Environmental Impact Study (EIS) Report

Project Location:
37719 Lake Line Road, Port Stanley, ON

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Engineers, Scientists, Surveyors.

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1.0 Introduction

MTE has been retained by Below-Me Developments (the Proponent) to complete an Environmental Impact Study (EIS) for the Kettle Creek Subdivision at 37719 Lake Line, Port Stanley in the Municipality of Central Elgin and Elgin County (the Subject Lands; Figure 1) in support of a Draft Plan of the Subdivision and Zoning By-Law amendment. An Issues Scoping Report (ISR) was previously submitted for the Subject Lands and adjacent land (BioLogic, 2015) which included a recommendation for a scoped EIS. During a pre-consultation meeting held with the Proponent, the Township of Central Elgin and Kettle Creek Conservation Authority on April 7, 2021, it was confirmed that an EIS was required as part of the Draft Plan application.

The 12.8 ha Subject Lands consist of an active sod farm and former farmstead as well as forested slopes, which are part of the Elgin County natural heritage system [Figure 1]. A municipal drain, Marr Drain, is located along the southern boundary of the Subject Lands. A 120m study area of Adjacent Lands has been applied to the Subject Lands for the purpose of evaluating contiguous or nearby natural features. The Adjacent Lands include the Lake Line Right-of-way (R.O.W.) to the north, Kettle Creek Golf and Country Club and a Public school to the south, and the River Road R.O.W. to the west. Per the Official Plan of Central Elgin, the Subject Lands have a land use designation of residential in the farmed portion and natural heritage/significant woodland on the forest slopes (Schedule G) and are zoned OS2-29 and OS2-30 (Open Space). The entire Subject Lands are within the area regulated by Kettle Creek Conservation Authority under Ontario Regulation 181/06: Development, Interference with Wetlands and Alterations to Shorelines and Watercourses.

The proposal is to establish 88 housing units (79 single detached, 9 semi-detached) with associated future municipal streets on the Subject Lands, with servicing (water) from a combined sewer in the Carlow Road R.O.W., that is directed to an existing pumping station that ultimately pumps the flows up Lake Line and discharged into the treatment facility on Scotch Line. The proposed Development Area is confined to the existing agricultural portions of the Subject Lands.

Following the pre-consultation meeting held on April 7, 2021, a Terms of Reference was submitted to Central Elgin and Elgin County on August 25, 2021, to confirm the scope of natural heritage field investigations as well as the contents of the EIS report for the Subject Lands. Comments provided by Kevin McClure (Planner, Central Elgin) and Nancy Pasato (Manager of Planning, Elgin County) on August 26, 2021 were incorporated into a revised Terms of Reference which was approved on September 17, 2021 [Appendix A]. This EIS has been prepared with reference to the Municipality of Central Elgin Official Plan policies in Section 3.1.2 and 3.4.2, and Elgin County Official Plan Policies in Section D1.2, specifically, Policy D1.2.8.1 and Appendix B. The EIS will build on the ISR (BioLogic, 2015) and incorporate life science inventories from 2015 and 2021 to document existing natural heritage features and functions on the Subject Property and adjacent lands, evaluate potential impacts, and recommend appropriate avoidance (e.g. setbacks), mitigation and enhancement measures to protect the natural heritage features.

The final EIS has been revised to address comments provided by Southwold Township and the Township of Central Elgin.

2.0 Natural Heritage Policy Overview

The following provincial and municipal legislation and policies were reviewed to inform the evaluation of significant natural heritage features and assessment of potential impacts.

2.1 Planning Act

The Provincial Policy Statement (PPS; MMAH, 2020) was issued under the *Planning Act, 1990* to provide direction to regional and local municipalities regarding planning policy, ensuring that decisions made by planning authorities were consistent with provincial policy. With respect to natural heritage features and resources, the PPS defines seven natural heritage features:

- Significant wetlands and significant coastal wetlands
- Significant woodlands
- Significant valleylands
- Significant wildlife habitat (SWH)
- Significant areas of natural and scientific interest (ANSI's)
- Fish habitat, and,
- Habitat of endangered and threatened species

These features are described in the Natural Heritage Reference Manual (MNR, 2010), a technical document intended to support the PPS which also provides guidance to help assess these natural heritage features. Section 2.1.4 of the PPS states that development and site alteration are not permitted in significant wetlands or significant coastal wetlands in Ecoregion 7E, where the Subject Lands are located. Section 2.1.5 states that development and site alteration shall not be permitted in significant woodlands, significant valleylands, SWH or ANSI's unless it has been demonstrated through an EIS that there will be no negative impacts on the features or their ecological functions. Development and site alteration are not permitted in fish habitat or habitat of endangered or threatened species, except in accordance with provincial and federal legislation.

2.2 Municipality of Central Elgin Official Plan (2013)

The Official Plan of the Municipality of Central Elgin includes policies that guide growth, economic development and the protection of natural heritage features across the municipality. With respect to Natural Heritage (Section 3.1.1), new permitted uses, or expansions/ enlargements to existing uses, buildings or structures within a Natural Heritage designation that require a Planning Act approval may be permitted only if they can be demonstrated through an Environmental Impact Study (EIS) that will demonstrate that there will be no negative impacts to the natural heritage features and/or their ecological functions.

The Subject Lands are designated as Residential in the farmed portions and Natural Heritage/ Significant Woodland on the forest slopes by the Central Elgin Official Plan (Schedule G, 2013). The Adjacent Lands to the south and to the east are also designated as Residential and Natural Heritage (Schedule G, 2013).

2.3 Municipality of Central Elgin, Zoning By-Law (2018)

The Subject Lands are currently designated as OS2-29 and OS2-30 (Open Space) by the Municipality of Central Elgin. This provision applies to lands used or proposed to be used for parks and outdoor recreational purposes and cemeteries where structures are limited. The Adjacent Lands are zoned as Residential (R1).

2.4 County of Elgin Official Plan (2015)

The purpose of the Official Plan of the County of Elgin (Final consolidation, November 2015) is to provide direction and a framework for managing growth and land use decisions within the County through the establishment of a broad, upper tier policy framework that provides guidance to local

municipalities, by implementation of the PPS at the County level, and by facilitating coordination and coordination amongst local municipalities and the County on planning and development issues. Section A4.2 describes the County's strategic objective to protect natural heritage features and areas, and their associated ecological functions. Part D of the Official Plan provides more specific policies to achieve this objective, such as criteria for defining natural heritage significance (e.g. significant woodlands) and identifying how natural heritage features should be considered in the context of development and site alteration. Development and site alteration is not permitted in significant habitat of endangered or threatened species, significant wetlands and significant coastal wetlands (D.1.2.6a)). Development and site alteration is not permitted in significant woodlands, significant valleylands, SWH and ANSIs or Adjacent Lands unless it has been demonstrated through an EIS that there will be no negative impacts on the natural features or their ecological functions. Appendix B of the Official Plan provides the County's requirements for an EIS.

Woodlands on the Subject Property are mapped as part of the County's Natural Heritage System on Map Appendix '1' of the Official Plan.

2.5 Kettle Creek Conservation Authority

The Kettle Creek Conservation Authority (KCCA) regulates lands within its watershed under Ontario Regulation 181/06, pursuant to Section 28 of the *Conservation Authorities Act*. The KCCA has jurisdiction over riverine flooding and erosion hazards, wetlands and the surrounding area, and requires that landowners obtain written approval from the Authority prior to undertaking any site alteration or development within the regulation limit.

The entire Subject Lands are within the regulation limit of the Kettle Creek Conservation Authority (KCCA). This regulation limit is associated with the Hazard Area (slope) on the north portion of the Subject Lands.

2.6 Endangered Species Act

The *Endangered Species Act, 2007* protects species listed as threatened, endangered or extirpated in Ontario from killing, harm, harassment or possession, and also protects their habitats from damage or destruction. All species are provided with general habitat protection for areas the species depend on to carry out their life processes, such as reproduction, rearing, hibernation, migration or feeding. Activities that may impact a protected species or its habitat require prior authorization from the Ministry of Environment, Conservation and Parks (MECP), unless the activities are exempt under Ontario Regulation 242/08. The provincial status of species in Ontario is determined by the Committee on the Status of Species at Risk in Ontario (COSSARO) and documented in the Species at Risk in Ontario List (SARO List).

3.0 Natural Heritage Features and Functions

Natural heritage field studies and vegetation community classification completed in 2014, 2015 and 2021 have been used to assess the Subject Lands and the Adjacent Lands for natural heritage significance with respect to the proposed future construction. The following resources were also reviewed for relevant information respecting natural heritage features on or adjacent to the Subject Lands:

- Issues Scoping Report – Glover – 37719 Lake Line & 320 Carlow Road, Port Stanley, Ontario (BioLogic, 2015)
- Central Elgin Official Plan (2013)
- The Official Plan of the County of Elgin (Consolidated 2015)
- Kettle Creek Conservation Authority Wetland Management Policies
- Land Information Ontario (LIO) mapping (MNRF, 2021a)
- Natural Heritage Information Centre (NHIC) online database (MNRF, 2021b)
- Atlas of the Breeding Birds of Ontario (Cadman et al., 2007)
- Ontario Reptile and Amphibian Atlas (ORAA; Ontario Nature, 2021)
- iNaturalist citizen science database
- eBird citizen science database

3.1 Physiography and Topography

The topography of the Subject Lands is nearly level with a moderate to steep wooded slope along the north and northwest portions of the property (BioLogic, 2015). Soils throughout are associated with modern alluvium consisting of undifferentiated material (gravel, sand, silt, clay, muck) composing side walls and terraces or flood plains of valleys associated with Kettle Creek to the east (BioLogic, 2015). The wooded slope at the north end of the Subject Lands is 27.8m with a gradient range of 0.6H:1V – 1.3H:1V, which is below the factor of safety range, excluding the reinforcement provided by vegetation (EXP, 2017). Previous geotechnical investigations have found evidence of groundwater seepage within TP2 to TP5 below depths ranging between about 1.4m and 2.7m (Trow Associates, 2007).

3.2 Designated Natural Features

The provincially-significant Port Stanley Till Earth Science Area of Natural and Scientific Interest (ANSI) is located directly north of the Subject Lands across Lake Line (LIO, 2014). The closest significant wetland, Hawk Cliff PSW, is over 2 km to the east of the subject lands (MNRF, 2014). Two locally-significant wetlands are located approximately 1 km to the north and north east (Moore Water Gardens and Port Stanley Poison Sumac Swamp). Woodlands on the Subject Property are mapped as part of Central Elgin and Elgin County's Natural Heritage System.

No other designated natural features were identified within 1km of the Subject Lands.

3.3 Species at Risk Records

Previous corresepondence with the Ministry of Natural Resources and Forestry (MNRF) took place to investigate potential Species at Risk within the area of the Subject Lands with records received on June 27, 2014. This background data review was updated in 2021. Data sources used for this updated review included the Species at Risk in Ontario (SARO) List, NHIC, ORAA, and citizen science online databases such as eBird and iNaturalist. Many of these sources display data for a broad area (e.g. by upper-tier municipality, per 10km atlas square) and therefore provide only a general potential for species presence on or near the Subject Lands.

Threatened or Endangered species and their habitats with the potential to be present within 10km of the Subject Lands are listed in Table 1. These species and their habitats are protected under the Endangered Species Act. Habitat for species listed as Special Concern is considered Significant Wildlife Habitat, and is therefore discussed in Section 3.5. The potential for these species or their habitats to be present on the Subject Lands was assessed as part of this EIS using data gathered during field investigations as well as desktop analysis.

Table 1: Species at Risk Potentially Present within 10km of the Subject Lands

Common Name	Scientific Name	ESA (SARO List)	S-rank (NHIC)
Bank Swallow	*Riparia riparia*	THR	S4B
Barn Swallow	*Hirundo rustica*	THR	S5B
Bobolink	*Dolichonyx oryzivorus*	THR	S4B
Chimney Swift	*Chaetura pelagica*	THR	S4B
Eastern False Rue-anenome	*Enemion biternatum*	THR	S2
Eastern Meadowlark	*Sturnella magna*	THR	S4B
Louisiana Waterthrush	*Parkesia motacilla*	THR	S3B
Red-headed Woodpecker	*Melanerpes erythrocephalus*	END	S4B
Acadian Flycatcher	*Empidonax virescens*	END	S2
Eastern Prickly-pear Cactus	*Opuntia cespitosa*	END	S3
Butternut	*Juglans cinerea*	END	S2?
Spiny Softshell	*Apalone spinifera*	END	S2
Little Brown Myotis	*Myotis lucifugus*	END	S3
Northern Myotis	*Myotis septentrionalis*	END	S3
Eastern Small-footed Myotis	*Myotis leibii*	END	S2S3
Tri-coloured Myotis	*Perimyotis subflavus*	END	S3?

3.4 Field Investigations

Field investigations were previously completed as part of the ISR (BioLogic, 2015) in 2014 and 2015. Additional surveys targeting the Subject Lands were undertaken between May and October, 2021 to update vegetation community classification, inventory plant species present within, document bird species breeding on or adjacent to the Subject Lands, identify potential habitat for Species at Risk [from Table 1], and record incidental observations of wildlife on the Subject Lands. These investigations were completed to support the assessment of potential impacts to natural heritage features and species at risk in the context of provincial and municipal policy. A summary of field investigations undertaken as part of the ISR (BioLogic, 2105) and current EIS is provided in Table 2.

Several field investigations were excluded from the 2021 field program based on the findings of the ISR (BioLogic, 2015) and additional unpublished data gathered for the Subject Lands. Amphibian surveys were completed on the Subject Lands in 2015 (BioLogic, unpublished data). Habitat suitable for amphibian breeding (i.e. shallow standing water) was not observed within the wetland community on the Subject Lands, therefore these surveys were not proposed for 2021. Habitat features that would concentrate snake species (e.g. candidate hibernaculum) were not documented

in the ISR and there are no records of snake Species at Risk in the vicinity of the Subject Lands, therefore reptile surveys were not proposed. Migratory bird surveys were also not proposed as the development has been designed to avoid direct impacts to the woodland and stopover habitat for migratory waterfowl or shorebirds is not present on the site based ELC and the findings of the ISR. The Significant Wildlife Habitat Mitigation Support Tool (MNR, 2015) recommends avoidance of woodlands but no setback as the key mitigation measure for migratory landbirds, therefore targeted surveys would not inform the assessment of impacts.

Table 2: Summary of field investigations undertaken on the Subject Lands

Field Investigation	Date	Personnel (BioLogic/MTE)
Ecological Land Classification (preliminary)	May 23, 2014	Dylan Morse
Ecological Land Classification (update)	July 24, 2014	Will Huys, certified to complete ELC
Butternut Health Assessment	July 27, 2014	Will Huys, BHA #222
Butternut Health Assessment	October 1, 2015	Will Huys, BHA #222
Auditory Amphibian Breeding Survey	May 8, 2015	Will Huys
Auditory Amphibian Breeding Survey	July 5, 2015	Will Huys
Spring Botanical Inventory	June 15, 2015	Will Huys
Summer Botanical Inventory	August 17, 2015	Will Huys
Fall Botanical Inventory	October 15, 2015	Will Huys
Breeding Bird Survey	June 15, 2015	Will Huys
Breeding Bird Survey	June 29, 2015	Will Huys
Spring Botanical Inventory	June 3, 2021	Will Huys
Summer Botanical Inventory	August 17, 2021	Elise Roth
Breeding Bird Survey	June 3, 2021	Will Huys
Breeding Bird Survey	June 22, 2021	Will Huys
Fall Botanical Inventory	October 14, 2021	Will Huys

3.4.1 Vegetation Communities

Ecological Lands Classification (ELC) surveys were conducted in 2014 and updated in 2021. A preliminary evaluation of vegetation within the Subject Lands was conducted by Dylan Morse, on May 23, 2014 and updated and confirmed by Will Huys on July 29, 2014. Surveys were updated in 2021 on June 3 and October 14, 2021 by Will Huys, certified to complete ELC in Ontario, using protocols outlined in the Ecological Land Classification System for Southern Ontario (Lee et al., 1998). The surveys were conducted within the area of the Subject Lands. Adjacent vegetation communities were not investigated in detail.

The vegetation surrounding the Subject Lands is predominantly forested area to the west of the Subject Lands, with residential land uses to the north and east and a golf course to the south. The golf course is also owned by the Proponent and were previously investigated in 2014 & 2015 as

part of the ISR (BioLogic, 2015). These additional lands are not currently proposed for development; therefore, they were not investigated in detail in 2021.

The Subject Lands are comprised of two primary natural vegetation communities with cultural inclusions, as well as an Agricultural and an Anthropogenic Disturbed Area (former farmstead) (Figure 2):

- Community 1 is classified as a Dry-Fresh Sugar Maple-Beech Deciduous Forest (FOD5-2). Sugar Maple is the dominant canopy species in this forest, along with Beech. The understorey consists of Dogwood, Sumac and Multiflora Rose. The ground layer consists of species such as Horsetail, Garlic Mustard and Skunk Cabbage. There are also two inclusions associated with Community 1. Inclusion 1a is a Mineral Cultural Thicket Ecosite (CUT1) which has a dominant canopy species consisting of Ash and Black Walnut and a sub-canopy consisting of Buckthorn, Hawthorn, Sumac and Dogwood. The understorey consists of Buckthorn, Hawthorn, Multiflora Rose and Honeysuckle. The ground layer consists of Horsetail, Goldenrod, Garlic Mustard and Mayapple. Inclusion 1b is also a Mineral Cultural Thicket Ecosite (CUT1).
- Community 2 is classified as an Organic Thicket Swamp (SWT3). White Ash and White Willow are the dominant canopy species in this seepage-fed thicket swamp. The understorey consists of Common Buckthorn, Dotted Hawthorn, Multiflora Rose and Common Elderberry. The ground layer consists of Skunk Cabbage, Spotted Joe-pye-weed and Common Boneset.

The agricultural portion of the Subject Lands is currently used for sod production. The former farmstead buildings in polygon A1 (Figure 2) were removed in 2017 due to poor or hazardous condition following the partial collapse of the barn into the silo.

3.4.2 Flora Inventory

Seasonal floristic surveys were undertaken in 2015 as well as on June 3, 2021 by Will Huys, August 17, 2021 by Elise Roth, and October 14, 2021 by Will Huys. The status of all plant species is based on the provincial NHIC database (MNRF, 2020) and the list of vascular plants for the Carolinian Zone (Oldham, 2017).

A total of 121 vascular plant species were recorded on the Subject Lands, of which 70 or 57.85% are native to Ontario and 51 or 42.15% are introduced (Appendix B-1). Five Butternut trees were located on the upper portion of the wooded slope, approximately 65m north of the Development Area. All trees were assessed as Category 1, non-retainable, in 2015 following the provincial Butternut Health Assessment protocol with results submitted to MNRF. Two locally-rare plant species, Swamp Agrimony and Purple Joe Pye Weed, were observed within the SWT3 community. No other plant Species at Risk and no rare plants were observed on the Subject Lands during site investigations.

3.4.3 Breeding Bird Surveys

Breeding bird surveys were conducted by Will Huys on the Subject Lands on June 15th and 29th, 2015, and June 3rd and 22nd, 2021. Surveys in 2021 consisted of 10-minute point counts at 2 stations along the edge of Communities 1 and 2 accompanied by an area search along the perimeter of the Development Area. The highest level of breeding evidence was recorded for each species using codes from the Ontario Breeding Bird Atlas (Cadman et al. 2007). Surveys began within half an hour of sunrise and were completed by 10am.

A total of 15 species were observed within the Subject Lands during breeding bird surveys. All species observed were secure (S5) or apparently secure (S4) breeding species in Ontario. A complete list of bird species observed is provided in Appendix B-2.

No Protected Species were detected during the 2021 breeding bird surveys. However, field investigations in 2015 identified 40-45 active Barn Swallow [THR] nests within the barn located in polygon A1 on the westerly portion of the Subject Lands. In 2017, three corners of the barn collapsed causing the barn to lean onto the silo, and compromising the integrity of both structures. Consequently, it is estimated that approximately 75% of the suitable nesting habitat for Barn Swallow was lost due to this unintended event. The remainder of the barn and adjacent structures within the farmstead were demolished to remove the hazard. Compensation for the removal of a portion (25%) of the original Barn Swallow [THR] habitat will be implemented in accordance with Ontario Regulation 242.08 Section 23.5 of the ESA.

3.4.4 Mammal Habitat

The Subject Lands contain a mature deciduous woodland which is assumed to provide suitable maternity roosting habitat for bats. Targeted surveys were not undertaken as the development has been designed to avoid direct impacts to the woodland.

No dens of fur-bearing mammals were observed on the Subject Lands.

3.4.5 Incidental Wildlife Observations

Four mammals and five invertebrates were observed incidentally on the Subject Lands during other targeted field investigations. These species were: Gray Squirrel, Raccoon, White-tailed Deer, Striped Skunk, Black Saddlebags, Common White-tail, Little Bluet, Cabbage White and Monarch. Monarch is listed as Special Concern on the SARO List, and Endangered on Schedule 1 of the federal Species at Risk Act.

3.5 Significant Wildlife Habitat

MNRF Significant Wildlife Habitat (SWH) Criteria Schedules for Ecoregion 7E (January 2015) use ELC ecosite codes and habitat criteria (eg. Size of ELC polygon, location of ELC polygon) to identify candidate significant wildlife habitat. A complete assessment of candidate SWH is provided in Appendix B-3. Where SWH has been confirmed through results of targeted field investigations (e.g. confirmed habitat use) this has been noted below.

3.5.1 Subject Lands

Candidate SWH was identified within the Subject Lands, associated with the woodland and swamp thicket (Communities 1 and 2), as follows:

Seasonal Concentration of Animals

- Bat Maternity Colonies (candidate) in woodland community FOD6
- Migratory Butterfly Stopover Areas (candidate) in cultural communities CUT1 and along the edge of woodland community FOD6
- Land Bird Migratory Stopover Areas (candidate) in woodland community FOD6

Specialized Habitats of Wildlife

- Seeps and springs (candidate) in swamp thicket SWT3

3.5.2 Adjacent Lands (within 120m of the Subject Lands)

Candidate SWH was identified within the Adjacent Lands, associated with the golf course area and the surrounding woodlands as follows:

Seasonal Concentration of Animals

- Bat Maternity Colonies (candidate) in woodland community FOD6
- Migratory Butterfly Stopover Areas (candidate) in cultural communities and along the edge of woodland community FOD6
- Land Bird Migratory Stopover Areas (candidate) in woodland community FOD6

Habitats for Species of Conservation Concern

- Special Concern and Rare Wildlife Species: Eastern Wood-pewee (candidate), Wood Thrush (candidate) and Broad Beech Fern (candidate) in adjacent woodlands

3.6 Habitat for Threatened and Endangered Species

Habitat potential for Protected Species on the Subject Lands was evaluated using a combination of desktop review, satellite photo interpretation and results of field investigations.

Suitable habitat is present within the Subject Lands for the following Threatened or Endangered Species:

Butternut [THR]: There were five confirmed Butternut [THR] trees identified within woodland community FOD6 on the north and northwest sides of the Subject Lands, all of which were assessed as non-retainable and are greater than 25m from the Development Area.

Little Brown Myotis, Northern Myotis, and Tri-coloured Bat [END]: Potential tree roosting habitat for Endangered bats is assumed to be present in woodland community FOD6 on the Subject Lands outside of the Development Area.

