



GUIDING SOLUTIONS IN THE
NATURAL ENVIRONMENT

Environmental Impact Study

Peace Bridge Village Phase 4

Town of Fort Erie, Niagara Region

Prepared For:

Ashton Homes Western Limited

Prepared By:

Beacon Environmental Limited

Date: Project:

May 2022 221288

Table of Contents

	page
1. Introduction	1
1.1 Overview of Study Area	1
1.2 Planning and Regulation Setting	4
1.2.1 Provincial Policy Statement (2020)	4
1.2.2 Niagara Region Official Plan (2014)	4
1.2.3 Town of Fort Erie Official Plan (2011)	5
1.2.4 Niagara Peninsula Conservation Authority – Ontario Regulation 155/06 (2006)	5
2. EIS Scope and Assessment Methodology	6
2.1 Scope of EIS	6
2.2 Background Review	6
2.3 Field Surveys	6
2.3.1 Aquatic Environment and Fish Habitat Surveys	7
2.3.2 Amphibian Surveys	7
2.3.3 Ecological Land Classification and Floristic Inventory	7
2.3.4 Breeding Bird Surveys	7
2.3.5 Bat Surveys	8
2.3.6 White-tailed Deer Yarding Area	9
2.3.7 Feature Staking	9
2.3.8 Assigned Beacon Staff	9
3. Description and Assessment of Existing Environment	10
3.1 Aquatic Resources and Fish Habitat	10
3.2 Vegetation Communities of the Adjacent Lands	11
3.2.1 Natural Communities	11
3.2.2 Cultural Communities	11
3.2.3 Rare Vegetation Communities	17
3.3 Flora	17
3.3.1 Endangered and Threatened Species	18
3.3.2 Special Concern and Provincially or Regionally Rare Species	18
3.4 Birds	18
3.4.1 Endangered and Threatened Species	19
3.4.2 Species of Special Concern and Provincially or Regionally Rare Species	20
3.5 Amphibians and Reptiles	20
3.5.1 Amphibians	20
3.5.2 Reptiles	20
3.6 Mammals	22
3.6.1 Endangered Species of Bats	22
3.7 Provincially Significant Wetlands or ANSIs	22
3.8 Town of Fort Erie Environmentally Sensitive or Significant Area	22
3.9 Species at Risk (SAR)	22
3.10 Significant Wildlife Habitat	23
3.11 Significant Woodland	23
3.12 Significant Valleylands	24
3.13 Niagara Region EPA and ECA	24

4. Proposed Draft Plan of Subdivision	24
4.1 Setbacks to Natural Heritage Features	24
5. Environmental Impact Assessment and Mitigation	25
5.1 Assessment of Potential Direct Impacts.....	25
5.2 Mitigation for Potential Indirect Impacts	25
5.3 Assessment of Residual Impacts to Natural Heritage	25
5.4 Cumulative Impacts	26
6. Policy Conformity	26
6.1 Provincial Policy Statement	26
6.2 Niagara Region and Town of Fort Erie Natural Heritage Policies	27
6.2.1 Environmental Protection Area (EPA)	27
6.2.2 Environmental Conservation Area (ECA)	27
6.2.3 Fish Habitat	27
6.2.4 Endangered and Threatened Species	27
6.2.5 Natural Heritage Corridor	27
6.3 Niagara Peninsula Conservation Authority.....	28
7. Summary.....	28
8. Recommendation	28
9. Literature and References	29

Figures

Figure 1. Site Location.....	after page 2
Figure 2. Existing Conditions	after page 10

Tables

Table 1. 2021 Field Survey Dates for the Subject Lands	7
Table 2. Potential Endangered and Threatened Species of Plants for the Subject lands	18
Table 3. Birds Documented for the Lands Adjacent to the Subject Lands.....	19

Appendices

Appendix A. Agency Consultation
Appendix B. Vascular Plants for Subject Lands
Appendix C. SAR Screening
Appendix D. SWH Screening
Appendix E. Draft Plan of Subdivision

1. Introduction

Beacon Environmental Limited (Beacon) was retained by Ashton Homes Western Limited (the Proponent) in April 2021 to undertake an Environmental Impact Study (EIS) for the Peace Bridge Village Phase 4 draft plan of subdivision, located south of Garrison Road and east of Arthur Street in the Town of Fort Erie, hereinafter referred to as the subject lands (**Figure 1**). The subject lands lie within the Town's Urban Area Boundary in the Garrison Neighbourhood. The total developable area for Phase 4 is 2.64 ha. Phases 1 through 3 of the Peace Bridge Village subdivision included lands directly to the north and are currently under construction or completed. The Phase 4 development is a plan of subdivision which will comprise of 30 single family residential homes and 34 Street Townhomes.

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 in the 2021 field season. 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-up Garrison Neighbourhood, with residential development occurring directly to the north, east and south (**Photograph 1**). An equipment and materials storage yard lies along the west boundary (**Photograph 2**). The lands have been significantly impacted by human activity. As with most of the Fort Erie area, historically the lands were cleared and farmed. A historic 1934 areal photograph (Google Earth) shows that the entirety of the subject lands was farm field, with no vegetation present.

The Lake Erie/Niagara River shoreline lies approximately 1 km to the east, and the multi-lane Queen Elisabeth Way (QEW) highway lies 1 km to the north. A wetland unit of the Provincially Significant Kraft Drain Wetland Complex lies approximately 150 m to the southwest of the subject lands (see **Figure 1**). No Provincial or Regional Areas of Natural and Scientific Interest (ANSI) occurs in the local area. No watercourses or fish habitat occurs within or directly adjacent to the subject lands. The Lake Erie/Niagara River shoreline to the east and the Kraft Drain located 300 m to the west represent the nearest fish habitat.

An initial site survey conducted by Beacon at the end of April 2021 found that all the subject lands had been cleared of vegetation. (**Photograph 3**). In June no vegetation community was found to occur with all most all of the site supporting bare soil with scattered individual young trees of American Elm (*Ulmus americana*), Red Maple (*Acer rubrum*), and Pin Oak (*Quercus palustris*) (**Photograph 4**).





Photograph 1. Recent Residential Development on Louisa Street Along the North Boundary of the Subjects Lands



Photograph 2. Storage Area Along the West Boundary of the Subject Lands



Site Location		Figure 1
Peace Bridge Village Ph.4		
		Project: 221288 Last Revised: May 2021
Client: Ashton Homes		Prepared by: DU Checked by: RH
	1:8,000	Inset Map: 1:50,000
Contains information licensed under the Open Government License— Ontario Orthoimagery Baselayer: FBS Niagara 2018		



Photograph 3. Cleared Subject Lands (end of April 2021) - Looking East from the West Boundary to Residences on Jordyn Drive



Photograph 4. Cleared Subject Lands with Scattered Trees of Elm, Maple and Oak (June 2021)

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. Niagara Region Policy 7.B.1.10 states that

development and site alteration is not permitted within EPA lands. Policy 7.B.1.11 states that development and site alteration is permitted on lands adjacent to EPA and within ECA 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.

The Niagara Region Schedule C – Core Natural Heritage shows the EPA wetland unit of Kraft Drain PSW to lie within 120 of the subject lands. A portion of the subject lands and immediate adjacent lands are also identified to support ECA – Woodlands. Fish Habitat or Potential Natural Heritage Corridor is not identified to be associated with the subject lands.

1.2.3 Town of Fort Erie Official Plan (2011)

The subject lands are not located within area that is subject to policies of a Secondary Plan, or a Special Policy Area as identified on Schedule A - Land Use Plan. As a result, only the environmental policies as detailed in Section 8 Natural Heritage are applicable. Natural Heritage Features are shown on Schedule A as EPA and ECA. EPAs include Provincially Significant Wetland, Areas of Natural and Scientific Interest, the habitat of threatened and endangered Species and species of special concern and natural hazard areas, including dune protection areas. ECAs include, significant natural areas, locally significant wetlands, as well as other woodlands and meadows. Schedule C depicts the Natural Heritage features in more detail showing Provincially Significant Wetlands, identified Areas of Natural and Scientific Interest, Locally Significant Wetlands, Environmentally Sensitive Areas, Significant Natural Areas, Woodlands >2ha, and Corridors. Schedule C1 identifies Fish Habitat and Stream Corridors and Natural Hazard Areas including Valleylands and Dune Protection Areas.

Policy 8.2(I) states the development is not permitted in EPA, and Policy 8.2(IV) states that an EIS is required in support of proposed development on lands that lie adjacent to EPA. Policy 8.3(III) states that development within an ECA is permitted if supported by the findings of an EIS. Policy 8.3(V) states that upon the submission of a development proposal, the degree of protection and conservation afforded to the natural features and ecological functions of these areas in large part depends on the area's classification.

Schedule A identifies the subject lands as Urban Residential and Commercial and does not show EPA to within the subject lands, however the adjacent PSW wetland units is identified as EPA. The entirety of the subject lands is designated as ECA, based woodlands >2 ha in size as identified Schedule C. No Environmentally Sensitive Area or Significant Natural Area is identified to be within or directly adjacent to the subject lands. Schedule C1 does not identify natural hazards or fish habitat to be associated with the subject lands.

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

Wetlands, watercourses and valleylands and their adjacent lands are regulated within the jurisdiction of the Niagara Peninsula Conservation Authority (NPCA) pursuant to Ontario Regulation 155/06. Under the Regulation the NPCA has regulatory power to prevent or restrict development within defined regulated areas. 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. A review of the NPCA Watershed Explorer shows that no regulated areas are associated with the subject lands.

2. EIS Scope and Assessment Methodology

2.1 Scope of EIS

On May 18, 2021, Beacon provided the Niagara Region with a Terms of Reference (TOR) which detailed the scope of work for undertaking the EIS and following their review the Region provided an approval in an e-mail dated June 1, 2021 (the TOR and Region approval are provided in **Appendix A**). As no area regulated by the NPCA (NPCA Watershed Explorer web site) is associated with the subject lands (see **Appendix B** in the TOR), consultation with the NPCA regarding the scope of the EIS was not required.

In 2018 the Ministry of Natural Resources and Forestry (MNRF) was contacted to provide natural heritage information for the lands associated with Phase 2 development directly to the north of the subject lands. The MNRF provided information with respect to records of Species at Risk (SAR) which have been recorded for the local area (see **Appendix A**). In addition, the MNRF provided a list of potential SAR for the Town of Fort Erie. This MNRF information was used to screen for potential SAR.

2.2 Background Review

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

- Provincial Policy Statement (2020);
- Town of Fort Erie Official Plan, (2010), Sections 6.1 Environment;
- Town of Fort Erie Natural Areas Inventory (2003);
- Natural Areas Inventory 2006–2009, Volume 1 and 2. Niagara Peninsula Conservation Authority 2010;
- Schedule C Regional Municipality of Niagara Core Natural Heritage (Consolidated Official Plan for August 2015);
- Town of Fort Erie Schedule C Natural Heritage Features (Office Consolidated Version: October 29, 2018);
- NPCA Watershed Explorer - <https://camaps.maps.arcgis.com/>;
- NPCA Policy Document: Policies for the Administration of Ontario Regulation 155/06 and the *Planning Act* 2018;
- MNRF List of SAR for the Town of Fort Erie;
- Significant Wildlife Habitat (SWH) Criteria Schedules for Ecoregion 7E (MNRF 2015); and
- Niagara Region Environmental Impact Study Guidelines, Version 1 September 2012.

