

Prepared By:



Environmental Impact Study

9795 County Road 93, Town of Penetanguishene

Project No. 04-033-2020

June 2021



June 1, 2021

Chris Pauze
c/o Innovative Planning Solutions Inc.
647 Welham Road, Unit 9A
Barrie, Ontario
L4N 0B7

**RE: BIRKS NHC 04-033-2020
Environmental Impact Study
9795 County Road 93, Town of Penetanguishene**

Dear Mr. Pauze:

Thank you for retaining Birks Natural Heritage Consultants Inc. (Birks NHC) to undertake the preparation of an Environmental Impact Study (EIS) for the property described above. It is our understanding that a property severance is proposed and that the EIS is required due to the presence of significant woodlands and watercourse within 120 metres of the property. The EIS has been produced in support of the proposed severance and future residential development of the resulting eastern property parcel.

Birks NHC completed a site visit on May 7, 2021 to review the existing conditions of the property with a focus on any natural heritage features and functions present. Through assessment of the site visit, review of background information, and applicable policies and regulations, we have determined that the property and adjacent lands contain natural heritage features and hydrologic features and functions relating to the presence of woodland, un-evaluated wetlands and fish habitat.

The report provides an assessment of potential impacts associated with the proposed severance and future development and provides mitigation measures to reduce any potential impacts.



If you have any questions or concerns regarding this report, please do not hesitate to contact the undersigned.

Yours truly,

Birks Natural Heritage Consultants Inc.

Stephanie Brady HBES
Ecologist

Heather Marcks, B.Sc., M.F.C.
Ecologist



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1 INTRODUCTION

Birks Natural Heritage Consultants, Inc. (Birks NHC) was retained by Chris Pauze and Innovative Planning Solutions (IPS) to undertake an Environmental Impact Study (EIS) for the property identified as 9795 County Road 93, in the Town of Penetanguishene, County of Simcoe (Figure 1).

1.1 PURPOSE

The objective of the EIS is to identify and characterize the potential functions associated with natural heritage features present on and adjacent to the property and determine if potential impacts to those features and functions could arise from the proposed works. The assessment is focused on potential ecological impacts which could result from the proposed severance and future residential development of the resulting eastern property parcel. The EIS is required due to the presence of significant woodlands on the property and un-evaluated wetlands within the vicinity of the property (*i.e.*, within 120m).

This report has been prepared to address the natural heritage requirements of the Provincial Policy Statement (PPS, 2020), Endangered Species Act (ESA, 2007), and Town of Penetanguishene Official Plan (2018).

1.2 SITE DESCRIPTION

The property is a rectangular lot, approximately 196 m by 31 m with an area of 0.49 hectares (ha). It is within a rural area of Penetanguishene and bound by Murray Road to the east and County Road 93 to the west. The property contains a residential dwelling and associated driveway in the western portion and woodlands in the eastern portion of the property.

1.3 ADJACENT LAND USE

The property is situated in a rural area of Penetanguishene, south of the main residential township. Natural areas (*i.e.*, woodlands and wetlands) are to the south, east and west of the property, with residential to the north. The property is located approximately 1.7 km south of a Georgian Bay inlet.

1.4 STUDY AREA

For the purpose of this EIS, the Study Area is focused within an area approximately 120 m surrounding the property as illustrated in Figure 1. The Ministry of Natural Resources and Forestry (MNRF) recommends a distance of 120 m for consideration of development and/or site alteration impacts to adjacent features, as outlined within the Natural Heritage Reference Manual (MNR, 2010).



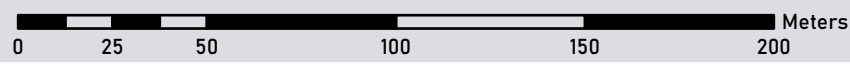
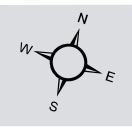
9795 Highway 93
 Town of Penetanguishene

- Property Limit
- - - 120m Study Area
- Watercourse (LIO)
- Un-evaluated Wetland
- Provincially Significant Wetland

Figure 1:
 Study Area



MAP DRAWING INFORMATION:
 DATA PROVIDED BY: ESRI CANADA
 MAP CREATED BY: SB
 MAP CHECKED BY: BB
 MAP PROJECTION: NAD 1983 UTM ZONE 17N



FILE LOCATION:
 Path: C:\Users\S_Brady\BirksNHC\Birks NHC Team for all - Documents\Project Folders\SBrady Projects\ArcGIS - Projects here\Projects - here\Hwy93
 PROJECT: 04-033-2020 STATUS: DRAFT DATE: 20/05/2021



2 ENVIRONMENTAL POLICY FRAMEWORK

The following summarizes the planning policies and regulations related to natural heritage that apply to the proposed development.

2.1 PROVINCIAL POLICY STATEMENT (2020)

Ontario's Planning Act requires that planning decisions shall be consistent with the Provincial Policy Statement (PPS, 2020). Section 2.1 of the PPS specifies policy related to protection of natural heritage features and functions. All proposed development needs to meet the "no negative impact" test and demonstrate that there will be no negative impacts to the natural features and their ecological functions per Section 2.1 of the PPS.

According Section 2.1.4 of the PPS, development and site alteration shall not be permitted in the following features:

- a) Significant wetlands in Ecoregions 5E, 6E, and 7E; and,
- b) Significant coastal wetlands.

Section 2.1.5 of the PPS states that, unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions, development and site alteration shall not be permitted in:

- a) Significant woodlands in Ecoregions 6E and 7E;
- b) Significant valleylands in Ecoregions 6E and 7E;
- c) Significant wildlife habitat (SWH);
- d) Significant areas of natural and scientific interest (ANSI); and,
- e) Coastal wetlands in Ecoregions 5E, 6E, and 7E that are not subject to policy 2.1.4(b).

Sections 2.1.6 and 2.1.7 state that development and site alteration is not permitted in fish habitat or habitat of endangered and threatened species except in accordance with federal and provincial requirements.

Section 2.1.8 extends protection of those features defined above in policies 2.1.4, 2.1.5 and 2.1.6 to adjacent lands, typically those within 120 m of the potential impact. Section 2.1.8 states that development and site alteration shall not be permitted on adjacent lands to natural heritage features identified in policies 2.1.4, 2.1.5, and 2.1.6 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological function.

While many of these features are mapped and direction is available to allow for candidate features and functions to be identified, it remains the responsibility of the province and/or the municipality to designate areas identified within Section 2.1.4 and 2.1.5 of the PPS as significant. The Natural Heritage Reference Manual (MNR, 2010) and Significant Wildlife Habitat Criterion Schedule for Ecoregion 6E



(MNRF, 2015) were used within this report to identify candidate features and functions not currently identified by the province and/or municipality.