Barn Swallow [THR]: Forty Barn Swallow nests were observed in 2015 within the barn in community A1 on the Subject Lands. Due to the age and disrepair of the structure, three-quarters of the nest sites are assumed to have been removed when three corners of the building collapsed in 2017. Compensation for the removal of the remaining suitable nesting habitat (25% or 10 nests) will be implemented in accordance with Ontario Regulation 242.08 Section 23.5 of the ESA.

The remaining Threatened or Endangered species listed in Table 1 are considered absent from the Subject Lands due to lack of suitable habitat or an absence of species' observations during targeted surveys (e.g. breeding bird surveys, botanical inventory).

4.0 Natural Heritage Features Summary

A summary of significant features and functions identified on the Subject Lands and Adjacent Lands, in accordance with provincial and municipal policy, is provided in Table 3, below.

Table 3: Natural Heritage Features or Functions of the Subject Lands

Policy Category	Policy-protected Natural Heritage Feature	Description of Feature on the Subject Lands and Adjacent Lands (120m)
Provincial Policy Statement, Elgin County Official Plan and Municipality of Central Elgin Official Plan	Significant Wetlands or Significant Coastal Wetlands	• No provincially-significant wetlands or coastal wetlands are located within 1km of the Subject Lands
	Significant Woodlands	• Significant Woodland is present within the north and northwest area of the Subject Lands
	Significant Valleyland	• Significant Valleyland has not been identified on the Subject Lands or Adjacent Lands. No watercourse or valley is present on the Subject Lands or Adjacent Lands.
	Significant Wildlife Habitat (SWH)	• Candidate SWH is present on the Subject Lands for: - Bat Maternity Colonies (candidate) in woodland community FOD6 - Migratory Butterfly Stopover Areas (candidate) in cultural communities CUT1 and along the edge of woodland community FOD6 - Land Bird Migratory Stopover Areas (candidate) in woodland community FOD6 - Seeps and springs (candidate) in swamp thicket SWT3 • Additional candidate SWH is present on the Adjacent Lands for: - Special Concern species Eastern Wood-Pewee, Wood Thrush and Broad Beech Fern in woodlands beyond the Subject Lands
	Areas of Natural and Scientific Interest	• The Port Stanley Till earth science ANSI is present on Adjacent Lands, north of the property limit and across Lake Line
	Fish Habitat	• Fish habitat is absent from the Subject Lands and Adjacent Lands
	Habitat of Threatened and Endangered Species	• 5 Butternut trees [THR] confirmed within the Subject Lands, however these are assessed as non-retainable and are located > 25m from the Development Area. • Barn Swallow (THR) nests confirmed in a barn within the Subject Lands in 2015. • Potential habitat for three Endangered bat species is assumed to be present within woodlands on the Subject Lands and Adjacent Lands outside of the Development Area
KCCA Regulations	Wetlands	• The SWT3 community on the Subject Lands does not meet the definition of a regulated wetland per the *Conservation Authorities Act, 1990* as it lacks a connection with a surface watercourse. • Lands periodically soaked and used for agricultural purposes and no longer exhibit wetland characteristics are also excluded from the definition of a wetland per the *Conservation Authorities Act, 1990*
	Hazard Lands	• The slope in the north of the Subject Lands may be regulated as a hazard feature. The slope stability analysis (EXP, 2022) provides recommendations for hazard mitigation.

5.0 Project Description

The proposal is to establish 88 housing units (79 single detached, 9 semi-detached) with associated future municipal streets on the Subject Lands. Sanitary discharge will be directed to an upgraded sewer pipe connecting to a combined sewer in the Carlow Road R.O.W. that conveys flows to an existing pumping station. The pumping station has been confirmed by the Municipality to have sufficient capacity for additional flows, which are pumped up Lake Line and ultimately discharged into a treatment facility on Scotch Line. Water servicing will be obtained from an existing watermain in the Lake Line R.O.W., through a new 150 mm diameter connection.

Under pre-development conditions there are no storm sewers on site. As part of the development, a storm sewer system will be installed to collect and convey minor runoff from the Subject Lands to a proposed dry stormwater management (SWM) pond located southeast of the site. Minor storm (5-year) and major storm (100-year) runoff will be conveyed to the same SWM pond by site grading. A portion of Marr Drain will be relocated to the servicing easement located behind lots 47-53. The proposed SWM pond will discharged through an oil and grit separator for quality control to the downstream, open channel portion of Marr Drain.

Basement construction is not recommended due to high groundwater levels and soil conditions. Stiffened slab-on-grade construction and foundation pre-loading are recommended as part of the design and construction of the residential homes (Trow, 2007).

A 6m development setback from the toe of the slope will be implemented in order to comply with the Erosion Hazard Limit (EXP, 2022) and provide a buffer to the Significant Woodland. Within this setback, a 2m wide walking trail with a permeable surface is proposed which will be located between the development area and the woodland.

An overlay of the proposed development on the natural heritage features of the Subject Lands is provided in Figure 5.

6.0 Potential Impacts and Mitigation Recommendations

Based on the completed site investigations and the assessment of significance, the Subject Lands contain Significant Woodland, have candidate Significant Wildlife Habitat and provide habitat for Butternut [END], Barn Swallow [THR] and may provided habitat for three Endangered bat species. An earth science ANSI, Port Stanley Till, is present on the Adjacent Lands to the north. In accordance with relevant municipal policy, potential direct and indirect impacts to these features must be addressed through avoidance, mitigation or compensation measures.

6.1 Significant Woodland & Other Vegetation

Communities 1 and 2 located on the northern edge of the Subject Lands are part of a Significant Woodland, as defined by the Municipality of Central Elgin Natural Heritage System. A setback of 6 m from the dripline of the Significant Woodland to the rear lot lines, which is generally coincident with the Erosion Hazard Limit (6m beyond toe of slope; EXP, 2022), is recommended to protect the woodland feature and its functions (Figure 5). This setback will be naturalized, in part, through planting of native species. The proposed 2m wide walking trail within the buffer should be paved with a permeable surface and located outside the dripline of the woodland and as close to the rear lot lines as practical. Trail development within natural heritage buffers is supported in other jurisdictions, including the City of London as documented in the London Plan and updated Environmental Management Guidelines (City of London, 2021). No negative impact to the Significant Woodland is anticipated as a result of trail development within the buffer, provided the recommended mitigation measures are implemented.

The proposed development will result in the removal of a 0.25 ha cultural thicket (CUT, Community 1a) at the entrance to the community. This community does not contain rare or significant species or habitat, and is considered to be less sensitive to disturbance. The thicket's function for general wildlife habitat (e.g. cover) can be replicated through the planting of native species of similar structure within the Significant Woodland buffer. Naturalization of the buffer, where possible, will also increase local diversity of native species and enhance the Subject Lands through the management of non-native species, such as European Buckthorn.

The following mitigation and compensation measures are recommended to avoid negative impacts to this natural heritage feature:

Recommendation 1: In order to protect the woodland feature and its functions, the development limit should be set back 6m from the dripline of the Significant Woodland. This 6m setback is generally coincident with the Erosion Hazard Limit (6m beyond toe of slope; EXP, 2022; Figure 5).

Recommendation 2: Flag the limits of the Significant Woodland and vegetation communities to be retained prior to construction to avoid inadvertent encroachment.

Recommendation 3: Incorporate naturalized plantings with native tree and shrub species in the setback area between the proposed development (e.g. walking trail) and the Significant Woodland to provide a natural buffer to the woodland.

Recommendation 4: Invasive plant species that are identified along the woodland edge or within the proposed naturalization area should be removed and best management practices for limiting the spread of floral invasive species should be followed during development.

Recommendation 5: Areas of exposed soil following construction should be stabilized with vegetation or other suitable ground cover, avoiding plant species with the potential to invade the Significant Woodland. For information on invasive, non-native plant species in southwestern Ontario refer to: http://thamesriver.on.ca/wp-content/uploads/InvasiveSpecies/Invasive-plants.pdf

Recommendation 6: The proposed 2m wide walking trail within the buffer should be paved with a permeable surface and located outside the dripline of the woodland and as close to the rear lot lines as practical.

6.2 Significant Wildlife Habitat

The following candidate (unconfirmed) SWH is present or assumed to be present on the Subject Lands or Adjacent Lands based on woodland size and characteristics.

- Bat Maternity Colonies (candidate) in woodland community FOD6
- Migratory Butterfly Stopover Areas (candidate) in cultural communities CUT1 and along the edge of woodland community FOD6
- Land Bird Migratory Stopover Areas (candidate) in woodland community FOD6
- Seeps and springs (candidate) in swamp thicket SWT3
- Habitat for Special Concern or Rare Wildlife Species: Eastern Wood-pewee (candidate), Wood Thrush (candidate) and Broad Beech Fern (candidate) in woodlands on the Adjacent Lands

All SWH is associated with the Significant Woodland or woodland edge located in the north of the Subject Lands, outside the Development Area. Direct impacts to SWH in the adjacent woodland will be avoided as the Development Area on the Subject Lands will be set back a minimum of 6m from the woodland edge (EXP, 2022).

Wildlife may also experience disturbance during construction when crossing roads or moving through active construction areas. Timing restrictions on vegetation removal are recommended to avoid disturbance to wildlife that may be using natural areas on the site, including breeding birds and bats. Nesting migratory birds are protected under the *Migratory Birds Convention Act* (MBCA), *1994*. No work is permitted to proceed that would result in the destruction of active nests (nests with eggs or young birds), or the wounding or killing of birds, of species protected under the Migratory Birds Convention Act, 1994 and/or Regulations under that Act. Some MBCA-protected species, such as Killdeer, may make use of un-maintained areas as they frequently make nests on the ground in construction sites and other disturbed areas.

Mitigation measures to avoid impacts to wildlife and wildlife habitat are recommended as follows:

Recommendation 7: Avoid vegetation clearing and site disturbance during the migratory bird breeding season (April to August 31) to ensure that no active nests will be removed or disturbed, in accordance with the Migratory Birds Convention Act and/or Regulations under that Act. If works are proposed within the breeding season, prior to any vegetation removal or ground disturbance, the area should be checked for nesting birds by a qualified professional. If there are any nesting birds, works within the nesting area should not proceed until after August 31 or the nest is confirmed inactive.

Recommendation 8: Where select tree removal is proposed, outside the Significant Woodland, removal of trees (> 10cm DBH) should occur outside the bat maternity roost period, which is approximately May 1 to September 31. This avoidance measure includes dead standing trees.

Recommendation 9: If an animal enters the work site, work at that location will stop and the animal should be permitted to leave un-harassed. If there are repeat observations of wildlife in the work area, barrier fencing (e.g. silt fence) may be used to direct wildlife away from active construction and toward natural areas.

6.3 Areas of Natural and Scientific Interest (ANSI)

The provincially-significant Port Stanley Till Earth Science Area of Natural and Scientific Interest (ANSI) is located directly north of the Subject Lands, across Lake Line (LIO, 2014). The ANSI designation for this area falls under the category of an Earth Science ANSI that is related to a geological formation. The Natural Heritage Reference Manual for the PPS (MNR, 2010) notes that appropriate land uses adjacent to an Earth Science ANSI are those that conserve topography and other geologically-defined features for which the area was identified. The proposed development

will conserve the topography on the Subject Lands and will have no direct impacts to the adjacent Earth Sciences ANSI.

6.4 Habitat of Endangered or Threatened Species

Based on the review of background data sources (Table 1) and results of field investigations, there is potentially suitable habitat for Bobolink [THR] and Eastern Meadowlark [THR] and confirmed habitat for Butternut [THR]. There is also evidence that the Subject Lands once supported Barn Swallow [THR] in the barn that was removed, partly due to natural causes. Potential habitat is also present, but unconfirmed, on the Adjacent Lands. Based on this, it is our opinion that the proposed development will avoid impacts to species protected under the ESA (2007). Mitigation measures for wildlife and wildlife habitat are recommended, as noted, with the following additions:

Recommendation 10: Any observation of a Protected Species should be reported to MECP. Protected Species should not be handled, harassed or moved unless they are in immediate danger.

Recommendation 11: Barn Swallow [THR] nests were found within the previously existing structure during general field investigations in 2015. It is recommended that the project will be registered with the MNRF and compensation will be implemented as required by Section 23.5 of Ontario Regulation 242/08. In accordance with the rules in this regulation, the Proponent will install artificial Barn Swallow habitat structures under the direction of a qualified biologist. As three-quarters of the barn collapsed due to structural instability, compensation for the removal of one-quarter of the remaining nest sites (10 nests) is recommended.

The compensation structure(s) must provide suitable conditions for Barn Swallow nesting by providing horizontal ledges or rough vertical surfaces with a sheltered overhang, in a location that minimizes predation, and within an area that allows the Barn Swallows to enter and exit nests freely and is capable of providing long term habitat. The amount of habitat provided by the structure must also provide a greater amount of habitat than the amount that was lost in the original building or structure. Monitoring of use of the created habitat will be completed for at least three years, and a Barn Swallow Mitigation and Restoration Record will be kept on file by the Proponent.

6.5 Groundwater and Stormwater Management

The following section summarizes potential effects and recommendations related to dewatering, stormwater management and sediment and erosion control, as described in the:

- Functional Servicing Report for Kettle Creek Subdivision (SBM, 2021), and
- Preliminary Geotechnical Investigation, Proposed Residential Development, 37719 Lake Line, Port Stanley, Ontario (Trow Associates Inc., 2007)

The site has been designed to accommodate excess overland flows during minor and major storm events, using a combination of site grading, swales, rear-yard catch basins and construction of a SWM pond. Sufficient storage has been provided in the SWM pond to meet the SWM objectives for the site.

Recommendation 12: Homeowners will be provided a Homeowner's Information Package by SBM regarding the SWM function of swales and rear-yard catch basins to encourage regular maintenance and ensure proper function of surface water drainage systems.

Recommendation 13: Due to the presence of shallow groundwater and soil conditions, foundation construction for the single family homes is recommended to be pre-loaded, stiffened slab-on-grade. Localized base soil improvements may be required in wet, silty soils, such as the addition of crushed stone bedding with a geotextile.

Recommendation 14: Groundwater is expected in service trench excavations 2m deep or greater, but can likely be managed using conventional pumping techniques. Where the groundwater removal rate exceeds 50,000 L per day a Permit to Take Water must be obtained from the Ministry of Environment, Conservation and Parks.

6.6 Indirect Impacts

Natural heritage features may also experience indirect effects during construction, such as sedimentation and erosion. Additional indirect impacts on natural features will be mitigated through the implementation of standard environmental protection measures, discussed below.

Recommendation 15: [Derived from Functional Servicing Report for Kettle Creek Subdivision (SBM, 2021)] Sediment and erosion control measures have been developed to alleviate the off-site migration of sediments by incorporation of various best management practices and control measures. Such controls may include but are not limited to silt fencing, silt sacks for inlet grate protection (catch basins, and catch basin maintenance holes), tree preservation fencing and erosion control blanket treatment of significant fill/cut slopes. Suitable precautions should be undertaken in maintaining and monitoring these controls during the construction phase. The control measures to be implemented on site should include:

- Protect all exposed surfaces and control all runoff during construction;
- Maintain erosion control measures during construction;
- All collected sediment to be disposed of at an approved location;
- Minimize area disturbed during construction;
- All dewatering to be disposed of in an approved sedimentation basin;
- Protect all catch basins, maintenance holes and pipe ends from sediment intrusion with geotextile fabric (Terrafix 270R), silt sacks, or approved equal;
- Keep all sumps clean during construction;
- Prevent wind-blown dust;
- Straw bales to be used in localized areas as directed by the engineer during construction for works which are in or adjacent to flood lines, fill lines and hazardous slopes;
- Straw bales to be terminated by rounding bales to contain and filter runoff;
- Contractor to supply sediment erosion control measures and emergency plan (including emergency contacts) in case of SEC measures failure, extreme weather conditions, or spills. Any spills are to be reported to the MECP at 1-866-6638477 toll free;
- Sediment and Erosion Control measures shall be repaired without delay by the owner's contractor as instructed by the contract administrator/engineer at no expense to the owner
- On-site sediment and erosion control measures are to be reviewed and modified to meet the changing site;
- Sediment and Erosion Control measures are to be inspected weekly or following significant rainfall
- events;
- Obtain approval from the governing Conservation Authority prior to construction for works which are in, or adjacent to flood lines, fill lines and hazardous slopes

All of the above notes and any sediment and erosion control measures are at the minimum to be in accordance with the ministry of natural resources guidelines on sediment and erosion control for urban construction sites. Sediment and erosion control measures to be removed at completion of project (following completion of base asphalt and sod). Sediment and erosion control details and notes have been included with the Site Engineering design (Sheet 3).

Recommendation 16: Store hazardous materials away from sensitive natural features. Equipment refueling should occur a minimum of 30m away from natural features.

Recommendation 17: All disturbed areas should be re-seeded as soon as possible to maximize erosion protection and to minimize the establishment of invasive species which may spread to the adjacent Significant Woodland.

Recommendation 18: Sediment and erosion control fencing should not be removed until adequate re-vegetation and site stabilization has occurred. Additional re-vegetation plantings and/or more time for vegetation to establish may be required; however two growing seasons are typically sufficient to stabilize most sites.

Recommendation 19: Soil stockpiles should be established on the tableland in locations where natural drainage is away from the valleyland and associated wetlands. If this is not possible, and there is a possibility of any stock pile slumping and moving toward sensitive natural features, these stockpiles should be protected with robust sediment and erosion control. Access to the stockpile should be confined to the up-gradient side. The stockpile locations should be reviewed at detailed design.

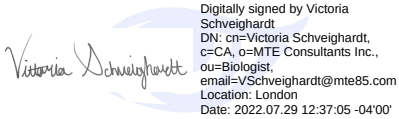
Recommendation 20: Regular cleanup of the Subject Lands must be completed during construction and post-construction to ensure the adjacent natural heritage features are not degraded.

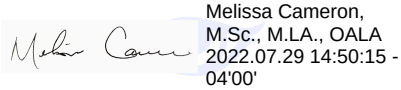
7.0 Conclusion

MTE has evaluated the proposal to establish 88 housing units on the Subject Lands and determined that the potential impacts to natural heritage features on Adjacent Lands have been avoided and/or mitigated with the recommendations herein and in the slope stability report (EXP, 2022). Provided the above recommendations for mitigation are followed during all stages of proposed construction, no significant impacts to the adjacent natural heritage features are expected. MTE seeks comments from the Municipality of Central Elgin, Elgin County and KCCA concerning the contents of this report. Formal comments may be submitted on behalf of the client to MTE. Should any clarification, questions, or additional materials be needed as part of the review of this report, do not hesitate to contact us.

All of which is respectfully submitted,

MTE Consultants Inc.





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VXS:sdm
\\mte85.local\mte\Proj_Mgmt\48957\100\05-Reports\EIS\48957-100 July 29 2022 Revised EIS Report.docx

8.0 References

Biologic. 2015. Issues Scoping Report – Glover – 37719 Lake Line & 320 Carlow Road, Port Stanley, Ontario.

Cadman et al. 2007. Atlas of Breeding Birds of Ontario

AECOM. 2021, City of London Environmental Management Guidelines.

EXP. 2017. Slope Assessment, Starthroy Turf Farm Ltd. Kettle Creek Golf and Country Club Development. Project Number LON-0013222-SA.

EXP. 2022. Slope Assessment, Strathroy Turf Farm Ltd. Proposed Kettle Creek Residential Development. Project Number LON-22006266-A0

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 Development and Transfer Branch. Field Guide FG

Ministry of Natural Resources and Forestry (MNRF). 2017. Survey Protocol for Species at Risk within Treed Habitats: Little Brown Myotis, Northern Myotis & Tri-coloured Bat. April 2017. 12 pp.

Ministry of Natural Resources and Forestry (MNRF). 2020. Natural Heritage Information Centre (NHIC) Online Database. Retrieved from https://www.ontario.ca/page/natural-heritage-information-centre

Ministry of Natural Resources and Forestry (MNRF). 2021. Land Information Ontario Mapping. Retrieved from https://geohub.lio.gov.on.ca/

Oldham, Michael J. 2017. List of Vascular Plants of Ontario's Carolinian Zone (Ecoregion 7E). Carolinian Canada and Ontario Ministry of Natural Resources and Forestry. Peterborough, ON. 132 pp.

Ontario Ministry of Municipal Affairs and Housing (MMAH). 2020. Provincial Policy Statement. Ontario Ministry of Municipal Affairs, Toronto, Ontario. 50 pp.

Ontario Ministry of Natural Resources (MNR), 2010. Natural Heritage Reference Manual for Natural Heritage Policies the Provincial Policy Statement, 2005. April 2010 Toronto, Ontario.

Ontario Ministry of Natural Resources and Forestry. 2015. Significant Wildlife Habitat Criterial Schedule B Ecoregion 7E. 40pp. January 2015.

Trow Associates. 2007. Preliminary Geotechnicial Investigation Proposed Residential Development 37719 Lake Line Port Stanley, Ontario

Figures

Figure 1: Site Location

(Elgin County Mapping, 2015)

Scale 1:50,000

Key Plan

* Locations are approximate and should be verified by survey where necessary.

Print on 11X17, Landscape Orientation

0 160

Scale 1:8000

July 2022

MTE Project#: 48957-100

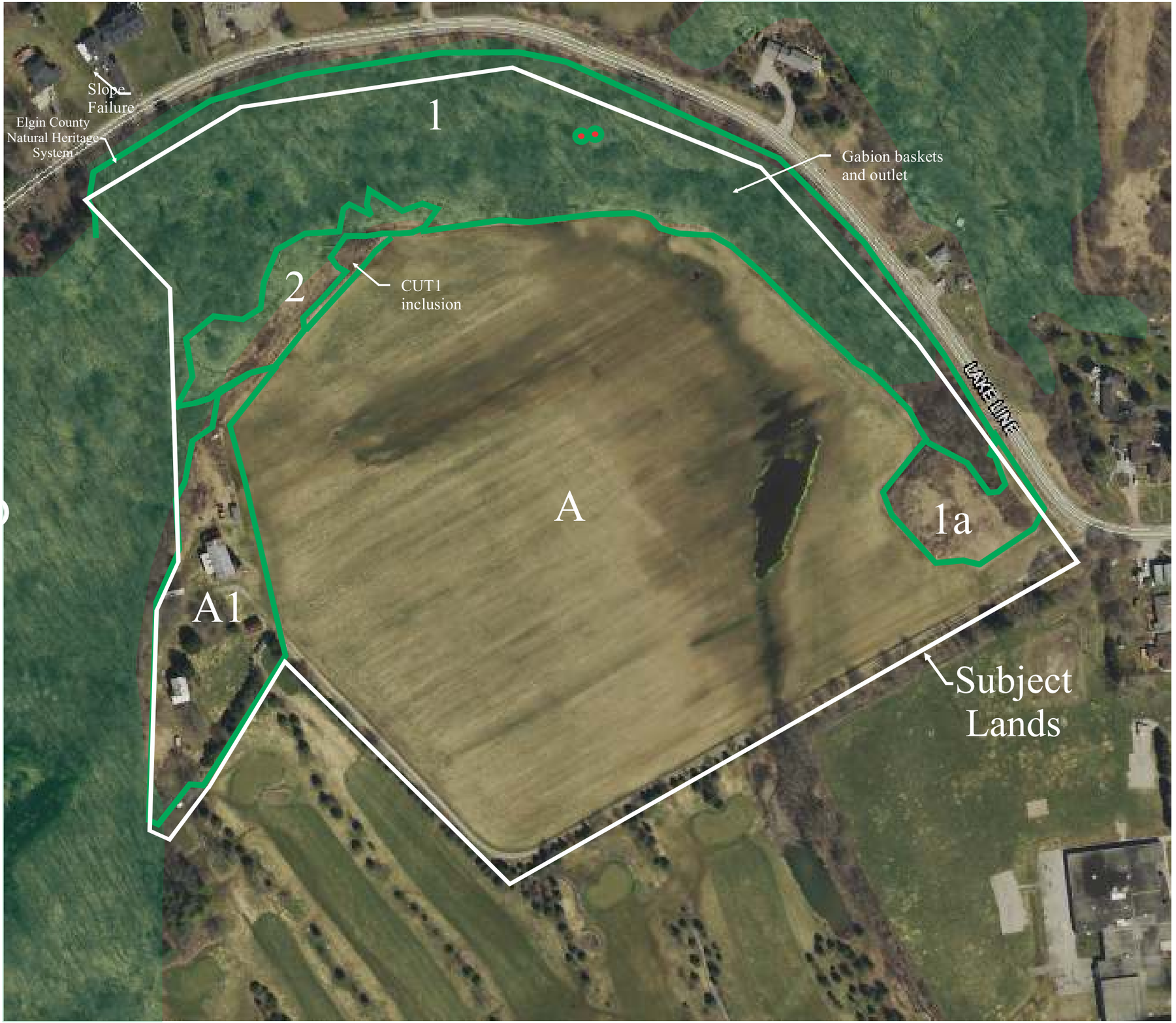

Figure 2: Vegetation Communities

(Elgin County Mapping, 2015)

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Scale 1:50,000

Key Plan

Legend

A - Agricultural
A1 - Anthropogenic Disturbed Area
1 FOD6 Fresh-Moist Sugar Maple Deciduous Forest (2.8ha)
1a CUT1 Mineral Cultural Thicket Ecosite (0.3ha)
2 SWT3 Organic Thicket Swamp (seepage fed) (0.5ha)

- Significant Woodland
- Category 1 Butternut

* Locations are approximate and should be verified by survey where necessary.

