FINAL

Scoped Environmental Impact Study

7449 Montrose Road, Niagara Falls, Ontario

Prepared for:

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1.0 INTRODUCTION

Pinchin Ltd. (Pinchin) was retained by 2683421 Ontario Limited c/o Bayfield Realty Advisors Inc. (Client) to complete a Scoped Environmental Impact Study (EIS) to assess the potential natural heritage features for the subject property located at 7449 Montrose Road, Niagara Falls, Ontario (Site). The location of the Site with general surrounding area is shown on Figure 1 in **Appendix A**. The Region of Niagara identified the need for a Constraints Analysis and a subsequent EIS in the pre-consultation process participated by the Client along with the City of Niagara Falls and Niagara Peninsula Conservation Authority (NPCA). Pinchin initially conducted the Constraints Analysis and subsequently determined that a Terms of Reference (TOR) and an EIS would be required to support the development application for the Site as per the Region's Official Plan (Policy 7.B.1.8).

Currently the Site is a 2.6-hectare property that is currently undeveloped. The Site contains vegetation patches that have not been assessed, including a woodlot, meadows, and unevaluated wetlands, most of which are located on the west side of the Site. The Client intends to develop the Site into three apartment buildings at 8, 12 and 13 storeys and five blocks of 3-storey stacked townhouses totalling 64 stacked townhouse units. The Site and its immediate surrounding environment, as the identified Study Area of 120 m around the Site for this EIS, can be seen on Figure 2 in **Appendix A**. The Scoped EIS will be required as part of the approval requirements by the municipal and regional governments for the proposed medium to high rises residential development.

This EIS report was conducted to assess the vegetation patches on the Site to determine if natural heritage features are present and are sufficiently significant to be included in the Core Natural Heritage System under the Region's Official Plan. This EIS report was prepared in general accordance with the Region of Niagara Official Plan (2014), City of Niagara Falls Official Plan (2019), and NPCA's Environmental Impact Studies Guidelines (2012).

2.0 POLICY CONTEXT

The following provincial, regional, and municipal legislation and policies were reviewed prior to an assessment of the vegetation patches of the Site and adjacent area was undertaken:

- Provincial Policy Statement (2020);
- Region of Niagara Falls Official Plan (2014);
- City of Niagara Falls Official Plan (2019); and
- Ontario Regulation 155/06 (1990).

The sections below provide a summary of the above legislation and policies applicable to natural environment for 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. 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 (Ministry of Municipal Affairs and Housing, 2020). 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.

2.2 Region of Niagara Falls Official Plan

The Site is designated as an “Urban Area” under Schedule A of the Regional Official Plan, included in **Appendix B** (Region of Niagara, 2014). A full range of residential, commercial and industrial uses are permitted generally within this designation. Policy 7.B was reviewed to identify that Core Natural Heritage System consists of four areas including: *a) Core Natural Areas including Environmental Protection Areas or Environmental Conservation Areas; b) potential natural heritage corridors connecting the Core natural Areas, c) Greenbelt Natural Heritage and Water Resources Systems; and d) fish habitat. Schedule C does not show the Site as being a part of the Core Natural Heritage System*.

Policy 7.B.1.8 states that if there are environmental features or functions that have not been adequately evaluated, the areas shall be evaluated by a qualified biologist in consultation with the Region and other relevant agencies. If the evaluation finds one or more natural heritage features meeting the criteria for identification as Core Natural Heritage System components, the appropriate policies shall apply. As a result of the Region’s request on review and comments received from the Region, the City and NPCA, a Constraints Analysis and an EIS were completed to assess the vegetation patches on the Site, with the results presented in Section 4.0 below.

2.3 City of Niagara Falls Official Plan

The City of Niagara Falls Schedule A of the Official Plan shows the Site designated as “Major Commercial”. The predominant land uses for this designated area include commercial and industrial uses, as well as mixed use developments, recreational and cultural facilities in the vicinity of the Study Area (City of Niagara Falls, 2019). Schedule A-1 does not show any Natural Heritage Features present on the Site and within the Study Area. These maps are available for reference in **Appendix B**. The Official Plan states that environmentally sensitive areas including woodlands, wetlands and fish habitats will be required to be protected through proper building orientations, setbacks, stormwater management, and complementary landscaping practices.

2.4 Ontario Regulation 155/06

Pursuant to the *Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses*, any development in or on areas defined in the regulation area (e.g. river or stream valleys, hazardous land, wetlands) requires permission from the Niagara Peninsula Conservation Authority under Ontario Regulation 155/06 (Government of Ontario, 2013). NPCA may grant permission for development in or on these areas if the control of flooding, erosion, dynamic beaches, pollution or the conservation of land will not be affected by the development. The Regulation also states that it is prohibited to straighten, change, divert or interfere in any way the existing channel of a river, creek, stream or watercourse or change or interfere in any way with the wetland without the permission from the NPCA.

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 Ministry of Northern Development, Mines, Natural Resources and Forestry's (NDMNRF) 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 City and Region Official Plans were reviewed. These document references the NDMNRF's Natural Heritage Reference Manual (NDMNRF, 2010) and the PPS which were both reviewed for this report. In addition, a scoping exercise with the Region, the City, and the NPCA was conducted through a TOR for the EIS prior to the completion of this report. A record of the agency consultation on the TOR with agency comments is included in **Appendix C** for reference. Subsequently, review comments on the first submitted EIS were received from these three agencies for establishing the associated updates of this EIS for the second submission.

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);

- Ontario Regulation 230/08 Species at Risk in Ontario List (COSSARO, 2020); Atlas of the Breeding Birds of Ontario (BSC, 2020);
- Atlas of the Mammals of Ontario (Dobbyn, 1994);
- Ontario Reptile and Amphibian Atlas (TEA, 2020);
- Ontario Butterfly Atlas (TEA, 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. 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 Ecological Land Classification (ELC) polygons mapped using aerial imagery.

The vegetation communities were sampled in fall 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 Wetland Assessment

Wetland assessment in the Study Area followed the criteria outlined in the *Ontario Wetland Evaluation System* (OWES) 3rd Edition (MNRF, 2013). Although the area in question on the Site is too small to be fully assessed using the OWES framework, the evaluation criteria therein provide an appropriate benchmark to work from. In particular, soil classification, the “50% rule” and the presence of wetland species and wetland indicator species form a useful basis for evaluation of the upland-wetland transition on the Site. According to the OWES, the “50% rule” is defined as that if 50% or more of the relative vegetation cover in a given area consists of wetland plants (including wetland tolerant species and wetland indicator species), then the area should be considered a “wetland”. Wetland indicator species are plant species that cannot live in upland areas, as compared with wetland species which include wetland indicator species and plant species that can tolerate both wetland and upland habitats. Additionally, the Coefficient of Wetness (CW) was used in our assessment. This CW is an indicator

varying from -5 (obligate wetland) to 5 (obligate upland) that describes the tolerances to wetness of an individual plant species. The OWES also has guidelines on feature size and complexing criteria. The OWES defines a wetland as greater than 2 ha but features greater than 0.5 ha can be included with justifications. Although OWES further allows features smaller than 0.5 ha to be evaluated, it is only for a feature having a specialized habitat. For wetland complexing, biological and hydrological features, functions and values are considered in the evaluation on and off the feature or site.

3.2.3 Woodland Assessment

Assessment of the Site followed the criteria outlined in the Niagara Region's Official Plan Chapter 7: Natural Environment (Niagara Region, 2015). To be identified as Significant Woodlands one or more of the following criteria must be met:

a) Contain threatened, endangered or species of concern;

b) In size, be equal to or greater than:

   a. 2 hectares, if located within or overlapping Urban Area Boundaries

   b. 4 hectares, if located outside Urban Areas and north of the Niagara Escarpment

   c. 10 hectares, if located outside Urban Areas and south of the Escarpment

c) Contain interior woodland habitat at least 100 metres in form the woodland boundaries

d) Contain older growth forest and be 2 hectares or greater in area

e) Overlap or contain one or more of the other significant natural heritage features listed in Policies 7.B.1.3 or 7.B.1.4; or

f) Abut or be crossed by a watercourse or water body and be 2 or more hectares in area.

Each of these woodland evaluation criteria will be discussed in Section 4.0 below. The woodland edge will be staked by a qualified Ontario Land Surveyor and shown on the relevant topographic survey, if available.

3.2.4 Amphibian Breeding Surveys

Based on the Marsh Monitoring Protocol, amphibians are required to be surveyed three separate times during the breeding season to determine if any species are using the wetland on site as a breeding area. These surveys involved three separate auditory surveys beginning at least half an hour after sunset. The surveys are required to begin in spring and continue into early summer, with each survey occurring at least 15 days apart.

The night-time air temperature must be greater than 5 degrees Celsius for the first survey, 10 degrees Celsius for the second survey, and 17 degrees Celsius for the third survey (Bird Studies Canada, 2000).

These separate surveys were conducted to account for different species breeding windows. Each station was surveyed for a minimum of five minutes per visit.

3.2.5 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 three 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.

3.2.6 Bat Habitat Surveys

Three bat species potentially occur in the Study Area that have been listed as endangered, including the Little Brown Myotis *(Myotis lucifugus*), Northern Myotis (*Myotis septentrionalis*) and Tri-colored Bat (*Perimyotis subflavus*). These species receive species and general habitat protection under the Endangered Species Act (ESA) 2007. For these three species summer roost and maternity sites are associated with mature trees that support cracks, crevices, holes and cavities, as well as loose bark and clusters of old leaves, including squirrel nests (COSWIC 2015). Leaf-on and leaf-off snag surveys followed the NDMNRF Guelph District's Survey Protocol for Species at Risk Bats within Treed Habitats (NDMNRF, 2017). This protocol is used to define suitable maternity roost trees for Species at Risk bats, including the Little Brown Myotis *(Myotis lucifugus*), Northern Myotis (*Myotis septentrionalis*) and Tri-colored Bat (*Pipistrellus subflavus*). All trees with a diameter at breast height (DBH) of 10 cm or greater were assessed with respect to presenting potential roosting/maternity habitat. All snag or cavity trees observed were provided a unique code and the following parameters were documented: species, location, canopy class, DBH, number of cavities, approximate height of cavities and decay class (tree condition).

As a result of the snag surveys, subsequent acoustic surveys for bats were carried out in June 2021 according to the same NDMNRF's Survey Protocol for Species at Risk Bats Within Treed Habitat (. Acoustic surveys are used to determine the presence, absence and abundance of Little Brown Bat, Northern Myotis, and Tri-colored Bat within treed habitats. Based on NDMNRF's protocol, 4 stations per hectare are needed for full coverage of an ecosite over the course of ten full nights, as the ecosite in question is less than 0.5-ha, 2 data loggers were used. Acoustic data loggers were set up in areas identified with abundant 'snags' which may be concentrated areas for bats within the Site. Once collected, the data recorded was analyzed using SonoBat 4.4.5 North America classifier. This software is able to analyze calls and render high resolution sonograms of each call pulse and automated classification (GeoProcess, 2021).

3.2.7 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.

3.2.8 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) 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 Pin Oak Drive to the west, McLeod Drive to the north, Montrose Road to the east, and a commercial development to the south. Past the road on the west are more commercial developments with additional forest fragments. To the east, there is forest fragments as well as a senior home development, and to the north, more commercial developments are present. The Site was farmed extensively before until in 1954 based on available historical aerial photos. The Site has wide-spread refuse dumping observed and has recent evidence of development on the east two-thirds that may have altered the grades and associated surface flows.

The Study Area is situated within Ecodistrict 7E-5 (Mixedwood Plains). The soils in the Study Area have not been classified by Agriculture Canada and the Ministry of Agriculture and Food; however, soil samples taken at the time of visit indicated primarily loam and sandy loam soils. Wetland indicators (mottles and gley) were found within three 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.

The Ontario Geological Survey classifies the bedrock underlying the Study Area as consisting of Upper Ordovician (approximately 443.7 to 488.3 million years old) red and grey shales, with thin limestone, dolostone and siltstone interlayers of the Queenston Formation in the north of the Study Area, with the central portion of the Study Area being of Lower Silurian (approximately 416.0 to 443.7 million years old) Clinton–Cataract Group shales and mudstones, and Lockport Formation dolostone with some shale at the southern limit of the Study Area. The quaternary geology being Halton Till (Ontario–Erie lobe) composed predominantly of silt to silty clay matrix, commonly high in matrix carbonate content and clast poor. (Ontario Geological Survey, 1991). Further, the Geotechnical Investigation Report completed for the Site indicated that the overharden is from 7.81 to 8.02 m until groundwater is reached (Pinchin, 2021). Although the Region's Official Plan suggests that a recharge area may be present in the area where the Site is located when overburden is at 5.0 m or less, this Site's overburden exceeds that depth. Hence, a site-based water balance may be needed to understand the recharge potential of the Site and stormwater infiltration requirements to guide the stormwater management designs with pre and post construction water balance, as well as sufficient water quantity and quality controls on the Site.

A detailed review and analysis on the vegetation communities associated with the vegetation patches on the Site are provided in Section 4.2 below.

4.2 Vegetation Surveys

4.2.1 Vegetation Communities

The vegetation surveys were conducted in the late spring and fall seasons on October 29, 2020, and June 17, 2021. The weather during the Fall visit was overcast, with a temperature of 10º Celsius and during the Spring visit was sunny with a temperature of 22º Celsius. A total of six vegetation communities were identified on the Site. These vegetation communities were observed during the Site investigations and can be visualized on Figure 3 in **Appendix A.** Selected Site photographs of the vegetation communities are included in **Appendix D**.

Fresh–Moist Oak–Maple–Hickory Deciduous Forest (FODM9): The woodlot consists entirely of this community except for the small wetlands described below. This woodlot community consists of a diverse selection of mature trees, dominated by a mix of Bur Oak (*Quercus macrocarpa*) and Red Oak (*Quercus rubra*), with some Red Maple (*Acer rubrum*), Sugar Maple (*Acer saccharum*), American Elm (*Ulmus americana*) and Shagbark Hickory (*Carya ovata*). A sparse regenerating shrub layer consists primarily of maples and the occasional Green Ash (*Fraxinus pennsylvanica*). Due to the late fall visit, the groundcover was very sparse, with only the occasional Aster (*Symphyotrichum*) and Strawberry (*Fragaria*) being found. The trees in this community mostly range between 20 and 50 cm DBH, with and estimate age between 70 and 80 years old. As these trees are older, the majority provide potential habitats for mammals including bats of Not-at-risk species and Species at Risk. However, the constant traffic disturbance and small in area size as bounded at the southeast corner of Pin Oak Drive and McLeod Road may deter them from inhabiting in this wooded area.