2.3 Field Surveys

As the subject lands did not support vegetation, therefor as identified in the TOR provided to the Niagara Region, field surveys were limit to the immediate adjacent lands. Beacon terrestrial ecologists conducted site surveys from April though October 2021 that documented flora, fauna and vegetation communities adjacent to the boundaries of the subject lands. Field survey dates are provided in **Table 1**. For each survey date, foot surveys were undertaken along the entire perimeter of the subject lands.

Table 1. 2021 Field Survey Dates for the Subject Lands

Survey	Dates
Leaf Off Tree Bat Snag Survey	April 28 th
Day Breeding Bird Surveys	April 28 th , May 26 th , June 10 th , June 24 th .
Night Breeding Bird Surveys	May 26 th , June 24 th
Floral Survey/ELC Assessment	April 28 th , May 26 th , June 10 th , June 20 th , July 20 th , October 3 rd

2.3.1 Aquatic Environment and Fish Habitat Surveys

The April survey of the subject lands found that no watercourse that could support fish habitat is associated with the subject lands or adjacent lands, therefore no specific field assessment for fish habitat was undertaken.

2.3.2 Amphibian Surveys

The April survey of the subject lands found that no ephemeral or permanent ponds, or wetland areas supporting standing water, are found within the subject lands or immediate adjacent lands. Therefore, no specific amphibian breeding surveys were undertaken.

2.3.3 Ecological Land Classification and Floristic Inventory

Vegetation communities adjacent to the perimeter boundary of the subject lands 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 survey, a foot survey was conducted for the vegetation communities adjacent to the perimeter boundary of the subject lands. Flora within the subject was also documented. Specific emphasises was placed on determining the presence of SAR. Both native and non-native species that are encountered were recorded.

2.3.4 Breeding Bird Surveys

Surveys for breeding birds took place in April, May, and June (see **Table 1**) 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 each survey date the entire perimeter boundary of the subject lands was walked. 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.

With respect to night surveys to detect calls for the threatened Whip-poor-will (*Antrostomus vociferous*) and special concern Common Nighthawk (*Chordeiles minor*), the MNRF- Guelph District did not identify

Whip-poor-will as species that could potentially occur (**Appendix A**), however, the potential for Common Nighthawk was noted. Based on an assessment of the existing conditions of the subject lands, an open site with bare ground, and the extensive bare ground areas associated with the adjacent storage yard to the west, it was determined that the potential breeding habitat for Common Nighthawk was present. Therefore, night surveys were conducted following MNRF protocol (MNRF 2015). Surveys were conducted on the nights of two full moons, May 26th, and June 24th. Surveys started at 10:00 pm, an hour after sun set and half hour after moon rise and lasted for 30 minutes. Due to the small area to be surveyed, only one survey station was used, located in the center of the subject lands.

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 at the end of April during leaf off. The 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). Walking along the perimeter of the subjects all trees with a dbh of 10 cm or greater were assessed with respect to presenting potential roosting/maternity habitat. **Photograph 5** shows the site in 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 5. Leaf Off Conditions on the Adjacent Lands During the April Bat Maternity Snag Tree Survey - Looking South at Mature Trees along the Southern Boundary of the Subject Lands

2.3.6 White-tailed Deer Yarding Area

The use of the subject lands by White-tailed Deer as winter habitat is not possible do to the absence of vegetation. While conducting the April survey of the adjacent lands, the density of deer tracks and droppings was noted, as well as evidence of deer browsing on shrubs and young trees.

2.3.7 Feature Staking

No feature staking, such as wetland boundaries, top of bank etc. with the NPCA or MNRF was required for this EIS.

2.3.8 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.

3. Description and Assessment of Existing Environment

The following provides a description and assessment of the natural heritage features and functions that are found for lands directly adjacent to the subject lands. **Figure 2** presents the features that are detailed in the following sections of the report.

3.1 Aquatic Resources and Fish Habitat

No natural watercourses or fish habitat occurs within or directly adjacent to the subject lands. Sheet flow of surface water within the subject lands is eastward and is collected in shallow drainage ditching along Louisa Street. A recently dug ditch runs along the southern boundary of the subject lands (**Photograph 6**). This ditch supports shallow (<5cm) ephemeral flows that flow eastward to Jordyn Drive.



Photograph 6. Dug Ditch along the Southern Boundary of the Subject Lands



Legend

- Subject Property
- Ecological Communities
- Kraft Drain Wetland Complex PSW

Code	Community
ANT	Anthropogenic
CUT1	Mineral Cultural Thicket
CUW1	Mineral Cultural Woodland

Existing Conditions

Figure 2

Peace Bridge Village Ph.4



Project: 221288

Last Revised: January 2022

Client: Ashton Homes

Prepared by: BD
Checked by: RH



1:4,000

Inset Map: 1:50,000

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

3.2 Vegetation Communities of the Adjacent Lands

The vegetation communities adjacent to the subject lands were assessed and mapped following the ELC for Southern Ontario (Lee et al 1998) and are shown on **Figure 2**. The ELC groups vegetation communities 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 fallow agricultural field. As noted, the subject lands have been significantly impacted by human activity, initially by clearing for agriculture and actively farms through 1940's.

3.2.1 Natural Communities

No naturally occurring vegetation communities are associated with the adjacent lands.

3.2.2 Cultural Communities

Mineral Cultural Thicket (CUT1)

A small rectangular block (100 X 120 m) of cultural thicket is found along the north boundary of the subject lands east of Arthur Street. This 1.2 ha community supports a dense cover by the invasive Common Buckthorn (*Rhamnus cathartica*), with a sparse canopy of young White Elm, and Green Ash (*Fraxinus pennsylvanica*) (**Photograph 7**). Standing young dead ash trees are found throughout this community (**Photograph 8**). The ground cover is a mix of grasses and field weeds.



Photograph 7. Example of the Density of the Common Buckthorn in the Cultural Thicket CUT1



Photograph 8. Dead Ash Trees in Cultural Thicket CUT1

Cultural Woodland (CUW1)

A cultural woodland is found along the southern boundary of the subject lands. A row of mature Cottonwood (*Populus deltoides*) delineates the historic property boundary (**Photograph 9**). The woodland supports a mix of young trees including Cottonwood, Green Ash, American Elm, and Crack Willow (*Salix fragilis*). A well-established shrubs layer supports a variety of species including Common Buckthorn, Dogwoods (*Cornus foemina*, *C. stolonifera*), and Raspberry (*Rubus allegheniensis*, *R. idaeus*) (**Photograph 10**). Piles of waste material cove extensive areas of the woodlands floor. (**Photograph 11**).



Photograph 9. Cultural Woodland (CUW1) with a Row of Mature Cottonwood along the South Property Boundary Line of the Subject Lands



Photograph 10. Cultural Woodland (CUW1) Adjacent to the South Boundary of the Subject Lands



Photograph 11. Waste Material Found Throughout the Floor of the Cultural Woodland (CUW1)

Hedgerow

A narrow single tree hedgerow of mature Eastern Cottonwood and young aged American Elm and Ash is found along the western boundary of the subject lands (**Photograph 12**).



Photograph 12. Single Tree Hedgerow along the West Boundary of the Subject Land Adjacent to the Waste Material Storage Area

Anthropogenic Communities

Anthropogenic (ANT)

Anthropogenic areas adjacent to the subject lands include residential development on Louisa Street along the northern boundary (**Photograph 13**) and Jordyn Drive along the eastern boundary (**Photograph 14**). As previously noted, a waste and material storage area is found along the western boundary (**Photograph 15**).



Photograph 13. Residential Development Along Louisa Street Adjacent to the Northern Boundary of the Subject Lands – Looking West



Photograph 14. Residential Development Along Jordyn Street Adjacent to the Eastern Boundary of the Subject Lands – Looking South



Photograph 15. A Waste and Materials Storage Area along The Western Boundary of the Subject Lands Looking South along the Boundary Line

3.2.3 Rare Vegetation Communities

All the subject lands and adjacent lands have been historically disturbed and altered by human activity, and no natural vegetation communities that are considered to be rare for the province (NHIC S1, S2, S3) or the Niagara Region (NPCA 2010) occur.

3.3 Flora

A total of One Hundred and Thirty-nine (139) species of vascular plants were recorded and are listed in **Appendix B**. The number and species of plants recorded are similar to those of adjacent lands identified in the LCA 2006 EIS and Beacon 2018 EIS. No unique or rare plant communities such as prairie elements, savannah, alvar or fen species were found to occur. Of the species present, fifty-six (56) are non-native species, representing 41% 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 to the historic disturbance of the lands which has resulted in the spread of non-native grasses, field weeds, trees and shrubs. No species with a Coefficient of Conservatism of 7 or greater was found to occur (with a total range of low 0 to a high of 10 - Oldham 1995).

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. **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 Ginseng (<i>Panax quinquefolius</i>)	Endangered
American Chestnut (<i>Castanea dentate</i>)	Endangered
Butternut (<i>Juglans cinera</i>)	Endangered
Cucumber Tree (<i>Magnolia acuminata</i>)	Endangered
Eastern Flowering Dogwood (<i>Cornus florida</i>)	Endangered
Spotted Wintergreen (<i>Chimaphila maculate</i>)	Endangered
Red Mulberry (<i>Morus rubra</i>)	Endangered
Round-leaved Greenbrier (<i>Smilax rotundifolia</i>)	Threatened
White Wood Aster (<i>Eurybia divaricate</i>)	Threatened

None of the above species were found occur during the surveys conducted by Beacon. **Appendix C** provides a screening for the species that the MNRF identified as having the potential to occur in the Fort Erie area.

3.3.2 Special Concern and Provincially or Regionally Rare Species

None of the 139 species recorded are listed as Special Concern. The MNRF SAR list for the Fort Eire area identified the potential for three species of Special Concern to occur, Common Hoptree (*Ptelea trifoliata*), Green Dragon (*Arisaema dracontium*) and Swamp Rose-mallow (*Hibiscus moscheutos*). These species inhabit lake shores and wetlands which are not found to occur within or adjacent to the subject lands. No provincially rare (NHIC S1, S2, S3) species were found to occur. No species that considered to be rare for the Niagara Region (Oldham 2010) were found to occur.

3.4 Birds

Thirty-eight (38) bird species were recorded during the field surveys of the adjacent lands and are presented in **Table 3**.

The adjacent lands supports a moderate 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 Willow Flycatcher (*Empidonax traillii*), Eastern Kingbird (*Tyrannus tyrannus*), Yellow Warbler (*Dendroica petechia*), Grey Catbird (*Dumetella carolinensis*), Red-winged Blackbird (*Agelaius phoeniceus*), and American Goldfinch (*Carduelis tristis*).

Species that occur in the Fort Erie area that are associated with stands of larger mature forest, such as nuthatch, thrushes, Hairy Woodpecker (*Picoides villosus*), Pileated Woodpecker (*Dryocopus pileatus*), and wood warblers were absent. No Areas Sensitive species was recorded.

