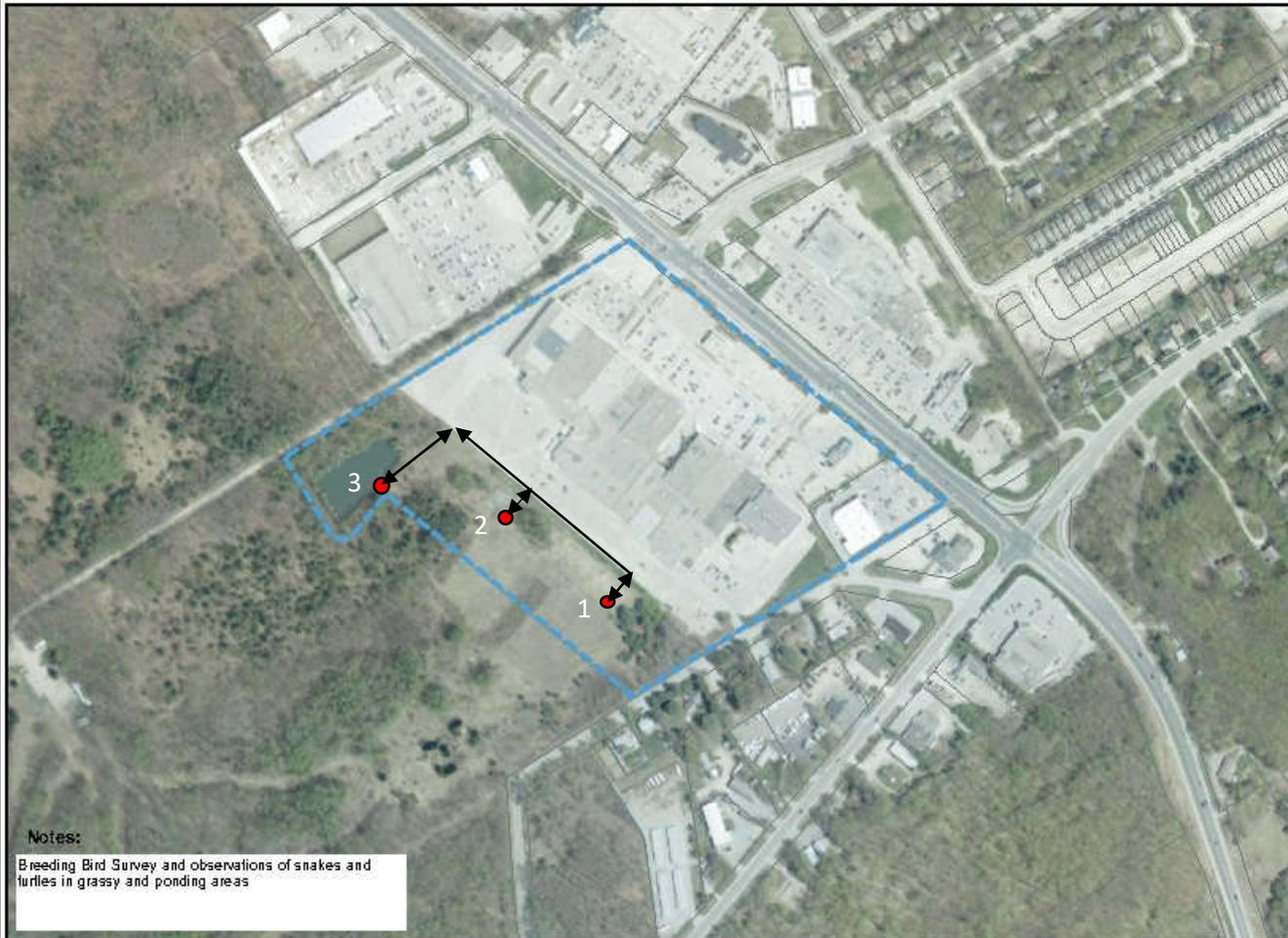
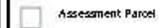
PROJECT NAME: Environmental Impact Study CLIENT NAME: Plaza REIT PROJECT LOCATION: 9226 County Road 93, Midland, Ontario FIGURE NAME: Study Area	PROJECT NO.: 295383.000 DATE: August 2021 SCALE: 1:3,500 FIGURE NO.: 2	LEGEND Site Boundary Study Area (120 m) Wetland (Unevaluated) Roadway	0 30 60 120 Metres Coordinate System: NAD 1983 CSRS UTM Zone 17N Projection: Transverse Mercator Datum: North American 1983 CSRS
	DRAWN BY: MH REVIEWED BY: RY REVISION: 0		



Service Layer Credits: MNRF, Geohub, 2021. Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN.



	PROJECT NAME: Environmental Impact Study	PROJECT NO.: 295383.000	LEGEND Site Boundary Roadway Ecological Land Classification CVI_3: Stormwater Management Pond CVI_4: Power Generation (Transformer) FODM3-1: Dry-Fresh Poplar Deciduous Forest FOMM5-2: Dry-Fresh Poplar Mixed Forest MEMM3: Dry-Fresh Mixed Meadow Ecosite	 0 20 40 80 Metres Coordinate System: NAD 1983 CSRS UTM Zone 17N Projection: Transverse Mercator Datum: North American 1983 CSRS
	CLIENT NAME: Plaza REIT	DATE: August 2021		
	PROJECT LOCATION: 9226 County Road 93, Midland, Ontario	SCALE: 1:2,250		
	FIGURE NAME: Ecological Land Classification	FIGURE NO.: 3		
	DRAWN BY: MH REVIEWED BY: RY REVISION: 1			



Notes:

Breeding Bird Survey and observations of snakes and turtles in grassy and ponding areas



Absence of a feature in the map does not mean they do not exist in this area.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources and Forestry (OMNRF) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.

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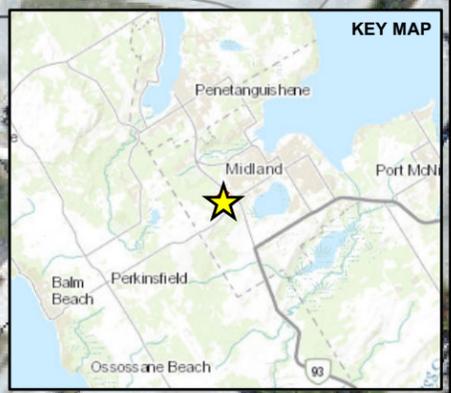


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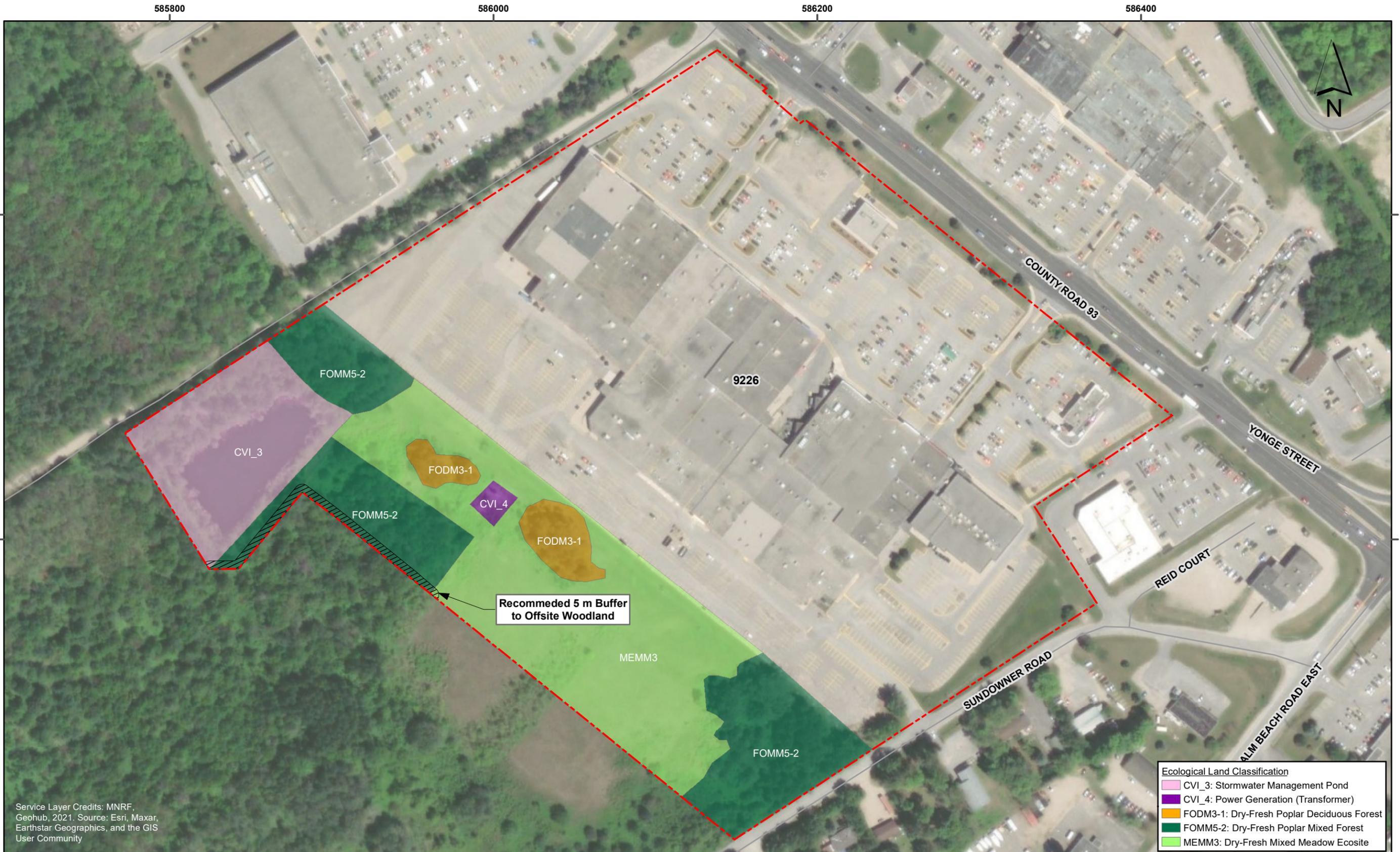
PROJECT NAME: Environmental Impact Study
CLIENT NAME: Plaza REIT
PROJECT LOCATION: 9226 County Road 93, Midland, Ontario
FIGURE NAME: Artificial Cover Object Locations

PROJECT NO. 295383.000
DATE: July 2023
SCALE: 1:2,250
FIGURE NO. 4

LEGEND
 Site Boundary
 Roadway
 Artificial Cover Object Location

Ecological Land Classification
 CVI_3: Stormwater Management Pond
 CVI_4: Power Generation (Transformer)
 FODM3-1: Dry-Fresh Poplar Deciduous Forest
 FODM5-2: Dry-Fresh Poplar Mixed Forest
 MEMM3: Dry-Fresh Mixed Meadow Ecosite

0 20 40 80 Metres
 Coordinate System: NAD 1983 CSRS UTM Zone 17N
 Projection: Transverse Mercator
 Datum: North American 1983 CSRS
 DRAWN BY: MH REVIEWED BY: KH REVISION: 0



Service Layer Credits: MNRF, Geohub, 2021. Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Ecological Land Classification	
	CVI_3: Stormwater Management Pond
	CVI_4: Power Generation (Transformer)
	FODM3-1: Dry-Fresh Poplar Deciduous Forest
	FOMM5-2: Dry-Fresh Poplar Mixed Forest
	MEMM3: Dry-Fresh Mixed Meadow Ecosite



PROJECT NAME: Environmental Impact Study
CLIENT NAME: Plaza REIT
PROJECT LOCATION: 9226 County Road 93, Midland, Ontario
FIGURE NAME: Environmental Constraints