Pin Oak Mineral Deciduous Swamp (SWDM1-3): This swamp community is present in two locations found exclusively within the above woodlot community, with one larger area being present at the north central portion, and the other found closer to the southwest corner of the woodlot. These small wetland pockets totaling at approximately 0.04 ha are found within depressions in the topography, where a noticeable change in the grade is present as you exit the forest described above. The central portion of these two pockets are organic soils, which were drier at the time of visit, but are likely wetter earlier in the year. The edges around the organic center consist of clay loam soils and different plant species; however, these edges would be too small to separate out. The canopy along the edges of this community is dominated by Pin Oak (*Quercus palustris*), while the middle or the community is bare, with only the overhanging trees contributing to the canopy above. A sparse regenerating layer consists of Green Ash and Red-osier Dogwood (*Cornus sericea*) along the edges, with Buttonbush (*Cephalanthus occidentalis*) found with the organic centres. Ground cover along the edges consists of Fringed Sedge (*Carex crinita),* Great Willowherb (*Epilobium hirsumtum),* as well as Asters and Goldenrods (*Solidago Sp.*). Due to the smaller size of these wetland pockets and being contained well within the deciduous forest of FODM9, they are considered part of the larger deciduous forest as *inclusions* under OWES.

Finally, there is extensive refuse dumping within the woodlot community containing the wetland inclusions from the adjacent properties, including old car tires, plastic bottles and other litter. Soil samples taken from within the wetland inclusions indicated fairly heavy clay soils, with mottling being found at a depth of 30 cm and gley being found at 35 cm. These features are indicators of wetland presence due to the water table being close to the surface. The wetland inclusions provide minor hydraulic function within the woodlot community based on the distance from the shallow mottle/gley to groundwater, separated by the overburden of 7.81-8.02 m. The upland woodlot community by comparison had mottling starting at 35 cm with gley observed at 50 cm. While these soil core samples fall within the potential range for wetlands (Moisture regime of 5), it is of Pinchin's opinion that the lack of wetland indictor species indicates that this woodlot is an upland community.

Although six vegetation communities were identified on the Site, only the above two communities have not been disturbed in its current conditions during the field visits. The following four communities, including a Cleared Land, a Mixed Meadow, a Meadow Marsh and a Transportation, have been previously disturbed or recently cleared. **Cleared Land (Commercial) (CVC_1):** This area on the property is vacant land with exposed soils at the time of the Site visit. The vacant land has been more recently cleared from vegetation, with some soil piles compiled in the centre of the Site. This cleared area is the largest community on the Site. A **Fresh–Moist Mixed Meadow (MEMM4)** with Asters and Goldenrods species and a **Mixed Mineral Meadow Marsh (MAMM3)** were observed within the site boundaries. **Transportation (CV1_1):** On the southern end of the Site, there is a road that cuts through to connect Montrose and Pin Oak Drive and connects to the commercial development to the south. With the historical anthropogenic disturbances on Site and the recent development to the eastern two-thirds, the water regime on the Site has likely been altered.

4.3 Wetland Assessment

TOR and EIS review comments from the regulatory agencies noted that an OWES evaluation and complex review may be required for the wetland pockets on the Site to determine if they should be complexed in with the Warren Creek Wetland Complex, a Provincially Significant Wetland (PSW) in the vicinity. A review of the Warren Creek Wetland Complex and a characteristics comparison of it with the wetland pockets onsite have been conducted based on NDMNRF's OWES including biological, social and/or hydrological functions, as well as watersheds, distance and lacustrine wetlands (NDMNRF, 2013). Further, important features to note include whether the wetlands are within 750 m from each other and in the same headwater area (NDMNRF, 2013).

Based on these guidelines, the Pin Oak Mineral Deciduous Swamp (**SWDM1-3**) makes up a very small area at approximately 0.04 ha or 1.5% of the Site. Firstly, from a feature size perspective the 0.04 ha size is much smaller than 0.5 ha required by the OWES to be evaluated as a significant wetland or not. Although features smaller than 0.5 ha can be evaluated, it is required to be a specialized habitat under OWES. Based on field assessment results above, this deciduous swamp does not contain specialized habitat. Secondly, from a complexing perspective it is approximately 200 m from the nearest Warren Creek Wetland Complex to the southwest, with others ranging from approximately 280 m northwest and 260 m to the west. The wetland pockets do not biologically contain any plant or wildlife Species of Conservation Concern. As it is fragmented and offers minimal habitat in size and value to wetland species, it likely does not offer important ecological benefits. Although it falls within 750 m of the Warren Creek PSW Complex, they are not within the same headwater as the wetland pockets on the Site are contained within the woodlot and bounded by roadways that are not hydrologically associated to offsite features nor are they connected by upland corridors or linkages. There is also no groundwater shallower than 7.81-8.02 m on the Site to support the wetland pockets.

As a result of this analysis, it does not qualify as a wetland to be evaluated under OWES and does not need to be complexed with other adjacent, larger wetlands that met OWES evaluation criteria.

4.4 Woodland Assessment

Following the criteria from the Niagara Region Official Plan (i.e. Policy 7.B.1.8 as per the Regional Staff), at this time the woodlot would not be considered significant. The details of this woodland assessment are described in the table below.

Criteria	Assessment
Contain threatened, endangered, or other species of concern	No threatened, endangered or special concern species and their evidence were observed at the time of Site visit or subsequent targeted surveys (see Sections 4.5-4.10 below).
In size, be equal or great than 2 hectares	No, woodland is less than 0.5 hectare.
Contain Interior woodland habitat at least 100 metres from the woodland boundaries	No, woodland is less than 50 metres at its widest.
Contain older growth forest and be 2 hectares of greater in area	No. Although some older trees were present, potentially being over 100 years old, the woodland is less than 2 hectares.

Criteria	Assessment
Overlap or contain one or more of the other Significant Natural Heritage Features listen in Policies 7.B.1.3 or 7.B.1.4	No other Significant Natural Heritage Features overlapped or contained in the woodland. Small wetlands are found within the woodland, but they are too small and insignificant as per OWES.
Abut or be crossed by a watercourse of water body and be 2 or more hectares in area	No, no watercourse or waterbody present and the area is less than 2 hectares in size.

As shown in the table above, at this time the woodland would not qualify as a Significant Woodland under the Policy 7.B.1.8 in the Niagara Region Official Plan. Hence, it does not warrant to be included in the Core Natural Heritage System indicated in Policy 7.B.1.8.

In summary of both wetland and woodland assessments above, the policy framework under Policy 7.B.1.8 for either feature has not been met on this Site. The focus of the field assessment outlined below from Section 4.5 to 4.11 relates to the Endangered Species Act 2007 and specialized functions.

4.5 Amphibian Breeding Surveys

A total of three amphibian breeding survey were completed on the Site from May to June in 2021. The first survey took place on May 12, 2021, beginning at 21:10 and ending at 21:40. The weather was 12°C, with a beaufort wind scale of 2, and 0% cloud cover. Two different locations were surveyed to ensure all potential habitat was covered. A map showing these monitoring locations is shown in Figure 4 of **Appendix A** and field sheets are included in **Appendix E**.

The first station was located in the west-central portion of the Site, in the Pin Oak Mineral Deciduous Swamp (**SWDM1-3**), the second monitoring station was located close to the first, but further north in the Fresh – Moist Oak – Maple – Hickory Deciduous Forest (**FODM9**), to ensure that the larger swamp and deciduous forest with suitable conditions was fully assessed. At the first location, the Western Chorus Frog (*Pseduacris triseriata*) was heard at a call level of 1. At the second location, both Spring Peeper (*Pseudacris crucifer*) and Western Chorus Frog were heard at call levels of 1. The second survey took place on May 31, 2021, beginning at 21:27 and ending at 21:48. The weather was 14°C with a beaufort wind scale of 3 and 80% cloud cover. The same two locations were surveyed for consistency. At both locations, nothing was heard. The third survey took place on June 28, 2021, beginning at 21:43 and ending at 22:03. The weather was 25°C with a beaufort wind scale of 2 and 30% cloud cover. At both locations, nothing was heard. It is noteworthy to mention that the ponding water that was previously present in the swamp had mostly dried up, leaving only damp/dark soil.

4.6 Breeding Bird Surveys

Breeding Bird Surveys were conducted on the Site and within the Study Area by a qualified avian biologist. A total of 10 avian species was seen or heard at or in the vicinity of the Site during the breeding bird season on June 16th and July 7th, 2021. The survey route and point count locations are shown on Figure 4 **in Appendix A**.

Of the 10 species surveyed, one species was confirmed to be breeding, the European Starling (*Sturnus vulgaris*), 2 species were possible breeders, and the remaining seven species were observed. 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 (not-native). The statuses of observed species, their provincial NHIC rank (SRank), and the likelihood of their breeding at the Site are summarized in Table 1 in **Appendix F**.

4.7 Bat Habitat Surveys

In the Niagara area three bat species potentially occur that have been listed as endangered, including the Little Brown Bat, Northern Myotis, and Tri-colored Bat. In the Spring of 2021, snag surveys were conducted based on the NDMNRF Bat Survey Protocol's Phase II Identification of Suitable Maternity Roost Trees. A total of twenty-four snag trees were identified and is summarized in **Appendix G**. The snag trees were spread throughout the western woodlot. The results of the snag surveys indicated that the next phase of the NDMNRF's Bat Survey Protocol's Phase III Acoustic Monitoring was required to determine if any endangered species of bats are present. The results of Acoustic Monitoring were summarized below and provided by GeoProcess in a technical memo included in **Appendix G**.

Data collectors were stationed within the Site and recorded nightly from June 4 to June 13, 2021, allowing for a full ten nights. While installing the data loggers, locations close to roads were avoided in order to lessen the amount of interference and additional noise. The acoustic data collectors were placed on the eastern edge of the woodlot. The first recorder was surrounded by mature White Oak (*Quercus alba*) and Shagbark Hickory (*Carya ovata*), while the second recorder was surrounded by Shagbark Hickory. Both data collectors had standing dead wood in close proximity.

Over the course of these ten nights, a total of three species of bats were heard. These included recorded calls of ten Big Brown Bats (*Eptesicus fuscus*), six Hoary Bats (*Lasiurus cinereus*) and two Silver-haired Bats (*Lasionycteris noctivagans*). The collected data confirms that a majority of the calls occurred after 23:00 each night. As a result of this, it is likely that the recorded bats are roosting elsewhere, if they were roosting within the Site the calls would likely be recorded closer to sunset. As these bats are roosting off-Site, they are likely visiting the Site and passing through the area. Bats will often travel several km throughout the night and will switch roosts on a frequency of 1-3 nights.

No Species at Risk bats including Little Brown Bat, Northern Myotis, and Tri-colored Bat were recorded during the acoustic surveys. Therefore, no further consultations with the NDMNRF/MECP are required based on the NDMNRF protocol and MECP guidelines (NDMNRF, 2017; MECP, 2019).

4.8 Incidental Wildlife Observations

Only a limited amount of observations as incidental wildlife was noted during field surveys on the Site in this suburban area likely due to the isolated and limited area at the western portion of the Site. The following incidental wildlife were observed during the field surveys for vegetation:

- Eastern Grey Squirrel (Sciurus carolinensis); and
- American Crow (Corvus brachyrhynchos).

Both of these species are common in this urban area and well adapted to a variety of habitats. Additional birds, bats and amphibian species were observed throughout the Site assessments but are described in their respective survey result sections above.

4.9 Species at Risk Screening

A total of 32 Species at Risk (SAR) were identified as having potential occurrence on the Site, resulting from the background review of the NHIC records and other available sources for the Study Area. These 32 species, their listing status, the last observed date and the sources used to identify their presence in the Study Area are all summarized in **Appendix H**. Based on the background and field assessments, 17 SAR were determined to have suitable habitat on the Site. None of the listed species were observed or recorded, likely as a result of the small habitat and existing disturbances surrounding the Site.

Four SAR plants were determined to have potential habitat on the Site. These species include American Chestnut (*Castanea dentata*), Butternut (*Juglans cinerea*), Cucumber Tree (*Magnolia acuminata*), and Pink Milkwort (*Polygala incarnata*). The three tree species have potential habitat within the forest on the Site, while the Pink Milkwort has potential habitat in the meadow. None of these species were observed during the Site visit or the subsequent targeted surveys.

Two SAR amphibians were determined to have potential habitat on the Site. These species include the Allegheny Mountain Dusky Salamander (*Desmognathus ochrophaeus*) and Northern Dusky Salamander (*Desmognathus fuscus*). Both of these species have potential habitat within the wetlands and in the moist forest. None of these species were observed during the Site visit or subsequent targeted surveys. Although the area is too small for other amphibians, an amphibian salvage for frogs should be conducted prior to the construction of the proposed development. One insect, Monarch Butterfly (*Danaus plexippus*), was determined to have potential habitat on the Site. This insect species has potential to be found in the meadow where there is Milkweed present. This species was not observed during the Site visit.

Six SAR birds were determined to have potential habitat on the Site. These species include the Acadian Flycatcher (*Empidonax virescens*), Bobolink (*Dolichonyx oryzivorus*), Eastern Meadowlark (*Sturnella magna*), Eastern Wood-Pewee (*Contpus virens*), Grasshopper Sparrow (*Ammodramus savannarum*) and Wood Thrush (*Hylocichla mustelina*). The Acadian Flycatcher, Eastern Wood-Pewee and Wood Thrush all have potential habitat in the woodlot on the Site. The Eastern Meadowlark, Bobolink and Grasshopper Sparrow all have potential habitat in the meadow on the Site. However, none of these species were observed during the avian surveys on the Site. Four mammal species have potential habitat on the Site, including Little Brown Bat (*Myotis lucifuga*), Eastern Small-footed Myotis (*Myotis leibii*), Northern Myotis (*Myotis septentrionalis*), Tri-coloured Bat (*Pipistrellus subflavus*). These bats species have potential habitat present within the woodlot on the Site where there are dead trees present that could provide potential roosting habitat. None of these species were observed during the Site visit or during the targeted bat surveys as discussed above. Although some species of bats were found to be present moving through the Site, extensive anthropogenic influences no the Site such as traffic disturbance in the immediate surrounding roadways, evident waste dumping in the forest, and recent vegetation clearance to the east on the Site may deter bat species from inhabiting in the small woodlot in this part of the region.

4.10 Significant Wildlife Habitat Screening

The Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E (MNRF, 2015) was consulted to screen the wildlife habitat for significance on Site. Field assessments of the Site were also undertaken to assess the quality of the habitat on the Site in relation to Significant Wildlife Habitat. Based on the observations during the vegetation surveys, breeding bird and amphibian surveys, and bat maternity habitat surveys, Significant Wildlife Habitat is unlikely to 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 Table 1 in **Appendix I**. In conclusion, all SWH are either unlikely or not candidate to be present on the Site. Therefore, further surveys are not recommended to be conducted to confirm their presence.