Table 3. Birds Documented for the Lands Adjacent to the Subject Lands

Common Name	Scientific Name
Turkey Vulture	<i>Cathartes aura</i>
Red-tailed Hawk	<i>Buteo jamaicensis</i>
American Kestrel	<i>Falco sparverius</i>
Killdeer	<i>Charadrius vociferus</i>
American Woodcock	<i>Scolopax minor</i>
Ring-billed Gull	<i>Larus delawarensis</i>
Mourning Dove	<i>Zenaida macroura</i>
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>
Downy Woodpecker	<i>Picoides pubescens</i>
Northern Flicker	<i>Colaptes auratus</i>
Eastern Wood-Pewee	<i>Contopus virens</i>
Willow Flycatcher	<i>Empidonax traillii</i>
Eastern Kingbird	<i>Tyrannus tyrannus</i>
Great Crested Flycatcher	<i>Myiarchus crinitus</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>
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>
Common Yellowthroat	<i>Geothlypis trichas</i>
Northern Cardinal	<i>Cardinalis cardinalis</i>
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>
Indigo Bunting	<i>Passerina cyanea</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>

3.4.1 Endangered and Threatened Species

No species listed as Endangered or Threatened were recorded to occur within the subject lands or the adjacent lands. **Appendix C** provides a screening for the species that the MNRF identified as having the potential to occur in the Fort Erie area.

3.4.2 Species of Special Concern and Provincially or Regionally Rare Species

Appendix C provides a screening for the four special concern species that the MNRF identified as having the potential to occur in the Fort Erie area. Of these, only the Eastern Wood-Pewee (*Contopus virens*) was recorded; one singing male in the adjacent cultural woodland to the south of the subject lands. Two-night surveys did not detect the calls of the Common Nighthawk. The large Cottonwood trees adjacent to the southern and western boundaries of the subjects do provide potential nesting habitat for the special concern Red-headed Woodpecker (*Melanerpes erythrocephalus*), however, none were observed.

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 Amphibians and Reptiles

3.5.1 Amphibians

As noted, no amphibian breeding sites are found within the subject lands or immediate adjacent lands. Two species of frog were observed in the ditch along the southern boundary, the Northern Leopard Frog (*Rana pipiens*) and Green Frog (*Rana clamitans*). Three other species have been reported for the local area, the Chorus Frog (*Pseudacris triseriata*), Spring Peeper (*Hyla crucifer*) and American Toad (*Bufo americanus*) (Beacon 2019; LCA 2006). All species are common to the Niagara Region (Yagi et al 2009).

3.5.2 Reptiles

Only one species of snake was encountered, the Common Garter Snake (*Thamnophis sirtalis*). The Little Dekay's Brownsnake (*Storeria dekayi*) is also expected to occur. Both species are very common to the Niagara Region (Yagi et al. 2009).

No bedrock crevices or stone/lumber piles that could provide hibernacula for snakes were found to occur within the subject lands. However, the materials storage piles associated with the lands along the western boundary could provide hibernacula (see **Photographs 16 and 17**). No habitat for turtles is found within or adjacent to the subject lands. A screening for potential SAR reptiles is provide in **Appendix C**.



Photograph 16. Wood Piles on Adjacent Lands Providing Potential Snake Hibernacula



Photograph 17. Material Piles on Adjacent Lands Providing Potential Snake Hibernacula

3.6 Mammals

Due to site conditions the subject lands do not support habitat for mammals. During the field investigations species encountered (visually or scat or tracks) for the adjacent lands included Gray Squirrel (*Sciurus carolinensis*), Coyote (*Canis latrans*), Raccoon (*Procyon lotor*), and White-tailed Deer (*Odocoileus virginianus*).

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*). The MNRF identified that these species may be present within wooded areas in the area of the subject lands (**Appendix 2**).

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 adjacent lands was conducted in April. This survey did not identify potential bat summer roost or maternity sites.

3.7 Provincially Significant Wetlands or 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. As noted, a wetland unit of the Kraft Drain Wetland Complex PSW lies approximately 150 m to the southwest of the subject lands (**Figure 2**). Also, no Areas of Natural Scientific Interest (ANSI) at the provincially or regional level are identified by the MNRF to occur within or adjacent to the subject lands.

3.8 Town of Fort Erie Environmentally Sensitive or Significant Area

Schedule C Natural Heritage Features identifies Environmentally Sensitive Areas and Significant Natural Areas. These features are not identified to occur within or adjacent to the subject lands. This EIS has not identified natural heritage features or functions for the adjacent lands that would support such a designation.

3.9 Species at Risk (SAR)

The MNRF provided information regarding potential SAR for area in which the subject lands are located. No SAR were observed during field surveys conducted for the subject lands or adjacent lands. A screening for the potential occurrence of SAR for the adjacent lands is provided in **Appendix C**.

3.10 Significant Wildlife Habitat

Under the PPS the identification of Significant Wildlife Habitat (SWH) is the responsibility of Regional and Local planning authorities. Schedule C of the Niagara Region and Town of Fort Erie Official Plans do not specifically identify areas that are considered to represent SWH. In addition, Section 7 Environment of the Niagara Region Official Plan does not provide criteria for the identification of SWH. However the Region's environmental staff support the MNRF SWH criteria for Ecoregion 7E (MNRF 2015).

Due to existing site conditions the subject lands do not support SWH. For the adjacent lands a SWH screening was undertaken following the MNRF SWH habitat criteria for Ecoregion 7E and is provided in **Appendix D**. The screening identified two potential SWH for the adjacent lands. As all ready noted, the lands adjacent to the west boundary provides material piles that could support snake winter hibernacula. Also due to the close proximity of the Lake Erie shoreline, 1 km, the cultural woodlands adjacent to the southern boundary provides a stop over area for migrating birds, particularly during the spring migration.

With respect to animal movement corridor, Schedule C of both the Niagara Region and Town of Fort Erie identify potential movement corridors and neither show the subject lands, or the adjacent lands, to support this function. The presence of the high traffic volume Garrison Road directly to the north of the subject lands, and the multi-lane QEW located approximately 1 km to the north, significantly reduces or eliminates a landscape level north-south movement corridor for most species of fauna, except for birds. An east-west corridor is significantly impacted by recent residential development in the Garrison Neighborhood to east the of the subject lands.

3.11 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;
 - 10 hectares, if located outside Urban Areas and south of the Escarpment;
- Contain interior woodland habitat at least 100 m in from the woodland boundaries;
- Contain older growth forest and be 2 ha 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 subject lands lie within an Urban Area boundary, and therefore any wooded area greater than 2 ha can be considered to represent Significant Woodland. The cultural woodlands adjacent to the southern boundary of the subject lands have total area that is > 2ha and are identified as significant woodland on Schedule C Natural Heritage Features of the Town of Fort Erie.

3.12 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. No valleylands were identified to be associated with subject lands or the adjacent lands.

3.13 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 not identified a feature or function that would support an EPA designation for the adjacent lands. The cultural woodland adjacent to the southern boundary of the subjects is identified as ECA by the Niagara Region. As this woodland area is > 2ha within an urban area, this designation is supported.

4. Proposed Draft Plan of Subdivision

The general elements of the proposed draft plan of the Peace Bridge Village Phase 4 subdivision are provided in **Appendix E** and should be reviewed in conjunction with the following text.

The draft plan identifies 29 single family residential homes, lots 1-29, and 36 street townhome units within blocks 30 through 35. Access to the subdivision will be via a loop street with two intersections with an eastward extension of Louisa Street. Block 36 in the southwest corner of the plan provides for a future road connection.

As with the other Peace Bridge Village development phases, water and sanitary sewer will be located within the street network and will link to existing municipal services. The majority of the stormwater will be collected through a street and gutter system and directed to the stormwater system installed in Phase 1 of the Peace Bridge Village development. Stormwater from the Phase 1 development is directed southward via piping to the rear of residential lots along Jordyn Drive, and then to a stormwater management pond located on lands currently owned by the Town, east of Nancy Road and north of Albany Street. This stormwater pond received approval for construction by the Region in 2018. Therefore, no stormwater block is associated with the Phase 4 plan of subdivision.

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 and townhouse may occur over a number of years.

4.1 Setbacks to Natural Heritage Features

Based on the findings of this study, no need for setback or buffer Blocks to natural heritage features were identified as required for the draft plan.

5. 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. Mitigation measures are identified that will reduce the potential impacts.

5.1 Assessment of Potential Direct Impacts

The potential impacts of the clearing of the subject lands prior to conducting this EIS can not be assessed. Currently the subject lands do not support natural heritage features as defined by the Niagara Region or City of Fort Erie. Therefore, based on existing conditions for the proposed development no direct impact to the natural heritage systems of the Niagara Region or Town of Fort Erie will occur.

5.2 Mitigation for Potential Indirect Impacts

Based on the proposed development and site conditions only one potential indirect impact has the potential to occur, construction impacts to the edge trees of the ECA – Cultural Woodland along the south boundary of the subject lands.

To mitigate this potential impact, to ensure that site grading or heavy equipment does not impose on the edge of the cultural woodland, for the duration of the construction phase paige wire fencing with filter fabric is to be installed along the south boundary of the subject lands. Fencing should be installed prior to the start of any construction works. The fencing should be removed only when development work is completed.

In addition to the placement of exclusion fencing, site grading directly along the woodland edge should be limited and placement of soil, if required, should be at depth that is <10cm and excavation work below the existing surface, if required, should not exceed 0.5 m.

5.3 Assessment of Residual Impacts to Natural Heritage

No fish habitat occurs within or directly adjacent to the subject lands, therefore no significant residual impact to fish habitat will occur.

As noted, the potential impacts of the clearing of the subject lands prior to conducting this EIS can not be assessed. Based on existing conditions of the subject lands, the proposed development will not result in the removal vegetation communities or wildlife habitat, therefore no significant residual impact to the local populations of common species of flora and fauna will occur.

5.4 Cumulative Impacts

At the local level the subject lands lie within the Town's Urban Boundary, in the Garrison Neighbourhood, where residential development south of Garrison Road has been expanding westward from King Street and northward along Albany Street. 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.

The approved Phases of the Peace Bridge Village subdivision has directly led to the proposed development of the Phase 4 lands which are the subject of this EIS. Combined the Peace Bridge Village development will have removed natural areas that supported cultural communities, predominately Common Buckthorn dominated thicket habitat. This habitat type is abundant in the Fort Erie area, and the Niagara Region. No extensive stands of mature native woodlands have been removed as a result of the Peace Bridge Village development, and no significant wetland areas have been impacted. Based the findings of all the EISs that have been completed for the development phases of the Peace Bridge Village, no significant natural heritage features or functions have been impacted.

As shown on the draft plan in **Appendix E**, the cultural thicket block east of Arthur Street directly to the north of the subject lands is identified as future development lands. As detailed in this EIS, these lands support a Common Buckthorn cultural thicket and are not a significant feature of the natural heritage system of the Town or Region. The lands directly to the south of the subject lands are identified as future condominium lands. These lands currently are identified as ECA - significant woodlands due to having a total area that is > 2 ha. For future development of these lands, an EIS will be required to assess the potential impacts to natural heritage.

As part of the Phase 2 development, the Town required that Arthur Street be reconstructed to an urban cross section. This requirement would indicate that additional development within the area of Arthur Street west to Alfred Street will occur in the near future. These lands are all so identified to support significant woodland >2 ha and therefore future development of these lands will also require the completion of an EIS to assess the potential impacts to natural heritage.

6. Policy Conformity

6.1 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 the Official Plans ensures conformity with the PPS.

6.2 Niagara Region and Town of Fort Erie Natural Heritage Policies

6.2.1 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. The wetland units of the Provincially Significant Kraft Drain Wetland Complex represent EPA; however, they occur 150 m or more from the subject lands and will not be impacted.

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.

6.2.2 Environmental Conservation Area (ECA)

ECA – Significant Woodlands was identified by the Region and Town of Fort Erie to occur within and adjacent to the subject lands. However, the subject lands currently do not support woodland. The lands located along the southern boundary of the subject lands support ECA- Significant Woodlands (woodland >2 ha). This woodland may also support ECA - Significant Wildlife Habitat, as stop over area for migrating birds along the Lake Erie shoreline. This EIS has identified mitigation measures that will be protective of the adjacent woodland during the construction phase of the development.