PROJECT NO. 295383.000
DATE: August 2023
SCALE: 1:2,250
FIGURE NO. 5

LEGEND	
	Site Boundary
	Recommended 5 m Buffer to Offsite Woodland
	Roadway

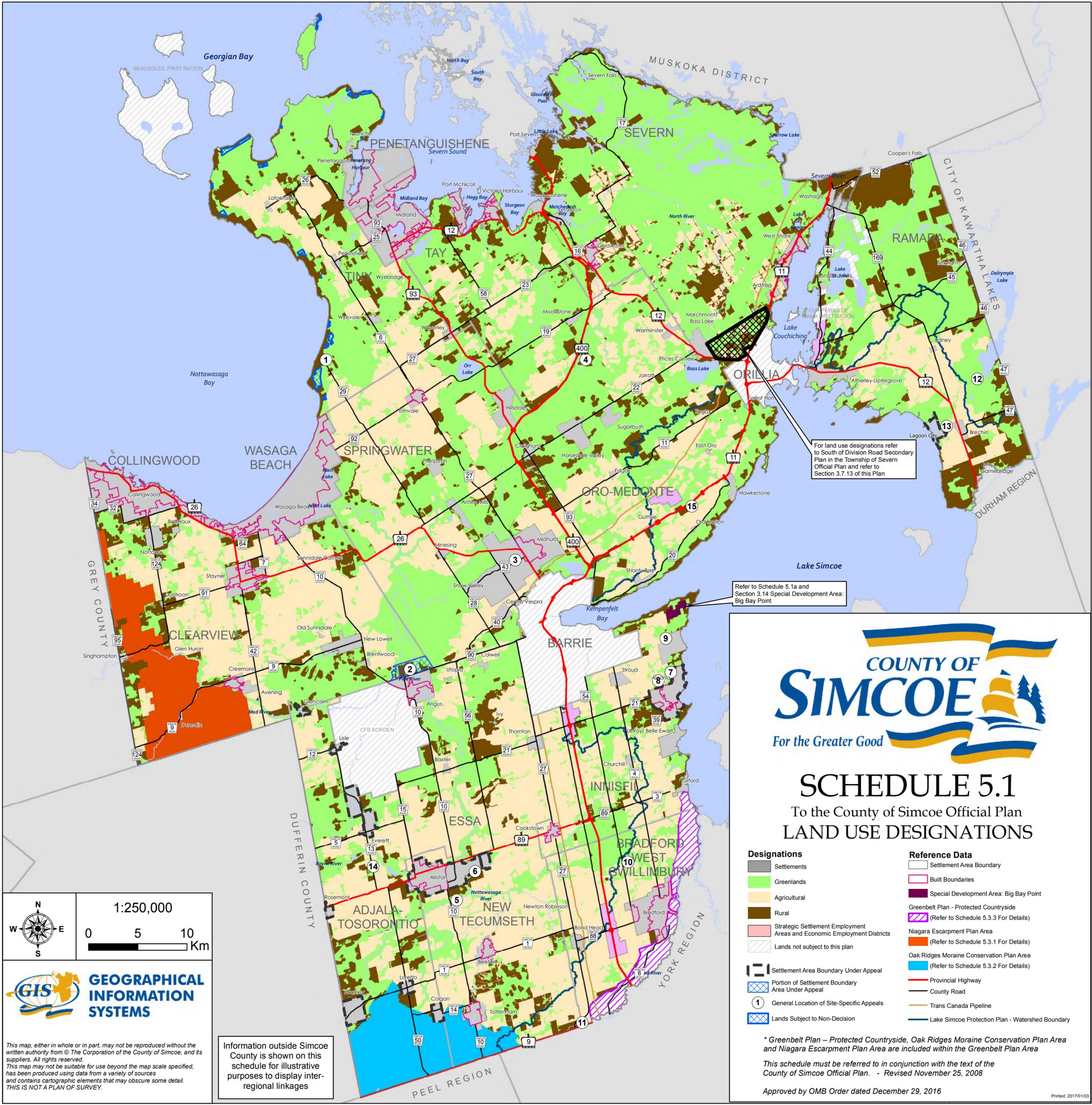


Coordinate System: NAD 1983 CSRS UTM Zone 17N
 Projection: Transverse Mercator
 Datum: North American 1983 CSRS

Note: All measurements and features are approximate and for planning purposes only.

DRAWN BY: MH REVIEWED BY: RY REVISION: 2

APPENDIX B
SUPPLEMENTARY INFORMATION



For land use designations refer to South of Division Road Secondary Plan in the Township of Severn Official Plan and refer to Section 3.7.13 of this Plan

Refer to Schedule 5.1a and Section 3.14 Special Development Area: Big Bay Point



SCHEDULE 5.1

To the County of Simcoe Official Plan

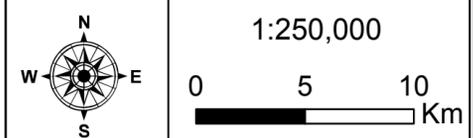
LAND USE DESIGNATIONS

Designations	Reference Data
Settlements	Settlement Area Boundary
Greenlands	Built Boundaries
Agricultural	Special Development Area: Big Bay Point
Rural	Greenbelt Plan - Protected Countryside
Strategic Settlement Employment Areas and Economic Employment Districts	Niagara Escarpment Plan Area
Lands not subject to this plan	(Refer to Schedule 5.3.1 For Details)
Settlement Area Boundary Under Appeal	Oak Ridges Moraine Conservation Plan Area
Portion of Settlement Boundary Area Under Appeal	(Refer to Schedule 5.3.2 For Details)
General Location of Site-Specific Appeals	Provincial Highway
Lands Subject to Non-Decision	County Road
	Trans Canada Pipeline
	Lake Simcoe Protection Plan - Watershed Boundary

* Greenbelt Plan - Protected Countryside, Oak Ridges Moraine Conservation Plan Area and Niagara Escarpment Plan Area are included within the Greenbelt Plan Area

This schedule must be referred to in conjunction with the text of the County of Simcoe Official Plan. - Revised November 25, 2008

Approved by OMB Order dated December 29, 2016



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Information outside Simcoe County is shown on this schedule for illustrative purposes to display inter-regional linkages

Town of Penetanguishene

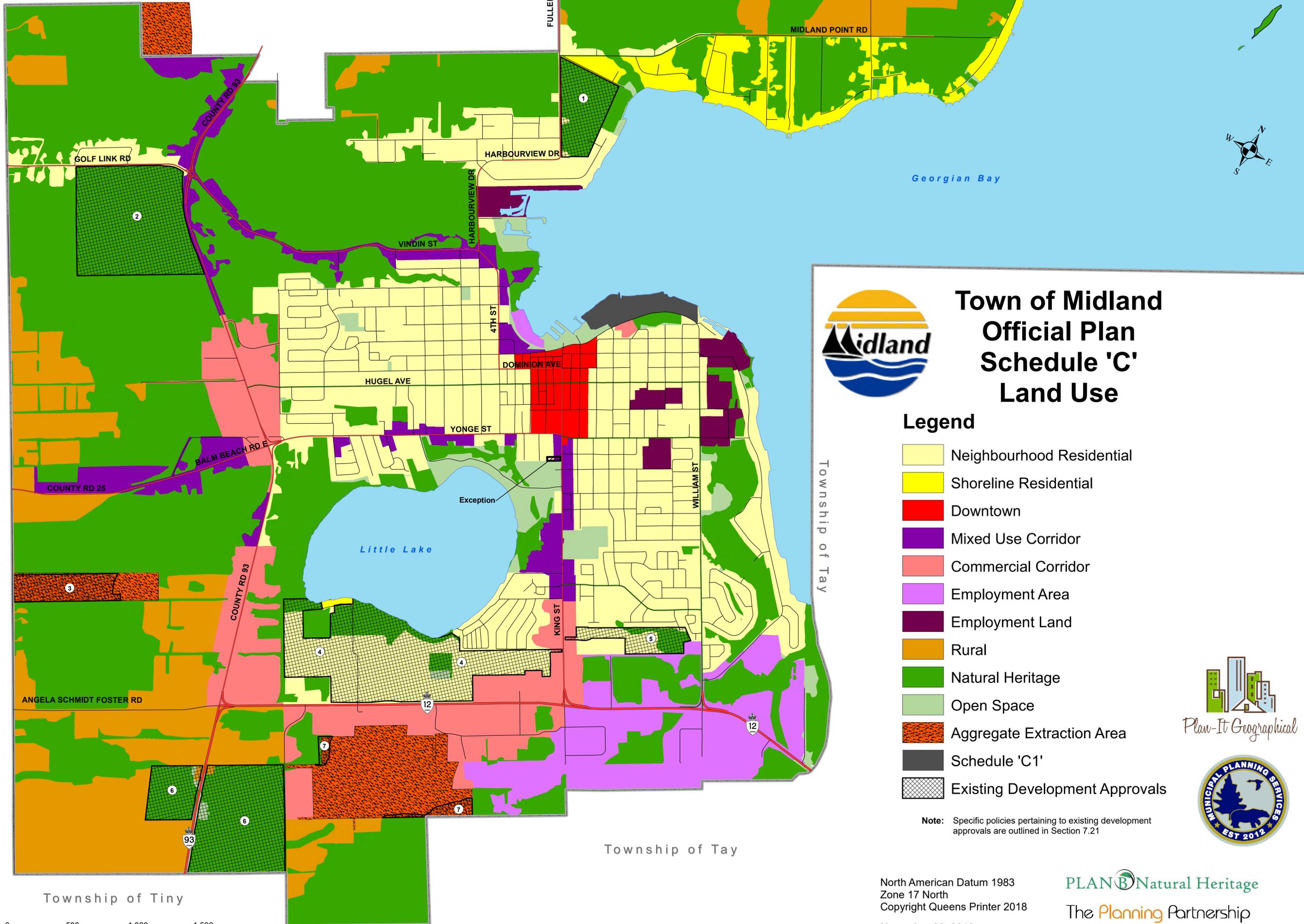
Town of Penetanguishene

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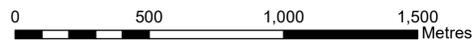


Town of Midland Official Plan Schedule 'C' Land Use

Legend

- Neighbourhood Residential
- Shoreline Residential
- Downtown
- Mixed Use Corridor
- Commercial Corridor
- Employment Area
- Employment Land
- Rural
- Natural Heritage
- Open Space
- Aggregate Extraction Area
- Schedule 'C1'
- Existing Development Approvals

Note: Specific policies pertaining to existing development approvals are outlined in Section 7.21



North American Datum 1983
Zone 17 North
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November 20, 2019

PLAN Natural Heritage
The Planning Partnership

APPENDIX C
AGENCY CONSULTATION RECORD

Rocky Yao

From: Katherine Rauscher <krauscher@mhbcplan.com>
Sent: August 8, 2023 9:39 AM
To: Rocky Yao
Subject: FW: EIS Terms of Reference Post Site Walk 9226 County Rd 93

This Email is from an **EXTERNAL** source. Ensure you trust this sender before clicking on any links or attachments.

KATHERINE RAUSCHER, MCIP, RPP | Associate

MHBC Planning, Urban Design & Landscape Architecture

442 Brant Street, Suite 204 | Burlington | ON | L7R 2G4 | C 416 930 7113 | T 905 639 8686 x 238
| krauscher@mhbcplan.com

From: Steve Farquharson <sfarquharson@midland.ca>
Sent: July 10, 2023 1:05 PM
To: Katherine Rauscher <krauscher@mhbcplan.com>
Subject: FW: EIS Terms of Reference Post Site Walk 9226 County Rd 93

Katherine,
As indicated in my sperate email, please see the comments below from the SSEA.