4.11 Natural Heritage System and Ecological Connectivity

To protect the diversity and connectivity of natural features and long-term ecological function of the area, an ecological function assessment needs to be completed. This ecological function assessment assesses the Site by its ecological functions by providing avenues in which plants and animals can propagate, move and replenish from other natural areas.

The Site consists of a forest, mixed meadow, a deciduous swamp, a meadow marsh, a cleared area, and a transportation corridor. Most of the natural features are located on the western side of the Site, with a large portion of the Site consisting of cleared land. The communities on Site are all disturbed to a large degree due to the proximity of the Site to urbanization in this part of the region. The Site is surrounded by developments in all cardinal directions. To the east of the Site is a block of commercial developments.

Beyond these developments further east, there is a forest and wetland complex identified as a part of the Warren Creek Wetland Complex. To the north of the Site there is also a commercial development.

Further north past these developments, there is more fragmented forest sections and wetland that is part of the Warren Creek Wetland Complex. It is likely that the wetland and forest on the Site used to be connected to this wetland complex in the past as a part of a larger forested wetland; however, with the urbanization in the area they are likely no longer connected (ecologically or hydrologically). To the east of the Site is a vegetated area that consists mostly of low shrubs before transitioning to a landscaped area for a retirement home. Beyond the retirement home there is a major highway, the Queen Elizabeth Way. To the south, there is commercial developments with large parking lots present.

The Site does not currently provide significant value for the dispersal of flora and fauna due to it being a very small, isolated patch of habitat that is highly disturbed in nature. The centre of the Site has already been stripped of vegetation, and the surrounding features on the Site have been affected negatively by its proximity to major roads and urbanization as discussed earlier. The Site was farmed until 1954 based on historical aerial photos. Currently there is evidence of wide-spread refuse dumping in the forest and meadows on the Site. The wetlands and forest likely used to be connected to the forest patches to the north and east of the Site, however they are no longer connected to each other. It is possible that some species such as birds that can traverse major roadways could utilize the habitat on this Site as a habitat patch; however, the forest on the Site is so small that it is unlikely to provide much value.

Overall, there is nor linkage or connectivity provided by the Site due to its degree of disturbance and disconnection from other vegetation patches by major roads and developments. These features are not significant and do not warrant to be included in the Core Natural Heritage System indicated in Region's Official Plan Policy 7.B.1.8.

5.0 PROPOSED DEVELOPMENT

Pinchin understands that the proposed development is to construct a mixed medium to high rises residential development, consisting of three apartment buildings and five blocks of stacked townhomes with associated parking structures and landscaped areas. A Site Plan showing the proposed development infrastructures and amenities can be seen in **Appendix J.**

Specifically, the Site is proposed to be developed into two apartment buildings at 6-8 storeys and five blocks of 3-storey stacked townhouses, totalling 64 stacked townhouse units. The proposed development will also include associated parking areas of underground parking for the apartment buildings and associated amenities and landscaped areas.

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 Sections 6.1 and 6.2 below.

6.1 Direct Impacts

Should the development be taking place to the area outlined above and in **Appendix J**, the direct impacts from the development proposals on natural heritage features (i.e. woodlot, wetlands and meadow) would include the following:

- Stripping of vegetation and topsoil on the entirety of the Site;
- Removal of most trees and small wetlands in the woodlot on the Site; and
- Displacement of wildlife on the Site

The proposed development should have all direct impacts contained to the footprint of the Site. Due to the nature of the proposed development construction, the entire Site will be cleared of vegetation for construction with the exception that six trees of three species will be retained on the southwestern edge of the Site. The woodlot potentially provides seasonal habitat to birds, bats 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 impacts to wildlife can be avoided by properly timing vegetation and topsoil removal around peak activity and breeding seasons.

Tree inventories and removals have been detailed separately in a Tree Inventory, Protection and Removals Plan and an Arborist Report reviewed for this EIS (MHBC, 2022a). In summary, a total of 142 trees will be removed to make way for the proposed development. The species included in this removal are mainly White Oak (*Quercus alba*), Red Oak (*Quercus rubra*), American Elm (*Ulmus americana*), Poplar sp. (*Populus spp*.), Sugar Maple (*Acer saccharum*), Ash Sp. (*Fraxinus spp*.), Black Oak (*Quercus velutina*), Pin Oak (*Quercus palustris*), Shagbark Hickory (*Carya ovata*), and Little Leaf Linden (*Tilia cordata*). In order to protect the remaining trees, a number of recommendations and mitigation measures will be implemented, namely the installation of a tree protection zone, low impact root pruning, and fertilization and irrigation (MHBC, 2022a).

The two small wetlands contained within the woodlot on the Site will be directly impacted, being removed to accommodate the proposed building constructions. The NPCA has ecological offsetting guidelines under Policy 8.2.2.8 for wetland offsetting (NPCA, 2018) and in its review comments for the first submitted EIS. The ecological offsetting through a Landscape Plan is recommended to be developed in order to restore and offset the impacts from the clearing of the woodlot and wetlands on the Site.

A Preliminary Landscape Plan included a Central Parkette with native planting of tree and shrub species at a 1:1 ratio for removed trees and shrubs on the Site (MHBC, 2022b). The restoration planting area in the Central Parkette and other areas on the Site considers restoration and enhancement measures that meet the objectives of the NPCA Policy 8.2.2.8. A detailed Landscape Plan with planting species, location, quantities, etc. will be provided in the detailed design stage for review by relevant agencies.

6.2 Indirect Impacts

The potential indirect impacts based on the development proposal may include the following:

- Effects on plants and wildlife by construction noise, dust and vibration; and
- Alteration of water quality and flow regime in the adjacent natural and drainage features

Very few indirect impacts are expected for this Site given that the surrounding areas are all urbanized. The Site is bounded by roadways on all four edges, and therefore there are no natural heritage features that should be directly impacted from runoff or sedimentation from the Site.

Sediment and erosion control measures should still be installed on the Site to limit any potential impacts off-site due to sediment-laden water from entering to other natural and drainage features.

It is possible that additional noise and vibration from the construction will impact local wildlife populations in the area; however, the area is already urbanized, and the local wildlife are likely adapted to the noises of the City. It is likely that during construction periods, wildlife including birds and mammals that occasionally use the woodlot and meadows as habitats will be disrupted and will migrate to other areas such as the forest patches to the east and north of the Site.

Hydrologic impacts have been assessed through a separate Functional Servicing Report by Odan Detech detailing stormwater management strategies for the surface water quantity and quality controls on the Site and within the Study Area (Odan Detech, 2022a). Stormwater management features include Low Impact Development (LID) features, Oil and Grit Separator, and two underground stormwater management tanks with storage of 565 m^2 and 390 m^2 located at the central and southeast corners of the Site, respectively (Odan Detech, 2022b).

While geotechnical impacts have been evaluated by Pinchin for the soils and bedrocks on the Site through a Geotechnical Investigation Report (Pinchin, 2021), a Hydrogeological Study for groundwater quantity and quality will be conducted by others to coordinate with the Functional Servicing Report to review the infiltration and recharge potentials on the Site which feed into the Functional Servicing Report with water balance and water quantity and quality on the Site for the proposed development.

Recommendations and mitigation measures for the potential impacts are detailed in Section 7.0 below.

7.0 RECOMMENDATIONS AND MITIGATION MEASURES

This EIS report detailed the review of the Niagara Region Official Plan Policy 7.B and assessment of the vegetation patches including a woodlot and two small pocket wetlands contained within. The policy framework under Policy 7.B.1.8 for either woodlot and wetland feature has not been met on this Site based on the desktop review and field assessment. The subsequent assessment related to the Endangered Species Act 2007 concluded that the Site does not contain any Species of Conservation Concern (i.e. Species at Risk or Species of Special Concern). As a result, it is Pinchin's opinion that the vegetation patches are not significant and do not warrant to be included in the Core Natural Heritage System indicated in Policy 7.B.1.8.

Based upon the above impact assessment, there are identified direct impacts and indirect impacts mainly on general plants and wildlife that are not Species of Conservation Concern on the vegetation patches, all of which are present on the western portion of the Site, while the eastern portion of the Site has been severely disturbed or altered previously. Recommendations for timing windows or other specifications for implementation for the potential negative impacts are included in the EIS. Furthermore, mitigation measure relating to onsite works (such as fencing) must be implemented prior to the commencement of construction. The proposed development will be mitigated to avoid potential impacts to natural features outside of the Site such as drainage features. The natural features within the Site do not provide high quality habitat as they are highly disturbed from the surrounding urbanization and busy roads.

These features will be removed entirely with the exception of a few trees of different species. Due to the amount of direct impacts, restoration and enhancement for the vegetation patches removal on this Site is recommended. Details of this restoration and enhancement will be provided in a Landscape Plan in the detailed design stage. It is recommended that the Landscape Plan take into account restoration and enhancement on the Site to make up for the impacts of removing the trees and vegetation on the Site.

The following recommendations are provided for the construction and alteration of the Site.

Tree and vegetation removal:

- The extent of potential tree and vegetation removal within the vegetation patches and on the Site is restricted to the construction footprint within the Site as necessary.
- To minimize or avoid impacts to breeding birds and roosting bats, the removal of vegetation within the Site will be outside of the associated breeding periods for bird and bat species between April 1 and September 30. If tree removal needs to occur within this timing constraint window, a qualified Biologist should be deployed to conduct amphibian salvage and bird nest survey prior to any tree and vegetation removal, as well as ongoing monitoring should they be confirmed to be present.

- A Tree Inventory and Protection Plan has been developed for the Site and should be approved by the reviewing agencies prior to construction and site alteration.

Erosion and sediment control:

- An Erosion and Sediment Control Plan as part of the Functional Servicing Report has been developed with protection measures of the surrounding natural features 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 entirety of the Site until the disturbed area is restored upon construction completion.
- 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 Preliminary Landscape Plan has been developed by MHBC for the Site (MHBC, 2022b) and a detailed Landscape Plan will be provided in the detailed design stage and need to be approved by the reviewing agencies prior to construction and site alteration.
- The detailed Landscape Plan will include a planting of native species of trees and shrubs at a 1:1 ratio at the Central Parkette and other areas on the Site. Appropriate seed mixes will also be included in the detailed Landscape Plan for the remaining exposed areas.

Additional supporting studies may be required:

- Functional Servicing Report on stormwater management on the Site for the quality and quantity controls of surface water.

- Water Balance as part of the Functional Servicing Report on site-based water balance to review infiltration and recharge potentials and to provide input to support the stormwater designs for pre/post construction water balance.
- Geotechnical Investigation Report on soils and bedrocks on the Site for the underground parking and building foundations of the development.

8.0 CONCLUSION

There are environmental opportunities and constraints identified on the Site as outlined in this EIS report. The assessed impacts, including direct and indirect impacts, are mainly on general plants and wildlife that are not Species at Risk. Effective stormwater and environmental management measures have been considered for the proposed residential development. With the implementation of the environmental and engineering plans sought out in the EIS, Tree Inventory and Protection Plan, Landscape Plan, and Functional Servicing Report with Water Balance prior, during and post construction on the Site, the proposed development would preserve the ecological functions of the adjacent natural features and enhance natural landscape on the Site that was severely disturbed and altered through the installation of planned restoration and enhancement measures on the Site post construction.

With the above recommendations taken into account and diligently implemented on the Site, no adverse negative impacts to the ecological integrity of the adjacent natural heritage features will result from the proposed residential infrastructures with associated amenities.

9.0 CLOSURE

The enclosed Scoped Environmental Impact Study report has been prepared to assess the natural heritage features including the terrestrial and wetland conditions on the Site within the Study Area. The information contained herein as a result of the EIS regarding the proposed residential development 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.

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11.0 LIMITATIONS

This work was performed subject to the Terms and Limitations presented or referenced in the proposal for this project. Information provided by Pinchin is intended for Client use only. Pinchin will not provide results or information to any party unless disclosure by Pinchin is required by law. Any use by a third party of reports or documents authored by Pinchin or any reliance by a third party on or decisions made by a third party based on the findings described in said documents, is the sole responsibility of such third parties. Pinchin accepts no responsibility for damages suffered by any third party as a result of decisions made or actions conducted. No other warranties are implied or expressed.

282894 Revised Final Environmental Impact Study 7449 Montrose Niagara Falls ON June 3 2022.docx

APPENDIX A
FIGURES

PINCHIN	**PROJECT NAME:** 7449 Montrose Road Environmental Impact Study **CLIENT NAME:** Bayfield Realty Advisors Ltd. **PROJECT LOCATION:** 7449 Montrose Road, Niagara Falls, Ontario **FIGURE NAME:** Site Location	**PROJECT NO.** 282894.000 **DATE:** November 2020 **SCALE:** 1:10,000 **FIGURE NO.** 1	**LEGEND** Site Boundary Wareen Creek Wetland Complex (Evaluated) Watercourse Roadway	Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

0 100 200 400 Metres

Coordinate System: WGS 1984 UTM Zone 17N
Projection: Transverse Mercator
Datum: WGS 1984

652250 652500 652750

4770250 4770250

4770000 4770000

PINCHIN

PROJECT NAME:	7449 Montrose Road Constraints Analysis
CLIENT NAME:	Bayfield Realty Advisors Ltd.
PROJECT LOCATION:	7449 Montrose Road, Niagara Falls, Ontario
FIGURE NAME:	Study Area
PROJECT NO.	282894.000
DATE:	June 2022
SCALE:	1:2,000
FIGURE NO.	2

LEGEND
- Site Boundary
- Study Area (120 m)
- Warren Creek Wetland Complex (Evaluated)
- Watercourse
- Roadway

Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

0 20 40 80 Metres

Coordinate System: WGS 1984 UTM Zone 17N
Projection: Transverse Mercator
Datum: WGS 1984

PINCHIN	**PROJECT NAME:** 7449 Montrose Road Constraints Analysis **CLIENT NAME:** Bayfield Realty Advisors Ltd. **PROJECT LOCATION:** 7449 Montrose Road, Niagara Falls, Ontario **FIGURE NAME:** Ecological Land Classification	**PROJECT NO.** 282894.000 **DATE:** November 2020 **SCALE:** 1:800 **FIGURE NO.** 3	**LEGEND** Site Boundary **Ecological Land Classification** FODM9: Fresh – Moist Oak – Maple – Hickory Deciduous Forest SWDM1-3: Pin Oak Mineral Deciduous Swamp CVC_1: Cleared Land (Commercial) CVI_1: Transportation (Roads) MEMM4: Fresh – Moist Mixed Meadow MAMM3: Mixed Mineral Meadow Marsh	0 5 10 20 Metres Coordinate System: WGS 1984 UTM Zone 17N Projection: Transverse Mercator Datum: WGS 1984 Imagery: NHIC

PINCHIN

PROJECT NAME:	7449 Montrose Road Constraints Analysis
CLIENT NAME:	Bayfield Realty Advisors Ltd.
PROJECT LOCATION:	7449 Montrose Road, Niagara Falls, Ontario
FIGURE NAME:	Breeding Amphibian and Bird Survey Locations
PROJECT NO.	282894.000
DATE:	March 2022
SCALE:	1:800
FIGURE NO.	4

LEGEND

- Site Boundary
- SWDM1-3: Pine Oak Mineral Deciduous Swamp
- FODM9: Fresh-Moist Oak -Maple-Hickory Deciduous Forest
- Breeding Bird Survey Traverse
- Amphibian Survey Locations with Direction
- Breeding Bird Point Count Stations

0 5 10 20 Metres

Coordinate System: WGS 1984 UTM Zone 17N
Projection: Transverse Mercator
Datum: WGS 1984
Service Layer Credits: MNRF, 2021.

