



GUIDING SOLUTIONS IN THE  
NATURAL ENVIRONMENT

# **Environmental Impact Study Draft Plan of Subdivision 3285 Thunder Bay Road Town of Fort Erie, Niagara Region**

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*Prepared For:*

**Westwind Niagara Developments Inc.**

*Prepared By:*

**Beacon Environmental Limited**

*Date:*      *Project:*

**June 2021    218011.1**



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- Appendix B. List of Vascular Plants for Subject Lands
- Appendix C. Butternut Data
- Appendix D. Bat Assessment Data
- Appendix E. Tree Preservation Plan
- Appendix F. Proposed Plan of Subdivision



# 1. Introduction

Beacon Environmental Limited (Beacon) was retained by Westwind Niagara Developments Inc. (the Proponent) to undertake an Environmental Impact Study (EIS) for a proposed Plan of Subdivision and Zoning By-law Amendment for lands known municipally as 3285 Thunder Bay Road in the Town of Fort Erie (the Town), the subject lands (**Figure 1**). The subject lands lie within the Town's Urban Area Boundary in the Ridgeway/Thunder Bay Neighbourhood and are designated low density residential on Schedule A Land Use Plan of the Town's Official Plan. The Town's Official Plan development policies for the Neighbourhood are detailed in Section 4.18. Ridgeway-Thunder Bay Secondary Plan. The total area for the plan of subdivision is 4.6 ha. The plan of subdivision will be comprised of forty-one (41) single detached residential homes with frontage along Thunder Bay Road and Burleigh Road South, and an internal crescent street (Street A).

This EIS has been prepared following the requirements of the Regional Municipality of Niagara Environmental Impact Study Guidelines (2012). For the subject lands, and adjacent lands, a background review, detailed field investigations, and assessment of natural heritage features and functions were undertaken by Beacon Environmental during 2018 and 2019. The draft plan of subdivision presented in this EIS has been prepared by Upper Canada Consultants.

## 1.1 Overview of Study Area

The subject lands lie within the Built Boundary (Places to Grow) area of the Ridgeway/Thunder Bay Neighbourhood (Schedule RTB-1), with residential development already completed directly to the north, east and west. All lands within 1 km support a street network and single-family homes. As well residential development occurs along the Lake Erie lakeshore to both the east and west of the subject lands (**Figure 1**).

The subject lands provide 221.5 m of frontage along Thunder Bay Road, which represents the northern boundary, and 148 m of frontage along Burleigh Road South, which sets the western boundary. The rear of lots along a 134 m section of the north side of Lakecrest Court defines most of the southern boundary. Along the eastern boundary a 65 m wide strip of land extends southward for 193 m to the shoreline of Lake Erie.

One existing family residence located along the lake shore is associated with subject lands and is accessed via a gravel driveway off Thunder Bay Road (**Photographs 1 & 2**). Maintained landscape yard is associated with the residence within the narrow strip of land that extends southward to the Lake. One watercourse runs east-west along the southern boundary and discharges to Lake Erie 50 m to the east of the subject lands. The mouth of Six Mile Creek along the lakeshore lies 925 m to the east.



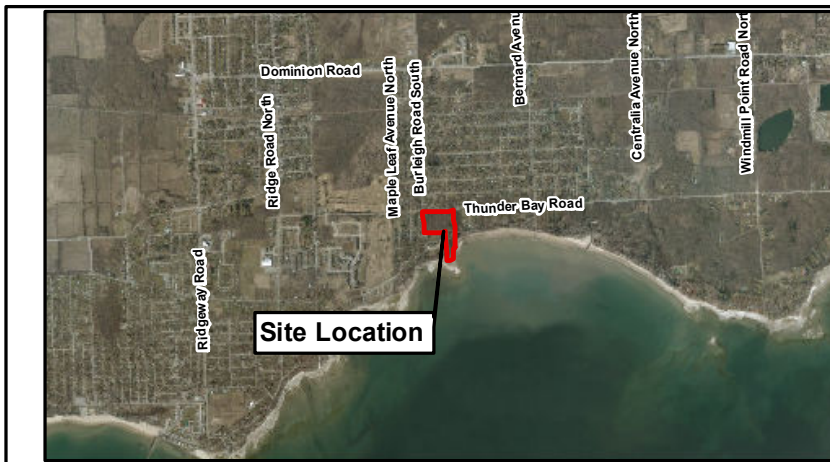


**Photograph 1. Subject Lands Single Family Residence along Lake Erie Shore**



**Photograph 2. Gravel Driveway to Residence off Thunder Bay Road – Looking South to Lake Erie**





## Site Location

## Figure 1

3285 Thunder Bay Road TIPP

UTM Zone 17 N, NAD 83

First Base Solutions  
Web Mapping Service 2010

0 25 50 100 Metres



1:3,000

Project 218011  
January 2018



## 1.2 Planning and Regulation Setting

The subject lands lie within the urban boundary of the Town of Fort Erie within the Niagara Region. This area lies outside of the jurisdiction of the Niagara Escarpment Plan (2017) and Greenbelt Plan (2017).

### 1.2.1 Provincial Policy Statement (2020)

The 2020 version of the *Provincial Policy Statement* (PPS) replaced the 2014 PPS as of May 1, 2020.

Section 2.1 of the PPS provides direction to regional and local municipalities regarding planning policies specifically for the protection and management of natural heritage features and resources.

Section 2.1.4 states that development and site alteration shall not be permitted in:

- a) *significant wetlands in Ecoregions 5E, 6E and 7E1; and*
- b) *significant coastal wetlands.*

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

- a) *significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E1;*
- b) *significant woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River)1;*
- c) *significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River)1;*
- d) *significant wildlife habitat;*
- e) *significant areas of natural and scientific interest; and*
- f) *coastal wetlands in Ecoregions 5E, 6E and 7E1 that are not subject to policy 2.1.4(b).*

Section 2.1.6 states that development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.

Section 2.1.7 states that development and site alteration shall not be permitted in habitat of endangered species and threatened species, except in accordance with provincial and federal requirements.

With respect to development on lands that lie adjacent to natural heritage features, Section 2.1.8 states that development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas 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 functions.

### 1.2.2 Niagara Region Official Plan (2014)

The Natural Heritage policies of the Niagara Region are detailed in *Section 7- Environment* of the Official Plan and natural heritage features are identified on Schedule C- Core Natural Heritage. Core Natural Heritage features include Environmental Protection Area (EPA), Environmental Conservation Area (ECA), Fish Habitat and Potential Natural Heritage Corridor. For the subject lands Schedule C shows



that no EPA or Corridor is associated with the subject lands, however, the lands south of Thunder Bay Road and east of Burleigh Road South which comprise the subject lands is identified as ECA. No watercourse that supports Fish Habitat is identified. However, the near shore of Lake Erie is identified as Fish Habitat. Policy 7.B.1.11 states that development and site alteration is permitted within ECA lands and their adjacent lands if it has been demonstrated through an EIS that there will be no negative impact on the natural features or their ecological functions.

Policy 7.B.1.15 states that development within fish habitat and the adjacent lands may be permitted provided there is no net loss of the productive capacity of the fish habitat. A naturally vegetated buffer zone, a minimum 30 metres in width as measured from the stable top of bank, generally shall be required adjacent to Critical Fish Habitat as defined by Ministry of Natural Resources and Forestry (MNRF). A minimum 15 metre buffer from the stable top of bank shall be required adjacent to Important or Marginal Fish Habitat as defined by MNRF. A narrower buffer may be considered where the EIS has demonstrated that it will not harm fish or fish habitat, but in no case shall the buffer adjacent to Critical Fish Habitat be less than 15 metres.

### ***1.2.3 Town of Fort Erie Official Plan (2011)***

Development policies for the subject lands are detailed in Section 4.18 Ridgeway-Thunder Bay Secondary Plan of the Town's Official Plan. Schedule RTB-2 Land Use identifies most of the subject lands as Environmental Conservation, and the lakeshore and near shore as Environmental Protection. Schedule RTB-3 Open Space and Natural Heritage Plan identifies that the Environmental Conservation area represents Woodland > 2 ha, and the lakeshore and near shore as Locally Significant Natural Area. An Environmental Corridor is also identified along the lakeshore lands. Schedule RTB-3a Open Space, Natural Hazards and Fish Habitat Plan identifies the watercourse associated with the subject lands as Stream Fish Habitat – Other, and the lakeshore as Natural Hazard.

Environmental planning policies for the Ridgeway-Thunder Bay Secondary Plan are detailed in Section 4.18.12. Natural Heritage. Section 4.18.12.1 General directs that Section 8 Natural Heritage of the Official Plan provides the comprehensive policy coverage for all relevant environmental features within the Plan Area and shall be relied upon for guidance when development is being considered in, or within defined proximity to environmental features or sensitive areas. Section 8.2. of the Official Plan identifies that Natural Hazard Areas are designated as Environmental Protection on Schedule A. Section 8.2.4 Natural Hazards identifies the shoreline along Lake Erie as a dynamic beach hazard. The hazard area associated with the Lake Erie shoreline represent the furthest landward limit of the flooding hazard, erosion hazard, wave uprush or dynamic beach hazard limit. Generally, development is not permitted within the limits of the dynamic beach hazard and is regulated by the Niagara Peninsula Conservation Authority (NPCA).

Section 8.3. states that Environmental Conservation designations, including Woodlands and Environmental Corridor, are intended to conserve natural habitat as well as to complement land use designations set out on the General Land Use Plan in Schedule A. Section 8.3 (II) identifies that development in Locally Significant Natural Area identified along the Lake Erie shore is permitted if supported by an EIS. Similarly, Section 8.3 (III) details that development in Environmental Conservation Areas - Woodland and Corridor is permitted if supported by and EIS.

Section 8.3.5 (V) states that development and site alteration shall not be permitted in Fish Habitat or adjacent lands except in accordance with provincial and federal requirements and where there is no net loss of productive capacity. The proponent must prepare an EIS to assess potential development impacts. Section 8.3.5 (VI) identifies that a naturally vegetated buffer area, of at least 30 metres in



width will be required adjacent to Critical Fish Habitat and a minimum 15 metre vegetative buffer will be required adjacent to Important or Marginal Fish Habitat. A narrower buffer may be considered where an EIS has demonstrated that there will be no harmful alteration or destruction to Fish Habitat. For critical Fish Habitat a minimum 15 metre setback shall be required unless the development represents an expansion to an existing use.

#### ***1.2.4 Niagara Peninsula Conservation Authority – Ontario Regulation 155/06 (2006)***

The NPCA regulates the shores of lakes and rivers, watercourses, wetlands and valleylands pursuant to *Ontario Regulation 155/06, Development, Interference with Wetlands and Alterations to Shorelines and Watercourses (2006)*. For the permitting and enforcement associated with *Ontario Regulation 155/06* the NPCA Policy Document: Policies for the Administration of Ontario Regulation 155/06 and the Planning Act 2018, provides direction.

For the subject lands, the NPCA regulates lands associated with the watercourse and the Lake Erie Shoreline. The following policies are relevant to this EIS.

#### **Great Lakes and Niagara River Shoreline Hazard**

Section 5 provides policies for development with respect to Lake Erie shoreline hazard areas to minimize risks to life, property damage social disruption and adverse environmental impacts. The shoreline hazard area includes the following natural hazards:

- Shoreline flooding hazard;
- Shoreline erosion and slope stability hazard; and
- Dynamic beach hazard.

Section 5.2.2 Development within the Shoreline Hazard Area generally identifies that development shall not be permitted within the limits of the Great Lakes shorelines hazard area. Development approval and a work permit may be issued following NPCA review and approval.

#### **Watercourse**

Section 9 provides policies for development where a watercourse may be impacted. For the application of the Regulation, a watercourse is defined as an identifiable depression in the ground in which a flow of water regularly or continuously occurs. In general, interference with a watercourse shall not be permitted. However, the NPCA will consider alterations to a watercourse provided that:

- The need for the watercourse alteration has been demonstrated to the satisfaction of the NPCA;
- The proposed works are in accordance with NPCA standards;
- The proposed watercourse alteration does not increase flood plain elevations, flood frequency, erosion rates or erosion frequency along either side of the watercourse, upstream and/or downstream of the proposed works;
- The works are designed to ensure that the storage capacity of the flood plain is maintained;
- The works will not adversely affect the ecological and hydrological function of the watercourse and riparian zone;



- Adequate erosion protection measures are utilized when required;
- Sediment control measures are incorporated during the construction phase to the satisfaction of the NPCA; or
- They are considered minor works as defined by the NPCA.

Section 9.2.5.1 states that, where development and site alteration is proposed adjacent to a watercourse, the NPCA shall require the establishment of a natural buffer of between 15 metres (49 feet) and 10 metres (33feet) based on the following:

- A 15 metre natural buffer for watercourses containing permanent flow, cool water or coldwater systems or specialized aquatic or riparian habitat (such as but not limited to fish spawning areas, habitat of species at risk or species of concern, forested riparian areas or Type 1 Critical Fish Habitat);
- A 10 metre natural buffer for watercourses containing intermittent flow, warmwater systems or general/impacts aquatic or riparian habitat, or Type 2 Important Fish Habitat or Type 3 Marginal Fish Habitat; and
- Other considerations which may impact pollution or the conservation of land.

## 2. EIS Scope and Assessment Methodology

### 2.1 Scope of EIS

On, April 13, 2018, Beacon requested that the Niagara Region provide a scope of work for undertaking the EIS (**Appendix A**), however, no response was provided. On April 16, 2019, Beacon provided the Region with a Terms of Reference to complete the EIS (**Appendix A**). In addition, on April 13, 2018, Beacon submitted an Information Request to the MNRF for the subject lands. The MNRF provided a letter on July 3, 2018 (**Appendix A**). The direction provided by the MNRF and Beacon Terms of Reference to the Region represents the Scope for this EIS.

### 2.2 Background Review

For this EIS a background review of the following documents was undertaken:

- Town of Fort Erie Official Plan 2011 (Consolidated Version 2018);
- Section 7-Environment of the Official Plan for the Niagara Planning Area (Consolidated Official Plan for August 2015);
- Schedule C Regional Municipality of Niagara Core Natural Heritage (Consolidated Official Plan for August 2015);
- Niagara Peninsula Conservation Authority – Policies for the Administration of Ontario Regulation 155/06 and the Planning Act (2018);
- Natural Areas Inventory 2006–2009, Volume 1 and 2. Niagara Peninsula Conservation Authority 2010;
- Natural Areas Inventory: Town of Fort Erie's Settlement Areas 2003; Prepared for Town of Fort Erie Community Planning & Development Services; and
- Niagara Region Environmental Impact Study Guidelines, Version 2 January 2018.



## 2.3 Field Surveys

Beacon terrestrial ecologists conducted site surveys of the subject lands from March 22 through October in 2018 that documented flora, fauna and vegetation communities. Field survey dates are provided in **Table 1**. Foot surveys were undertaken for all areas of the subject lands. In addition to these field survey dates, a site visit of the subject lands to review current 2021 conditions was undertaken on May 5<sup>th</sup> 2021.

**Table 1. 2018 Field Survey Dates for the Subject Lands**

Survey	Dates 2018
Amphibian Survey	March 23 <sup>rd</sup>
Day Breeding Bird Surveys	May 28 <sup>th</sup> , June 15 <sup>th</sup> , June 21 <sup>st</sup> and July 10 <sup>th</sup> .
Floral Survey/ELC Assessment	March 23 <sup>rd</sup> , May 28 <sup>th</sup> , June 15 <sup>th</sup> , June 21 <sup>st</sup> , July 10 <sup>th</sup> , and October 5 <sup>th</sup>
Leaf Off Tree Bat Snag Survey	March 23 <sup>rd</sup>
Bat Acoustic Monitoring	June 1 <sup>st</sup> through June 11 <sup>th</sup>
Watercourse	All above survey dates

### 2.3.1 Aquatic Environment and Fish Habitat Surveys

One watercourse that occurs on the subject lands and near shore of Lake Erie was visually assessed while conducting site surveys from the spring through summer. No fish sampling was undertaken.

### 2.3.2 Amphibian Surveys

A late March survey of the subject lands identified that no permanent or ephemeral ponds that could be used as breeding sites by amphibians occur. Therefore, no surveys were undertaken in April and May to record the presence or absence of breeding frogs and toads. The lakeshore associated with the subject lands was assumed to be potential habitat for the Endangered Fowler's Toad (*Anaxyrus fowleri*).

### 2.3.3 Ecological Land Classification and Floristic Inventory

Vegetation communities were mapped and described following the protocols of the Ecological Land Classification (ELC) System for Southern Ontario (Lee *et al.* 1998). This involved delineating vegetation communities on aerial photographs and for each vegetation community, information on dominant species cover, community structure, level of disturbance, presence of indicator species, vascular plant species and other notable features was recorded.

The floristic inventory was undertaken during all field surveys and completed for three seasons. For the surveys a random walk foot survey was conducted which covered all the subject lands. No transit or plot survey methods was undertaken, as the area of subject lands is small, and statistically valid data is not required. Specific emphasises was placed on determining the presence of species at risk. Both native and non-native species that were encountered were recorded.



### 2.3.4 Breeding Bird Surveys

Surveys for breeding birds took place in May, June, and July in the early morning on days with low winds (1 or less on the Beaufort scale), temperatures within 5°C of normal and no precipitation. For the surveys, a random walk foot survey was conducted which covered all the subject lands. The subject lands represent a small survey area and could be walked such that all singing birds could be heard or observed and recorded. Point count or transit survey methods were not undertaken, as these survey methods are typically only required for collecting statistically valid data sets for long term studies, or for the survey of large (>100 ha) areas of land.

With respect to specific night surveys to detect calls for the Threatened Whip-poor-will (*Antrostomus vociferus*) and Special Concern Common Nighthawk (*Chordeiles minor*), the MNRF- Guelph District did not identify records for these species to occur in the area of the subject lands (see MNRF correspondence in **Appendix A**). The MNRF SAR list for Fort Erie does not list the Whip-poor-will (**Appendix A**) and during five years of survey (2001-2005) of the area in which the subject lands occur the Ontario Breeding Bird Atlas (Atlas Survey Square 17TPH64) did not record the occurrence of these two species during the breeding season. In addition, spring assessment of the existing conditions did not identify breeding habitat to be present on the subject lands for either species. Therefore night surveys for these two species following the MNRF Survey Protocol (MNRF 2013) were not undertaken.

### 2.3.5 Bat Surveys

Surveys of trees for snags, cracks and holes to determine if suitable habitat for the establishment of maternity roosts for endangered species of bats was undertaken during leaf off on March 22<sup>nd</sup>, 2018. This survey was undertaken following Phase II Identification of Suitable Maternity Roost Trees of the MNRF Guelph District most current bat habitat survey protocol for Species at Risk Bats within Treed Habitats (MNRF 2017). All trees with a dbh of 10 cm or greater were assessed with respect to presenting potential roosting/maternity habitat. **Photograph 3** shows the site leaf off conditions during the snag tree survey. All snag or cavity trees observed were provided a unique code and the following parameters were documented:

- Species;
- Location;
- Approximate tree height;
- Diameter breast height (DBH);
- Number of cavities;
- Characteristics of cavity;
- Approximately height of cavities; and
- Tree condition.





**Photograph 3. Site Leaf Off Conditions During March 2018 Bat Maternity Snag Tree Survey**

Following the March maternity roost snag tree survey, an acoustic survey was undertaken in June 2018 following the MNRF (2017) protocol to determine if SARs bats were present. Acoustic detectors were deployed from June 1<sup>st</sup> through June 11<sup>th</sup>, 2018. Following the MNRF protocol, this deployment period provided at least ten nights of data recorded under suitable weather conditions (air temp  $\geq 10^{\circ}\text{C}$ , low winds, and minimal precipitation). Ten (10) monitoring stations were established within the subject lands (**Appendix D**). Monitoring locations were based on the results of the snag tree survey and to achieve adequate coverage of the subject lands. At each station an SM4BAT passive monitor, equipped with a SMM-U1 ultrasonic, omni-directional, microphone was installed. Microphones were deployed at least 2.5 m above the ground and were oriented to optimize echolocation detections. Each monitor was programmed to record during triggered events each night for a period of five hours beginning at sunset. A 12dB gain setting was used based on the SMM-U1 microphone, the surrounding habitat and proximity to potential roost trees. The unit was programmed to record in full spectrum with a 256 kHz sample rate. The high pass filter was set to 16 kHz to eliminate low frequency noise but to still capture the lowest frequency bat calls (i.e. Hoary Bat for the study area). The trigger level was set to +18SNR with a 0.5 second minimum call duration trigger. All files were recorded as full spectrum in .WAV format.

Following the retrieval of the monitors', recordings on the data chips were analyzed using Kaleidoscope software. A combination of auto-identification and manual analysis was applied to call files to make species determinations. All unclassified files (No ID Files) were manually reviewed for call frequency to determine if unclassified calls fell within the 40 kHz Myotis species and Tri-coloured Bat echolocation range. If the call did not fall within the approximate 40 kHz range, it was not analyzed further as it is likely not a species at risk. Furthermore, a random selection of noise files were reviewed to ensure that the batch filters functioned correctly.



### **2.3.6 Feature Staking**

No feature staking (wetland boundaries, top of bank etc.) with the NPCA or MNRF was required for this EIS. The current NPCA delineation of the lakeshore Flood and Erosion Setback limit was used for the development plan.

### **2.3.7 Assigned Beacon Staff**

#### **Project Manager Mr. Ron Huizer, B.Sc. Principal, Senior Ecologist/EA Specialist**

Mr. Ron Huizer conducted all field investigations and is the author of this EIS report. Mr. Huizer is a Senior Ecologist/EA Specialist with over 25 years' experience undertaking field assessment of terrestrial and aquatic environments. His experience includes undertaking detailed bio-inventories of flora and fauna and environmental impact assessments as both project manager and as part of a multi-disciplinary team. He is a recognized wetlands expert in Ontario and has been a technical advisor to the MNRF WETT Committee and been retained by the Ministry of Municipal Affairs and Housing on a number of occasions as an expert witness for wetland-development issues before the Ontario Municipal Board. Ron has completed numerous Environment Impact Studies (EIS) that address protection of Natural Heritage in support of plan of subdivision developments throughout south Ontario. He has completed Class EAs for a variety of projects following several EA processes, including: the Canadian Environmental Assessment Act (CEAA), both screenings and comprehensive studies; Municipal Class EA for Water and Road Projects; and Ministry of Transportation's Provincial Highways Class EAs for Provincial Transportation Facilities.