Regards,



Steven Farquharson, BURPL, MCIP,
RPP

Acting Director of Planning,
Building, and By-law

P: 705-526-4275 ext 2214

E: sfarquharson@midland.ca

Town of Midland

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Midland, Ontario L4R 1R2

www.midland.ca



From: Michelle Hudolin <MHudolin@severnsound.ca>
Sent: Wednesday, July 5, 2023 4:33 PM
To: Steve Farquharson <sfarquharson@midland.ca>
Subject: RE: EIS Terms of Reference Post Site Walk 9226 County Rd 93

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Hi Steve,

I hope you had a great long weekend. I had some extra time off which was nice.

I have reviewed Rocky's email below with respect to SAR screening.

The additional information compares Eastern Whip-poor-will's preferred habitat (from provincial guidance information) to the conditions on site, and provides detail and rationale for why Whip-poor-will is not considered a probable species for the site. The provision of this information is helpful.

Rocky's email also indicates that field visits, including those done this year and/or conducted in suitable conditions for detecting reptiles, have not revealed the presence of snake hibernacula or individual snakes (e.g., SAR Eastern Hog-nosed Snake and Massasauga) and further, that habitat on site is marginal for these species. It should be noted that these species can be quite cryptic and difficult to detect even when they are known to be present on a site, and any further site visits to the subject property should continue to include searches for reptiles, in case they are present despite the habitat being less than ideal.

The NHA was not very clear with regard to SAR screening for Whip-poor-will, Hog-nosed Snake and Massasauga, however Rocky has indicated that the EIS report will provide additional detail and discuss why these species were screened out as a potential SAR. Information that clearly compares the preferred habitat of all SAR species with the conditions on site and demonstrates why the site is not potential habitat for the species should be included in the EIS report when it is submitted.

Please let me know if you wish to discuss further before passing on the above information to the consulting team for 9226 CR 93. If you wish for me to respond directly to Rocky, please advise.

Best regards,
Michelle

Michelle Hudolin | Manager Watershed Resilience, Wetlands & Habitat Biologist
Severn Sound Environmental Association

Tel: 705-534-7283 ext. 202 | MHudolin@severnsound.ca

www.severnsound.ca | Twitter @SSEA_SSRAP | Instagram @severnsoundea

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From: Rocky Yao <ryao@Pinchin.com>
Sent: June 23, 2023 4:25 PM
To: Steve Farquharson <sfarquharson@midland.ca>
Cc: Katherine Rauscher <krauscher@mhbcplan.com>; Oz Kemal <okemal@mhbcplan.com>; Michelle Hudolin <MHudolin@severnsound.ca>
Subject: [EXTERNAL] RE: EIS Terms of Reference Post Site Walk 9226 County Rd 93

Thanks Steve for forwarding SSEA's comments on the TOR.

Hi Michelle, we appreciated your agreement and additional clarification below. While we concur with your additional requirements, we would like to further clarify on how we screened out the Whip-poor-will and two snakes on this site.

The SAR screening we conducted as part of the NHA before followed the MECP's Client Guide to Preliminary SAR Screening 2019. The SAR screening section and table are to be read in conjunction; therefore, the Whip-poor-will and SAR snakes were screened out of this site based on the species preferred habitat vs. the actual habitat on the Site. Specifically for Whip-poor-will, MNRF's SWH Technical Guide described its habitat as follows:

- dry, open, deciduous woodlands of small to medium trees; oak or beech with lots of clearings and shaded leaf litter; wooded edges, forest clearings with little herbaceous growth; pine plantations; associated with >100 ha forests; may require 500 to 1000 ha to maintain population

The Dry-Fresh Poplar Mixed Forest and Dry-Fresh Poplar Deciduous Forest on the Site do not contain oak or beech species and much smaller than the >100 ha size requirement, combined with heavy anthropogenic influences such as transformer stations (old & new), mowed lawn behind the plaza, and SWM pond both in and adjacent to these small forests.

Further, we have conducted several field surveys as part of the ELC/vegetation, BBS and re-survey this spring with no observations or evidence (individual, hibernacula, etc.) on this site for Eastern Hognose Snake and Massasauga with some of the visits in appropriate conditions. The Site itself is in a very marginal habitat area as the edge of woodlands. There are much more suitable habitats in the larger area to the west and northwest of the Site in a more natural state to suit these avian and snake species. At the EIS reporting stage, we will put in more detail on how we screen out these and other SAR species, while we will use the relevant surveys we completed to discuss the presence and absence of other general wildlife species.

I hope the above help clarify on why we do not believe surveys for Whip-poor-will and two snakes are required on this Site in particular. If you have further questions or concerns, I would be happy to have a call directly with you to discuss the above in detail – I am available early next week on Monday or Tuesday.

Thanks and have a great weekend,

Rocky Yao, M.Sc, CISEC, EP
Team Leader and Regional Practice Leader, Environmental Science
Pinchin Ltd. | T: 365.873.0355 | C: 289.971.7821

From: Steve Farquharson <sfarquharson@midland.ca>
Sent: June 16, 2023 4:15 PM
To: Rocky Yao <ryao@Pinchin.com>
Cc: Katherine Rauscher <krauscher@mhbcplan.com>; Oz Kemal <okemal@mhbcplan.com>; Michelle Hudolin

<mhudolin@severnsound.ca>

Subject: FW: EIS Terms of Reference Post Site Walk 9226 County Rd 93

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Good Afternoon Rocky,

Please see the below comments from the SSEA with regards to the TOR for the property at 9226 County Road 93.

Oz and Katherine is there a targeted timeframe as to when an application may be submitted for processing?

Regards,



Steven Farquharson, BURPL, MCIP,
RPP

Acting Director of Planning,
Building, and By-law

P: 705-526-4275 ext 2214

E: sfarquharson@midland.ca

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From: Michelle Hudolin <MHudolin@severnsound.ca>

Sent: Friday, June 16, 2023 3:06 PM

To: Steve Farquharson <sfarquharson@midland.ca>; Andy Warzin <awarzin@midland.ca>

Subject: RE: EIS Terms of Reference Post Site Walk 9226 County Rd 93

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Hi Steve and Andy,

I have reviewed the EIS Terms of Reference (TOR) provided in pdf format by Rocky Yao at Pinchin. I offer the following comments and clarification on the proposed scope of work; some comments are based on information provided in the 2023 Natural Heritage Assessment (NHA). These comments only relate to natural heritage, and do not cover any other studies that approval agencies may require for the site.

The TOR states the following, and the SSEA is in agreement with these requirements for the EIS:

- All natural heritage features as identified on the Study Area will be illustrated on Geographic Information System figures in the Scoped EIS report.
- the EIS will need to be completed in consistency with the provincial and regional policies including the Provincial Policy Statement (2020) and Endangered Species Act (2007).
- Direct and indirect impacts of the proposed development will be addressed in detail in the EIS in addition to recommended avoidance and mitigation measures to ensure that there are no negative impacts to the Natural Heritage System and Key Features or their ecological function within the Study Area.
- The EIS will also identify opportunities for restoration and enhancement of these natural area, where applicable.

The SSEA is in agreement with the Ecological Surveys that are noted as a “yes” for the site on page 2 of the TOR, namely Ecological Land Classification, Spring Vegetation Inventory, Summer Vegetation Inventory, Tree Inventory, Woodland Assessment, Breeding Bird Survey, Species at Risk/Habitat Survey, Significant Wildlife Habitat Survey and Incidental Wildlife Observations. However, SSEA would like to clarify:

1. Since the NHA identified that suitable habitat for Eastern Whip-poor-will (Threatened species) may be present within the study area, the Breeding Bird Survey must include evening surveys for this species, following provincial survey protocols which include specific criteria for timing (June) and lunar conditions (moon must be visible above the horizon and bright, e.g., between first quarter and full moon).
2. For consideration of Significant Wildlife Habitat (SWH), SWH Criteria Schedule for Ecoregion **6E** must be used; the TOR incorrectly refers to Ecoregion 7E.
3. Incidental wildlife observations should include evidence of mammals, reptiles, amphibians and birds breeding as well as foraging, shelter/nesting areas and travel corridors, if applicable.

In addition, the SSEA notes that a Snake Survey is not proposed for the EIS for the site, however, since the NHA indicated suitable habitat for SAR snakes may be present within the study area, a snake survey should be undertaken as part of the EIS. Several field visits have already been conducted, but either it was unclear from the NHA what weather conditions were during visits, or conditions were not conducive for observing snakes (e.g., overcast with light showers) that may be using the site. Pinchin should provide additional information with respect to the survey methodology that will be used for snakes. Note: Information on the location of many federal and provincial SAR should be treated as sensitive data, and in these cases, information must be **disclosed to the municipality and applicable agencies in a manner that does not make it part of public record** (e.g., mapping/ information provided separate from the main report, subject to restricted access).

As previously commented by SSEA with respect to the NHA, appropriate buffers (or vegetation protection zones) to natural heritage features must be established, and the size/width of the buffers should be determined based on an ecological rationale that will protect the features and their associated functions from anticipated or potential impacts of development, taking into consideration any applicable federal or provincial policies/legislation and guidance documents (e.g., Growth Plan for the Greater Golden Horseshoe, if applicable).

Additional notes and clarification on EIS requirements

1. Unless otherwise specified, the EIS report should be provided in both hard-copy and electronic formats, and must be legible – e.g., font size of text in the report, figures, tables, and appendices must be reasonable, photocopies of field data sheets must be readable, etc. Electronic formats must allow reviewers to copy and paste text (i.e., not be simply a scan of the hard-copy report), to facilitate commenting by the municipality and applicable

agencies/peer reviewer, if necessary. Digital mapping (e.g., ELC) provided to review agencies will be compatible with ArcGIS.

2. The EIS and the biophysical surveys undertaken in support of it must be completed by appropriately qualified professional(s) with any applicable training or certification(s) relevant to the required work. Field work will be conducted during appropriate season(s), weather conditions and using suitable protocols to identify and evaluate the natural feature(s) and their ecological functions. All field work will be described to the following standards:
 - a. Date, time, and duration of field work/survey (including start time, end time of site investigations)
 - b. Sampling locations and/or area searched (i.e., identified on a map)
 - c. Purpose of field work and survey protocol(s) used/ summary of investigation methods
 - d. Relevant temperature and weather conditions during site investigations (cloud cover, wind speed [Beaufort scale or km/h], precipitation [type and amount])
 - e. Personnel involved (name and qualifications)

Copies of the approved Terms of Reference and correspondence with relevant agencies will be included as appendices to the EIS.

With the clarification and additions or changes noted above in this email, the scope of work for the EIS is acceptable to SSEA.

Since this is a site-specific review, it is outside the scope of the core services that SSEA provides to the municipalities, and the Town will be invoiced on a cost-recovery basis for our time spent on the file.

I will leave it to you to correspond with the proponent. If you wish to discuss any of the above prior to responding to them, please let me know. **Note that some of the fieldwork above is time sensitive (e.g., Whip-poor-will surveys).**

Best regards,
Michelle

**Michelle Hudolin | Manager Watershed Resilience, Wetlands & Habitat Biologist
Severn Sound Environmental Association**
Tel: 705-534-7283 ext. 202 | MHudolin@severnsound.ca

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From: Rocky Yao <ryao@Pinchin.com>
Sent: May 31, 2023 4:57 PM
To: Michelle Hudolin <MHudolin@severnsound.ca>; Andy Warzin <awarzin@midland.ca>
Cc: Adam Farr <sfarquharson@midland.ca>; Olivia Magalhaes <Olivia.Magalhaes@plaza.ca>; Oz Kemal <okemal@mhbcpplan.com>; Katherine Rauscher <krauscher@mhbcpplan.com>; Elizabeth O'Hara <ehohara@Pinchin.com>
Subject: EIS Terms of Reference Post Site Walk 9226 County Rd 93

Hi Michelle and Andy,

It was a pleasure meeting you both in the site walk last month. As discussed then, please find attached the EIS Terms of Reference for Michelle's review.

Feel free to let me and Elizabeth know if you have any questions or comments on this TOR.