DRAWN BY: MH REVIEWED BY: RY REVISION: 2

APPENDIX B

SUPPLEMENTARY INFORMATION

Schedule A
to the Official Plan
FUTURE LAND USE

NiagaraFalls CANADA

Transit Station Secondary Plan see Schedule A-5

Garner South Secondary Plan see Schedule A-3

Riverfront Secondary Plan see Schedule A-6

Grand Niagara Secondary Plan see Schedule A-4

Legend

- Environmental Conservation Area
- Environmental Protection Area
- Extractive Industrial
- Good General Agriculture
- Industrial
- Major Commercial
- Minor Commercial
- Niagara Escarpment Plan Area
- Open Space
- Parkway Residential
- Residential
- Resort Commercial
- Theme Park Marineland
- Tourist Commercial
- Intake Protection Zone IPZ-1
- Secondary Plan Area
- Special Policy Area
- Urban Area Boundary

NOTE: THIS MAP MUST BE READ IN CONJUNCTION WITH THE WRITTEN TEXT OF THE OFFICIAL PLAN APPROVED OCTOBER 1993 UPDATED TO November 2019

0 3 Km

N W E S

PLANNING & DEVELOPMENT DIVISION
Updated to: January 2020
K:\SourceData\Shapes\OP\Schedule A\OPSchedule_A_11x17.mxd

Scale 1:55,000

Schedule A-1

to the Official Plan

NATURAL HERITAGE FEATURES AND ADJACENT LANDS

NiagaraFalls CANADA

Subject to NEC Plan Policies

Legend

- Environmental Protection Area
- Environmental Conservation Area
- Wetland Buffer Area*
- Adjacent Land
- Area of further study FOD7-3 - see Part 5, Section 2
- Creek

* The Wetland Buffer Area has been illustrated as 30 metres. The actual extent of this buffer may increase or decrease as a result of detailed studies through this Plan.

TOWN OF NIAGARA-ON-THE-LAKE

CITY OF THOROLD

CITY OF WELLAND

CITY OF PORT COLBORNE

TOWN OF FORT ERIE

UNITED STATES OF AMERICA
CANADA

Niagara River

Welland River

MOUNTAIN RD
MEWBURN RD
QUEEN ELIZABETH WY
ST PAUL AV
TAYLOR RD
GARNER RD
KALAR RD
DORCHESTER RD
PORTAGE RD
STANLEY AV
NIAGARA RIVER PY
THOROLD STONE RD
MONTROSE RD
MORRISON ST
VICTORIA AV
RIVER RD
BEAVERDAMS RD
420 HY
BEECHWOOD RD
LUNDY'S LN
DRUMMOND RD
THOROLD TOWNLINE RD
DUNN ST
MCLEOD RD
OAKWOOD DR
BROWN RD
68
CHIPPAWA CREEK RD
CHIPPAWA PY
LYONS CREEK RD
LEGENDS WY
SODOM RD
34
WEAVER RD
40
BIGGAR RD
MILLER RD
MCKENNEY RD
MORRIS RD
CARL RD
ORT RD
WILLOUGHBY DR
MARSHALL RD
YOUNG RD
WILLODELL RD
BECK RD
DETENBECK RD
SCHISLER RD
SHERK RD
KING RD
SAUER RD
SOMERVILLE RD
CROWLAND AV
MISENER RD
MORNINGSTAR RD
RIDGE RD
BAKER RD
NETHERBY RD

NOTE: THIS MAP MUST BE READ IN CONJUNCTION WITH THE WRITTEN TEXT OF THE OFFICIAL PLAN APPROVED OCTOBER 1993 UPDATED TO November 2019

0 3 Km

N W E S

PLANNING & DEVELOPMENT DIVISION
Updated to: January 2020
K:\SourceData\Shapes\OP\Schedule A1\OPSchedule_A1_11x17.mxd

Scale 1:55,000

Lake Ontario

CITY OF HAMILTON

Kemp Road

Grassie

Grimsby Centre

Fulton

Regional Road 12

Kimbo

Tintern

Abingdon

St. Ann's

Silverdale

Caistor Centre

North Pelham

Caistorville

Bismark

East Boyle

Boyle

Wellandport

Wellandport

Attercliffe

HALDIMAND COUNTY

Beckett's Bridge

Chambers Corners

Winger

Hendershot Corners

Wainfleet

Ostryhon Corners

Burnaby

Lake Erie

Niagara River

Snyder

Bethel

Gasline

Sherkston

UNITED STATES OF AMERICA

0 2.5 5 10

Kilometers

GRIMSBY

LINCOLN

ST. CATHARINES

NIAGARA on the LAKE

THOROLD

WEST LINCOLN

PELHAM

NIAGARA FALLS

WELLAND

WAINFLEET

PORT COLBORNE

FORT ERIE

- URBAN AREA BOUNDARY
- BUILT-UP AREA
- DESIGNATED GREENFIELD AREA
- DOWNTOWN ST. CATHARINES URBAN GROWTH CENTRE
- NIAGARA ESCARPMENT PLAN (NEP) AREA
- GREENBELT PLAN AREA
- PROTECTED COUNTRYSIDE
- DISTRICT PLAN
- HAMLET (as adopted by Regional Council and subject to approval by the Minister under Section 26 of the Planning Act)
- GOOD GENERAL AGRICULTURE AREA
- RURAL AREA
- INTERNATIONAL CROSSING
- PORT
- NIAGARA REGION
- MUNICIPAL BOUNDARY
- PROVINCIAL ROAD
- REGIONAL ROAD
- RAILWAY

NIAGARA REGION OFFICIAL PLAN

Niagara Region

Published March 2018

Regional Structure

SCHEDULE A

APPENDIX C

AGENCY CONSULTATION RECORD

Rocky Yao

From: Jessica Abrahamse <jabrahamse@npca.ca>
Sent: Tuesday, January 26, 2021 1:57 PM
To: Rocky Yao
Cc: David Deluce; Fricke, Britney; Andrew Bryce; robert.m@zpplan.com; mgotkin@bayfieldadvisors.com
Subject: 7449 Montrose Rd. Terms of Reference

Follow Up Flag: Follow up
Flag Status: Flagged

Good Afternoon Rocky,

The NPCA has reviewed the subject property.

From the aerial image it appears that there are areas of standing water present, if amphibian breeding habitat is present on site then amphibian monitoring should be conducted. Amphibian surveys should include visual searches for egg masses as well as monitoring following the Marsh Monitoring Program protocols.

Should wetlands be present on site additional studies may be required including:

- complexing exercise with the Warren Creek Wetland Complex
- Water Balance Study

Let me know if you have any further questions.

With Best Regards,

Jessica Abrahamse M.E.S.
Watershed Planner

250 Thorold Road West, 3rd Floor
Welland, On
L3C 3W2
(905) 788-3135 Ext. 235
jabrahamse@npca.ca
www.npca.ca
NPCA Mapping Tool

For mapping on features regulated by the NPCA please go to our GIS webpage at https://gis-npca-camaps.opendata.arcgis.com/ and utilize our Watershed Explorer App or GIS viewer.

To send NPCA staff information regarding a potential violation of Ontario Regulation 155/06 please go to the NPCA Enforcement and Compliance webpage at https://npca.ca/administration/enforcement-compliance.

From:	Andrew Bryce
To:	Rocky Yao; Britney.Fricke@niagararegion.ca
Cc:	David Deluce; robert.m@zpplan.com; Michael Gotkin
Subject:	RE: EIS Terms of Reference for 7449 Montrose Road, Niagara Falls
Date:	Tuesday, January 5, 2021 11:47:24 AM

Thank you Rocky, we will anticipate a separate TIPP report with the application.

Regards

From: Rocky Yao <ryao@Pinchin.com>
Sent: Monday, January 4, 2021 3:59 PM
To: Andrew Bryce <abryce@niagarafalls.ca>; Britney.Fricke@niagararegion.ca
Cc: David Deluce <ddeluce@npca.ca>; robert.m@zpplan.com; Michael Gotkin <mgotkin@bayfieldadvisors.com>
Subject: RE: EIS Terms of Reference for 7449 Montrose Road, Niagara Falls

Happy New Year everyone,

Please find attached the correct TOR for the EIS with a typo corrected.

Andrew – the TIPP report will be provided by MHBC but will be analyzed and referenced in the EIS report by Pinchin.

Thanks,

Rocky Yao, M.Sc, CISEC, EP
Regional Practice Lead, Biologist, Environmental Science
Pinchin Ltd. ¦T: 365.873.0355 ¦C: 289.971.7821

From: Andrew Bryce <abryce@niagarafalls.ca>
Sent: Tuesday, December 29, 2020 1:39 PM
To: Rocky Yao <ryao@Pinchin.com>; Britney.Fricke@niagararegion.ca
Cc: David Deluce <ddeluce@npca.ca>; robert.m@zpplan.com; Michael Gotkin <mgotkin@bayfieldadvisors.com>
Subject: RE: EIS Terms of Reference for 7449 Montrose Road, Niagara Falls

Hi Rocky, thank you for sending the TOR for the EIS. I have attached the pre-con checklist for the proposal. Please note that the inclusion of a tree inventory and preservation plan has been identified as part of the proposed EIS. This component should evaluate if the existing trees can be incorporated into the proposed development. Please let me know if there are any questions.

Regards

Andrew Bryce, MCIP, RPP | Manager of Current Planning | Planning, Building and Development | City of Niagara Falls
4310 Queen Street | Niagara Falls, ON L2E 6X5 | (905) 356-7521 ext 4232 | Fax 905-356-2354 | abryce@niagarafalls.ca

---

From: Rocky Yao <ryao@Pinchin.com>
Sent: Wednesday, December 23, 2020 5:12 PM
To: Britney.Fricke@niagararegion.ca
Cc: Andrew Bryce <abryce@niagarafalls.ca>; David Deluce <ddeluce@npca.ca>; robert.m@zpplan.com; Michael Gotkin <mgotkin@bayfieldadvisors.com>
Subject: EIS Terms of Reference for 7449 Montrose Road, Niagara Falls

Hi Britney,

Based on the Region's comments in the pre-consultation meeting for the above-noted property, attached you will find the EIS Terms of Reference (TOR) for your review.

Please feel free to contact me if you have any questions on this TOR.

Thanks and Happy Holidays!

Rocky Yao, M.Sc, CISEC, EP
Regional Practice Lead, Biologist, Environmental Science
Pinchin Ltd. ¦T: 365.873.0355 ¦C: 289.971.7821

Courtney Butler

From: Boudens, Adam <Adam.Boudens@niagararegion.ca>
Sent: Friday, March 12, 2021 4:04 PM
To: Rocky Yao
Cc: Fricke, Britney; Lampman, Cara; Andrew Bryce; Jessica Abrahamse
Subject: RE: EIS Terms of Reference for 7449 Montrose Road, Niagara Falls
Attachments: Significant Wildlife Habitat Screening Table for Niagara Region.docx; 282894 EIS Terms of Reference 7449 Montrose Road Niagara Falls ON Dec 23 2020.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Rocky,

Niagara Region Environmental Planning staff have reviewed the Terms of Reference (TOR) prepared by Pinchin Ltd. (dated December 23, 2020) for the property located at 7449 Montrose Road, Niagara Falls. While the TOR is generally acceptable, we offer the following comments for your consideration:

1. Based on a site visit completed by staff on March 12th, 2021, there appear to be 2 wetland pockets within the subject lands. As such, the wetlands should be assessed which may require the completion of an OWES evaluation to determine if they should be complexed in with the adjacent Warren Creek Provincially Significant Wetland (PSW) Complex. The MNRF and NPCA should be contacted to confirm requirements. All correspondence should be appended to the Environmental Impact Study (EIS).
2. Amphibian surveys should be completed in accordance with the *Marsh Monitoring Program Participant's Handbook for Surveying Amphibians (Environment Canada, 2008).*
3. Staff request that a Spring botanical inventory be conducted, in addition to the Fall botanical survey proposed in the TOR.
4. Breeding Bird surveys should be completed in accordance with the *Ontario Breeding Bird Atlas – Guide for Participants (2011)* survey protocol.
5. An assessment of Bat habitat is required. Surveys to identify potential suitable habitat should be completed prior to June. If suitable maternity roost habitat is identified, separate acoustic surveys in the month of June may be recommended by the MECP. Please contact the MECP for protocols, field data sheets, and guidance.
6. If S1-S3 species are found on site or within adjacent lands, their locations and habitat extent must also be mapped and included within the Constraints Assessment to ensure no negative impact to the species or its habitat.
7. In the future, please include the Species at Risk (SAR) and Significant Wildlife Habitat (SWH) screenings in TOR submissions. Attached is a SWH screening table which we prefer is used during TOR development. This will assist staff with scoping of field surveys.

8. Significant Woodland boundaries should be staked in the field with Regional Environmental Planning staff.
9. Please include all field survey data sheets as an appendix in the Constraints Assessment.

Please note that the Niagara Peninsula Conservation Authority (NPCA) continues to be responsible for the review and comment on planning applications related to hazard lands and their regulated features. As such, the NPCA should be consulted with respect to the TOR and their comments read in conjunction

The above comments are provided in effort to ensure that the development application will include all information needed to address the Core Natural Heritage System (CNHS) policies of the Region's Official Plan (ROP). Staff will review the completed EIS against the requirements in the proposed TOR and outlined above. Should Pinchin Ltd. be of the opinion that one or more of the requirements outlined above should not be included within the EIS scope; Regional staff may entertain a reduced scope if sufficient rationale is provided. Should the comments above be acceptable, staff will accept the Pinchin Ltd. proposed TOR along with this letter as the final EIS TOR, with both appended to the final EIS.

Please do not hesitate to contact me if you have any questions or require additional information.