2.2 GROWTH PLAN FOR THE GREATER GOLDEN HORSESHOE (2020)

A Place to Grow: Growth Plan for the Greater Golden Horseshoe (Growth Plan) was issued under the authority of Section 7 of the *Places to Grow Act*, 2005. It was most recently amended and replaces the initial Growth Plan that took effect in 2017. Like other provincial plans, the Growth Plan builds upon the policy foundation provided by the PPS and provides additional and more specific land use planning policies to address issues facing specific geographic areas in Ontario.

A Natural Heritage System (NHS) for the Growth Plan has been mapped by the province. The property is within a defined settlement area and therefore relevant policies applicable to the NHS are as follows:

Section 4.2.2.6. Beyond the Natural Heritage System for the Growth Plan, including within settlement areas, the municipality:

- a) will continue to protect any other natural heritage features and areas in a manner that is consistent with the PPS; and*
- b) may continue to protect any other natural heritage system or identify new systems in a manner that is consistent with the PPS.*

2.3 ENDANGERED SPECIES ACT (2007)

Ontario's *Endangered Species Act*, 2007 (ESA) provides regulatory protection to Endangered and Threatened species, prohibiting harassment, harm and/or killing of individuals and destruction of their habitats. Habitat is broadly characterized within the ESA as the area prescribed by a regulation as the habitat of the species, or, an area on which the species depends, directly or indirectly, to carry on its life processes including reproduction, rearing of young, hibernation, migration or feeding.

O. Reg. 230/08 of the ESA identifies Species at Risk in Ontario and includes species listed as Extirpated, Endangered, Threatened, and Special Concern. As noted above, only species listed as Endangered and Threatened receive species and habitat protection through the ESA. Species designated as Special Concern may receive protection under the Significant Wildlife Habitat (SWH) Provisions of the PPS.

2.4 FISHERIES ACT (1985)

The purpose of the federal *Fisheries Act*, 1985 is, in part, to provide a framework for the conservation and protection of fish and fish habitat through the various regulations that protect against serious harm to fish by death or any permanent or temporary harmful alteration, disruption or destruction (HADD) to their habitat. On August 28th, 2019 provisions of the new *Fisheries Act*, 1985 came into force including new protections for fish and fish habitat in the form of standards, codes of practice, and guidelines for projects near water.

The fish and fish habitat protection provisions of the *Fisheries Act*, 1985 include:



- No person shall carry on any work, undertaking or activity, other than fishing, that results in the death of fish (Section 34.4);
- No person shall carry on any work, undertaking or activity that results in the harmful alteration, disruption or destruction (HADD) of fish habitat (Section 35);
- Ministerial powers to ensure the free passage of fish or the protection of fish or fish habitat with respect to existing obstructions (Section 34.3); and,
- Establishment of standards and codes of practice in relation to works, undertakings and activities during any phase of their construction, operation, modification, decommissioning or abandonment for the avoidance of death to fish, HADD, and for the prevention of pollution (Section 34.2).

The interpretation and application of the regulations of the *Fisheries Act*, 1985 is overseen by Fisheries and Oceans Canada (DFO). Under the direction of DFO, projects that have potential to affect fish and fish habitat are to be screened using their online guidance platform, 'Projects Near Water' to determine if the project will require review under the *Fisheries Act*, 1985. Projects that can not implement measures to mitigate impact to fish and fish habitat, and do not qualify under the current standards and Codes of Practice, require review by DFO prior to any site disturbance or alteration including vegetation removal and grading.

2.5 TOWN OF PENETANGUISHENE OFFICIAL PLAN (2018)

The Town of Penetanguishene Official Plan (2018) Schedule A – Land Use illustrates the property as within a Rural Area outside of the delineated built boundary. Lands within the Rural Area are typically un-serviced or partially serviced and predominantly contain rural residential uses, as well as mineral extraction operations, rural employment uses, camps, commercial forestry, recreational hunting, small-scale agricultural uses and hobby farms, and natural heritage features. (Town of Penetanguishene Official Plan, Section 4.9). Limited residential development shall occur in the Rural Area in accordance with the policies in Section 6.3.5 (Land Division).

Development will also be subject to policies of Section 3.10 of the Town of Penetanguishene Official Plan (2018) and boundaries of Schedule B1 to determine any natural heritage features and functions which may be a constraint to development. Schedule B1 illustrates portions of the property as within the following policy overlays: Future Study Areas and Environmental Protection. The Future Study Areas overlay in the Town of Penetanguishene Official Plan (2018) is intended to permit existing uses, while protecting the lands for future development. The Future Study Areas overlay provides an additional layer of policies to help protect certain areas from development until supported by future studies. Therefore, prior to any development occurring in the Future Study Areas, studies or phasing requirements are to be met (Town of Penetanguishene Official Plan, Section 3.7).

The Town of Penetanguishene Official Plan (2018) Environmental Protection Overlay is distinguished from the Environmental Protection Area (EP) in that EP includes lands where development and site alteration are prohibited, whereas the Environmental Protection Overlay includes lands where



development and site alteration may be permitted, subject to the preparation of an EIS (Town of Penetanguishene Official Plan, Section 4.10). Significant woodlands, locally significant wetlands, fish habitat, and linkage areas, for example, are identified with an Environmental Protection Overlay.

3 STUDY APPROACH

The following activities and assessments were undertaken to fulfill the objectives of this study.

3.1 BACKGROUND DATA REVIEW AND SOURCES

Background documents provide information on site characteristics, habitat, wildlife, rare species and communities, and other aspects of the Study Area. For the purpose of this EIS, the following sources were considered:

- Ontario Reptile and Amphibian Atlas (ORAA; ON, 2020)
- Land Information Ontario (LIO; MNRF, 2020)
- Natural Heritage Information Centre (NHIC; MNRF, 2020)
- Species at Risk in Ontario List (MECP, 2021)
- Aquatic Species at Risk Map (DFO, 2019)
- Township of Penetanguishene Official Plan (2018)

3.2 FIELD SURVEY

Natural heritage features and functions within the Study Area were characterized through completion of a single site visit on May 7, 2021. The following sections outline the methods used at the time of the site visit, including specific provincial protocols utilized. Incidental wildlife, plant and habitat observations were considered during the survey. Searches were also conducted to document the presence or absence of suitable habitat, based on habitat requirements of threatened or endangered species with habitat ranges overlapping the property.