Along with the client, we would like to get a sense of the turnaround time for your TOR review.

Much appreciated,

Rocky Yao, M.Sc, CISEC, EP

Team Leader and Regional Practice Leader, Environmental Science
Pinchin Ltd. | T: 365.873.0355 | C: 289.971.7821

From: Michelle Hudolin <MHudolin@severnsound.ca>

Sent: March 30, 2023 11:12 AM

To: Katherine Rauscher <krauscher@mhbcplan.com>; Adam Farr <sfarquharson@midland.ca>; Andy Warzin <awarzin@midland.ca>

Cc: Rocky Yao <ryao@Pinchin.com>; Olivia Magalhaes <Olivia.Magalhaes@plaza.ca>; Oz Kemal <okemal@mhbcplan.com>; Elizabeth O'Hara <eohara@Pinchin.com>

Subject: RE: Postponed - Site Walk 9226 County Rd 93

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Good morning,

I am not available on April 10th.

The week of April 17th: Monday the 17th would be the best date for me, but I could potentially do between 11 am and noon on the Tuesday, Wednesday or Thursday.

Thank you.

Michelle Hudolin | Manager Watershed Resilience, Wetlands & Habitat Biologist
Severn Sound Environmental Association

Tel: 705-534-7283 ext. 202 | MHudolin@severnsound.ca

www.severnsound.ca | Twitter @SSEA_SSRAP | Instagram @severnsoundea

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From: Katherine Rauscher <krauscher@mhbcplan.com>

Sent: March 30, 2023 10:51 AM

To: Michelle Hudolin <MHudolin@severnsound.ca>; Adam Farr <sfarquharson@midland.ca>; Andy Warzin <awarzin@midland.ca>
Cc: Rocky Yao <ryao@Pinchin.com>; Olivia Magalhaes <Olivia.Magalhaes@plaza.ca>; Oz Kemal <okemal@mhbcplan.com>; Elizabeth O'Hara <eohara@Pinchin.com>
Subject: Postponed - Site Walk 9226 County Rd 93
Importance: High

Hi All,

Looking ahead to tomorrows forecast, we would like to re-schedule our site walk for 9226 County Road 93.

We offer the following times instead, please let us know what works best with your schedules:

Monday April 10, after 11am

April 17-21, after 11am

A new invite will be sent once a date is confirmed.

Thank you,

KATHERINE RAUSCHER, MCIP, RPP | Associate

Please note that I am working remotely and can be reached on my cell at 416-930-7113.

Absence Alert: I will away beginning Friday, April 7, returning Wednesday April 12, 2023.

MHBC Planning, Urban Design & Landscape Architecture

442 Brant Street, Suite 204 | Burlington | ON | L7R 2G4 | T 905 639 8686 x 238

| krauscher@mhbcplan.com



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APPENDIX D
VASCULAR PLANT LIST

Table 1: Vascular Plant List for the Study Area

Scientific Name	Common Name	S-Rank	CC	CW
<i>Populus balsamifera</i>	Balsam Poplar	S5	4	-3
<i>Lotus corniculatus</i>	Bird's-foot Trefoil	SNA		3
<i>Saponaria officinalis</i>	Bouncing Bet	SNA		3
<i>Diervilla lonicera</i>	Bush Honeysuckle	S5	5	5
<i>Solidago canadensis</i>	Canada Goldenrod	S5	1	3
<i>Bellis perennis</i>	Common Daisy			
<i>Taraxacum officinale</i>	Common Dandelion	SNA	-	3
<i>Asclepias syriaca</i>	Common Milkweed	S5	0	5
<i>Verbascum thapsus</i>	Common Mullein	SNA		5
<i>Prunella vulgaris ssp. Vulgaris</i>	Common Selfheal	S5	0	0
<i>Thuja occidentalis</i>	Eastern White Cedar	S5	4	-3
<i>Maianthemum racemosum</i>	False Solomon Seal	S5	4	3
<i>Equisetum arvense</i>	Field Horsetail	S5	0	0
<i>Berteroa incana</i>	Hoary False-alyssum	SNA		5
<i>Populus grandidentata</i>	Large-toothed Aspen	S5	5	5
<i>Malva moschata</i>	Musk Mallow	SNA		5
<i>Hemerocallis fulva</i>	Orange Day Lily	SNA		5
<i>Dactylis glomerata</i>	Orchard Grass	SNA		3
<i>Matteuccia struthiopteris</i>	Ostrich Fern	S5	5	0
<i>Leucanthemum vulgare</i>	Ox-Eye Daisy	SNA		5
<i>Toxicodendron radicans</i>	Poison Ivy	S5	2	0
<i>Daucus carota</i>	Queen Anne's Lace	SNA		5
<i>Quercus rubra</i>	Red Oak	S5	6	3
<i>Cornus sericea</i>	Red-osier Dogwood	S5	2	-3
<i>Vitis riparia</i>	Riverbank Grape	S5	0	0
<i>Erigeron strigosus</i>	Rough Fleabane	S5	4	3
<i>Pinus sylvestris</i>	Scots Pine	SNA		3
<i>Bromus inermis</i>	Smooth Brome	SNA		5
<i>Centaurea stoebe</i>	Spotted Knapweed	SNA		5
<i>Apocynum androsaemifolium</i>	Spreading Dogbane	S5	3	5
<i>Rhus typhina</i>	Staghorn Sumac	S5	1	3
<i>Acer saccharum</i>	Sugar Maple	S5	4	3
<i>Phleum pratense</i>	Timothy	SNA		3
<i>Populus tremuloides</i>	Trembling Aspen	S5	2	0
<i>Vicia cracca</i>	Tufted Vetch	SNA		5
<i>Echium vulgare</i>	Viper's Bugloss	SNA		5
<i>Parthenocissus quinquefolia</i>	Virginia Creeper	S4?	6	3
<i>Fraxinus americana</i>	White Ash	S4	4	3
<i>Pinus strobus</i>	White Pine	S5	4	3
<i>Melilotus albus</i>	White Sweet Clover	SNA		3
<i>Salix spp</i>	Willow			

APPENDIX E
SELECTED SITE PHOTOGRAPHS

SELECTED SITE PHOTOGRAPHS

(All photos taken July 15, 2021, April 17, 2023, and July 12, 2023)



Photo 1 – View of Dry-Fresh Poplar Deciduous Forest.



Photo 2 – View of Dry-Fresh Mixed Meadow



Photo 3 – View of the manholes and other features associated with the septic system buried under the mixed meadow.



Photo 4 – View Dry-Fresh Poplar Mixed Forest.



Photo 5 – View of edge of the Stormwater Management Pond.



Photo 6 – View of the Artificial Cover Objects laid throughout the Dry – Fresh Mixed Meadow to survey for snakes on the Site.

APPENDIX F
BREEDING BIRD SURVEY TABLE

Appendix E Table 2. Bird Species Observed on the Site

Scientific Name	Common Name	SARA	ESA 2007	Srank	OBBA Square	Breeding likelihood and observed activities
<i>Corvus brachyrhynchos</i>	American Crow	---	---	S5B	17NK85	FY
<i>Carduelis tristis</i>	American Goldfinch	---	---	S5B	17NK85	S
<i>Setophaga ruticilla</i>	American Redstart	---	---	S5B	17NK85	S
<i>Poecile atricapillus</i>	Black-capped Chickadee	---	---	S5	17NK85	S, FY
<i>Cyanocitta cristata</i>	Blue Jay	---	---	S5	17NK85	S
<i>Dendroica pensylvanica</i>	Chestnut-sided Warbler	---	---	S5B	17NK85	X, S
<i>Spizella passerina</i>	Chipping Sparrow	---	---	S5B	17NK85	S
<i>Corvus corax</i>	Common Raven	---	---	S5	17NK85	X
<i>Picoides pubescens</i>	Downy Woodpecker	---	---	S5	17NK85	FY
<i>Pipilo erythrophthalmus</i>	Eastern Towhee	---	---	S4B	17NK85	S
<i>Sturnus vulgaris</i>	European Starling	---	---	SNA	17NK85	X
<i>Dumetella carolinensis</i>	Gray Catbird	---	---	S4B	17NK85	S
<i>Myiarchus crinitus</i>	Great Crested Flycatcher	---	---	S4B	17NK85	S
<i>Troglodytes aedon</i>	House Wren	---	---	S5B	17NK85	S, FY
<i>Passerina cyanea</i>	Indigo Bunting	---	---	S4B	17NK85	S
<i>Vireo olivaceus</i>	Red-eyed Vireo	---	---	S5B	17NK85	S
<i>Larus delawarensis</i>	Ring-billed Gull	---	---	S5B, S4N	17NK85	X
<i>Bonasa umbellus</i>	Ruffed Grouse	---	---	S4	17NK85	X
<i>Passerculus sandwichensis</i>	Savannah Sparrow	---	---	S4B	17NK85	X
<i>Melospiza melodia</i>	Song Sparrow	---	---	S5B	17NK85	S

NHIC Srank (Subnational) Legend

- S4 Apparently secure, at fairly low risk of extirpation.
- S5 Secure, at low or no risk of extirpation.
- SNA Not applicable because species is not a suitable target for conservation activities, e.g., non-native species.
- S#B Conservation status refers to breeding population.
- S#N Conservation status refers to non-breeding population.

OBBA Breeding Codes

Observed

- X Species observed in its breeding season (no breeding evidence)

Possible

- S Singing male present or breeding calls heard in suitable nesting habitat

Probable

- P Pair observed in their breeding season in suitable nesting habitat
- T Permanent territory presumed through registration of territorial song or presence of adult bird in breeding habitat on at least 2 days, one week or more apart at the same place
- A Agitated behaviour or anxiety calls of adult
- N Nest building or excavation of nest hole