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.

6.2.3 Fish Habitat

No fish habitat has been identified to occur within or directly adjacent to the subject lands, therefore 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*.

6.2.4 Endangered and Threatened Species

No species of flora or fauna that are regulated under the Ontario *Endangered Species Act* (ESA 2007) have been identified to occur within or adjacent to the subject lands, therefor habitat protection regulations within the *Act* do not apply.

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

6.2.5 Natural Heritage Corridor

Potential Natural Heritage Corridor is not identified to be associated with the subject lands on Schedule C of the Official Plans of the Region or Town. This EIS has also not identified a aquatic or terrestrial corridor function to be associated with the subject lands or adjacent lands, therefore the proposed development plan is in conformity with the Region's and Town's policies for maintaining natural heritage corridors.

6.3 Niagara Peninsula Conservation Authority

With respect to NPCA regulations and development policies pursuant to Ontario Regulation 155/06, no valleylands, shorelines or watercourses occur within or adjacent to the subject lands, therefore the proposed development plan is in conformity with the NPCA planning policies pursuant to the regulations *Ontario Regulation 155/06*.

7. Summary

This EIS has determined that based on existing conditions the subject lands do not support natural heritage features or functions of the Natural Heritage System of the Niagara Region or the Town of Fort Erie. For the adjacent lands, the cultural woodland along the southern boundary was identified to support a ECA designation. This EIS has identified required mitigations measures that will be protective of the ECA woodland. This EIS 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 and the Niagara Region as well as the Province's Natural Heritage Policies under the Provincial Policy Statement (PPS 2014). In addition this EIS has identified that no lands that are regulated by the Niagara Peninsula Conservation Authority pursuant to *Ontario Regulation 155/06* occur within or adjacent to the proposed development lands.

8. Recommendation

This EIS concludes that with the implementation of the recommended construction mitigation measures the proposed Peace Bridge Village Phase 4 development plan 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



Lindsey Waterworth, B.Sc.
Senior Ecologist

9. Literature and References

- Beacon Environmental. 2019.
Environmental Impact Study, Peace Bridge Village Phase 2, Town of Fort Erie, Niagara Region.
Prepared for Ashton Homes Western Limited.
- Endangered Species Act*, S.O. 2007, C-6.
- L. Campbell and Associates. 2006.
Environmental Impact Study. Garrison Green Subdivision, Town of Fort Erie. 2006. Prepared
for Garrison Green Corporation.
- Lee, H.T., W.D. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig, and S. McMurray. 1998.
Ecological Land Classification for southern Ontario: first approximation and its application.
Ontario Ministry of Natural Resources, Southcentral Science Section, Science Department and
Transfer Branch. SCSS Field Guide FG-02.
- Ministry of Municipal Affairs and Housing. 2020.
Provincial Policy Statement Under the *Planning Act*. Issued under section 3 of the *Planning Act*,
effective May 1, 2020.
- Ministry of Natural Resources. 2015.
Eastern Whip-poor-will (*Caprimulgus vociferous*) and Common Nighthawk (*Chordeiles minor*)
Survey Protocol- MNR Guelph District.
- Ministry of Natural Resources. 2015.
Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E January 2015. Ontario Ministry
of Natural Resources and Forestry, Regional Operations Division: Southern Region Resources
Section: 300 Water Street, 4th Floor South Peterborough, Ontario, Canada.
- Ministry of Natural Resources and Forestry. 2017.
Survey Protocol for Species at Risk Bats Within Treed Habitats, Little Brown Myotis, Northern
Myotis, Tri-Colored Bat. April 2017. Ministry of Natural Resources and Forestry, Guelph District.
- Ministry of Natural Resources and Forestry. 2021.
Natural Heritage Information Centre <https://www.ontario.ca/page/get-natural-heritage-information> - Species Lists – Plant Communities.
- Niagara Peninsula Conservation Authority. 2010.
Natural Areas Inventory 2006–2009, Volume 1 and Volume 2.
- Niagara Peninsula Conservation Authority. 2018.
NPCA Policy Document: Policies for the Administration of Ontario Regulation 155/06 and the
Planning Act.
- Niagara Region. 2014.
Section 7-Environment and Schedule C-Core Natural Heritage, the Official Plan for the Niagara
Planning Area (Consolidated Official Plan for August 2015).

- Oldham, M.J., W.D. Bakowsky and D.A. Sutherland. 1995.
Floristic Quality Assessment system for southern Ontario. Natural Heritage Information Centre,
Ontario Ministry of Natural Resources, Box 7000, Peterborough, Ontario.
- Oldham, M.J. March 2010.
Checklist of the Vascular Plant of the Niagara Regional Municipality, Ontario. Prepared for
Niagara Peninsula Conservation Authority.
- Regional Municipality of Niagara. 2012.
Niagara Region Environmental Impact Study Guidelines, Version 1, September 2012.
- Town of Fort Erie. 2003.
Natural Areas Inventory: Town of Fort Erie's Settlement Areas 2003; Prepared for Town of Fort
Erie Community Planning & Development Services
- Town of Fort Erie. 2018.
Town of Fort Erie Official Plan (Consolidated Version 2018);
- Yagi A.R, A. Brant and R. Tervo. 2009.
Niagara Region Natural Areas Inventory Reptile and Amphibian Study 2006 to 2008. Ontario
Ministry of Natural Resources and Land Care Niagara unpublished report for the Natural Areas
Inventory prepared for the Niagara Peninsula Conservation Authority.

Appendix A

Agency Consultation

Ron Huizer

From: William Heikoop <WHeikoop@ucc.com>
Sent: Tuesday, June 1, 2021 1:28 PM
To: Ron Huizer
Cc: Jay Gilmour
Subject: FW: Terms of Reference Peace Bridge Village Phase 4
Attachments: 2021-05-18_EIS TOR Ashtonhome Peace Bridge Village Phase 4_221288.pdf

From: Boudens, Adam [mailto:Adam.Boudens@niagararegion.ca]
Sent: June 1, 2021 1:08 PM
To: William Heikoop <WHeikoop@ucc.com>
Cc: Lampman, Cara <Cara.Lampman@niagararegion.ca>
Subject: RE: Terms of Reference Peace Bridge Village Phase 4

Hi William,

Regional Environmental Planning staff have reviewed the attached Terms of Reference (TOR), prepared by Beacon Environmental, dated May 18, 2021, and have no objections.

Kind regards,
Adam

Adam Boudens
Senior Environmental Planner/Ecologist

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

From: William Heikoop <WHeikoop@ucc.com>
Sent: Friday, May 21, 2021 7:41 AM
To: Lampman, Cara <Cara.Lampman@niagararegion.ca>
Subject: Terms of Reference Peace Bridge Village Phase 4

CAUTION: This email originated from outside of the Niagara Region email system. Use caution when clicking links or opening attachments unless you recognize the sender and know the content is safe.

Hi Cara,

Please see attached for terms of reference for your review.

Thank you,

May 18, 2021

BEL 221288

Cara Lampman
Manager Environmental Planning
Planning and Development Services, Niagara Region
1815 Sir Isaac Brock Way, P.O. Box 1042
Thorold, ON L2V 4T7

via email: Cara.Lampman@niagararegion.ca

Re: EIS Terms of Reference; Ashton Homes Proposed Plan of Subdivision; Peace Bridge Village Phase 4, Town of Fort Erie, Niagara Region

Dear Ms. Lampman:

Beacon Environmental Limited (Beacon) has been retained by Ashton Homes to undertake an Environmental Impact Study (EIS) in support of a proposed plan of subdivision located on lands south of Louisa Street in the Town of Fort Erie. The Figure in **Attachment A** presents the location of the subject lands. The proposed development represents Phase 4 of Ashton Homes Peace Bridge Village that is located south of Garrison Road east of Alfred Street.

The lands are currently designated on Schedule C Core Natural Heritage of the Niagara Region Official Plan as Environmental Conservation and as Woodland Over 2 ha on Schedule C Natural Heritage Features of the Town of Fort Erie Official Plan. A review of the Niagara Peninsula Conservation Authority (NPCA) Watershed Explore shows that no NPCA regulated areas are associated with the subject lands or immediate adjacent lands (**see Attachment B**). No Provincially Significant or Locally Significant wetlands or Environmental Significant or Sensitive areas are identified to be associated with the subject lands. A wetland unit of the provincially significant Kraft Drain Wetland Complex lies 150 m to the southwest of the southwest corner of the subject lands (**Attachment A**).

To determine the scope of the EIS Beacon conducted an initial site survey of the subject lands on April 28, 2021. A photographic record of the current conditions of the subject lands is provided in **Attachment C**. This survey identified that no vegetation community is associated with the subject lands (**Photographs 1 through 4**). The adjacent lands to the north and south support cultural Buckthorn thicket communities with scattered Ash, Trembling Aspen and American Elm (**Photographs 5 through 7**). Residential development is found along the east boundary and highly disturbed lands lie adjacent to the southern boundary of the property (**Photographs 8 & 9**). No watercourse, permanent or ephemeral ponds are found within or directly adjacent lands to the subject lands.

Based on the existing conditions, for undertaking the EIS field surveys and assessment efforts will be of very limited scope and undertaken by visual assessment of the immediate adjacent lands. No foot survey of the adjacent private lands will be undertaken, only visual assessment along the edge of the property boundaries.

The following is a summary of the proposed tasks that will be undertaken for EIS.

Background Review

Beacon has completed a review of background information sources and policy documents related to the subject property including:

- Provincial Policy Statement (2020);
- Town of Fort Erie Official Plan, (2010), Sections 6.1 Environment;
- Town of Fort Erie Natural Areas Inventory (2003);
- Natural Areas Inventory 2006–2009, Volume 1 and 2. Niagara Peninsula Conservation Authority 2010;
- Schedule C Regional Municipality of Niagara Core Natural Heritage (Consolidated Official Plan for August 2015);
- Town of Fort Erie Schedule C Natural Heritage Features (Office Consolidated Version: October 29, 2018);
- NPCA Policy Document: Policies for the Administration of Ontario Regulation 155/06 and the *Planning Act* 2018;
- MNRF List of SAR for the Town of Fort Erie;
- Significant Wildlife Habitat (SWH) Criteria Schedules for Ecoregion 7E (MNRF 2015); and
- Niagara Region Environmental Impact Study Guidelines, Version 1 September 2012.

Field Investigations

Field investigations will be undertaken in 2021 to document the vegetation and wildlife that occur along the boundary lines of the subject property. The primary of focus of the field survey will be to search for the occurrence of potential Species at Risk (SARs). No ELC mapping of adjacent lands will be undertaken as the adjacent lands are private. However, a general assessment and description of the vegetation along the property boundaries will be undertaken. Three site visits will be undertaken, one in April, which has been completed, and one in June and one in early July. Field assessment will include:

- Leaf off Bat Maternity/Rooting Habitat Survey of adjacent lands (Completed this April 2021);
- Assessment of potential Amphibian Breeding Habitat (Completed this April 2021);
- General Assessment and flora inventory of the adjacent lands vegetation communities (April, June and July); and
- Breeding bird surveys (June and July).