3.2.1 Vegetation Community Mapping and Surveys

As a first step in identifying and assessing for potential natural heritage features and functions on the property, the vegetation communities were assessed using Ecological Land Classification (ELC). The ecological community boundaries were determined through a review of aerial photography and then further refined during the site visit. The ELC system for Southern Ontario (Lee *et al.*, 1998) was used with modifications. In early 2007, the MNRF refined their original vegetation type codes to encompass the vast range of natural and cultural communities across Southern Ontario. These updated ELC codes have also been used for reporting purposes in this study where they are more representative. The resulting mapping is illustrated in Figure 2.

Vascular plants were considered during the site visit. A formal list typical of a multi-season vegetation survey was not completed due to the single site visit and nature of the proposed development, however a list has been compiled for inclusion in this report (Appendix A). Plant species identified on the



property are common locally and provincially. No Species at Risk, including Butternut, or provincially rare plant species were documented within the property.

3.2.2 Wildlife Surveys

A wildlife assessment within the property was completed through incidental observations while on site. Any incidental observations of wildlife were noted, as well as other wildlife evidence such as dens, tracks, and scat. For each observation notes, and when possible, photos were taken. These observations also helped validate our conclusions on the ecological function of the ecosystems identified within the Study Area.

Wildlife habitat functions were evaluated according to provincial criteria outlined in the Significant Wildlife Habitat Criterion Schedule for Ecoregion 6E (MNRF, 2015).

3.2.3 Fish Habitat Assessment

The assessment considered the type of fish habitat present and incorporated fish species observed/known to be present based on data available from the MNRF, Land Information Ontario (LIO).

Fish habitat identified within the Study Area was assigned one of the following designations:

- Permanent direct fish habitat: a feature where flowing or standing water is present year-round and connected to known fish habitat;
- Seasonal direct fish habitat: a feature that provides direct habitat for fish under elevated water levels (during spring freshet and large storm events), but not under low water conditions, due to insufficient open water and refuge habitat or anoxic water quality conditions; and
- Indirect fish habitat: a feature where there is sufficient water to sustain aquatic invertebrates and plants and discharges to direct habitat downstream, however, fish cannot directly access the area as a result of a barrier to upstream fish movement (*i.e.*, steep channel grade, low water levels, perched culvert).

3.3 SPECIES AT RISK

The Species at Risk assessment included an analysis of the habitat requirements of Species at Risk reported to occur in the region to identify those having potential to occur within the Study Area. Birks NHC staff reviewed data obtained through desktop review and the site visit related to potential habitat for provincially designated species, notably Species at Risk listed under O. Reg. 230/08 of the ESA as Threatened or Endangered.



4 EXISTING CONDITIONS

4.1 VEGETATION COMMUNITIES AND PLANTS

Vegetation communities and their respective locations are illustrated on Figure 2. The vegetation communities that occur on the property are as follows:

1. FOD: Deciduous Forest
2. FOC: Coniferous Forest
3. Maintained Area

The vegetation consisted of common species such as Manitoba Maple, White Pine, Staghorn Sumac, Trembling Aspen, and Paper Birch. Balsam Poplar was the dominant tree species in the deciduous forest community; Scots Pine and White Pine were abundant in the coniferous forest, along with Sugar Maple. Non-native species such as Tartarian Honeysuckle and Scots Pine were present. Herbaceous species found on the property included Yellow Trout-lily, Sweet-scented Bedstraw, Wild Lily-of-the-valley, and Poison Ivy, among others.

Appendix A provides a list of vascular plants documented within the Study Area at the time of the site visit.

4.2 WILDLIFE HABITAT

4.2.1 Birds and Mammals

The property is expected to provide general habitat for common wildlife species such as Grey Squirrel, Raccoon, Eastern Cottontail, Black-capped Chickadee, American Robin, and American Crow. Typical wildlife species observed in urban and rural settings are expected to utilize the habitat within the property. Brown-headed Cowbird, House Wren, American Goldfinch, Northern Cardinal, and Ruby Crowned Kinglet were observed at the time of the site visit. Within the Study Area, outside of the property boundary, other bird and mammal species may utilize the wetlands and wooded habitats. These may include White-tailed Deer, Red-winged Blackbird, and small rodents.

4.2.2 Amphibians and Reptiles

During spring amphibians gather to mate and lay eggs in water. Once hatched and grown, the amphibians emerge as adults. Some adult amphibians will remain in or near the water, while others will move to terrestrial habitats. There are no wetlands, ponds, lakes or streams within the property boundary. Habitats suitable for amphibian breeding and overwintering are therefore not present on the property, however adjacent lands represent suitable habitat. Amphibians that may be found within 120 m of the property include but are not limited to: Green Frog, Northern Leopard Frog, Spring Peeper, and Grey Treefrog.



Given the habitats present, species range maps, and observations in the general area, the following reptiles may utilize the habitats within the Study Area: Milksnake, Eastern Gartersnake, Midland Painted Turtle, and Snapping Turtle.

4.2.3 Fish

The Study Area is situated approximately 1.7 km from Georgian Bay, in the Midland Area subwatershed of the Severn Sound watershed. The Midland Area subwatershed has a drainage area of 24 km², which comprises approximately 2% of the Severn Sound watershed (SSEA *et al.*, 2015). A tributary of the main drainage feature runs westerly adjacent to the southern property line connecting with the main drainage at County Road 93. From there, the watercourse generally runs south along County Road 93, and outlets to the Midland Swamp Provincially Significant Wetland (PSW). The reach adjacent to the property was observed to be rocky and incised. Average wetted width was 30 cm and water depth of 15 cm at the time of the May 2021 site visit. This reach is considered to, at a minimum, provide seasonal direct fish habitat. Given property access restrictions, for the purpose of this submission the orientation of the feature has been taken from available open data source (LIO) (Figure 2).

Fish sampling data south of the Study Area within the Midland Swamp PSW identified Blacknose Dace (coolwater) and Blacknose Shiner (coolwater) (source: LIO). Other fish which have been identified within the wetland include Common Shiner (coolwater), Northern Redbelly Dace (coolwater), Creek Chub (coolwater), Brown Trout (coldwater), Brook Stickleback (coolwater), and Mottle Sculpin (coolwater) (SSEA, 2006). These fish are representative of the coolwater thermal regime in the area.