Print on 11X17, Landscape Orientation

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Scale 1:2000

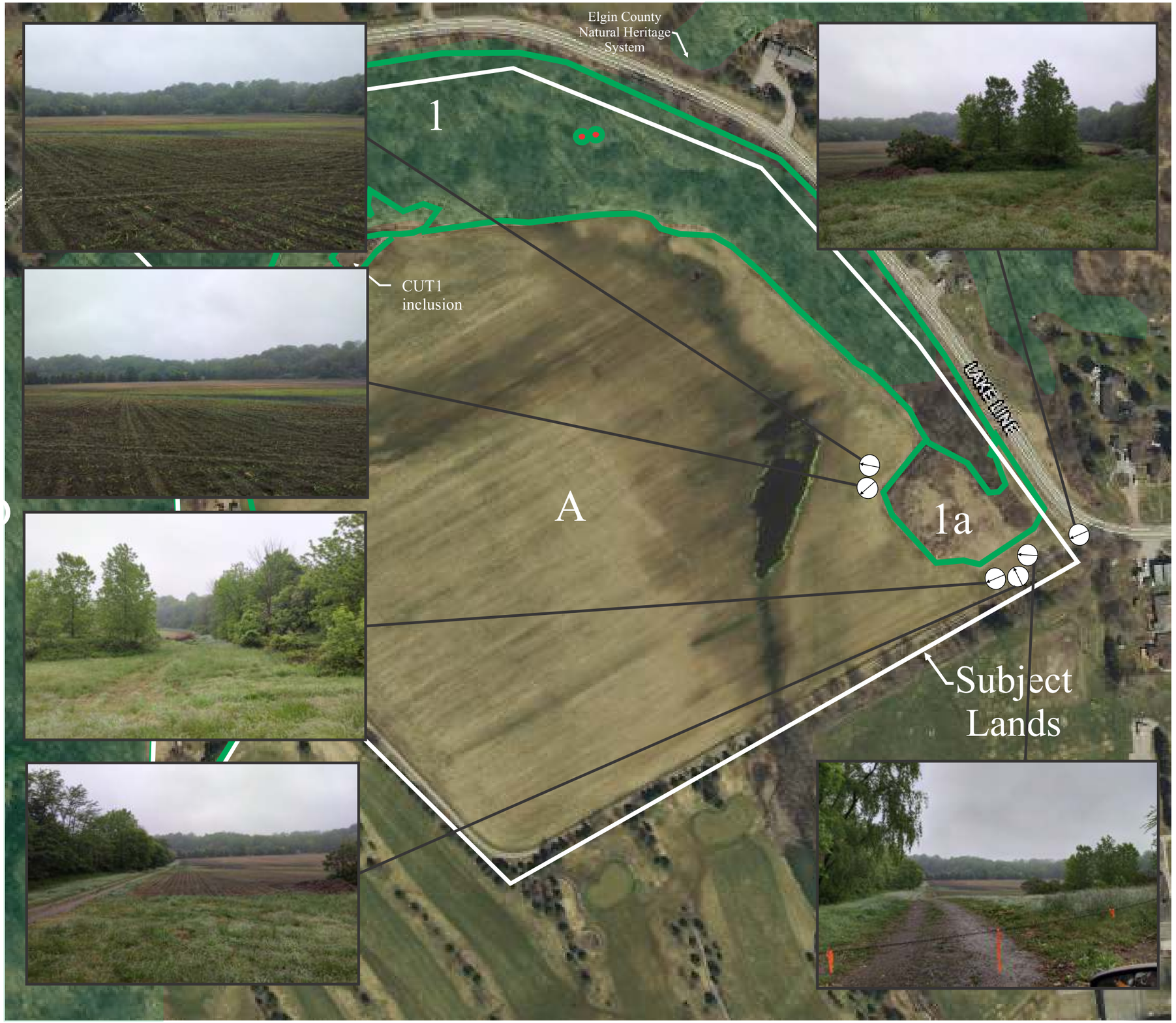
July 2022

MTE Project#: 48957-100

MTE

Figure 3: Site Photos

(Elgin County Mapping, 2015)



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Scale 1:50,000

Key Plan

Legend

A - Agricultural
A1 - Anthropogenic Disturbed Area
1 FOD6 Fresh-Moist Sugar Maple Deciduous Forest (2.8ha)
1a CUT1 Mineral Cultural Thicket Ecosite (0.3ha)
2 SWT3 Organic Thicket Swamp (seepage fed) (0.5ha)

- Significant Woodland
- Category 1 Butternut

* Locations are approximate and should be verified by survey where necessary.

Print on 11X17, Landscape Orientation

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Scale 1:2000

July 2022

MTE Project#: 48957-100

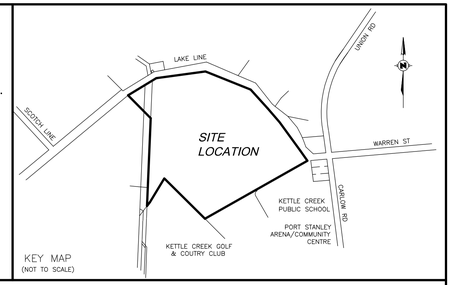
MTE

Figure 4: Development Plan

CURVE TABLE				
CURVE	RADIUS	ARC	CHORD	BEARING
C1	23.750	8.025	7.987	N76°15'49"E
C2	9.000	13.180	12.033	N71°27'52"W
C3	70.000	24.174	24.054	N39°24'19"W
C4	70.000	3.963	3.963	N31°08'01"W
C5	70.000	14.050	14.026	N38°30'20"W
C6	70.000	6.161	6.159	N46°46'38"W
C7	9.000	14.137	12.728	N15°29'18"E
C8	50.000	17.268	17.182	N39°24'19"W
C9	50.000	7.773	7.765	N33°57'54"W
C10	50.000	9.495	9.481	N43°51'31"W
C11	10.000	4.442	4.406	N73°12'58"E
C12	10.000	3.271	3.257	N69°51'37"E
C13	10.000	1.171	1.171	N82°35'18"E
C14	110.000	164.937	149.915	N87°44'45"E
C15	110.000	14.558	14.548	N53°05'25"W
C16	110.000	14.558	14.548	N60°40'23"W
C17	110.000	14.558	14.548	N68°15'22"W
C18	110.000	14.558	14.548	N75°50'21"W
C19	110.000	14.428	14.418	N83°23'18"W
C20	110.000	5.000	5.000	N88°26'54"W
C21	110.000	14.217	14.207	N86°32'49"E
C22	110.000	14.379	14.368	N79°05'58"E
C23	110.000	14.379	14.368	N71°36'37"E
C24	110.000	14.379	14.369	N64°07'15"E
C25	110.000	14.379	14.369	N56°37'52"E
C26	110.000	14.329	14.319	N49°09'17"E
C27	110.000	1.215	1.215	N45°06'24"E
C28	90.000	134.948	122.657	N87°44'45"E
C29	90.000	14.639	14.623	N53°57'31"W
C30	90.000	21.229	21.180	N65°22'33"W
C31	90.000	23.005	22.942	N79°27'22"W
C32	90.000	5.001	5.000	N88°22'14"W
C33	90.000	23.039	22.976	N82°42'15"E
C34	90.000	22.421	22.363	N68°14'02"E
C35	90.000	22.423	22.365	N53°57'33"E
C36	90.000	3.191	3.191	N45°48'22"E
C37	9.000	14.137	12.728	N0°12'35"W
C38	30.000	58.201	49.494	N10°47'17"W
C44	10.000	3.692	3.672	N55°47'17"W
C47	9.000	14.137	12.728	N89°47'25"E
C48	9.000	14.137	12.728	N0°12'35"W
C49	20.000	25.936	24.157	N82°21'39"W
C50	40.000	51.872	48.313	N82°21'39"W
C55	10.000	14.994	13.629	N87°44'45"E
C56	30.000	44.983	40.886	N87°44'45"E
C57	30.000	5.956	5.946	N50°28'40"E
C58	30.000	15.670	15.493	N71°07'44"E
C59	30.000	5.006	5.000	N89°07'37"W
C60	30.000	18.351	18.066	N66°49'22"W
C61	50.000	18.547	18.441	N38°40'18"W
C62	9.000	13.907	12.564	N16°13'18"E
C63	70.000	25.104	24.970	N39°01'29"W
C64	70.000	10.368	10.359	N45°03'20"W
C65	70.000	14.736	14.709	N34°46'53"W
C66	9.000	14.257	12.812	N74°07'52"W
C67	30.000	7.819	7.796	N37°19'27"E
C68	30.000	5.123	5.117	N24°57'56"E
C69	30.000	10.735	10.678	N9°49'17"E
C70	30.000	12.595	12.503	N12°27'27"W
C72	30.000	13.042	12.940	N36°56'21"W
C73	30.000	8.887	8.854	N57°52'48"W
C74	40.000	10.248	10.220	N52°32'58"W
C75	40.000	13.364	13.302	N69°27'38"W
C76	40.000	13.364	13.302	N88°36'12"W
C77	40.000	13.364	13.302	N72°15'13"E
C78	40.000	1.532	1.532	N61°35'07"E
C79	9.000	14.137	12.728	N0°12'35"W
C80	9.000	14.137	12.728	N89°47'25"E

SUBJECT TO THE CONDITIONS, IF ANY, SET FORTH IN OUR LETTER DATED _____ DAY OF _____, 20___ ,
THIS DRAFT PLAN IS APPROVED UNDER SECTION 51 OF THE PLANNING ACT THIS _____ DAY OF _____, 20___ .

_____



DRAFT PLAN OF SUBDIVISION
OF PART OF
CLERGY RESERVE LOT "D" NORTH OF THE LAKE ROAD
AND PART OF
JAMES BEGG LOTS 14 & 15 REGISTERED PLAN No. 20 (MIDD)
AND PART OF
ROAD ALLOWANCE BETWEEN LOTS 14 & 15 NORTH OF THE LAKE ROAD
AND ALL OF
LOT "T", REGISTERED PLAN No. 39
IN THE
TOWNSHIP OF SOUTHWOLD
(GEOGRAPHIC TOWNSHIP OF SOUTHWOLD)
COUNTY OF ELGIN

SCALE 1:1000 (Metric)

15 7.5 0 15 30 45 60 75
(SCALE IN METRES)

TERRY P. DIETZ
ONTARIO LAND SURVEYOR

ADDITIONAL INFORMATION REQUIRED UNDER SECTION 51(17) OF THE PLANNING ACT:

a) AS SHOWN
b) AS SHOWN
c) AS SHOWN
d) AS SHOWN
e) AS SHOWN
f) AS SHOWN
g) AS SHOWN
h) MUNICIPAL WATER AVAILABLE
i) SILTY CLAY LOAM
j) AS SHOWN
k) STORM & SANITARY SEWERS, HYDRO, GAS
l) AS SHOWN

LAND USE SCHEDULE

LOTS 1 TO 70 – SINGLE FAMILY RESIDENTIAL	4.44 ha. (44,430.393 sq.m.)
LOTS 71 TO 79 SEMI DETACHED DWELLINGS	1.42 ha. (14,151.880 sq.m)
LOTS 80 & 81 TOWNHOUSE DWELLINGS	0.53 ha. (5,334.195 sq.m)
BLOCKS 82, 83, 87 & 88 – OPEN SPACE	4.14 ha. (41,369.687 sq.m.)
BLOCKS 84, 85, 86 & 90 – WALKWAYS	0.12 ha. (1,116.641 sq.m.)
BLOCK 89 – FUTURE ROAD	0.08 ha. (796.728 sq.m)
ROADS	2.11 ha. (21,068.42 sq.m.)
TOTAL SITE AREA:	12.83 ha. (128,267.944 sq.m.)

OWNER'S CERTIFICATE

I HEREBY AUTHORIZE CALLON DIETZ INC. TO SUBMIT THIS PLAN OF PROPOSED SUBDIVISION TO THE CORPORATION OF THE COUNTY OF ELGIN FOR APPROVAL.

BELOW-ME DEVELOPMENTS INC.

LONDON, ONTARIO

JAMES GLOVER
I HAVE THE AUTHORITY TO BIND THE CORPORATION

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED AND THEIR RELATIONSHIP TO ADJACENT LANDS ARE ACCURATELY AND CORRECTLY SHOWN ON THIS PLAN.

LONDON, ONTARIO

TERRY P. DIETZ
ONTARIO LAND SURVEYOR

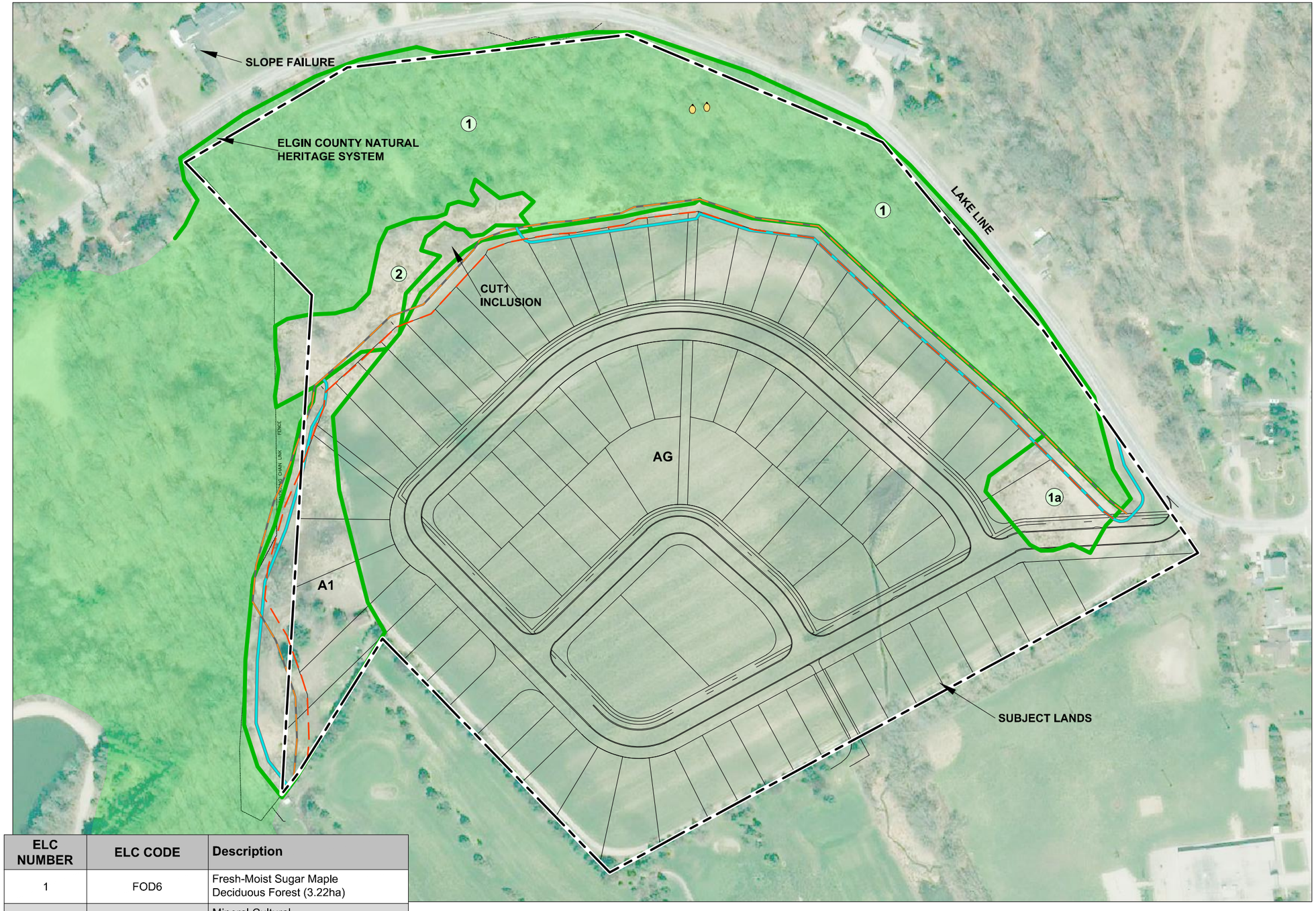
METRIC DISTANCES AND COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

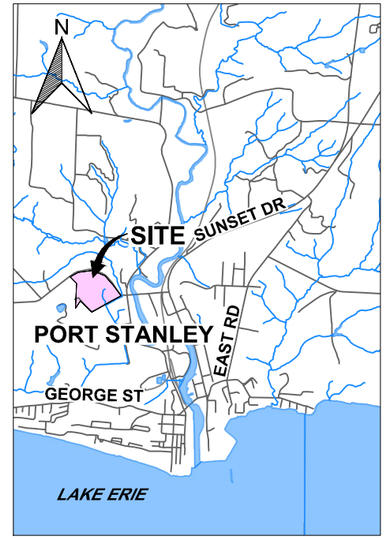
C:_CDvault\DWG\2010s\2019\19-22517\Draftplan(X-2801).dwg July 25, 2022

Callon Dietz INCORPORATED
ONTARIO LAND SURVEYORS
CARLETON PLACE LONDON NORTH BAY
info@callondietz.com callondietz.com

ISO 9001 REGISTERED

SURVEY BY:	DRAWN BY: H.D.	FILE No: 19-22517B	PLAN No: X-2801





KEY PLAN (nts)

LEGEND

- SUBJECT SITE
- 1 VEGETATION COMMUNITY
- SIGNIFICANT WOODLAND
- CATEGORY 1 BUTTERNUT
- TOE OF SLOPE
- EROSION HAZARD LINE
- 6m BUFFER FROM WOODED AREA

SCALE IN METRES
0 40 80m
1:2,000

ELC NUMBER	ELC CODE	Description
1	FOD6	Fresh-Moist Sugar Maple Deciduous Forest (3.22ha)
1a	CUT1	Mineral Cultural Thicket Ecosite (0.27ha)
2	SWT3	Organic Thicket Swamp (0.29ha)
A		Agricultural (8.46ha)
A1		Anthropogenic Disturbed Area (0.53ha)
Note: Area (ha) totals are only within the Subject Lands		

REFERENCES

BING IMAGERY AS OF MAY 31 - 2022 (IMAGE DATE UNKNOWN);
STRIK BALDINELLI MONIZ LTD, SURVEY PLAN, AUTOCAD FILE "to client Draftplan(X-2801) July 25 2022.dwg"; AND
LAND INFORMATION ONTARIO, ROAD AND WATER NETWORK (Key Plan).

NOTES

THIS FIGURE IS SCHEMATIC ONLY AND TO BE READ IN CONJUNCTION WITH ACCOMPANYING TEXT.

BING IMAGERY USED FOR ILLUSTRATION PURPOSES ONLY AND NOT TO BE USED FOR MEASUREMENTS.

ALL LOCATIONS ARE APPROXIMATE.

MTE
Engineers, Scientists, Surveyors

PROJECT
ENVIRONMENTAL IMPACT STUDY
37719 LAKE LINE ROAD
PORT STANLEY, ONTARIO

TITLE
DEVELOPMENT OVERLAY

Drawn DCH	Scale AS SHOWN
Checked	Project No. 48957-100
Date July 28/22	Rev No. 0

FIGURE 5

Client: James Glover, Below-Me Developments
July 28, 2022 — 4:05 PM
CAD: P:\48957\100\2_PROD\48957-100-R01\48957-100-R01005.DWG
0 25mm Original Format in Tabloid (279mm x 432mm; 11" x 17")

Appendix A

Agency Consultation

Melissa Cameron

Subject:	FW: Consultation Meeting - 37719 Lake Line
Location:	https://us02web.zoom.us/j/84062551719?pwd=U0UwdkFxblp1czhReUk3NGI1bm55QT09
Start:	Wed 4/7/2021 3:00 PM
End:	Wed 4/7/2021 4:00 PM
Show Time As:	Tentative
Recurrence:	(none)
Organizer:	Lloyd Perrin

-----Original Appointment-----
From: Lloyd Perrin
Sent: Monday, March 22, 2021 1:30 PM
To: Lloyd Perrin; McCoomb, Jim; james glover; Kevin Moniz; 'Joe Gordon'; Nick Dyjach; Nancy Pasato; blima@elgin.ca; Matthew Statema; Chris McDonough
Subject: FW: Consultation Meeting - 37719 Lake Line
When: Wednesday, April 7, 2021 3:00 PM-4:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: https://us02web.zoom.us/j/84062551719?pwd=U0UwdkFxblp1czhReUk3NGI1bm55QT09

Good afternoon,

The following is a Zoom meeting invite to discuss a proposal at 37719 Lake Line on Wednesday April 7th from 3:00 – 4:00 PM. A previous consultation meeting was held in December 2019 to discuss the proposal and it is the intention of this meeting to allow for the individuals who are new to the file to get up to speed and ensure that the applicant is aware of all the materials that will be required as part of their complete submission. The materials that were submitted along with the consultation request form are attached. If you have any questions, please do not hesitate to ask.

Regards,

KEVIN McCLURE, MCIP RPP Planner
Central Elgin Planning Office | Planning & Building Services Dept.
9 Mondamin Street, St. Thomas, Ontario N5P 2T9
e. kmcclure@stthomas.ca
t. 519-631-1680 ext: 4164
t. 519-633-2560
f. 519-633-6581

ST. THOMAS
THE RAILWAY CITY

-----Original Appointment-----
From: Lloyd Perrin
Sent: Monday, March 22, 2021 11:53 AM
To: Lloyd Perrin; McClure, Kevin
Subject: Consultation Meeting - 37719 Lake Line
When: Wednesday, April 7, 2021 3:00 PM-4:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: https://us02web.zoom.us/j/84062551719?pwd=U0UwdkFxblp1czhReUk3NGI1bm55QT09

Lloyd Perrin is inviting you to a scheduled Zoom meeting.