#### **Terrestrial Ecologist, Mr. Daniel S. Westerhof, B.Sc., MES**

Mr. Westerhof is a Senior field ecologist, botanist, arborist, and project manager with 15 years of professional experience in the environmental field, working in Ontario and the United States. His core areas of expertise include: botanical surveys, vegetation community classification, ecological monitoring, arborist assessments and tree preservation plans, and ecological restoration. Dan has strong plant identification skills, particularly concerning Ontario flora, and is certified and well-versed in the Ecological Land Classification (ELC) system and Ontario Wetland Evaluation System (OWES). Dan has contributed to numerous small I- and large-scale ecological inventories and assessments in Ontario during his time with Beacon and while previously working as a field botanist for the Toronto Region Conservation Authority. Dan is also an ISA Certified Arborist and has completed the ISA Tree Risk Assessment Qualification (TRAQ). He regularly conducts tree inventories and prepares tree preservation plans for public and private sector clients. Dan has also contributed to numerous ecological restoration and invasive species management initiatives in Ontario and the United States.

#### **Field Biologist, Ms. Jesse Harnden, B.Sc. Ecologist, Certified Arborist**

Ms. Harnden is an ecologist and arborist/botanist with Beacon Environmental with over 7 years of experience in the environmental field working on private and public sector projects across Ontario. Her experience includes vegetation inventories, ELC community classification, amphibian breeding surveys and bat habitat assessments. She also develops and prepares, arborist reports, tree preservation plans, restoration and compensation plans, and edge management plans. Jesse is a certified Butternut Health Assessor and Ontario Wetland Evaluator. She is also responsible for the undertaking of MNRF Species at Risk permitting applications for Butternut and Bats. Jesse has participated in numerous EISs to identify potential construction impacts and provide mitigation and preservation plans for urban and rural environments across Southern Ontario.



**Field Biologist, Ms. Anna Corrigan, B.Sc. (Hons.) Ecologist**

Anna is an Ecologist with five years of applied experience conducting a range of terrestrial ecological assessments in southern Ontario. Her work to date has included amphibian and reptile surveys, bird and bat habitat assessments, invasive species monitoring, wildlife savages and screening for terrestrial Species at Risk. Anna has special expertise in bat habitat assessment and analysis of acoustic data, and is skilled at applied ecological research, data management and analysis, and reporting for environmental projects. Anna is also familiar with current provincial natural heritage policies and regulations in Ontario based on involvement in projects under the Endangered Species Act (ESA) and Renewable Energy Act (REA), and regularly provides support for compliance with the Migratory Birds Convention Act, Species at Risk screenings and Significant Wildlife Habitat assessments.

### 3. Description and Assessment of the Environment in 2018

The following provides a description and assessment of the natural heritage features and functions that were found within the boundaries of the subject lands in 2018. **Figure 2** presents the features that are detailed in the following sections of the report.

#### 3.1 Aquatic Resources and Fish Habitat

One watercourse is associated with the subject lands. Through a culvert that crosses Burleigh Road South, the watercourse flows eastward across the subject lands and onto the adjacent property to the east, and then turns southward to discharge to the Lake Erie Shoreline 50 m to the east of the subject lands. The watercourse drains a small watershed, with the headwater area associated with two small wetland pockets located along Prospect Point Road 500 m to the west of the subject lands. Visual surveys of the watercourse from the start of the spring freshet in late March through to the fall established that it supports an ephemeral flow regime, with flows primarily occurring during the early spring, March and April, and then only periodically during heavy or prolonged rain events.

Upstream, west of Burleigh Road South, the watercourse is represented by a grass swale that runs along the boundary of the rear of existing residential lots (**Photograph 4**). Downstream of the Burleigh Road South crossing the watercourse flows within the subject lands in a narrow 1 m wide dug channel that runs along the boundary of existing residential lots for 134 m section of the north side of Lakecrest Court. The watercourse supports a grassed bottom which is periodically interrupted by bare soil substrate (**Photographs 5 and 6**). An old concert box culvert (**Photograph 7**) conveys flow under the residential driveway where it then enters the adjacent property along the eastern boundary of the subject lands. Within the subject lands the top of bank of the watercourse supports a dense growth of shrubs and grasses. During the study no fish were observed within the watercourse and given the ephemeral flow regime within the subject lands the watercourse does not support critical or important fish habitat, and is assessed to support Type 3 Marginal Fish Habitat as defined by the MNR.





**Photograph 4. Grassed Swale of the Unnamed Watercourse Upstream of the Subject Lands at the Burleigh Road South Road Culvert Crossing**



**Photograph 5. Narrow Dug Watercourse between the Southern Boundary of the Subject Lands and Residential Lots**





### Legend

- Subject Property
- Vegetation Communities
- Watercourse

### Existing Conditions

### Figure 2

3285 Thunder Bay Road, TIPP



Project: 218011.1  
Last Revised: May, 2019

Client: Westwind Niagara  
Developments Ltd.

Prepared by: DU  
Checked by: RH



1:2,250

0 25 50 m

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Ontario Orthoimagery Baselayer: FBS Niagara 2018





**Photograph 6. Narrow Dug Watercourse between the Southern Boundary of the Subject Lands and Residential Lots**



**Photograph 7. Old Concert Box Culvert Conveying Flow at the Residential Driveway Near the Eastern Boundary of the Subject Lands**



Approximately 160 m of the shoreline of Lake Erie occurs along the southern boundary of the subject lands (**Photograph 8**). The near shore waters are considered to support Lake Fish Habitat; however, no Critical Lake Fish Habitat is identified for this section of the near shore of the Lake (Town of Fort Erie OP Schedule C1 – Natural Hazards and Fish Habitat).



**Photograph 8. Lake Erie Shoreline Along the Subject Lands Southern Boundary**

## **3.2 Vegetation Communities**

### **3.2.1 Fort Erie Natural Areas Inventory**

The vegetated portions of the subject lands are identified by the Fort Erie Natural Areas Inventory (NAI) as ELC Polygon #192, Deciduous Forest. The NAI site summary for Polygon #192 identifies that based on a drive by assessment in 2002 the ELC vegetation community was a FOD Lowland Deciduous Forest Ecosite. This assessment was made prior to the massive die off ash trees in the Fort Erie area due to the Emerald Ash Borer infestation.

### **3.2.2 2018 Assessment**

The vegetation communities on the subject lands were assessed and mapped following the ELC for Southern Ontario (Lee et al 1998) based field survey conducted in 2018 and are shown on **Figure 2**. The ELC groups vegetation community into two broad categories, naturally occurring communities, and cultural communities. Cultural communities represent vegetated areas that support a plant community that has been strongly influenced by human activities, both past and present, for example pine plantations or the naturalization of a fallowed agricultural field.



## **Natural Vegetation Communities**

No naturally occurring vegetation communities occurs within the subject lands.

## **Cultural Anthropogenic Communities**

### **Anthropogenic (ANT)**

Anthropogenic areas dominated the eastern third of the subject lands and include a residential home, garage, sheds and large areas with maintained lawn and landscape trees and shrubs along the lakeshore (**Photograph 9**). Mature lawn trees include Black Walnut (*Juglans nigra*), Red Oak (*Quercus rubra*), Norway Spruce, Freeman's Maple (*Acer x freemanii*), and Thornless Honey Locust (*Gleditsia triacanthos* var. *inermis*).



**Photograph 9. Residential Property along Lake Shore**

### **Cultural Thicket (CUT1)**

The majority of the subject lands consists of a cultural thicket community that is dominated by a dense growth of highly invasive shrubs, including Common Buckthorn (*Rhamnus cathartica*), Glossy Buckthorn (*Fr angula alnus*), Tartarian Honeysuckle (*Lonicera tatarica*), and Multiflora Rose (*Rosa multiflora*) (**Photograph 10**). The community once supported a tree canopy that was dominated by Green Ash (*Fraxinus pennsylvanica*), however, most of these trees are now dead due to the Emerald Ash Borer infestation that has occurred in the Fort Erie area (**Photograph 11**).

The tree canopy is sparse (<25%), comprised of scattered White Pine (*Pinus strobus*) and Scotch Pine (*Pinus sylvestris*) most of which occur within the Right-of-Way of Thunder Bay Road and of Burleigh Road South. Other tree species included scattered Red Maple (*Acer rubrum*), White Elm (*Ulmus*



*americana*), Black Locust (*Robinia pseudo-acacia*), and Apple (*Malus*). As this community supports a tree canopy that is <25%, following the ELC it can not be considered to represent forest, or cultural woodland. Due to the dense growth of Buckthorn (**Photograph 12**) ground cover is sparse and includes Fowl Manna Grass (*Glyceria striata*), Rough Goldenrod (*Solidago rugosa*), bittercress (*Cardamine* sp.), Tall Goldenrod (*Solidago altissima* var. *altissima*), Fowl Blue Grass (*Poa palustris*), Avens (*Geum*), Wild Strawberry (*Fragaria virginiana*) and True Forget-me-not (*Myosotis scorpioides*).



**Photograph 10. Cultural Thicket along Burleigh Road South - 2018**





**Photograph 11. Buckthorn Cultural Thicket and Dead Green Ash - 2018**



**Photograph 12. Example of the Density of Buckthorn in the Cultural Thicket CUT1 - March 2018**



### 3.2.3 Rare Vegetation Communities

No provincially rare vegetation communities (NHIC S-rank of S1, S2, S3) is found within or directly adjacent to the subject lands.

## 3.3 Flora

A total of one hundred and sixteen (116) species of vascular of plants were recorded and are listed in **Appendix B**. Except for the lakeshore marsh noted above, no unique or rare plant community such as prairie elements, savannah, alvar or fen species were found to occur. Of the species present, forty-six (46) are non-native species, representing 40% of the plant community. In Niagara Region vegetation communities typically support a floristic composition that is 65% native species and 35% non-native/introduced species (Oldham 1995). For the subject lands the high occurrence of non-native species can be attributed the historic disturbance of the lands which has resulted in the spread of non-native grasses, field weeds and shrubs. Only two species had a Coefficient of Conservatism that was greater than 7, Pin Oak (9) and Tulip Tree (8) (with a total range of a low of 0 to a high of 10 - Oldham 1995). Over 40% of the species had a low coefficient value of 0 to 3, which again reflects the cultural disturbance of the subject lands.

### 3.3.1 Endangered and Threatened Species

During the site surveys emphasis was placed on the potential for the occurrence of several endangered and threatened species that were identified by Beacon and the MNRF (see **Appendix A**) as having the potential to occur for the Fort Erie area. **Table 2** presents the species that could potential occur.

**Table 2. Potential Endangered and Threatened Species of Plants for the Subject lands**

Species	Status
American Chestnut ( <i>Castanea dentate</i> )	Endangered
Butternut ( <i>Juglans cinera</i> )	Endangered
Cucumber Tree ( <i>Magnolia acuminata</i> )	Endangered
Spotted Wintergreen ( <i>Chimaphila maculate</i> )	Endangered
Red Mulberry ( <i>Morus rubra</i> )	Endangered
Cherry Birch ( <i>Betula lenta</i> )	Endangered
Eastern Flowering Dogwood ( <i>Cornus florida</i> )	Endangered
Round-leaved Greenbrier ( <i>Smilax rotundifolia</i> )	Threatened
White Wood Aster ( <i>Eurybia divaricate</i> )	Threatened
Eastern Prickly Pear Cactus ( <i>Opuntia humifusa</i> )	Endangered

Only one of these species was found to occur during the surveys conducted by Beacon. One young, aged Butternut (*Juglans cinera*) was found within the property boundary hedgerow of Black Walnut along the eastern boundary of the subject lands (**Photograph 13**).





**Photograph 13. Young Butternut in Property Boundary Hedgerow – Center of Photograph**

Leaf samples of the tree were sent for genetic testing and the tree was assessed by a qualified Butternut Health Assessor and was found to be a native category 2 retainable Butternut. However, the Butternut tree is located within a hedgerow between two lots in association with planted Black Walnut and Norway Spruce (*Picea abies*). Therefore, it is Beacon's opinion that the Butternut was likely planted, and as such, is not subject to the regulations of the *Endangered Species Act*. Assessment details have been provided to the Ministry of the Environment, Conservation, and Parks for review (see **Appendix C**).

### **3.3.2 Special Concern and Provincially or Regionally Rare Species**

None of the 116 species recorded for the subject lands are listed as Special Concern. The MNRF identified the potential for one species of Special Concern to occur, Common Hoptree (*Ptelea trifoliata*). This species inhabits sand soil shores and dunes along Lake Erie and the Niagara River. This habitat is present along the lakeshore, however no Hoptree was found to occur. The endangered Butternut discussed above is considered to be provincially rare (NHIC S1, S2, S3) with an S-rank of S2. One other tree species, the native the Honey Locust (*Gleditsia triacanthos*) is also listed as S2. A non-native planted cultivar (*Gleditsia triacanthos* var. *inermis*) was noted to be associated with the residential lawn. However, no native naturally occurring Honey Locust were found.

One species that is considered to be rare for the Niagara Region was found to occur, Small-flower Agrimony (*Agrimonia parviflora*) (**Photograph 14**). The species inhabits shrubby old fields, open woods, and edges, and is particularly abundant in the Fort Erie (Oldham 2010). The species was formally considered to be rare for the province but is currently considered to have an S-rank of S4.





**Photograph 14. An Example of Regionally Rare Small-flower Agrimony (*Agrimonia parviflora*)**

### 3.4 Birds

Thirty-two (32) bird species were recorded on the subject lands and are presented in **Table 3**. Of these six (6) species were not considered to be breeding within the subject lands, Common Tern (*Sterna hirundo*) for example. The site supports a very low diversity of bird species, the majority of which are common urban/rural tolerant species inhabiting small woodlots, forest edges, hedgerows, thickets, fields and agricultural landscapes. The thicket bird community is well represented, including such species as Song Sparrow (*Melospiza melodia*), Northern Cardinal (*Cardinalis cardinalis*), Eastern Kingbird (*Tyrannus tyrannus*), Yellow Warbler (*Dendroica petechia*), Grey Catbird (*Dumetella carolinensis*), Red-winged Blackbird (*Agelaius phoeniceus*), and American Goldfinch (*Cardeulis tristis*). Species that occur in the Fort Erie area that are associated with stands of mature forest, such as nuthatch, thrushes, Hairy Woodpecker (*Picoides villosus*), Pileated Woodpecker (*Dryocopus pileatus*), and wood warblers were absent, though feeding on the dead Green Ash by Pileated Woodpecker was noted. No Areas Sensitive species was recorded to be breeding within the subject lands.

**Table 3. Breeding Birds Documented for the Subject Lands**

Common Name	Scientific Name
Turkey Vulture*	<i>Cathartes aura</i>
Red-tailed Hawk*	<i>Buteo jamaicensis</i>
Spotted Sandpiper	<i>Actitis macularia</i>
Ring-billed Gull*	<i>Larus delawarensis</i>
Common Tern*	<i>Sterna hirundo</i>
Mourning Dove	<i>Zenaida macroura</i>
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>



Common Name	Scientific Name
Downy Woodpecker	<i>Picoides pubescens</i>
Northern Flicker	<i>Colaptes auratus</i>
Pileated Woodpecker*	<i>Dryocopus pileatus</i>
Eastern Kingbird	<i>Tyrannus tyrannus</i>
American Crow*	<i>Corvus brachyrhynchos</i>
Blue Jay	<i>Cyanocitta cristata</i>
Black-capped Chickadee	<i>Poecile atricapillus</i>
House Wren	<i>Troglodytes aedon</i>
Carolina Wren	<i>Thryothorus ludovicianus</i>
American Robin	<i>Turdus migratorius</i>
Northern Mockingbird	<i>Mimus polyglottus</i>
Grey Catbird	<i>Dumetella carolinensis</i>
European Starling	<i>Sturnus vulgaris</i>
Cedar Waxwing	<i>Bombycilla cedrorum</i>
Warbling Vireo	<i>Vireo gilvus</i>
Yellow Warbler	<i>Dendroica petechia</i>
Northern Cardinal	<i>Cardinalis cardinalis</i>
Song Sparrow	<i>Melospiza melodia</i>
Chipping Sparrow	<i>Spizella passerina</i>
Brown-headed Cowbird	<i>Molothrus ater</i>
Common Grackle	<i>Quiscalus quiscula</i>
Red-winged Blackbird	<i>Agelaius phoeniceus</i>
Baltimore Oriole	<i>Icterus galbula</i>
American Goldfinch	<i>Carduelis tristis</i>
House Sparrow	<i>Passer domesticus</i>

\*Species Not Considered to be Breeding within the Subject Lands

### 3.4.1 Endangered and Threatened Species

Based on MNRF data (See Appendix A) and species breeding range in Niagara and general habitat present on or adjacent to the subject lands, four species listed as either endangered (END) or threatened (THR) under the *Endangered Species Act* (2007) were assessed to have the potential to occur and are discussed below.

#### **Bank Swallow (*Riparia riparia*) (THR)**

Bank Swallow are known to occur along the banks of the shores of Lake Erie and the Niagara River. However, for the subject lands no feeding flights were observed, and no nesting colony or nesting habitat was found to occur.

#### **Barn Swallow (*Hirundo rustica*) (THR)**

Barn Swallows often live in close association with humans, building their cup-shaped mud nests almost exclusively on human-made structures such as open barns, sheds, ledges and under bridges and in culverts (COSSARO 2011a). No feeding flights were observed, and no nests were found on the existing house and sheds within the subject lands.



**Chimney Swift (*Chaetura pelagica*) (THR)**

Chimney Swifts are aerial foragers, often concentrating near water where insects are abundant. The Chimney Swift is now mainly associated with urban and rural areas where chimneys are available for nesting and roosting (COSEWIC 2007a). The species is known to occur in the Fort Erie area, and nests and roosts in chimneys in the built-up areas of the Town. The subject lands residence does have a chimney, but it has a wire mesh covering over it to prevent wildlife assessments (**see Photograph 15**). No flights of Chimney Swift were noted during field surveys.



**Photograph 15. Residence Chimney with Wildlife Exclusion Covering**

**Yellow-breasted Chat (*Icteria virens*) (END)**

The Yellow-breasted Chat inhabits open county shrub land and thickets. The species is at the northern limit of its range in Niagara, and only few breeding pairs occur in any year in Southern Ontario. The species is difficult to survey, so call play back was used during the bird surveys. No birds were detected.

**3.4.2 Species of Special Concern and Provincially or Regionally Rare Species**

Based on previous records four species listed as Special Concern were identified by the MNRF as having the potential to occur, the Red-Headed Woodpecker (*Melanerpes erythrocephalus*), Wood Thrush (*Hylocichla mustelina*), Eastern Wood-Pewee (*Contopus virens*) and Canada Warbler (*Wilsonia Canadensis*). Three of the species, Wood Thrush, Eastern Wood-Pewee and Canada Warbler, require extensive stands of mature forest for breeding habitat. This habitat is not associated with the subject lands and these species were not recorded to occur during the study. The Red-Headed Woodpecker is known to breed along the lakeshore in the Fort Erie area, however, the species prefers open canopy



extensive stands of mature trees for nesting sites (ECCC 2019). Again, this habitat is not associated with the subject lands and the species was not recorded to occur during the study.

No species that are considered to be rare for the province by the MNRF (NHIC S1, S2, S3) or rare for the Niagara Region (NPCA 2010) were recorded.

## 3.5 Reptiles and Amphibians

### 3.5.1 Amphibians

No ephemeral or permanent ponds are associated with the subject lands that would provide breeding habitat for frog and toad species.

The Lake Erie shoreline in the Fort Erie area is known to support breeding and feeding habitat for the Endangered Fowler's Toad (*Anaxyrus fowleri*) (Green et al 2011). Habitat for this species is restricted to the near shore environment of the lake, typically within the active sand dune zone. Five types of habitat are needed by the Fowler's Toad to complete its life cycle and to continue to persist:

**Hibernation** - sand dunes (open to moderately vegetated) and sufficiently deep sand areas where the toads can successfully dig below the frost line to just above the water table and remain over winter (7 to 8 months from mid September to mid May);

**Breeding** - egg laying, and tadpole development occur in early successional wetlands, drains and stream mouths that open onto sand beaches, bedrock pools, shallow bays, and ponds within the full range of Lake Erie water levels; such breeding sites need either a sand or bedrock substrate, and must have sparse vegetation;

**Feeding and Re-hydration Habitat** - shorelines, including bedrock outcrop areas, dunes, and beaches;

**Daytime Retreat and Aestivation** - open to moderately vegetated beaches and dunes with rocks, woody debris, and other objects that provide cover along the shore; and

**Dispersal Corridor** - contiguous beach and dune sand shoreline habitat, without barriers such as solid-wall piers or groynes, solid shorewalls or breakwalls, canals, deep or fast-flowing water, or roads. These linkage requirements are similar for all life stages, and are used for:

- Active migration from hibernation to breeding sites by adults as well as active movements from day time refugia to shorelines for feeding and re- hydration (adults and juveniles);
- Passive dispersal of tadpoles and toadlets, initiated by natural processes, from growth and development sites to shoreline emergence areas; and
- Active dispersal of toadlets, juveniles, and adults to new sites.

The lake shore environment associated with the subject lands does not support breeding habitat for the species. Also, no inland breeding ponds or wetlands are found within the subject lands or within 300 m of the lakeshore. However, the narrow (20 m) beach upslope of the normal wave action zone of the lake within the subject lands and adjacent lands (**Photographs 16 & 17**) can be considered to support a number of adult toad habitat requirements, including general feeding habitat and some re-hydration,



retreat and aestivation habitat . This section of beach also represents a potential dispersal corridor for the toad.