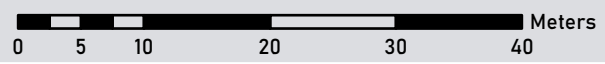
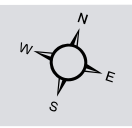
9795 Highway 93
 Town of Penetanguishene

- Property Limit
- Watercourse (LI0)
- 30m Watercourse Setback
- 1) Maintained Area
- 2) FODM3-1 - Dry-Fresh Poplar Deciduous Forest
- 3) FOCM6-3 - Dry-Fresh Scotch Pine Naturalized Coniferous Plantation
- Proposed Building Envelope (0.14ha)

Figure 2:
 Existing Conditions and Proposed Site Plan



MAP DRAWING INFORMATION:
 DATA PROVIDED BY: ESRI CANADA
 MAP CREATED BY: SB
 MAP CHECKED BY: BB
 MAP PROJECTION: NAD 1983 UTM ZONE 17N



FILE LOCATION:
 Path: C:\Users\S_Brady\BirksNHC\Birks NHC Team for all - Documents\Project Folders\SBrady Projects\ArcGIS - Projects here\Projects - here\Hwy93
 PROJECT: 04-033-2020 STATUS: DRAFT DATE: 17/05/2021



5 NATURAL HERITAGE FEATURES AND FUNCTIONS

In the following sections we summarize the range of natural heritage features and functions attributable to the Study Area based on existing designations/delineations by agencies and as revealed through the application of provincial guidelines for identification of significant natural heritage features and functions.

5.1 PROVINCIALY SIGNIFICANT WETLAND

No Provincially Significant Wetlands are mapped on the property or within 120 m of the property.

5.2 OTHER WETLANDS

Background mapping (*i.e.*, LIO, NHIC) identifies un-evaluated wetlands outside of the property but within the Study Area. These un-evaluated wetlands are situated on the opposite side of the roads that bound the property (east of Murray Road and west of County Road 93).

5.3 SIGNIFICANT WOODLAND

Woodland habitat is present within the eastern portion of the property and extends to the southern and eastern portions of the Study Area and beyond. Those woodlands are mapped in Town of Penetanguishene Official Plan Environmental Protection Overlay (Appendix B). Significant woodlands, locally significant wetlands, fish habitat, and linkage areas, for example, are identified with an Environmental Protection Overlay, however the Official Plan mapping does not specify which of those features are encompassed by the Environmental Protection Overlay within the Study Area. Given that the lands on the property under the Environmental Protection Overlay are woodlands, it is safe to assume that the Town of Penetanguishene consider those woodlands as either linkage areas and/or significant woodlands. Additionally, the Penetanguishene Natural Heritage Study Update maps those woodlands within the property and Study Area as part of Significant Woodlands wooded area >50 ha in size (SSEA, 2017).

The woodland habitat within the eastern portion of the property extends to the southern and eastern portions of the Study Area and beyond. The significance of the woodland feature was assessed according to criteria defined by the Natural Heritage Reference Manual (OMNR 2010). The contiguous woodland measures over 200 ha in size (Appendix C). The woodland, as a whole, also meets the following criteria for significance:

- Woodland Interior: Assuming a 100 m buffer at the edge of the forest, the woodland contains approximately 72 ha of interior forest (Appendix C). No interior forest is within the Study Area.
- Proximity to other habitats: The contiguous woodland feature encompasses components of Midland Swamp PSW, un-evaluated wetlands, and fish habitat that likely receives ecological benefit from the woodland.
- Linkages: The woodlands link woodland and wetland habitats in the area.
- Water Protection: The contiguous woodland feature encompasses watercourses, fish habitat and wetlands.



The woodlands on the property and within the Study Area is therefore are considered as Significant Woodlands for this report.

5.4 SIGNIFICANT VALLEYLANDS

There are no significant valleylands within the Study Area.

5.5 SIGNIFICANT WILDLIFE HABITAT

The Significant Wildlife Habitat Technical Guide (MNR, 2000) and Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNRF, 2015) were reviewed as part of this study to determine whether any portions of the Study Area would meet the criteria.

SWH functions were assessed utilizing expert knowledge of the site. Habitat and species data sources were reviewed in addition to field data gathered by Birks NHC ecologists. The SWH assessment table was not compiled for inclusion in this report but can be provided upon request.

5.5.1 Seasonal Concentration Areas of Animals

As outlined within the Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E, Seasonal Concentration Areas are areas where wildlife species occur annually. These seasonal aggregations result in large numbers of individuals, sometimes highly concentrated within relatively small areas. As a result, the loss of, or damage to, these features can result in a significant impact to populations.

Bat Maternity Colonies

For the majority of bat species in Ontario, natural maternal roosting habitat is comprised of roost trees that are in early stages of decay and contain features such as cavities or crevices, or loose, peeling bark. According to the Significant Wildlife Habitat Technical Guide (MNR, 2000) and Significant Wildlife Habitat Criterion Schedule for Ecoregion 6E (MNRF, 2015), candidate maternity colonies SWH are located in mature deciduous or mixed forest stands with greater than 10 large diameter (>25cm dbh) wildlife trees per ha. Bat maternity colonies for Silver-haired Bat and Big Brown Bat are identified as candidate SWH because known locations of forested bat maternity colonies are extremely rare in Ontario. It remains extremely difficult to confirm this SWH designation as it requires confirmation of use by more than ten Big Brown Bats or more than five Silver-haired Bats.

Based on the site visit, there was very limited potential suitable habitat on the property for this function due to species composition, and age of forest communities. However, the woodlands present within the Study Area, adjacent to the property, contain hardwood trees that may have suitable bat roost features such as cavities and crevices.



Reptile Hibernaculum

Snakes overwinter in Ontario by accessing underground hibernation sites below the frost line. They will utilize rock crevices, rodent burrows, tree root systems and structures such as old building foundations to get below ground deep enough so they will not freeze. Because of the variability in features that snakes will use for hibernation, snake hibernaculum may be found in almost any habitat (except for very wet ones). Since features associated with this function appear to be common in the landscape, reptile hibernaculum SWH may be present within the Study Area. While there are no rock crevices in the Study Area, reptiles may gain access to below the frost line for hibernation through rodent burrows and tree root systems.

Colonially-Nesting Bird Breeding Habitat (Ground)

Colonial birds are a diverse group including swallows, gulls, terns, and herons. While some nest colonially high in trees like herons, other colonial nesting birds such as gulls and terns nest on the ground. Ground colonial nesting birds are frequently found on islands in the Great Lakes and large rivers. Any rocky island or peninsula within a lake or large river is to be considered Candidate SWH according to the Significant Wildlife Habitat Criterion Schedule for Ecoregion 6E (MNRF, 2015). The NHIC indicates Colonial Waterbird Nesting within the area of the property (NHIC survey grid squares 17NK8456, 17NK8556, 17NK8555, and 17NK8455). This record is connected to the habitats outside of the Study Area, associated with the Midland Swamp PSW to the south of the property and Study Area. No suitable habitat is present within the property or immediate adjacent lands (*i.e.*, within 120m) to function as Colonially-Nesting Bird Breeding Habitat (Ground) SWH.

