May 2018

ENVIRONMENTAL IMPACT STUDY

2220740 ONTARIO INC

17-5859

Submitted by:
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1.0 Introduction

Dillon Consulting Limited (Dillon) was retained by 2220740 Ontario Inc. to complete an Environmental Impact Study (EIS) in support of a proposed development application for a property located in Camperdown, legally described as Part Lot 26, Concession 6 in the Town of the Blue Mountains (referred to herein as the "Study Area") (**Figure 1**).

The Study Area is bounded by an existing residential neighbourhood along the south, Camperdown Road to the west, Old Lakeshore Road to the north and forested area to the east and is approximately 6.61 ha in size. The majority of the Study Area is comprised of forested area and undeveloped land. A small area in the northwest corner Study Area contains a residential building with manicured lawns and mature trees.

Prior Draft Plan Approval was previously granted by the Town of the Blue Mountains (the "Town") for this property. Due to delays in other planning and approvals, the Draft Plan approval lapsed; and, therefore, a new application is now required to be submitted to the Town of the Blue Mountains for approval. As a result an EIS is required as part of the submission. The identical limit of natural feature and development has been carried over from the past approval. The purpose of the EIS is to document existing conditions of the natural environment; determine the potential limits of development; evaluate the potential for environmental impacts associated with the proposed development; and recommend mitigation, restoration, and enhancement measures to preserve and/or restore natural features. The EIS has been prepared in general accordance with the policies of the Grey Sauble Conservation Authority (GSCA), following the Terms of Reference (TOR) submitted to the GRCA on June 27, 2017 (see **Appendix A**).

CAMPERDOWN
TOWN OF BLUE MOUNTAINS
ENVIRONMENTAL IMPACT STUDY

PROJECT LOCATION
FIGURE 1

- Study Area
- Expressway / Highway
- Road
- Watercourse
- Waterbody

0 50 100 200 m

SCALE 1:10,000

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF

MAP CREATED BY: LK
MAP CHECKED BY: DL
MAP PROJECTION: NAD 1983 UTM Zone 17N

DILLON CONSULTING

PROJECT: 17-5958
STATUS: DRAFT
DATE: 2018-04-27

FILE LOCATION: \\dillon.ca\DILLON_DFS\Ottawa\Ottawa CAD\CAD\2017\175859 - Camperdown Blue Mountains ON\mxd\Figure1_PrjLocation.mxd

2.0 Planning Context

2.1 General

The following sections have been prepared to identify the applicable land use planning policies related to the natural environment. Various regulatory agencies and legislative authorities have established a number of policies with the purpose of protecting ecological features and functions. **Table 1** lists the relevant policies and legislation that apply to the protection of natural heritage features within the Town of Blue Mountains; as well as supporting guidance documents and resources consulted respective to each policy. This table also includes additional background information sources used to help identify and define natural heritage features within the province of Ontario, and Eco-region 6E specifically. This section is not intended to constitute a complete land use planning assessment as it focuses on the relevant environmental policies and regulations. The documents referenced below can be read in their entirety for a more detailed understanding of the land use policy framework applicable to the Study Area.

Table 1: Policies, Legislation and Background Resources Searched

Policy	Guidelines and Supporting Documents
Province of Ontario	
Planning Act, 1990: Provincial Policy Statement (2014)	Policies within Section 2.1 related to natural heritage features
	Ministry of Natural Resources and Forestry (MNRF) Midhurst District Main Contact: Megan Eplett, A/ Management Biologist *Records received from MNRF Midhurst District relating to natural features and wildlife species*
	MNRF Natural Heritage Information Centre (NHIC) Square #17NK4731 *Species of Conservation Concern* *Species at Risk* *Natural heritage features*
	Ecological Land Classification for Southern Ontario, Second Approximation, 2008
	Natural Heritage Reference Manual, Second Edition, March 2010
	Ontario Wetland Evaluation System, Southern Manual, Third Edition, 2014
	MNRF Significant Wildlife Habitat Technical Guide (2000) *Significant Wildlife Habitat Eco-region 6E Criterion Schedules, 2015*
	Fisheries and Oceans Canada (DFO) *Ontario South West Map (Map 4 of 34) (July 2017)*
	Federal Species at Risk Public Registry, accessed November 2017
	Ontario Breeding Birds Atlas (OBBA) 17NK43
	Ontario Reptile and Amphibian Atlas - online data accessed November 2017

Policy	Guidelines and Supporting Documents
	Ontario Butterfly Atlas - online data accessed November 2017
	Atlas of the Mammals of Ontario, 1994
Endangered Species Act (2007)	MNRF Species at Risk in Ontario (SARO) List (O.Reg. 230/08), November 2017
	MNRF Midhurst District Main Contact: Shawn Carey, District Manager *Received SAR occurrence records*
	MNRF NHIC Square #17NK4731 *SAR occurrence records*
	OBBA Square #17NK43
	Ontario Reptile and Amphibian Atlas - online data accessed November 2017
Lower Tier Municipality	
The Town of Blue Mountains Official Plan (2016)	Schedules A to A6; Appendix 1: Constraint Mapping
Upper Tier Municipality	
Grey County Official Plan (2013)	Schedule A & B
Conservation Authority	
Conservation Authorities Act, 1990: Ontario Regulation 151/06	Grey Sauble Conservation Authority (GSCA) Floodplain mapping Regulated Area mapping Forest Management Plan

Policies within each document that relate to the natural environment and apply to the Study Area are outlined in subsequent sections.