**Photograph 16. Potential Habitat for Adult Fowler's Toad along Lake Shore of the Subject Lands  
Looking West**





**Photograph 17. Potential Habitat for Adult Fowler's Toad along Lake Shore of the Subject Lands Looking West**

### **3.5.2 Reptiles**

No species of snake was encountered, however, the Common Garter Snake (*Thamnophis sirtalis*) and Little Dekay's Brownsnake (*Storeria dekayi*) are expected to occur. Both species are very common to the Niagara Region (Yagi et al. 2009). No in land bedrock crevices or stone/lumber piles that could provide hibernacula for snakes were noted to occur within the subject lands.

The sand beach environment along this section of the Lake Erie shore can be considered to provide potential habitat for the Threatened Eastern Hog-nosed Snake (*Heterodon platirhinos*). At present, for Niagara the only viable sub-population of Hog-nose Snake occurs along the north shore dune systems of Lake Erie in the Point Abino area, west to Port Colborne and east to Fort Erie (Yagi et al. 2009). This species was not observed during any of the field surveys.

## **3.6 Mammals**

Due to site conditions typical urban/rural mammal species are associated with the subject lands. During the field investigations species encountered (visually or scat and tracks) included Gray Squirrel (*Sciurus carolinensis*) and Eastern Cottontail (*Sylvilagus floridanus*), Raccoon (*Procyon lotor*), White-tailed Deer (*Odocoileus virginianus*), and Striped Skunk (*Mephitis mephitis*). Other species that are expected to occur include Virginia opossum (*Didelphis virginiana*), Coyote (*Canis latrans*), and Red Fox (*Vulpes vulpes*). All species are well adapted to urbanized landscapes and are common to abundant in the Niagara Region and Town of Fort Erie (Dobbyn 1994, NPCA 2010).



### 3.6.1 Endangered Species of Bats

In Niagara four species of bats occur that are listed as provincially endangered and receive species and general habitat protection under the *Endangered Species Act* (ESA 2007), the Little Brown Myotis (*Myotis lucifugus*), Northern Myotis (*Myotis septentrionalis*), Eastern Small-footed Myotis (*Myotis leibii*) and Tri-colored Bat (*Perimyotis subflavus*).

For these species summer roost and maternity sites are associated with trees that support cracks, crevices, holes and cavities, as well as loose bark and clusters of old leaves, including squirrel nests. To determine the potential for the trees to provide maternity or roosting habitat, the MNRF bat habitat survey protocol requires that leaf off surveys be conducted to record trees that support the habitat. If present, the next step in the assessment is to conduct acoustic monitoring to determine if any of the endangered species are present. For this EIS a leaf off survey of the subject lands was conducted in March 2018. The location of identified snag trees and details of the recorded snag trees are provided in **Appendix D**. The results of snag survey identified that that acoustic monitoring for bats in the month of June was required. Ten (10) acoustic monitoring sites were established, see locations in **Appendix D**, and recorded data from June 1<sup>st</sup> to the 11<sup>th</sup>.

The results of the acoustic monitoring are provided in **Appendix D**. Though absolute numbers can not be determined from the data, four species of bat were identified to occur; the Big Brown Bat (*Eptesicus fuscus*), Hoary Bat (*Lasiurus cinereus*), Eastern Red Bat (*Lasiurus blossevillei*) and Silver-haired Bat (*Lasionycteris noctivagans*). No calls of endangered species were recorded.

### 3.7 Provincially Significant Wetlands and ANSIs

No Provincially Significant Wetlands (PSW) are identified by the MNRF to occur within the subject lands, or within 120 m of the subject lands. The nearest PSW are wetland units of the Six Mile Creek Wetland Complex that are located over 400 m to the east and north east of the subject lands. This EIS has not identified wetland areas to be associated with the subject lands. No Areas of Natural Scientific Interest (ANSI) occur within the local area.

### 3.8 Habitat for Endangered and Threatened Species

As noted in Section 3.5.1 the nearshore for Lake Erie within the boundaries of the subject lands could potentially support adult habitat for the endangered Fowler's Toad. The toad's habitat within the subject lands is limited to a narrow band of sand beach down slope of the NPCA identified lake shore flood and erosion setback.

One young, aged Butternut, an endangered species, was found within the property boundary hedgerow of Black Walnut along the eastern boundary of the subject lands. However, based on exiting conditions, the tree is considered to have been planted along with several Black Walnut which is a close cousin species in the Juglans genus. Endangered Species Act Butternut regulations do not apply to planted landscape trees.



### 3.9 Significant Wildlife Habitat

Under the PPS the identification of Significant Wildlife Habitat is the responsibility of Regional and Local planning authorities. Schedule C of the Niagara Region Official Plan does not specifically identify areas that are considered to represent Significant Wildlife Habitat. In addition, Section 7 Environment of the Niagara Region Official Plan does not provide criteria for the identification of Significant Wildlife Habitat.

For the Town of Fort Erie Official Plan, Section 8.3.1. Significant Natural Areas states that the Town has completed a Natural Areas Inventory that identifies Significant Natural Areas (SNA's), Corridors, and Linkages that should be considered for protection. These Natural Areas include, but are not limited to, Significant Woodlands, Thickets, Meadowlands, Significant Wildlife Habitat Areas, and Environmentally Sensitive Areas and Environmental Corridors and Linkages. It states that Appendix D provides criteria for the identification of Significant Natural Areas. In Appendix D, Criteria 5 Special Features, provides categories for the identification of Significant Wildlife Habitat, including:

- Seasonal Concentration Areas;
- Rare vegetation communities and specialised habitats for wildlife;
- Habitat for species of conservation concern; and
- Animal movement corridors.

Appendix E of the Natural Areas Inventory Report provides more detailed criteria for these four categories as follows:

#### **Seasonal Concentration Areas**

- Winter deer yards.
- Colonial bird nesting sites.
- Waterfowl stopover and staging areas.
- Waterfowl nesting areas.
- Migratory stopover areas for shorebirds and landbirds and butterflies.
- Raptor wintering feeding and roosting areas.
- Wild turkey winter range.
- Turkey vulture summer roosts.
- Bat /reptile hibernacula.
- Bullfrog concentration areas.

#### **Rare vegetation communities and specialized habitats for wildlife**

- Alvars.
- Tall-grass prairies.
- Savannas.
- Rare forest types.
- Great lakes dunes.
- Habitat for area-sensitive species.
- Forests providing a high diversity of habitats.
- Old-growth or mature forest stands.



- Foraging areas with abundant mast.
- Amphibian woodland breeding ponds.
- Turtle nesting habitat.
- Specialized raptor nesting habitat.
- Denning sites for members of the weasel family.
- Areas containing high species or vegetation community diversity.
- Cliffs.
- Seeps and springs.

### **Habitats for Species of Conservation Concern**

- Species identified as nationally endangered or threatened by the Committee on the Status of Endangered Wildlife in Canada, which are not protected in regulation under Ontario's *Endangered Species Act*.
- Species identified as provincially vulnerable based on list of Vulnerable, Threatened, Endangered, Extirpated, or Extinct Species of Ontario that are updated periodically by the OMNR.
- Species that are listed as rare or historical in Ontario based on records kept by the Natural Heritage Information Centre in Peterborough (this includes ranks S1, S2 and S3).
- Species whose populations are known to be experiencing substantial declines in Ontario.
- Species that have a high percentage of their global population in Ontario and are rare or Uncommon in the planning area.
- Species that are rare within the planning area, even though they may not be provincially rare.
- Species that are subject to recovery programs (e.g. the Black Duck Joint Venture of the North American Waterfowl Management Plan).
- Species considered important to the municipality, based on recommendations from the Conservation Advisory Committee.

### **Animal Movement Corridors**

Animal movement corridors are typically elongated, naturally vegetated parts of the landscape. They exist at different scales and frequently link or border natural areas. They may include:

- Riparian zones;
- Shorelines;
- Wetland buffers;
- Stream and river valleys;
- Woodlands;
- Hydro and pipeline corridors;
- Abandoned road and railway allowances; and
- Fencerows and windbreaks.

Based on the three seasons field surveys conducted for this EIS, no seasonal concentration of wildlife as identified by the Town of Fort Erie is associated with the subject lands. No quality waterfowl or shorebird migration habitat is present and no raptor winter finding habitat or roosting habitat is present. The March field survey did not identify a high density of White-tailed Deer tracks or droppings that would



indicate concentrated use by deer as winter habitat. In addition, the Buckthorn thicket community that dominated the subject lands do not provided shelter areas nor support a density of preferred deer winter browse shrub and tree species (Dogwoods, Viburnums, Maple, Birch, White Pine, Eastern White Cedar).

The March survey did not identify raptor stick nests. No significant habitat for species of conservation concern is associated with the cultural thicket vegetation community of the subject lands. The regionally rare Small-flower Agrimony was found to occur. However, as noted the species inhabits shrubby old fields, open woods, and edges and is particularly abundant in the Fort Erie. Therefore, the subject lands are not considered to support Significant Wildlife Habitat based solely on the presence of this one species.

The lakeshore does support an animal movement corridor function and Schedule C for the Town of Fort Erie identifies a potential east-west movement corridor along this section of the Lake Erie Shoreline. No north-south movement corridor is associated with the subject lands due to existing residential development directly north of the subject lands.

### 3.10 Significant Woodland

Section 7.B.1.5 of the Niagara Region Official Plan provides criteria for the identification Environmental Conservation Area – Significant Woodlands as follows:

- Contain threatened or endangered species or species of concern;
- In size, be equal to or greater than:
  - 2 hectares, if located within or overlapping Urban Area Boundaries;
  - 4 hectares, if located outside Urban Areas and north of the Niagara Escarpment; or
  - 10 hectares, if located outside Urban Areas and south of the Escarpment;
- Contain interior woodland habitat at least 100 metres in from the woodland boundaries;
- Contain older growth forest and be 2 hectares or greater in area;
- 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
- Abut or be crossed by a watercourse or water body and be 2 or more hectares in area.

The ECL identifies vegetated areas with <25% tree cover as shrub habitat, and for the subject lands this habitat type was identified as Cultural Thicket (CUT 1) (**Figure 2**). Forests are defined by the ELC as having >60% tree cover. ELC Cultural Woodlands require tree cover that is >35% and <60%. An inventory of live trees for the subject lands in 2017 for a tree preservation plan (**see Appendix E**) found that based on the plot data, there is only an average of four trees per 100 m<sup>2</sup>, and resulting tree density of only 400 trees per hectare. The Niagara Region Tree By-Law NO. 2020-79 defines woodland as a wooded area that supports at least 1000 per hectare. Therefore, the community does not represent a forest or cultural woodland based on the criteria of the ECL or Niagara Region. Historically, the cultural thicket community may have supported a tree cover that would support a woodland designation, and this may be why the area was identified by the Fort Erie Natural Areas Inventory as a deciduous forest ecosite and Environmental Conservation- Woodland >2ha in the Schedules of the Towns Official Plan. However, these designations are no longer supported.



### 3.11 Significant Valleylands

Generally Significant Valleylands are defined as distinctive landforms that have a degree of naturalness, importance of ecological functions, potential for restoration, or historical and cultural values. This EIS has not found valleylands to be associated with subject lands or the adjacent lands.

### 3.12 Niagara Region EPA and ECA

Schedule C – Core Natural Heritage does not show EPA to occur within or directly adjacent to the subject lands. This EIS has identified that the nearshore active beech zone could potentially represent adult habitat for the Endangered Fowler’s Toad, which would represent EPA within the Regions Core Natural Heritage System.

Schedule C identifies the cultural thicket community as ECA, which represents Significant Woodland. As noted in Section 3.10 above, no woodland that is >2ha is currently associated with the subject lands. No feature or function was identified to be associated with the cultural thicket community within the subject lands that would support an ECA designation.

This study supports the identification of the nearshore along Lake Erie as Corridor within the Region’s Core Natural Heritage System.

### 3.13 Town of Fort Erie Environmentally Sensitive or Significant Area

Schedule C Natural Heritage Features identifies Environmentally Sensitive Areas and Significant Natural Areas. No Environmentally Sensitive Area is associated with or adjacent to the subject lands. The lakeshore and nearshore lands of the subject lands is identified as Significant Natural Area and Environmental Corridor. These designation for the shoreline are support by this study.

## 4. Existing Conditions in 2021

Following the completion of the field assessment of the subject lands in 2018, tree preservation plans were prepared in consultation with the Town of Fort Erie in (**see correspondence in Appendix E**) and the removal of dead ash trees was undertaken. Hazard trees were identified by the NPAC forester in accordance with the Town’s Lot Maintenance By-Law #165-08. In addition to the removal of hazardous trees, European Buckthorn was marked for removal throughout the property pursuant to Lot Maintenance By-law #165-08, subsection 4.2.

As a result of the dead tree and Buckthorn removal, the ELC Cultural Thicket Community identified in 2018 was significantly alerted. **Photographs 18 & 19** below present the current condition of the subject lands.





**Photograph 18. Exiting Conditions (May 2021) of the Subject Lands Following the Removal Dead Ash and Buckthorn - Looking Southeast from Thunder Bay Road**



**Photograph 19. Exiting Conditions (May 2021) of the Subject Lands Following the Removal Dead Ash and Buckthorn - Looking West to Burleigh Road South from Residence Driveway**



## 5. Proposed Draft Plan of Subdivision

### 5.1 Proposed Development Plan

The general elements of the proposed draft plan of subdivision are presented on **Figure 3. Appendix F** presents the plan in more detail. These should be reviewed in conjunction with the following text.

The draft plan proposes forty-one (41) lots for Residential development (single detached dwellings). Lots 1 through 9 will have frontage and access along Thunder Bay Road, and the remainder of the lots (Lots 10 through 41) will have frontage along an internal crescent street (Street "A") that will have two entrances, one off Thunder Bay Road and one off Burleigh Road South.

Block 42 is a minimum 16 m wide corridor through which the watercourse will be maintained in its present location. The plan identifies Blocks 43 and 45 as Park Blocks. Block 44 represents the shoreline of Lake Erie, from the normal waters edge, upslope to the NPCA shore flood and erosion setback. Block 42 will be provided with an Environmental Protection (EP) Zone through the related Zoning By-law Amendment application and Block 44 will retain its existing Hazard (H) Zoning. Both lots will be transferred into municipal ownership, along with Blocks 43 & 45, for the creation of public access to the Lakefront and long term environmental protection of identified features.

Water and sanitary sewer will be located within the street network and will link to existing municipal services. Stormwater will be collected through a street curb and gutter system and will be directed to the existing municipal stormwater system along Thunder Bay Road. There is no Stormwater Block associated with the plan of subdivision, as quantity and quality control will be provided through an oil/grit separator and orifice control.

Due to the very flat relief associated with the subject lands, limited grading works will be required for the development. It is anticipated that the street network and servicing infrastructure will be completed in one construction season. The construction of the homes may occur over a number of years.

### 5.2 Setbacks to Natural Heritage Features

The watercourse that crosses the subject lands will be retained in its existing location within Block 42, which will be zoned as Environmental Protection (EP). The EP Zone will be applied to a minimum 16 metre wide Block that will provide a minimum setback of 10 metres from the centreline of the channel to the rear of Lots 24-35 and Block 45.

The lands downslope of the NPCA identified lake shore flood and erosion setback will remain Zoned as Hazard (H). No upslope buffer to the NPCA setback is identified, as these lands are to be transferred into the ownership of the Town of Fort Erie for public access and park land purposes.





## Legend

- Subject Property
- Proposed Development
- Watercourse

## Proposed Development

## Figure 3

3285 Thunder Bay Road, TIPP



**BEACON**  
ENVIRONMENTAL

Project: 218011.1

Last Revised: November, 2020

Client: Westwind Niagara  
Developments Ltd.

Prepared by: DU  
Checked by: RH



1:2,250

0 25 50 m

Contains information licensed under the Open Government License—  
Ontario Orthoimagery Baselayer: FBS Niagara 2018



## 6. Environmental Impact Assessment and Mitigation

The following section details the potential impacts of the proposed development to the natural heritage features and function associated with the subject lands based on current 2021 conditions. Mitigation measures are identified that will reduce the potential impacts.

### 6.1 Assessment of Potential Impacts for the Proposed Development Plan

#### 6.1.1 *Direct Impacts of the Proposed Development Plan*

As shown on **Figure 3**, the proposed development of the land will result in the clearing of a 3.2 ha of lands south of Thunder Bay Road that currently supports a park like environment of scattered trees and sparse ground cover. No significant natural heritage features or functions are associated with this community. Block 42, which contains the watercourse, will be zoned EP and will retain the existing tree and shrub vegetation (**see Photographs 20 & 21**) within the watercourse corridor. No crossing or construction works are proposed to occur within the watercourse corridor through the Draft Plan and Zoning By-law Amendment applications.



**Photograph 20. Exiting (May 2021) Vegetation Within the 15 m Corridor Along the Watercourse Within the Subject Lands - Looking East from Burleigh Road South**





**Photograph 21. Exiting (May 2021) Vegetation Within the 30 m Corridor Along the Watercourse Within the Subject Lands - Looking East**

Blocks 43 and 45, which will be developed as public park, currently supports residential lawn and landscaping and will not result in a directly impact to natural heritage features. No development along the lake shore is proposed and Block 44, which contains the shoreline of the subject lands, will remain zoned as Hazard (H). Therefore, no direct impact to the shoreline or near shore fish habitat will occur as a result of the proposed development of the subject lands. Any proposed future development downslope of the NPCA Natural Hazards lands will require review and approval from the NPCA.

#### **6.1.1.1** *Impacts to Fowler's Toad Habitat*

Generally, habitat for the Fowler's Toad is restricted to sand dune/beach nearshore lands along the shoreline of Lake Erie. The regulated habitat for this species pursuant to the *Endangered Species Act* is defined in Section 27.0.2 Fowler's Toad of Ontario Regulation 242/08. For the Niagara area the habitat regulation for Fowler's Toad protects:

- Any parts of wetlands, ponds or other bodies of water, including vernal or other temporary pools that are being used for breeding, egg laying or tadpole development as well as the 30 metres around such areas;
- Natural or man-made hibernation sites;
- Suitable habitat is protected up to a distance of 150 metres up and down the shoreline from known occurrences of Fowler's Toad and up to 300 metres inland from the shoreline;
- The dispersal corridor along the water's edge, where the distance between two occupied areas is less than one kilometre: and



- Naturally occurring areas used by Fowler's Toad to migrate between breeding areas, hibernation sites and/or seasonally used beach areas, where at least two such features are within 1 km of each other.

The above areas are protected until five consecutive years of non-use by the toad is documented. Suitable habitats for adult Fowler's Toad include open, shrub, or treed sand habitat, or pebble beaches, sand dunes, and sand barrens; marshes; ponds; other bodies of water, including vernal or other temporary pools; or rock shoals.

Assessment undertaken for this EIS has established that no breeding habitat is associated with the lakeshore environment and no inland breeding ponds or wetlands up to 300 m upslope of the shoreline are associated with the subject lands. Within the subject lands general habitat for toads is restricted to a narrow (20 – 30 m) wide strip of beech along and the lakeshore. For the subject lands a low rock wall defines the upslope limit of the habitat (**Photograph 22**). The habitat for the toad lies wholly within the NPCA identified lake shore flood and erosion setback which is identified as Hazard Lands. These lands are located in Block 44, which will remain zoned as Hazard (H) and be dedicated to the Town. Also as noted any proposed future development downslope of the Hazard Lands will require review and approval from the NPCA. Therefore, no direct impact to the regulated habitat of Fowler's Toad will occur, including impacts to the migration corridor along the beech.



**Photograph 22. Lawn and Low Rock Wall Representing Upslope Limit of Fowler's Toad Habitat along the Lake Shore**

### **6.1.2 Mitigation for Direct Impacts**

No mitigation measures are required with respect to potential direct impacts.



## 6.2 Mitigation for Potential Indirect Impacts

Based on the proposed development and site conditions the following indirect impacts have the potential to occur during the construction phase of the development:

- Impacts on wildlife during site clearing;
- Inadvertent impacts on adult Fowler's Toad;
- Impacts on vegetation within the watercourse corridor EP Block; and
- Transport of sediment which could potentially impact on fish habitat.

These potential impacts can be mitigated by standard construction mitigation measures which are detailed below.

### **Construction Exclusion Filter Fabric and Paige Wire Fencing**

As noted, the shoreline associated with the subject lands could be utilized as general habitat by the endangered Fowler's Toad. The toad is typically associated with the near shore environment, and no development is proposed along the shoreline, therefore the potential for inadvertent mortality of individual toads is considered to be very low. Nevertheless to ensure that site grading or heavy equipment does not impose on the nearshore beach environment, and protect adult Fowler's Toads, for the duration of the construction phase paige wire fencing with filter fabric is to be installed along the up slope limit of the Hazard Lands. Fencing should be installed by April 1<sup>st</sup> of the first year of construction and maintained during the entire development process. The fencing should be removed only when development work is completed.

### **Sediment and Erosion Control**

For the protection against erosion and sediment transport and potential down stream impacts to fish habitat within the watercourse and Lake Erie shoreline an Erosion and Sediment Control Plan is required which is to be approved by the NPCA. The plan should be developed based on the Erosion & Sediment Control Guidelines for Urban Construction (2006) for the Greater Golden Horseshoe Area Conservation Authorities.

### **Timing of Site Clearing**

For the protection of nesting migratory birds as required by the federal *Migratory Bird Convention Act* and other wildlife such as bats, the clearing of vegetation (trees and shrubs) should not be undertaken from April 1<sup>st</sup> through to the end of August.