There is no need to submit a revised TOR. Please just include all relevant agency correspondence as an appendix in the EIS.

Kind regards,
Adam

Adam Boudens
Senior Environmental Planner/Ecologist

Planning and Development Services, Niagara Region
1815 Sir Isaac Brock Way, P.O. Box 1042
Thorold, ON L2V 4T7
Phone: **905-980-6000 ext. 3770** Toll-free: 1-800-263-7215
Adam.Boudens@niagararegion.ca

From: Rocky Yao <ryao@Pinchin.com>
Sent: Friday, March 5, 2021 3:14 PM
To: Boudens, Adam <Adam.Boudens@niagararegion.ca>
Cc: Fricke, Britney <Britney.Fricke@niagararegion.ca>
Subject: RE: EIS Terms of Reference for 7449 Montrose Road, Niagara Falls

Hi Adam,

Hope all is well with you. Since my last response below 2 months ago, I trust that you have already received the owner's payment for the TOR review fee.

I just wanted to follow up with you to see if the Region has any additional comments to those received from the City and NPCA on this TOR.

Thanks,

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

From: Rocky Yao
Sent: Monday, January 4, 2021 4:15 PM
To: 'Boudens, Adam' <Adam.Boudens@niagararegion.ca>
Cc: Fricke, Britney <Britney.Fricke@niagararegion.ca>
Subject: RE: EIS Terms of Reference for 7449 Montrose Road, Niagara Falls

Hi Adam,

I will let the client know to process the payment for you. Please use the attached correct TOR for the EIS with a typo corrected.

Thanks,

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

From: Boudens, Adam <Adam.Boudens@niagararegion.ca>
Sent: Monday, January 4, 2021 4:07 PM
To: Rocky Yao <ryao@Pinchin.com>
Cc: Fricke, Britney <Britney.Fricke@niagararegion.ca>
Subject: EIS Terms of Reference for 7449 Montrose Road, Niagara Falls

Hi Rocky,

I was circulated the attached TOR for review. However, as identified at the pre-consultation meeting, before we can provide Regional comments we require a review fee of $400.

Payment for this application can be made through one of two methods: by **cheque** or **online**.

Please let me know whether payment will come by cheque or online. When you confirm how payment is coming in, if you choose to pay online, please also provide the following information:

- The cardholder's name;

- A brief description of what you are paying for (I would recommend referencing the property address – 7449 Montrose Road, NF and “Environmental Planning Terms of Reference Review Fee” at a minimum).

Cheque:

If you are paying by **cheque**, please address it as payable to ‘Niagara Region’ submitted to the Planning & Development Services Department at the address listed in my signature block below.

Online:

If you are paying **online** by Visa or Mastercard, please use the following link: **MailScanner has detected a possible fraud attempt from "can01.safelinks.protection.outlook.com" that could be a fraud attempt as the link does not match the site its claiming to be** https://niagararegion.ca/business/payments/default.aspx

Using this link, there will be three options; please select “Planning Fees and Private Septic Permit Fees” and note the application type and address (7449 Montrose Road, Niagara Falls). If you include an email address, you will receive an emailed credit card receipt directly from Moneris. Please forward this receipt/proof of payment by replying to all of the recipients of this message.

Should you have any questions regarding the above payment process, please do not hesitate to contact myself or the Program Assistants at devtplanningapplications@niagararegion.ca.

Thank you,
Adam

Adam Boudens
Senior Environmental Planner/Ecologist

Planning and Development Services, Niagara Region
1815 Sir Isaac Brock Way, P.O. Box 1042
Thorold, ON L2V 4T7
Phone: **905-980-6000 ext. 3770** Toll-free: 1-800-263-7215
Adam.Boudens@niagararegion.ca

APPENDIX D

SELECTED SITE PHOTOS

SELECTED SITE PHOTOS

(Captured on October 29, 2020)

Photo 1 – View of the mixed meadow to east of the Site.

Photo 2 – Photo from inside the woodlot on the Site. Evidence of dumping is visible.

Photo 3 – View of the cleared area on the Site east of the woodlot below.

Photo 4 – View inside the woodlot on the Site.

APPENDIX E
BREEDING AMPHIBIAN SURVEY RESULTS

Marsh Monitoring Program - Amphibian Data Form

Return by 31 July

Please write legibly (in pen).

MARSH MONITORING PROGRAM

VISIT INFORMATION

Route #: _____ Route Name: _____

Observer #: _____ Observer Name: Erin Tracey, Rachel Karaim

Visit #: 1 Day: 12 Month: May Year: 2021

Cloud Cover (10th): 0 Temperature (°C or °F): 12 Beaufort Wind Scale (0-6): 2

Precipitation (check one): ⊗ None/Dry ○ Damp/Haze/Fog ○ Drizzle ○ Rain

CALL LEVEL CODES

Code 1: Calls not simultaneous, number of individuals can be accurately counted

Code 2: Some calls simultaneous, number of individuals can be reliably estimated

Code 3: Full chorus, calls continuous and overlapping, number of individuals cannot be reliably estimated

Amphibian2100.xls; ver 02/2011

GPS: 0652392
4770199

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

* Check if species is calling from inside 100-metre station area

** Check if species is calling from outside 100-metre station area.

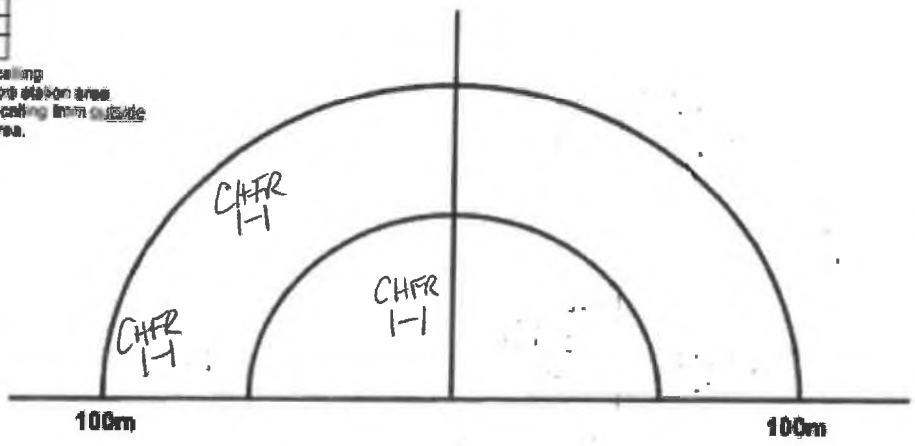
Station A

1010

1E

Station Start Time (24 hr): 21:10

Background Noise Code (1-4): 4



Heavy traffic, car wash to west of site.

Pinchin File Number: 282894 Client: _____ Address/Site: 7449 Montrose Rd, Niagara Falls

Marsh Monitoring Program - Amphibian Data Form

Return by 31 July

Please write legibly (in pen).

VISIT INFORMATION

Route #: _____ Route Name: _____

Observer #: _____ Observer Name: Erin Tracey, Rachel Karam

Visit #: 1 Day: 12 Month: May Year: 2021

Cloud Cover (10th): 0 Temperature (°C or °F): 12 Beaufort Wind Scale (0-6): 2

Precipitation (check one): (X) None/Dry ( ) Damp/Haze/Fog ( ) Drizzle ( ) Rain

CALL LEVEL CODES

Code 1: Calls not simultaneous, number of individuals can be accurately counted

Code 2: Some calls simultaneous, number of individuals can be reliably estimated

Code 3: Full chorus, calls continuous and overlapping, number of individuals cannot be reliably estimated

Amphibian2000.xls; rev. 02/2000

GPS: 43°4'10" N
79°7'40" W

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

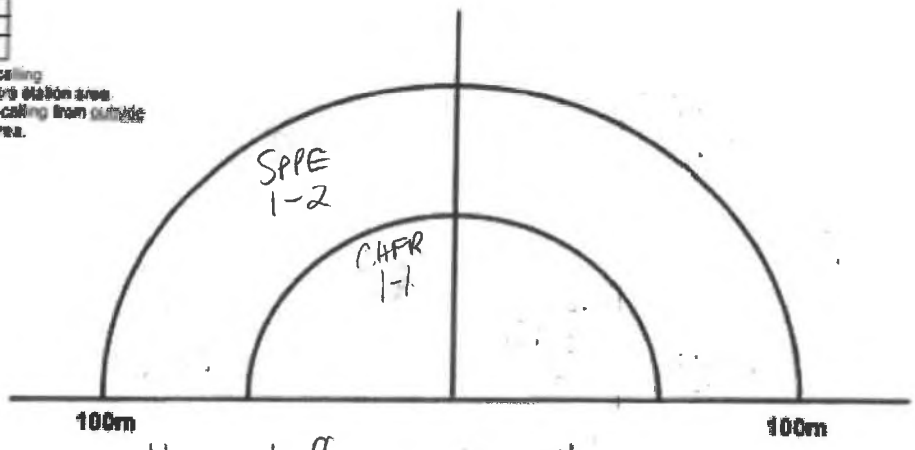
* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station ~~A~~ B

253° WSW

SW

Station Start Time (24 hr):	21:25
Background Noise Code (1-4):	4



Heavy traffic + car wash

Pinchin File Number: 282894 Client: _____ Address/Site: 7449 Montrose Rd, Niagara Falls

Marsh Monitoring Program - Amphibian Data Form

Return by 31 July

Please write legibly (in pen).

MARSH MONITORING PROGRAM

VISIT INFORMATION

Route #: _____ Route Name: _____

Observer #: _____ Observer Name: Erin Tracey, Rachel Karaim

Visit #: 2 Day: 31 Month: May Year: 2021

Cloud Cover (10th): 8 Temperature (°C or °F): 14 Beaufort Wind Scale (0-6): 3

Precipitation (check one): (X) None/Dry ( ) Damp/Haze/Fog ( ) Drizzle ( ) Rain

CALL LEVEL CODES

Code 1: Calls not simultaneous, number of individuals can be accurately counted

Code 2: Some calls simultaneous, number of individuals can be reliably estimated

Code 3: Full chorus, calls continuous and overlapping, number of individuals cannot be reliably estimated

Amphibian2021 rev. 02/2021

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

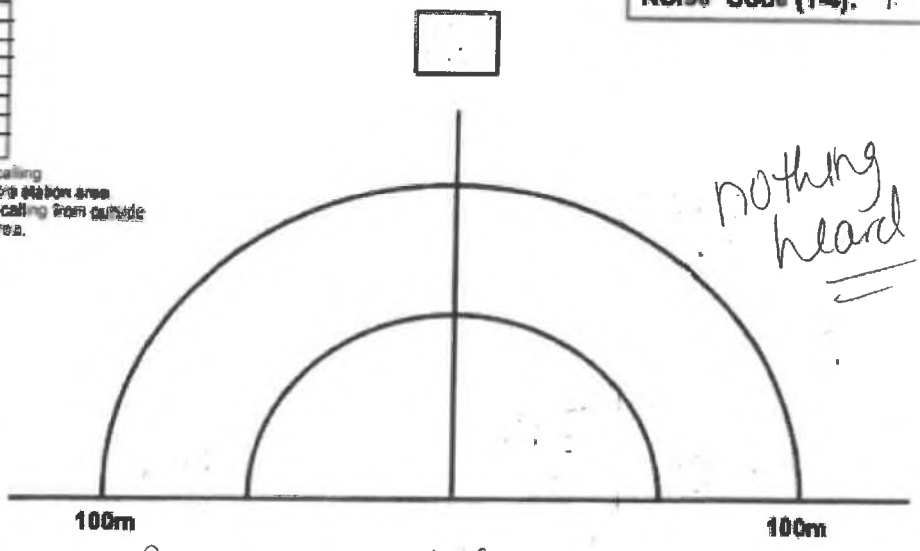
* Check if species is calling from inside 100-metre station area

** Check if species is calling from outside 100-metre station area.

Station A

Station Start Time (24 hr): 21:27

Background Noise Code (1-4): 4



nothing heard

Car wash, heavy traffic to west

Pinchin File Number: 282894 Client: _____ Address/Site: 7449 Montrose Rd

Marsh Monitoring Program - Amphibian Data Form

Return by 31 July

Please write legibly (in pen).

MARSH MONITORING PROGRAM

VISIT INFORMATION

Route #: _____ Route Name: _____

Observer #: _____ Observer Name: Erin Tracey, Rachel Karam

Visit #: 2 Day: 31 Month: May Year: 2021

Cloud Cover (10th): 8 Temperature (°C or °F): 14 Beaufort Wind Scale (0-6): 3

Precipitation (check one): ⊗ None/Dry ○ Damp/Haze/Fog ○ Drizzle ○ Rain

CALL LEVEL CODES

Code 1: Calls not simultaneous, number of individuals can be accurately counted

Code 2: Some calls simultaneous, number of individuals can be reliably estimated

Code 3: Full chorus, calls continuous and overlapping, number of individuals cannot be reliably estimated

Amphibians/30 calc. rev 03/2016

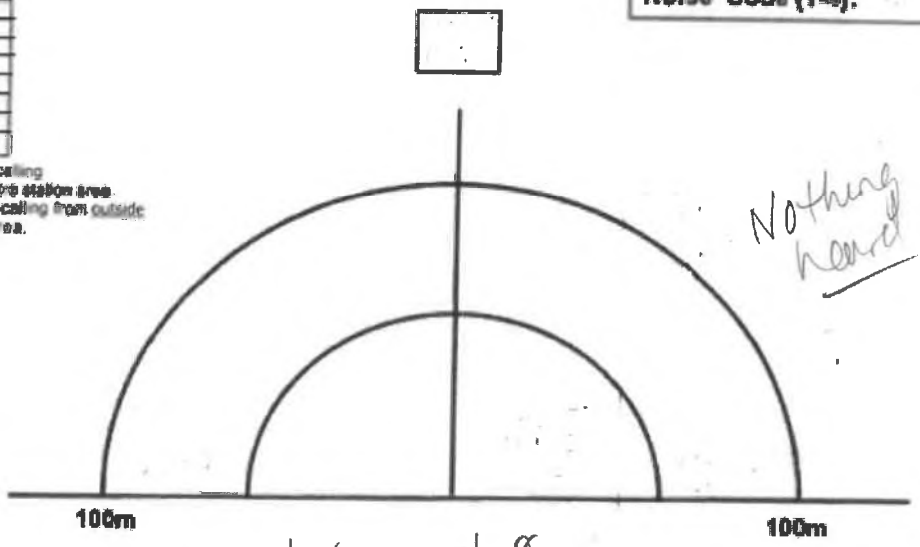
Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station ~~A~~ B

Station Start Time (24 hr): 21:38

Background Noise Code (1-4): 4



Nothing heard

Car wash, heavy traffic

Pinchin File Number: 282894 Client: _____ Address/Site: 7449 Montrose Rd

Marsh Monitoring Program - Amphibian Data Form

Return by 31 July

Please write legibly (in pen).