No specific night surveys for Eastern whip-poor-will or Common Nighthawk will be undertaken. The bird survey will document all birds heard and seen in the adjacent lands. Base on a general assessment of the adjacent lands the EIS will conduct a SAR Screening based on the MNRF list of SAR for the Town of Fort Erie. The EIS will also undertake a Significant Wildlife Habitat Screening based on the MNRF SWH Criteria Schedules for Ecoregion 7E (MNRF 2015). No watercourse assessment following the Evaluation, Classification and Management of Headwater Drainage Features Guidelines (TRCA and CVC 2014) is required. In addition, no feature staking with the NPCA or Region will be required.

Reporting

The EIS report will characterize the subject lands and adjacent lands based on the findings of the background review and field investigations, assess the function and significance of natural heritage features adjacent to the subject lands, describe the proposed development, evaluate potential impacts of the proposed development, recommend mitigation and enhancement opportunities to avoid, minimize, or off-set impacts, and assess conformity with provincial and municipal policies and regulations. The EIS will be prepared according to the Table of Contents outline as shown in **Attachment D**.

Should have any questions or require clarification, please do not hesitate to contact the undersigned.

Prepared by:
Beacon Environmental



Ron Huizer, B. Sc.
Principal, Senior Ecologist

CC:



- William Heikoop, Planner, Upper Canada Planning & Engineering Ltd; and
- Jay Gilmour, Ashton Homes (Western) Limited.

Attachments:

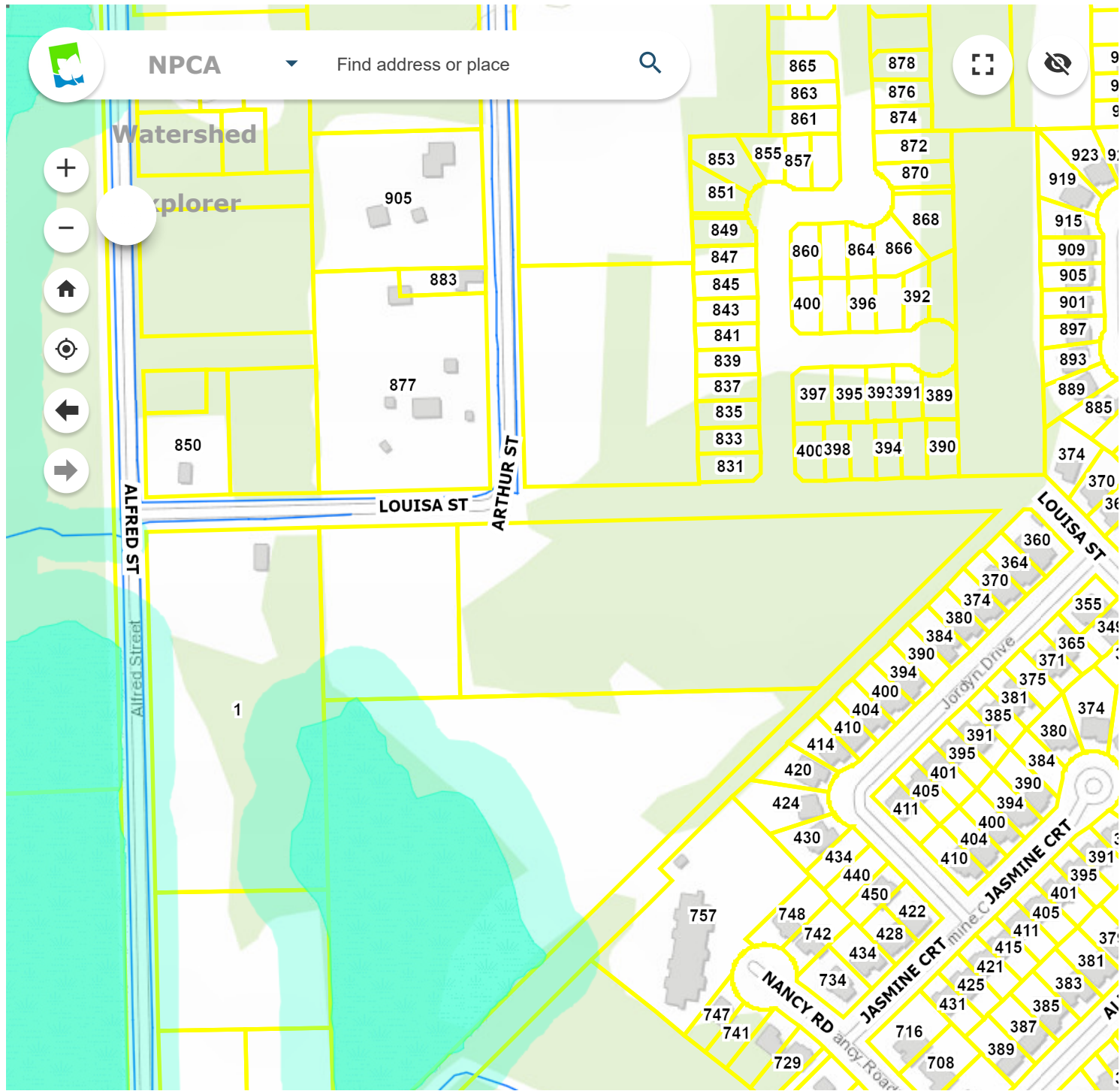
Attachment A. Figure 1 Site Location;
Attachment B. NPCA Watershed Explorer;
Attachment C. Site Photographic Record; and
Attachment D. Proposed EIS Table of Contents

Attachment A



Site Location		Figure 1
Peace Bridge Village Ph.4		
		Project: 221288 Last Revised: May 2021
Client: Ashton Homes		Prepared by: DU Checked by: RH
	1:8,000	Inset Map: 1:50,000
Contains information licensed under the Open Government License— Ontario Orthoimagery Baselayer: FBS Niagara 2018		

Attachment B



Attachment C

Attachment C

Photographic Record



Photograph 1. Subject Lands Looking East from the West Property Boundary



Photograph 2. Subject Lands Looking South from the North Property Boundary



Photograph 3. Subject Lands Looking East along the North Property Boundary



Photograph 4. Subject Lands Looking West to the West Property Boundary



Photograph 5. Tall Shrub Buckthorn Thicket Adjacent to the North Property Boundary



Photograph 6. Tall Shrub Buckthorn Thicket Adjacent to the North Property Boundary



Photograph 7. Young Poplar Tall Shrub Buckthorn Thicket Adjacent to the South Property Boundary



Photograph 8. Highly Disturb Lands with Spoil Piles and Junk Yard Adjacent to the West Property Boundary – Looking to the North Along the Property Boundary



Photograph 9. Highly Disturb Lands with Spoil Piles and Junk Yard Adjacent to the West Property Boundary – Looking to the South Along the Property Boundary

Attachment D

EIS Table of Contents

1. Introduction

2. Policy Context

- 2.1 Provincial Policy Statement
- 2.2 Regional Municipality of Niagara Official Plan
- 2.3 Town of Fort Erie Official Plan
- 2.4 Niagara Peninsula Conservation Authority Regulations and Policies

3. Methodology

- 3.1 Background Review
- 3.2 Field Investigations
 - 3.2.1 Aquatic Habitat Surveys
 - 3.2.2 Vegetation Surveys
 - 3.2.3 Amphibian Surveys
 - 3.2.4 Breeding Bird Surveys

4. Characterization of Existing Conditions

- 4.1 General Conditions and Landscape Context
- 4.2 Physical Resources
 - 4.2.1 Surficial Geology and Soils
 - 4.2.2 Hydrogeology
- 4.3 Hydrology and Aquatic Resources
 - 4.3.1 Local Hydrology
 - 4.3.2 Aquatic Resources on Subject Land
 - 4.3.3 Fish Habitat Assessment
- 4.4 Terrestrial Resources
 - 4.4.1 Vegetation Communities
 - 4.4.2 Flora
 - 4.4.3 Breeding Birds
 - 4.4.4 Amphibians
 - 4.4.5 Reptiles
 - 4.4.6 Mammals
 - 4.4.7 Significant Wildlife Habitat and Corridors
 - 4.4.8 Significant Valleylands
 - 4.4.9 Significant Woodlands
 - 4.4.10 ANSIs
 - 4.4.11 Species at Risk
 - 4.4.12 Provincially Significant Wetland

5. Summary Natural Heritage Features and Constraints Assessment

6 Proposed Development

7. Impact Assessment and Proposed Mitigation

- 7.1 Assessment of Direct Impacts and Mitigation
 - 7.2 Assessment of Potential Indirect Impacts and Mitigation
-

- 7.3 Assessment of Residual Impact
- 7.3 Cumulative Impacts

8. Policy Conformity Assessment

- 8.1 Provincial Policy Statement
- 8.2 Niagara Region and Town of Fort Erie Natural Heritage Policies
- 8.3 Niagara Peninsula Conservation Authority

9. Summary

10. Recommendation

11. Literature Cited

Figures

- Figure 1. Site Location
- Figure 2. Existing Conditions
- Figure 3. Proposed Draft Plan

Appendices

- Appendix A. EIS Terms of Reference
 - Appendix B. Species Lists
 - Appendix C. Proposed Draft Plan of Subdivision
-

June 20, 2018

Ron Huizer
c/o Mancini Associates LLP, Suite 505
Weston Road, Woodbridge, Ontario
L4L 8G7

Via Email only: rhuizer@beaconenviro.com

RE: Garrison Greens Phase 2, 397 Garrison Road, Town of Fort Erie

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:

SPECIES AT RISK

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

- Bank Swallow (*Riparia riparia*) (Threatened)
- Barn Swallow (*Hirundo rustica*) (Threatened)
- Blanding's Turtle (*Emydoidea blandingii*) (Threatened)
- Bobolink (*Dolichonyx oryzivorus*) (Threatened)
- Canada Warbler (*Wilsonia Canadensis*) (Special Concern)
- Chimney Swift (*Chaetura pelagica*) (Threatened)
- Common Hoptree (*Ptelea trifoliata*) (Special Concern)
- Eastern Meadowlark (*Sturnella magna*) (Threatened)
- Loggerhead Shrike (*Lanius ludovicianus*) (Endangered)
- Peregrine Falcon (*Falco peregrinus*) (Special Concern)
- Red Knot rufa subspecies (*Calidris canutus rufa*) (Endangered)
- Spotted Wintergreen (*Chimaphila maculate*) (Endangered)
- White Wood Aster (*Eurybia divaricate*) (Threatened)
- Wood Thrush (*Hylocichla mustelina*) (Special Concern)

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 for further direction.

I trust that the above information is of assistance.

Sincerely,

A handwritten signature in cursive script that reads "Amy Parks".