5.5.2 Specialized Habitats of Wildlife

Specialized habitat for wildlife is a community or diversity-based category. The more wildlife species a habitat contains, the more significant the habitat becomes to the planning area. Some species require large areas of habitat for their long-term survival and many require substantial areas of suitable habitat for successful breeding. The largest and least fragmented habitats will support the most significant populations of wildlife (MNRF, 2015).

Amphibian Breeding Habitat

During spring amphibians will congregate in woodland ponds, wetlands and other aquatic habitats to reproduce. These habitats are important to amphibian biodiversity within the landscape. Suitable amphibian breeding habitat is not present on the property given the lack of suitable aquatic features but potential habitat is present within the Study Area, associated with the mapped wetlands and watercourse. Breeding pools were not observed within the woodlands on the property.

5.5.3 Habitat for Species of Conservation Concern

Habitat for all Special Concern and provincially Rare (S1-S3, SH) plant and animal species is considered SWH. Habitat for Species of Conservation Concern does not include habitats of Endangered or Threatened species as identified by the ESA. When a NHIC element occurrence is identified within a



survey grid square for a Special Concern or provincially rare species, linking candidate habitat on the site needs to be completed.

The following species was identified as potentially occurring within the Study Area:

Snapping Turtle (Special Concern)

The Snapping Turtle occurs in almost any freshwater habitat including small wetlands, ponds, and ditches. This species is known in the area and has recent occurrences recorded in the survey grid squares which encompasses the Study Area (NHIC square 17NK8556 and 17NK8456; ON square 17NK85). While it is unlikely that the turtle would be found on the property itself due to the lack of suitable habitat, this turtle has potential to utilize the adjacent wetlands and drainage features in the Study Area.

5.5.4 Animal Movement Corridors (Amphibians)

Often animals move between different areas and habitats to satisfy various life requirements. Wildlife moves to access seasonal summer and winter habitats, feeding spots, or breeding and nesting areas. Corridors must be available to provide suitable habitat for wildlife to safely disperse and move through the landscape to access these important life cycle habitats. Amphibian movement corridors are listed as SWH in the Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNRF, 2015).

For amphibians, movement corridors between terrestrial and aquatic breeding habitat are important for local populations. Suitable amphibian breeding habitat is not present on the property given the lack of aquatic features but is expected to be present within the Study Area adjacent lands. Amphibian movements are therefore expected to occur within the natural features outside of the property, particularly to the south and east of the property in association with the mapped wetlands and watercourses.

5.6 AREAS OF NATURAL AND SCIENTIFIC INTEREST

No Areas of Natural and Scientific Interest are located within 1 km of the property.

5.7 FISH AND FISH HABITAT

A drainage feature runs south of the property, outletting to the main tributary that parallels County Road 93 and drains to the Midland Swamp PSW to the south. The feature is located outside of the property boundaries, but within the Study Area. Fish were not confirmed within the drainage feature adjacent to the property, though the feature was wet at the time of the site visit. A coolwater fish community has been confirmed downstream of the Midland Swamp PSW. Thus, the feature, at a minimum, provides permanent indirect fish habitat and likely provides seasonal direct fish habitat under periods of high flow.



5.8 HABITAT OF THREATENED AND ENDANGERED SPECIES

The habitat requirements of those species listed as Threatened and Endangered under the ESA were considered in relation to the habitat features noted within the property limits and the adjacent lands. Based on habitat use, site knowledge and data available, it was determined that potential habitat for the following Threatened and Endangered species may be present within the Study Area:

5.8.1 Little Brown Myotis, Northern Myotis, and Tri-colored Bat (Endangered)

Assessment of the characteristics of woodlands as they relate to potential use by Endangered bat species has become a consideration in land development. Important habitat functions for Little Brown Myotis, Northern Myotis, and Tri-colored bats include hibernacula, maternity roost, day roosts, and foraging habitat. Of these habitat types, no features with potential to function as hibernacula exists within the Study Area.

Potential foraging habitat would be associated with woodland and wetland areas that provide an abundance of flying insects. Foraging habitat is widely available within the matrix of wetland and wooded areas common to throughout the County of Simcoe. Day roosts are those that are used by males and non-reproductive females as they move across the landscape and can take the form of any tree with appropriate snag features such as loose bark, cracks or crevices. Maternity roosting habitat is found in woodlands providing a relatively high density of large wildlife cavity trees (*i.e.*, snags).

The property contains wooded habitat however trees found within the property did not contain features that would suggest the potential for bat maternity roosting habitat within the property. However, adjacent habitats within the Study Area, specifically areas where hardwood trees are present, may provide suitable roosting habitat for maternity colonies of Endangered bat species.

5.8.2 Butternut (Endangered)

Butternut is a small to medium sized deciduous tree that is listed as an Endangered species in Ontario. The Endangered status of Butternut is based on observed declines due to a fungal disease known as Butternut Canker that often results in tree mortality. This tree species can grow in a variety of treed and open habitats, individually or in small groups. Disturbed areas (*i.e.*, fencerow, road, trail) are more likely to have Butternut because the tree species is intolerant of shade and requires open sunlight, however Butternut can also occur in forested communities in a canopy opening or near the forest edge.

Suitable habitat is present within the Study Area. No Butternut trees were documented within the property during the May 2021 site visit.

5.9 NATURAL HERITAGE FEATURES AND FUNCTIONS SUMMARY

The results of the site visit, review of background information and analysis indicate both confirmed and candidate natural heritage features and functions to be associated within the Study Area. Our impact assessment will consider potential impacts only to features and functions summarized in Table 1 below.



Table 1: Natural Heritage Features and Functions

Natural Heritage Features and Functions	Within Property	Within 120m of Property	Actions Required
Provincially Significant Wetland	None	None	No actions required.
Other Wetland	None	Un-evaluated wetlands	Evaluation for potential indirect impacts required.
Significant Woodlands	Present	Present	Evaluation for potential impacts required.
Significant Valleylands	None	None	No actions required.
Significant Wildlife Habitat	None	Potential: <ul style="list-style-type: none"> • Bat Maternity Colonies • Amphibian Breeding Habitat and Movement Corridors • Reptile Hibernaculum • Special Concern and Rare Wildlife 	Evaluation for potential indirect impacts required.
Provincial Areas of Natural and Scientific Interest	None	None	No actions required.
Fish Habitat	None	Seasonal Direct fish habitat	Evaluation for potential impacts required.
Habitat of Threatened or Endangered Species	None	Potential: <ul style="list-style-type: none"> • Endangered bat species • Butternut 	Evaluation for potential indirect impacts required.