Join Zoom Meeting
https://us02web.zoom.us/j/84062551719?pwd=U0UwdkFxblp1czhReUk3NGI1bm55QT09

Meeting ID: 840 6255 1719
Passcode: 845800
One tap mobile
+16473744685,,84062551719# Canada
+16475580588,,84062551719# Canada

Dial by your location
+1 647 374 4685 Canada
+1 647 558 0588 Canada
+1 778 907 2071 Canada
+1 204 272 7920 Canada
+1 438 809 7799 Canada
+1 587 328 1099 Canada
Meeting ID: 840 6255 1719
Find your local number: https://us02web.zoom.us/u/kbBrR03A1r

MTE Consultants
123 St. George St., London, Ontario N6A 3A1

September 9, 2021

MTE File No.: 48957-100

Kevin McClure, Planner Central Elgin Planning Office | Planning & Building Services Dept. 9 Mondamin Street, St. Thomas, ON N5P 2T9 Email: kmcclure@stthomas.ca	Jim McCoomb, Manager of Planning Services Central Elgin Planning Office | Planning & Building Services Dept. 9 Mondamin Street, St. Thomas, ON N5P 2T9 Email: jmccoomb@stthomas.ca
Lloyd Perrin, Director of Asset Management/ Development Services Municipality of Central Elgin 450 Sunset Drive, Elgin County Administration Building St. Thomas, Ontario N5R 5V1 Email: LPerrin@centralelgin.org	Nancy Pasato, Manager of Planning Elgin County 450 Sunset Drive, Elgin County Administration Building St. Thomas, Ontario N5R 5V1 Email: npasato@ELGIN.ca
Joe Gordon, Supervisor of Planning Kettle Creek Conservation Authority 44015 Ferguson Line, St. Thomas, ON, N5P 3T3 Email: joe@kettlecreekconservation.on.ca	

Dear Mr. McClure, Mr. McCoomb, Mr. Perrin, Ms. Pasato and Mr. Gordon:

MTE has been retained by Below Me Developments (James Glover) to complete an Environmental Impact Study (EIS) for the proposed Kettle Creek Subdivision at 37719 Lake Line, Port Stanley, the Municipality of Central Elgin and Elgin County (the Subject Lands) in support of a Draft Plan of the Subdivision and Zoning By-Law amendment. An Issues Scoping Report (ISR) was previously submitted for the Subject Lands and adjacent land (BioLogic, 2015) which included a recommendation for a scoped EIS. During a pre-consultation meeting held with the Township of Central Elgin and Kettle Creek Conservation Authority on April 7, 2021, it was confirmed that an EIS was required as part of the Draft Plan application. The agreed-upon scope of the EIS in that meeting was to build on the ISR (BioLogic, 2015) and incorporate life science inventories from 2015 and 2021 to document existing natural heritage features and functions on the Subject Property and adjacent lands, evaluate potential impacts, and recommend appropriate avoidance (e.g. setbacks), mitigation and enhancement measures to protect the natural heritage features.

The 12.8 ha Subject Lands consist of an active sod farm agricultural lands as well as forested slopes, which are part of the Elgin County natural heritage system [Figure 1]. The Adjacent Lands include the Lake Line Right-of-way (R.O.W.) to the north, Kettle Creek Golf and County Club and a Public school to the south, and the River Road R.O.W. to the west. Per the Official Plan of Central Elgin, the Subject Lands have a land use designation of residential in the farmed portion and natural heritage/significant woodland on the forest slopes (Schedule G) and are zoned OS2-29 and OS2-30 (Open Space). The entire Subject Lands are within the area regulated by Kettle Creek Conservation Authority under Ontario Regulation 181/06: Development, Interference with Wetlands and Alterations to Shorelines and Watercourses.

The proposal is to establish 79 single detached lots and 9 semi-detached lots on the Subject Lands, with servicing (water) from a combined sewer in the Carlow Road R.O.W., that is directed to an existing pumping station that ultimately pumps the flows up Lake Line and discharged into the treatment facility on Scotch Line. The proposed area of development is confined to the existing agricultural portions of the Subject Lands.

This Terms of Reference is intended to confirm the scope of natural heritage field investigations as well as the contents of the EIS report for the Subject Lands as agreed upon in the pre-consultation meeting held April 7, 2021. Revisions to the first submission of the Terms of Reference (circulated August 25, 2021) are included herein to incorporate comments provided by Kevin McClure and Nancy Pasato on August 26, 2021 [Appendix A]. The Terms of Reference were prepared with reference to the Municipality of Central Elgin Official Plan policies in Section 3.1.2 and 3.4.2, and Elgin County Official Plan Policies in Section D1.2, specifically, Policy D1.2.8.1 and Appendix B.

Proposed Field Investigations and Reporting

The following field investigations are proposed for 2021 to update data previously gathered on the Subject Lands as part of the ISR (BioLogic, 2015) to inform the current EIS. Field investigations have been scoped to the Subject Lands plus a 120 m Study Area with an emphasis on natural features directly adjacent the development proposal (woodland and thicket wetland) and in consideration of previously-collected data, as noted below:

- ELC to identify and delineate vegetation communities
- Two-season botanical inventory (spring & summer). A fall inventory is not proposed as the late-flowering species targeted during this survey period are typically plants of meadow or prairie habitats, which are absent from the Subject Lands. Data from a three-season inventory completed on the Subject Lands in 2015 (BioLogic, unpublished data) will be incorporated into the EIS.
- Breeding bird surveys (late May-early July)
- Identification of potential habitat for Protected Species (provincially endangered or threatened species), including bat maternity roost trees and fur-bearing mammal dens.
- Documentation of incidental wildlife observations and their habitats in relation to the site

Several field investigations have been excluded from the 2021 field program based on the findings of the ISR (BioLogic, 2015) and additional unpublished data gathered for the Subject Lands. Amphibian surveys were completed on the Subject Lands in 2015 (BioLogic, unpublished data). Habitat suitable for amphibian breeding (i.e. shallow standing water) was not observed within the wetland communities on the Subject Lands, therefore these surveys are not proposed for 2021. Habitat features that would concentrate snake species (e.g. candidate hibernaculum) were not documented in the ISR and there are no records of snake Species at Risk in the vicinity of the Subject Lands, therefore reptile surveys are not proposed. Migratory bird surveys are also not proposed as the development has been designed to avoid direct impacts to the woodland and stopover habitat for migratory waterfowl or shorebirds is not present on the site based ELC and the findings of the ISR. The Significant Wildlife Habitat Mitigation Support Tool (MNR, 2015) recommends avoidance of woodlands but no setback as the key mitigation measure for migratory landbirds, therefore targeted surveys would not inform the assessment of impacts.

The EIS report will include a description of existing natural heritage features using background sources and data gathered during field investigations, an assessment of natural heritage feature significance and sensitivity, including an assessment of Significant Wildlife Habitat and habitat for Species at Risk, a description of the proposed undertaking, an assessment of potential impacts, and recommendations for avoidance, mitigation or enhancement of natural heritage features to assist with the site design. Figures depicting key natural features and the proposed development on the Subject Lands and within 120m will be included with the report, along with appendices documenting data collection.

Summary

This Terms of Reference for an EIS, as agreed upon in the pre-consultation meeting on April 7, 2021, has been prepared in accordance with policies of the Municipality of Central Elgin Official Plan in Sections 3.1.2 and 3.1.4, and the Elgin County Official Plan Policy D1.2.8.1 and Appendix B. We welcome your comments and look forward to confirming these Terms of Reference.

Yours Truly,

MTE Consultants Inc.


Melissa Cameron, M.Sc., M.LA., OALA
2021.09.09 14:42:54 -04'00'

Melissa Cameron
Senior Biologist
519-204-6510 ext. 2263
mcameron@mte85.com

Figure 1: Vegetation Communities

(Elgin County Mapping, 2006)

0 1,000

Scale 1:50,000

Key Plan

Legend

A - Agricultural (7.93ha)
A1 - Anthropogenic Disturbed Area (0.55ha)
1 FOD5-2 Dry-Fresh Sugar Maple-Beech Deciduous Forest (1.9ha)
1a (CUT1 Mineral Cultural Thicket Ecosite 0.5ha)
1b (CUW1 Mineral Cultural Woodland Ecosite 0.6ha)
2 SWT2 Mineral Thicket Swamp (0.9ha)

Significant Woodland (approximate boundary)

* Locations are approximate and should be verified by survey where necessary.

Print on 11X17, Landscape Orientation

0 40

Scale 1:2000

August 2021

MTE Project#: 48957-100

MTE

Appendix A

Agency Comments for EIS Terms of Reference (submitted Aug 25, 2021)

Melissa Cameron

From:	Melissa Cameron
Sent:	Thursday, August 26, 2021 2:07 PM
To:	'Nancy Pasato'; McClure, Kevin; McCoomb, Jim; 'LPerrin@centralelgin.org'; 'Joe Gordon'
Cc:	'Kevin Moniz'; james glover
Subject:	RE: EIS Terms of Reference for 37719 Lake Line, Port Stanley

Hi Nancy,

Thank you for your comments! The EIS was scoped in a meeting on April 7th, 2021 and is based on the development proposal, the findings of the ISR (BioLogic 2015) and additional data gathered by BioLogic in 2015. These data were discussed in the scoping meeting, however I understand you may not have been present so I've incorporated that information into my responses below.

1. Plant Inventory – a three-season inventory was completed on the Subject Lands by BioLogic in 2015 (data unpublished). Our 2021 updated field investigations are scoped to the natural features adjacent the current development proposal (woodland and thicket) in which late-flowering species typical of open habitats, like meadow or prairie, are not expected.

2. Wildlife Inventories
    a. Breeding bird surveys are proposed during the appropriate season (late-May/June). These have been completed.
    b. Habitat assessments for mammals (e.g. bats, fur-bearing mammals) are included in the TOR (bullets 4 & 5).
    c. Amphibian surveys were completed on the Subject Lands by BioLogic in 2015 (data unpublished). Habitat suitable for amphibian breeding (i.e. shallow standing water) was not observed within the wetland communities on the Subject Lands, therefore these surveys are excluded from the 2021 TOR and EIS.
    d. There were no features observed on the Subject Lands in the ISR that would concentrate snake species (e.g. candidate hibernaculum) and no records of snake Species at Risk in the vicinity of the Subject Lands, therefore reptile surveys are not proposed.
    e. Migratory Bird surveys are not proposed as the development has been designed to avoid direct impacts to the woodland (Candidate SWH for migratory landbird stopover) and Candidate SWH for migratory waterfowl or shorebirds is not present on the site based ELC and the on the findings of the ISR. The Significant Wildlife Habitat Mitigation Support Tool (MNR, 2015) recommends avoidance of woodlands as the key mitigation measure for migratory landbirds, and no setback beyond the feature is recommended for this particular SWH type. The potential for indirect impacts to candidate SWH will be addressed in the EIS.
    f. Significant Wildlife Habitat and habitat for Species at Risk were assessed as part of the ISR (BioLogic, 2015) and these assessments will be updated in the 2021 EIS.

3. For 2021, our focus for field investigations is on the natural features in communities 1 and 2 and updating the data set from 2014/2015. However, the EIS will address the entire area shown as Subject Lands (including community A1) plus a 120m Study Area.

If we can provide more information to assist in your review of the Terms of Reference please us let know. We would be happy to add the information noted above to the TOR document if it satisfies the County's concerns.

Best regards,

Melissa

Client First | Right Solution | Work Together
Melissa Cameron, M.Sc., M.LA, OALA
Senior Biologist
London x2263

From: Nancy Pasato <npasato@ELGIN.ca>
Sent: Thursday, August 26, 2021 9:46 AM
To: McClure, Kevin <kmcclure@stthomas.ca>; Melissa Cameron <MCameron@mte85.com>; McCoomb, Jim <jmccoomb@stthomas.ca>; 'LPerrin@centralelgin.org' <LPerrin@centralelgin.org>; 'Joe Gordon' <joe@kettlecreekconservation.on.ca>
Cc: 'Kevin Moniz' <kevin@sbmltd.ca>; james glover <jamesgluv@gmail.com>
Subject: RE: EIS Terms of Reference for 37719 Lake Line, Port Stanley

Hello Melissa – following up from Kevin's email, having reviewed the requirements of an EIS as outlined in Appendix B of the County Official Plan, it appears much of the required information is missing from your terms of reference. For instance:

- as per clause b), a three season inventory is required – why does your terms of reference only outline two?
- as per clause c), no mention of a three season survey of bird, mammal and reptile and amphibian species and an assessment of potential wildlife species based on available habitat types, in addition to the bird survey being undertaken during the peak period for migratory and breeding bird activity (i.e. May and June for Breeding Bird Activities and May to October for peak migratory activity)
- the TofR also does not seem to indicate that you will be reviewing the southern pointed corner (labelled as A1 on the attached drawing) – please confirm this

Please review Appendix B of the County OP and address the required items, in addition to the requirements for Central Elgin in your Terms of Refence and ultimately, within the EIS.
Thanks.

Nancy Pasato, RPP
Manager of Planning

450 Sunset Drive
St. Thomas, ON. N5R 5V1
(519) 631-1460 ext.126
www.elgincounty.ca

From: McClure, Kevin <kmcclure@stthomas.ca>
Sent: August 26, 2021 9:35 AM
To: Melissa Cameron <MCameron@mte85.com>; McCoomb, Jim <jmccoomb@stthomas.ca>; 'LPerrin@centralelgin.org' <LPerrin@centralelgin.org>; Nancy Pasato <npasato@ELGIN.ca>; 'Joe Gordon' <joe@kettlecreekconservation.on.ca>
Cc: 'Kevin Moniz' <kevin@sbmltd.ca>; james glover <jamesgluv@gmail.com>
Subject: RE: EIS Terms of Reference for 37719 Lake Line, Port Stanley

Good morning Melissa,

The Municipality of Central Elgin has specific criteria in its Official Plan that speaks to Issues Scoping Reports and Environmental Impact Statements (attached). I believe that you and your client should be satisfied that there is sufficient analysis undertaken to ensure that the information submitted satisfies the requirements in the Official Plan and that there is demonstration that the proposed development
and/or site alteration will not have any negative impacts on the natural heritage features and their ecological functions.

Regards,

KEVIN McCLURE, MCIP RPP Planner
Central Elgin Planning Office | Planning & Building Services Dept.
9 Mondamin Street, St. Thomas, Ontario N5P 2T9
e. kmcclure@stthomas.ca
t. 519-631-1680 ext: 4164
t. 519-633-2560
f. 519-633-6581

ST. THOMAS
THE RAILWAY CITY

From: Melissa Cameron
Sent: Wednesday, August 25, 2021 3:14 PM
To: McClure, Kevin <kmcclure@stthomas.ca>; McCoomb, Jim <jmccoomb@stthomas.ca>; 'LPerrin@centralelgin.org' <LPerrin@centralelgin.org>; 'Nancy Pasato' <npasato@ELGIN.ca>; 'Joe Gordon' <joe@kettlecreekconservation.on.ca>
Cc: 'Kevin Moniz' <kevin@sbmltd.ca>; james glover <jamesgluv@gmail.com>
Subject: EIS Terms of Reference for 37719 Lake Line, Port Stanley

Dear Mr. McClure, Mr. McCoomb, Mr. Perrin, Ms. Pasato and Mr. Gordon:

MTE has been retained by Below Me Developments (James Glover) to complete an Environmental Impact Study (EIS) for the proposed Kettle Creek Subdivision at 37719 Lake Line, Port Stanley, the Municipality of Central Elgin and Elgin County (the Subject Lands) in support of a Draft Plan of Subdivision and Zoning By-Law amendment. An Issues Scoping Report (ISR) was previously submitted for the Subject Lands and adjacent land (BioLogic, 2015) which included a recommendation for a scoped EIS. During a pre-consultation meeting held with the Township of Central Elgin and Kettle Creek Conservation Authority on April 7, 2021, it was confirmed that an EIS was required as part of the Draft Plan application. The EIS will build on the ISR (BioLogic, 2015) and incorporate life science inventories from 2021 to document existing natural heritage features and functions on the Subject Property and adjacent lands, evaluate potential impacts, and recommend appropriate avoidance (e.g. setbacks), mitigation and enhancement measures to protect the natural heritage features.

A Terms of Reference (TOR) for the EIS is attached which describes the proposed scope of natural heritage field investigations as well as the contents of the EIS report for the Subject Lands, as agreed upon in the pre-consultation meeting held April 7, 2021.

We would appreciate your confirmation of receipt of this email and look forward to confirming the TOR with you in advance of our EIS report submission.

Sincerely,

Melissa

Melissa Cameron, M.Sc., M.LA, OALA | **Senior Biologist**
MTE Consultants Inc.
T: 519-204-6510 x2263 | MCameron@mte85.com
123 St George St., London, Ontario N6A 3A1
www.mte85.com | Twitter | LinkedIn | Instagram | Facebook

Our structural engineering team is growing with the acquisition of Atkins + Van Groll. Visit our website to learn more.

COVID-19 Update: We remain operational and are currently available by email and phone, however, our offices are closed. Staff that are required to visit job sites or perform field work are required to follow MTE health and safety policies and procedures, as well as additional COVID-19 protocols, which can be viewed here.

Notice: A number of Elgin County services are unavailable at this time due to the evolving health situation (COVID-19). Please visit www.elgincounty.ca for daily updates.

Appendix B

Species Lists

AVIFAUNAL SURVEY INFORMATION SUMMARY SHEET

W. Huys

	Date	Start	Finish	Weather
Visit 1	15-Jun-15	6:45 AM	7:15 AM	24C, wind 1, 10% cloud, 0 precipitation
Visit 2	29-Jun-15	7:30 AM	8:00 AM	15C, wind 1, 0% cloud, 0 precipitation

Species Abbr.	Species Name	Comm. 1			Comm. 2				S Rank	ESA Status	PIF Status	Notes
		Visit 1		Visit 2	Visit 1		Visit 2					
		Code	No.	No.	Code	No.	Code	No.				
WAVI	Warbling Vireo	SM	1	SM	1				S5			
AMRO	American Robin	FY	10						S5			
YWAR	Yellow Warbler	NE	4	NE	2				S5			
SOSP	Song Sparrow	P	2	P	2				S5			
NOCA	Northern Cardinal	P	5	P	2				S5			
RWBL	Red-winged Blackbird	FY	8						S4			
AMGO	American Goldfinch			P	3				S5			

Evidence Codes:

Breeding Bird - Possible

SH=Suitable Habitat SM=Singing Male

Breeding Bird - Probable

T=Territory A=Anxiety Behaviour D=Display N=Nest Building P=Pair V=Visiting Nest

Breeding Bird - Confirmed

DD=Distraction NE=Eggs AE=Nest Entry NU=Nest Used NY=Nest Young FY=Fledged Young FS=Food/Faecal Sack

Other Wildlife Evidence

OB=Observed DP=Distinctive Parts TK=Tracks VO=Vocalization HO=House/Den FE=Feeding Evidence CA=Carcass
Fy=Eggs or Young SC=Scat SI=Other Signs (specify)

AVIFAUNAL SURVEY INFORMATION SUMMARY SHEET

Project: 48957-100
Collector(s): W. Huys

	Date	Start	Finish	Weather
Visit 1	3-Jun-21	8:00am	8:30am	overcast
Visit 2	22-Jun-21	8:00am	8:30am	cool, overcast

Species Abbr.	Species Name	Comm. 1				S Rank	ESA Status	PIF Status	Notes
		Visit 1		Visit 2					
		Code	No.	Code	No.				
KILL	Killdeer	P	2	OB	1	S5			In field
GCFL	Great Crested Flycatcher	SH	1			S4	-		
WAVI	Warbling Vireo	SM	1	SM	1	S5			
BCCH	Black-capped Chickadee	SM	1			S5	-		
HOWR	House Wren	SM	1			S5			
AMRO	American Robin	P	4	FY	3	S5			
YWAR	Yellow Warbler	P/T	2	T	2	S5			
AMRE	American Redstart	SM	1	SM	1	S5			
EATO	Eastern Towhee			VO	1	S4		RC	
SOSP	Song Sparrow	P	2	SM	1	S5			
NOCA	Northern Cardinal	SH	2	OB	3	S5			
INBU	Indigo Bunting			SM	1	S4			
RWBL	Red-winged Blackbird	P	5			S4			
BHCO	Brown-headed Cowbird	SH	2	SH	2	S4			
BAOR	Baltimore Oriole	P	2	P	2	S4		RC,RS	Along lane

Evidence Codes:

Breeding Bird - Possible

SH=Suitable Habitat SM=Singing Male

Breeding Bird - Probable

T=Territory A=Anxiety Behaviour D=Display N=Nest Building P=Pair V=Visiting Nest

Breeding Bird - Confirmed

DD=Distraction NE=Eggs AE=Nest Entry NU=Nest Used NY=Nest Young FY=Fledged Young FS=Food/Faecal Sack

Other Wildlife Evidence

OB=Observed DP=Distinctive Parts TK=Tracks VO=Vocalization HO=House/Den FE=Feeding Evidence CA=Carcass
Fy=Eggs or Young SC=Scat SI=Other Signs (specify)
FL=Flyover FO=Foraging