## 6.3 Assessment of Residual Impacts to Natural Heritage

Based on current conditions of the subject lands the area upslope of the lakeshore does not support natural vegetation communities and is comprised of landscaped lawn, and an open parkland vegetation that supports common flora and urban adapted fauna. Therefore, the development of these lands will not result in a residual impact to natural heritage features or functions. The watercourse that flows



through the subject lands is assessed to support Type 3 Marginal Fish Habitat. For the development the watercourse will be retained and located within a naturally vegetated corridor. In addition, no development or in waterworks will occur along the shore of Lake Erie. Construction mitigation measures have been identified to address downstream short- and long-term impacts to fish habitat within the watercourse and shore of Lake Erie. Based on these factors, no significant residual impact to fish habitat will occur.

The Fowler's Toad habitat along the nearshore of Lake Erie within the subject lands will be protected in its entirety within a Hazard Lands designation, and construction mitigation measures have been identified to prevent indirect impacts. No development will occur along the shoreline and therefore no impact to the existing movement corridor function of the nearshore will occur. Based on these factors, no significant residual impact to the shoreline or Fowler's Toad habitat will occur.

## 6.4 Cumulative Impacts

The assessment of cumulative impacts as a result of the urbanization of rural areas within the Urban Boundary of the Town of Fort Erie or the Niagara Region is outside the scope of this EIS. At the local level the subject lands lie within the Town's Urban Boundary, in the Ridgeway/Thunder Bay Neighbourhood, where residential development has been occurring since the 1950's. All lands within 1 km of the subject lands support a street network and single-family homes. As well, existing residential development occurs along the Lake Erie lakeshore to both the east and west of the existing residence associated with the subject lands. The proposed development will utilize existing roads, water, sanitary and stormwater services and as a result will not directly support additional development in the local area. Therefore, with respect to potential cumulative impacts no future development will be directly linked to the proposed development of the subject lands. In addition, no works are proposed along the shoreline of Lake Erie, and therefore the proposed development will not contribute the cumulative impacts that have been occurring along shoreline.

## 7. Policy Conformity

### 7.1 Provincial Policy Statement

The development policies of the current Official Plans of the Niagara Region and Town of Fort Erie are in conformity with Section 2.1 Natural Heritage of the Provincial Policy Statement (PPS, 2020), which is directed at a province wide protection and management of natural heritage resources. Therefore, conformity with natural heritage policies of these Official Plans ensures conformity with the PPS.

### 7.2 Niagara Region and Town of Fort Erie Natural Heritage Policies

#### 7.2.1 Environmental Protection Area (EPA)

The MNRF has not identified Areas of Natural and Scientific Interest (ANSI) to occur within or adjacent to the subject lands. No Provincially Significant Wetlands (PSW) are identified by the MNRF to occur within the subject lands, or within 120 m of the subject lands. The nearest PSW are wetland units of the



Six Mile Creek Wetland Complex that are located over 400 m to the east and north east of the subject lands.

The Lake Erie nearshore associated with the subject lands is assumed to provide habitat for the Endangered Fowler's Toad and therefore would support an EP Zoning or Environmental Protection designation in the Regional and Town Official Plans. As the Hazard (H) Zone already prohibits development, and that Block 44 will be conveyed into the ownership of the Town of Fort Erie, the Habitat is considered to be sufficiently protected.

Based the above, the proposed development plan is in conformity with the Town of Fort Erie and Niagara Region's Natural Heritage Policies for EPA.

### **7.2.2 Environmental Conservation Area (ECA) and Corridor**

ECA-Significant Woodland was identified by the Region and Town of Fort Erie to occur on most of the subject lands. However, this study determined that no woodland community that is >2ha in size occurs within the subject lands. This areas currently supports a parkland environment.

The Town identifies the lakeshore to support Locally Significant Natural Area. In addition, the shoreline has been identified to support an east-west corridor function along the Lake. All these features and function lie down slope for the Natural Hazard lands (furthest landward limit of the flooding hazard, erosion hazard, wave uprush and dynamic beach hazard limit), an area where no development is proposed.

Based the above, the proposed development plan is in conformity with the Town of Fort Erie and Niagara Region's Natural Heritage Policies for ECA.

### **7.2.3 Fish Habitat**

The watercourse associated with subject lands has been identified by this EIS to represent Type 3 Marginal Fish Habitat. No alteration or realignment of the watercourse will occur. Both the Region and Town policies identify the need for a minimum 15 m buffer to important or marginal fish habitat. This buffer may be further reduced based on study. With the establishment of Block 42, a minimum 10 metre m buffer from the watercourse to the proposed residential development area (Lots 24-35 & Block 45) to the watercourse will be provided. The nearshore of Lake Erie is considered to represent Type 2 important fish habitat. No development will occur along the shoreline and the shoreline lands will be designated EPA. In addition, with respect to indirect impacts, this EIS has identified the need for the development of an Erosion and Sediment Control Plan to mitigate off site down stream impacts to fish and fish habitat.

Based on the above, the proposed development plan is in conformity with the Region's and Town's policies for the protection of fish habitat and the regulations of the *federal Fisheries Act*.

### **7.2.4 Endangered and Threatened Species**

The nearshore of Lake Erie nearshore associated with the subject lands is assumed to provide habitat for the Endangered Fowler's Toad. For the Niagara Region the regulated habitat for this species pursuant to the *Endangered Species Act* is defined in Section 27.0.2 Fowler's Toad of Ontario



Regulation 242/08. Based on these habitat regulations within the subject lands the habitat for the toad lies wholly down slope of the NPCA identified lake shore flood and erosion setback which is identified as Hazard Lands and no development is proposed down slope of the setback. In addition, construction mitigation measures have been identified to protect individual toads and the regulated habitat along the lakeshore.

One Butternut tree, a species listed as endangered, was found to occur in a hedgerow along the eastern boundary of the subject lands. The tree is associated with a row of planted Black Walnut, a close cousin of Butternut, and therefore the Butternut in the hedgerow is considered to have been planted and not naturally occurring. As a result, the regulations of the ESA for Butternut do not apply. Nevertheless, the tree will be retained within Block 43, which will be conveyed to the Town of Fort Erie for parkland purposes.

Based on the above the development plan is in conformity with the Region's and Town's policies for the protection habitat of the endangered and threatened species and the regulations of the *Endangered Species Act*.

### 7.3 Niagara Peninsula Conservation Authority

With respect to NPCA regulations and development policies pursuant to Ontario Regulation 155/06, the watercourse that traverses the subject lands, and the Lake Erie shoreline are regulated. No alteration to the watercourse will occur and Block 42 will be zoned as Environmental Protection (EP), and conveyed to the Town of Fort Erie. A minimum setback of 10 metres from the watercourse to the proposed lots will be provided. With respect to the Great Lakes and Niagara River Shoreline Hazard development policies, no development will occur along the Lake Erie shoreline downslope of the NPCA identified shore flood and erosion setback. However, as the development will occur on lands that are regulated by the NPCA this EIS identifies the need for a NPCA review of permit requirements pursuant to *Ontario Regulation 155/06* for the proposed development adjacent to, or within, the watercourse and lands adjacent to the shoreline of Lake Erie pursuant to *Ontario Regulation 155/06*.

Based on the above, the proposed development plan is in conformity with the NPCA planning policies pursuant to the regulations *Ontario Regulation 155/06*.

## 8. Summary

This EIS has determined that with the implementation of identified mitigation measures no significant negative impact to the natural features or functions of the Natural Heritage System of the Niagara Region or the Town of Fort Erie will occur as a result of the proposed development plan. This study has demonstrated that the proposed plan of subdivision is in conformity with the Official Plans and Natural Heritage System policies of the Town of Fort Erie, the Niagara Region, and the NPCA, as well as the Province's Natural Heritage Policies under the Provincial Policy Statement (PPS 2014). The EIS has identified the need for a NPCA review of permit requirements for the proposed development with respect to lands that are regulated adjacent to the watercourse and shoreline of Lake Erie pursuant to *Ontario Regulation 155/06*.



## 9. Recommendation

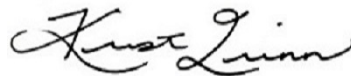
This EIS concludes that with the implementation of the recommended mitigation measures the proposed draft plan to be located at 3285 Thunder Bay Road, in the Town of Fort Erie is supported with respect to maintaining the natural heritage system of the Town of Fort Erie, Niagara Region and the Province.

Report prepared by:  
**Beacon Environmental**



Ron Huizer, B. Sc.  
Principal, Senior Ecologist

Report reviewed by:  
**Beacon Environmental**



Kristi Quinn, B.E.S., Cert. Env. Assessment  
Principal, Senior Environmental Planner



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# **Appendix A**

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## **Agency Consultation**



## Ron Huizer

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**From:** Ron Huizer  
**Sent:** April 13, 2018 12:10 PM  
**To:** 'pat.busnello@niagararegion.ca'  
**Cc:** 'craig.rohe@niagararegion.ca'  
**Subject:** FW: RE; Request for EIS Scope 3285 Thunder Bay Road, Fort Erie  
**Attachments:** 218011\_Figure01\_SiteLocation\_20180117.pdf

Can you please provide an EIS Scope for a plan of subdivision for lands located at 3285 Thunder Bay Road, Town of Fort Erie— see attached map for location.

Thank You.

*Ron Huizer, B.Sc. (Hons) / Principal, Senior Ecologist*  
**BEACON ENVIRONMENTAL**  
373 Woolwich Street, Guelph, Ontario, N1H 3W4  
Cell: 416.729.0544  
[www.beaconenviro.com](http://www.beaconenviro.com)



## Ron Huizer

---

**From:** Ron Huizer  
**Sent:** April 13, 2018 12:07 PM  
**To:** 'esa.guelph@ontario.ca'  
**Subject:** RE; Information request 3285 Thunder Bay Road, Fort Erie  
**Attachments:** Guelph\_NH\_InfoRequest\_FillableForm.pdf; 218011\_Figure01\_SiteLocation\_20180117.pdf

See Attached

*Ron Huizer, B.Sc. (Hons) / Principal, Senior Ecologist*

**BEACON ENVIRONMENTAL**

373 Woolwich Street, Guelph, Ontario, N1H 3W4

Cell: 416.729.0544

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# Natural Heritage Information Request Form – Guelph District MNRF *(updated: Dec. 2017)*

Please be advised that failure to complete this form in its entirety may result in delays in receiving a response from MNRF.

Forward the completed form to: [esa.guelph@ontario.ca](mailto:esa.guelph@ontario.ca)

Consultant Name:	<input type="text"/>
Consultant Company:	<input type="text"/>
Email Address:	<input type="text"/>
Phone Number:	<input type="text"/>
Proponent Name:	<input type="text"/>
Proponent Company:	<input type="text"/>

Project Name:	<input type="text"/>
Property Address:	<input type="text"/>
Township/Municipality:	<input type="text"/>
Lot & Concession:	<input type="text"/>
UTM Coordinates: (NAD83)	<input type="text"/> <input type="text"/>
	Easting (X) Northing (Y)

Brief Description  
of Undertaking:

Are any municipal planning, provincial or other approvals required for this project? (Check all that apply)

Aggregate Resources Act

Planning Act

Public Lands Act

Lakes and Rivers Improvement Act

Drainage Act

Niagara Escarpment Planning & Development Act

Environmental Protection Act

Other (specify)

Have you previously contacted someone at MNRF for information on this site?

Yes

No

If yes, when and who?

*Provide a map (aerial photo preferred) of accurate scale to illustrate footprint/study area of the proposed activity in relation to the surrounding landscape (include property boundaries, roads, waterbodies, natural features etc.).*

**REQUEST - I would like to request the following information for the property identified above:**

Wetland Evaluation File  
(provide name of wetland if known)

Area of Natural and Scientific Interest (ANSI) Checksheet  
(provide name of ANSI if known)

Fish Dot Information  
(fish and other aquatic species found in a particular  
area of a watercourse)

Species at Risk

Other (specify)

In-Water Work Timing Window



07/13/2018

Ron Huizer,  
BEACON ENVIRONMENTAL  
373 Woolwich Street, Guelph, Ontario, N1H 3W4  
Cell: 416.729.0544  
www.beaconenviro.com

**RE: Thunder Bay Road Plan of Subdivision  
3285 Thunder Bay Road, Town of Fort Erie, ON**

Dear Mr. Huizer,

The Ministry of Natural Resources and Forestry (MNRF), Guelph District – Vineland Field Office, has reviewed the natural heritage information available for the above-noted property and surrounding area (the “study area”), and offers the following comments:

### **WETLANDS**

The Ministry notes that there are no provincially significant wetlands (PSWs) or evaluated non-provincially significant wetlands identified within the study area.

### **AREAS OF NATURAL AND SCIENTIFIC INTEREST**

The Ministry notes that there are no Areas of Natural and Scientific Interest (ANSIs) identified within the study area.

### **FISHERIES**

The MNRF does not have any detailed fisheries information for the study area.



## **SPECIES AT RISK**

There are records in the area for the following species at risk (SAR):

- Fowler's Toad (*Anaxyrus fowleri*) (Endangered)
- Barn Swallow (*Hirundo rustica*) (Threatened)
- Wood Thrush (*Hylocichla mustelina*) (Special Concern)
- Red-headed Woodpecker (*Melanerpes erythrocephalus*) (Special Concern)
- White Wood Aster (*Eurybia divaricata*) (Threatened)
- Eastern Wood-Pewee (*Contopus virens*) (Special Concern)
- Canada Warbler (*Wilsonia Canadensis*) (Special Concern)
- Eastern Prickly Pear Cactus (*Opuntia humifusa*) (Endangered)
- Common Hoptree (*Ptelea trifoliata*) (Special Concern)
- West Virginia White (*Pieris virginianensis*) (Special Concern)
- Butternut (*Juglans cinerea*) (Endangered)

Threatened and Endangered Species receive both individual species and habitat protection under the *Endangered Species Act, 2007* (ESA). SAR habitat prescribed under regulation is listed in Ont. Reg. 242/08 (<https://www.ontario.ca/laws/regulation/080242>).

Please be advised that because the province has not been surveyed comprehensively for the presence of listed species, the absence of a record does not necessarily indicate the absence of SAR from an area. To determine the presence of SAR for a given study area, the District's recommended approach is as follows:

### **I. Habitat Inventory**

The Ministry recommends undertaking a comprehensive botanical inventory of the entire area that may be subject to direct and indirect impacts from the proposed activity. The vegetation communities should be classified as per the "Ecological Land Classification (ELC) for Southern Ontario" system, to either the "Ecosite" or "Vegetation Type" level. For aquatic habitats in the study area, we recommend that you collect data on the physical characteristics of the waterbodies and inventory the riparian zone vegetation, so that these habitats can be classified as per the Aquatic Ecosites described in the ELC manual.

### **II. Potential SAR within the Study Area**

A list of SAR that have the potential to occur in the area can be produced by cross-referencing the ecosites described during the habitat inventory with the habitat descriptions of SAR known to occur within the planning area. The list of SAR known to occur in **the Town of Fort Erie** is attached for your reference. The species-specific COSEWIC status reports (<https://www.canada.ca/en/environment-climate-change/services/committee-status-endangered-wildlife.html>) are a good source of information on habitat needs and will be helpful in determining the suitability of the study areas ecosites for a given species.

Please note that the Species at Risk in Ontario (SARO) List is a living document that is periodically amended as a result of species assessment and re-assessments conducted by the Committee on the Status of Species at Risk in Ontario (COSSARO). The SARO List can be accessed on the following webpage: <https://www.ontario.ca/environment-and-energy/species-risk-ontario-list>.



COSSARO also maintains a list of species to be assessed in the future. It is recommended that you take COSSARO's list of anticipated assessments into consideration, especially when the proposed start date of an activity is more than 6 months away, or the project will be undertaken over a period greater than 6 months. This list can be viewed at: <https://www.ontario.ca/page/how-comment-protecting-species-risk>.

### III. SAR Surveys

The Ministry recommends that each potential SAR identified under Step II is surveyed for, regardless of whether or not the species has been previously recorded in the area. The survey report should describe how each SAR was surveyed for, and provide a rationale for why certain species were not afforded a survey (e.g., habitat within the study area is not suitable for a specific SAR). Please note that some targeted surveys may require provincial authorizations (e.g., ESA permit or Wildlife Scientific Collector's Permit).

### **ADDITIONAL INFORMATION**

Natural heritage features (e.g. wetlands, ANSIs) can be viewed for a given study area through the MNRF's "Make a Map" web application: <https://www.ontario.ca/page/make-natural-heritage-area-map>. Digital data layers can be obtained through the Land Information Ontario (LIO) geowarehouse <https://www.ontario.ca/page/land-information-ontario>.

Additionally, the MNRF recommends contacting the municipality and the conservation authority to determine if they have any additional information or records of interest for the study area.

Please be advised that it is your responsibility to comply with all other relevant provincial or federal legislation, municipal by-laws, other MNRF approvals or required approvals from other agencies. If your investigations reveal the presence of Threatened or Endangered species, please contact the MNRF at [esa.guelph@ontario.ca](mailto:esa.guelph@ontario.ca) for further direction.

I trust that the above information is of assistance.

Sincerely,



David Denyes  
Management Biologist



# Fort Erie

Date Generated:

July 12, 2018

Amphibian	SARO	Protection	Habitat Information	Timing Windows	Survey Protocol
<b>Fowler's Toad</b> <i>Anaxyrus fowleri</i>	END	Species Protection and Habitat Regulation	Generally found in sand dunes and lakeshore habitats; found in shallow areas of permanent water bodies; only occurs on the shores of Lake Erie	Active: April – October Hibernates: October – April Breeding: May - July	Contact MNRF Guelph District Management Biologist to obtain a copy of the protocol

Bird	SARO	Protection	Habitat Information	Timing Windows	Survey Protocol
<b>Acadian Flycatcher</b> <i>Empidonax virescens</i>	END	Species Protection and General Habitat Protection	Generally requires large areas of mature, undisturbed forest; avoids the forest edge; often found in well wooded swamps and ravines.	Migrate South before Winter	Follow Breeding Bird Survey Protocol

<b>Bank Swallow</b> <i>Riparia riparia</i>	THR	Species Protection and General Habitat Protection	It nests in a wide variety of naturally and anthropogenically created vertical banks, which often erode and change over time including aggregate pits and the shores of large lakes and rivers.	Migrate South before Winter	Follow Breeding Bird Survey Protocol. Colony and Roost information should be recorded and submitted using Bird Studies Canada's Ontario Bank Swallow Project data forms (2010).
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<b>Barn Swallow</b> <i>Hirundo rustica</i>	THR	Species Protection and General Habitat Protection	Prefers farmland; lake/river shorelines; wooded clearings; urban populated areas; rocky cliffs; and wetlands. They nest inside or outside buildings; under bridges and in road culverts; on rock faces and in caves etc.	Migrate South before Winter	Follow Breeding Bird Survey Protocol
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<b>Bobolink</b> <i>Dolichonyx oryzivorus</i>	THR	Species Protection and General Habitat Protection	Generally prefers open grasslands and hay fields. In migration and in winter uses freshwater marshes and grasslands	Migrate South for the Winter	Contact MNR Guelph District Management Biologist to obtain a copy of the protocol
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<b>Cerulean Warbler</b> <i>Setophaga cerulea</i>	THR	Species Protection and General Habitat Protection	Generally found in mature deciduous forests with an open understorey; also nests in older, second-growth deciduous forests.	Migrate South for the Winter	Follow Breeding Bird Survey Protocol
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<b>Chimney Swift</b> <i>Chaetura pelagica</i>	THR	Species Protection and General Habitat Protection	Historically found in deciduous and coniferous, usually wet forest types, all with a well developed, dense shrub layer; now most are found in urban areas in large uncapped chimneys	Nesting - Late April to Mid-May Migrate South in September or Early October	Chimney Swift Monitoring Protocol. Bird Studies Canada, March 2009
<b>Common Nighthawk</b> <i>Chordeiles minor</i>	SC	N/A	Generally prefer open, vegetation-free habitats, including dunes, beaches, recently harvested forests, burnt-over areas, logged areas, rocky outcrops, rocky barrens, grasslands, pastures, peat bogs, marshes, lakeshores, and river banks. This species also inhabits mixed and coniferous forests. Can also be found in urban areas (nest on flat roof-tops).	Migrate South for the Winter	Contact MNR Guelph District Management Biologist to obtain a copy of the protocol
<b>Eastern Meadowlark</b> <i>Sturnella magna</i>	THR	Species Protection and General Habitat Protection	Generally prefers grassy pastures, meadows and hay fields. Nests are always on the ground and usually hidden in or under grass clumps.	Migrate South for the Winter	Contact MNR Guelph District Management Biologist to obtain a copy of the protocol
<b>Eastern Wood-Pewee</b> <i>Contopus virens</i>	SC	N/A	Associated with deciduous and mixed forests. Within mature and intermediate age stands it prefers areas with little understory vegetation as well as forest clearings and edges.	Migrate South for the Winter	Follow Breeding Bird Survey Protocol
<b>King Rail</b> <i>Rallus elegans</i>	END	Species Protection and General Habitat Protection	Generally this species requires large marshes with open shallow water that merges with shrubby areas	Breed from Late April to mid-May Migrate South for the Winter	Follow Marsh Monitoring Protocol.
<b>Northern Bobwhite</b> <i>Colinus virginianus</i>	END	Species Protection and General Habitat Protection	Generally inhabits a variety of edge and grassland type - habitats including non-intensively farmed agricultural lands.	Active Year Round	Follow Breeding Bird Survey Protocol