Confirmed

- DD Distraction display or injury feigning

APPENDIX G
SPECIES AT RISK AND SIGNIFICANT WILDLIFE HABITAT SCREENING

Table 1. Species at Risk Screening for the Site

Type	Common Name	Scientific Name	Srank	SARO Status	COSEWIC Status	Last Obs Date	Background Information Source					Notes on Preferred Habitat ¹	Suitable Habitat on Site	Confirmed Observation on Site
							NHIC Grid 17NK8554 & 17NK8654	Atlas of Ontario Mammals (Dobbyn 1994)	Atlas of the Breeding Bird of Ontario (Cadman 2009)	Ontario Butterfly Atlas (Macnair 2018)	Rare Vascular Plants of Ontario (Oldham & Brinker 2009)			
BIRDS	Bank Swallow	<i>Riparia riparia</i>	S4B	---	THR	2001-2005						Sand, clay or gravel river banks or steep riverbank cliffs; lakeshore bluffs of easily crumbled sand or gravel; gravel pits, road-cuts, grassland or cultivated fields that are close to water; nesting sites are limiting factor for species presence	No, suitable habitat not present within the Site.	No
	Barn Swallow	<i>Hirundo rustica</i>	S4B	---	THR	2001-2005						Nest along human-made structures such as open barns, under bridges and in culverts. Attracted to open structures to build their nests, including ledges. They prefer rough-cut wood structures as the mud nests adheres better.	Yes, suitable habitat may be present in human structures on the Site. However, no evidence of this species was observed on site during breeding bird surveys.	No
	Bobolink	<i>Dolichonyx oryzivorus</i>	S4B	---	THR	2001-2005						Large, open expansive grasslands with dense ground cover; hayfields, meadows or fallow fields; marshes; requires tracts of grassland >50 ha	No, suitable habitat not present within the Site.	No
	Black Tern*	<i>Chlidonias niger</i>	S3B	---	SC	2001-2005						Wetlands, coastal or inland marshes; large cattail marshes, marshy edges of rivers, lakes or ponds, wet open fens, wet meadows; must have shallow (0.5 to 1 m deep) water and areas of open water near nests; requires marshes >20 ha in size;	No, suitable habitat not present within the Site.	No
	Canada Warbler*	<i>Wilsonia canadensis</i>	S4B	THR	SC	2001-2005						an interior forest species; dense, mixed coniferous, deciduous forests with closed canopy, wet bottomlands of cedar or alder; shrubby undergrowth in cool moist mature woodlands; usually requires at least 30 ha	Yes, suitable habitat may be present in the deciduous woodland within the Site. However, no evidence of this species was observed on site during breeding bird surveys.	No
	Chimney Swift	<i>Chaetura pelagica</i>	S4B, S4N	THR	THR	2001-2005						commonly found in urban areas near buildings; nests in hollow trees, crevices of rock cliffs, chimneys; highly gregarious; feeds over open water	Yes, suitable habitat may be present in structures within Site. However, no evidence of this species was observed on site during breeding bird surveys.	No
	Eastern Meadowlark	<i>Sturnella magna</i>	S4B	---	THR	2001-2005						open, grassy meadows, farmland, pastures, hayfields or grasslands with elevated singing perches; cultivated land and weedy areas with trees; old orchards with adjacent, open grassy areas >10 ha in size	No, suitable habitat not present within the Site.	No
	Eastern Wood-pewee	<i>Contopus virens</i>	S4B	---	SC	2001-2005						open, deciduous, mixed or coniferous forest; predominated by oak with little understory; forest clearings, edges; farm woodlots, parks	Yes, suitable habitat may be present in the deciduous woodland within the Site. However, no evidence of this species was observed on site during breeding bird surveys.	No
	Least Bittern	<i>Ixobrychus exilis</i>	S4B	THR	THR	2001-2005						deep marshes, swamps, bogs; marshy borders of lakes, ponds, streams, ditches; dense emergent vegetation of cattail, bulrush, sedge; nests in cattails	No, suitable habitat not present within the Site.	No
	Red-shouldered Hawk*	<i>Buteo lineatus</i>	S4B	SC	---	2001-2005						moist, mature hardwood forests ; woody swamps or wooded margins of marshes; wet bottomlands; restricted to mature, closed (>80%) closed forests; nests reused; requires a minimum of 10 ha of continuous forest to meet territorial requirements	Yes, suitable habitat may be present in the deciduous woodland within the Site. However, no evidence of this species was observed on site during breeding bird surveys.	No
	Whip-poor-will	<i>Caprimulgus vociferus</i>	S4B	---	THR	2001-2005						dry, open, deciduous woodlands of small to medium trees; oak or beech with lots of clearings and shaded leaf litter; wooded edges, forest clearings with little herbaceous growth; pine plantations; associated with >100 ha forests	Yes, suitable habitat may be present in the deciduous woodland within the Site. However, the deciduous woodland patches do not contain oak or beech species and are combined with heavy anthropogenic influences (i.e., transformer stations, mowed lawns, and stormwater management pond), which are likely to deter Whip-poor-will based on its habitat preference. Further, no evidence of this species was observed on site during breeding bird surveys.	No
	Wood Thrush	<i>Hylocichla mustelina</i>	S4B	SC	THR	2001-2005						Carolinian and Great Lakes-St. Lawrence forest zones; undisturbed moist mature deciduous or mixed forest with deciduous sapling growth; near pond or swamp; hardwood forest edges; must have some trees higher than 12 m	Yes, suitable habitat may be present in the deciduous woodland within the Site. However, no evidence of this species was observed on site during breeding bird surveys.	No
REPTILES	Blanding's turtle	<i>Emydoidea blandingii</i>	S3	THR	THR	2016						Shallow water marshes, bogs, ponds or swamps, or coves in larger lakes with soft muddy bottoms and aquatic vegetation; basks on logs, stumps, or banks;	No, suitable habitat not present within the Site.	No
	Common musk turtle	<i>Sternotherus odoratus</i>	S3	THR	THR	1983						Tend to be found in ponds, lakes, marshes and rivers that are slow-moving. Prefer lots of emergent vegetation and muddy bottoms that allow them to burrow for the duration of winter.	No, suitable habitat not present within the Site.	No
	Common Snapping Turtle*	<i>Chelydra serpentina</i>	S4	SC	SC	2019						permanent, semi-permanent fresh water; marshes, swamps or bogs; rivers and streams with soft muddy banks or bottoms; often uses soft soil or clean dry sand on south-facing slopes for nest sites;	No, suitable habitat not present within the Site.	No

Table 1. Species at Risk Screening for the Site

Type	Common Name	Scientific Name	Srank	SARO Status	COSEWIC Status	Last Obs Date	Background Information Source					Notes on Preferred Habitat ¹	Suitable Habitat on Site	Confirmed Observation on Site
							NHIC Grid 17NK8554 & 17NK8654	Atlas of Ontario Mammals (Dobbyn 1994)	Atlas of the Breeding Bird of Ontario (Cadman 2009)	Ontario Butterfly Atlas (Macnaughton 2018)	Rare Vascular Plants of Ontario (Oldham & Brinker 2009)			
REPTILES	Eastern Hognose Snake	<i>Heterodon platirhinos</i>	S3	THR	THR	2013						sandy upland fields, pastures, savannahs, sandy beaches; dry open oak-pine-maple forest with sandy soils; prefer forest areas > Sha	Yes, suitable habitat may be present in the deciduous woodland within the Site. However, no evidence of this species was observed on site during the ACO or VES snake surveys.	No
	Massasauga (Great Lakes St. Lawrence population)	<i>Sistrurus catenatus pop. 1</i>	S3	END	END	1969	•					use upland, old field in summer; marsh, shrub swamp or bog; rivers and streams that provide edge or low vegetative growth; in fall and winter; hibernate underground in mammal burrows, under rotting stumps, in rock crevices	Yes, suitable habitat may be present in the deciduous woodland within the Site. However, no evidence of this species was observed on site during the ACO or VES snake surveys.	No
	Map Turtle*	<i>Graptemys geographica</i>	S3	SC	SC	2018					•	large bodies of water with soft bottoms, and aquatic vegetation; basks on logs or rocks or on beaches and grassy edges, uses soft soil or clean dry sand for nest sites; aquatic corridors (e.g. stream) are required for movement	No, suitable habitat not present within the Site.	No
INSECTS	Speckled Giant Lacewing	<i>Polystoechotes ounctata</i>	SH	-	-		•					Lacewings are known to occur in field and tree crops, gardens and fields. They commonly live amongst tall grasses and herbaceous plants.	Yes, however it is unlikely as they are thought to be extirpated in Ontario.	No
	Monarch	<i>Danaus plexippus</i>	S2N,S4B	SC	SC	2021					•	Caterpillars feed on milkweed plants and are confined to meadows and open areas where milkweed grows. Adults forage on a variety of wildflowers and milkweed.	Yes, suitable habitat may be present in the meadow within the Site as milkweed was observed. However, the meadow on site is very much disturbed and is too small as significant habitat for this species.	Yes
MAMMALS	Little Brown Bat	<i>Myotis lucifugus</i>	S4	END	END			•				uses caves, quarries, tunnels, hollow trees or buildings for roosting; winters in humid caves; maternity sites in dark warm areas such as attics and barns; feeds primarily in wetlands, forest edges	Yes, suitable habitat may be present in the structures and in crevices of trees within the Site. However, no evidence of bats or suitable habitat (roost trees, snags, etc.) were observed during field surveys.	No
	Eastern Small-footed Bat*	<i>Myotis leibii</i>	S2S3	END	END			•				roosts in caves, mine shafts, crevices or buildings that are in or near woodland; hibernates in cold dry caves or mines; maternity colonies in caves or buildings; hunts in forests	Yes, suitable habitat may be present in the structures and in crevices of trees within the Site. However, no evidence of bats or suitable habitat (roost trees, snags, etc.) were observed during field surveys.	No
	Northern Long-eared Myotis	<i>Myotis septentrionalis</i>	S3	END	END			•				hibernates during winter in mines or caves; roosts in houses, manmade structures but prefers hollow trees or under loose bark;	Yes, suitable habitat may be present in the structures and in crevices of trees within the Site. However, no evidence of bats or suitable habitat (roost trees, snags, etc.) were observed during field surveys.	No
	Gray Fox	<i>Urocyon cinereoargenteus</i>	S1	THR	THR			•				marshy woodlands with a mix of fields and woods; swamps; wooded, brushy or rocky habitats; woodland farmland edge; old fields with thickets; dens in hollow log or tree; individual has numerous winter dens throughout its range which is > 40 ha	Yes, suitable habitat may be present in deciduous woodland within the Site. However, no evidence of this species was observed on site .	No

SARO Species at Risk Ontario (O. Reg. 230/08)
 COSEWIC Committee on the Status of Endangered Wildlife in Canada
Definitions
 Endangered (END) Species facing imminent extirpation or extinction
 Threatened (THR) Species likely to become endangered if nothing is done to reverse the factors leading to their extirpation or extinction
 Special Concern (SC) Species that may become threatened or endangered because of a combination of biological characteristics and identified threats
 Extirpated (EXR) Species which no longer exist in the wild in Ontario, but exist elsewhere in the world
 DD Data deficient
 Not at Risk (NAR) Not at risk

NHIC Srank (Subnational) Legend
 S1 Critically imperiled, at very high risk of extirpation.
 S2 Imperiled, at high risk of extirpation.
 S3 Vulnerable, at moderate risk of extirpation.
 S4 Apparently secure, at fairly low risk of extirpation.
 S5 Secure, at low or no risk of extirpation.
 B Conservation status refers to breeding population.
 N Conservation status refers to non-breeding population.
 SH Possibly Extirpated

References
 1 Ministry of Natural Resources (MNR). 2000. Significant Wildlife Habitat Technical Guide. Peterborough: Queen's Printer for Ontario.
 2 Government of Canada. 2018. Species at Risk Act: COSEWIC Assessments and Status Reports. Accessed February 2019. <https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/cosewic-assessments-status-reports.html>.
 3 Government of Canada. 2011. Species at Risk Public Registry: A to Z Species Index. Ottawa: Government of Canada. Accessed February 2019. http://sararegistry.gc.ca/sar/index/default_e.cfm.
 4 Ministry of the Environment, Conservation and Parks. 2018. Species at Risk in Ontario. Accessed February 2019. <https://www.ontario.ca/page/species-risk-ontario#section-3>.
 5 Oldham, M. J. and S. R. Brinker. 2009. Rare Vascular Plants of Ontario, Fourth Edition. Natural Heritage Information Centre, Ontario Ministry of Natural Resources. Peterborough, Ontario. 188 pp.