Amy Parks
A/Resource Management Technician

Fort Erie

Date Generated:

June 20, 2018

Amphibian	SARO	Protection	Habitat Information	Timing Windows	Survey Protocol
Fowler's Toad <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
Acadian Flycatcher <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

Bank Swallow <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).
---	-----	---	---	-----------------------------	---

Barn Swallow <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
---	-----	---	--	-----------------------------	--------------------------------------

Bobolink <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
---	-----	---	---	------------------------------	---

Cerulean Warbler <i>Setophaga cerulea</i>	THR	Species Protection and General Habitat Protection	Generally found in mature deciduous forests with an open understory; also nests in older, second-growth deciduous forests.	Migrate South for the Winter	Follow Breeding Bird Survey Protocol
---	-----	---	--	------------------------------	--------------------------------------

Chimney Swift <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
Common Nighthawk <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
Eastern Meadowlark <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
Eastern Wood-Pewee <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
King Rail <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.
Northern Bobwhite <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

Prothonotary Warbler <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
Red-Headed Woodpecker <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
Wood Thrush <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
Yellow-breasted Chat <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
Fish	SARO	Protection	Habitat Information	Timing Windows	Survey Protocol
Grass Pickerel <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
Lake Chubsucker <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

Monarch Butterfly <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.
Rusty-patched Bumble Bee <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
West Virginia White <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
Eastern Small-footed Myotis <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
Little Brown Myotis <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

Northern Myotis <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
Tri-colored Bat <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
Woodland Vole <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
Plant	SARO	Protection	Habitat Information	Timing Windows	Survey Protocol
American Ginseng <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
Butternut <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.
Common Hoptree <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

Eastern Flowering Dogwood <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
Green Dragon <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
Spotted Wintergreen <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
Swamp Rose-mallow <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
White Wood Aster <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
Reptile	SARO	Protection	Habitat Information	Timing Windows	Survey Protocol

Blanding's Turtle <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
Eastern Hog-nosed Snake <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 August or early September	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
Snapping Turtle <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

Spotted Turtle <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
---	-----	---	--	---	--

Appendix B

List of Vascular Plants for Subject Lands

Appendix B

List of Vascular Plants for the Subject Lands

Scientific Name	Common Name	Srank	COSEWIC	COSSARO	Niagara
<i>Equisetum arvense</i>	Field Horsetail	S5			
<i>Equisetum variegatum</i>	Variegated Horsetail	S5			
<i>Onoclea sensibilis</i>	Sensitive Fern	S5			
<i>Pinus sylvestris</i>	Scots Pine	SE5			
<i>Typha angustifolia</i>	Narrow-leaved Cattail	S5			
<i>Typha latifolia</i>	Broad-leaf Cattail	S5			
<i>Alisma triviale</i>	Northern Water-plantain	S5?			
<i>Agrostis gigantea</i>	Black Bentgrass	SE5			
<i>Agrostis stolonifera</i>	Spreading Bentgrass	S5			
<i>Bromus ciliatus</i>	Fringed Brome	S5			
<i>Bromus inermis</i>	Awnless Brome	SE5			
<i>Digitaria ischaemum</i>	Smooth Crabgrass	SE5			
<i>Digitaria sanguinalis</i>	Hairy Crabgrass	SE5			
<i>Elymus repens</i>	Rye Grass	SE5			
<i>Glyceria striata</i>	Fowl Manna-grass	S4S5			
<i>Hordeum vulgare</i>	Common Barley	SE2			
<i>Muhlenbergia mexicana</i>	Mexican Muhly	S5			
<i>Panicum capillare</i>	Old Witch Panic-grass	S5			
<i>Panicum dichotomiflorum</i>	Spreading Panicgrass	SE5			
<i>Phalaris arundinacea</i>	Reed Canary Grass	S5			
<i>Phleum pratense</i>	Meadow Timothy	SE5			
<i>Phragmites australis</i>	Common Reed	S5			
<i>Poa compressa</i>	Canada Bluegrass	S5			
<i>Poa palustris</i>	Fowl Bluegrass	S5			
<i>Poa pratensis</i>	Kentucky Bluegrass	S5			
<i>Carex bebbii</i>	Bebb's Sedge	S5			
<i>Carex crinita</i>	Fringed Sedge	S5			
<i>Carex gracillima</i>	Graceful Sedge	S5			
<i>Carex hystericina</i>	Porcupine Sedge	S5			
<i>Carex intumescens</i>	Bladder Sedge	S5			
<i>Carex stipata</i>	Stalk-grain Sedge	S5			
<i>Carex vulpinoidea</i>	Fox Sedge	S5			
<i>Eleocharis obtusa</i>	Blunt Spike-rush	S5			
<i>Scirpus atrovirens</i>	Dark-green Bulrush	S5			
<i>Juncus bufonius</i>	Toad Rush	S5			
<i>Juncus dudleyi</i>	Dudley's Rush	S5			
<i>Juncus effusus</i>	Soft Rush	S5			
<i>Juncus tenuis</i>	Path Rush	S5			
<i>Iris versicolor</i>	Blueflag	S5			
<i>Epipactis helleborine</i>	Eastern Helleborine	SE5			
<i>Populus deltoides</i>	Eastern Cottonwood	SU			
<i>Populus grandidentata</i>	Large-tooth Aspen	S5			
<i>Populus tremuloides</i>	Trembling Aspen	S5			
<i>Salix bebbiana</i>	Bebb's Willow	S5			
<i>Salix fragilis</i>	Crack Willow	SE5			

Scientific Name	Common Name	Srank	COSEWIC	COSSARO	Niagara
<i>Quercus palustris</i>	Pin Oak	S4			
<i>Ulmus americana</i>	American Elm	S5			
<i>Ulmus parvifolia</i>	Chinese Elm	SE1			
<i>Pilea pumila</i>	Canada Clearweed	S5			
<i>Polygonum lapathifolium</i>	Dock-leaf Smartweed	S5			
<i>Polygonum virginianum</i>	Virginia Knotweed	S4			
<i>Rumex crispus</i>	Curly Dock	SE5			
<i>Cerastium fontanum</i>	Common Mouse-ear Chickweed	SE5			
<i>Saponaria officinalis</i>	Bouncing-bet	SE5			
<i>Silene vulgaris</i>	Maiden's Tears	SE5			
<i>Anemone canadensis</i>	Canada Anemone	S5			
<i>Ranunculus acris</i>	Tall Butter-cup	SE5			
<i>Barbarea vulgaris</i>	Yellow Rocket	SE5			
<i>Brassica nigra</i>	Black Mustard	SE5			
<i>Lepidium campestre</i>	Field Pepper-grass	SE5			
<i>Ribes hudsonianum</i>	Northern Black Currant	S5			
<i>Ribes rubrum</i>	Northern Red Currant	SE5			
<i>Agrimonia gryposepala</i>	Tall Hairy Groovebur	S5			
<i>Crataegus crus-galli</i>	Cockspur Hawthorn	S5			
<i>Crataegus monogyna</i>	English Hawthorn	SE5			
<i>Crataegus punctata</i>	Dotted Hawthorn	S5			
<i>Fragaria virginiana</i>	Virginia Strawberry	S5			
<i>Geum aleppicum</i>	Yellow Avens	S5			
<i>Malus pumila</i>	Common Apple	SE5			
<i>Potentilla recta</i>	Sulphur Cinquefoil	SE5			
<i>Prunus virginiana</i>	Choke Cherry	S5			
<i>Pyrus communis</i>	Common Pear	SE4			
<i>Rosa blanda</i>	Smooth Rose	S5			
<i>Rosa multiflora</i>	Rambler Rose	SE4			
<i>Rubus allegheniensis</i>	Allegheny Blackberry	S5			
<i>Rubus idaeus</i>	Red Raspberry	S5			
<i>Rubus odoratus</i>	Purple Flowering Raspberry	S5			
<i>Spiraea alba</i>	Narrow-leaved Meadow- sweet	S5			
<i>Lotus corniculatus</i>	Birds-foot Trefoil	SE5			
<i>Medicago lupulina</i>	Black Medic	SE5			
<i>Melilotus alba</i>	White Sweet Clover	SE5			
<i>Trifolium campestre</i>	Low Hop Clover	SE5			
<i>Trifolium pratense</i>	Red Clover	SE5			
<i>Trifolium repens</i>	White Clover	SE5			
<i>Vicia americana</i>	American Purple Vetch	S5			
<i>Geranium bicknellii</i>	Bicknell Northern Crane's- bill	S4			
<i>Geranium maculatum</i>	Wild Crane's-bill	S5			
<i>Geranium robertianum</i>	Herb-robert	SE5			
<i>Rhus typhina</i>	Staghorn Sumac	S5			
<i>Acer rubrum</i>	Red Maple	S5			
<i>Acer saccharum</i>	Sugar Maple	S5			
<i>Impatiens capensis</i>	Spotted Jewel-weed	S5			
<i>Rhamnus cathartica</i>	Common Buckthorn	SE5			

Scientific Name	Common Name	Srank	COSEWIC	COSSARO	Niagara
<i>Rhamnus frangula</i>	Glossy Buckthorn	SE5			
<i>Parthenocissus vitacea</i>	Virginia Creeper	S5			
<i>Vitis riparia</i>	Riverbank Grape	S5			
<i>Lythrum salicaria</i>	Purple Loosestrife	SE5			
<i>Circaea alpina</i>	Small Enchanter's Nightshade	S5			
<i>Oenothera parviflora</i>	Northern Evening-primrose	S5?			
<i>Daucus carota</i>	Wild Carrot	SE5			
<i>Cornus amomum</i>	Silky Dogwood	S5			
<i>Cornus foemina</i>	Gray Dogwood	S5			
<i>Cornus stolonifera</i>	Red-osier Dogwood	S5			
<i>Fraxinus americana</i>	White Ash	S5			
<i>Fraxinus pennsylvanica</i>	Green Ash	S5			
<i>Asclepias incarnata</i>	Swamp Milkweed	S5			
<i>Myosotis scorpioides</i>	True Forget-me-not	SE5			
<i>Hedeoma pulegioides</i>	American Pennyroyal	S4			
<i>Leonurus cardiaca</i>	Common Mother-wort	SE5			
<i>Lycopus uniflorus</i>	Northern Bugleweed	S5			
<i>Prunella vulgaris</i> ssp. <i>vulgaris</i>	Heal-all	SE3			
<i>Solanum dulcamara</i>	Climbing Nightshade	SE5			
<i>Verbascum thapsus</i>	Great Mullein	SE5			
<i>Veronica officinalis</i>	Common Speedwell	SE5			
<i>Plantago lanceolata</i>	English Plantain	SE5			
<i>Plantago major</i>	Nipple-seed Plantain	SE5			
<i>Galium mollugo</i>	Great Hedge Bedstraw	SE5			
<i>Galium triflorum</i>	Sweet-scent Bedstraw	S5			
<i>Dipsacus fullonum</i>	Fuller's Teasel	SE5			
<i>Achillea millefolium</i>	Common Yarrow	SE			
<i>Ambrosia artemisiifolia</i>	Annual Ragweed	S5			
<i>Bidens frondosa</i>	Devil's Beggar-ticks	S5			
<i>Centaurea jacea</i>	Brown Knapweed	SE5			
<i>Cirsium arvense</i>	Creeping Thistle	SE5			
<i>Cirsium vulgare</i>	Bull Thistle	SE5			
<i>Erigeron hyssopifolius</i>	Daisy Fleabane	S5			
<i>Eupatorium perfoliatum</i>	Common Boneset	S5			
<i>Euthamia graminifolia</i>	Flat-top Fragrant-golden-rod	S5			
<i>Matricaria matricarioides</i>	Pineapple-weed Chamomile	SE5			
<i>Solidago altissima</i>	Tall Goldenrod	S5			
<i>Solidago canadensis</i>	Canada Goldenrod	S5			
<i>Solidago rugosa</i>	Rough-leaf Goldenrod	S5			
<i>Sonchus oleraceus</i>	Common Sowthistle	SE5			
<i>Symphyotrichum lanceolatum</i>	Panicled Aster	S5			
<i>Symphyotrichum novae-angliae</i>	New England Aster	S5			
<i>Symphyotrichum puniceum</i>	Feather-leaf Tansy	S5			
<i>Tanacetum vulgare</i>	Common Tansy	SE5			
<i>Taraxacum officinale</i>	Brown-seed Dandelion	SE5			
<i>Tragopogon pratensis</i>	Meadow Goat's-beard	SE5			

Scientific Name	Common Name	Srank	COSEWIC	COSSARO	Niagara
<i>Tussilago farfara</i>	Colt's Foot	SE5			

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

SAR Screening

Appendix C

SAR Screening – Fort Erie Area

Species	ESA Status	General habitat description	Assessment for Adjacent Lands
Amphibians			
Fowler's Toad	Endangered	Generally found in sand dunes and lakeshore habitats; found in shallow areas of permanent water bodies.	No suitable habitat is present.
Birds			
Acadian Flycatcher	Endangered	Generally requires large areas of mature, undisturbed forest; avoids the forest edge; often found in well wooded swamps and ravines.	No suitable habitat is present.
Bank Swallow	Threatened	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.	No suitable habitat is present.
Barn Swallow	Threatened	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.	No structures that could provide suitable nesting habitat are present. No adult feeding flights were observed during field surveys.
Bobolink	Threatened	Generally, prefers open grasslands and hay fields. In migration and in winter uses freshwater marshes and grasslands	No suitable habitat is present.
Canada Warbler	Threatened	Generally prefers wet coniferous, deciduous and mixed forest types, with a dense shrub layer. Nests on the ground, on logs or hummocks, and uses dense shrub layer to conceal the nest.	No suitable habitat is present.
Cerulean Warbler	Threatened	Generally found in mature deciduous forests with an open understorey;	No suitable habitat is present.