6 IMPACT ASSESSMENT

The intent of this study is to identify natural heritage features and functions associated with the Study Area and determine if potential impacts could arise from the proposed development. Impacts are evaluated on the current knowledge of the property based on data collected in 2021 by Birks NHC ecologists.

6.1 DEVELOPMENT PLAN

The proposal involves the severance of the property into two parcels and future residential development of the resulting eastern parcel. The future residential development would include a driveway, residential dwelling, septic, and clearing of the back and front yards. The Site Plan is presented in Figure 2.

6.2 DIRECT IMPACTS

Direct impacts are those that are immediately evident as a result of a development. Typically, the adverse effects of direct impacts are most evident during the site preparation and construction phase of a development. Potential impacts of the proposed development include the following:

- Removals within Significant Woodland
- Erosion and sedimentation into natural heritage features
- Loss of and disturbance to wildlife and wildlife habitat

In the following sections we assess the potential for negative ecological impact to the identified natural heritage features and functions.

6.2.1 Removals within Candidate Significant Woodland

The proposal for residential development on the eastern severed lot would be within the mapped Significant Woodland (Appendix C) and will require vegetation and tree removals. The Town of Penetanguishene Official Plan (2018) Environmental Protection Overlay (which includes Significant Woodlands) includes lands where development and site alteration may be permitted, subject to the preparation of an EIS. Additionally, the PPS states that development and site alteration is not permitted in Significant Woodlands unless it has been demonstrated that there will be no negative impacts on the natural feature or its ecological functions.

An overlay of the Site Plan illustrates that the proposed future residential development would result in the removal of approximately 0.16 ha of woodland (Figure 2). This area represents less than 0.1% of the contiguous woodland feature, measured at approximately 218 ha (Appendix C). Given the location (*i.e.*, edge) and area of removal relative to the size of the overall feature, there is no expectation that the loss of edge habitat to this woodland would constitute a negative ecological impact to the Significant Woodland feature, including the associated functions. The woodland size post-development will continue to be of sufficient size to maintain the current ecological functions, including providing interior



habitat, linkages, and water protection. Additionally, the contiguous woodland feature would continue to encompass components of Midland Swamp PSW, un-evaluated wetlands, and fish habitat and would maintain a sufficient buffer to those identified features.

6.2.2 Erosion and Sedimentation into Natural Heritage Features

Future construction activities on the proposed severed lot, especially operations involving the handling of earthen material, could increase the availability of sediment for erosion and transport by surface drainage. In order to mitigate the adverse environmental impacts caused by the release of sediment-laden runoff into any potential receiving watercourses, wetland and woodland communities, measures for erosion and sediment control are required for construction sites.

Any potential direct impacts to habitats which could result from sedimentation can be mitigated through the application of erosion and sediment control plans along the boundary of the proposed soil disturbances. Erosion and sediment control measures shall be implemented prior to and during the development (*i.e.*, grading, construction, restoration) and maintained until the site is stabilized.

6.2.3 Loss of and Disturbance to Wildlife and Wildlife habitat

Typical wildlife species observed in urban and rural settings are expected to utilize the habitat within the property. Within the Study Area, outside of the property boundaries, other wildlife species may utilize the wetlands, watercourses, and wooded habitats. No portion of the proposed severed lot for future residential development envelope contains features which would support rare or at-risk wildlife species, nor does the property contain any candidate SWH. The proposed severance and future residential dwelling development is also outside of a 30 m protective zone for fish habitat (Figure 2). Additionally, the contiguous natural heritage features (*i.e.*, woodlands, wetlands) to the south of the property and to the east of Murray Road would remain intact for the provision of wildlife habitat.

Following the mitigation measures provided in Section 7, there is no expectation that the proposed development would result in any direct impacts to fish and wildlife or their habitats.

6.3 INDIRECT IMPACTS

Indirect impacts are those that do not always manifest in the core development area but in the lands adjacent to the development. Indirect impacts of the proposed development include:

- Anthropogenic disturbance
- Increased potential for invasion of non-native species
- Changes to water quality entering sensitive features; and
- Loss of Species at Risk Habitat and Incidental Harm

6.3.1 Anthropogenic Disturbance

The proposed development is situated within a rural area of Penetanguishene. It is bound by County Road 93 to the west and Murray Road to the east. Additional residential and commercial properties



(i.e., antique store, optical eyeglasses store) exist in the area along County Road 93, as well as rural dwellings and a residential community to the north along Murray Road. Given that the proposed severance and residential dwelling development would be in an area that has already experienced impacts from human presence, the proposed development is not expected to result in a noticeable intensification of indirect human impacts.

6.3.2 Increased Potential for Invasion of Non-native Species

Site disturbance may increase the likelihood that non-native and/or invasive vegetation will become established within the retained vegetation communities. Additionally, if construction equipment coming from other sites is used without first being cleaned properly, invasive species transport may occur. Management and control measures are provided in Section 7 below.

6.3.3 Changes to Water Quality Entering Sensitive Features

The potential impacts of future residential development on the severed lot could result in changes to surface water run-off and water quality entering the aquatic habitats within the Study Area. The proposed future residential development is not likely to result in large areas of impervious surfaces and will likely be limited to a driveway and dwelling. Therefore, a significant increase in surface run-off into adjacent aquatic communities is not anticipated. There is no expectation that the proposed development will result in any changes to the existing hydrology of adjacent wetland habitats. Furthermore, the watercourses, fish habitat, and wetland communities would be protected from indirect alteration and impacts through the implementation of a minimum 30 m feature setback, the orientation of which should be confirmed through topographic survey prior to site plan design. In addition, it is recommended that a sediment fence be constructed along the proposed disturbed limits in order to prevent sedimentation migration into adjacent aquatic habitats during any future construction activities.

6.3.4 Loss of Species at Risk Habitat and Incidental Harm

Potential habitat for Species at Risk within the Study Area is related to the presence adjacent woodland habitat.

Endangered Bat Species

The property contains a very limited amount of wooded habitat consisting trees that did not contain features that would suggest the potential for maternal bat roosting habitat or bat day roosting. However, adjacent habitats within the Study Area, specifically areas where hardwood trees are present, may provide suitable roosting habitat for Endangered bat species. A discussed, foraging opportunities are also present. As insectivores, Endangered bat species feed on moths and other flying insects that are available within the adjacent woodlands and aquatic habitats.