Floral Inventory										
Scientific Name	Common Name	CW	GRank	COSEWIC	Nrank	SARO	SRank	EL	Type	Invasive
Abutilon theophrasti	Velvetleaf	3.0	GNR		NNA		SE5	IC	FO	
Acer saccharinum	Silver Maple	-3.0	G5		N5		S5	C	TR	
Agrimonia parviflora	Swamp Agrimony	-1.0	G5		N4		S4	R	FO	
Agrostemma githago var. githago	Common Corncockle	3.0	GNRTNR		NNA		SE3		FO	
Agrostis stolonifera	Creeping Bentgrass	-3.0	G5		N5		SE5	IC	GR	
Alliaria petiolata	Garlic Mustard	0.0	GNR		NNA		SE5	IC	FO	Y
Ambrosia artemisiifolia	Common Ragweed	3.0	G5		N5		S5	C	FO	
Arctium minus	Common Burdock	3.0	GNR		NNA		SE5	IC	FO	
Asclepias syriaca	Common Milkweed	5.0	G5		N5		S5	C	FO	
Barbarea vulgaris	Bitter Wintercress	0.0	GNR		NNA		SE5	IC	FO	
Berberis thunbergii	Japanese Barberry	3.0	GNR		NNA		SE5	IU	SH	Y
Carex blanda	Woodland Sedge	0.0	G5		N5		S5	C	SE	
Chelone glabra	White Turtlehead	-5.0	G5		N5		S5	X	FO	
Cichorium intybus	Chicory	3.0	GNR		NNA		SE5	IC	FO	
Circaea canadensis	Broad-leaved Enchanter's Nightshade	3.0	G5		N5		S5	C	FO	
Cirsium arvense	Canada Thistle	3.0	G5		NNA		SE5	IC	FO	Y
Cirsium vulgare	Bull Thistle	3.0	GNR		NNA		SE5	IC	FO	
Convolvulus arvensis	Field Bindweed	5.0	GNR		NNA		SE5	IX	VI	
Cornus alternifolia	Alternate-leaved Dogwood	3.0	G5		N5		S5	X	SH	
Cornus racemosa	Gray Dogwood	0.0	G5		N5		S5	X	SH	
Cornus sericea	Red-osier Dogwood	-3.0	G5		N5		S5	C	SH	
Dactylis glomerata	Orchard Grass	3.0	GNR		NNA		SE5	IC	GR	
Daucus carota	Wild Carrot	5.0	GNR		NNA		SE5	IC	FO	
Dipsacus fullonum	Common Teasel	3.0	GNR		NNA		SE5	IC	FO	Y
Echinochloa crus-galli	Large Barnyard Grass	-3.0	GNR		NNA		SE5	IC	GR	
Elaeagnus umbellata	Autumn Olive	3.0	GNR		NNA		SE3	IR	SH	Y
Eleocharis obtusa	Blunt Spikerush	-5.0	G5		N5		S5	C	SE	
Elymus repens	Creeping Wildrye	3.0	GNR		NNA		SE5	IC	GR	
Elymus virginicus	Virginia Wildrye	-3.0	G5		N5		S5		GR	
Epilobium ciliatum	Northern Willowherb	-3.0	G5		N5		S5		FO	
Epilobium parviflorum	Small-flowered Willowherb	3.0	GNR		NNA		SE4		FO	Y
Epipactis helleborine	Eastern Helleborine	3.0	GNR		NNA		SE5	IU	FO	Y
Equisetum arvense	Field Horsetail	0.0	G5		N5		S5	C	FE	
Erigeron annuus	Annual Fleabane	3.0	G5		N5		S5	C	FO	
Erigeron hyssopifolius	Daisy Fleabane	-3.0	G5		N5		S5		FO	
Eupatorium perfoliatum	Common Boneset	-3.0	G5		N5		S5	C	FO	
Euphorbia corollata	Flowering Spurge	5.0	G5		N4		S4		FO	
Euthamia graminifolia	Grass-leaved Goldenrod	0.0	G5		N5		S5	C	FO	
Eutrochium maculatum	Spotted Joe Pye Weed	-5.0	G5		N5		S5		FO	
Eutrochium purpureum	Purple Joe Pye Weed	0.0	G5		N4		S4	R	FO	
Fagus grandifolia	American Beech	3.0	G5		N5		S4	C	TR	
Fraxinus americana	White Ash	3.0	G5		N5		S4	C	TR	
Fraxinus pennsylvanica	Green Ash	-3.0	G5		N5		S4	C	TR	
Geum canadense	White Avens	0.0	G5		N5		S5	X	FO	

Click Here to Generate/Refresh Inventory Table

Glechoma hederacea	Ground Ivy	3.0	GNR		NNA		SE5	IX	FO	
Hackelia virginiana	Virginia Stickseed	3.0	G5		N5		S5	X	FO	
Hesperis matronalis	Dame's Rocket	3.0	G4G5		NNA		SE5	IC	FO	Y
Hypericum perforatum	Common St. John's-wort	5.0	GNR		NNA		SE5	IC	FO	Y
Impatiens capensis	Spotted Jewelweed	-3.0	G5		N5		S5	C	FO	
Juglans nigra	Black Walnut	3.0	G5		N4		S4?	C	TR	
Juncus tenuis	Path Rush	0.0	G5		N5		S5	C	RU	
Juniperus virginiana	Eastern Red Cedar	3.0	G5		N5		S5	U	TR	
Leontodon hispidus	Common Hawkbit		GNR		NNA		SEH		FO	
Leucanthemum vulgare	Oxeye Daisy	5.0	GNR		NNA		SE5	IC	FO	
Ligustrum vulgare	European Privet	3.0	GNR		NNA		SE5	IR	SH	Y
Lindera benzoin	Spicebush	-3.0	G5		N5		S4	C	SH	
Liriodendron tulipifera	Tulip Tree	3.0	G5		N4		S4	C	TR	
Lobelia siphilitica	Great Blue Lobelia	-3.0	G5		NNR		S5	X	FO	
Lolium arundinaceum	Tall Fescue	3.0	GNR		NNA		SE5	IC	GR	
Lonicera japonica	Japanese Honeysuckle	3.0	GNR		NNA		SE2	IR	VW	Y
Lonicera tatarica	Tartarian Honeysuckle	3.0	GNR		NNA		SE5		SH	Y
Lythrum salicaria	Purple Loosestrife	-5.0	G5		NNA		SE5	IC	FO	Y
Malus prunifolia	Pear-leaved Crabapple	5.0	GNR		NNA		SE1	IR	SH	
Melilotus albus	White Sweet-clover	3.0	G5		NNA		SE5	IC	FO	Y
Mimulus ringens	Square-stemmed Monkeyflower	-5.0	G5		N5		S5	X	FO	
Monarda fistulosa	Wild Bergamot	3.0	G5		N5		S5		FO	
Morus alba	White Mulberry	0.0	GNR		NNA		SE5	IU	TR	Y
Muhlenbergia mexicana	Mexican Muhly	-3.0	G5		N5		S5	C	GR	
Nepeta cataria	Catnip	3.0	GNR		NNA		SE5	IC	FO	
Oenothera biennis	Common Evening Primrose	3.0	G5		N5		S5	X	FO	
Ostrya virginiana	Eastern Hop-hornbeam	3.0	G5		N5		S5	C	TR	
Oxalis stricta	Upright Yellow Wood-sorrel	3.0	G5		N5		S5	X	FO	
Parthenocissus vitacea	Thicket Creeper	3.0	G5		N5		S5	C	VW	
Persicaria careyi	Carey's Smartweed	-3.0	G4		N4		S4		FO	
Petroselinum crispum	Garden Parsley	5.0	GNR		NNA		SE1	IR	FO	
Phalaris arundinacea	Reed Canary Grass	-3.0	G5		N5		S5	C	GR	Y
Phragmites australis	Common Reed	-3.0	G5		N5		S4?		GR	Y
Physocarpus opulifolius	Eastern Ninebark	-3.0	G5		N5		S5	X	SH	
Poa pratensis	Kentucky Bluegrass	3.0	G5		N5		S5		GR	
Podophyllum peltatum	May-apple	3.0	G5		N5		S5	C	FO	
Populus deltoides	Eastern Cottonwood	0.0	G5		N5		S5		TR	
Prunus serotina	Black Cherry	3.0	G5		N5		S5	C	TR	
Rhamnus cathartica	Common Buckthorn	0.0	GNR		NNA		SE5	IC	SH	Y
Rhus typhina	Staghorn Sumac	3.0	G5		N5		S5	C	SH	
Robinia pseudoacacia	Black Locust	3.0	G5		NNA		SE5	IC	TR	Y
Rosa multiflora	Multiflora Rose	3.0	GNR		NNA		SE5	IX	SH	Y
Rosa palustris	Swamp Rose	-5.0	G5		NNR		S5	X	SH	
Rubus idaeus ssp. idaeus	Common Red Raspberry	3.0	G5T5		NNR		SE1		SH	
Rubus occidentalis	Black Raspberry	5.0	G5		N5		S5	X	SH	
Rudbeckia hirta	Black-eyed Susan	3.0	G5		N5		S5	C	FO	

Rumex crispus	Curly Dock	0.0	GNR		NNA		SE5	IC	FO	
Rumex obtusifolius	Bitter Dock	-3.0	GNR		NNA		SE5	IX	FO	
Salix bebbiana	Bebb's Willow	-3.0	G5		N5		S5	X	SH	
Salix x fragilis	(Salix alba X Salix euxina)	0.0	GNA		NNA		SNA	hyb	TR	
Scirpus atrovirens	Dark-green Bulrush	-5.0	G5		N5		S5	C	SE	
Senecio vulgaris	Common Ragwort	5.0	GNR		NNA		SE5	IX	FO	
Setaria faberi	Giant Foxtail	3.0	GNR		NNA		SE4	IC	GR	
Setaria pumila	Yellow Foxtail	0.0	GNR		NNA		SE5	IC	GR	
Solanum dulcamara	Bittersweet Nightshade	0.0	GNR		NNA		SE5	IC	VW	Y
Solidago canadensis	Canada Goldenrod	3.0	G5		N5		S5		FO	
Solidago gigantea	Giant Goldenrod	-3.0	G5		N5		S5	X	FO	
Solidago patula	Round-leaved Goldenrod	-5.0	G5		N5		S4	X	FO	
Sonchus arvensis	Field Sow-thistle	3.0	GNR		NNA		SE5	IX	FO	
Symphyotrichum lanceolatum var. interior	Interior White Aster	-3.0	G5T5		NNR		S4S5		FO	
Symphyotrichum novae-angliae	New England Aster	-3.0	G5		N5		S5	C	FO	
Symphyotrichum puniceum	Swamp Aster	-5.0	G5		N5		S5	X	FO	
Symphyotrichum urophyllum	Arrow-leaved Aster	5.0	G4G5		N4		S4	X	FO	
Symplocarpus foetidus	Skunk Cabbage	-5.0	G5		N5		S5	C	FO	
Taraxacum officinale	Common Dandelion	3.0	G5		N5		SE5	IC	FO	
Thelypteris palustris	Marsh Fern	-3.0	G5		N5		S5	C	FE	
Thuja occidentalis	Eastern White Cedar	-3.0	G5		N5		S5	C	TR	
Trifolium repens	White Clover	3.0	GNR		NNA		SE5	IX	FO	
Tussilago farfara	Colt's-foot	3.0	GNR		NNA		SE5	IC	FO	Y
Typha angustifolia	Narrow-leaved Cattail	-5.0	G5		N5		SE5	IC	FO	Y
Typha latifolia	Broad-leaved Cattail	-5.0	G5		N5		S5	C	FO	
Urtica dioica	Stinging Nettle	0.0	G5		N5		S5		FO	
Verbascum thapsus	Common Mullein	5.0	GNR		NNA		SE5	IC	FO	
Verbena hastata	Blue Vervain	-3.0	G5		NNR		S5	C	FO	
Verbena urticifolia	White Vervain	0.0	G5		N5		S5	X	FO	
Viburnum opulus	Cranberry Viburnum	-3.0	G5		N5		S5		SH	
Vitis riparia	Riverbank Grape	0.0	G5		N5		S5	C	VW	

Appendix C – Candidate Significant Wildlife Habitat Assessment Table

Subject Lands ELCs: FOD6, SWT3, CUT1,
Adjacent Lands ELC's: FOD6, CUP3

Seasonal Concentration of Animals

Wildlife Habitat	ELC Codes Triggers	Additional Habitat Criteria	Subject Lands Candidate SWH	Adjacent Lands Candidate SWH
Waterfowl Stopover and Staging Areas (Terrestrial)	CUT1, A	- Fields with spring sheet water are present within the Agricultural portion of the Subject Lands, however these do not contain waste grains which would concentrate staging waterfowl.	No	No
Waterfowl Stopover and Staging Areas (Aquatic)	None Present	- Marsh wetlands large enough to support significant concentration of waterfowl are absent from the Subject Lands and Adjacent Lands.	No	No
Shorebird Migratory Stopover Area	None Present	- Beach areas, bars, seasonally flooded, muddy and un-vegetated shoreline habitat are absent from the Subject Lands and Adjacent Lands	No	No
Raptor Wintering Area	FOD6 CUT1	- Habitat >20ha with a combination of forest and open uplands is absent from the Subject Lands and Adjacent Lands	No	No
Bat Hibernacula	None Present	- No caves, mine shafts, underground foundations present	No	No
Bat Maternity Colonies	FOD6	- Woodlands on and Adjacent to the Subject Lands are assumed to provide suitable roosting habitat for bats	Candidate	Candidate
Turtle Wintering Areas	None present	- Deep (>2m) permanent waterbodies are greater than 120m from the Subject Lands	No	No
Reptile Hibernaculum	None Present	- No burrows, rock piles, rock crevices, or mammal burrows were observed on the Subject Lands	No	No

Colonially-Nesting Bird Breeding Habitat (Bank / Cliff)	CUT1	- No exposed cliffs or banks	No	No
Colonially-Nesting Bird Breeding Habitat (Trees/Shrubs)	None Present	- Mixed and deciduous treed wetland is absent from the Subject Lands. The small swamp thicket community is of insufficient size to support a concentration of colonial-nesting birds. No nesting colonies were observed in this community during field investigations.	No	No
Colonially-Nesting Bird Breeding Habitat (Ground)	CUT1	- Islands or peninsulas associated with open water or in the marshy areas are absent from the Subject Lands	No	No
Migratory Butterfly Stopover Areas	FOD6 CUT1	- The Subject Lands are located within 5km of Lake Erie or Lake Ontario, however limited nectar producing and egg-laying plants were observed along the forest edges and in cultural communities. - Monarch was observed on the Subject Lands during field investigations.	Candidate	Candidate
Land Bird Migratory Stopover Areas	FOD6	- The Subject Lands are located within 5kn of Lake Erie or Lake Ontario. Woodlands on the Subject Lands and Adjacent Lands are assumed to provide stopover habitat for migrating landbirds.	Candidate	Candidate
Deer Winter Congregation Areas	FOD6	- Deer winter congregation areas are typically mapped by MNRF. No deer winter congregation areas are mapped within the Subject Lands or Adjacent Lands	No	No

Rare Vegetation Communities

Wildlife Habitat	ELC Codes Triggers	Additional Habitat Criteria	Subject Lands Candidate SWH	Adjacent Lands Candidate SWH
Cliffs and Talus Slopes	None Present	- No vertical cliffs with bedrock >3m in height	No	No
Sand Barren	None Present	- No sand barren areas >0.5ha	No	No
Alvar	CUT1 CUW1	- No alvars >0.5ha	No	No
Old Growth Forest	FOD5	- Woodland area not >0.5ha, dominant tree species not >140 years old	No	No
Savannah	None Present	- No savannah habitat with 25-60% tree cover	No	No
Tallgrass Prairie	None Present	- No ground cover dominated by prairie grasses	No	No
Other Rare Vegetation	None Present	- No Provincially Rare vegetation communities	No	No

Specialized Habitats of Wildlife considered SWH

Wildlife Habitat	ELC Codes Triggers	Additional Habitat Criteria	Subject Lands Candidate SWH	Adjacent Lands Candidate SWH
Waterfowl Nesting Area	SWT3	- No wetland >0.5ha or cluster of smaller wetlands are present on the Subject Lands. The swamp thicket on the Subject Property is too small and lacking in standing water to support a concentration of nesting waterfowl. -	No	No
Bald Eagle and Osprey Nesting, Foraging, Perching	FOD6	- Nests of Bald Eagle or Osprey were not observed within the Subject Lands. - No super-canopy trees providing ideal perches are present on the Subject Lands or Adjacent Lands	No	No
Woodland Raptor Nesting Habitat	None Present	- Natural or conifer plantation woodlands/ forest stands >30ha with >4ha of interior habitat are absent from the Subject Lands. - No raptor nests were observed within the study area	No	No
Turtle Nesting Areas	None Present	- No exposed mineral soil adjacent to wetland	No	No
Springs and Seeps	None Present	- Seepage from the base of the woodland slope is present on the Subject Lands	Candidate	No
Amphibian Breeding Habitat (Woodland)	FOD6 SWT3	- The thicket swamp at the base of the woodland slope does not retain sufficient water in spring to support concentrations of breeding amphibians	No	No
Amphibian Breeding Habitat (Wetlands)	None Present	- No wetlands >500m² and >120m from woodland ecosites are present on the Subject Lands or Adjacent Lands	No	No
Woodland Area-Sensitive Bird Breeding Habitat	None Present	- Large mature (>60 years old) forest stand or woodlots >30ha with interior habitat are absent from the Subject Lands and Adjacent Lands	No	No

Habitats of Species of Conservation Concern

Wildlife Habitat	ELC Codes Triggers	Additional Habitat Criteria	Subject Lands Candidate SWH	Adjacent Lands Candidate SWH
Marsh Breeding Bird Habitat	None Present	- There is no marsh habitat present within the Subject Lands or Adjacent Lands to support nesting by marsh birds	No	No
Open Country Bird Breeding Habitat	None Present	- Natural and cultural fields >30ha are absent from the Subject Lands and Adjacent Lands	No	No
Shrub/Early Successional Bird Breeding Habitat	CUT1	- Large fields succeeding to shrub and thicket habitats >10ha in size are absent from the Subject Lands and Adjacent Lands	No	No
Terrestrial Crayfish	SWT3	- Seepage wetland habitat present with forest edge habitat, however no crayfish chimneys were observed	No	No
Special Concern and Rare Wildlife Species (NHIC and MNRF pre-consultation)		NHIC identified several species are potentially on or adjacent to the Subject Lands		
Broad Beech Fern (SC)		- Broad Beech Fern was not observed during targeted plant surveys on the Subject Lands in 2015 and 2021 - Suitable deciduous forest habitat for Broad Beech Fern is assumed to be present on the Adjacent Lands	No	Candidate
Bald Eagle (SC)		- Suitable habitat for Bald Eagle (forest near major lake) may be present within the woodland of the Subject Lands as well as the Adjacent Lands, however no nests and no suitable perching trees (super-canopy trees) were observed. - Bald Eagle may be unlikely to use habitat in close proximity to existing roads and residences	No	No
Eastern Ribbonsnake (SC)		- Suitable marsh habitat is absent from the Subject Lands	No	No
Eastern Wood-pewee (SC)		- Suitable deciduous forest is present within the Subject Lands and the Adjacent Lands - Eastern Wood-pewee was not detected on the Subject Lands during breeding bird surveys in 2015 or 2021	No	Candidate
Peregrine Falcon (SC)		- Suitable steep cliff ledges close to large bodies of water are absent from the Subject Lands and Adjacent Lands	No	No

Snapping Turtle (SC)		- Suitable pond habitat may be present within the nearby golf course, however these ponds are > 120m from the Subject Lands	No	No
Wood Thrush (SC)		- Suitable mature deciduous forest is present within the Subject Lands and the Adjacent Lands - Wood Thrush was not detected on the Subject Lands during breeding bird surveys in 2015 or 2021	No	Candidate

Animal Movement Corridors

Wildlife Habitat	ELC Codes Triggers*	Additional Habitat Criteria	Subject Lands Candidate SWH	Adjacent Lands Candidate SWH
Amphibian Movement Corridors	None Present	- Amphibian movement corridors are identified once breeding habitat is confirmed. There are no suitable movement corridors present for amphibians within the Subject Lands	No	No

Appendix C

Field Data Sheets

0cm 3cm 15cm

Butternut Data Collection Form 1 - 2010 Edition

Surveyor ID or BHA # 222

(PLEASE USE BLOCK LETTERS)

Date (dd/mm/yyyy) 01 - 10 - 2015

Shaded fields are mandatory for Butternut Health Assessments

Surveyor Contact

First: WILL Last: HUYS

Email: whuys@biology.ca

Telephone (519) 281-5962 Telephone Other ( ) - X

Property Owner (check if same as surveyor) ☐

First: JAMES Last: GLOVER

or Company:

Email:

Telephone ( ) - Telephone Other ( ) - X

Property Owner's Mailing address

Address: 320 CARLOW RD

City: PORT STANLEY

Postal Code: N5L 1B6 Prov.: ON

Tree Location (if different from mailing address)

Address/(911#): 3719 LAKE ROAD

Township: SOUTHWOLD Lot: Con:

City: PORT STANLEY

Directions

☐ Yes ☒ No Can Share Location Information with other Butternut Recovery Organizations?

☐ Yes ☐ No Site visits OK? (prior arrangments will always be made for a site vist)

> (Greater than)
< (Less than)

Butternut Trees Tally by Diameter Class

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

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

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

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

Overall Property Description (area(s) containing Butternut)

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

Vegetation Community/ies

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

Other

Soil Drainage

☐ Well Drained
☐ Moderately Drained
☐ Poorly Drained
☐ Unknown

Soil Texture

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

Soil Depth

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

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

Page Link 481717

(Contact Information follows all applicable privacy policies and guidelines)

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Suite 233, 266 Charlotte St.
Peterborough, ON, K9J 2V4
www.fgca.net

49731

Butternut Data Collection FORM 2 (2010 Edition) (PLEASE USE BLOCK LETTERS)

Shaded fields are mandatory for Butternut Health Assessments

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

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

Surveyor ID or BHA #: 222

Surveyor Last Name: HUYS

Date (dd/mm/yyyy): 01-10-2015

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

Tree #: 01 | Zone: 17 | Easting: 481717 | Northing: 4724778

Crown Class: | Live Crown %: 95 | Main Stem Length(m) Below crown: 1

☐ Twig Dieback ☐ Branch Dieback ☐ Defoliation ☐ Discolouration

#Stems: 1 | DBH(cm): 17

Butternut Origin: ☐ Natural ☐ Planted ☐ Unknown

Seed Signs: ☐ Male Flowers ☐ Female Flowers ☐ Seed Set ☐ None

Assess below live crown: #Epic-Live: | #Epic-Dead: | Bark Type: | # Callused Wounds: 2

	#Open	#Sooty
Root	04	09
=<2m	04	03
>2m	00	00

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

Competing Species:

HYBRID

Tree #: 02 | Zone: 17 | Easting: 481719 | Northing: 4724781

Crown Class: | Live Crown %: 95 | Main Stem Length(m) Below crown: 1

☐ Twig Dieback ☐ Branch Dieback ☐ Defoliation ☐ Discolouration

#Stems: 1 | DBH(cm): 16

Butternut Origin: ☐ Natural ☐ Planted ☐ Unknown

Seed Signs: ☐ Male Flowers ☐ Female Flowers ☐ Seed Set ☐ None

Assess below live crown: #Epic-Live: | #Epic-Dead: | Bark Type: | # Callused Wounds: 0

	#Open	#Sooty
Root	00	00
=<2m	00	00
>2m	00	00

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

Competing Species:

HYBRID

Tree #: | Zone: 1 | Easting: | Northing:

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

☐ Twig Dieback ☐ Branch Dieback ☐ Defoliation ☐ Discolouration

#Stems: | DBH(cm):

Butternut Origin: ☐ Natural ☐ Planted ☐ Unknown

Seed Signs: ☐ Male Flowers ☐ Female Flowers ☐ Seed Set ☐ None

Assess below live crown: #Epic-Live: | #Epic-Dead: | Bark Type: | # Callused Wounds:

	#Open	#Sooty
Root		
=<2m		
>2m		

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

Competing Species:

Tree #: | Zone: 1 | Easting: | Northing:

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

☐ Twig Dieback ☐ Branch Dieback ☐ Defoliation ☐ Discolouration

#Stems: | DBH(cm):

Butternut Origin: ☐ Natural ☐ Planted ☐ Unknown

Seed Signs: ☐ Male Flowers ☐ Female Flowers ☐ Seed Set ☐ None

Assess below live crown: #Epic-Live: | #Epic-Dead: | Bark Type: | # Callused Wounds:

	#Open	#Sooty
Root		
=<2m		
>2m		

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

Competing Species:

Tree #: | Zone: 1 | Easting: | Northing:

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

☐ Twig Dieback ☐ Branch Dieback ☐ Defoliation ☐ Discolouration

#Stems: | DBH(cm):

Butternut Origin: ☐ Natural ☐ Planted ☐ Unknown

Seed Signs: ☐ Male Flowers ☐ Female Flowers ☐ Seed Set ☐ None

Assess below live crown: #Epic-Live: | #Epic-Dead: | Bark Type: | # Callused Wounds:

	#Open	#Sooty
Root		
=<2m		
>2m		

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

Competing Species:

Please enter matching page link code on forms 1 and 2

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Table 3: Key for Field Identification of Butternut Hybrids