<b>Prothonotary Warbler</b> <i>Protonotaria citrea</i>	END	Species Protection and General Habitat Protection	Generally found in the dead trees of flooded woodlands or deciduous swamp forests; Carolinia Zone	Migrate South for the Winter Eggs are laid from Late May - Early July	Follow Breeding Bird Survey Protocol
<b>Red-Headed Woodpecker</b> <i>Melanerpes erythrocephalus</i>	SC	N/A	Generally prefer open oak and beech forests, grasslands, forest edges, orchards, pastures, riparian forests, roadsides, urban parks, golf courses, cemeteries, as well as along beaver ponds and brooks	Active from May to September	Follow Breeding Bird Survey Protocol
<b>Short-eared Owl</b> <i>Asio flammeus</i>	SC	N/A	Generally prefers a wide variety of open habitats, including grasslands, peat bogs, marshes, sand-sage concentrations, old pastures and agricultural fields	Active Year Round	Contact MNRF Guelph District Management Biologist to obtain a copy of the protocol
<b>Wood Thrush</b> <i>Hylocichla mustelina</i>	SC	N/A	Nests mainly in second-growth and mature deciduous and mixed forests, with saplings and well-developed understory layers. Prefers large forest mosaics, but may also nest in small forest fragments.	Migrate South for the Winter Arrive in Ontario in mid to late spring	Follow Breeding Bird Survey Protocol
<b>Yellow-breasted Chat</b> <i>Icteria virens</i>	END	Species Protection and General Habitat Protection	Generally prefer dense thickets around wood edges, riparian areas, and in overgrown clearings	Migrate South for the Winter Arrive in Ontario Early May	Follow Breeding Bird Survey Protocol
<b>Fish</b>	<b>SARO</b>	<b>Protection</b>	<b>Habitat Information</b>	<b>Timing Windows</b>	<b>Survey Protocol</b>
<b>Grass Pickerel</b> <i>Esox americanus vermiculatus</i>	SC	N/A	Generally occur in wetlands with warm, shallow water and an abundance of aquatic plants; Occur in the St. Lawrence River, Lake Ontario, Lake Erie, and Lake Huron	Spawn from late March to early May	For information please contact your local MNRF office, CA and/or DFO
<b>Lake Chubsucker</b> <i>Erimyzon sucetta</i>	THR	Species Protection and General Habitat Protection	Generally prefer marshes, wetlands and lakes with clear, still waters and abundant aquatic plants	Active from Late April to June	Electrofishing For information please contact your local MNRF office, CA and/or DFO



Insect	SARO	Protection	Habitat Information	Timing Windows	Survey Protocol
<b>Monarch Butterfly</b>  <i>Danaus plexippus</i>	SC	N/A	Exist primarily wherever milkweed and wildflowers exist; abandoned farmland, along roadsides, and other open spaces	Usually migrate south in late September and October	Watch for adults along roadsides and in open fields. Caterpillars feed on milkweeds: Common milkweed grows in open disturbed habitats (fields, roadsides, etc) and swamp milkweed grows in wet habitats (along streams, lakes, marshes)  Adults can be spotted from a distance; caterpillars must be looked for carefully on the host plant.
<b>Rusty-patched Bumble Bee</b>  <i>Bombus affinis</i>	END	Species Protection and General Habitat Protection	Generally inhabits a range of diverse habitats including mixed farmland, sand dunes, marshes, urban and wooded areas. It usually nests underground in abandoned rodent burrows	Active from early Spring to late Fall	Contact MNRF Guelph District Management Biologist to obtain a copy of the protocol
<b>West Virginia White</b>  <i>Pieris virginiensis</i>	SC	N/A	Generally prefer moist, deciduous woodlands. The larvae feed only on the leaves of the two-leaved toothwort (Cardamine diphylla), which is a small, spring-blooming plant of the forest floor.	Adult butterfly emerges from pupa in late March; flies only in April and May	Watch for adults within moist, deciduous woodlands  Caterpillars feed on the two-leaved toothwort: Toothwort grows in damp, open, rich hardwood woodlands and blooms from April to June.  Adults can be spotted from a distance; caterpillars must be searched for carefully by checking host plant
Mammal	SARO	Protection	Habitat Information	Timing Windows	Survey Protocol
<b>Eastern Small-footed Myotis</b>  <i>Myotis leibii</i>	END	Species Protection and General Habitat Protection	Overwintering habitat: Caves and mines that remain above 0 degrees Celsius  Maternal Roosts: primarily under loose rocks on exposed rock outcrops, crevices and cliffs, and occasionally in buildings, under bridges and highway overpasses and under tree bark.	Hibernates in caves and mines during winter	Contact MNRF Guelph District Management Biologist to obtain a copy of the protocol



<b>Little Brown Myotis</b>  <i>Myotis lucifugus</i>	END	Species Protection and General Habitat Protection	Overwintering habitat: Caves and mines that remain above 0 degrees Celsius  Maternal Roosts: Often associated with buildings (attics, barns etc.). Occasionally found in trees (25-44 cm dbh).	Hibernates during winter	Contact MNRF Guelph District Management Biologist to obtain a copy of the protocol
<b>Northern Myotis</b>  <i>Myotis septentrionalis</i>	END	Species Protection and General Habitat Protection	Overwintering habitat: Caves and mines that remain above 0 degrees Celsius  Maternal Roosts: Often associated with cavities of large diameter trees (25-44 cm dbh). Occasionally found in structures (attics, barns etc.)	Hibernates during winter	Contact MNRF Guelph District Management Biologist to obtain a copy of the protocol
<b>Tri-colored Bat</b>  <i>Perimyotis subflavus</i>	END	Species Protection and General Habitat Protection	Overwintering habitat: Caves and mines that remain above 0 degrees Celsius  Maternal Roosts: Can be in trees or dead clusters of leaves or arboreal lichens on trees. May also use barns or similar structures.	Hibernates during winter	Contact MNRF Guelph District Management Biologist to obtain a copy of the protocol

<b>Woodland Vole</b>  <i>Microtus pinetorum</i>	SC	N/A	Generally associated with deciduous forests in areas of soft, friable, often sandy soil beneath deep humus, where it can burrow easily.	Active Year Round	Contact MNRF Guelph District Management Biologist to obtain a copy of the protocol
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Plant	SARO	Protection	Habitat Information	Timing Windows	Survey Protocol
<b>American Ginseng</b>  <i>Panax quinquefolius</i>	END	Species Protection and General Habitat Protection	Grows in rich, moist, undisturbed and relatively mature deciduous woods in areas of neutral soil (such as over limestone or marble bedrock).	Flowering begins in June and continues until August The fruit develop from July to August and ripen in August and September	Walk slowly and systematically in grid fashion, pausing to scan for plants every 5 meters Use a plant field guide to distinguish from similar species



<b>Butternut</b>  <i>Juglans cinerea</i>	END	Species Protection and General Habitat Protection	Generally grows in rich, moist, and well-drained soils often found along streams. It may also be found on well-drained gravel sites, especially those made up of limestone. It is also found, though seldomly, on dry, rocky and sterile soils. In Ontario, the Butternut generally grows alone or in small groups in deciduous forests as well as in hedgerows	Flowers from April to June. Fruits reach maturity during the month of September or October	Walk slowly and systematically in grid fashion through suitable habitat pausing every 30 meters for a detailed scan of trees within sight. Areas with dense foliage or many saplings will require a more intensive survey to detect sapling butternut. Use Butternut Health Assessment Protocol if planning on removing trees.
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<b>Common Hoptree</b>  <i>Ptelea trifoliata</i>	SC	N/A	Generally grows in sandy soils in areas with a lot of natural disturbance - such as the outer edge of shoreline vegetation, sand spits, and sand points.	Flowering occurs in early summer Fruiting occurs in July	Walk slowly and systematically in grid fashion, pausing to scan for plants every 5 meters Use a plant field guide to distinguish from similar species
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<b>Eastern Flowering Dogwood</b>  <i>Cornus florida</i>	END	Species Protection and Habitat Regulation	Generally grows in deciduous and mixed forests, in the drier areas of its habitat, although it is occasionally found in slightly moist environments; Also grows around edges and hedgerows	Flowering occurs in mid-May, just as the leaves begin to develop. Fruit turns red at the end of summer.	Walk slowly and systematically in grid fashion, pausing to scan for plants every 5 meters Use a plant field guide to distinguish from similar species Easiest to detect during Spring when in flower Also look for distinctive bark
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<b>Green Dragon</b>  <i>Arisaema dracontium</i>	SC	N/A	Generally grows in damp deciduous forests and along streams.	Flowering occurs in May and June	Walk slowly and systematically in grid fashion, pausing to scan for plants every 5 meters Use a plant field guide to distinguish from similar species
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<b>Spotted Wintergreen</b>  <i>Chimaphila maculata</i>	END	Species Protection and General Habitat Protection	Generally grow in sandy habitats in dry-mesic oak-pine woods.	Flowering occurs in late July to early August	Watch for the distinct evergreen leaves in suitable habitat May be easiest to search in fall and spring
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<b>Swamp Rose-mallow</b>  <i>Hibiscus moscheutos</i>	SC	N/A	Generally grows in open, coastal marshes, but it is also sometimes found in open wet woods, thickets and drainage ditches	Flowering occurs between the end of July and the middle of September	Walk slowly and systematically in grid fashion, pausing to scan for plants every 5 meters Use a plant field guide to distinguish from similar species
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<b>White Wood Aster</b>  <i>Eurybia divaricata</i>	THR	Species Protection and General Habitat Protection	Generally grows in open, dry, deciduous forests. It has been suggested that it may benefit from some disturbance, as it often grows along trails.	Flowering occurs in early September, and sets fruit later in the month	Walk slowly and systematically in grid fashion, pausing to scan for plants every 5 meters Use a plant field guide to distinguish from similar species
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Reptile	SARO	Protection	Habitat Information	Timing Windows	Survey Protocol
<b>Blanding's Turtle</b>  <i>Emydoidea blandingii</i>	THR	Species Protection and General Habitat Protection	Generally occur in freshwater lakes, permanent or temporary pools, slow-flowing streams, marshes and swamps. They prefer shallow water that is rich in nutrients, organic soil and dense vegetation. Adults are generally found in open or partially vegetated sites, and juveniles prefer areas that contain thick aquatic vegetation including sphagnum, water lilies and algae. They dig their nest in a variety of loose substrates, including sand, organic soil, gravel and cobblestone. Overwintering occurs in permanent pools that average about one metre in depth, or in slow-flowing streams.	Eggs are laid in June, with hatchlings emerging in late September and early October.	Contact MNR Guelph District Management Biologist to obtain a copy of the protocol

<b>Eastern Hog-nosed Snake</b>  <i>Heterodon platirhinos</i>	THR	Species Protection and General Habitat Protection	Generally prefer habitats with sandy, well-drained soil and open vegetative cover, such as open woods, brushland, fields, forest edges and disturbed sites. The species is often found near water.	Mating occurs in spring and in August and early September. Eggs are laid in June. Hatching occurs in late	In early spring, look for individuals near ideal hibernation sites During egg-laying period (June), look for nesting females in sandy areas in early morning and late evening. Rest of the season, survey intensively and systematically by flipping rocks
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<b>Snapping Turtle</b>  <i>Chelydra serpentina</i>	SC	N/A	Generally inhabit shallow waters where they can hide under the soft mud and leaf litter. Nesting sites usually occur on gravelly or sandy areas along streams. Snapping Turtles often take advantage of man-made structures for nest sites, including roads (especially gravel shoulders), dams and aggregate pits.	Nesting: Late May and June Hibernate: October - April	Scan offshore rocks and logs for basking turtles (10am-2pm) Snorkel in desired aquatic habitat Nesting Season: Search known or preferred nesting habitat areas for females
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<b>Spotted Turtle</b>  <i>Clemmys guttata</i>	END	Species Protection and General Habitat Protection	Generally prefers the shallow, slow-moving and unpolluted water of ponds, bogs, marshes, ditches, vernal pools and sedge meadows. It can also be found in woodland streams and near the sheltered shores of shallow bays	Hibernate: September - April Breed: May - Early June Nesting: Mid - Late June	Stalk silently along shorelines and from vantage points scan emergent clumps of vegetation, logs, rocks and shorelines for basking turtles and watch for turtles in shallow ponds/pools  Wade very slowly through wetland edges being extremely quiet and careful to ensure you see the turtle before it sees you  Nesting season: search nesting habitat areas for females  Wetlands can be scanned from a greater distance using a spotting scope High quality 10 power binoculars are essential  Surveys should be done by looking for basking turtles in early Spring as they come out of hibernation  Minimum of 2 days of surveys in appropriate weather (warm sunny spring days) at suitable sites
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April 16, 2019

BEL 218011.1

Pat Busnello, MCIP, RPP  
Manager Development Planning  
Planning and Development Services Department  
Niagara Region  
1815 Sir Isaac Brock Way  
P.O. Box 1042, Thorold, ON L2V 4T7

*via email: pat.busnello@niagararegion.ca*

**Re: Terms of Reference for Environmental Impact Study (EIS)  
3285 Thunder Bay Road, Town of Fort Erie**

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Dear Mr. Busnello:

As required by the Niagara Region Environmental Impact Study process, Beacon Environmental Limited (Beacon) has prepared a scope of work for completing an Environmental Impact Study (EIS) in support of a Draft Plan of Subdivision to be located at 3285 Thunder Bay Road, Town of Fort Erie. A site location map is attached. A request for a scope was made by Beacon to the Region in April 13, 2018, however, no response was provided.

The Town of Fort Erie Official Plan designates the Subject Lands as Residential, with portions identified as Environmental Conservation - Woodland over 2 ha, and the lake shore as Significant Natural Area, Environmental Protection. A ditch/watercourse is also associated with the Subject Lands. Assessments of the natural heritage associated with properties have already been undertaken by Beacon in 2018 including bat habitat surveys following MNRF survey protocol and three seasons flora and fauna inventory and ECL mapping. Also, the MNRF was consulted with respect to PSWs, ANSIs and Species at Risk. In addition, an Arborist Report has been completed by Beacon.

Following the requirements of the Niagara Region Environmental Impact Study Guidelines a Table of Contents for the EIS is attached to this letter. For the EIS specific investigations and assessment will include:

- Review of Relevant Background information;
- ELC mapping of the site and immediate adjacent lands;
- Flora and fauna inventory (inventories will follow standard foot survey, except for amphibians, where the Marsh Monitoring Protocol will be followed);
- Bat Habitat Assessment (Snag Survey and Acoustic Monitoring);
- Watercourse and Fish Habitat Assessment (no fish sampling will be undertaken);
- Presence/absence and habitat delineation and description for any Species at Risk or Species of Concern (S1-S3) found on site or within adjacent lands;



- Identification and delineation of core natural heritage features (identification of Significant Woodland and Significant Wildlife Habitat will follow the criteria of Section 8.3. Environmental Conservation Area of the Town of Fort Erie Official Plan;
- Discussion of all ecological and hydrological functions of each natural heritage feature on site and within adjacent lands (including Species at Risk habitat);
- Impact assessment on the natural heritage features identified and their functions from an ecological and hydrological perspective;
- Assessment of conformity with relevant planning policies and regulations;
- Relevant, reasonable, and implementable mitigation measures to reduce negative impacts;
- A final assessment of whether the proposal, combined with any design changes and mitigation measures will result in any residual negative impact on the natural heritage feature or its ecological and hydrological functions; and
- Conformity of the proposed development with the natural heritage planning policies of the Region, Town of Fort Erie and NPCA.

Please circulate this letter to appropriate staff of the Region and City. The will be provided with this letter for their review and comment.

I trust the above the above meets your present needs. Should have any questions or require clarification, please do not hesitate to contact the under signed.

Prepared by:  
**Beacon Environmental**



Ron Huizer, B. Sc. (Honours)  
Principal

CC  
David Deluce, NPCA



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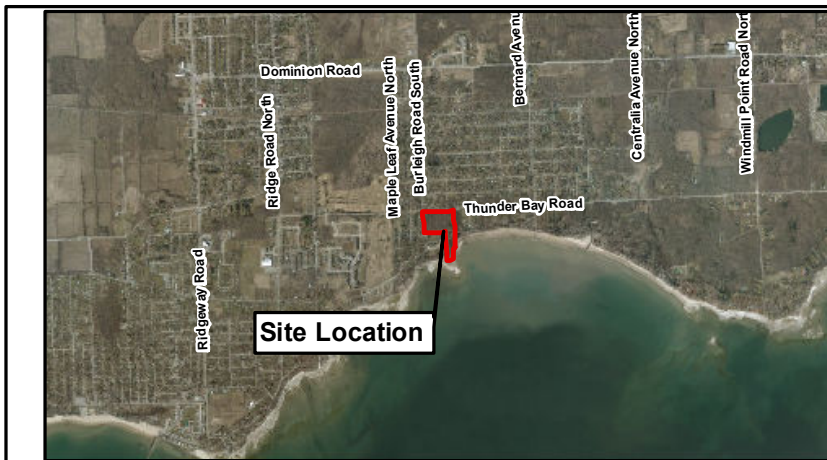
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## Site Location

## Figure 1

3285 Thunder Bay Road TIPP

UTM Zone 17 N, NAD 83

First Base Solutions  
Web Mapping Service 2010



0 25 50 100 Metres

1:3,000



Project 218011  
January 2018



# **Appendix B**

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## **List of Vascular Plants for Subject Lands**



## Appendix B

### List of Vascular Plants for the Subject Lands

Code	Scientific Name	English Name	Srank	COSEWIC	COSSARO	Niagara
1	<i>Equisetum arvense</i>	Field Horsetail	S5			
85	<i>Dryopteris carthusiana</i>	Spinulose Shield Fern	S5			
110	<i>Onoclea sensibilis</i>	Sensitive Fern	S5			
146	<i>Picea abies</i>	Norway Spruce	SE3			
156	<i>Pinus strobus</i>	Eastern White Pine	S5			
157	<i>Pinus sylvestris</i>	Scots Pine	SE5			
244	<i>Agrostis gigantea</i>	Black Bentgrass	SE5			
249	<i>Agrostis stolonifera</i>	Spreading Bentgrass	S5			
287	<i>Bromus inermis</i>	Awnless Brome	SE5			
300	<i>Calamagrostis canadensis</i>	Blue-joint Reedgrass	S5			
326	<i>Digitaria sanguinalis</i>	Hairy Crabgrass	SE5			
342	<i>Elymus repens</i>	Rye Grass	SE5			
365	<i>Festuca arundinacea</i>	Kentucky Fescue	SE5			
372	<i>Festuca pratensis</i>	Meadow Fescue	SE5			
379	<i>Glyceria grandis</i>	American Mannagrass	S4S5			
384	<i>Glyceria striata</i>	Fowl Manna-grass	S4S5			
394	<i>Hordeum jubatum</i> ssp. <i>jubatum</i>		SE5			
433	<i>Panicum acuminatum</i> var. <i>lindheimeri</i>	Hairy Panic-grass	S4			
435	<i>Panicum capillare</i>	Old Witch Panic-grass	S5			
440	<i>Panicum dichotomiflorum</i>	Spreading Panicgrass	SE5			
464	<i>Phalaris arundinacea</i>	Reed Canary Grass	S5			
467	<i>Phleum pratense</i>	Meadow Timothy	SE5			
476	<i>Poa compressa</i>	Canada Bluegrass	S5			
485	<i>Poa pratensis</i> ssp. <i>pratensis</i>	Kentucky Bluegrass	S5			
573	<i>Carex bebbii</i>	Bebb's Sedge	S5			
597	<i>Carex crinita</i>	Fringed Sedge	S5			
629	<i>Carex granularis</i>	Meadow Sedge	S5			
706	<i>Carex projecta</i>	Necklace Sedge	S5			
708	<i>Carex radiata</i>	Stellate Sedge	S5			
765	<i>Carex vulpinoidea</i>	Fox Sedge	S5			



Code	Scientific Name	English Name	Srank	COSEWIC	COSSARO	Niagara
800	<i>Cyperus esculentus</i>	Chufa Flat-sedge	S5			
830	<i>Eleocharis smallii</i>	Creeping Spike-rush	S5			
861	<i>Schoenoplectus tabernaemontani</i>	Soft-stem Club-rush	S5			
907	<i>Juncus balticus</i>	Baltic Rush	S5			
917	<i>Juncus dudleyi</i>	Dudley's Rush	S5			
918	<i>Juncus effusus</i>	Soft Rush	S5			
934	<i>Juncus tenuis</i>	Path Rush	S5			
971	<i>Hemerocallis fulva</i>	Orange Daylily	SE5			
1057	<i>Epipactis helleborine</i>	Eastern Helleborine	SE5			
1109	<i>Populus alba</i>	White Poplar	SE5			
1111	<i>Populus deltoides</i>	Eastern Cottonwood	SU			
1130	<i>Salix bebbiana</i>	Bebb's Willow	S5			
1160	<i>Salix purpurea</i>	Basket Willow	SE4			
1166	<i>Salix x fragilis</i>	Crack Willow	SE5			
1180	<i>Juglans cinerea</i>	Butternut	S3?			
1181	<i>Juglans nigra</i>	Black Walnut	S4			
1212	<i>Quercus macrocarpa</i>	Mossy-cup Oak	S5			
1214	<i>Quercus palustris</i>	Pin Oak	S3			
1217	<i>Quercus rubra</i>	Northern Red Oak	S5			
1228	<i>Ulmus americana</i>	American Elm	S5			
1272	<i>Polygonum convolvulus</i>	Black Bindweed	SE5			
1280	<i>Polygonum lapathifolium</i>	Dock-leaf Smartweed	S5			
1283	<i>Polygonum pensylvanicum</i>	Pennsylvania Smartweed	S5			
1299	<i>Rumex crispus</i>	Curly Dock	SE5			
1442	<i>Silene vulgaris</i>	Maiden's Tears	SE5			
1448	<i>Stellaria borealis</i>	Northern Stitchwort	S5			
1512	<i>Ranunculus acris</i>	Tall Butter-cup	SE5			
1559	<i>Liriodendron tulipifera</i>	Tulip Tree	S4			
1629	<i>Cardamine pensylvanica</i>	Pennsylvania Bitter-cress	S5			
1666	<i>Hesperis matronalis</i>	Dame's Rocket	SE5			
1677	<i>Lepidium virginicum</i>	Poor-man's Pepper-grass	S5			
1764	<i>Ribes rubrum</i>	Northern Red Currant	SE5			
1771	<i>Agrimonia gryposepala</i>	Tall Hairy Groovebur	S5			
1772	<i>Agrimonia parviflora</i>	Small-flower Groovebur	S3S4			R
1796	<i>Crataegus Spp.</i>	Hawthorn	N/A			
1851	<i>Fragaria virginiana</i>	Virginia Strawberry	S5			
1852	<i>Geum aleppicum</i>	Yellow Avens	S5			
1868	<i>Malus pumila</i>	Common Apple	SE5			