Tree removal would be required for the future residential development of the resulting severed eastern property. The residential development would be within the resulting lot and would not remove any



trees in adjacent habitats. As discussed, the property does not contain habitat suitable for bat roosting habitat, including maternal bat roosting habitat or day roosting habitat and therefore the proposed vegetation removal will not constitute a loss of bat habitat.

Foraging and roost habitat is widely available within the matrix of wetland and wooded areas common to throughout the County of Simcoe. Therefore, there would be no loss of potential bat habitat in the area. Following mitigation measures provided in Section 7 (such as timing windows), it is unlikely that a bat would sustain incidental harm during construction activities.

7 RECOMMENDATIONS AND MITIGATION MEASURES

Mitigation refers to the avoidance or reduction of impacts associated with the proposed works through best practices. As previously discussed, potential impacts were identified which could result to the identified natural heritage features and functions associated with the Study Area. Where applied correctly, mitigation is intended to reduce the potential for impacts to ensure that the natural heritage features and functions will continue uninhibited by the proposed development. Thus, mitigation would be required to ensure that there is no negative impact, and the development can proceed in conformity with the relevant planning documents and in compliance with environmental law.

The following recommended mitigation measures are recommended to minimize the above listed potential impacts.

7.1 SPECIES AT RISK

Given the dynamic character of the natural environment, as well as changes to policy (*i.e.*, new species listing), consideration is recommended in the interpretation of potential presence of Threatened or Endangered species as protected under the ESA.

This report was produced based on the most up-to-date policy information however, it is not intended to act as a long-term assessment of potential species at risk. The ESA is recognized as being a 'proponent-driven' piece of legislation and therefore it is the responsibility of the landowner/developer to ensure compliance with the regulations made under this act. Should a considerable length of time and/or sudden change in policy occur prior to construction, it is recommended that a review of the assessment provided within this report be undertaken by a qualified ecologist to ensure compliance with the ESA at that time.

All current Threatened or Endangered species listed under O. Reg. 230/08 made under the ESA with an e-laws currency date of August 1, 2018 have been considered within this report.



7.2 WOODLAND HABITAT

Severance and future residential development are planned outside of wetland habitat, and over 30 m from the nearest mapped wetland. The proposal for residential development on the eastern severed lot would however be within mapped Significant Woodland.

In advance of any vegetation clearing or earth works (*i.e.*, clearing or grubbing) the development limits approved in the proposed Site Plan should be established. A temporary fence (*i.e.*, sediment fence) should be erected along the surveyed limits to protect the woodland feature and prevent inadvertent encroachment into areas outside of the development limits. This fence should be kept intact throughout the entire construction and monitored to ensure that the barrier remains in good working condition. No development activities (*i.e.*, material and equipment storage, grading, equipment activity, *etc.*) are permitted outside of the identified development limit.

7.3 FISH HABITAT

As stated above, the drainage feature located to the south of the property likely provides seasonal direct fish habitat. A 30 m setback is to be implemented to protect the drainage feature and its functions from the impacts of the proposed change (Figure 2). Development or site alteration is not permitted within the protection setback. Erosion and sediment control protection measures should be implemented prior to commencement of construction activity to ensure that the watercourse and fish habitat are not impacted by development. The measures are to remain in place until site works have been completed and the risk of sedimentation is no longer a concern.

7.4 MIGRATORY BIRDS

Construction activities involving the removal of vegetation should be restricted from occurring during the bird breeding season. Migratory birds, nests, and eggs are protected by the *Migratory Birds Convention Act*, 1994 and the *Fish and Wildlife Conservation Act*, 1997. Environment Canada outlines dates when activities in any region have potential to impact nests at the Environment Canada Website (<https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds.html>)

For this location, vegetation removal should be avoided between April 1st and August 30th of any given year. If vegetation clearing is required between these dates, screening by an ecologist with knowledge of bird species present in the area should be undertaken to ensure that the vegetation has been confirmed to be free of nests prior to clearing.

7.5 GENERAL MITIGATION PLAN

General mitigation of potential impacts to identified natural heritage features and functions during construction include:

- Fencing should be used appropriately as directed so that wildlife movements are only blocked when desired (*i.e.*, as exclusion fencing during construction).



- Erosion and sediment control plan to be implemented to protect the watercourse, adjacent wetlands and retained woodland habitats. Control measures to be in place until site works have been completed and the risk of sedimentation is no longer a concern.
- Tree cutting should be timed to occur during the calendar months of November 1 to March 31 and no cutting activity in forested areas should occur outside that period. This will ensure that no bats actively roosting in trees will be killed or harmed as a result of clearing activities and is outside of the breeding bird season.
- Increase habitat wherever possible, native plantings are recommended to expand habitat available in the area.
- Refueling of all equipment should occur at least 30 m from retained natural features, including woodland and wetland habitat.
- Control potentially contaminated materials (*i.e.*, fill, soil, gravel, excavated materials) moved by equipment during construction to prevent the spread of invasive plants.
- Inspect and clean equipment and vehicles prior to allowing access to the property to prevent the spread of invasive plant species into the site.
- Make sure that all equipment, boots, clothing etc. are cleaned at the site to ensure seeds from invasive plants are not transported from the site.
- Where possible, maximize the distance of construction equipment used from the wetland edge to avoid disturbing wildlife.
- Should an animal be injured or found injured during the construction phase, they should be transported to an appropriate wildlife rehabilitation centre.

8 CONCLUSIONS

This EIS was prepared for the proposed severance of the property into two parcels and future residential development of the resulting eastern parcel. The intent of the EIS was to identify the presence of natural heritage features and hydrologic features and functions within the Study Area that have the potential to be impacted by the proposed development.

The mitigation measures recommended in this report have been developed to avoid and mitigate any potential negative ecological impacts associated with the proposed development. Overall, potential ecological impacts are minimal and mitigable provided the listed mitigation measures are applied accordingly. At this time, it is the position of Birks NHC that this EIS supports the application and that developable areas are present within the properties to allow for future site development.



9 REFERENCES

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Town of Penetanguishene. November 2018. Town of Penetanguishene Official Plan.