Species	ESA Status	General habitat description	Assessment for Adjacent Lands
		also nests in older, second-growth deciduous forests.	
Chimney Swift	Threatened	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	No suitable nesting habitat is present.
Common Nighthawk	Special Concern	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 rooftops)	Suitable nesting habitat is associated with the subject lands and adjacent lands to the west of the subject lands. No adult feeding flights were heard or observed during field surveys.
Eastern Meadowlark	Threatened	Generally prefers grassy pastures, meadows and hay fields. Nests are always on the ground and usually hidden in or under grass clumps.	No suitable habitat is present.
Eastern Wood Pewee	Special Concern	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	Suitable habitat is present in the adjacent woodland to the south of the subject lands. Territorial singing by one male was heard in this area during field surveys.
King Rail	Endangered	Generally this species requires large marshes with open shallow water that merges with shrubby areas.	No suitable habitat is present.
Loggerhead Shrike	Endangered	Associated with open scrubland and active pasture lands with thicket hedgerows.	No suitable habitat is present.
Northern Bobwhite	Endangered	Generally inhabits a variety of edge and grassland type – habitats including non-intensively farmed agricultural lands.	No suitable habitat is present.
Peregrine Falcon	Special Concern	Generally nest on tall, steep cliff ledges adjacent to large	No suitable nesting habitat is present.

Species	ESA Status	General habitat description	Assessment for Adjacent Lands
		waterbodies; some birds adapt to urban environments and nest on ledges of tall buildings, even in densely populated downtown areas.	
Prothonotary Warbler	Endangered	Generally found in the dead trees of flooded woodlands or deciduous swamp forests.	No suitable habitat is present.
Red-headed Woodpecker	Special Concern	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	Suitable nesting habitat is present with large Eastern Cottonwood trees along the southern and western boundary of the subject lands. Species was not observed or heard during field surveys.
Red Knot rufa subspecies	Endangered	Shores of lakes and rivers and open water marshlands.	No suitable habitat is present
Wood Thrush	Special Concern	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.	No suitable habitat is present
Yellow-breasted Chat	Endangered	Generally prefer dense thickets around wood edges, riparian areas, and in overgrown clearings	Low quality habitat is present along northern boundary of the subject lands. Species was not observed or heard during field surveys.
Fish – no aquatic habitat is present			
Insects			
Monarch Butterfly	Special Concern	Exist primarily wherever milkweed and wildflowers exist; abandoned farmland, along roadsides, and other open spaces	No suitable egg laying habitat (fields with abundant milkweed) is present. No migration feeding habitat is present.

Species	ESA Status	General habitat description	Assessment for Adjacent Lands
Rusty-patch Bumblebee	Endangered	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	No suitable habitat is present.
West Virginia White Butterfly	Special Concern	Generally prefer moist, deciduous woodlands. The larvae feed only on the leaves of the two-leaved toothwort (<i>Cardamine diphylla</i>), which is a small, spring-blooming plant of the forest floor.	The host plant, Two-leaved Toothwort, is not present.
Mammals			
Eastern small-footed Myotis Little Brown Myotis Northern Myotis Tri-colour Bat	Endangered	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.	No overwintering habitat is present. Potential maternal roosts in trees were not observed during field survey of the woodland edge along the southern boundary of the subject lands.
Gray Fox	Threatened	Generally prefers deciduous forests, marshes, swampy areas, and urban areas	The Grey Fox is very rare in the Niagara Region with no recent records. The likelihood of occurring in this area is very low.
Woodland Vole	Endangered	Generally associated with deciduous forests in areas of soft, friable, often sandy soil beneath deep humus, where it can burrow easily.	Habitat is not present.
Plants			
American Chestnut	Endangered	Found in deciduous forest communities; this tree prefers arid forests with acid and sandy soils.	Habitat is not present. Species not observed during site survey.
American Columbo	Endangered	Most commonly associated with open deciduous forested slopes, thickets and clearings; grows in a variety of relatively stable habitats as well on a wide variety of soils.	General habitat is present. Species not observed during site survey.
American Ginseng	Endangered	Grows in rich, moist, undisturbed and relatively mature deciduous woods in areas of	Habitat is not present.

Species	ESA Status	General habitat description	Assessment for Adjacent Lands
		neutral soil (such as over limestone or marble bedrock).	Species not observed during site survey.
Butternut	Endangered	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.	General habitat is present. Species not observed during site survey.
Cherry Birch	Endangered	Generally grows in moist, well drained soils, but it is also found on coarse-textured or rocky shallow soils.	General habitat is present. Species not observed during site survey.
Common Hoptree	Special Concern	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.	Habitat is not present. Species not observed during site survey
Cucumber Tree	Endangered	Generally grows in rich, well-drained soils in deciduous forest habitats	Habitat is not present. Species not observed during site survey.
Eastern Flowering Dogwood	Endangered	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	General habitat is present. Species not observed during site survey.
Red Mulberry	Endangered	Generally grows in moist forest habitats. In Ontario, these include slopes and ravines of the Niagara Escarpment, and sand spits and bottom lands; Can grow in open areas such as hydro corridors.	General habitat is present. For the Niagara Region naturally occurring trees are currently only known to occur in the Niagara River gorge corridor. Species not observed during site survey.

Species	ESA Status	General habitat description	Assessment for Adjacent Lands
Round-leaved Greenbrier	Threatened	Generally grows in open moist to wet woodlands, often growing on sandy soils . Habitat is variable.	General habitat is not present. Species not observed during site survey.
Spotted Wintergreen	Endangered	Generally grow in sandy habitats in dry-mesic oak-pine woods.	Habitat is not present. Species not observed during site survey.
Swamp Rose Mallow	Special Concern	Generally grows in open, coastal marshes, but it is also sometimes found in open wet woods, thickets and drainage ditches	Habitat is not present. Species not observed during site survey.
White Wood Aster	Threatened	Generally grows in open, dry, deciduous forests. It has been suggested that it may benefit from some disturbance, as it often grows along trails in woodlands.	Habitat is not present. Species not observed during site survey.
Reptiles			
Blanding's Turtle	Threatened	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.	Adult or nesting habitat is not present.
Eastern Hognose Snake	Threatened	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.	Habitat is not present.
Snapping Turtle	Special Concern	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 manmade structures	Adult or nesting habitat is not present.

Species	ESA Status	General habitat description	Assessment for Adjacent Lands
		for nest sites, including roads (especially gravel shoulders), dams and aggregate pits.	
Spotted Turtle	Endangered	Generally prefers the shallow, slow moving and unpolluted water of ponds, bogs, marshes, ditches, vernalpools and sedge meadows. It can also be found in woodland streams and near the sheltered shores of shallow bays	Adult or nesting habitat is not present.

Appendix D

SWH Screening

Appendix D

Significant Wildlife Habitat Assessment (Ecoregion 7E)

Significant Wildlife Habitat Type	Habitat Description	Habitat Assessment
Seasonal Concentration Areas of Animals		
Waterfowl Stopover and Staging Areas (Terrestrial)	Fields with sheet water or fields utilized by Tundra Swans during Spring (mid March to May). Fields flooding during spring melt and run-off provide important invertebrate foraging habitat for migrating waterfowl. Agricultural fields with waste grains are commonly used by waterfowl, these are not considered SWH unless used by Tundra Swans in the Long Point, Rondeau, Lk. St. Clair, Grand Bend and Pt. Pelee areas.	No Suitable habitat was not observed for the adjacent lands
Waterfowl Stopover and Staging Areas (Aquatic)	Ponds, marshes, lakes, bays, costal inlets and watercourses that are used as stopover areas during migration. These habitat typically have an abundant food supply (mostly aquatic invertebrates and vegetation in shallow water).	No Suitable habitat was not observed for the adjacent lands
Shorebird Migratory Stopover Area	Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats. Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores, are extremely important for migratory shorebirds in May to mid-June and early July to October. Sewage treatment ponds and storm water ponds do not qualify as a SWH	No Suitable habitat was not observed for the adjacent lands
Raptor Winter Area	A combination of fields and woodlands that provide roosting, foraging and resting habitat for wintering raptors. These sites need to be larger than 20 ha in size, of which at least 15 ha needs to be comprised of idle/fallow or lightly grazed field/meadow.	No Suitable habitat was not observed for the adjacent lands
Bat Hibernacula	Hibernacula may be found in caves, mine shafts, underground foundations and karsts.	No Suitable habitat was not observed for the adjacent lands

Significant Wildlife Habitat Type	Habitat Description	Habitat Assessment
Bat Maternity Colonies	Maternity colonies can be found in tree cavities, vegetation and buildings. Deciduous and mixed forest communities with greater than 10 ha of large diameter (> 25 cm dbh) wildlife trees.	No Suitable habitat was not observed for the adjacent lands
Turtle Winter Areas	Over-wintering sites for turtles are typically in the same area as their core habitat. Waterbodies have to be deep enough to not freeze and have soft mud substrates.	No Suitable habitat was not observed for the adjacent lands
Snake Hibernaculum	Snakes hibernate in sites located below frost lines in burrows, rock crevices and other natural locations. Rock piles, slopes, stone fences and crumbling foundations can also be used by hibernating snakes. Areas of broken and fissured rocks can also provide access to sites below the frost line.	YES Suitable habitat occurs in a materials/equipment storage areas located directly to the west of the subject lands
Colonially - Nesting Bird Breeding Habitat (Bank and Cliff)	Any site or areas with exposed soil banks, undisturbed or naturally eroding that is not a licensed/permitted aggregate area.	No Suitable habitat was not observed for the adjacent lands
Colonially - Nesting Bird Breeding Habitat (Tree/Shrubs)	Nests in live or dead standing trees in wetlands, lakes, islands and peninsulas. Shrubs and occasionally emergent vegetation may also be used.	No Suitable habitat was not observed for the adjacent lands
Colonially - Nesting Bird Breeding Habitat (Ground)	Nesting colonies of gulls and terns occur on rocky islands or peninsulas within a lake or larger river	No Suitable habitat was not observed for the adjacent lands
Migratory Butterfly Stopover Areas	Cultural meadow, savannah and thicket communities that are within 5 km of Lake Ontario, at least 10 ha in size and contain a combination of field and forest habitat	No Suitable habitat was not observed for the adjacent lands
Landbird Migratory Stopover Areas	Woodlots >5 ha in size and within 5 km of Lake Erie and Lake Ontario. If woodlands are rare in an area of shoreline, woodland fragments 2-5 ha can be considered for this habitat.	YES Suitable habitat is associated with the