Code	Scientific Name	English Name	Srank	COSEWIC	COSSARO	Niagara
1871	<i>Potentilla anserina</i>	Silverweed	S5			
1911	<i>Prunus virginiana</i>	Choke Cherry	S5			
1924	<i>Rosa multiflora</i>	Rambler Rose	SE4			
1936	<i>Rubus allegheniensis</i>	Allegheny Blackberry	S5			
1946	<i>Rubus idaeus ssp. melanolasius</i>	Red Raspberry	S5			
1954	<i>Rubus pubescens</i>	Catherinettes Berry	S5			
2018	<i>Gleditsia triacanthos</i>	Honey Locust	S2			R
2054	<i>Medicago lupulina</i>	Black Medic	SE5			
2059	<i>Melilotus alba</i>	White Sweet Clover	SE5			
2073	<i>Robinia pseudo-acacia</i>	Black Locust	SE5			
2087	<i>Trifolium pratense</i>	Red Clover	SE5			
2089	<i>Trifolium repens</i>	White Clover	SE5			
2169	<i>Pachysandra terminalis</i>	Japanese-spurge	SE1			
2176	<i>Rhus radicans ssp. negundo</i>	Poison Ivy	S5			
2193	<i>Acer negundo</i>	Box Elder	S5			
2195	<i>Acer platanoides</i>	Norway Maple	SE5			
2197	<i>Acer rubrum</i>	Red Maple	S5			
2200	<i>Acer saccharum ssp. saccharum</i>	Sugar Maple	S5			
2202	<i>Acer x freemanii</i>	Hybrid Maple	S?			
2211	<i>Rhamnus cathartica</i>	Common Buckthorn	SE5			
2212	<i>Rhamnus frangula</i>	Glossy Buckthorn	SE5			
2215	<i>Parthenocissus vitacea</i>	Virginia Creeper	S5			
2220	<i>Tilia americana</i>	American Basswood	S5			
2252	<i>Hypericum punctatum</i>	Common St. John's-wort	S5			
2269	<i>Viola affinis</i>	Lecontes Violet	S4?			
2378	<i>Aegopodium podagraria</i>	Goutweed	SE5			
2439	<i>Cornus foemina</i>	Gray Dogwood	S5			
2441	<i>Cornus stolonifera</i>	Red-osier Dogwood	S5			
2514	<i>Fraxinus americana</i>	White Ash	S5			
2517	<i>Fraxinus pennsylvanica</i>	Green Ash	S5			
2521	<i>Ligustrum vulgare</i>	European Privet	SE5			
2561	<i>Asclepias syriaca</i>	Kansas Milkweed	S5			
2626	<i>Myosotis scorpioides</i>	True Forget-me-not	SE5			
2680	<i>Lycopus uniflorus</i>	Northern Bugleweed	S5			
2755	<i>Solanum dulcamara</i>	Climbing Nightshade	SE5			
2833	<i>Verbascum thapsus</i>	Great Mullein	SE5			
2884	<i>Plantago lanceolata</i>	English Plantain	SE5			
2885	<i>Plantago major</i>	Nipple-seed Plantain	SE5			



Code	Scientific Name	English Name	Srank	COSEWIC	COSSARO	Niagara
2934	<i>Lonicera tatarica</i>	Tartarian Honeysuckle	SE5			
2954	<i>Viburnum opulus</i>	Guelder-rose Viburnum	SE4			
2999	<i>Achillea millefolium ssp. lanulosa</i>	Seaside Yarrow	S5			
3093	<i>Cichorium intybus</i>	Chicory	SE5			
3102	<i>Cirsium vulgare</i>	Bull Thistle	SE5			
3283	<i>Solidago altissima</i>	Tall Goldenrod	S5			
3288	<i>Solidago canadensis</i>	Canada Goldenrod	S5			
3307	<i>Solidago rugosa</i>	Rough-leaf Goldenrod	S5			
3363	<i>Taraxacum officinale</i>	Brown-seed Dandelion	SE5			
3378	<i>Xanthium strumarium</i>	Rough Cockle-bur	S5			

# KEY

COSEWIC = Committee on the Status of Endangered Wildlife in Canada

COSSARO = Committee on the Status of Species at Risk in Ontario

END = Endangered, THR = Threatened, SC = Special Concern

SRANK = Natural Heritage Information Centre occurrence status

S1 (Critically Imperiled), S2 (Imperiled), S3 (Vulnerable), S4 (Apparently Secure), S5 (Secure)

SE (exotic, i.e. non-native)

R= Rare in Niagara Region (Oldham 2010)



# Appendix C

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## Butternut Tree Data



May 3, 2019

BEL 218011.1

Ministry of the Environment, Conservation, and Parks  
College Park 5th Floor, 777 Bay St.  
Toronto, ON M7A 2J3

**Re: Butternut Health Assessment – 3285 Thunder Bay Road, Fort Erie**

---

Beacon Environmental Limited (Beacon) completed a Butternut Health Assessment (BHA) for a 20 cm DBH Butternut (*Juglans cinerea*) tree located at 3285 Thunder Bay Road in the Town of Fort Erie. A residential plan of subdivision is proposed for the subject property.

The location of this tree is shown in **Figure 1**. The tree was tested for hybridity by the Ontario Forest Research Institute; hybridity was not detected. The result of the hybridity test is appended to this report.

A Butternut Health Assessment (BHA) was completed on June 9, 2017 by a Certified Butternut Health Assessor with Beacon (Dan Westerhof, BHA #479). Attached are the completed Butternut Data Collection Forms and the BHA Tree Analysis. Based on the assessment, it was determined that the Butternut is retainable (Category 2). No badly cankered Butternut trees were found within 40 m of the assessed tree.

The Butternut tree is located within a hedgerow between two lots (**Photo 1**) in association with planted Black Walnut (*Juglans nigra*) and Norway Spruce (*Picea abies*). Therefore, it is Beacon's opinion that the Butternut was likely planted, and as such, is not subject to the Endangered Species Act.

If you have any questions or comments regarding this assessment, please contact the undersigned within 30 days of receipt of this report.

Prepared by:  
**Beacon Environmental**



Dan Westerhof, B.Sc., MES  
Terrestrial Ecologist,  
Certified Arborist (ON-1536A)

Reviewed by:  
**Beacon Environmental**



Ron Huizer, B. Sc. (Honours)  
Principal







**Photo 1. Butternut in hedgerow along property line**





Legend

-  Subject Property
-  Butternut Location

Butternut Location

Figure 1

3285 Thunder Bay Road TIPP

UTM Zone 17 N, NAD 83

First Base Solution8  
Web Mapping Service 2010



0 20 40 80 Metres

1:1,800



**BEACON**  
ENVIRONMENTAL

Project 218011  
May 2019  
**DRAFT**





FRMS-PL-F-003

# LABORATORY TEST REPORT

## BUTTERNUT HYBRIDITY TEST

**OFRILS**1235 Queen Street East  
Sault Ste. Marie, Ontario P6A 2E5  
Phone: 705 946 7448  
Fax: 705 946 2030

Report Date

2018-07-10

Report ID: OFRILS-PL-

1837

Page 1 of 2

Client	Beacon Environmental		
Address	373 Woolwich St. Guelph, Ontario N1H 3W4		
Contact	Dan Westerhof		
Phone:	(519) 826-0419	Fax:	
E-mail:	dwesterhof@beaconenviro.com		

MNRF Contact	Elizabeth Reimer		
Address	Regional Operations Division Southern Region Ontario		
Phone:	(905) 562-0041	Fax:	
E-mail:	elizabeth.reimer@ontario.ca		

Sample Received On:

2018-06-26

Method: Molecular tests to detect butternut x Japanese walnut hybrids\*

**Test Report:**

Three standard molecular tests were conducted on one sample from Thunder Bay Road, Fort Erie, Ontario. Hybridity was not detected in the results of laboratory tests. To the best of our knowledge the sample represents butternut, *Juglans cinerea*. Sample details may be found on page two of this report.

Please direct any questions to the contact below.

The Forest Pathology Laboratory applies three standard molecular tests published by Zhao & Woeste (2011) \* for detecting hybrids.

Note: If these tests are for the purpose of seed tree certification, the results apply only to the tested tree(s), and cannot extend to progeny resulting from open pollination.

This result and test report relates only to the items tested.

**Laboratory Contact:**

Glenna Halicki Hayden  
Forest Pathology Lab Supervisor  
Ontario Forest Research Institute  
1235 Queen Street East  
Sault Ste. Marie, ON P6A 2E5  
Phone: 705 946 7412 Fax: 705 946 2030  
Email: glenna.halickihayden@ontario.ca  
Web: <http://ontario.ca/ofri>

All appropriate laboratory quality controls were applied in producing the result/s. The results and interpretation are reported to the best of the knowledge and expertise of the lab and is based on the reference method adopted.

Authorized Signature

Glenna Halicki Hayden

Digitally signed by Glenna Halicki Hayden  
DN: cn=Glenna Halicki Hayden, o=ou,  
email=glenna.halickihayden@ontario.ca, c=CA  
Date: 2018.07.10 14:06:28 -04'00'

Name

\* Based on published reference method: Peng Zhao & Keith E. Woeste. 2011. DNA markers identify hybrids between butternut (*Juglans cinerea* L.) and Japanese walnut (*Juglans allantifolia* Carr.). Tree Genetics & Genomes 7:511-533. DOI 10.1007/s11295-010-0352-4.

This report shall not be reproduced except in full, or altered without the written approval of the laboratory.

*All errors and omissions are limited to the cost of the analysis*





FRMS-PL-F-003

# SAMPLE INFORMATION AND TEST SUMMARY

**OFRILS**1235 Queen Street East  
Sault Ste. Marie, Ontario P6A 2E5  
Phone: 705 946 7448  
Fax: 705 946 2030

Report ID: OFRILS-PL-

1837

Page 2 of 2

Lab ID	Sample Type	Tree ID	Collection Site	UTM Coordinates	LAB RESULT Hybridity Detected	
18107	Foliage	Tree # 1	3258 Thunder Bay Road, Fort Erie, Ontario	17T 660385 4748732	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
					<input type="checkbox"/> NO	<input type="checkbox"/> YES
					<input type="checkbox"/> NO	<input type="checkbox"/> YES
					<input type="checkbox"/> NO	<input type="checkbox"/> YES
					<input type="checkbox"/> NO	<input type="checkbox"/> YES
					<input type="checkbox"/> NO	<input type="checkbox"/> YES
					<input type="checkbox"/> NO	<input type="checkbox"/> YES
					<input type="checkbox"/> NO	<input type="checkbox"/> YES
					<input type="checkbox"/> NO	<input type="checkbox"/> YES
					<input type="checkbox"/> NO	<input type="checkbox"/> YES
					<input type="checkbox"/> NO	<input type="checkbox"/> YES
					<input type="checkbox"/> NO	<input type="checkbox"/> YES
					<input type="checkbox"/> NO	<input type="checkbox"/> YES
					<input type="checkbox"/> NO	<input type="checkbox"/> YES
					<input type="checkbox"/> NO	<input type="checkbox"/> YES
					<input type="checkbox"/> NO	<input type="checkbox"/> YES
					<input type="checkbox"/> NO	<input type="checkbox"/> YES
					<input type="checkbox"/> NO	<input type="checkbox"/> YES
					<input type="checkbox"/> NO	<input type="checkbox"/> YES

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# Butternut Data Collection Form 1 - 2010 Edition

Surveyor ID  
or BHA # **479**

(PLEASE USE BLOCK LETTERS)

Date (dd/mm/yyyy)

**09-06-2018**

Shaded fields are mandatory for Butternut Health Assessments

Surveyor  
Contact

First **DANIEL** Last **WESTERHOF**

Email

Telephone (**519**) **362-8595** Telephone Other ( ) - ( ) - ( ) x ( )

Property  
Owner

First Last

(check if same  
as surveyor)

or Company **WESTWIND NIAGARA DEVELOPMENTS**

Email

Telephone (**905**) **871-3002** Telephone Other ( ) - ( ) - ( ) x ( )

Property Owner's Mailing address

Address **1219 SUNSET DR** Postal Code Prov.

City **FORT ERIE**

Tree Location (if different from mailing address)

Address/(911)# **3285 THUNDER BAY ROAD** Lot Con

Township City

**FORT ERIE**

Directions

☐ Yes ☒ No  
☐ Yes ☐ No

Can Share Location Information with other Butternut Recovery Organizations?  
Site visits OK? (prior arrangements will always be made for a site visit)

> (Greater than)  
< (Less than)

## Butternut Trees Tally by Diameter Class

(Do a dot tally in blank space; write total# in box for each)

Tree Condition	< 3 cm	3-15 cm	16-30cm	>30 cm
Vigorous: > 50% Live Crown Minor or no cankers				
Poor Vigor: <50% Live Crown or >50% Live Crown + heavily cankered stem				
Dead				

Historically, do some trees produce seeds? ☐ Y ☐ N ☐ Unknown

Estimated area containing butternut  
for properties > 1 acre (0.4 hectares): ☐ Acres ☐ Hectares

## Overall Property Description (area(s) containing Butternut)

☐ Rolling Upland ☐ Bottomland  
☐ Valley Slope ☐ Variable  
☐ Tableland ☐ Unknown

## Vegetation Community/ies

☐ Open ☐ Fencerow  
☐ Shrubland ☐ Roadside  
☐ DeciduousForest ☐ Quarry  
☐ ConiferForest ☐ UrbanYard  
☐ MixedForest ☐ UrbanPark

## Other

## Soil Drainage

☐ Well Drained  
☐ Moderately Drained  
☐ Poorly Drained  
☐ Unknown

## Soil Texture

☐ Clay ☐ Sand  
☐ Clay Loam ☐ Variable  
☐ Loam ☐ Unknown  
☐ Loamy Sand

## Soil Depth

☐ > 1metre  
☐ 30 - 99cm  
☐ < 30cm  
☐ Variable  
☐ Unknown

Please enter matching numerical page link code on forms 1 and 2

Page Link

(Contact Information follows all applicable  
privacy policies and guidelines)

Please return forms to:  
Forest Gene Conservation Association  
Suite 233, 266 Charlotte St.  
Peterborough, ON, K9J 2V4  
www.fgca.net

49731



# Butternut Data Collection FORM 2 (2010 Edition)

(PLEASE USE  
BLOCK LETTERS)

Fill when Form 1 indicates canker is well  
established. The information on Form 2  
must be filled out for all trees when doing a  
Butternut Health Assessment.

**Shaded fields are mandatory for Butternut Health Assessments**

Site Code (A,B,...Z, AA...)

Surveyor ID  
or BHA # 479

Date (dd/mm/yyyy)

09 - 06 - 2018

Surveyor Last Name WESTERHOF

Tree ID Numbering: 1,2,3,...Starting from 1 for each site

Tree #	Zone	Easting	North
1	1	7660390	4748736

Crown Class 2 Live Crown % 100 Main Stem Length(m) 3 Below crown

Butternut Origin Natural Planted Unknown

Signs Male Flowers Female Flowers Seed Set None

Twig Dieback Branch Dieback Defoliation Discolouration

#Stems 20 DBH(cm)

Assess below live crown

#Epic-Live #Epic-Dead

Bark Type

# Callused Wounds

#Open #Sooty

Root

=<2m >2m

Metres from badly cankered tree  
☐ < 40 ☐ > 40 ☒ None Found

Competing Species


Tree #	Zone	Easting	North
1	1		

Crown Class Live Crown % Main Stem Length(m) Below crown

Butternut Origin Natural Planted Unknown

Signs Male Flowers Female Flowers Seed Set None

Twig Dieback Branch Dieback Defoliation Discolouration

#Stems DBH(cm)

Assess below live crown

#Epic-Live #Epic-Dead

Bark Type

# Callused Wounds

#Open #Sooty

Root

=<2m >2m

Metres from badly cankered tree  
☐ < 40 ☐ > 40 ☐ None Found

Competing Species


Tree #	Zone	Easting	North
1	1		

Crown Class Live Crown % Main Stem Length(m) Below crown

Butternut Origin Natural Planted Unknown

Signs Male Flowers Female Flowers Seed Set None

Twig Dieback Branch Dieback Defoliation Discolouration

#Stems DBH(cm)

Assess below live crown

#Epic-Live #Epic-Dead

Bark Type

# Callused Wounds

#Open #Sooty

Root

=<2m >2m

Metres from badly cankered tree  
☐ < 40 ☐ > 40 ☐ None Found

Competing Species


Tree #	Zone	Easting	North
1	1		

Crown Class Live Crown % Main Stem Length(m) Below crown

Butternut Origin Natural Planted Unknown

Signs Male Flowers Female Flowers Seed Set None

Twig Dieback Branch Dieback Defoliation Discolouration

#Stems DBH(cm)

Assess below live crown

#Epic-Live #Epic-Dead

Bark Type

# Callused Wounds

#Open #Sooty

Root

=<2m >2m

Metres from badly cankered tree  
☐ < 40 ☐ > 40 ☐ None Found

Competing Species


Tree #	Zone	Easting	North
1	1		

Crown Class Live Crown % Main Stem Length(m) Below crown

Butternut Origin Natural Planted Unknown

Signs Male Flowers Female Flowers Seed Set None

Twig Dieback Branch Dieback Defoliation Discolouration

#Stems DBH(cm)

Assess below live crown

#Epic-Live #Epic-Dead

Bark Type

# Callused Wounds

#Open #Sooty

Root

=<2m >2m

Metres from badly cankered tree  
☐ < 40 ☐ > 40 ☐ None Found

Competing Species


Please enter matching page link code on forms 1 and 2

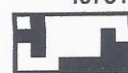
Page Link

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(Contact Information follows all applicable  
privacy policies and guidelines)

Please return forms to:  
Forest Gene Conservation Association  
Suite 233, 266 Charlotte St.  
Peterborough, ON, K9J 2V4  
www.fgca.net

49731





BHA ID #		479		BHA Name				Daniel Westerhof												
Landowner / Client Name								Westwind Niagara Developments Ltd.												
Property Location				3285 Thunder Bay Road, Fort Erie																
input field data										automatic calculations from field data						Categories: 1: non-retainable, 2: retainable, 3: archivabile				
Tree #	Live Crown %	Tree dbh (cm)	# bole cankers				# root flare (RF) cankers		<40 m from cankered tree? (Y or N)	Circ. (cm) = Pi x dbh	total bole canker width (sooty x 2.5 + open x 5)	total RF canker width (sooty x 2.5 + open x 5)	bole canker % of circ.	RF canker % of circ.	total bole & root canker % of 2xCirc					
			sooty (S) (will be assigned 2.5 cm per canker)		open (O) (will be assigned 5 cm per canker)															
			S <2 m	S >2 m	O <2 m	O >2 m	RF S	RF O		Circ (cm)	BC (cm)	RC (cm)	BC%	RC%	BRC%	LC% >= 50 & BC% = 0	LC% >70 & BRC % <20	LC% >70 & BC % <20	Preliminary tree call	FINAL TREE CALL a Cat 2, dbh>20cm <40m from a Cat 1
1	100	20	3	0	2	0	1	0	n	62.8	17.5	2.5	27.9	4.0	15.9	1	2	1	2	2



# Appendix D

---

## Bat Assessment Data



## Appendix D

### Snag Survey Data

No.	Tree_Sp	No. Cav	Snag_Att	DBH	Feature_Ht	Tree_Ht	Loose_Bark	Decay_Clas	Canopy_Cov	Ht_Class	Leaf_nests	X_East_17	Y_North_17
1	American Elm	0	Loose Bark	26	5-10	5-10	25-50%	4	75-100%	3	0	660209.1	4748860
2	American Elm	0	Loose Bark	18	5-10	5-10	1-25%	4	< 25%	3	0	660222	4748884
3	American Elm	1	Loose Bark;Cavity	30	0-5	0-5	1-25%	5	75-100%	4	0	660243	4748888
4	Scots Pine	3	Cavity	20	0-5	0-5	0%	5	50-75%	4	0	660261.1	4748881
5	American Elm	0	Loose Bark	37	5-10	5-10	1-25%	4	< 25%	4	0	660298.4	4748870
6	Silver Maple	3	Cavity	60	10-15	10-15	0%	2	50-75%	4	0	660343.7	4748869
7	American Elm	0	Loose Bark	18	5-10	5-10	25-50%	4	75-100%	4	0	660311.7	4748825
8	American Elm	1	Loose Bark;Crack	26	5-10	5-10	1-25%	4	75-100%	4	0	660291.5	4748817
9	American Elm	2	Cavity;Crack	28	0-5	0-5	0%	5	75-100%	4	0	660312.3	4748818
10	American Elm	2	Loose Bark;Cavity;Crack	40	5-10	5-10	0%	5	75-100%	4	0	660277.9	4748843
11	American Elm	2	Loose Bark;Cavity	39	5-10	5-10	25-50%	3	50-75%	4	0	660257.8	4748842
12	American Elm	7	Loose Bark;Cavity	40	5-10	5-10	1-25%	5	50-75%	4	0	660239.8	4748841
13	Basswood	4	Cavity	15,28	10-15	10-15	0%	2	< 25%	3	0	660227.2	4748846
14	American Elm	3	Loose Bark;Cavity	43	0-5	0-5	1-25%	5	25-50%	4	0	660206.3	4748835
15	American Elm	1	Loose Bark;Crack	30	0-5	0-5	1-25%	5	< 25%	4	0	660180.7	4748821
16	American Elm	0	Loose Bark	42	10-15	10-15	0%	3	< 25%	3	0	660253.9	4748781
17	Eastern Cottonwood	10+	Cavity;Crack	43	10-15	10-15	0%	5	< 25%	2	0	660260.5	4748770
18	American Elm	1	Loose Bark;Cavity;Crack	30	5-10	5-10	1-25%	5	< 25%	4	0	660266.6	4748771
19	Willow Sp.	2	Loose Bark;Cavity	40,35	5-10	5-10	1-25%	4	< 25%	3	0	660269.2	4748767
20	Unknown Dead Snag	5	Cavity;Crack	32	5-10	5-10	0%	5	< 25%	4	0	660300.7	4748790
21	American Elm	5	Loose Bark;Cavity	26	5-10	5-10	1-25%	5	< 25%	4	0	660303.9	4748774
22	American Elm	5	Cavity;Crack	26	5-10	5-10	0%	4	50-75%	4	0	660337.9	4748792
23	Green Ash	2	Cavity	27	5-10	10-15	0%	3	< 25%	3	0	660304	4748762
24	American Elm	4	Loose Bark;Cavity	25	5-10	5-10	1-25%	5	< 25%	4	0	660306	4748763
25	American Elm	3	Cavity	42	10-15	10-15	0%	2	50-75%	3	0	660283.6	4748755
26	American Elm	1	Loose Bark;Cavity	40,38,37	15-20	15-20	1-25%	2	50-75%	2	0	660277.4	4748765
27	American Elm	0	Loose Bark	27	10-15	10-15	25-50%	2	75-100%	3	0	660150.4	4748844
28	American Elm	0	Loose Bark	31	5-10	10-15	1-25%	3	50-75%	2	0	660351	4748888
29	Basswood	0	None	22	5-10	5-10	0%	1	75-100%	3	1	660365.3	4748856
30	American Elm	0	Loose Bark	18	5-10	5-10	1-25%	4	75-100%	3	0	660363	4748853
31	American Elm	7	Loose Bark;Cavity;Woodpecker hole	26	5-10	5-10	1-25%	5	50-75%	4	0	660359.5	4748822
32	White Ash	1	Cavity;Knot hole	53	0-5	10-15	0%	1	75-100%	3	0	660362.3	4748805
33	American Elm	3	Cavity;Woodpecker hole	43	5-10	5-10	0%	5	< 25%	3	0	660330.2	4748714
35	Eastern Cottonwood	10+	Cavity;Crack;Woodpecker hole	107	0-20	15-20	0%	4	< 25%	1	0	660328.5	4748646
34	Scots Pine	5	Cavity;Crack	33	0-10	5-10	0%	4	75-100%	4	0	660340.6	4748647
36	Willow Sp.	4	Cavity;Woodpecker hole	120	5-20	20-25	0%	2	50-75%	1	0	660341.4	4748554



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## Bat Acoustic Monitoring Data

\*Note Tables represents raw data, Individual files were not manually vetted so the data presented does is not a true representation of the number of confirmed call files. The number of individual bats for each species can not be determined from the data.