Appendix A

Plant List



Vascular Plant List

Scientific Name	Common Name	Provincial S_Rank	Provincial Endangered Species Act (ESA)	Global G_Rank
<i>Populus tremuloides</i>	Trembling Aspen	S5		G5
<i>Ulmus americana</i>	White Elm	S5		G4
<i>Quercus rubra</i>	Northern Red Oak	S5		G5
<i>Populus balsamifera</i>	Balsam Poplar	S5		G5
<i>Pinus sylvestris</i>	Scots Pine	SNA		GNR
<i>Erythronium americanum</i>	Yellow Trout-lily	S5		G5
<i>Rubus allegheniensis</i>	Allegheny Blackberry	S5		G5
<i>Lonicera tatarica</i>	Tatarian Honeysuckle	SNA		GNR
<i>Geranium robertianum</i>	Herb-Robert	S5		G5
<i>Ostrya virginiana</i>	Eastern Hop-hornbeam	S5		G5
<i>Toxicodendron radicans</i>	Poison Ivy	S5		G5
<i>Prunus serotina</i>	Black Cherry	S5		G5
<i>Fraxinus pennsylvanica</i>	Red Ash	S4		G5
<i>Maianthemum canadense</i>	Wild Lily-of-the-valley	S5		G5
<i>Pinus strobus</i>	Eastern White Pine	S5		G5
<i>Taraxacum officinale</i>	Common Dandelion	SNA		G5
<i>Acer saccharum</i>	Sugar Maple	S5		G5
<i>Picea glauca</i>	White Spruce	S5		G5
<i>Sorbus aucuparia</i>	European Mountain-ash	SNA		G5
<i>Galium odoratum</i>	Sweet-scented Bedstraw	SNA		GNR
<i>Acer negundo</i>	Manitoba Maple	S5		G5
<i>Populus grandidentata</i>	Large-toothed Aspen	S5		G5
<i>Tilia americana</i>	Basswood	S5		G5
<i>Betula papyrifera</i>	Paper Birch	S5		G5
<i>Rhus typhina</i>	Staghorn Sumac	S5		G5
<i>Myosotis scorpioides</i>	True Forget-me-not	SNA		G5

Provincial Rank: S1 - Extremely Rare, S2 - Very Rare, S3 - Rare to Uncommon, S4 - Common, S5 - Very Common

Global Rank: G1 - Critically Imperiled, G2 - Imperiled, G3 - Vulnerable, G4 - Apparently Secure, G5 - Secure

ESA: EXP (Extirpated), END (Endangered), THR (Threatened), SC (Special Concern), NAR (Not At Risk)



Appendix B

Town of Penetanguishene Official Plan Schedule B1 Policy Overlays

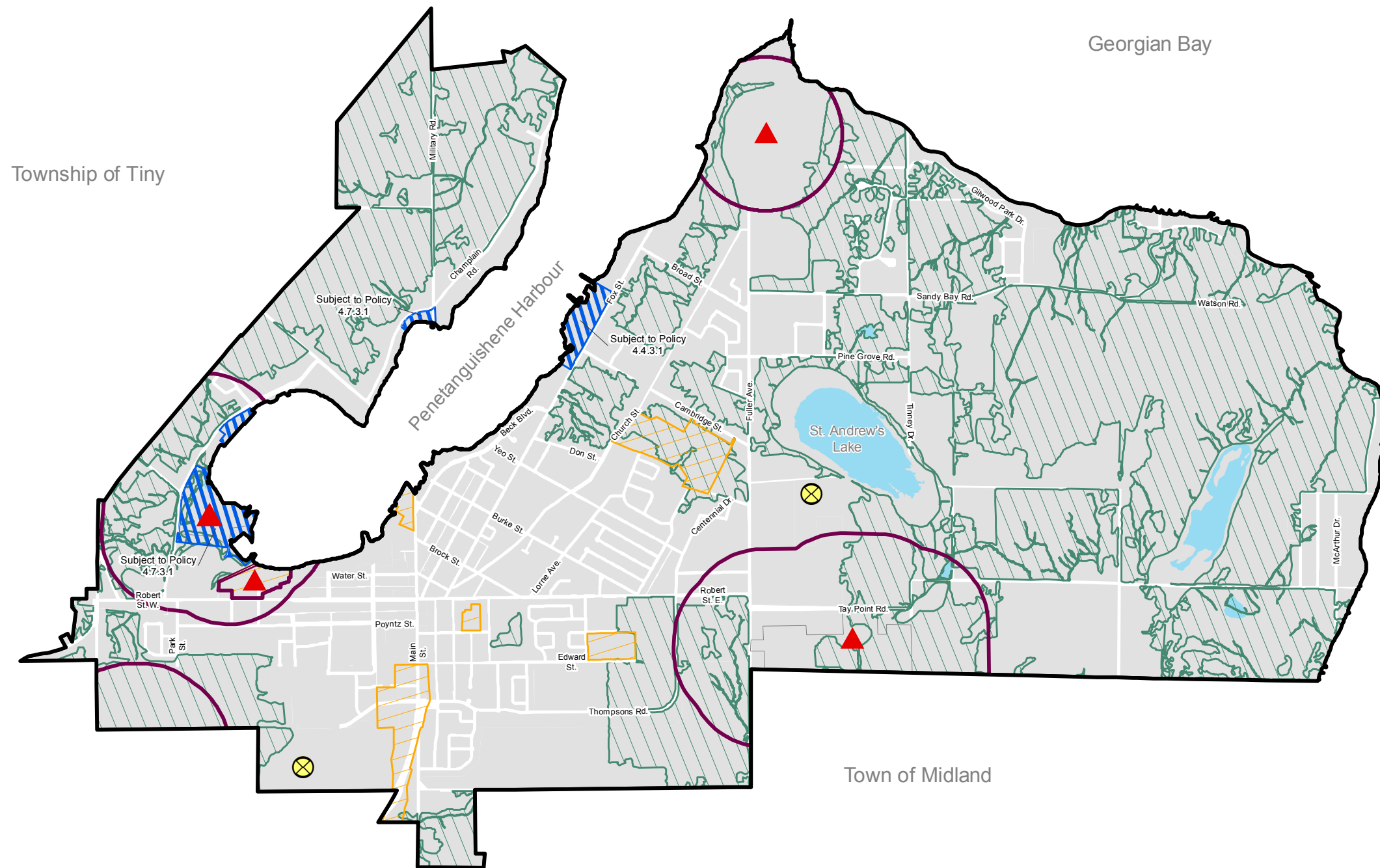




OFFICIAL PLAN
Schedule B1: Policy Overlays

-  Environmental Protection
-  Future Study Areas
-  Site Specific Policy Areas
-  Waste Disposal Influence Area
-  Waste Disposal Site
-  Pits and Quarries

Interpretation Note:
 This Schedule shall be read and interpreted
 in conjunction with the Official Plan.





Appendix C

Woodlands and Interior Habitat



Woodlands