MARSH MONITORING PROGRAM

VISIT INFORMATION

Route #: _____ Route Name: _____

Observer #: _____ Observer Name: Erin Tracey, Rachel Vasvin

Visit #: 3 Day: 28 Month: June Year: 2021

Cloud Cover (10th): 3 Temperature (°C or °F): 25 Beaufort Wind Scale (0-6): 2 (11 km/h)

Precipitation (check one): ⊗ None/Dry ○ Damp/Haze/Fog ○ Drizzle ○ Rain

CALL LEVEL CODES

Code 1: Calls not simultaneous, number of individuals can be accurately counted

Code 2: Some calls simultaneous, number of individuals can be reliably estimated

Code 3: Full chorus, calls continuous and overlapping, number of individuals cannot be reliably estimated

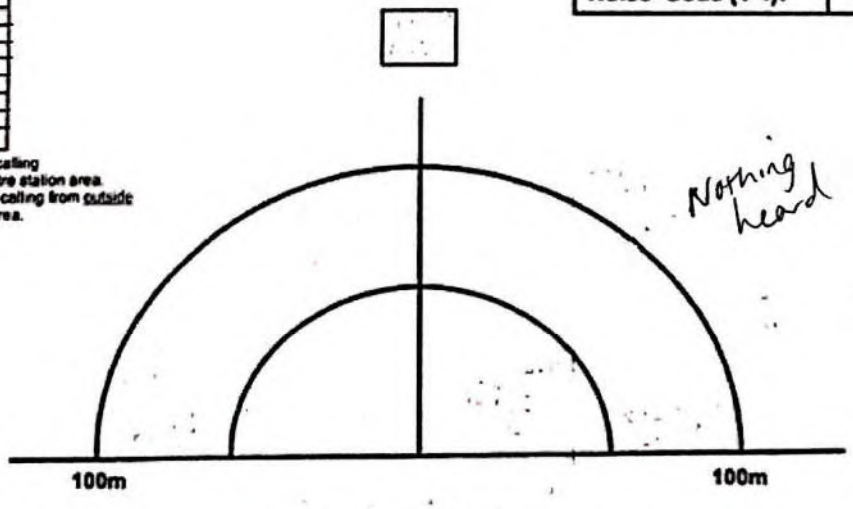
Amphibfine2008.cdr, rev 02/2008

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station A

Station Start Time (24 hr):	21.43
Background Noise Code (1-4):	4



Nothing heard

Lots of traffic, car wash running.

Pinchin File Number: 282894 Client: _____ Address/Site: 7449 Montrose Rd

Ponding water has mostly dried up - no standing water left, only dark mud bottom.

Marsh Monitoring Program - Amphibian Data Form

Return by 31 July

Please write legibly (in pen).

MARSH MONITORING PROGRAM

VISIT INFORMATION

Route #: _____ Route Name: _____

Observer #: _____ Observer Name: Erin Tracey, Rachel Karam

Visit #: 3 Day: 28 Month: June Year: 2021

Cloud Cover (10th): 3 Temperature (°C or °F): 25 Beaufort Wind Scale (0-6): 2

Precipitation (check one): (X) None/Dry ( ) Damp/Haze/Fog ( ) Drizzle ( ) Rain

CALL LEVEL CODES

Code 1: Calls not simultaneous, number of individuals can be accurately counted

Code 2: Some calls simultaneous, number of individuals can be reliably estimated

Code 3: Full chorus, calls continuous and overlapping, number of individuals cannot be reliably estimated

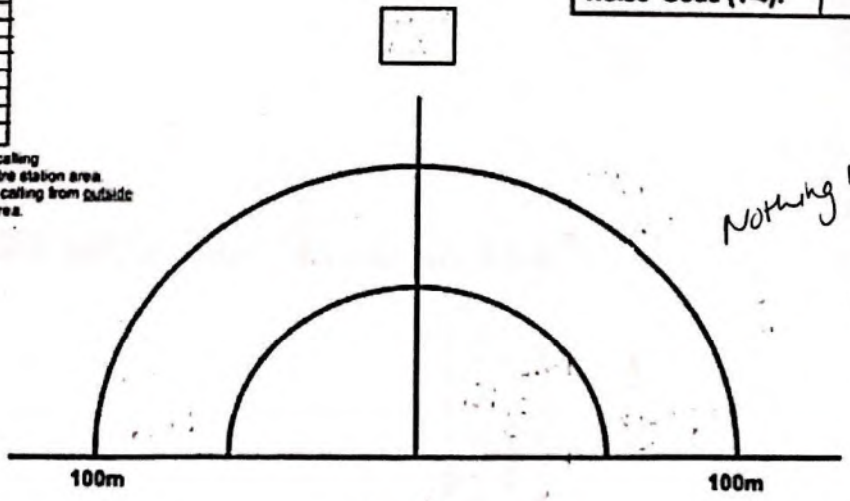
Amphibians2008.xls; rev 02/2008

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station ~~X~~ B

Station Start Time (24 hr):	21:58
Background Noise Code (1-4):	4



Nothing heard.

Traffic, car wash.

Pinchin File Number: 282894 Client: _____ Address/Site: 7449 Montrose Rd.

APPENDIX F

BREEDING BIRD SURVEY RESULTS

Appendix E Table 1. Bird Species Observed on the Site

		Background Information Source				
Scientific Name	Common Name	SARA	ESA 2007	Srank	NHIC	Breeding Likelihood and observed activities
Turdus migratorius	American Robin	---	---	S5B		S
Scolopax minor	American Woodcock	---	---	S4B		X
Quiscalus quiscula	Common Grackle	---	---	S5B		X
Geothlypis trichas	Common Yellowthroat	---	---	S5B		S
Sturnus vulgaris	European Starling	---	---	SNA		AE, CF, NY
Charadrius vociferus	Killdeer	---	---	S5B, S5N		X
Colaptes auratus	Northern Flicker	---	---	S4B		X
Agelaius phoeniceus	Red-winged Blackbird	---	---	S4		X
Columba livia	Rock Dove	---	---	SNA		X
Actitis macularia	Spotted Sandpiper	---	---	S5		X

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

AE Adult entering, occupying, or leaving a nest site

CF Adult carrying food for young

NY Nest with young (seen or heard)

Confirmed

DD Distraction display or injury feigning

APPENDIX G

BAT HABITAT SURVEY RESULTS

1.1 Snag Inventory Information

Tree #	Species	DBH	Height Class	Decay Class	Cavity	East	North	Feature	Snag Quality
142	Swamp White Oak	80	OS	2	No	652396	4770264	Dead Branches exfoliating Bark	Moderate, lose bark only
247	Pin Oak	34/41	CD	2	No	652409	4770183	2 dead trunks	Moderate, likely to develop cracks and cavities
235	Pin Oak	40	CD	2	Yes	652388	4770185	Cavity 0 to 5 m height	Good
252	Shagbark Hickory	26	S	1	No	652404	4770165	Exfoliating bark plates	Good
209	Shagbark Hickory	23	S	1	No	652404	4770209	Exfoliating bark plates	Good
210	Shagbark Hickory	18	S	1	No	652404	4770209	Exfoliating bark plates	Good
212	Shagbark Hickory	30	CD	1	No	652406	4770209	Exfoliating bark plates	Good
285	Pin Oak	30	CD	1	Yes	652392	4770188	Knot hole open cavity 0-6m height	Good
No Tag	Shagbark Hickory	26	S	`1	No	652405	4770172	Exfoliating bark plates	Good
224	Ash Species	18	Int	4	No	652399	4770211	Losing branches, loose bark, dead	Poor, not stable
182	Ash Species	33	Int	4	No	652385	4770222	Losing branches, loose bark, dead	Poor, not stable
162	Ash Species	35	CD	4	No	652384	4770231	Losing branches, loose bark, dead	Poor, not stable

190/774	Red Maple	30/14	S	2	No	652395	4770225	Top half dead	Moderate, likely to develop cracks and cavities
172	Ash Species	18	Int	4	No	652395	4770233	Losing branches, loose bark, dead	Poor, not stable
170/768	Ash Species	20	S	4	No	652401	4770233	Losing branches, loose bark, dead	Poor, not stable
767	Ash Species	28	S	4	No	652401	4770233	Losing branches, loose bark, dead	Poor, not stable
194	Ash Species	20	Int	4	No	652402	4770228	Losing branches, loose bark, dead	Poor, not stable
202/834	Ash Species	34	CD	4	No	652407	4770218	Losing branches, loose bark, dead	Poor, not stable
222	Red Maple	25/28	Int	2	No	652396	4770197	Dead Top, exfoliating bark	Moderate, likely to develop cracks and cavities
242	Pin Oak	38	CD	1	Yes	652388	4770178	Basal Cavity	Good
241	Pin Oak	25	Int	2	No	652386	4770178	Broken Top	Moderate, likely to develop cracks and cavities
186	Red Maple	41/38/28/32/42/20	CD	2	No	652374	4770208	1 Dead leader, all leaders some exfoliating, Basal Sprouts	Moderate, likely to develop cracks and cavities
180	Pin Oak	28	Int	1	Yes	652374	4770220	Basal Decay	Good
139	Pin Oak	84	OS	2	Yes	652377	4770258	Dead branches, cracks	Good

Height Class

OS	Overstory
CD	Codominant
Int	Intermediate
SU	Suppressed

Decay Class

1	Healthy, live
2	Declining live tree, part of canopy lost
3	Very recently dead, no canopy, bark intact, branches intact
4	Recently dead, bark peeling, only large branches intact
5	Older dead tree, 90% of bark lost, few branch stubs, broken top
6	Very old dead tree, advanced decay, no branches, parts of stem rotted away

Species

Swamp White Oak	*Quercus bicolor*
Pin Oak	*Quercus palustris*
Shagbark Hickory	*Carya ovata*
Red Maple	*Acer rubrum*

1.2 Photos of Some Cavities

Photo 1 – Tree # 285, Pin Oak with Cavity Ground level to approximately 6 m height.

Photo 2 – Example of Tree with Basal Decay that is Creating a Cavity, Tree # 180, Pin Oak.

MEMO

GeoProcess RESEARCH ASSOCIATES
Knowledge Research Consulting

August 20, 2021

Rocky Yao
Pinchin Ltd.
2470 Milltower Court.
Mississauga, ON
L9H 6Y6

Re: Acoustic Data Collection
7449 Montrose Road, Niagara Falls, ON

GeoProcess Research Associates Inc. (GRA) was retained by Pinchin Ltd. to complete an acoustic data collection survey for a property identified as 7449 Montrose Road in Niagara Falls, herein referred to the "Study Area" (Map 1). The purpose of this assessment was to determine if bats are present which would be listed under the Endangered Species Act (ESA). The assessment is focused on the four Species at Risk (SAR) bat species: little brown myotis (*Myotis lucifugus*), northern myotis (*Myotis septentrionalis*), eastern small-footed myotis (*Myotis leibii*) and tri-colored bat (*Perimyotis subflavus*), all managed by the Ministry of Environment, Conservation and Parks (MECP).

The Study Area contains a woodlot approximately 0.45 ha in size, referred to as the "Monitoring Area" that is bounded by McLeod Rd to the north, Pink Oak Dr to the west and a Cineplex Odeon complex to the south (Map 2). Pinchin Ltd. provided GRA with approximate locations of potential snag habitat within the woodlot and two Song Meter Mini Bat Ultrasonic recorders (acoustic data collectors) were installed accordingly.

1. Methodology

GRA followed the Survey Protocol for Species at Risk Bats Within Treed Habitat (MNRF, 2017). This protocol is used to define suitable maternity roost trees for the little brown myotis, Northern myotis and tri-colored bat. Prior to conducting acoustic surveys, a "Snag Survey" is completed to determine accurate placement of data collectors. Acoustic surveys are used to determine the absence or presence of SAR bats within suitable treed habitats.

Pinchin Ltd. provided Snag Survey data that identified 14 candidate bat roosting trees in the Monitoring Area. The MNRF specifies that 4 stations per hectare are needed for full coverage of an ecosite, therefore since the woodlot within the Study Area is less than 0.5 ha, two Song Meter Mini Bat Ultrasonic recorders (acoustic data collectors) were deployed (Map 2). The acoustic data collectors recorded nightly from June 4 to June 13, 2021, from sunset to sunrise, for a total of ten full nights. During setup, locations near roads were avoided to reduce background traffic noise. The acoustic data collectors were placed on the eastern edge of

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the woodlot. The first recorder was surrounded by mature white oak (*Quercus alba*) and shagbark hickory (*Carya ovata*) trees, while the second recorder was surrounded by shagbark hickories. Both data collectors had standing dead wood in proximity.

Once collected, the data was analyzed using SonoBat 4.4.5 North America classifier. The software uses noise files from the acoustic data collector to extract and analyze the full spectrum data, rendering high resolution sonograms of each call pulse and automated classification. Summaries were based on successfully classified noise files which can be identified to frequency level and or species level. Using Excel, a value of mean bat passes per night with standard deviation(σ) using all species was calculated to compare activity levels. Nightly Hi and Lo temperatures were averaged using data from timeanddate.com for Niagara Falls, Ontario, Canada.

The following species codes are used throughout this memo:

4-letter Code	Scientific Name	Common Name
Epfu	*Eptesicus fuscus*	big brown bat
Laci	*Lasiurus cinereus*	hoary bat
Lano	*Lasionycteris noctivagans*	silver haired Bat

2. Results

2.1. Passive Acoustic Monitoring

The acoustic data collection survey resulted in the identification of three species of bats and no identification of SAR bats. The big brown bat (*Eptesicus fuscus*) and the hoary bat (*Lasiurus cinereus*) were detected with an average degree of accuracy greater than 78%. The big brown bat was detected more frequently than the hoary bat, but successful individual recording numbers were low. A possible detection of the silver haired bat (*Lasionycteris noctivagans*) was noted with low maximum likelihood estimates. Bat activity across all species was highest at Station 2.

2.1.1. Acoustic Station 1

There were 3083 noise files recorded at Station 1 with 69 of those noise files accurately detecting bat activity. SonoBat categorizes applicable noise files as either a high frequency call (HiF) or a low frequency call (LoF), indicating whether a bat species was detected and not something else (e.g., traffic noise, bird). Station 1 detected 66 LoF calls and 3 HiF calls, of those noise files, SonoBat accepted 2 as the big brown bat, 2 as the hoary bat and 1 as the silver haired bat (Figure 1). To ensure accuracy, SonoBat adjusts the best possible results with actual performance data to calculate presence maximum likelihood estimates (Figure2).