Significant Wildlife Habitat Type	Habitat Description	Habitat Assessment
	If multiple woodlands are located along the shoreline those Woodlands <2 km from Lake Erie and Lake Ontario are more significant.	woodlands adjacent to the south of the subject lands
Deer Yarding Areas	Deer yarding areas or winter concentration within a mixed or coniferous forest and swamp communities.	No Suitable habitat is not associated with the adjacent lands
Deer Winter congregation Areas	Deer movement in winter months within eco-region 7E are not constrained by snow depth, however they still congregate in suitable woodlands. These woodlands will typically be larger than 100 ha in size, however woodlands smaller than 100 ha may be considered significant based on MNR assessments.	No Suitable habitat is not associated with the adjacent lands
Rare Vegetation Communities		
Cliffs and Talus Slops	A cliff is a vertical to near vertical bedrock that is greater than 3 m in height. A talus slope is rock rubble at the base of a cliff made up of coarse rocky debris.	No Cliffs or talus slopes were not observed for the adjacent lands
Sand Barren	Sand barrens typically are exposed sand, generally sparsely vegetated and caused by lack of moisture, periodic fires and erosion. They have little to no soil and the underlying rock protrudes through the surface. Usually located within other types of natural habitat such as forest or savannah.	No Sand barren were not observed for the adjacent lands
Alvar	Alvar is typically a level, mostly unfractured calcareous bedrock feature with a mosaic of rock pavements and bedrock overlain by a thin veneer of soil.	No Alvar was not observed for the adjacent lands
Old Growth Forest	Old growth forests are characterized by heavy mortality or turnover of over story trees resulting in a mosaic of gaps that encourage development of a multi-layered canopy and an abundance of snags and downed woody debris. Stands must be 30 ha or greater in size with a minimum of 10 ha of interior habitat (interior habitat determined with a 100 m buffer).	No Old growth forest was not observed for the adjacent Lands
Savannah	Savannah is a tallgrass prairie habitat that has tree cover between 20 - 60%.	No Savannah habitat was not observed for the adjacent lands

Significant Wildlife Habitat Type	Habitat Description	Habitat Assessment
Tallgrass Prairie	Tallgrass Prairie has ground cover that is dominated by prairie grasses. An open tallgrass prairie has less than 25% tree cover.	No Tallgrass Prairie was not observed for the adjacent lands
Other Rare Vegetation Communities	Rare vegetation communities may include beaches, fens, forests, marsh, barrens, dunes and swamps, as identified in Appendix M of the Significant Wildlife Habitat Technical Guide.	No Rare vegetation communities were not observed for the adjacent lands
Specialized Habitat for Wildlife		
Waterfowl Nesting Area	Waterfowl nesting areas are upland areas adjacent to marsh, shallow aquatic and swamp habitat. In order to be considered significant these features must extend 120 m from of a wetland in order to deter predators	No Suitable habitat is not associated with the adjacent lands
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	Nests for these species are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands or on structures over water. Osprey nests are usually at the top of a tree, while Bald Eagle nests are typically in super canopy trees.	No No Bald Eagle or Osprey nests were observed within the adjacent lands
Woodland Raptor Nesting Habitat	Woodland raptor habitat can be found in all natural or conifer plantation woodland/forest stands that are greater than 30 ha in size with more than 10 ha of interior forest habitat (interior habitat determined with a 200 m buffer).	No Suitable habitat is not associated with the adjacent lands
Turtle Nesting Areas	Ideal nesting habitat for turtles are close to water and away from roads and sites that are less prone to loss of eggs by predation. These areas are often associated with exposed mineral soil (sand or gravel) areas within 100 m of a marsh, shallow aquatic, bog or fen habitat.	No Suitable habitat was not observed for the adjacent lands
Seeps and Springs	Seeps/springs are areas where ground water comes to the surface. Often they are found within headwater areas within forested habitats.	No Seeps/springs were not observed within the adjacent lands

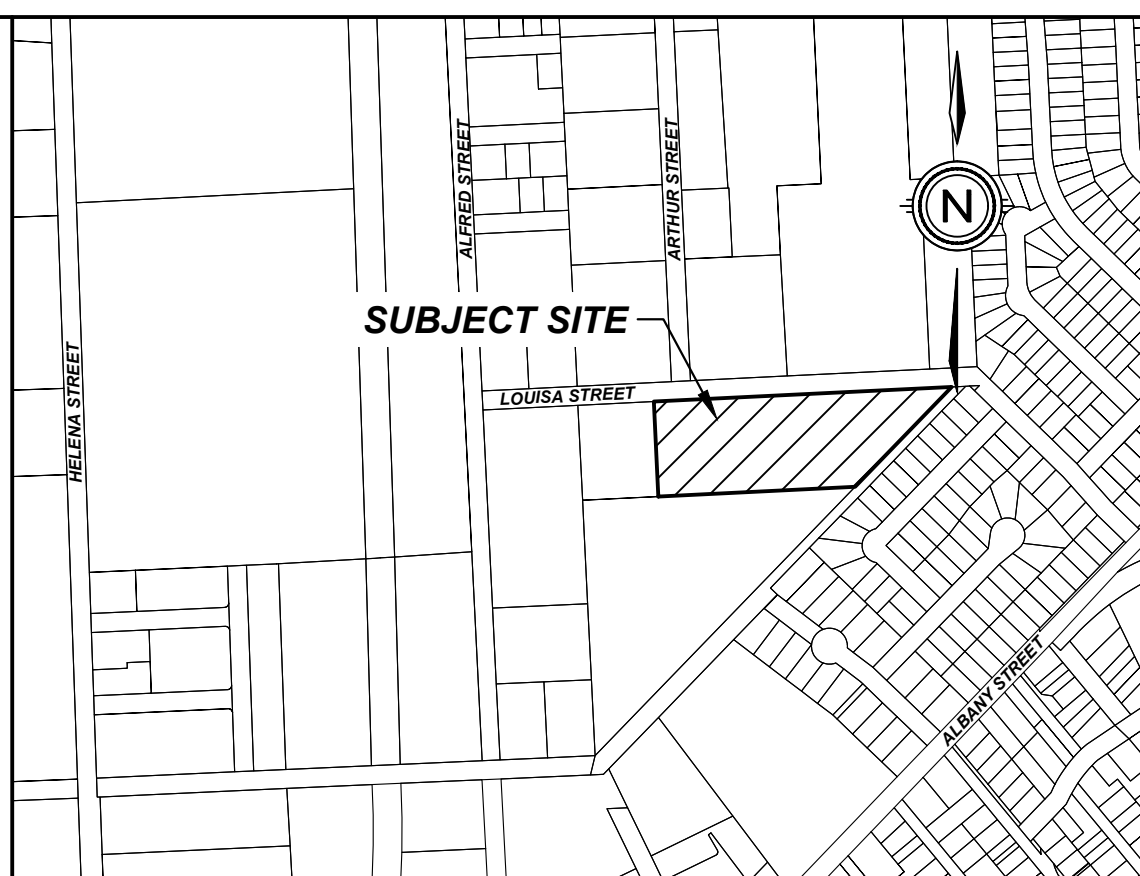
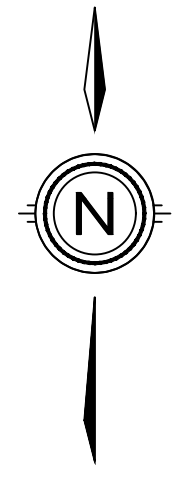
Significant Wildlife Habitat Type	Habitat Description	Habitat Assessment
Amphibian Breeding Habitat (Woodland)	This type of habitat is associated with the presence of a wetland, lake or pond that is within or adjacent (within 120m) of a woodland. Woodlands with permanent ponds or those contain water until mid-July are more likely to be used as breeding habitat.	No Suitable habitat is not associated with the adjacent lands
Amphibian Breeding Habitat (Wetlands)	Wetlands and pools that are greater than 500 m ² and are isolated from woodlands (greater than 120 m)	No Suitable habitat is not associated with the adjacent lands
Habitat for Species of Conservation Concern (Not including Endangered or Threatened Species)		
Marsh Bird Breeding Habitat	This type of habitat occurs in wetlands with shallow water and emergent aquatic vegetation present	No Suitable habitat is not associated with the adjacent lands
Woodland Area-Sensitive Bird Breeding Habitat	Habitats where interior forest breeding birds are breeding. These forests are typically larger mature forest stands or woodlands that are greater than 30 ha in size (interior habitat determined with a 200 m buffer).	No Suitable habitat is not associated with the adjacent lands
Open Country Bird Breeding Habitat	This type of habitat occurs in larger grassland areas (including natural and cultural fields and meadows) that are greater than 30 ha in size. Grasslands that are being actively used for farming (i.e. row cropping, intensive hay, livestock pasturing in the last 5 years) typically do not provide ideal habitat for open country bird species.	No Suitable habitat is not associated with the adjacent lands
Shrub/Early Successional Bird Breeding Habitat	This type of habitat occurs in large field areas succeeding to shrub and thicket habitats that are greater than 10 ha in size.	No Suitable habitat that is >10 ha is not associated with the adjacent lands
Terrestrial Crayfish	This type of habitat occurs in meadows and edge of shallow marshes.	No Suitable habitat is not associated with the adjacent lands

Significant Wildlife Habitat Type	Habitat Description	Habitat Assessment
Special Concern and Rare Wildlife Species	This type of habitat occurs wherever special concern and provincially rare (S1, S2, S3 and SH) plant and animal species occur.	No No special Concern species were identified to occur within the adjacent lands
Animal Movement Corridors		
Amphibian Movement Corridors	This habitat consists of movement corridors between breeding habitat and summer habitat. Corridors may be found in all ecosystems associated with water.	No Suitable habitat is not associated with the adjacent lands

Appendix E

Draft Plan of Subdivision

PEACE BRIDGE VILLAGE PHASE 4
TOWN OF FORT ERIE



KEY PLAN
N.T.S.

DRAFT PLAN OF SUBDIVISION

LEGAL DESCRIPTION

LOTS 3, 4 AND 5 ON THE SOUTH
SIDE OF LOUISA STREET - PLAN 992
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.

[Signature] MARCH 21, 2022
DATE
ASHTON HOMES (WESTERN) LIMITED

SURVEYOR'S CERTIFICATE

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

[Signature] MAY 20, 2022
DATE
DONALD G. CHAMBERS, B. Sc., O.L.S.
CHAMBERS AND ASSOCIATES SURVEYING LTD.

**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	LOT 1-29	29	1.278	48.48
STREET TOWNHOMES	BLOCKS 30-35	36	0.711	26.97
FUTURE ROAD CONNECTION	BLOCK 36		0.056	2.13
ROADWAY			0.591	22.42
TOTAL		65	2.636	100.00

DEVELOPABLE AREA = 2.64ha
DEVELOPABLE DENSITY = 24.62 units/ha

0	ISSUED FOR APPROVAL	2022-05-20	M.K.
#	REVISION	DATE	INIT

**UPPER CANADA
CONSULTANTS**
ENGINEERS / PLANNERS

DRAWING TITLE	DRAFTING	M.K.
DRAFT PLAN OF SUBDIVISION	DATE	MAY 14, 2019
	PRINTED	MAY 20, 2022
	SCALE	1:500
	DWG No.	REV
1945-DP	0	