Table 2. Significant Wildlife Habitat Assessment for the Study Area

Significant Habitat Type	Site Assessment
Seasonal Wildlife Concentration Areas	
Waterfowl Stopover and Staging Areas (Terrestrial)	Meadows are found within the Site, however no evidence of annual spring flooding was observed and none of the waterfowl species were observed during field surveys. Unlikely SWH
Waterfowl Stopover and Staging Areas (Aquatic)	No wetlands found on or adjacent to the Site. Not SWH
Shorebird Migratory Stopover Area	No suitable lake, river or wetland shorelines are observed within the Site. Not SWH
Raptor Wintering Area	Forest and upland meadows are found within the Study area, however these areas are not adjacent to shorelines, and are less than 20 ha in size. Not SWH
Bat Hibernacula	No caves or crevices are found within the Site. Not SWH
Bat Maternity Colonies	Woodlands found on the Site, however no snag trees observed Unlikely SWH
Turtle Wintering Areas	No large, permanent water bodies are found within the Site. Not SWH
Reptile Hibernaculum	No rock piles, slopes or similar features observed on the Site. Not SWH
Colonially - Nesting Bird Breeding Habitat (Bank and Cliff)	No large banks or cliffs observed on Site. Not SWH
Colonially - Nesting Bird Breeding Habitat (Tree/Shrubs)	No live and few dead standing trees are found within wetlands or lakes the Site. Not SWH
Colonially - Nesting Bird Breeding Habitat (Ground)	No rocky islands or peninsulas within lakes or large rivers found within the Site. Not SWH
Migratory Butterfly Stopover Area	Meadow communities with milkweed are observed within the Site. However, it is less than 10 ha in size and not 5 km from the shores of Lake Ontario. Not SWH
Landbird Migratory Stopover Area	Wooded areas are found within the Study Area and are greater than 10 ha; However, is greater than 5 km from Lake Ontario. Not SWH
Deer Yarding Areas	The Site was not identified as a Stratum I or II. Not SWH
Deer Winter Congregation Area	Forested Ecosites are found within the Study Area. However, was not mapped by the MNRF on-Site. Unlikely SWH
Rare Vegetation Communities or Specialized Habitat for Wildlife	
Cliffs and Talus Slopes	No cliffs or talus slopes found within the Site. Not SWH
Sand Barren	No sand barrens found within the Site. Not SWH
Alvar	No alvars found within the Site. Not SWH
Old Growth Forest	No old growth forest present on the Site. Not SWH
Savannah	No savannahs found within the Site. Not SWH
Tallgrass Prairie	No tallgrass prairies found within the Site. Not SWH
Other Rare Vegetation Communities	No other provincially rare plant communities are found within the Site. Not SWH
Specialized Habitat for Wildlife	
Waterfowl Nesting Area	No wetlands found within 120 m of the Site. Not SWH
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	No forests or wetlands directly adjacent to rivers, lakes, or wetlands on the Site. Not SWH
Woodland Raptor Nesting Habitat	Forested Ecosites are found within the Site. Canidate SWH
Turtle Nesting Areas	No exposed mineral soils areas adjacent to wetlands, lakes, or rives found on the Site. Not SWH
Seeps and Springs	No seeps or springs observed within the Site. Not SWH
Amphibian Breeding Habitat (Woodland)	Although there are woodlands on the Site, there are no observations of seasonal flooded areas or vernal pools observed on the Site. Unlikely SWH
Amphibian Breeding Habitat (Wetlands)	No wetlands are found within the Site. Not SWH
Woodland Area - Sensitive Bird Breeding Habitat	No forests over 60 years old and larger than 30 ha found within the Site. Not SWH
Habitat for Species of Conservation Concern (Not Including Endangered or Threatened Species)	
Marsh Bird Breeding Habitat	No wetlands are found within the Site. Not SWH

Table 2. Significant Wildlife Habitat Assessment for the Study Area

Significant Habitat Type	Site Assessment
Open Country Bird Breeding Habitat	No large grassland areas bigger than 30 ha found within the Site. Not SWH
Shrub/Early Successional Bird Breeding Habitat	No shrub thickets greater than 10 ha found within the Site. Not SWH
Terrestrial Crayfish	No wet meadows or shallow marshes found on the Site. No evidence of terrestrial crayfish was observed. Not SWH
Special Concern and Rare Wildlife Species	No special concern or rare wildlife species observed on the Site. Not SWH
Animal Movement Corridors	
Deer Movement Corridor	Forest are present on Site, however they are no associated with riparian areas. Not SWH
Amphibian Movement Corridors	No wetlands are found within the Site to be movement corridors for amphibians. Not SWH

APPENDIX H
FIELD DATA FORMS

ELC SOILS ONTARIO	SITE: 9226 Midland 93
	POLYGON: MEMM3
	DATE:
	SURVEYOR(S):

		Slope			UTM					
P/A	PP	Dr	Position	Aspect	%	Type	Class	Z	EASTING	NORTHING
1										
2										
3										
4										
5										

SOIL	1	2	3	4	5
TEXTURE & HORIZON 3cm	A OM B Sand				
S 2					

A	TEXTURE	Organic mch			
	COURSE FRAGMENTS				
B	TEXTURE	Sand			
	COURSE FRAGMENTS				
C	TEXTURE				
	COURSE FRAGMENTS				
	EFFECTIVE TEXTURE	Sand			
	SURFACE STONINESS	0			
	SURFACE ROCKINESS	0			

DEPTH TO / OF					
MOTTLES	NO				
GLEYS	NO				
BEDROCK	752cm				
WATER TABLE	752cm				
CARBONATES	N/A				
DEPTH OF ORGANICS	3cm				
PORE SIZE DISC #1					
PORE SIZE DISC #2					
MOISTURE REGIME	Dry				
SOIL SURVEY MAP					
LEGEND CLASS					

ELC PLANT SPECIES LIST	SITE:
	POLYGON:
	DATE:
	SURVEYOR(S):

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER
 ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER				COL.
	1	2	3	4	
Golden Rod				A	
Vetch				O	
Stachem Sumac			O		
Rosin Ivy				O	
Roadside Compositae				O	
Wild Parberry				R	
Bindweed				R	
Common Milkweed				O	
Timothy grass				O	
Smooth Broom				A	
Spotted knifeweed				R	
Grand sweet clover				R	
Wild carrot				O	
Goats beard				O	
musc mallow				R	
Antelope thorn				R	
Hoary Alyssum				R	
Miller				R	
Viper bugloss				O	
St. John wort				O	
Spreading dogbane				R	
Trembling aspen			R		
Scots pine			R		
Turkey Hawthorn			R		
Kentucky Blue				O	
Orchard Grass				O	
Snowberry willow			O		
Willow sp			R		
Yellow Salsify				R	
Falcum Poplar		R	R		
Manitoba		R	R		

Maple

SPECIES CODE	LAYER				COL.
	1	2	3	4	
birds foot trefoil					R
Red clover					O
Black medic					R
Wild Basil					R
Rainweed					R
Stinking Nettle					O
White plantain					O
Dandelion					O

Ontario Breeding Bird Atlas - Point Count Form - South Central



Zone 17NK85 Block Square Atlasser Number Atlasser Name MICHAEL RICHARDSON Year 2021

Point A	Point B	Point C
Designated Number: <u>1</u> UTM (if not designated point): <input type="radio"/> On Road <input type="radio"/> GPS <input type="radio"/> NAD83 <input checked="" type="radio"/> Off Road <input type="radio"/> Map <input type="radio"/> NAD27 Mon Day: <u>6/30</u> UTM Easting: <u>586114</u> UTM Northing: <u>4954100</u> Start Time (24-hr): <u>06:02</u> Habitat: Class Sub. Structure (Optional) Modification (Optional)	Designated Number: <u>2</u> UTM (if not designated point): <input type="radio"/> On Road <input type="radio"/> GPS <input type="radio"/> NAD83 <input checked="" type="radio"/> Off Road <input type="radio"/> Map <input type="radio"/> NAD27 Mon Day: <u>6/30</u> UTM Easting: <u>585991</u> UTM Northing: <u>4954180</u> Start Time (24-hr): <u>06:13</u> Habitat: Class Sub. Structure (Optional) Modification (Optional)	Designated Number: <u>3</u> UTM (if not designated point): <input type="radio"/> On Road <input type="radio"/> GPS <input type="radio"/> NAD83 <input checked="" type="radio"/> Off Road <input type="radio"/> Map <input type="radio"/> NAD27 Mon Day: <u>6/30</u> UTM Easting: <u>585892</u> UTM Northing: <u>4954250</u> Start Time (24-hr): <u>06:28</u> Habitat: Class Sub. Structure (Optional) Modification (Optional)
1st 2nd	1st 2nd	1st 2nd

Species Name	Point A <100m >100m	Point B <100m >100m	Point C <100m >100m	Species Name	Point A <100m >100m	Point B <100m >100m	Point C <100m >100m	
Killdeer				Common Yellowthroat				
Ring-billed Gull				Scarlet Tanager				
Rock Dove				Chipping Sparrow				
Mourning Dove				Savannah Sparrow	X		1	
Downy Woodpecker			161	Song Sparrow	2	2		
Northern Flicker				Swamp Sparrow				
Eastern Wood-Pewee				White-throated Sparrow				
Least Flycatcher				Northern Cardinal				
Eastern Phoebe				Rose-breasted Grosbeak				
Great Crested Flycatcher	1	1	1	Indigo Bunting	2	1	1	
Eastern Kingbird				Bobolink				
Warbling Vireo				Red-winged Blackbird				
Red-eyed Vireo		X	1	Eastern Meadowlark				
Blue Jay		1		Common Grackle				
American Crow				Brown-headed Cowbird				
Tree Swallow				Baltimore Oriole				
Barn Swallow				American Goldfinch	1			
Black-capped Chickadee	3	2		House Sparrow				
White-breasted Nuthatch				Additional species or species with > 100 individuals				
House Wren		3+	2	Species Name	Species Code	Point A <100m >100m	Point B <100m >100m	Point C <100m >100m
Veery				RS TO WHEE	RS TO	1	2	1
Wood Thrush					CSWA			1
American Robin				ALSO				
Gray Catbird				AMCR				
Brown Thrasher				CORR				
European Starling				RBG4				
Cedar Waxwing				FLY OVER				
Yellow Warbler								
Black-and-white Warbler								
American Redstart								
Ovenbird								
Northern Waterthrush								

This form will be read by computer. Please print neatly with pen or dark pencil (not felt pen) so numbers do not touch lines. Put only one character per box except additional species counts.

Ontario Breeding Bird Atlas - Point Count Form - South Central



Zone 1 Block 7N Square K85 Atlasser Number Atlasser Name MICHAEL RICHARDSON Year 2021

Point A	Point B	Point C
Designated Number <u>1</u> UTM (if not designated point) <input type="radio"/> On Road <input type="radio"/> GPS <input type="radio"/> NAD83 <input type="radio"/> Off Road <input type="radio"/> Map <input type="radio"/> NAD27 Mon <u>7</u> Day <u>109</u> UTM Easting <u>586126</u> Start Time (24-hr) <u>6:30</u> UTM Northing <u>4954113</u> Habitat: Class Sub. <u> </u> Structure (Optional) <u> </u> Modification (Optional) <u> </u> 1st <u> </u> 2nd <u> </u>	Designated Number <u>2</u> UTM (if not designated point) <input type="radio"/> On Road <input type="radio"/> GPS <input type="radio"/> NAD83 <input type="radio"/> Off Road <input type="radio"/> Map <input type="radio"/> NAD27 Mon <u>7</u> Day <u>109</u> UTM Easting <u>586010</u> Start Time (24-hr) <u>6:39</u> UTM Northing <u>4954223</u> Habitat: Class Sub. <u> </u> Structure (Optional) <u> </u> Modification (Optional) <u> </u> 1st <u> </u> 2nd <u> </u>	Designated Number <u>3</u> UTM (if not designated point) <input type="radio"/> On Road <input type="radio"/> GPS <input type="radio"/> NAD83 <input type="radio"/> Off Road <input type="radio"/> Map <input type="radio"/> NAD27 Mon <u>7</u> Day <u>109</u> UTM Easting <u>585906</u> Start Time (24-hr) <u>6:49</u> UTM Northing <u>4954263</u> Habitat: Class Sub. <u> </u> Structure (Optional) <u> </u> Modification (Optional) <u> </u> 1st <u> </u> 2nd <u> </u>

Species Name	Point A		Point B		Point C		Species Name	Point A		Point B		Point C	
	<100m	>100m	<100m	>100m	<100m	>100m		<100m	>100m	<100m	>100m	<100m	>100m
Killdeer							Common Yellowthroat						
Ring-billed Gull							Scarlet Tanager						
Rock Dove							Chipping Sparrow		1				
Mourning Dove							Savannah Sparrow						
Downy Woodpecker							Song Sparrow		1				1
Northern Flicker							Swamp Sparrow						
Eastern Wood-Pewee							White-throated Sparrow						
Least Flycatcher							Northern Cardinal						
Eastern Phoebe							Rose-breasted Grosbeak						
Great Crested Flycatcher							Indigo Bunting						
Eastern Kingbird							Bobolink						
Warbling Vireo							Red-winged Blackbird						
Red-eyed Vireo						2	Eastern Meadowlark						
Blue Jay							Common Grackle						
American Crow		3				3	Brown-headed Cowbird						
Tree Swallow							Baltimore Oriole						
Barn Swallow							American Goldfinch						
Black-capped Chickadee				3		3	House Sparrow						
White-breasted Nuthatch							Additional species or species with > 100 individuals						
House Wren		1		1			Species Name	Species Code	Point A	Point B	Point C		
Veery							<u>R. Grouse</u>	<u>RUGR</u>		1			
Wood Thrush													
American Robin													
Gray Catbird		1		1									
Brown Thrasher													
European Starling				1									
Cedar Waxwing													
Yellow Warbler													
Black-and-white Warbler													
American Redstart						1							
Ovenbird													
Northern Waterthrush													
							<u>RBBU</u>						

RBBU - IN PARKING LOT

MIDLAND

Ontario Breeding Bird Atlas
Breeding Evidence Form - South

Zone Block Square Region Year
17 N K 55 20 21

Square Name (optional)

Atlasser Name Atlasser Number

MICHAEL RICHARDSON

Additional Observers Atlasser Number (if available)

Visit Mon Day Start Time End Time Party Hours*

Visit	Mon	Day	Start Time	End Time	Party Hours*
1	6	30	6:02	6:33	:
2	7	4	6:30	6:54	:
3					
4					
5					
6					
7					
8					
9					
10					

* Use 24-hr clock. See manual for calculation of party-hours. Record extra visits in notes or on separate sheet. For each species, record visit number when first found (use 0 if only recorded on casual visits).