**Summary Table**  
**Total Number of Call Recorded by Each Monitor Over the 11 Day Monitoring Period**

Monitor	Species				Grand Total
	EPTFUS	LASBOR	LASCIN	LASNOC	
49\Data	3		44	10	57
50\Data	20	1	110	21	152
51\Data	17	1	82	16	116
52\Data	20		108	23	151
53\Data	19		88	24	131
54\Data	14	2	32	18	66
55\Data	4	1	49	8	62
56\Data	2		18	6	26
57\Data	131	8	113	33	285
58\Data	2		19	6	27
<b>Grand Total</b>	<b>232</b>	<b>13</b>	<b>663</b>	<b>165</b>	<b>1073</b>

EPTFUS – Big Brown Bat, LASBOR – Eastern Red Bat, LASCIN – Hoary Bat, LASNOC – Silver-haired Bat

**Data Summary for Each Monitoring Station Over the 11 Day Monitoring Period**

Monitor	Species				Grand Total
	EPTFUS	LASBOR	LASCIN	LASNOC	
<b>49\Total</b>	<b>3</b>		<b>44</b>	<b>10</b>	<b>57</b>
2018-06-01	1		7	5	13
2018-06-02			9	3	12
2018-06-03			3		3
2018-06-04	1		8	1	10
2018-06-05			6		6
2018-06-06			1		1
2018-06-07			3	1	4
2018-06-08			5		5
2018-06-09			1		1
2018-06-10	1		1		2
<b>50\Total</b>	<b>20</b>	<b>1</b>	<b>110</b>	<b>21</b>	<b>152</b>
2018-06-01	3	1	9	8	21
2018-06-02	2		15	4	21



Monitor	Species				Grand Total
	EPTFUS	LASBOR	LASCIN	LASNOC	
2018-06-03			3	2	5
2018-06-04	2		13	2	17
2018-06-05	3		22	2	27
2018-06-06			5		5
2018-06-07	2		11	1	14
2018-06-08	2		15		17
2018-06-09	1		10		11
2018-06-10	4		5	1	10
2018-06-11	1		2	1	4
<b>51\Total</b>	<b>17</b>	<b>1</b>	<b>82</b>	<b>16</b>	<b>116</b>
2018-06-01		1	8	6	15
2018-06-02	2		14	2	18
2018-06-03	2		11	1	14
2018-06-04	4		12	2	18
2018-06-05			4	1	5
2018-06-06			4		4
2018-06-07	2		5	1	8
2018-06-08	3		5	2	10
2018-06-09	1		11		12
2018-06-10	2		6	1	9
2018-06-11	1		2		3
<b>52\Data</b>	<b>20</b>		<b>108</b>	<b>23</b>	<b>151</b>
2018-06-01	2		13	10	25
2018-06-02	6		18	4	28
2018-06-03	4		14	3	21
2018-06-04	2		13	2	17
2018-06-05			2	2	4
2018-06-06	1		3		4
2018-06-07	1		14		15
2018-06-08	1		15		16
2018-06-09	1		8		9
2018-06-10	2		7	2	11
2018-06-11			1		1
<b>53\Total</b>	<b>19</b>		<b>88</b>	<b>24</b>	<b>131</b>
2018-06-01			8	5	13
2018-06-02	2		10	9	21
2018-06-03	6		9	1	16
2018-06-04	2		4	4	10
2018-06-05			2	1	3



Monitor	Species				Grand Total
	EPTFUS	LASBOR	LASCIN	LASNOC	
2018-06-06	1		1		2
2018-06-07	3		37	1	41
2018-06-08			7		7
2018-06-09			3		3
2018-06-10	4		2	1	7
2018-06-11	1		5	2	8
<b>54\Total</b>	<b>14</b>	<b>2</b>	<b>32</b>	<b>18</b>	<b>66</b>
2018-06-01	2		3	5	10
2018-06-02	4		9	5	18
2018-06-03	2		3		5
2018-06-04	5		8		13
2018-06-05	1		1		2
2018-06-06			2		2
2018-06-07			2		2
2018-06-08			2		2
2018-06-09			1		1
2018-06-10		2	1		3
2018-06-11				8	8
<b>55\Total</b>	<b>4</b>	<b>1</b>	<b>49</b>	<b>8</b>	<b>62</b>
2018-06-01			8	1	9
2018-06-02		1	7	3	11
2018-06-03			6	1	7
2018-06-04	3		6		9
2018-06-05			5	1	6
2018-06-06			3	1	4
2018-06-07	1		5	1	7
2018-06-08			2		2
2018-06-09			2		2
2018-06-10			4		4
2018-06-11			1		1
<b>56\Total</b>	<b>2</b>		<b>18</b>	<b>6</b>	<b>26</b>
2018-06-01	1		3	2	6
2018-06-02				4	4
2018-06-03			2		2
2018-06-04	1		1		2
2018-06-05			7		7
2018-06-07			3		3
2018-06-09			1		1
2018-06-11			1		1



Monitor	Species				Grand Total
	EPTFUS	LASBOR	LASCIN	LASNOC	
<b>57\Total</b>	<b>131</b>	<b>8</b>	<b>113</b>	<b>33</b>	<b>285</b>
2018-06-01	16	1	20	14	51
2018-06-02	10	2	17	9	38
2018-06-03	11		11	2	24
2018-06-04	18		9		27
2018-06-05	9	1	9	1	20
2018-06-06	6		8		14
2018-06-07	8	1	12		21
2018-06-08	14	3	8		25
2018-06-09	7		9	1	17
2018-06-10	25		9	6	40
2018-06-11	7		1		8
<b>58\Data</b>	<b>2</b>		<b>19</b>	<b>6</b>	<b>27</b>
2018-06-01			1	1	2
2018-06-02	1		2	1	4
2018-06-03			3	2	5
2018-06-04			4		4
2018-06-05			2		2
2018-06-06			1		1
2018-06-07			2	1	3
2018-06-08			1	1	2
2018-06-09	1		1		2
2018-06-10			1		1
2018-06-11			1		1
<b>Grand Total</b>	<b>232</b>	<b>13</b>	<b>663</b>	<b>165</b>	<b>1073</b>



# Appendix E

---

## Tree Preservation Plans



February 7, 2018

BEL 218011

Westwind Niagara Developments Ltd.  
1219 Sunset Drive  
Fort Erie, ON L2A 5M4

Attn: Tom Stack

**Re: Arborist Report for 3285 Thunder Bay Road, Ft. Erie**

---

Dear Mr Stack:

Beacon Environmental Limited (Beacon) was retained to complete a tree inventory and preservation plan for 3285 Thunder Bay Road in the Town of Fort Erie. The location of the subject property is shown in **Figure 1**.

**Methods**

A tree inventory of the subject property was conducted on February 8, 2017 by an ISA Certified Arborist. The tree inventory focussed on documenting individual specimen trees (e.g. larger trees in good health) and characterizing tree groupings. Information collected on individual trees included: species, trunk diameter (DBH), crown diameter, and condition. Tree locations were recorded in the field with a hand-held GPS unit.

Tree condition was assessed in terms of overall health and structural integrity based on indicators such as live growth, dead wood, decay, branch structure, and presence of disease. Each tree was assigned a condition rating of good, fair, poor, or dead, based on the following criteria:

- **Poor** – Severe dieback, significant lean, missing leader, major defects, significant decay and/or disease presence
- **Fair** – Moderate dieback and/or lean, limb defects, multiple stems, moderate foliage damage from stress
- **Good** – Healthy vigorous growth, minor visible defects or damage
- **Dead** – No live growth

Where trees occurred in groupings, rather than assess trees individually, the groupings were delineated on an aerial photograph of the property and the species, size, number, and general condition of the trees in the groups were recorded. Larger tree groupings were inventoried using 100 m<sup>2</sup> random circular sample plots. Within the sample plots, the species and DBH of each tree was recorded.



## Findings

At total of two (2) tree groups and six individual trees were identified on the property. The approximate locations trees are shown on **Figure 1**. The following is a description of the trees on the property.

An evaluation of individual trees on the subject property is provided in **Table 1**. These trees are located in the existing yard at the south end of the property.

**Table 1. Evaluation of Individual Trees on Subject Property**

Tree #	Species	Common Name	DBH (cm)	Condition	Comments
1	<i>Acer x freemanii</i>	Freeman's Maple	77	Fair	Dead, broken branches
2	<i>Acer x freemanii</i>	Freeman's Maple	85	Good	
3	<i>Quercus rubra</i>	Red Oak	80	Good	
4	<i>Gleditsia triacanthos</i>	Honey Locust	61	Good	
5	<i>Picea sp.</i>	Spruce	63	Good	

## Butternut

In addition, a single Butternut (*Juglans cinerea*) tree was identified close to the eastern property boundary, near the existing house. Butternut is an Endangered species in Ontario. This tree will be assessed in spring/summer 2018 according to the Butternut Health Assessment (BHA) protocol to determine its status under the Endangered Species Act. Authorization from the Ministry of Natural Resources and Forestry (MNRF) is required prior to development within 50 m of the Butternut tree.

## Tree Group A

This grouping includes the majority of the subject property. The area is dominated by a dense thicket of Gray Dogwood and Common Buckthorn with a canopy consists predominantly of dead and dying Green Ash trees. To obtain an estimate of the number, size, and species of trees in this area, a total 11 100 m<sup>2</sup> temporary sample plots were established. Plot locations are shown on **Figure 1**. A summary of the plot data is presented in **Table 1**.

Based on the plot data, there is an average of four trees per 100 m<sup>2</sup>. The total area of this grouping is approximately 4 ha; therefore, there are an estimated 1,600 trees within this grouping based on the plot data. Trees range in size from 10 to 47 cm DBH. The majority (67%) of trees are Green Ash, which are dead or in decline due to Emerald Ash Borer (EAB) damage.



**Table 1. Sample Plot Data for Tree Group A**

Plot	Green Ash ( <i>Fraxinus pennsylvanica</i> )	Willow ( <i>Salix</i> sp.)	White Elm ( <i>Ulmus americana</i> )	Red Maple ( <i>Acer rubrum</i> )	Tulip Tree ( <i>Liriodendron tulipifera</i> )	Apple ( <i>Malus</i> sp.)	Black Locust ( <i>Robinia pseudo-acacia</i> )	Scotch Pine ( <i>Pinus sylvestris</i> )	White Pine ( <i>Pinus strobus</i> )	Black Walnut ( <i>Juglans nigra</i> )	Total
	DBH (cm)										
1	28, 42	-	-	13	-	-	-	-	-	-	3
2	33, 30, 13, 10	46, 46	-	29	-	-	-	-	-	-	7
3	37, 34, 9, 22	-	-	-	-	10	-	-	-	-	5
4	34, 32, 15	-	13	-	12	10	-	-	-	-	6
5	16	-	-	-	-	-	10	-	-	-	2
6	37, 27, 23	-	-	24	-	-	-	-	-	-	4
7	47, 30, 26	-	-	-	-	-	-	-	-	-	3
8	40	-	-	-	-	-	-	-	37	-	2
9	37	-	-	51	-	-	-	26	-	-	3
10	36, 14, 15, 22	-	-	-	-	-	-	-	-	34, 34	6
11	35, 23, 20, 19, 15	-	-	-	-	-	-	-	-	-	5
Total	31	2	1	4	1	2	1	1	1	2	46



## **Tree Group B**

This grouping is a hedgerow located on the east property line consisting of 13 mid-aged Norway Spruce ranging in size from 21 to 49 cm DBH, and one Black Walnut (50 cm DBH) that were planted adjacent to the existing residence.

## **Recommendations**

The large majority ( $\geq 67\%$ ) of trees on the subject property are Green Ash. In general, ash trees are a low priority for preservation as they are in decline due to Emerald Ash Borer (EAB). Signs and symptoms of EAB were observed on ash trees throughout the property.

It is our understanding that the proponent wishes to remove dead and dying trees from the property. An area for selective removal of dead/dying ash trees is identified in **Figure 3**.

Permission should be obtained from the Town prior to any tree removals required from the right-of-way along Thunder Bay Road and Burleigh Road South (see **Figure 3**). The determination of tree ownership is the responsibility of the landowners.

A 15 m riparian buffer/tree protection zone is recommended on either side of the watercourse that crosses the subject property (see **Figure 3**).

Authorization from the Ministry of Natural Resources and Forestry (MNRF) is required prior to site alteration, including the removal of trees or other vegetation, within 50 m of the Butternut tree (see **Figure 3**).

It is recommended that tree removals be conducted outside the breeding season for birds. The federal *Migratory Birds Convention Act* protects the nests, eggs, and young of most bird species from harassment, harm, or destruction. The breeding bird season in southern Ontario is generally from mid-April to late-July; therefore, the clearing of vegetation should take place outside of these dates (i.e. between August and March).

Trees or tree groupings identified for tree preservation shall be protected by establishing fencing at the locations shown in **Figure 3**. Fencing should consist of 1.2 m high orange plastic mesh fencing secured to metal t-bar stakes spaced no more than 2 m apart.

Fencing must be installed before any tree clearing takes place and maintained in good working order through the duration of the project. Within the fenced tree protection areas there shall be:

- No vegetation clearing or disturbance of any kind
- No storage of materials, equipment, waste, or debris
- No movement, parking, or storage of vehicles, machinery, or equipment



Report prepared by:  
**Beacon Environmental**



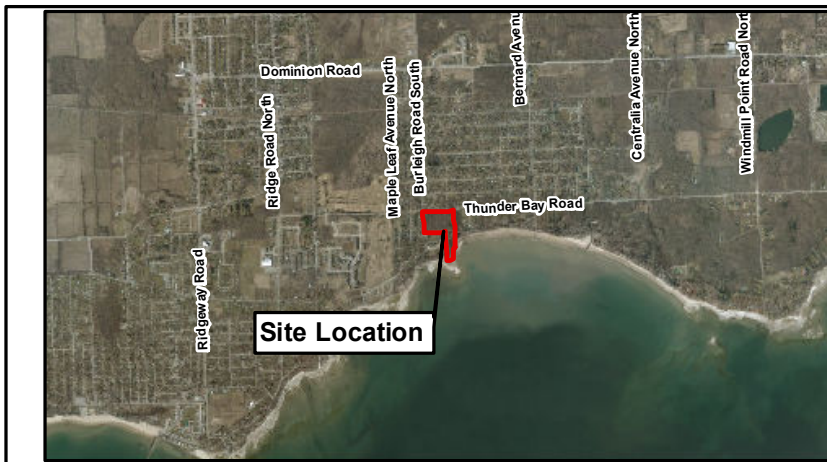
Dan Westerhof B.Sc., MES  
Terrestrial Ecologist, ISA Certified Arborist

Report reviewed by:  
**Beacon Environmental**



Ron Huizer, B. Sc. (Honours)  
Principal





## Site Location

## Figure 1

3285 Thunder Bay Road TIPP

UTM Zone 17 N, NAD 83

First Base Solutions  
Web Mapping Service 2010



0 25 50 100 Metres

1:3,000



Project 218011  
January 2018

**DRAFT**





Legend

- Subject Property
- Tree Groups
- Sample Plot Locations
- Tree Locations
- Butternut

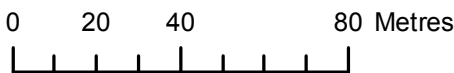
Tree Inventory

Figure 2

3285 Thunder Bay Road TIPP

UTM Zone 17 N, NAD 83

First Base Solutions  
Web Mapping Service 2010



1:1,800



**BEACON**  
ENVIRONMENTAL

Project 218011  
January 2018

**DRAFT**





Legend

- Subject Property
- Tree Groups
- Watercourse
- Trees To Be Preserved
- Trees To Be Preserved Pending Approval From Town For Removal
- Selective Removal Of Ash Trees
- Trees To Be Preserved
- Tree Protection Fence

Tree Preservation Plan		Figure 3	
3285 Thunder Bay Road TIPP			
UTM Zone 17 N, NAD 83			
First Base Solutions Web Mapping Service 2010			
0 20 40 80 Metres		1:1,800	
<b>BEACON</b> ENVIRONMENTAL		Project 218011 February 2018 <b>DRAFT</b>	





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## *LCA Environmental Consultants*

---

December 21, 2018

**William Heikoop, B.U.R.Pl**

Upper Canada Planning & Engineering Ltd.

30 Hannover Dr., Unit #3

St. Catharines, ON L2W 1A3

Dear Mr. Heikoop,

**Re: Removal of Hazardous Trees and European Buckthorn  
3285 Thunder Bay Road, Fort Erie ON, ARN: 27030200112000**

---

LCA Environmental staff met with the landowner and NPCA forester, Dan Drennan at the above-mentioned property on December 3, 2018 to identify hazardous trees for removal in accordance with the Town's Lot Maintenance By-Law #165-08.

All trees within 30m of the south, west, and north property boundaries were assessed by Dan Drennan for potentially hazardous conditions. Only those trees identified by Dan Drennan as dead, decayed, or damaged and which created unsafe conditions for neighbouring property landowners or adjacent roads were marked for removal. See Figure 1, attached for the area assessed for potential hazard.

A total of fifty-seven trees were marked for removal, including forty-eight dead Ash trees, eight Elm, and one Scots Pine.

Further to Lot Maintenance By-law #165-08, subsection 4.2 states that properties must be kept clean from all noxious weeds. European Buckthorn (*Rhamnus cathartica*) is designated as a noxious weed under the *Weed Control Act*, R.S.O. 190, c.W.5, and is a common and widespread invasive species in the Town of Fort Erie.

Pursuant to a resolution between the landowner and Town Council, which requires all living trees on the subject property be surveyed prior to the removal of dead or damaged trees, the removal of European Buckthorn from the understory is necessary to create proper sight lines for survey equipment. The understory on the property is dominated by Buckthorn, which creates a dense scrub layer, impeding movement and accuracy of equipment.

In addition to hazardous trees, European Buckthorn was marked for removal throughout the property. LCA Environmental identified and clearly marked all Buckthorn during site visits on December 3, 2018 and December 11, 2018. To avoid removal of native species, only clearly marked vegetation shall be removed by cutting or pulling.

We trust that the information provided above meets your requirements. Should you have any questions, please contact Anne McDonald.