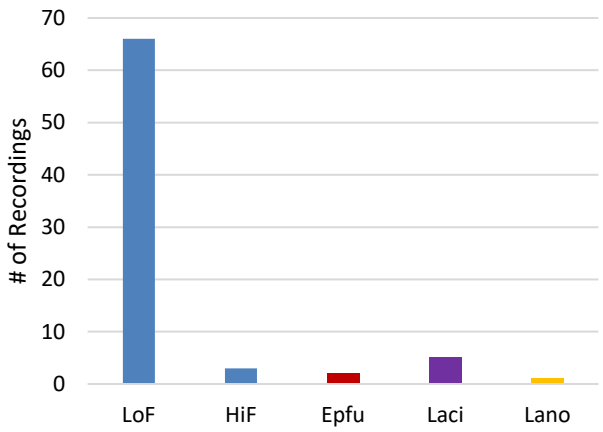


Figure 1. Number of LoF and HiF bat calls and accepted SonoBat species decisions.

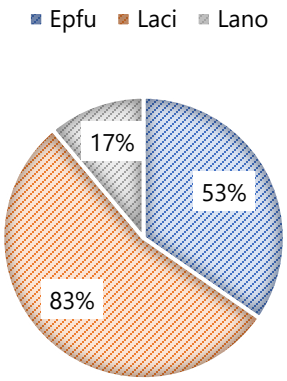


Figure 2. Presence maximum likelihood estimates for accepted SonoBat species decisions.

2.1.2. Acoustic Station 2

There were 4204 noise files recorded at Station 2 with 42 of those noise files accurately detecting bat activity. Station 2 detected 38 LoF calls and 4 HiF calls, of those noise files, SonoBat accepted 8 as the big brown bat, 4 as the hoary bat and 1 as the silver haired bat (Figure 3). Refer to Figure 4 for presence maximum likelihood estimates.

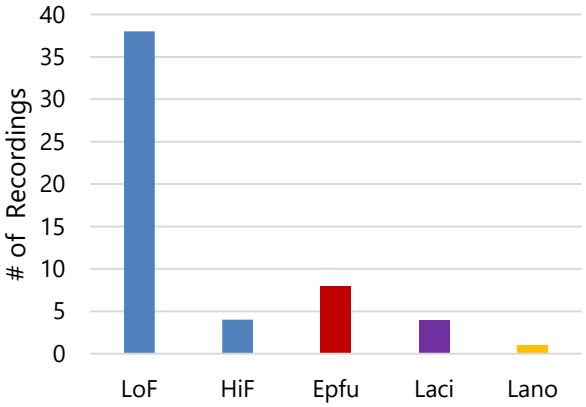


Figure 3. Number of LoF and HiF bat calls and accepted SonoBat species decisions.

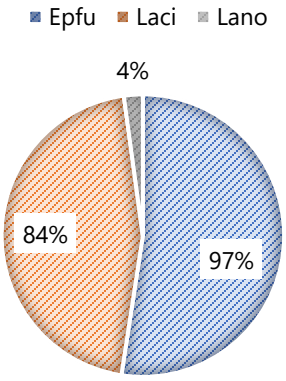


Figure 4. Presence maximum likelihood estimates for accepted SonoBat species decisions.

On average the detectors successfully classified 2 (σ =1.6) bats call per night with the most bat calls (6) being heard on June 9th. The second highest recording was 3 on June 4th and 6th. Refer to Table 1 for accepted SonoBat species detections per night with average air temperatures. Observations of Lano were omitted due to the low maximum likelihood percent values and detections.

Table 1. Summary of Accepted SonoBat Species Decisions per Monitoring Evening

Date	Jun 4	Jun 5	Jun 6	Jun 7	Jun 8	Jun 9	Jun 10	Jun 11	Jun 12	Jun 13
Temperature °C	21	23	24	25	22	25	22	21	22	21
Epfu	-	1	1	1	-	4	1	1	-	1
Laci	3	1	2	-	1	-	-	1	1	-
Total	3	2	3	1	1	4	1	2	1	1

3. Discussion and Conclusion

In total, there were 10 big brown bat, 6 hoary bat and 2 silver-haired bat detections for the Monitoring Area. No SAR bat species were present during the 10-night collection period. It is predicted that bats were visiting the site and not roosting. Bats will travel several km through the night and will switch roosts on a frequency of 1–3 nights. The collected data confirms that bats were arriving later than 23:00 hours each night, therefore if bats were roosting in the Monitoring Area, we would expect to hear calls closer to sunset.

4. Closing

Thank-you for providing GRA the opportunity to present this acoustic data collection survey for lands at 7449 Montrose Road, Niagara Falls.

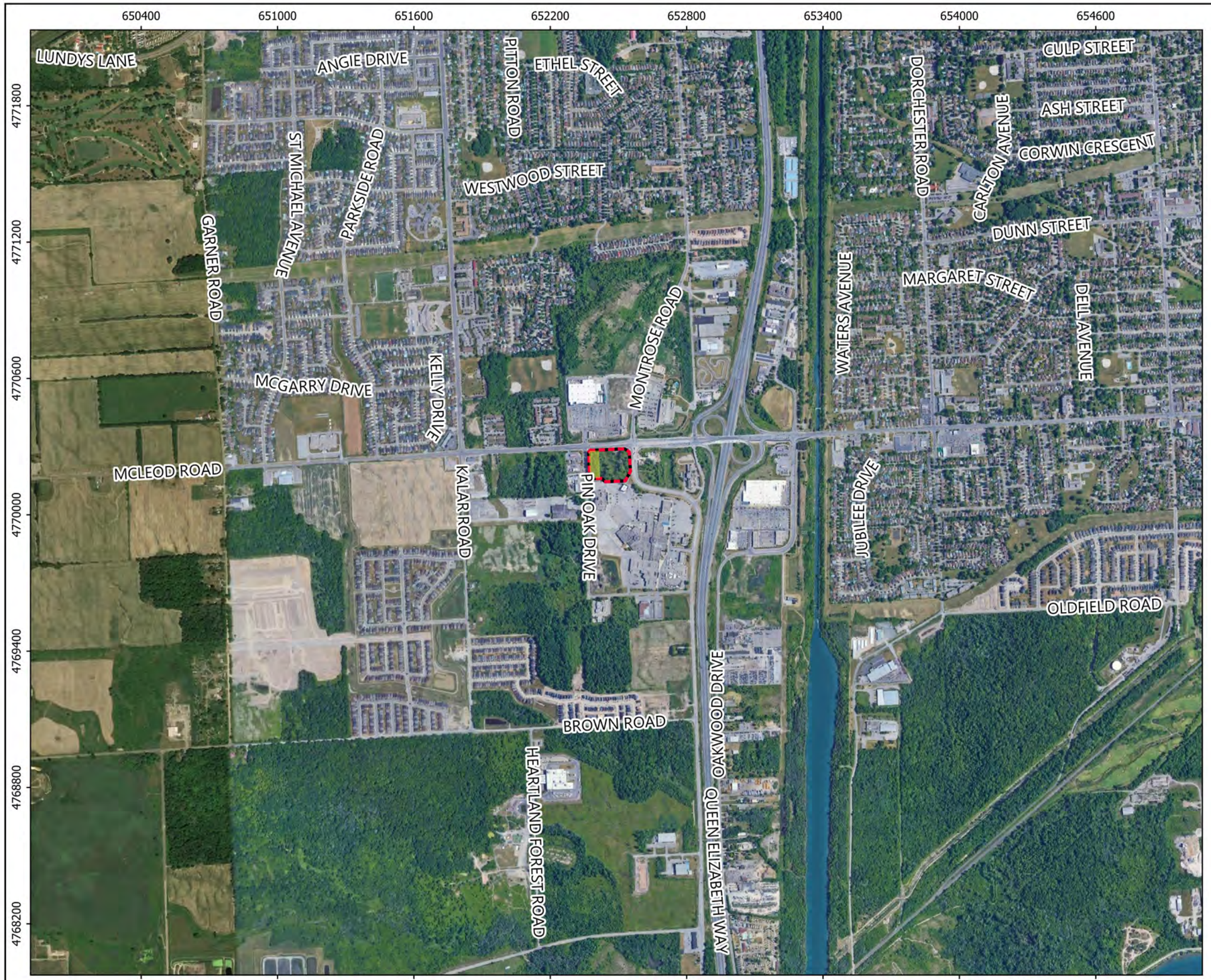
If you have any questions regarding this submission, do not hesitate to contact us.

Regards,

GEOPROCESS RESEARCH ASSOCIATES INC

Ken Glasbergen, MSc., ERPG
Senior Ecologist, Principal

Meghan Douglas, BSc., ERPG
Junior Wildlife Ecologist



Legend

- Study Area
- Monitoring Area

N

0 150 300 450 600 750 m

Prepared using QGIS and Google Satellite Imagery

GeoProcess RESEARCH ASSOCIATES

CREATED BY:	MD	PROJECT NO.:	P2021-539
CHECKED BY:	KG	DATE:	Aug 20, 2021

Map 1.

Key Map

ACOUSTIC DATA COLLECTION
7449 MONTROSE RD.
Pinchin Ltd.

G:\My Drive\Projects\P2021-539 7449 Montrose Rd Bat Survey\Mapping\Projects\BaseMap.qgz

GeoProcess RESEARCH ASSOCIATES

CREATED BY:	MD	PROJECT NO.:	P2021-539
CHECKED BY:	KG	DATE:	Aug 20, 2021

Map 2.

Acoustic Data Collector Locations

ACOUSTIC DATA COLLECTION
7449 MONTROSE RD.
Pinchin Ltd.

G:\My Drive\Projects\P2021-539 7449 Montrose Rd Bat Survey\Mapping\Projects\BaseMap.qgz

APPENDIX H

SPECIES AT RISK SCREENING TABLE

Table 1. Species at Risk Screening for the Study Area

Type	Common Name	Scientific Name	Srank	SARO Status	COSEWIC Status	Last Obs Date	Background Information Source						Notes on Preferred Habitat [1]	Confirmed Observation within the Study Area	Suitable Habitat within the Study Area
							NHIC Grid 17PH5270, 17PH5269	Atlas of Ontario Mammals (Dobbyn 1994)	Atlas of the Breeding Bird of Ontario (Cadman 2009)	Ontario Reptile and Amphibian Atlas (ON 2018)	Ontario Butterfly Atlas (Macnaighton 2018)	Rare Vascular Plants of Ontario (Oldham & Brinker, 2009)			
PLANT	Butternut	*Juglans cinerea*	S2?	END	END	-						◆	Grows along or in small groups in deciduous forests. Prefers moist, well-drained soil and is often found along streams.	NO	Yes, potentially could be found within the wooded areas on the Site.
	Cucumber Tree	*Magnolia acuminata*	S2	END	END	-						◆	Found in few locations in Niagara Region and Norfolk County. Requires moist to wet soils and full sun.	NO	Yes, potentially could be found within the wooded areas on the Site.
	White Wood Aster	*Eurybia divaricata*	S2S3	THR	THR	-						◆	Open, dry deciduous forests dominated by Sugar Maple and American Beech trees. Prefers well-drained soils and low levels of disturbance.	NO	No, the forest on Site is moist and does not provide the right conditions.
	Bird's-foot Violet	*Viola pedata*	S1	END	END	-						◆	Only found in Black Oak savanna, a rare vegetation type in Ontario. Requires widely spaced open-grown trees with an understorey of tallgrass prairie and herbs.	NO	No, there is no Black Oak savanna habitat within the Study Area
	Deerberry	*Vaccinium stamineum*	S1	THR	THR	-	◆						Can be found in habitats where the climate is moderated by proximity to a body of water. It is predominantly found in dry open woods on sandy and well-drained soils growing under oaks, Pitch Pine or White Pine.	NO	No, the soils on the Site are moist and do not support the growing conditions.
PLANT	Pink Milkwort	*Polygala incarnata*	S1	END	END		◆						Grows in moderately moist to dry, sandy, prairie habitats. It os often found growing with Little Bluestem grass. Periodic fire is important to maintain its open prairie conditions.	NO	Yes, there is habitat for this species to grow in the meadow habitats.

Table 1. Species at Risk Screening for the Study Area

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PLANT	American Chestnut	*Castanea dentata*	S1S2	END	END		◆						It prefers moist to dry soils, and can do well in full sun or full shade. It is adaptable to soil and can even grow in rocky soils. It used to be common but a widespread disease has made it rare.	NO	Yes, this species has potential habitat within the forested areas on the Site.
REPTILE	Midland Painted Turtle	*Chrysemys picta marginata*	S4	-	SC	2019	◆			◆			Inhabit waterbodies such as ponds, marshes, lakes and slow-moving creeks that have soft bottoms and provide an abundance of aquatic vegetation. They bask on shorelines, logs and rocks. They will hibernate on the bottom of waterbodies.	NO	NO, there is no habitat to support this species on the Site.
	Snapping Turtle	*Chelydra serpentina*	S3	SC	SC	2015				◆			Prefer shallow, slow-movnig waters with abundant vegetation, but can also live in deeper water habitats. During the nesting season June-July, they can be gound on gravelly or sandy areas on land.	NO	No, no shallow, slow-moving waters with abundant vegetation found within the Study Area.
	Eastern Milksnake	*Lampropeltis triangulum*	S4	SC	SC	2019				◆			Open habitats and rocky outcrops. Fields, forest edges and rural areas with barns.	NO	No, meadows are found within the Study Area, however the quality of the potential habitat is low and small in nature.
AMPHIBIAN	Allegheny Mountain Dusky Salamander	*Desmognathus ochrophaeus*	S1	END	END	2018				◆			Found in or near forested small streams, springs or seeps. They typically nest in underground cavities close to seeps or in shallow depressions in moist soil beneath logs, stones, moss, leaf litter or stumps.	NO	Yes, there are small marshes and moist woodlands within the Site that could be utilized by this species, however the habitat quality is low and it is unlikely.
	Northern Dusky Salamander	*Desmognathus fuscus*	S1	END	END	2018				◆			Are found on land close to groundwater fed streams, seeps and springs. Live under rocks, logs or leaf litter in or near water. It is restricted to a small area of the Niagara Peninsula.	NO	Yes, there are small marshes and moist woodlands within the Site that could be utilized by this species, however the habitat quality is low and it is unlikely.