Notes/Other Observers:

0359489277



Species	1st Visit	Ob.	Po.	Pr.	Conf.
Common Loon					
Pied-billed Grebe					
Double-crested Cormorant §					
American Bittern					
Least Bittern †					
Great Blue Heron §					
Great Egret †§					
Green Heron §					
Black-crowned Night-Heron †§					
Turkey Vulture					
Canada Goose					
Mute Swan					
Trumpeter Swan †					
Wood Duck					
Gadwall					
American Wigeon					
American Black Duck					
Mallard					
Blue-winged Teal					
Northern Shoveler					
Northern Pintail					
Amer Green-winged Teal					
Redhead †					
Ring-necked Duck					
Lesser Scaup					
Common Goldeneye					
Hooded Merganser					
Common Merganser					
Red-breasted Merganser					
Ruddy Duck †					
Osprey					
Bald Eagle †					
Northern Harrier					
Sharp-shinned Hawk					

Species	1st Visit	Ob.	Po.	Pr.	Conf.
Cooper's Hawk					
Northern Goshawk					
Red-shouldered Hawk †					
Broad-winged Hawk					
Red-tailed Hawk					
American Kestrel					
Merlin					
Peregrine Falcon †					
Gray Partridge					
Ring-necked Pheasant					
Ruffed Grouse		X			
Spruce Grouse					
Sharp-tailed Grouse †					
Wild Turkey					
Northern Bobwhite †					
King Rail †					
Virginia Rail					
Sora					
Common Moorhen (seen)					
American Coot (seen)					
Coot/Moorhen (heard)					
Sandhill Crane					
Killdeer					
Solitary Sandpiper					
Spotted Sandpiper					
Upland Sandpiper					
Common (Wilson's) Snipe					
American Woodcock					
Wilson's Phalarope †					
Ring-billed Gull §					
Herring Gull §					
Great Black-backed Gull †§					
Caspian Tern †§					
Common Tern §					

Species	1st Visit	Ob.	Po.	Pr.	Conf.
Forster's Tern †§					
Black Tern †§					
Rock Dove					
Mourning Dove					
Black-billed Cuckoo (seen)					
Yellow-billed Cuckoo (seen)					
Cuckoo species (heard)					
Eastern Screech-Owl					
Great Horned Owl					
Barred Owl					
Long-eared Owl					
Short-eared Owl †					
Northern Saw-whet Owl					
Common Nighthawk					
Whip-poor-will					
Chimney Swift §					
Ruby-throated Hummingbird					
Belted Kingfisher					
Red-headed Woodpecker †					
Red-bellied Woodpecker					
Yellow-bellied Sapsucker					
Downy Woodpecker		X			EYCF
Hairy Woodpecker					
Black-backed Woodpecker					
Northern Flicker					
Pileated Woodpecker					
Olive-sided Flycatcher					
Eastern Wood-Pewee					
Yellow-bellied Flycatcher					
Acadian Flycatcher †					
Alder Flycatcher					
Willow Flycatcher					
Least Flycatcher					
Eastern Phoebe					

MIDLAND

Species	1st Visit	Ob.	Po.	Pr.	Conf.
Great Crested Flycatcher			S		
Eastern Kingbird					
Loggerhead Shrike †					
White-eyed Vireo †					
Yellow-throated Vireo					
Blue-headed Vireo					
Warbling Vireo					
Philadelphia Vireo					
Red-eyed Vireo			S		
Gray Jay					
Blue Jay		X			
American Crow		X			FY
Common Raven					
Homed Lark					
Purple Martin					
Tree Swallow					
North Rough-wing Swallow					
Bank Swallow §					
Cliff Swallow §					
Barn Swallow					
Black-capped Chickadee		X	S		FY
Boreal Chickadee					
Tufted Titmouse †					
Red-breasted Nuthatch					
White-breasted Nuthatch					
Brown Creeper					
Carolina Wren					
House Wren		X	S		FY
Winter Wren					
Sedge Wren					
Marsh Wren					
Golden-crowned Kinglet					
Ruby-crowned Kinglet					
Blue-gray Gnatcatcher					

Species	1st Visit	Ob.	Po.	Pr.	Conf.
Eastern Bluebird					
Veery					
Swainson's Thrush					
Hermit Thrush					
Wood Thrush					
American Robin					
Gray Catbird			X		
Northern Mockingbird					
Brown Thrasher					
European Starling			X		
Cedar Waxwing					
Blue-winged Warbler (seen)					
Golden-winged Warbler (seen)					
Golden/Blue-winged (heard)					
Tennessee Warbler					
Nashville Warbler					
Northern Parula					
Yellow Warbler					
Chestnut-sided Warbler				S	
Magnolia Warbler					
Cape May Warbler					
Black-throated Blue Warbler					
Yellow-rumped Warbler					
Black-throated Green Warbler					
Blackburnian Warbler					
Pine Warbler					
Prairie Warbler †					
Bay-breasted Warbler					
Cerulean Warbler †					
Black-and-white Warbler					
American Redstart				S	
Prothonotary Warbler †					
Ovenbird					
Northern Waterthrush					

Species	1st Visit	Ob.	Po.	Pr.	Conf.
Louisiana Waterthrush †					
Mourning Warbler					
Common Yellowthroat					
Hooded Warbler †					
Wilson's Warbler					
Canada Warbler					
Yellow-breasted Chat †					
Scarlet Tanager					
Eastern Towhee				S	
Chipping Sparrow				S	
Clay-colored Sparrow					
Field Sparrow					
Vesper Sparrow					
Savannah Sparrow			X		
Grasshopper Sparrow					
Henslow's Sparrow †				S	
Song Sparrow					
Lincoln's Sparrow					
Swamp Sparrow					
White-throated Sparrow					
Dark-eyed Junco					
Northern Cardinal					
Rose-breasted Grosbeak					
Indigo Bunting			X		
Bobolink					
Red-winged Blackbird					
Eastern Meadowlark					
Western Meadowlark					
Rusty Blackbird					
Brewer's Blackbird					
Common Grackle					
Brown-headed Cowbird					
Orchard Oriole					
Baltimore Oriole					

Species	1st Visit	Ob.	Po.	Pr.	Conf.
Purple Finch					
House Finch					
Red Crossbill					
White-winged Crossbill					
Pine Siskin					
American Goldfinch			X	S	
Evening Grosbeak					
House Sparrow					

Additional Species	Name	Code	1st Visit	Ob.	Po.	Pr.	Conf.

Status Codes
 † - Rare species § - Colonial Species
 (Please complete relevant sections of rare/colonial species form)

Breeding Codes

OBSERVED:
 X - Species observed in its breeding season (no evidence of breeding)

POSSIBLE:
 H - Species observed in breeding season in suitable nesting habitat
 S - Singing male present or breeding calls heard in breeding season in suitable nesting habitat

PROBABLE:
 P - Pair observed in their breeding season in suitable nesting habitat
 T - Permanent territory presumed through registration of territorial song or presence of adult bird in breeding habitat on at least 2 days, one week or more apart at the same place.
 D - Courtship or display between a male and a female or 2 males including courtship feeding or copulation
 V - Visiting probable nest site
 A - Agitated behaviour or anxiety calls of an adult
 B - Brood Patch on adult female or cloacal protuberance on adult male
 N - Nest building or excavation of nest hole

CONFIRMED:
 DD - Distraction display or injury feigning
 NU - Used nest or egg shell found (occupied/laid during atlas period)
 FY - Recently fledged young or downy young
 AE - Adults leaving or entering nest site in circumstances indicating occupied nest
 FS - Adult carrying faecal sac
 CF - Adult carrying food for young
 NE - Nest containing eggs
 NY - Nest with young seen or heard



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ALSO IN PARKING LOT / FLY OVER
 RING-BILLED GULL
 COMMON RAVEN
 AMERICAN CROW

APPENDIX 1: Snake Survey Form

Project Details 9226 County Road 93, Midland Date July 12, 2023
 Number of Surveyors 1 Surveyor Names Elizabeth O'HARA

Location Description _____

Location UTM _____ UTM Zone 18 Site Photo #s na Map Attached

Start Time 9:00 Air Temp Start 18°C Basking Temp* Start / Cloud Cover 60 Wind (Beaufort) 2

End Time 11:30 Air Temp End 19°C Basking Temp* End / Precipitation 0 Search Duration 230

Habitats surveyed (include ELC where possible) and approximate size of each _____

Observations

Species	Easting	Northing	Accuracy (m)	Time	Behaviour	Age / Sex	Photo #s	Notes
Eastern Garter Snake				11:20	Slithering	Adult		observed in eastern portion of mixed mesquite

General Comments (habitat notes, invasive species, potential threats)
NA

Beaufort Wind Scale:
 0 = calm, smoke rises vertically (0-2km/hr)
 1 = Light air movement, smoke drifts (3-5)
 2 = Slight breeze, wind felt on face; leaves rustle (6-11)
 3 = Gentle breeze, leaves & twigs in constant motion (12-19)
 4 = Moderate breeze, small branches moving, raises dust & loose paper (20-30);
 5 = Fresh breeze, small trees begin to sway (31-39)
 6 = Strong breeze, large branches in motion (40-50)

*Basking temp should be measured in the sun just above the ground

APPENDIX 1: Snake Survey Form

Project Details 9226 County Road 93 Midland Date July 20th, 2003

Number of Surveyors 1 Surveyor Names Kennedy Hancus*

Location Description _____

Location UTM _____ UTM Zone _____ Site Photo #s _____ Map Attached

Start Time 10:24 Air Temp Start 23 Basking Temp* Start _____ Cloud Cover 80+ Wind (Beaufort) 1

End Time 11:43 Air Temp End 25 Basking Temp* End _____ Precipitation NA Search Duration hr 19 min

Habitats surveyed (include ELC where possible) and approximate size of each _____

meadow

Observations

Species	Easting	Northing	Accuracy (m)	Time	Behaviour	Age / Sex	Photo #s	Notes
Eastern garter Snake				10:40	Slithering	ADULT		between canopards 2 & 3

General Comments (habitat notes, invasive species, potential threats)

Beaufort Wind Scale:
 0 = calm, smoke rises vertically (0-2km/hr)
 1 = Light air movement, smoke drifts (3-5)
 2 = Slight breeze, wind felt on face; leaves rustle (6-11)
 3 = Gentle breeze, leaves & twigs in constant motion (12-19)
 4 = Moderate breeze, small branches moving, raises dust & loose paper (20-30)
 5 = Fresh breeze, small trees begin to sway (31-39)
 6 = Strong breeze, large branches in motion (40-50)

*Basking temp should be measured in the sun just above the ground

APPENDIX 1: Snake Survey Form

Project Details 9226 County Road 93, Midland Date July 25, 2023

Number of Surveyors 1 Surveyor Names Kennedy Alanus P.