Anne McDonald, BSc

Project Coordinator, LCA Environmental

[aemcdonald@lcaenvironmental.ca](mailto:aemcdonald@lcaenvironmental.ca)



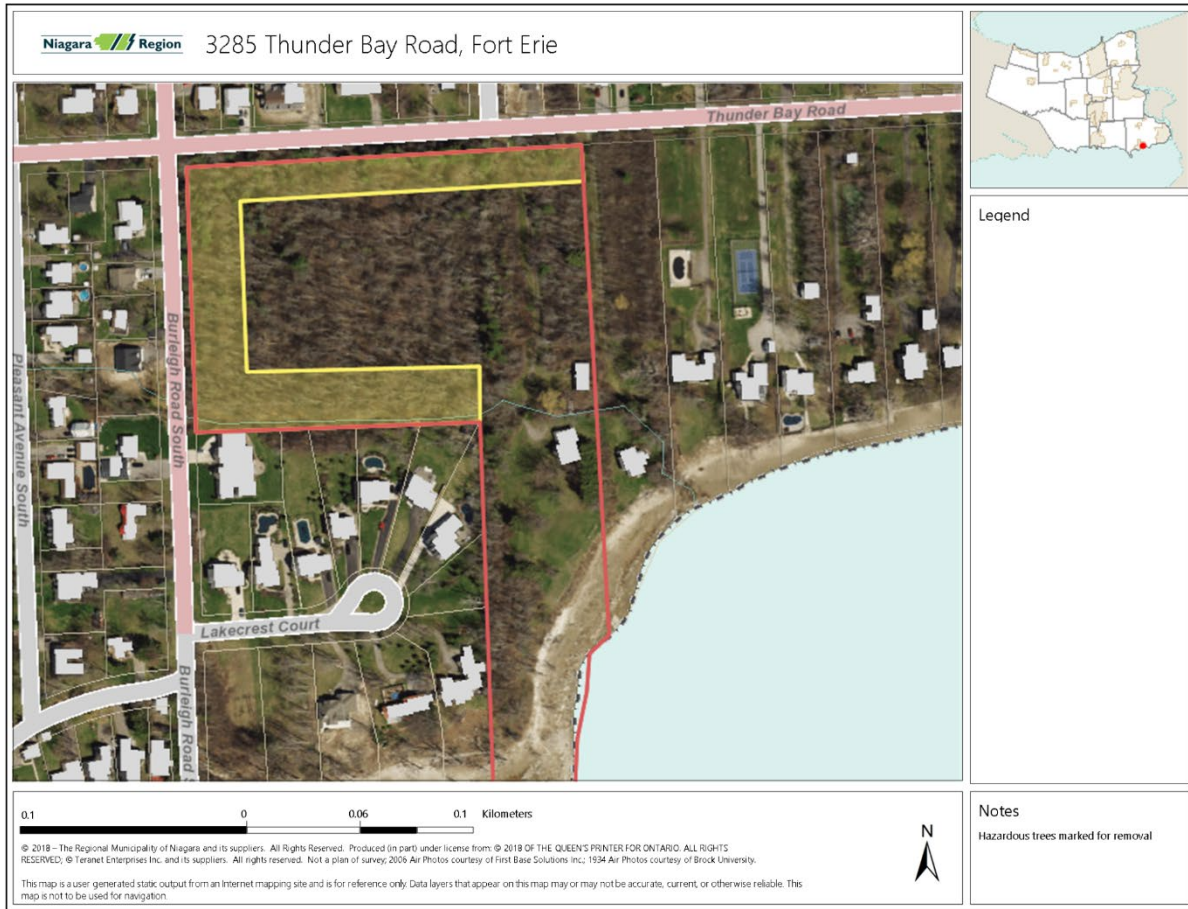


Figure 1: The area marked in yellow was assessed by LCA staff and NPCA forester for potentially hazardous trees.





**UPPER CANADA  
CONSULTANTS**  
ENGINEERS / PLANNERS

Upper Canada  
Planning &  
Engineering Ltd.

3-30 Hannover Drive  
St. Catharines, ON  
L2W 1A3

Phone 905-688-9400  
Fax 905-688-5274

February 6th, 2019

File: 17143

Town of Fort Erie  
1 Municipal Centre Drive  
Fort Erie ON L2A 2S6

*Attn: Kira Dolch, MCIP, RPP, CNU-A Associate Director, Planning and Development Services*

**Tree Preservation Plan  
3285 Thunder Bay Road– Town of Fort Erie**

Following the council resolution in May of 2018, which detailed criteria for the removal of dead ash trees on the above noted property. Please find enclosed a Tree Preservation Plan which was prepared accordingly. This plan shows the required preservation of all non-ash trees within the Stage 1 Area of the property, being first 30m of the property line within the EC Conservation Overlay area. Due to the thick underbrush only the first 30 meters of the forested area surrounding the perimeter was visible enough for surveying equipment to record the location of the non-ash trees. It is the intention that when the removal of dead on the Stage 1 Area is completed that an additional plan will be provided showing the location of the non-ash tree marked for preservation within the Stage 2 area.

All the non-ash tree's to be identified by an arborist for preservation. All dead trees within 30m of the south, west, and north property lines were identified by the Niagara Peninsula Conservation Authorities forester Dan Drennan who is an ISA certified Arborist, who was also accompanied by Anne McDonald with LCA Environmental Consulting. Additionally this information was confirmed by Rachel Bowery of Pineridge Tree Service who is also and ISA Certified Arborist. Subsequently these identified tree locations were recorded by accurate surveying equipment and illustrated on the Preservation Plan. A corridor for the removal of these trees will be located near the extent of the 30 meter buffer and meander as needed to avoid any non-ash trees.

My Client and I request that you approve the enclosed plan as clearing is required to take place before the commencement of the Migratory Bird Breeding Season.

If there are any further questions or concerns please do not hesitate to contact the undersigned.

Sincerely,

William Heikoop, B.URPI  
Urban Planner

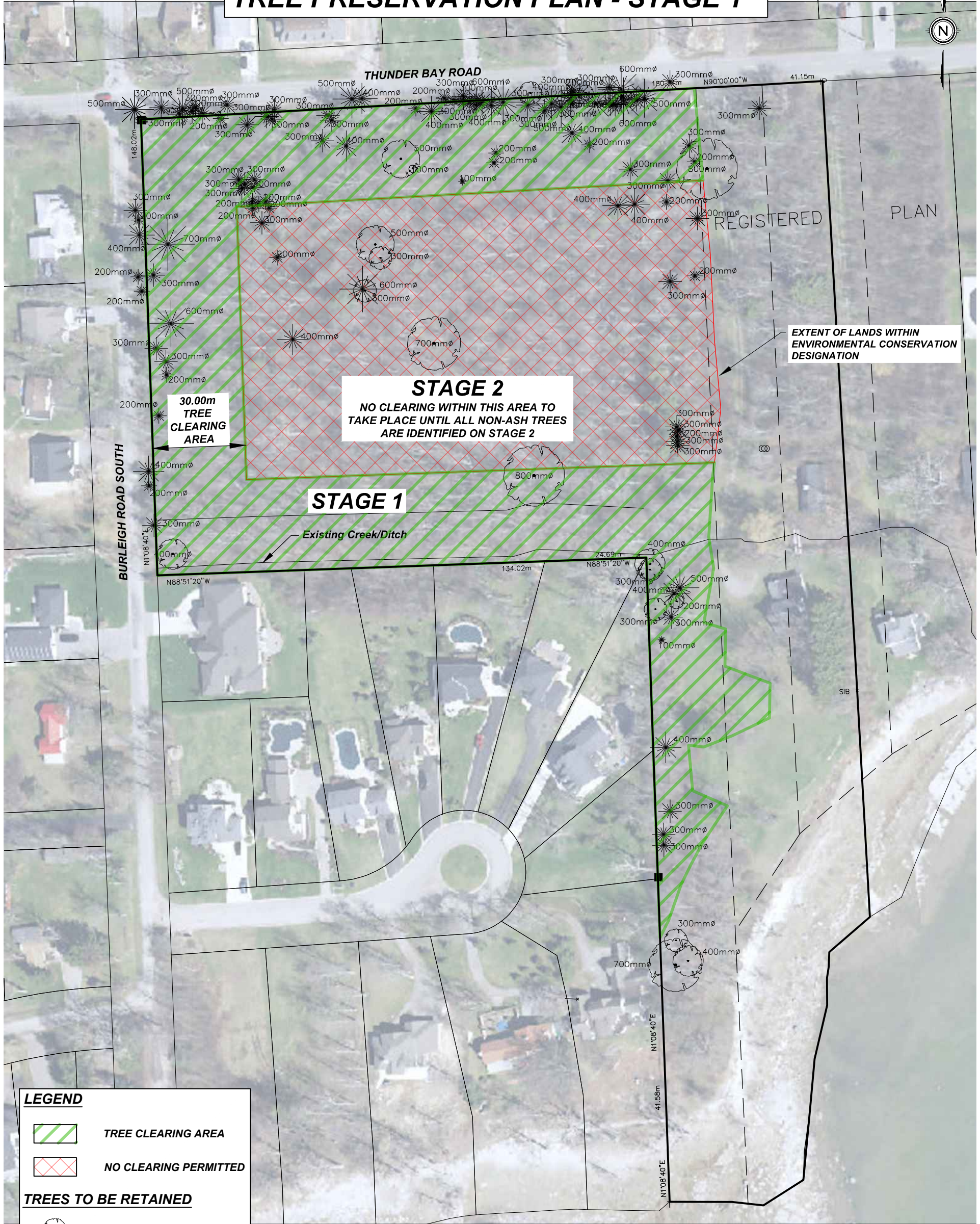
Upper Canada Consultants

cc. 3285 Thunder Bay Road Corporation – Alfred Beam, Tom Stack, Rob Mills

Encl. Tree Preservation Plan, Confirmation Email Correspondence – Dan Drennan NPCA



# TREE PRESERVATION PLAN - STAGE 1



**LEGEND**

TREE CLEARING AREA

NO CLEARING PERMITTED

**TREES TO BE RETAINED**

DECIDUOUS TREES

CONIFEROUS TREES

0	ISSUED FOR REVIEW	2019-01-29	M.K.
#	REVISION	DATE	INIT

NOTES/LEGEND

DRAFTING  
M.K.  
DESIGN  
M.K.  
CHECKED BY  
M.H.  
APPROVED BY



3285 THUNDER BAY ROAD  
TOWN OF FORT ERIE  
TREE PRESERVATION PLAN

CONSULTANT FILE No. 17143
DATE 2019-01-24
PRINTED 2019-02-05
SCALE 1:1250 m
REF No. ---
DWG No. 17143-TP
REV 0





**UPPER CANADA  
CONSULTANTS**  
ENGINEERS / PLANNERS

Upper Canada  
Planning &  
Engineering Ltd.

3-30 Hannover Drive  
St. Catharines, ON  
L2W 1A3

Phone 905-688-9400  
Fax 905-688-5274

March 14<sup>th</sup>, 2019

File: 17143

Town of Fort Erie  
1 Municipal Centre Drive  
Fort Erie ON L2A 2S6

**Attn:** Kira Dolch, MCIP, RPP, CNU-A Associate Director, Planning and Development Services

**Tree Preservation Plan – Stage 2**  
**3285 Thunder Bay Road– Town of Fort Erie**

Following the council resolution in May of 2018, which detailed criteria for the removal of dead ash trees on the above noted property. Please find enclosed a Tree Preservation Plan for the Stage 2 area which was prepared accordingly. This plan shows the required preservation of all non-ash trees within the Stage 2 Area of the property, being the remainder the subject site with the EC Conservation Overlay area. After the first 30m of dead ash trees were removed, surveying equipment could obtain sufficient sight lines to get reliable data to record the live non-ash tree's which have been shown on the Stage 2 Tree Preservation Plan enclosed.

All the non-ash tree's to be identified by an arborist for preservation. All dead trees within the interior of the site were identified by Michael Moes of Arbor Moose Tree Care, enclosed is a letter confirming their review of the site. Subsequently these identified tree locations were recorded by accurate surveying equipment and illustrated on the Preservation Plan. A corridor for the removal of these trees will be located near the extent of the 30 meter setback from the property line as identified and meander as needed to avoid any non-ash trees.

My Client and I request that you approve the enclosed plan as clearing is required to take place before the commencement of the Migratory Bird Breeding Season.

If there are any further questions or concerns please do not hesitate to contact the undersigned.

Sincerely,

William Heikoop, B.URPI  
Urban Planner  
Upper Canada Consultants  
cc. 3285 Thunder Bay Road Corporation – Alfred Beam, Tom Stack, Rob Mills  
Encl. Tree Preservation Plan,

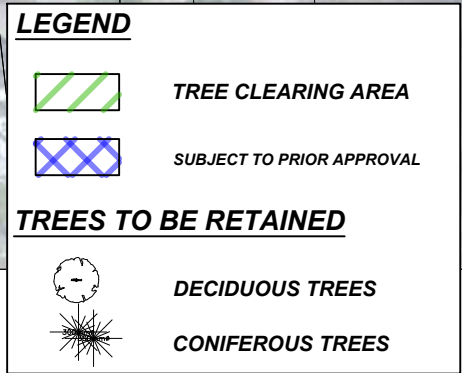
*Confirmation Letter From Arbor Moose Tree Care*







**UPPER CANADA  
CONSULTANTS**  
*ENGINEERS / PLANNERS*





0	ISSUED FOR REVIEW	2019-13-03	M.K.
#	REVISION	DATE	INIT

NOTES/LEGEND	DRAFTING
	M.K.
	DESIGN
	W.H.
	CHECKED BY
	W.H.
	APPROVED BY
	W.H.

<p><b>3285 THUNDER BAY ROAD</b>  <b>TOWN OF FORT ERIE</b>  <b>TREE PRESERVATION PLAN</b>  <b>STAGE 2</b></p>	CONSULTANT FILE No. 17143	
	DATE	2019-01-24
	PRINTED	2019-03-13
	SCALE	1:1250 m
	REF No. ----	
	DWG No.	REV
	<b>17143-TP2</b>	<b>0</b>



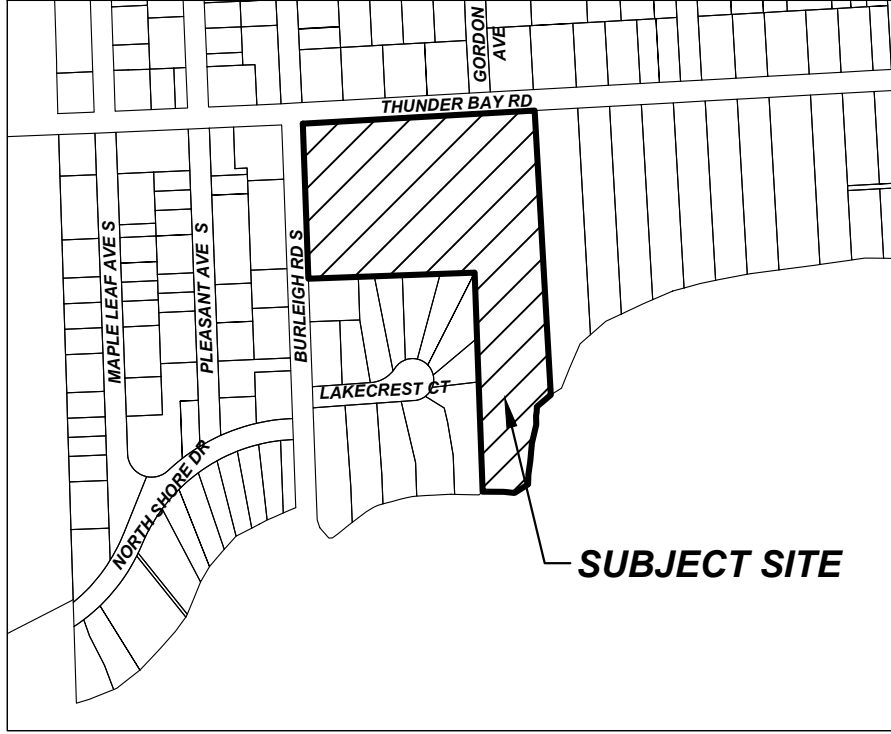
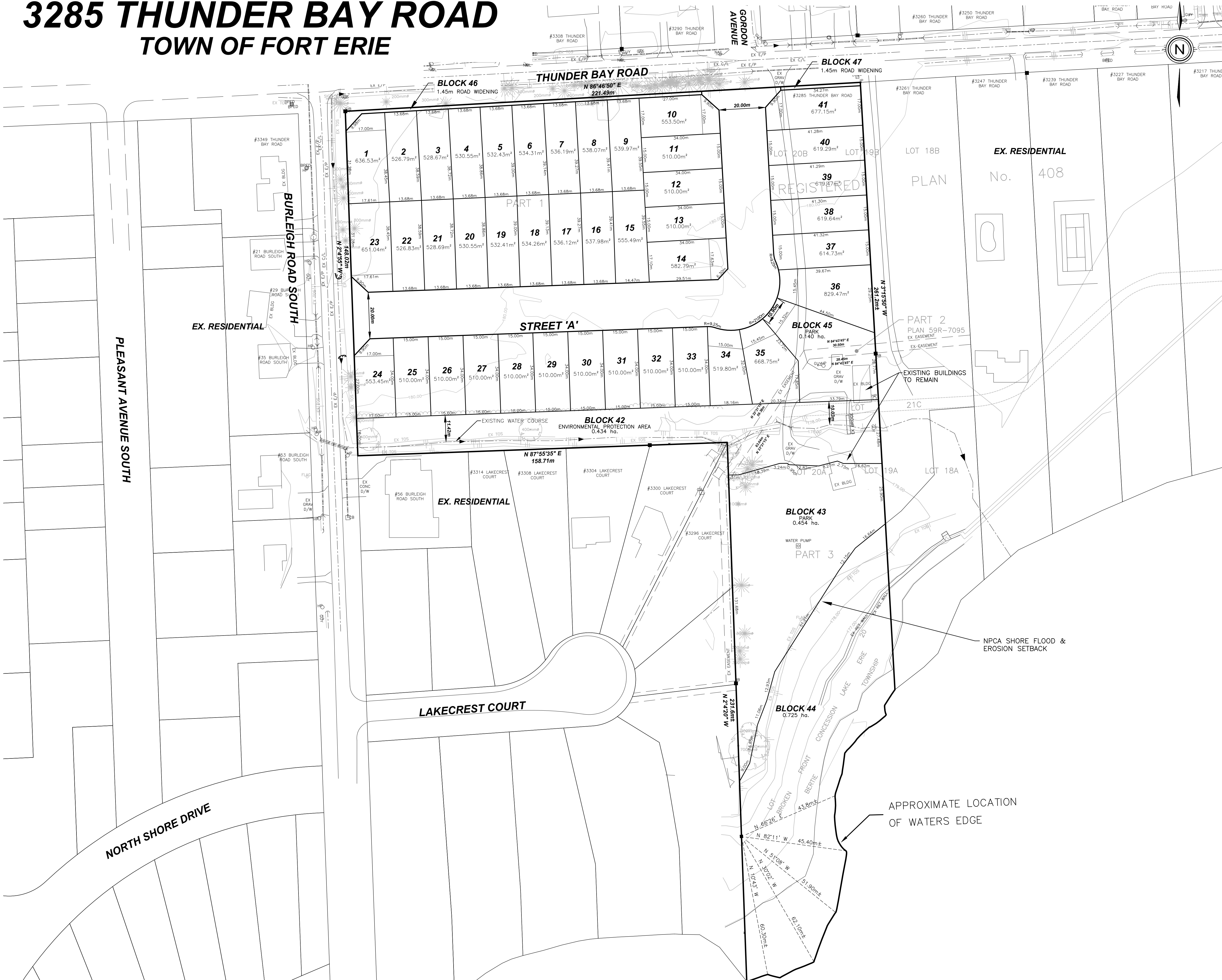
# **Appendix F**

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## **Proposed Plan of Subdivision**



3285 THUNDER BAY ROAD  
TOWN OF FORT ERIE




KEY PLAN  
N.T.S.

DRAFT PLAN OF SUBDIVISION

LEGAL DESCRIPTION


LOTS 20A, 20B, PART OF LOTS 19A, 19B & 21C  
REGISTERED PLAN No. 408 and  
PART OF LOT 20, BROKEN FRONT CONCESSION LAKE ERIE  
GEOGRAPHIC TOWNSHIP OF BERTIE  
TOWN OF FORT ERIE  
REGIONAL MUNICIPALITY OF NIAGARA  
OWNER'S CERTIFICATE

BEING THE REGISTERED OWNER, I HEREBY  
AUTHORIZE UPPER CANADA CONSULTANTS TO  
PREPARE AND SUBMIT THIS DRAFT PLAN OF  
SUBDIVISION TO THE TOWN OF FORT ERIE  
FOR APPROVAL.

  
WESTWIND NIAGARA DEVELOPMENTS INC. JUNE 22, 2021  
DATE

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THE BOUNDARIES OF  
THE LANDS TO BE SUBDIVIDED ARE  
CORRECTLY SHOWN.

  
ROY S. KIRKUP, B.Sc., O.L.I.P., Ontario Land Surveyor DATE  
KIRKUP MASCOE URE SURVEYING  
(a Division of J.D. Barnes Limited)

REQUIREMENTS OF SECTION 51(17)  
OF THE PLANNING ACT

- |             |                    |                 |
|-------------|--------------------|-----------------|
| a) SEE PLAN | e) SEE PLAN        | i) SILTY SAND   |
| b) SEE PLAN | f) SEE PLAN        | j) SEE PLAN     |
| c) SEE PLAN | g) SEE PLAN        | k) FULL SERVICE |
| d) SEE PLAN | h) MUNICIPAL WATER | l) SEE PLAN     |

LAND USE SCHEDULE

LAND USE	LOT/BLOCK	# OF UNITS	AREA(ha)	AREA(%)
SINGLE FAMILY RESIDENTIAL	1-41	41	2.2815	49.55
ENVIRONMENTAL PROTECTION	BLOCK 42		0.4343	9.43
PARK	BLOCK 43,45		0.5940	12.90
SHORELINE DEDICATION	BLOCK 44		0.7245	15.74
ROAD WIDENING	BLOCK 46-47		0.0296	0.64
ROADWAY			0.5404	11.74
TOTAL		41	4.6043	100.00
DEVELOPABLE AREA (TOTAL - BLOCK 42 & 44) = 3.4455 ha				
DEVELOPABLE DENSITY = 11.90 units/ha				

1	ISSUED FOR APPROVAL	2021-06-28	M.K
0	ISSUED FOR PRE-CONSULTATION	2020-09-24	MK
#	REVISION	DATE	INIT



30 Hannover Drive, Unit 3  
St. Catharines, ON  
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Fax: (905)688-5274

DRAWING TITLE	DRAFTING	MK
DRAFT PLAN OF SUBDIVISION	DATE	JUNE 22, 2021
	PRINTED	JUNE 28, 2021
	SCALE	1:750
	DWG No.	17143-DP
	REV	1