Trait	Description	Assign score of:
Leaf Retention	Leaves yellow and drop early in the fall, late August to mid-September	0
	Leaves yellow and drop in mid-fall, after the first frost	1
	Leaves stay green late into the fall and drop after a hard frost	2
Dormant Terminal Bud	Terminal bud elongated and slender, conical, and tan-coloured	0
	Terminal bud broadest at base, less elongated, slightly green coloured	1
	Terminal bud stout, pyramid shaped, green or yellow green in colour	2
Dormant Twigs	Dark olive green or reddish-brown, slender, sometimes with hairs below the terminal bud	0
	Tan to brownish green and stout, sometimes with patches of hairs, especially below terminal bud	1
	Tan to light green, stout, often with abundant rusty red or tan hairs	2
Lenticel Shape on New Twigs	Lenticels on most recent growth uniformly small, round, white, abundant, and evenly distributed; if some are elongated or dash-shaped, elongation is perpendicular to direction of the branch	0
	Lenticels on most recent growth mostly small, round, white, abundant, with patchy distribution; if some are elongated or dash-shaped, elongation is parallel to direction of branch	1
	Lenticels on most recent growth large, tan and corky, patchy distribution, many dash-shaped and elongated parallel to branch	2
Pith Color of 1-Year Twig	Very dark, chocolate brown	0
	Medium brown (colour of dark maple syrup)	1
	Tan to honey coloured	2
Leaf Scar	Top edge of most leaf scars straight or slightly arched	0
	Top edge of some leaf scars with small descending "V" shaped notch	1
	Top edge of most or all leaf scars with clear descending "V" shaped notch	2
Leaf Length	Most leaves less than 46 cm long	0
	Many leaves 46 cm or longer	1
Color of Bark Fissures on Mature Trees	Dark grey or black	0
	Light grey or silvery	1
	Tan or slightly pinkish	2
Green Hull Characteristics	Densely hairy and very sticky	0
	Somewhat hairy and only slightly sticky	2
Nut Shape	Nut cylindrical, round in cross section, with thin, sharp corrugations; the suture/seam is not easily distinguished from the longitudinal ridges	0
	Nut slightly asymmetrical, with noticeable valleys between longitudinal ridges	1
	Nut asymmetric, diamond shaped or flattened, with dull or sparse corrugations; the suture/seam is easily identified and forms the widest part of the body of the nut	2
Catkin Length When Fully Extended and Shedding Pollen	Shorter than 11.5 cm	0
	11.5 – 14 cm	1
	Longer than 14 cm	2

Table 4: **Data Sheet for Field Identification of Butternut Hybrids**

BHA name:	Will Huys	Tree ID #:	Tree ID #:	Tree ID #:	Tree ID #:	Tree ID #:	Tree ID #:
BHA ID #:	222						
BHA Report #:	222-006	01	02				
Assessment Date(s):	Oct. 1, 2015						
Tree location (site address):	37719 Lake Road, Pt. Stanley						
Client name:	James Glover						
Traits (must evaluate at least five traits):		Score Assigned:	Score Assigned:	Score Assigned:	Score Assigned:	Score Assigned:	Score Assigned:
Leaf Retention		1	1				
Dormant Terminal Bud		1	1				
Dormant Twigs		1	1				
Lenticel Shape on New Twigs		2	2				
Pith Color of 1-Year Twig		0	1				
Leaf Scar		2	1				
Leaf Length		0	1				
Color of Bark Fissures on Mature Trees		1	0				
Green Hull Characteristics		/	/				
Nut Shape		/	/				
Catkin Length When Fully Extended and Shedding Pollen		/	/				
How to interpret total score: *0 to 3 = Butternut;* *4 or greater = Hybrid*	**Total:**	8	8				

GENERAL SITE INFORMATION FIELD SHEET

Project: 48957-100
Date: June 22, 2021 Project Manager:
Collector(s): WH Visit #:
Time started: 8:00 Time finished: 8:30 Combined collectors' hours: 0.5
☐ NHIC List ☐ MNR EO's ☐ none ☐ not provided to collector

WEATHER CONDITIONS				
Temp.	Wind:		Cloud Cover (%)	Precipitation
13	Direction:	N	90	Today: 0 Yesterday: yes

WIND SCALE	
0	Calm
1	Smoke Drifts
2	Wind Felt on Face
3	Leaves in constant motion
4	Wind raises dust and paper
5	Small trees sway
6	Large branches sway
7	Lots of resistance when walking into
8	Limbs breaking off trees

DATA FOCUS

X	Birds 1__ 2_X_ Mig__	☐	ELC's	☐	Dripline/Tree Survey
☐	Mammals	X	Floral V_X_ S__ A_	☐	Aquatic - Physical
☐	Amphibians 1_ 2_ 3_	☐	Wetland	☐	Aquatic - Biological
☐	Reptiles	☐	Butternut (BHA)	☐	Faunal Habitat
☐	Inverterbrates	☐	other SAR	☐	Other - see notes

FEATURES (with GPS co-ordinates where applicable)	Mapped	Follow-up Req'd		
	UTM	Yes	No	Who
Man-made Structures: ☐ None observed				
Yes No				
☐ X Barns/Footings/Wells/other(list)				
☐ X Rock Piles				
☐ X Garbage				
Natural Vegetation: ☐ None observed				
☐ X Fallen Logs outside woods (#'s)				
☐ X Brush Piles				
X ☐ Snags (raptor perch) DEAD ASH IN PRESERVED LANDS				
☐ X Tree Cavities (nesting)				
☐ X Sentinel Trees				
☐ X Butternut Identified				
☐ X Mast Trees (6E) ☐ Berry Shrubs (6E)				
Wildlife Features: ☐ None observed				
☐ X Waterfowl nesting (large #'s, # of species)				
☐ X Exposed Banks (nesting swallows)				
☐ X Stick Nests				
☐ X Animal Burrows (>10cm)				
☐ X Heronry				
☐ X Crayfish mounds				
☐ X Sand/gravel on site				
☐ X Marsh/open country/shrub				
☐ X Winter Deer yards				
X X Corridor from pond to woods (ampibian movement)				
☐ X Bat corridor (shorelines, escarpments)				
☐ X Bat hibernacula (caves, mines, crevices, etc.)				
Aquatic Features:				
☐ X Perm. pond in woodland ☐ emergents/submergents/logs ☐ temp.				
☐ X Perm. pond in open ☐ emergents/submergents/logs ☐ temp.				
☐ X Water in woodland ☐ pools ☐ flowing ☐ dry				
☐ X Waterways flowing dry pools				
☐ natural stream ☐ ☐ ☐				
☐ swale ☐ ☐ ☐ ☐ None observed				
☐ open drain ☐ ☐ ☐				
☐ Seeps/Springs ☐ ☐ ☐				
Incidental Observations/Notes:				

Graphic ☐ Attached or Name E:\ENV\Biological Services\Templates\MTE NEnv_General Field Sheet Checked by Project Manager ☐ Date:

ELC
COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 48957-100		POLYGON: 1	
SURVEYOR(S): WH	DATE: Jn 3, 2021	TIME: start	
		finish	
UTMZ:	UTME:	UTMN:	

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☐ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND			☐ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION
SITE			**COVER**		
☐ OPEN WATER			☐ OPEN		
☐ SHALLOW WATER			☐ SHRUB		
☐ SURFICIAL DEP.			☐ TREED		
☐ BEDROCK					

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (up to 4 sp) (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

HT CODES: **1** = >25 m **2** = 10<HT 25 m **3** = 2<HT 10 m **4** = 1<HT 2 m **5** = 0.5<HT 1 m **6** = 0.2<HT 0.5 m **7** = HT<0.2 m

CVR CODES **0**= NONE **1**= 0% < CVR 10% **2**= 10 < CVR 25% **3**= 25 < CVR 60% **4**= CVR > 60%

STAND COMPOSITION:	BA:

SIZE CLASS ANALYSIS:	☐	< 10	☐	10 - 24	☐	25 - 50	☐	> 50
STANDING SNAGS:	☐	< 10	☐	10 - 24	☐	25 - 50	☐	> 50
DEADFALL / LOGS:	☐	< 10	☐	10 - 24	☐	25 - 50	☐	> 50

ABUNDANCE CODES: **N** = NONE **R** = RARE **O** = OCCASIONAL **A** = ABUNDANT

COMM. AGE :	☐	PIONEER	☐	YOUNG	☐	MID-AGE	☐	MATURE	☐	OLD GROWTH

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES / GLEY	g =	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

		ELC CODE
COMMUNITY CLASS:	CULTURAL	CU
COMMUNITY SERIES:	THICKET	CUT
ECOSITE:	MINERAL	CUT1
VEGETATION TYPE:		
INCLUSION		
COMPLEX		

Notes:

ELC
MANAGEMENT / DISTURBANCE

SITE:
POLYGON:
DATE:
SURVEYOR(S):

DISTURBANCE EXTENT	0	1	2	3	SCORE †
TIME SINCE LOGGING	> 30 YRS	15 - 30 YRS	5 - 15 YRS	0 - 5 YEARS	
INTENSITY OF LOGGING	NONE	FUEL WOOD	SELECTIVE	DIAMETER LIMIT	
EXTENT OF LOGGING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
SUGAR BUSH OPERATIONS	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF OPERATIONS	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
GAPS IN FOREST CANOPY	NONE	SMALL	INTERMEDIATE	LARGE	
EXTENT OF GAPS	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
LIVESTOCK (GRAZING)	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF LIVESTOCK	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
ALIEN SPECIES	NONE	OCCASIONAL	ABUNDANT	DOMINANT	
EXTENT OF ALIEN SPECIES	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
PLANTING (PLANTATION)	NONE	OCCASIONAL	ABUNDANT	DOMINANT	
EXTENT OF PLANTING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
TRACKS AND TRAILS	NONE	FAINT TRAILS	WELL MARKED	TRACKS OR	
EXTENT OF TRACKS/TRAILS	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
DUMPING (RUBBISH)	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF DUMPING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
EARTH DISPLACEMENT	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF DISPLACEMENT	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
RECREATIONAL USE	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF RECR. USE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
NOISE	NONE	SLIGHT	MODERATE	INTENSE	
EXTENT OF NOISE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
DISEASE/DEATH OF TREES	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF DISEASE / DEATH	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
WIND THROW (BLOW DOWN)	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF WIND THROW	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
BROWSE (e.g. DEER)	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF BROWSE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
BEAVER ACTIVITY	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF BEAVER	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
FLOODING (pools & puddling)	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF FLOODING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
FIRE	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF FIRE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
ICE DAMAGE	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF ICE DAMAGE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
OTHER	NONE	LIGHT	MODERATE	HEAVY	
EXTENT	NONE	LOCAL	WIDESPREAD	EXTENSIVE	

† INTENSITY x EXTENT = SCORE

ELC
PLANT SPECIES LIST

SITE: 48957-100
POLYGON: 1
DATE: Jn 3, Jn 22, 2021
SURVEYOR(S): WN

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER

ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER 1	2	3	4	COL.
JUGLni					
SALIbab					
ACERsac					
POPUdel					
ROBIpse					
RUBIida					
CORNrac					
RHAMcat					
SLASumb					
CORNser					
SLASumb					
CORNalt					
RHUStyp					

SPECIES CODE	LAYER 1	2	3	4	COL.
VIBRtha					
ASCLsyr					
LEUCvul					
GLEChed					
POA_pra					
NEPAcat					
DAUCcar					
SOLIcan					
DACTglo					

Page ..... of .....

ELC
PLANT SPECIES LIST

SITE:
POLYGON:
DATE:
SURVEYOR(S):

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER

ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER 1	2	3	4	COL.

SPECIES CODE	LAYER 1	2	3	4	COL.

Page ..... of .....

ELC
WILDLIFE

SITE: 48957-100
POLYGON: 1
DATE: Jn 3 2021
SURVEYOR(S): WH
START TIME: END TIME:

TEMP (°C): CLOUD (10th): WIND: PRECIPITATION:
CONDITIONS:

POTENTIAL WILDLIFE HABITAT:

	VERNAL POOLS		SNAGS
	HIBERNACULA		FALLEN LOGS

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#
	BCCH	SM	I	
	SOSP	P	II	
	KILL	P	IN FIELD	
	BAOR	P	ALONG LANE	
	AMRO	P	IIII	
	WAVI	SM	I	
	GCFL	SH	I	
	YEWA	T	II	
	BHCO	SH	II	
	RWBL	P	卌	
	AMRE	SM	I	
	NOCA	SM	II	
	HOWR	SM	I	

TY	SP. CODE	EV	NOTES	#
	VIWT	SC		

FAUNAL TYPE CODES (TY):
B = BIRD M = MAMMAL H = HERPETOFAUNA L = LEPIDOPTERA F = FISH O = OTHER

EVIDENCE CODES (EV):
BREEDING BIRD - POSSIBLE:
SH = SUITABLE HABITAT SM = SINGING MALE

BREEDING BIRD - PROBABLE:
T = TERRITORY D = DISPLAY P = PAIR
A = ANXIETY BEHAVIOUR N = NEST BUILDING V = VISITING NEST

BREEDING BIRD - CONFIRMED:
DD = DISTRACTION NU = USED NEST FY = FLEDGED YOUNG
NE = EGGS NY = YOUNG FS = FOOD/FAECAL SACK
AE = NEST ENTRY

OTHER WILDLIFE EVIDENCE:
OB = OBSERVED VO = VOCALIZATION CA = CARCASS
DP = DISTINCTIVE PARTS HO = HOUSE/DEN FY = EGGS OR YOUNG
TK = TRACKS FE = FEEDING EVIDENCE SC = SCAT
SI = OTHER SIGNS (specify)

ELC
WILDLIFE

SITE: 48957-100
POLYGON: 1
DATE: Jn 22, 2021
SURVEYOR(S): WH
START TIME: 8:00 END TIME:

TEMP (°C): 13 CLOUD (10th): 9 WIND: 1 PRECIPITATION: NO
CONDITIONS:

POTENTIAL WILDLIFE HABITAT:

	VERNAL POOLS		SNAGS
	HIBERNACULA		FALLEN LOGS

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#
	WAVI	SM	I	
	YEWA	T	II	
	BAOR	P	II	
	NOCA		II	
	INBU	SM	I	
	SOSP	SM	I	
	EATO	VO	I	
	KILL		I	
	BHCO	SH	II	
	AMRO	FY	III	
	AMRE	SM	I	

TY	SP. CODE	EV	NOTES	#

FAUNAL TYPE CODES (TY):
B = BIRD M = MAMMAL H = HERPETOFAUNA L = LEPIDOPTERA F = FISH O = OTHER

EVIDENCE CODES (EV):
BREEDING BIRD - POSSIBLE:
SH = SUITABLE HABITAT SM = SINGING MALE

BREEDING BIRD - PROBABLE:
T = TERRITORY D = DISPLAY P = PAIR
A = ANXIETY BEHAVIOUR N = NEST BUILDING V = VISITING NEST

BREEDING BIRD - CONFIRMED:
DD = DISTRACTION NU = USED NEST FY = FLEDGED YOUNG
NE = EGGS NY = YOUNG FS = FOOD/FAECAL SACK
AE = NEST ENTRY

OTHER WILDLIFE EVIDENCE:
OB = OBSERVED VO = VOCALIZATION CA = CARCASS
DP = DISTINCTIVE PARTS HO = HOUSE/DEN FY = EGGS OR YOUNG
TK = TRACKS FE = FEEDING EVIDENCE SC = SCAT
SI = OTHER SIGNS (specify)

GENERAL SITE INFORMATION FIELD SHEET

Project: 48957-100
Date: June 3, 2021 Project Manager:
Collector(s): WH Visit #:
Time started: 8:00 Time finished: 8:30 Combined collectors' hours: 0.5
☐ NHIC List ☐ MNR EO's ☐ none ☐ not provided to collector

WEATHER CONDITIONS				
Temp.	Wind:	0	Cloud Cover (%)	Precipitation
16	Direction:	—	100	Today: yes Yesterday: yes

WIND SCALE	
0	Calm
1	Smoke Drifts
2	Wind Felt on Face
3	Leaves in constant motion
4	Wind raises dust and paper
5	Small trees sway
6	Large branches sway
7	Lots of resistance when walking into
8	Limbs breaking off trees

DATA FOCUS

☒	Birds 1☒ 2__ Mig__	☐	ELC's	☐	Dripline/Tree Survey
☐	Mammals	☒	Floral V__ S__ A_	☐	Aquatic - Physical
☐	Amphibians 1_ 2_ 3_	☐	Wetland	☐	Aquatic - Biological
☐	Reptiles	☐	Butternut (BHA)	☐	Faunal Habitat
☐	Inverterbrates	☐	other SAR	☐	Other - see notes

FEATURES (with GPS co-ordinates where applicable)	Mapped	Follow-up Req'd		
	UTM	Yes	No	Who
Man-made Structures: ☐ None observed				
Yes No				
☐ ☒ Barns/Footings/Wells/other(list)				
☐ ☒ Rock Piles				
☐ ☒ Garbage				
Natural Vegetation: ☐ None observed				
☐ ☒ Fallen Logs outside woods (#'s)				
☐ ☒ Brush Piles				
☐ ☒ Snags (raptor perch)				
☐ ☒ Tree Cavities (nesting)				
☐ ☒ Sentinel Trees				
☐ ☒ Butternut Identified				
☐ ☒ Mast Trees (6E) ☐ Berry Shrubs (6E)				
Wildlife Features: ☐ None observed				
☐ ☒ Waterfowl nesting (large #'s, # of species)				
☐ ☒ Exposed Banks (nesting swallows)				
☐ ☒ Stick Nests				
☐ ☒ Animal Burrows (>10cm)				
☐ ☒ Heronry				
☐ ☒ Crayfish mounds				
☐ ☒ Sand/gravel on site				
☐ ☒ Marsh/open country/shrub				
☐ ☒ Winter Deer yards				
☐ ☒ Corridor from pond to woods (ampibian movement)				
☐ ☒ Bat corridor (shorelines, escarpments)				
☐ ☒ Bat hibernacula (caves, mines, crevices, etc.)				
Aquatic Features:				
☐ ☒ Perm. pond in woodland ☐ emergents/submergents/logs ☐ temp.				
☐ ☒ Perm. pond in open ☐ emergents/submergents/logs ☐ temp.				
☐ ☒ Water in woodland ☐ pools ☐ flowing ☐ dry				
☐ ☒ Waterways flowing dry pools				
☐ natural stream ☐ ☐ ☐				
☐ swale ☐ ☐ ☐ ☐ None observed				
☐ open drain ☐ ☐ ☐				
☐ Seeps/Springs ☐ ☐ ☐				

Incidental Observations/Notes:

Graphic ☐ Attached or Name L:\ENV\Biological Services\Templates\MTE NEW_General Field Sheet Checked by Project Manager ☐ Date:

ELC
COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 48957-100		POLYGON: 1	
SURVEYOR(S): WH	DATE: Jn 3, 2011	TIME: start	
		finish	
UTMZ:	UTME:	UTMN:	

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☐ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND			☐ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

SITE	COVER
☐ OPEN WATER	☐ OPEN
☐ SHALLOW WATER	☐ SHRUB
☐ SURFICIAL DEP.	☐ TREED
☐ BEDROCK	

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (up to 4 sp) (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

HT CODES: 1 = >25 m 2 = 10<HT 25 m 3 = 2<HT 10 m 4 = 1<HT 2 m 5 = 0.5<HT 1 m 6 = 0.2<HT 0.5 m 7 = HT<0.2 m

CVR CODES 0= NONE 1= 0% < CVR 10% 2= 10 < CVR 25% 3= 25 < CVR 60% 4= CVR > 60%

STAND COMPOSITION:	BA:

SIZE CLASS ANALYSIS:		< 10		10 - 24		25 - 50		> 50
STANDING SNAGS:		< 10		10 - 24		25 - 50		> 50
DEADFALL / LOGS:		< 10		10 - 24		25 - 50		> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES / GLEY	g =	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

		ELC CODE
COMMUNITY CLASS:	CULTURAL	CU
COMMUNITY SERIES:	THICKET	CUT
ECOSITE:	MINERAL	CUTI
VEGETATION TYPE:		
INCLUSION		
COMPLEX		

Notes:

ELC
MANAGEMENT / DISTURBANCE

SITE:
POLYGON:
DATE:
SURVEYOR(S):

DISTURBANCE EXTENT	0	1	2	3	SCORE †
TIME SINCE LOGGING	> 30 YRS	15 - 30 YRS	5 - 15 YRS	0 - 5 YEARS	
INTENSITY OF LOGGING	NONE	FUEL WOOD	SELECTIVE	DIAMETER LIMIT	
EXTENT OF LOGGING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
SUGAR BUSH OPERATIONS	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF OPERATIONS	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
GAPS IN FOREST CANOPY	NONE	SMALL	INTERMEDIATE	LARGE	
EXTENT OF GAPS	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
LIVESTOCK (GRAZING)	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF LIVESTOCK	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
ALIEN SPECIES	NONE	OCCASIONAL	ABUNDANT	DOMINANT	
EXTENT OF ALIEN SPECIES	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
PLANTING (PLANTATION)	NONE	OCCASIONAL	ABUNDANT	DOMINANT	
EXTENT OF PLANTING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
TRACKS AND TRAILS	NONE	FAINT TRAILS	WELL MARKED	TRACKS OR	
EXTENT OF TRACKS/TRAILS	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
DUMPING (RUBBISH)	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF DUMPING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
EARTH DISPLACEMENT	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF DISPLACEMENT	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
RECREATIONAL USE	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF RECR. USE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
NOISE	NONE	SLIGHT	MODERATE	INTENSE	
EXTENT OF NOISE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
DISEASE/DEATH OF TREES	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF DISEASE / DEATH	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
WIND THROW (BLOW DOWN)	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF WIND THROW	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
BROWSE (e.g. DEER)	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF BROWSE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
BEAVER ACTIVITY	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF BEAVER	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
FLOODING (pools & puddling)	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF FLOODING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
FIRE	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF FIRE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
ICE DAMAGE	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF ICE DAMAGE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
OTHER	NONE	LIGHT	MODERATE	HEAVY	
EXTENT	NONE	LOCAL	WIDESPREAD	EXTENSIVE	

† INTENSITY x EXTENT = SCORE

ELC
PLANT SPECIES LIST

SITE: 48957-100
POLYGON: 1
DATE:
SURVEYOR(S):

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER

ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER 1	2	3	4	COL.
JUGLnig					
SALIbab					
ACERsac					
POPUdel					
ROBIpse					
RUBUida					
CORNrac					
RHAMcat					
SLASumb					
CORNser					
SLASumb					
CORNalt					
RUBUstp					

SPECIES CODE	LAYER 1	2	3	4	COL.
VERBtha					
ASCLsyr					
LEUCvul					
GLEChed					
POA_pra					
NEPAcat					
DAUCcar					
SOLIcan					
DACTglo					

ELC
PLANT SPECIES LIST

SITE:
POLYGON:
DATE:
SURVEYOR(S):

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER

ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER 1	2	3	4	COL.

SPECIES CODE	LAYER 1	2	3	4	COL.