Location Description _____

Location UTM _____ UTM Zone 1 Site Photo #s 1 Map Attached

Start Time 10:34 Air Temp Start 23 Basking Temp* Start / Cloud Cover 40 Wind (Beaufort) 2

End Time 11:37 Air Temp End 24 Basking Temp* End / Precipitation 0 Search Duration 1hr

Habitats surveyed (include ELC where possible) and approximate size of each _____

Meadow.

Observations

Species	Easting	Northing	Accuracy (m)	Time	Behaviour	Age / Sex	Photo #s	Notes

General Comments (habitat notes, invasive species, potential threats)
NO snakes observed

Beaufort Wind Scale:
 0 = calm, smoke rises vertically (0-2km/hr)
 1 = Light air movement, smoke drifts (3-5)
 2 = Slight breeze, wind felt on face, leaves rustle (6-11)
 3 = Gentle breeze, leaves & twigs in constant motion (12-19)
 4 = Moderate breeze, small branches moving, raises dust & loose paper (20-30)
 5 = Fresh breeze, small trees begin to sway (31-39)
 6 = Strong breeze, large branches in motion (40-50)

*Basking temp should be measured in the sun just above the ground

APPENDIX 1: Snake Survey Form

Project Details 9226 County Road 93, Midland Date July 26th, 2018

Number of Surveyors 1 Surveyor Names Kennedy + Hancock

Location Description _____

Location UTM _____ UTM Zone _____ Site Photo #s _____ Map Attached

Start Time 8:00 Air Temp Start 22 Basking Temp* Start / Cloud Cover 101 Wind (Beaufort) 2

End Time 9:00 Air Temp End 24 Basking Temp* End / Precipitation 0 Search Duration 1.20

Habitats surveyed (include ELC where possible) and approximate size of each _____

meadow.

Observations

Species	Easting	Northing	Accuracy (m)	Time	Behaviour	Age / Sex	Photo #s	Notes
<u>Eastern garter snake</u>				<u>8:30</u>	<u>skittling</u>	<u>Adult</u>	<u>/</u>	<u>between coverboards</u> <u>2 B 3</u>

General Comments (habitat notes, invasive species, potential threats)
M

Beaufort Wind Scale:
 0 = calm, smoke rises vertically (0-2km/hr)
 1 = Light air movement, smoke drifts (3-5)
 2 = Slight breeze, wind felt on face, leaves rustle (6-11)
 3 = Gentle breeze, leaves & twigs in constant motion (12-19)
 4 = Moderate breeze, small branches moving, raises dust & loose paper (20-30)
 5 = Fresh breeze, small trees begin to sway (31-39)
 6 = Strong breeze, large branches in motion (40-50)

*Basking temp should be measured in the sun just above the ground

APPENDIX 1: Snake Survey Form

Project Details 9226 County Road 93. Date August 1, 2023

Number of Surveyors 1 Surveyor Names Elizabeth O'HARA

Location Description _____

Location UTM _____ UTM Zone / Site Photo #s _____ Map Attached

Start Time 9:55 Air Temp Start 20°C Basking Temp* Start / Cloud Cover 0 Wind (Beaufort) 3

End Time 11:01 Air Temp End 21°C Basking Temp* End / Precipitation 0 Search Duration 1

Habitats surveyed (include ELC where possible) and approximate size of each _____

meadow.

Observations

Species	Easting	Northing	Accuracy (m)	Time	Behaviour	Age / Sex	Photo #s	Notes

General Comments (habitat notes, invasive species, potential threats)
No snakes observed.

Beaufort Wind Scale:
 0 = calm, smoke rises vertically (0-2km/hr)
 1 = Light air movement, smoke drifts (3-5)
 2 = Slight breeze, wind felt on face; leaves rustle (6-11)
 3 = Gentle breeze, leaves & twigs in constant motion (12-19)
 4 = Moderate breeze, small branches moving, raises dust & loose paper (20-30)
 5 = Fresh breeze, small trees begin to sway (31-39)
 6 = Strong breeze, large branches in motion (40-50)

*Basking temp should be measured in the sun just above the ground

APPENDIX 1: Snake Survey Form

Project Details 9226 County Road 93, Midland. Date 8/22/2023

Number of Surveyors 1 Surveyor Names Kennedy Hanerzyk

Location Description _____

Location UTM _____ UTM Zone _____ Site Photo #s NP Map Attached

Start Time 8:00 Air Temp Start 19 Basking Temp* Start na Cloud Cover 10% Wind (Beaufort) 1

End Time 9:02 Air Temp End 20 Basking Temp* End na Precipitation 0 Search Duration 1hr 2min

Habitats surveyed (include ELC where possible) and approximate size of each
meadow

Observations

Species	Easting	Northing	Accuracy (m)	Time	Behaviour	Age / Sex	Photo #s	Notes

General Comments (habitat notes, invasive species, potential threats)
No snakes were observed.

Beaufort Wind Scale:
 0 = calm, smoke rises vertically (0-2km/hr)
 1 = Light air movement, smoke drifts (3-5)
 2 = Slight breeze, wind felt on face; leaves rustle (6-11)
 3 = Gentle breeze, leaves & twigs in constant motion (12-19)
 4 = Moderate breeze, small branches moving, raises dust & loose paper (20-30);
 5 = Fresh breeze, small trees begin to sway (31-39)
 6 = Strong breeze, large branches in motion (40-50)

*Basking temp should be measured in the sun just above the ground

APPENDIX 1: Snake Survey Form

Project Details 9226 Canky Road 93, Midland Date 08/25/2023
 Number of Surveyors 1 Surveyor Names Kennedy Hanay 12
 Location Description _____

Location UTM _____ UTM Zone _____ Site Photo #s NP Map Attached

Start Time 8:19 Air Temp Start 18 Basking Temp* Start NA Cloud Cover 60% Wind (Beaufort) _____
 End Time 9:19 Air Temp End _____ Basking Temp* End NA Precipitation 0 Search Duration 1 hr

Habitats surveyed (include ELC where possible) and approximate size of each _____
meadow

Observations

Species	Easting	Northing	Accuracy (m)	Time	Behaviour	Age / Sex	Photo #s	Notes
<u>Eastern Garter snake</u>				<u>9:10</u>	<u>under cardboard 5</u>	<u>Juvenile</u>	<u>na</u>	<u>found under cardboard 5</u>

General Comments (habitat notes, invasive species, potential threats)
NA

Beaufort Wind Scale:
 0 = calm, smoke rises vertically (0-2km/hr)
 1 = Light air movement, smoke drifts (3-5)
 2 = Slight breeze, wind felt on face, leaves rustle (6-11)
 3 = Gentle breeze, leaves & twigs in constant motion (12-19)
 4 = Moderate breeze, small branches moving, raises dust & loose paper (20-30);
 5 = Fresh breeze, small trees begin to sway (31-39)
 6 = Strong breeze, large branches in motion (40-50)

*Basking temp should be measured in the sun just above the ground

APPENDIX 1: Snake Survey Form

Project Details 9226 County Road 93, Midland Date Aug 30/23
 Number of Surveyors 1 Surveyor Names Kennedy Hanayk
 Location Description _____

Location UTM _____ UTM Zone _____ Site Photo #s _____ Map Attached

Start Time 9:30 Air Temp Start 16 Basking Temp* Start _____ Cloud Cover 60% Wind (Beaufort) 2

End Time 10:30 Air Temp End 16 Basking Temp* End _____ Precipitation 0% Search Duration 1hr

Habitats surveyed (include ELC where possible) and approximate size of each _____
Meadow

Observations

Species	Easting	Northing	Accuracy (m)	Time	Behaviour	Age / Sex	Photo #s	Notes
Eastern Garter Snake				9:54	under cover board 4	Juvenile	na	under board 4

General Comments (habitat notes, invasive species, potential threats)
na.

Beaufort Wind Scale:
 0 = calm, smoke rises vertically (0-2km/hr)
 1 = Light air movement, smoke drifts (3-5)
 2 = Slight breeze, wind felt on face, leaves rustle (6-11)
 3 = Gentle breeze, leaves & twigs in constant motion (12-19)
 4 = Moderate breeze, small branches moving, raises dust & loose paper (20-30)
 5 = Fresh breeze, small trees begin to sway (31-39)
 6 = Strong breeze, large branches in motion (40-50)

*Basking temp should be measured in the sun just above the ground

APPENDIX 1: Snake Survey Form

Project Details 9226 Carthy Road 93, Midland Date Aug 31

Number of Surveyors 1 Surveyor Names Kennelly Hanayk

Location Description _____

Location UTM _____ UTM Zone _____ Site Photo #s _____ Map Attached

Start Time 9:30 Air Temp Start 16 Basking Temp* Start _____ Cloud Cover 30% Wind (Beaufort) 2

End Time 10:30 Air Temp End 17 Basking Temp* End _____ Precipitation 0 Search Duration 1 hour

Habitats surveyed (include ELC where possible) and approximate size of each
Meadow.

Observations

Species	Easting	Northing	Accuracy (m)	Time	Behaviour	Age / Sex	Photo #s	Notes
<u>Eastern Garter</u>				<u>10:15</u>	<u>under cover board S</u>	<u>Juvenile.</u>	<u>na</u>	<u>under cb S</u>

General Comments (habitat notes, invasive species, potential threats)
na

Beaufort Wind Scale:
 0 = calm, smoke rises vertically (0-2km/hr)
 1 = Light air movement, smoke drifts (3-5)
 2 = Slight breeze, wind felt on face; leaves rustle (6-11)
 3 = Gentle breeze, leaves & twigs in constant motion (12-19)
 4 = Moderate breeze, small branches moving, raises dust & loose paper (20-30);
 5 = Fresh breeze, small trees begin to sway (31-39)
 6 = Strong breeze, large branches in motion (40-50)

*Basking temp should be measured in the sun just above the ground

APPENDIX 1: Snake Survey Form

Project Details 9226 Carley Road 93, Midland. Date Sept 7/2023

Number of Surveyors 1 Surveyor Names Jenny Harker

Location Description _____

Location UTM _____ UTM Zone _____ Site Photo #s _____ Map Attached

Start Time 9:45 Air Temp Start 18 Basking Temp* Start _____ Cloud Cover 70 Wind (Beaufort) 1

End Time 10:45 Air Temp End 19 Basking Temp* End _____ Precipitation 0 Search Duration 1hr

Habitats surveyed (include ELC where possible) and approximate size of each _____

Meadow

Observations

Species	Easting	Northing	Accuracy (m)	Time	Behaviour	Age / Sex	Photo #s	Notes

General Comments (habitat notes, invasive species, potential threats)
no snakes observed.

Beaufort Wind Scale:
 0 = calm, smoke rises vertically (0-2km/hr)
 1 = Light air movement, smoke drifts (3-5)
 2 = Slight breeze, wind felt on face; leaves rustle (6-11)
 3 = Gentle breeze, leaves & twigs in constant motion (12-19)
 4 = Moderate breeze, small branches moving, raises dust & loose paper (20-30);
 5 = Fresh breeze, small trees begin to sway (31-39)
 6 = Strong breeze, large branches in motion (40-50)

*Basking temp should be measured in the sun just above the ground