Table 1. Species at Risk Screening for the Study Area

Type	Common Name	Scientific Name	Srank	SARO Status	COSEWIC Status	Last Obs Date	Background Information Source						Notes on Preferred Habitat [1]	Confirmed Observation within the Study Area	Suitable Habitat within the Study Area
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BIRD	Acadian Flycatcher	*Empidonax virescens*	S2S3	END	END	2001-2005			◆				Found in mature, shady forests with ravines, or in forested swamps with lots of maple and beech trees.	NO	Yes, there is habitat for this species in the forested area, though it is small in nature and unlikely to be used.
	Bank Swallow	*Riparia riparia*	S4B	THR	THR	2001-2005			◆				Nest in burrows in natural and human-made settings where there are vertical faces in silt and sand deposits. Many nests are on banks of rivers and lakes, but can be found in sand and gravel pits.	NO	No, there is no vertical silt faces for this species to nest in.
	Barn Swallow	*Hirundo rustica*	S4B	THR	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.	NO	No, there are no human-made structures on the Site.
	Bobolink	*Dolichonyx oryzivorus*	S4B	THR	THR	2001-2005			◆				Can be found in tallgrass prairie, open meadows, hayfields, and dense grasses. They build their nests on the ground amongst the dense vegetation .	NO	Yes, this species has potential habitat in the meadow on the Site, though it is small and low quality and is unlikely to be used.
	Common Nighthawk	*Chordeiles minor*	S4B	THR	SC	2001-2005			◆				Rocky areas with little vegetation and clearings. Can use gravel roads, flat roofs, and fields. [3]	NO	No, there is no habitat in the Study Area to support this species.
BIRD	Chimney Swift	*Chaetura pelagica*	S4B, S4N	THR	THR	2001-2005			◆				Historically have nested on cave walls and in hollow trees, but are more likely to be found in urban settlements nesting in chimneys and manmade structures. They tend to stay close to water where flying insects congregate for foraging.	NO	No, there are no chimneys or manmade structures on the Site.

Table 1. Species at Risk Screening for the Study Area

Type	Common Name	Scientific Name	Srank	SARO Status	COSEWIC Status	Last Obs Date	Background Information Source						Notes on Preferred Habitat [1]	Confirmed Observation within the Study Area	Suitable Habitat within the Study Area
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BIRD	Eastern Meadowlark	*Sturnella magna*	S4B	THR	THR	2001-2005			◆				Breed primarily in moderately tall grasslands such as pastures, hayfields and weedy borders of croplands, roadsides and other open areas.	NO	Yes, this species has potential habitat in the meadow on the Site, though it is small and low quality and is unlikely to be used.
BIRD	Eastern Wood-Pewee	*Contopus virens*	S4B	SC	SC	2001-2005			◆				Live in the mid-canopy layer of forest clearings and edges of deciduous and mixed forests. It is most abundandtly found in intermediate-age mature forest stands with little understory vegetation.	NO	Yes, this species has potential habitat in the forest on the Site.
BIRD	Grasshopper Sparrow	*Ammodramus savannarum*	S4B	SC	SC	2001-2005			◆				Open grassland areas with well-drained, sandy soil. Will nest in hayfields and pastures, as well as alvars, prairies and occassionally grain crop such as barely. Prefers areas that are sparsely vegetated.	NO	Yes, this species has potential habitat in the meadow on the Site, though it is small and low quality and is unlikely to be used.
BIRD	Peregrine Falcon	*Falco peregrinus*	S3B	SC	SC	2001-2005			◆				Nests on tall, steep cliff ledges close to large bodies of water. They can also be found nesting in urban settings on the ledges of tall buildings.	NO	No, there are no steep cliff ledges or buildings on the Site.
BIRD	Wood Thrush	*Hylocichla mustelina*	S4B	SC	THR	2001-2005	◆		◆				Lives in mature deciduous and mixed forests, seeking moist stands of trees with well-developed undergrowth and tall trees for perching. They prefer large forests, but will also use smaller stands of trees, building their nests in saplings, trees or shrubs, usually of Sugar Maple or American Beech.	NO	Yes, there are forest within the Site that could provide habitat to this species, though it is unlikely to be used as it is small in size.
INSECT	Monarch	*Danaus plexippus*	S4B	SC	SC	2019						◆	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.	NO	Yes, Milkweed plants were found within the Study Area

Table 1. Species at Risk Screening for the Study Area

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INSECT	Mottled Duskywing	*Erynnis martialis*	S2	END	END	1904						◆	Dry habitats with sparse vegetation. This includes sparse open barrens, sandy patches among woodlands and alvars. They deposit their eggs on New Jersey Tea and Prairie Redroot plants.	NO	No, there is no habitat for this species on the Site.
AQUATIC SPECIES	Eastern Pondmussel	*Ligumia nasuta*	S1	END	SC		◆						Found in sheltered areas of lakes and in slow-moving areas of rivers and canals with sand or mud bottoms.	NO	No, there is no habitat for aquatic species on the Site.
	Round Hickorynut	*Obovaria subrotunda*	S1	END	END		◆						Mainly found in rivers with clay, sand or gravel bottoms. Also lives in shallow areas of lakes with firm sand and faster moving water.	NO	No, there is no habitat for aquatic species on the Site.
	Grass Pickerel	*Esox americanus vermiculatus*	S3	SC	SC		◆						Wetlands, ponds and slow-moving streams and shallow bays of larger lakes with warm, shallow and clear water and abundance of aquatic plants.	NO	No, there is no habitat for aquatic species on the Site.
MAMMAL	Little Brown Bat	*Myotis lucifuga*	S4	END	END	-		◆					Roost in trees and buildings such as attics, abandoned builings and barns. Generally found in coniferous or deciduous forests along edge habitat, foraging in clearings near sources of water.	NO	Yes. The deciduous forest on the Site contains several snags and tree cavities where this species could roost.
	Eastern Small-footed Myotis	*Myotis leibii*	S2S3	END	END	-							Roost in a variety of habitats, including in or under rocks, in rock outcrops, in buildings, under bridges, or in caves, mines or hollow trees	NO	Yes. The deciduous forest on the Site contains several snags and tree cavities where this species could roost.
MAMMAL	Northern Myotis	*Myotis septentrionalis*	S3	END	END	-							Roost under loose bark and in cavities of trees. Hibernate from October/November to March/April most often in caves or abandoned mines	NO	Yes. The deciduous forest on the Site contains several snags and tree cavities where this species could roost.

Table 1. Species at Risk Screening for the Study Area

Type	Common Name	Scientific Name	Srank	SARO Status	COSEWIC Status	Last Obs Date	Background Information Source						Notes on Preferred Habitat [1]	Confirmed Observation within the Study Area	Suitable Habitat within the Study Area
							NHIC Grid 17PH5270, 17PH5269	Atlas of Ontario Mammals (Dobbyn 1994)	Atlas of the Breeding Bird of Ontario (Cadman 2009)	Ontario Reptile and Amphibian Atlas (ON 2018)	Ontario Butterfly Atlas (Macnaighton 2018)	Rare Vascular Plants of Ontario (Oldham & Brinker, 2009)			
MAMMAL	Tri-coloured Bat	*Pipistrellus subflavus*	S3	END	END	-							Forms day roosts and maternity colonies in older forests but can also be found in barns or other structures. Forage over water along streams in the forest. Overwinter in caves from October-April.	NO	Yes. The deciduous forest on the SIte contains several snags and tree cavities where this species could roost.

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 biolodical characteristics and identified threats
Extirpated (EXR) — Species which no longer exist in the wild in Ontario, but exist elsewhere in the world
DD — Data defficient

NHIC Srank (Subnational) Legend

S1
S2
S3
S4
S5
B
N

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 in 2020. 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 in 2020. http://sararegistry.gc.ca/sar/index/default_e.cfm.
4 Ministry of the Environment, Conservation and Parks. 2020. Species at Risk in Ontario. Accessed in 2020. https://www.ontario.ca/page/species-risk-ontario#section-3.
5 Butterflies of Ontario. 2020. Red-disked Alpine. Accessed in 2020. http://www.ontariobutterflies.ca/families/nymphalidae/red-disked-alpine.
6 Butterflies and Moths of North America. 2020. Red-disked Alpine. Accessed in 2020. https://www.butterfliesandmoths.org/sighting_details/1053970.
7 Rare Vascular Plants of Ontario. 2009. Oldhama and Brinker..

APPENDIX I
SIGNIFICANT WILDLIFE SCREENING TABLE

Table 1. 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. None of the bird species were observed during field surveys. **Unlikely SWH**
Waterfowl Stopover and Staging Areas (Aquatic)	There is very little water or aquatic ecosites within the Site. **Unlikely SWH**
Shorebird Migratory Stopover Area	No shorelines or suitable habitats present within Study Area. **Not SWH**
Raptor Wintering Area	Although a small field and woodland are present on the Site, the size is under 20 ha. **Not SWH**
Bat Hibernacula	No caves or suitable crevices are found within the Site. **Not SWH**
Bat Maternity Colonies	Woodlands are found within the Study Area and snags were observed within the Site. However, due to the small size and shortage of suitable roosts, it is unlikely that the Site has maternity roost trees. **Unlikely SWH**
Turtle Wintering Areas	No suitable water bodies are found within the Site. **Not SWH**
Reptile Hibernaculum	No areas of natural broken rock, rock piles, slopes or similar features were observed within Study Area. **Unlikely 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)	Live and very few dead standing trees are found within the Study Area. No bird nests were observed within these trees. **Unlikely 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 were not observed within the Study Area boundaries and meadows are not over 10 ha. **Not SWH**
Landbird Migratory Stopover Area	Wooded areas are found within the Study Area but woodland is not over 5 ha. **Not SWH**
Deer Winter Congregation Area	Forested Ecosites are found within the Site, however they are less than 50 ha in size. **Not 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 forests found within 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	A small marsh Ecosites is found within the Study Area boundaries. No candidate species were observed during field visits. **Unlikely SWH**
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	Forested area is present on the Site, however it is fairly small. None of the candidate species were observed during field surveys. **Unlikely SWH**
Woodland Raptor Nesting Habitat	Woodland Ecosites are found within the Study Area, however they do not have 10 ha of interior habitat. **Not SWH**
Turtle Nesting Areas	No suitable water is found within the Site and no evidence of turtles was observed within the Site. **Not SWH**

Seeps and Springs	No seeps or springs observed within the Site. **Not SWH**
Amphibian Breeding Habitat (Woodland)	A small swamp is found within the Site, however based on the amphibian breeding surveys completed, there were minmal observations found. **Unlikely SWH**
Amphibian Breeding Habitat (Wetlands)	A small swamp is found within the Site, however it provides low species diversity based on the amphibiam breeding survey conducted. **Unlikely SWH**
Woodland Area - Sensitive Bird Breeding Habitat	Woodlands are present within the Site but based on the size there is no interior habitat. **Not SWH**
Habitat for Species of Conservation Concern (Not Including Endangered or Threatened Species)	
Marsh Bird Breeding Habitat	A small swamp and marsh are present on the Site, however the breeding bird surveys did not show appicable species utilizing the wetland habitat. **Unlikely SWH**
Open Country Bird Breeding Habitat	No large grassland areas bigger than 30 ha found within the Study Area. **Not SWH**
Shrub/Early Successional Bird Breeding Habitat	No thicket present within the Site. **Not SWH**
Terrestrial Crayfish	Meadows are present within Study Area. No evidence of terrestrial crayfish was observed, however no targeted surveys were undertaken as part of this assessment. **Not SWH**
Special Concern and Rare Wildlife Species	No species of Special Concern were observed on Site during field assessment or subsequent surveys. **Not SWH**
Animal Movement Corridors	
Amphibian Movement Corridors	A small swamp was observed within the Site. Amphibian breeding surveys in these habitats were completed as part of this assessment, with minimal species observed. **Unlikely SWH**

APPENDIX J

PROPOSED SITE PLAN

M c L E O D R O A D

(ORIGINAL ROAD ALLOWANCE BETWEEN STAMFORD TOWNSHIP LOTS 170 AND 179)

(TRANFERRED TO THE CITY OF NIAGARA FALLS BY ORDER-IN-COUNCIL OC 723/80, INST. NO. RO 352585 – PART 10, HWY. PLAN P-1915-210)

P.I.N. 64263-1038 (LT)
PART 1, PLAN 59R-15765
Subject to Easement as in Inst. No. SN269876

BLOCK WA
(WIDENING BY REG'D PLAN M-40)
P.I.N. 64263-0110 (LT)

BUILDING B
8 STOREY
APARTMENT BUILDING

BUILDING A
6 STOREY

13 STOREY
CONDO TOWER

6 STOREY

BLOCK A
PART 1, PLAN 59R-13666
Subject to Easement as in Inst. No. SN269876
P.I.N. 64263-1592 (LT)

REGISTERED PLAN M-40
PARKETTE

BUILDING C1
(8) 3 STOREY
TOWNHOUSES

BUILDING C2
(5) 3 STOREY
TOWNHOUSES

BUILDING C3
(4) 3 STOREY
TOWNHOUSES

BUILDING C4
(6) 3 STOREY
TOWNHOUSES

BUILDING C5
(4) 3 STOREY
TOWNHOUSES

BUILDING C6
(5) 3 STOREY
TOWNHOUSES

BUILDING C7
(5) 3 STOREY
TOWNHOUSES

BUILDING C8
(6) 3 STOREY
TOWNHOUSES

BUILDING C9
(8) 3 STOREY
TOWNHOUSES

BUILDING C10
(6) 3 STOREY
TOWNHOUSES

P I N O A K D R I V E

M O N T R O S E R O A D
(REGIONAL ROAD 98)

BLOCK WB
(WIDENING BY REGISTERED PLAN M-40)
P.I.N. 64263-0111 (LT)

PART 1, PLAN 59R-16537
Subject to Easement as in Inst. No. SN269876

PART 2, PLAN 59R-13666
Subject to Easement as in Inst. No. SN269876

PART 13, PLAN 59R-16537
Subject to Easement as in Inst. No. SN269876

P.I.N. 64263-1594 (LT)

PART 3, PLAN 59R-16537
Subject to Easement as in Inst. No. SN269876

STAMFORD TOWNSHIP
LOT 179
PART 12, PLAN 59R-16537
Subject to Easement as in Inst. No. SN269876

BRICK BUILDING
(1 STOREY)
"HOOPS SPORTS BAR & GRILL"
No 7555

UNDERGROUND SWM STORAGE TANK –SEE CIVIL DWGS

EXISTING DRIVEWAY TO BE REMOVED

CONCRETE PRECAST BUILDING

REV.	BY	DESCRIPTION	DATE
	MZ	ISSUED FOR OP & ZP AMENDMENT	JAN. 31 2022

REVISIONS

CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE

DO NOT SCALE DRAWINGS

BAYFIELD Realty Advisors Inc.

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PROJECT
PROPOSED RESIDENTIAL DEVELOPMENT
NIAGARA SQUARE
BAYFIELD
7449 MONTROSE ROAD NIAGARA FALLS, ON

DRAWING TITLE
SITE PLAN

DRAWN BY: MZ	COMM. NO.
CHECKED: AZ	DRAWING NO. SP-1
SCALE: 1:300	
DATE: JAN 19 2022	