ELC WILDLIFE	SITE: 48957-100	
	POLYGON: 1	
	DATE:	
	SURVEYOR(S):	
	START TIME:	END TIME:

TEMP (°C):	CLOUD (10th):	WIND:	PRECIPITATION:
CONDITIONS:			

POTENTIAL WILDLIFE HABITAT:

	VERNAL POOLS		SNAGS
	HIBERNACULA		FALLEN LOGS

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#
	BCCH	SM	1						
	SOSP	F	11						
	KILL	P	1 IN FIELD						
	BACR	P	ALONG LANE						
	AMRO	P	IIII						
	WAVI	SM	1						
	GCFL	SH	1						
	YEWA	~~P~~ SH	11						
	BHCO	SH	11						
	RWBL	P	HH						
	AMRE	SM	1						
	NOCA	SH	11						
	NOWR	SM	1						
						VIWT	SC		

FAUNAL TYPE CODES (TY):

B = BIRD M = MAMMAL H = HERPETOFAUNA L = LEPIDOPTERA F = FISH O = OTHER

EVIDENCE CODES (EV):

BREEDING BIRD - POSSIBLE:

SH = SUITABLE HABITAT SM = SINGING MALE

BREEDING BIRD - PROBABLE:

T = TERRITORY D = DISPLAY P = PAIR

A = ANXIETY BEHAVIOUR N = NEST BUILDING V = VISITING NEST

BREEDING BIRD - CONFIRMED:

DD = DISTRACTION NU = USED NEST FY = FLEDGED YOUNG

NE = EGGS NY = YOUNG FS = FOOD/FAECAL SACK

AE = NEST ENTRY

OTHER WILDLIFE EVIDENCE:

OB = OBSERVED VO = VOCALIZATION CA = CARCASS

DP = DISTINCTIVE PARTS HO = HOUSE/DEN FY = EGGS OR YOUNG

TK = TRACKS FE = FEEDING EVIDENCE SC = SCAT

SI = OTHER SIGNS (specify)

ELC WILDLIFE	SITE:	
	POLYGON:	
	DATE:	
	SURVEYOR(S):	
	START TIME:	END TIME:

TEMP (°C):	CLOUD (10th):	WIND:	PRECIPITATION:
CONDITIONS:			

POTENTIAL WILDLIFE HABITAT:

	VERNAL POOLS		SNAGS
	HIBERNACULA		FALLEN LOGS

SPECIES LIST:

TY	SP. CODE	EV	NOTES	#	TY	SP. CODE	EV	NOTES	#

FAUNAL TYPE CODES (TY):

B = BIRD M = MAMMAL H = HERPETOFAUNA L = LEPIDOPTERA F = FISH O = OTHER

EVIDENCE CODES (EV):

BREEDING BIRD - POSSIBLE:

SH = SUITABLE HABITAT SM = SINGING MALE

BREEDING BIRD - PROBABLE:

T = TERRITORY D = DISPLAY P = PAIR

A = ANXIETY BEHAVIOUR N = NEST BUILDING V = VISITING NEST

BREEDING BIRD - CONFIRMED:

DD = DISTRACTION NU = USED NEST FY = FLEDGED YOUNG

NE = EGGS NY = YOUNG FS = FOOD/FAECAL SACK

AE = NEST ENTRY

OTHER WILDLIFE EVIDENCE:

OB = OBSERVED VO = VOCALIZATION CA = CARCASS

DP = DISTINCTIVE PARTS HO = HOUSE/DEN FY = EGGS OR YOUNG

TK = TRACKS FE = FEEDING EVIDENCE SC = SCAT

SI = OTHER SIGNS (specify)

GENERAL SITE INFORMATION FIELD SHEET

Project: 48957-100
Date: August 17, 2021 Project Manager: DH
Collector(s): ER Visit #:
Time started: 1:15 Time finished: 2:30 Combined collectors' hours:
☐ NHIC List ☐ MNR EO's ☐ none ☐ not provided to collector

WEATHER CONDITIONS				
Temp.	Wind:	5km/hr	Cloud Cover (%)	Precipitation
25°C	Direction:	NW	60	Today: None Yesterday: None

WIND SCALE	
(0)	Calm
1	Smoke Drifts
2	Wind Felt on Face
3	Leaves in constant motion
4	Wind raises dust and paper
5	Small trees sway
6	Large branches sway
7	Lots of resistance when walking into
8	Limbs breaking off trees

DATA FOCUS

☐	Birds 1__ 2__ Mig__	☐	ELC's	☐	Dripline/Tree Survey
☐	Mammals	☑	Floral V__ S✓_ A_	☐	Aquatic - Physical
☐	Amphibians 1_ 2_ 3_	☐	Wetland	☐	Aquatic - Biological
☐	Reptiles	☐	Butternut (BHA)	☐	Faunal Habitat
☐	Inverterbrates	☐	other SAR	☐	Other - see notes

FEATURES (with GPS co-ordinates where applicable)	Mapped	Follow-up Req'd		
	UTM	Yes	No	Who
Man-made Structures: ☐ None observed				
Yes No				
☐ ☐ Barns/Footings/Wells/other(list)				
☐ ☐ Rock Piles				
☐ ☐ Garbage				
Natural Vegetation: ☐ None observed				
☐ ☐ Fallen Logs outside woods (#'s)				
☐ ☐ Brush Piles				
☐ ☐ Snags (raptor perch)				
☐ ☐ Tree Cavities (nesting)				
☐ ☐ Sentinel Trees				
☐ ☐ Butternut Identified				
☐ ☐ Mast Trees (6E) ☐ Berry Shrubs (6E)				
Wildlife Features: ☐ None observed				
☐ ☐ Waterfowl nesting (large #'s, # of species)				
☐ ☐ Exposed Banks (nesting swallows)				
☐ ☐ Stick Nests				
☐ ☐ Animal Burrows (>10cm)				
☐ ☐ Heronry				
☐ ☐ Crayfish mounds				
☐ ☐ Sand/gravel on site				
☐ ☐ Marsh/open country/shrub				
☐ ☐ Winter Deer yards				
☐ ☐ Corridor from pond to woods (ampibian movement)				
☐ ☐ Bat corridor (shorelines, escarpments)				
☐ ☐ Bat hibernacula (caves, mines, crevices, etc.)				
Aquatic Features:				
☐ ☐ Perm. pond in woodland ☐ emergents/submergents/logs ☐ temp.				
☐ ☐ Perm. pond in open ☐ emergents/submergents/logs ☐ temp.				
☐ ☐ Water in woodland ☐ pools ☐ flowing ☐ dry				
☐ ☐ Waterways flowing dry pools				
☐ natural stream ☐ ☐ ☐				
☐ swale ☐ ☐ ☐ ☐ None observed				
☐ open drain ☐ ☐ ☐				
☐ Seeps/Springs ☐ ☐ ☐				

Incidental Observations/Notes:

- Saw deer
- Saw monarch
- Summer plants

Graphic ☐ Attached or Name: E:\ENV\Biological Services\Templates\MTE NEnv_General Field Sheet Checked by Project Manager ☐ Date:

GENERAL SITE INFORMATION FIELD SHEET

Project: Glover - Port Stanley
Date: Aug 17, 2015 Project Manager: DM
Collector(s): WH Visit #: 2
Time started: 8:15 Time finished: 8:45 Combined collectors' hours: 0.5
☐ NHIC List ☐ MNR EO's ☐ none ☒ not provided to collector

WEATHER CONDITIONS					WIND SCALE	
Temp. 23°	Wind: 11	Cloud Cover (%) 5	Precipitation		0	Calm
	Direction: W		Today: no		1	Smoke Drifts
			Yesterday: no		2	Wind Felt on Face
DATA FOCUS					3	Leaves in constant motion
☐ Birds 1__ 2__	☐ ELC's	☐ Dripline			4	Wind raises dust and paper
☐ Mammals	☒ Floral V__ S_ XA_	☐ Aquatic - Physical			5	Small trees sway
☐ Amphibians 1_ 2_ 3_	☐ Wetland	☐ Aquatic - Biological			6	Large branches sway
☐ Reptiles	☐ Butternut	☐ Faunal Habitat			7	Lots of resistance when walking into
☐ Inverterbrates	☐ other SAR				8	Limbs breaking off trees

FEATURES (with GPS co-ordinates where applicable)	Mapped	Follow-up Req'd		
		Yes	No	Who
Man-made Structures: ☐ None observed				
☐ Barns/Footings/Wells/other(list)				
☐ Rock Piles				
☐ Garbage				
Natural Vegetation: ☐ None observed				
☐ Fallen Logs outside woods (#'s)				
☐ Brush Piles				
☐ Snags (raptor perch)				
☐ Tree Cavities (nesting)				
☐ Sentinel Trees				
☐ Mast Trees (6E) ☐ Berry Shrubs (6E)				
Wildlife Features: ☐ None observed				
☐ Waterfowl nesting (large #'s, # of species)				
☐ Exposed Banks (nesting swallows)				
☐ Stick Nests				
☐ Animal Burrows (>10cm)				
☐ Heronry				
☐ Crayfish mounds				
☐ Sand/gravel on site				
☐ Marsh/open country/shrub				
☐ Winter Deer yards				
☐ Corridor from pond to woods (ampibian movement)				
☐ Bat corridor (shorelines, escarpments)				
☐ Bat hibernacula (caves, mines, crevices, etc.)				
Aquatic Features:				
☐ Perm. pond in woodland ☐ emergents/submergents/logs ☐ temp.				
☐ Perm. pond in open ☐ emergents/submergents/logs ☐ temp.				
☐ Water in woodland ☐ pools ☐ flowing ☐ dry				
☐ Waterways flowing dry pools				
☐ natural stream ☐ ☐ ☐				
☐ swale ☐ ☐ ☐ ☐ None observed				
☐ open drain ☐ ☐ ☐				
☐ Seeps/Springs ☐ ☐ ☐				
Incidental Observations:				

Graphic ☐ Attached or Name Checked by Project Manager ☐ Date: _____

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: Glover - Port Stanley		POLYGON: 1
	SURVEYOR(S): D. Morse	DATE: May 23/14	TIME: start 12:30 finish 4:00
	UTMZ:	UTME:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL ☐ WETLAND ☐ AQUATIC	☐ ORGANIC ☒ MINERAL SOIL ☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK. ☐ CARB. BEDRK.	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☒ VALLEY SLOPE ☐ TABLELAND ☐ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☒ NATURAL ☐ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD. ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☐ DECIDUOUS ☐ CONIFEROUS ☒ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☒ FOREST ☐ PLANTATION
SITE			**COVER**		
☐ OPEN WATER ☐ SHALLOW WATER ☐ SURFICIAL DEP. ☐ BEDROCK			☐ OPEN ☐ SHRUB ☒ TREED		

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (up to 4 sp) (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	sug. maple >> trem. aspen = beech > elm > ash
2	SUB-CANOPY	3	3	sug. maple >> buckthorn = hawthorn > beech > elm
3	UNDERSTOREY	3	4	buckthorn ≥ hawthorn > m.f.r. > dogwood > sumac
4	GRD. LAYER	6	3	horsetail ≥ garlic mustard > s.c. = mayapple

- pics

HT CODES: 1 = >25 m 2 = 10<HT≤25 m 3 = 2<HT≤10 m 4 = 1<HT≤2 m 5 = 0.5<HT≤1 m 6 = 0.2<HT≤0.5 m 7 = HT<0.2 m

CVR CODES 0= NONE 1= 0% < CVR ≤ 10% 2= 10 < CVR ≤ 25% 3= 25 < CVR ≤ 60% 4= CVR > 60%

STAND COMPOSITION:	BA:

SIZE CLASS ANALYSIS:	a	< 10	a	10 - 24	o	25 - 50	r-n	> 50
STANDING SNAGS:	o	< 10	o	10 - 24	n	25 - 50	n	> 50
DEADFALL / LOGS:	o	< 10	o	10 - 24	r	25 - 50	n	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES / GLEY	g =	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

		ELC CODE
COMMUNITY CLASS:	Forest	FO
COMMUNITY SERIES:	Deciduous Forest	FOD
ECOSITE:	Dry - Fresh Sugar Maple Deciduous Forest	FOD-5
VEGETATION TYPE:	Dry-Fresh Sugar Maple - Beech Deciduous Forest	FOD5-2
☐ INCLUSION (a)	Mineral Cultural Thicket	CUT1 (1a)
☐ ~~COMPLEX~~ (b)	Mineral Cultural Woodland	CUW1 (1b)

Notes:

ELC
PLANT SPECIES LIST

SITE: Glen - Port Stanley
POLYGON: 1
DATE: May 23, 2024
SURVEYOR(S): D. Morse

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER

ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER 1	2	3	4	COL.
Ash	·	·	·	·	
black walnut					
crabapple		·			
sugar maple	·	·			
cottonwood					
aspen trembling					
am. beech					
hemlock					
elm					
dogwood					
sumac			·		
red osier dogwood			·		
multi flora rose			·		
buckthorn		·	d		
hawthorn			d		
s.t h.					
horsetail					
garlic mustard				·	
skunk cabbage					
mayapple					
dandelion					
grasses					
nettle					
Pens. fern					

SPECIES CODE	LAYER 1	2	3	4	COL.
inclusion 1b					
red oak					
white cedar					
willow					
spruce					
black locust					
birch					
cattail					
ragweed					
inclusion 1a					
Ash sp.					
Sumac					
buckthorn					
Hawthorn					
Dogwood sp.					
Multi-flora rose					
Honeysuckle					
Horsetail					
Coffee rod sp.					
Mayapple					
Garlic Mustard					

ELC

MANAGEMENT / DISTURBANCE

SITE: Clover - Port Stanley

POLYGON: 1

DATE: May 23, 2014

SURVEYOR(S): D. Morse

DISTURBANCE / EXTENT	0	1	2	3	SCORE †
TIME SINCE LOGGING	>30 YRS	15 - 30 YRS	5 - 15 YRS	0 - 5 YEARS	0
INTENSITY OF LOGGING	NONE	FUEL WOOD	SELECTIVE	DIAMETER LIMIT	0
EXTENT OF LOGGING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
SUGAR BUSH OPERATIONS	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF OPERATIONS	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
GAPS IN FOREST CANOPY	NONE	SMALL	INTERMEDIATE	LARGE	1
EXTENT OF GAPS	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
LIVESTOCK (GRAZING)	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF LIVESTOCK	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
ALIEN SPECIES	NONE	OCCASIONAL	ABUNDANT	DOMINANT	4
EXTENT OF ALIEN SPECIES	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
PLANTING (PLANTATION)	NONE	OCCASIONAL	ABUNDANT	DOMINANT	0
EXTENT OF PLANTING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
TRACKS AND TRAILS	NONE	FAINT TRAILS	WELL MARKED	TRACKS OR	1
EXTENT OF TRACKS/TRAILS	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
DUMPING (RUBBISH)	NONE	LIGHT	MODERATE	HEAVY	1
EXTENT OF DUMPING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
EARTH DISPLACEMENT	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF DISPLACEMENT	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
RECREATIONAL USE	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF RECR. USE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
NOISE	NONE	SLIGHT	MODERATE	INTENSE	1
EXTENT OF NOISE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
DISEASE/DEATH OF TREES	NONE	LIGHT	MODERATE	HEAVY	1
EXTENT OF DISEASE / DEATH	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
WIND THROW (BLOW DOWN)	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF WIND THROW	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
BROWSE (e.g. DEER)	NONE	LIGHT	MODERATE	HEAVY	1
EXTENT OF BROWSE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
BEAVER ACTIVITY	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF BEAVER	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
FLOODING (pools & puddling)	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF FLOODING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
FIRE	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF FIRE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
ICE DAMAGE	NONE	LIGHT	MODERATE	HEAVY	0
EXTENT OF ICE DAMAGE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
OTHER	NONE	LIGHT	MODERATE	HEAVY	
EXTENT	NONE	LOCAL	WIDESPREAD	EXTENSIVE	

† INTENSITY x EXTENT = SCORE

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: Glover Pt Stanley		POLYGON: 1a	
	SURVEYOR(S): D. Morse	DATE: May 23, 2019	TIME: start	12:30
			finish	4:30
	UTMZ:	UTME:	UTMN:	

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
[X] TERRESTRIAL	[ ] ORGANIC	[ ] LACUSTRINE	[ ] NATURAL	[ ] PLANKTON	[ ] LAKE
[ ] WETLAND	[X] MINERAL SOIL	[ ] RIVERINE	[X] CULTURAL	[ ] SUBMERGED	[ ] POND
[ ] AQUATIC	[ ] PARENT MIN.	[ ] BOTTOMLAND		[ ] FLOATING-LVD.	[ ] RIVER
	[ ] ACIDIC BEDRK.	[ ] TERRACE		[ ] GRAMINOID	[ ] STREAM
	[ ] BASIC BEDRK.	[X] VALLEY SLOPE		[ ] FORB	[ ] MARSH
	[ ] CARB. BEDRK.	[ ] TABLELAND		[ ] LICHEN	[ ] SWAMP
SITE		[ ] ROLL. UPLAND	**COVER**	[ ] BRYOPHYTE	[ ] FEN
[ ] OPEN WATER		[ ] CLIFF	[ ] OPEN	[X] DECIDUOUS	[ ] BOG
[ ] SHALLOW WATER		[ ] TALUS	[X] SHRUB	[ ] CONIFEROUS	[ ] BARREN
[X] SURFICIAL DEP.		[ ] CREVICE / CAVE	[ ] TREED	[ ] MIXED	[ ] MEADOW
[ ] BEDROCK		[ ] ALVAR			[ ] PRAIRIE
		[ ] ROCKLAND			[X] THICKET
		[ ] BEACH / BAR			[ ] SAVANNAH
		[ ] SAND DUNE			[ ] WOODLAND
		[ ] BLUFF			[ ] FOREST
					[ ] PLANTATION

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (up to 4 sp) (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	2	Ash >> Black Walnut
2	SUB-CANOPY	3	4	Buckthorn = Hawthorn > Sumac > Dogwood
3	UNDERSTOREY	3	4	Buckthorn = Hawthorn > Multi Flora Rose > Honeysuckle
4	GRD. LAYER	7	3	Horsetail = Golden Rod > Garlic Mustard > Mayapple

HT CODES: 1 = >25 m 2 = 10<HT≤25 m 3 = 2<HT≤10 m 4 = 1<HT≤2 m 5 = 0.5<HT≤1 m 6 = 0.2<HT≤0.5 m 7 = HT<0.2 m

CVR CODES 0= NONE 1= 0% < CVR ≤ 10% 2= 10 < CVR ≤ 25% 3= 25 < CVR ≤ 60% 4= CVR > 60%

STAND COMPOSITION:	BA:

SIZE CLASS ANALYSIS:	a	< 10	b	10 - 24	c	25 - 50	n	> 50

STANDING SNAGS:	n	< 10	n	10 - 24	n	25 - 50	n	> 50
DEADFALL / LOGS:	r	< 10	n	10 - 24	n	25 - 50	n	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER	X	YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES / GLEY	g =	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

		ELC CODE
COMMUNITY CLASS:	Cultural	CU
COMMUNITY SERIES:	Cultural Thicket	CUT
ECOSITE:		
VEGETATION TYPE:		
INCLUSION	Mineral Cultural Thicket Ecosite	CUT1
COMPLEX		

Notes:

ELC PLANT SPECIES LIST

SITE: Clover - Port Stanley

POLYGON: 1a

DATE: May 23, 2014

SURVEYOR(S): D. Morse

LAYERS: 1 = CANOPY 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER

ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	COL.
Ash	•				
Sumac		•			
Buckthorn		•			
Hawthorn		•			
Dogwood		•			
Multi-flora Rose			•		
Honeysuckle			•		
Horsetail				•	
Golden Rods				•	
Mayapple				•	
Garlic Mustard				•	

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	COL.

GENERAL SITE INFORMATION FIELD SHEET

Project: Glover Port Stanley
Date: July 29, 2014 Project Manager: DM
Collector(s): WH Visit #: 1
Time started: 12:15 Time finished: 3:00 Combined collectors' hours: 8.75
☐ NHIC List ☐ MNR EO's ☐ none ☐ not provided to collector

WEATHER CONDITIONS

Temp.	Wind:	0	Cloud Cover (%)	Precipitation
22	Direction:	N	65	Today: no
				Yesterday: no

WIND SCALE

0	Calm
1	Smoke Drifts
2	Wind Felt on Face
3	Leaves in constant motion
4	Wind raises dust and paper
5	Small trees sway
6	Large branches sway
7	Lots of resistance when walking into
8	Limbs breaking off trees

DATA FOCUS

☐	Birds 1__ 2__	☒	ELC's	☐	Dripline
☐	Mammals	☐	Floral V__ S__ A_	☐	Aquatic - Physical
☐	Amphibians 1_ 2_ 3_	☐	Wetland	☐	Aquatic - Biological
☐	Reptiles	☒	Butternut	☐	Faunal Habitat
☐	Inverterbrates	☐	other SAR		

FEATURES (with GPS co-ordinates where applicable)	Mapped	Follow-up Req'd		
		Yes	No	Who
Man-made Structures: ☐ None observed				
☒ Barns/Footings/Wells/other(list)	yes		X	
☐ Rock Piles				
☐ Garbage				
Natural Vegetation: ☐ None observed				
☐ Fallen Logs outside woods (#'s)				
☐ Brush Piles				
☐ Snags (raptor perch)				
☐ Tree Cavities (nesting)				
☐ Sentinel Trees				
☐ Mast Trees (6E) ☐ Berry Shrubs (6E)				
Wildlife Features: ☐ None observed				
☐ Waterfowl nesting (large #'s, # of species)				
☐ Exposed Banks (nesting swallows)				
☐ Stick Nests				
☐ Animal Burrows (>10cm)				
☐ Heronry				
☐ Crayfish mounds				
☐ Sand/gravel on site				
☐ Marsh/open country/shrub				
☐ Winter Deer yards				
☐ Corridor from pond to woods (ampibian movement)				
☐ Bat corridor (shorelines, escarpments)				
☐ Bat hibernacula (caves, mines, crevices, etc.)				
Aquatic Features:				
☐ Perm. pond in woodland ☐ emergents/submergents/logs ☐ temp.				
☐ Perm. pond in open ☐ emergents/submergents/logs ☐ temp.				
☐ Water in woodland ☐ pools ☐ flowing ☐ dry				
☐ Waterways flowing dry pools				
☐ natural stream ☐ ☐ ☐				
☐ swale ☐ ☐ ☐ ☐ None observed				
☐ open drain ☐ ☐ ☐				
☐ Seeps/Springs ☐ ☐ ☐				
Incidental Observations:				

Graphic ☐ Attached or Name Checked by Project Manager ☐ Date:

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: GLOVER - PORT STANLEY		POLYGON: 2	
SURVEYOR(S): WH	DATE: July 29 2014	TIME: start	2:15
		finish	3:00
UTMZ: 17	UTME: 481311	UTMN: 4724848	

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☒ NATURAL	☐ PLANKTON	☐ LAKE
☒ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☒ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☒ SWAMP
SITE		☐ ROLL. UPLAND	COVER	☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
☐ OPEN WATER		☐ TALUS	☐ OPEN	☐ CONIFEROUS	☐ BARREN
☒ SHALLOW WATER		☐ CREVICE / CAVE	☒ SHRUB	☐ MIXED	☐ MEADOW
☐ SURFICIAL DEP.		☐ ALVAR	☐ TREED		☐ PRAIRIE
☐ BEDROCK		☐ ROCKLAND			☒ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (up to 4 sp) (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	3	FRAamer > SALalba
2	SUB-CANOPY	—	—	
3	UNDERSTOREY	3	3	RHAcath > CRN pluv > ROSmult > SAM cana
4	GRD. LAYER	5	4	SYM foet > CAR spp > EUP macu > EUP perf

HT CODES: 1 = >25 m 2 = 10<HT≤25 m 3 = 2<HT≤10 m 4 = 1<HT≤2 m 5 = 0.5<HT≤1 m 6 = 0.2<HT≤0.5 m 7 = HT<0.2 m

CVR CODES 0= NONE 1= 0% < CVR ≤ 10% 2= 10 < CVR ≤ 25% 3= 25 < CVR ≤ 60% 4= CVR > 60%

STAND COMPOSITION:	BA:

SIZE CLASS ANALYSIS:	A	< 10	O	10 - 24	O	25 - 50	N	> 50
STANDING SNAGS:	O	< 10	O	10 - 24	A	25 - 50	R	> 50
DEADFALL / LOGS:	A	< 10	O	10 - 24	O	25 - 50	R	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :		PIONEER	X	YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS:

TEXTURE: FS	DEPTH TO MOTTLES / GLEY	g = O	G= O	
MOISTURE: 6	DEPTH OF ORGANICS:	16		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:	999		(cm)

COMMUNITY CLASSIFICATION:

		ELC CODE
COMMUNITY CLASS:	SWAMP	SW
COMMUNITY SERIES:	THICKET SWAMP	SWT
ECOSITE:	MINERAL THICKET SWAMP	SWT2
VEGETATION TYPE:		
INCLUSION		
COMPLEX		

Notes:

ELC — STAND CHARACTERISTICS

SITE:	
POLYGON:	
DATE:	
SURVEYOR(S):	

TREE TALLY BY SPECIES:

PRISM FACTOR ☐

SPECIES	TALLY 1	TALLY 2	TALLY 3	TALLY 4	TALLY 5	TOTAL	REL. AVG
TOTAL							100
BASAL AREA (BA)							
DEAD							

STAND COMPOSITION:

COMMUNITY PROFILE DIAGRAM

Notes:

EL

SOILS ONTARIO

SITE: CLOVER-PORT STANLEY
POLYGON: 2
DATE: JULY 29, 2014
SURVEYOR(S): WN

	P/A	PP	Dr	Position	Aspect	Slope %	Type	Class	Z	UTM EASTING	UTM NORTHING
1	A	2	6	4	264	4			17	481311	4724848
2											
3											
4											
5											

SOIL	1	2	3	4	5
TEXTURE x HORIZON	Om 16 / O / A				
A TEXTURE	FS				
COURSE FRAGMENTS	999				
B TEXTURE	999				
COURSE FRAGMENTS	999				
C TEXTURE	999				
COURSE FRAGMENTS	999				
EFFECTIVE TEXTURE	FS				
SURFACE STONINESS	999				
SURFACE ROCKINESS	999				
DEPTH TO / OF					
MOTTLES	0				
GLEY	0				
BEDROCK	999				
WATER TABLE	0				
CARBONATES	999				
DEPTH OF ORGANICS	16				
PORE SIZE DISC #1	999				
PORE SIZE DISC #2	999				
MOISTURE REGIME	6				
SOIL SURVEY MAP					
LEGEND CLASS					

ELC
PLANT SPECIES LIST

SITE:
POLYGON:
DATE:
SURVEYOR(S):

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

SPECIES CODE	LAYER 1	2	3	4	COL.

SPECIES CODE	LAYER 1	2	3	4	COL.

ELC
COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: Glover | POLYGON: X
SURVEYOR(S): WA | DATE: July 19, 2014 | TIME: start 12:15, finish 1:15
UTMZ: 17 | UTME: 481420 | UTMN: 4724335

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☒ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
SITE	☐ BASIC BEDRK.	☒ VALLEY SLOPE	COVER	☐ FORB	☐ MARSH
☐ OPEN WATER	☐ CARB. BEDRK.	☐ TABLELAND	☐ OPEN	☐ LICHEN	☐ SWAMP
☐ SHALLOW WATER		☐ ROLL. UPLAND	☐ SHRUB	☐ BRYOPHYTE	☐ FEN
☒ SURFICIAL DEP.		☐ CLIFF	☒ TREED	☐ DECIDUOUS	☐ BOG
☐ BEDROCK		☐ TALUS		☒ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND			☐ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☒ PLANTATION

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (up to 4 sp) (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	PINstro >> PRUsero > POPalba
2	SUB-CANOPY	—	—	
3	UNDERSTOREY	3	3	PRUsero > CORalt = SAMcana
4	GRD. LAYER	1	2	ALL petio >> CIRlute > ONOsens

HT CODES: 1 = >25 m 2 = 10<HT≤25 m 3 = 2<HT≤10 m 4 = 1<HT≤2 m 5 = 0.5<HT≤1 m 6 = 0.2<HT≤0.5 m 7 = HT<0.2 m

CVR CODES 0= NONE 1= 0% < CVR ≤ 10% 2= 10 < CVR ≤ 25% 3= 25 < CVR ≤ 60% 4= CVR > 60%

STAND COMPOSITION: PINstro 89 PRUsero 11 | BA: 18

	< 10	10 - 24	25 - 50	> 50
SIZE CLASS ANALYSIS:	R	A	A	R
STANDING SNAGS:	R	O	R	R
DEADFALL / LOGS:	R	R	R	R

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE :	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH
			X		

SOIL ANALYSIS:

TEXTURE: CAS	DEPTH TO MOTTLES / GLEY	g = 70	G= 0
MOISTURE: 3	DEPTH OF ORGANICS: 4		(cm)
HOMOGENEOUS / ~~VARIABLE~~	DEPTH TO BEDROCK: 999		(cm)

COMMUNITY CLASSIFICATION:

		ELC CODE
COMMUNITY CLASS:	CULTURAL	CU
COMMUNITY SERIES:	CULTURAL PLANTATION	CUP
ECOSITE:	CONIFEROUS PLANTATION	CUP3
VEGETATION TYPE:	WHITE PINE CONIFEROUS PLANTATION	CUP3-2
INCLUSION		
COMPLEX		

Notes:

ELC
STAND CHARACTERISTICS

SITE: Glover - Port Stanley
POLYGON: X
DATE: July 29, 2014
SURVEYOR(S): WN

TREE TALLY BY SPECIES:

PRISM FACTOR 2m

SPECIES	TALLY 1	TALLY 2	TALLY 3	TALLY 4	TALLY 5	TOTAL	REL. AVG
PINstro	8					8	89
PRUsero	1					1	11
TOTAL	9					9	100
BASAL AREA (BA)	18					18	18
DEAD	1					1	1

STAND COMPOSITION: PINstro 89 PRUsero 11

COMMUNITY PROFILE DIAGRAM

Notes:

ELC
SOILS ONTARIO

SITE: GLOVER - PORT STANLEY
POLYGON: 3X
DATE: July 29, 2014
SURVEYOR(S): WH

	P/A	PP	Dr	Position	Aspect	Slope %	Slope Type	Slope Class	UTM Z	UTM EASTING	UTM NORTHING
1	A	2		3	340	15			17	481420	4724335
2											
3											
4											
5											

SOIL	1	2	3	4	5
TEXTURE x HORIZON	Lfs A				
A TEXTURE	Lfs				
COURSE FRAGMENTS	999				
B TEXTURE	999				
COURSE FRAGMENTS	999				
C TEXTURE	999				
COURSE FRAGMENTS	999				
EFFECTIVE TEXTURE	Lfs				
SURFACE STONINESS	999				
SURFACE ROCKINESS	999				
DEPTH TO / OF					
MOTTLES	70				
GLEY	999				
BEDROCK	999				
WATER TABLE	999				
CARBONATES	999				
DEPTH OF ORGANICS	4				
PORE SIZE DISC #1	999				
PORE SIZE DISC #2	999				
MOISTURE REGIME	3				
SOIL SURVEY MAP					
LEGEND CLASS					

ELC
PLANT SPECIES LIST

SITE:
POLYGON:
DATE:
SURVEYOR(S):

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

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	COL.	SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	COL.

GENERAL SITE INFORMATION FIELD SHEET

Project: 48957-100
Date: June 22, 2021 Project Manager:
Collector(s): WH Visit #:
Time started: 8:00 Time finished: 8:30 Combined collectors' hours: 0.5
☐ NHIC List ☐ MNR EO's ☐ none ☐ not provided to collector

WEATHER CONDITIONS				
Temp.	Wind:	1	Cloud Cover (%)	Precipitation
13	Direction:	N	90	Today: 0 Yesterday: yes

WIND SCALE	
0	Calm
1	Smoke Drifts
2	Wind Felt on Face
3	Leaves in constant motion
4	Wind raises dust and paper
5	Small trees sway
6	Large branches sway
7	Lots of resistance when walking into
8	Limbs breaking off trees

DATA FOCUS

☒	Birds 1__ 2☒ Mig__	☐	ELC's	☐	Dripline/Tree Survey
☐	Mammals	☒	Floral V_Y S__ A_	☐	Aquatic - Physical
☐	Amphibians 1_ 2_ 3_	☐	Wetland	☐	Aquatic - Biological
☐	Reptiles	☐	Butternut (BHA)	☐	Faunal Habitat
☐	Inverterbrates	☐	other SAR	☐	Other - see notes

FEATURES (with GPS co-ordinates where applicable)	Mapped	Follow-up Req'd		
	UTM	Yes	No	Who
Man-made Structures: ☐ None observed				
Yes No				
☐ ☒ Barns/Footings/Wells/other(list)				
☐ ☒ Rock Piles				
☐ ☒ Garbage				
Natural Vegetation: ☐ None observed				
☐ ☒ Fallen Logs outside woods (#'s)				
☐ ☒ Brush Piles				
☒ ☐ Snags (raptor perch) 0 2 AD ASN IN PRESERVED LANDS				
☐ ☒ Tree Cavities (nesting)				
☐ ☒ Sentinel Trees				
☐ ☒ Butternut Identified				
☐ ☒ Mast Trees (6E) ☐ Berry Shrubs (6E)				
Wildlife Features: ☐ None observed				
☐ ☒ Waterfowl nesting (large #'s, # of species)				
☐ ☒ Exposed Banks (nesting swallows)				
☐ ☒ Stick Nests				
☐ ☒ Animal Burrows (>10cm)				
☐ ☒ Heronry				
☐ ☒ Crayfish mounds				
☐ ☒ Sand/gravel on site				
☐ ☒ Marsh/open country/shrub				
☐ ☒ Winter Deer yards				
☒ ☒ Corridor from pond to woods (ampibian movement)				
☐ ☒ Bat corridor (shorelines, escarpments)				
☐ ☒ Bat hibernacula (caves, mines, crevices, etc.)				
Aquatic Features:				
☐ ☒ Perm. pond in woodland ☐ emergents/submergents/logs ☐ temp.				
☐ ☒ Perm. pond in open ☐ emergents/submergents/logs ☐ temp.				
☐ ☒ Water in woodland ☐ pools ☐ flowing ☐ dry				
☐ ☒ Waterways flowing dry pools				
☐ natural stream ☐ ☐ ☐				
☐ swale ☐ ☐ ☐ ☐ None observed				
☐ open drain ☐ ☐ ☐				
☐ Seeps/Springs ☐ ☐ ☐				
Incidental Observations/Notes:				

Graphic ☐ Attached or Name: L:\ENV\Biological Services\Templates\MTE NEnv_General Field Sheet Checked by Project Manager ☐ Date:

GENERAL SITE INFORMATION FIELD SHEET

Project: 48957-100
Date: Oct. 1, 2021 Project Manager:
Collector(s): WH Visit #:
Time started: 9:00 Time finished: 9:30 Combined collectors' hours: 0.5
☐ NHIC List ☐ MNR EO's ☐ none ☐ not provided to collector

WEATHER CONDITIONS				
Temp.	Wind:	0	Cloud Cover (%)	Precipitation
11	Direction:	–	3	Today: 0 Yesterday: 0

WIND SCALE	
0	Calm
1	Smoke Drifts
2	Wind Felt on Face
3	Leaves in constant motion
4	Wind raises dust and paper
5	Small trees sway
6	Large branches sway
7	Lots of resistance when walking into
8	Limbs breaking off trees

DATA FOCUS

☐	Birds 1__ 2__ Mig__	☐	ELC's	☐	Dripline/Tree Survey
☐	Mammals	☒	Floral V__ S__ A__	☐	Aquatic - Physical
☐	Amphibians 1_ 2_ 3_	☐	Wetland	☐	Aquatic - Biological
☐	Reptiles	☐	Butternut (BHA)	☐	Faunal Habitat
☐	Inverterbrates	☐	other SAR	☐	Other - see notes

FEATURES (with GPS co-ordinates where applicable)	Mapped	Follow-up Req'd		
	UTM	Yes	No	Who
Man-made Structures: ☐ None observed				
Yes No				
☐ ☐ Barns/Footings/Wells/other(list)				
☐ ☐ Rock Piles				
☐ ☐ Garbage				
Natural Vegetation: ☐ None observed				
☐ ☐ Fallen Logs outside woods (#'s)				
☐ ☐ Brush Piles				
☐ ☐ Snags (raptor perch)				
☐ ☐ Tree Cavities (nesting)				
☐ ☐ Sentinel Trees				
☐ ☐ Butternut Identified				
☐ ☐ Mast Trees (6E) ☐ Berry Shrubs (6E)				
Wildlife Features: ☐ None observed				
☐ ☐ Waterfowl nesting (large #'s, # of species)				
☐ ☐ Exposed Banks (nesting swallows)				
☐ ☐ Stick Nests				
☐ ☐ Animal Burrows (>10cm)				
☐ ☐ Heronry				
☐ ☐ Crayfish mounds				
☐ ☐ Sand/gravel on site				
☐ ☐ Marsh/open country/shrub				
☐ ☐ Winter Deer yards				
☐ ☐ Corridor from pond to woods (ampibian movement)				
☐ ☐ Bat corridor (shorelines, escarpments)				
☐ ☐ Bat hibernacula (caves, mines, crevices, etc.)				
Aquatic Features:				
☐ ☐ Perm. pond in woodland ☐ emergents/submergents/logs ☐ temp.				
☐ ☐ Perm. pond in open ☐ emergents/submergents/logs ☐ temp.				
☐ ☐ Water in woodland ☐ pools ☐ flowing ☐ dry				
☐ ☐ Waterways flowing dry pools				
☐ natural stream ☐ ☐ ☐				
☐ swale ☐ ☐ ☐ ☐ None observed				
☐ open drain ☐ ☐ ☐				
☐ Seeps/Springs ☐ ☐ ☐				
Incidental Observations/Notes:				

Graphic ☐ Attached or Name L:\ENV\Biological Services\Templates\MTE NEnv_General Field Sheet Checked by Project Manager ☐ Date:

GENERAL SITE INFORMATION FIELD SHEET

Project: Glover - Port Stanley
Date: June 15, 2015 Project Manager: DM
Collector(s): WH Visit #: 1
Time started: 6:45 Time finished: 7:15 Combined collectors' hours: 0.5
☐ NHIC List ☐ MNR EO's ☐ none ☒ not provided to collector

WEATHER CONDITIONS					WIND SCALE	
Temp. 24	Wind:	1	Cloud Cover (%)	Precipitation	0	Calm
	Direction:	SW	10	Today: no	1	Smoke Drifts
				Yesterday: no	2	Wind Felt on Face
					3	Leaves in constant motion
					4	Wind raises dust and paper
					5	Small trees sway
					6	Large branches sway
					7	Lots of resistance when walking into
					8	Limbs breaking off trees

DATA FOCUS					
☒	Birds 1☒ 2__	☐	ELC's	☐	Dripline
☐	Mammals	☐	Floral V_☒S__A_	☐	Aquatic - Physical
☐	Amphibians 1_ 2_ 3_	☐	Wetland	☐	Aquatic - Biological
☐	Reptiles	☐	Butternut	☐	Faunal Habitat
☐	Inverterbrates	☐	other SAR		

FEATURES (with GPS co-ordinates where applicable)	Mapped	Follow-up Req'd		
		Yes	No	Who
Man-made Structures: ☐ None observed				
☒ Barns/Footings/Wells/other(list)	✓			
☐ Rock Piles				
☐ Garbage				
Natural Vegetation: ☒ None observed				
☐ Fallen Logs outside woods (#'s)				
☐ Brush Piles				
☐ Snags (raptor perch)				
☐ Tree Cavities (nesting)				
☐ Sentinel Trees				
☐ Mast Trees (6E) ☐ Berry Shrubs (6E)				
Wildlife Features: ☐ None observed				
☐ Waterfowl nesting (large #'s, # of species)				
☐ Exposed Banks (nesting swallows)				
☐ Stick Nests				
☐ Animal Burrows (>10cm)				
☐ Heronry				
☐ Crayfish mounds				
☐ Sand/gravel on site				
☒ Marsh/open country/shrub				
☐ Winter Deer yards				
☐ Corridor from pond to woods (ampibian movement)				
☐ Bat corridor (shorelines, escarpments)				
☐ Bat hibernacula (caves, mines, crevices, etc.)				
Aquatic Features:				
☐ Perm. pond in woodland ☐ emergents/submergents/logs ☐ temp.				
☐ Perm. pond in open ☐ emergents/submergents/logs ☐ temp.				
☐ Water in woodland ☐ pools ☐ flowing ☐ dry				
☐ Waterways flowing dry pools				
☐ natural stream ☐ ☐ ☐				
☐ swale ☐ ☐ ☐ ☒ None observed				
☐ open drain ☐ ☐ ☐				
☐ Seeps/Springs ☐ ☐ ☐				

Incidental Observations:

Checked barn and sheds on community A1 for Barn Swallow nest. 40-45 active nests in large barn. Many adults and young observed.

Graphic ☐ Attached or Name Checked by Project Manager ☐ Date:_____

GENERAL SITE INFORMATION FIELD SHEET

Project: Glover - Port Stanley
Date: Jn 29, 2015 ✓ Project Manager: DM
Collector(s): WH Visit #: 2
Time started: 7:30 Time finished: 8:00 Combined collectors' hours: 6.5
☐ NHIC List ☐ MNR EO's ☐ none ☐ not provided to collector

WEATHER CONDITIONS					WIND SCALE	
Temp.	Wind:	1	Cloud Cover (%)	Precipitation	0	Calm
15	Direction:	S	0	Today: no	1	Smoke Drifts
				Yesterday: no	2	Wind Felt on Face
					3	Leaves in constant motion
					4	Wind raises dust and paper
					5	Small trees sway
					6	Large branches sway
					7	Lots of resistance when walking into
					8	Limbs breaking off trees

DATA FOCUS					
☒	Birds 1__ 2☒	☐	ELC's	☐	Dripline
☐	Mammals	☒	Floral V__ S☒_ A_	☐	Aquatic - Physical
☐	Amphibians 1_ 2_ 3_	☐	Wetland	☐	Aquatic - Biological
☐	Reptiles	☐	Butternut	☐	Faunal Habitat
☐	Inverterbrates	☐	other SAR		

FEATURES (with GPS co-ordinates where applicable)	Mapped	Follow-up Req'd		
		Yes	No	Who
Man-made Structures: ☒ None observed				
☐ Barns/Footings/Wells/other(list)				
☐ Rock Piles				
☐ Garbage				
Natural Vegetation: ☒ None observed				
☐ Fallen Logs outside woods (#'s)				
☐ Brush Piles				
☐ Snags (raptor perch)				
☐ Tree Cavities (nesting)				
☐ Sentinel Trees				
☐ Mast Trees (6E) ☐ Berry Shrubs (6E)				
Wildlife Features: ☒ None observed				
☐ Waterfowl nesting (large #'s, # of species)				
☐ Exposed Banks (nesting swallows)				
☐ Stick Nests				
☐ Animal Burrows (>10cm)				
☐ Heronry				
☐ Crayfish mounds				
☐ Sand/gravel on site				
☐ Marsh/open country/shrub				
☐ Winter Deer yards				
☐ Corridor from pond to woods (ampibian movement)				
☐ Bat corridor (shorelines, escarpments)				
☐ Bat hibernacula (caves, mines, crevices, etc.)				
Aquatic Features:				
☐ Perm. pond in woodland ☐ emergents/submergents/logs ☐ temp.				
☐ Perm. pond in open ☐ emergents/submergents/logs ☐ temp.				
☐ Water in woodland ☐ pools ☐ flowing ☐ dry				
☐ Waterways flowing dry pools				
☐ natural stream ☐ ☐ ☐				
☐ swale ☐ ☐ ☐ ☒ None observed				
☐ open drain ☐ ☐ ☐				
☐ Seeps/Springs ☐ ☐ ☐				
Incidental Observations:				

Graphic ☐ Attached or Name Checked by Project Manager ☐ Date:

GENERAL SITE INFORMATION FIELD SHEET

Project: Glover - Port Stanley
Date: Oct. 1, 2015 Project Manager: DM
Collector(s): WH Visit #: 3
Time started: 9:25 Time finished: 10:25 Combined collectors' hours: 1
☐ NHIC List ☐ MNR EO's ☐ none ☒ not provided to collector

WEATHER CONDITIONS					WIND SCALE	
Temp. 7°	Wind: 31	Cloud Cover (%) 10	Precipitation		0	Calm
	Direction: NE		Today: no		1	Smoke Drifts
			Yesterday: no		2	Wind Felt on Face
DATA FOCUS					3	Leaves in constant motion
☐ Birds 1__ 2__	☐ ELC's	☐ Dripline			4	Wind raises dust and paper
☒ Mammals	☒ Floral V__ S__ A☒	☐ Aquatic - Physical			5	Small trees sway
☐ Amphibians 1_ 2_ 3_	☐ Wetland	☐ Aquatic - Biological			6	Large branches sway
☐ Reptiles	☐ Butternut	☐ Faunal Habitat			7	Lots of resistance when walking into
☐ Inverterbrates	☐ other SAR				8	Limbs breaking off trees

FEATURES (with GPS co-ordinates where applicable)	Mapped	Follow-up Req'd		
		Yes	No	Who
Man-made Structures: ☒ None observed				
☐ Barns/Footings/Wells/other(list)				
☐ Rock Piles				
☐ Garbage				
Natural Vegetation: ☒ None observed				
☐ Fallen Logs outside woods (#'s)				
☐ Brush Piles				
☐ Snags (raptor perch)				
☐ Tree Cavities (nesting)				
☐ Sentinel Trees				
☐ Mast Trees (6E) ☐ Berry Shrubs (6E)				
Wildlife Features: ☒ None observed				
☐ Waterfowl nesting (large #'s, # of species)				
☐ Exposed Banks (nesting swallows)				
☐ Stick Nests				
☐ Animal Burrows (>10cm)				
☐ Heronry				
☐ Crayfish mounds				
☐ Sand/gravel on site				
☐ Marsh/open country/shrub				
☐ Winter Deer yards				
☐ Corridor from pond to woods (ampibian movement)				
☐ Bat corridor (shorelines, escarpments)				
☐ Bat hibernacula (caves, mines, crevices, etc.)				
Aquatic Features:				
☐ Perm. pond in woodland ☐ emergents/submergents/logs ☐ temp.				
☐ Perm. pond in open ☐ emergents/submergents/logs ☐ temp.				
☐ Water in woodland ☐ pools ☐ flowing ☐ dry				
☐ Waterways flowing dry pools				
☐ natural stream ☐ ☐ ☐				
☐ swale ☐ ☐ ☐ ☒ None observed				
☐ open drain ☐ ☐ ☐				
☐ Seeps/Springs ☐ ☐ ☐				
Incidental Observations:				

Graphic ☐ Attached or Name Checked by Project Manager ☐ Date:_____