2.2 Provincial Policy Statement, 2014

The Provincial Policy Statement, 2014 (PPS) provides overall policy direction on matters of provincial interest related to land use planning and development in Ontario. The PPS sets forth a vision for Ontario's land use planning system by managing and directing land use to achieve efficient development and land use patterns, wise use and management of resources, and protecting public health and safety. This report deals specifically with Policy 2.1, Natural Heritage, and Policy 2.2, Water, which provides for the protection and management of natural heritage and water resources, which include the following:

- *significant wetlands;*
- *significant coastal wetlands;*
- *significant woodlands;*
- *significant valleylands;*

- *significant wildlife habitat;*
- *significant areas of natural and scientific interest (ANSI);*
- *fish habitat;*
- *sensitive surface water features; and,*
- *sensitive groundwater features.*

The PPS defines "significant" to mean:

- *in regard to wetlands, coastal wetlands and areas of natural and scientific interest, an area identified as provincially significant by the Ontario Ministry of Natural Resources using evaluation procedures established by the Province, as amended from time to time;*
- *in regard to woodlands, an area which is ecologically important in terms of features such as species composition, age of trees and stand history; functionally important due to its contribution to the broader landscape because of its location, size or due to the amount of forest cover in the planning area; or economically important due to site quality, species composition, or past management history. These are to be identified using criteria established by the Ontario Ministry of Natural Resources; and,*
- *in regard to other features and areas in policy in 2.1, ecologically important in terms of features, functions, representation or amount, and contributing to the quality and diversity of an identifiable geographic area or natural heritage system".*

The PPS defines "sensitive" to mean:

- *in regard to surface water features and ground water features, means areas that are particularly susceptible to impacts from activities or events, including, but not limited to, water withdrawals, and additions of pollutants.*

The potential significance of natural heritage features may be evaluated based on size, age, the presence of rare or sensitive species, species diversity, and linkage functions, taking into consideration factors such as adjacent land use and degree of disturbance. Criteria for determining significance follow the guidance outlined in the Natural Heritage Reference Manual (MNRF, 2010) and the Significant Wildlife Habitat Technical Guide Eco-Region 6E Criterion Schedules (MNRF, 2015), where applicable.

The significance of natural features identified within the Study Area is further discussed in **Section 5.4** of this report.

2.3 Endangered Species Act, 2007

In June 2008, the *Endangered Species Act*, 2007 (ESA) came into effect in Ontario administered by the Ministry of Natural Resources and Forestry (MNRF). The purpose of the ESA is to identify Species at Risk (SAR) based on the best available scientific information; to protect SAR and their habitats, to promote

the recovery of SAR; and to promote stewardship activities to assist in the protection and recovery of SAR in Ontario. There are two applicable regulations under the ESA; *Ontario Regulation 230/08* (the SARO List); and, *Ontario Regulation 242/08* (General). These regulations serve to identify which species and habitat receive protection and provide direction on the current implementation of the ESA by the MNRF.

The potential for SAR and SAR habitat to be present within the Study Area is discussed further in **Section 3.4** and **Section 5.5** of this report.

2.4 Niagara Escarpment Planning and Development Act, 1973

In June 1973, the Niagara Escarpment Planning and Development Act was passed and the Niagara Escarpment Plan ("NEP") was later released (the latest update is October 2012). The NEP delineated the boundaries of the Niagara Escarpment Plan area and provides land use designations and development criteria within those boundaries. The Niagara Escarpment was also designated a World Biosphere Reserve in 1990 by UNESCO to further promote the importance of the natural and ecological features within the Niagara Escarpment area.

The Study Area occurs within the limits of the NEP area and is designated as Escarpment Recreational (Niagara Escarpment Plan Map 6) (**Appendix B**). There are several objectives listed in the NEP section of the Official Plan for land in the Escarpment Recreation designation, the overarching objective applicable to residential development is that "growth should be compatible with and provide for the protection of unique ecologic, historic and archaeological areas, wildlife habitats, streams and water supplies and other environmentally sensitive areas both inside and adjacent to Escarpment Recreation Areas" (Town of Blue Mountains, 2007).

Uses permitted under the Official Plan (OP) are only permitted in the NEP Area if they comply with the NEP. If there is a conflict between the OP and the NEP, the provisions of the NEP take precedence. However, land use policies in OP apply throughout the town as well as in the NEP areas. In most cases, land use policies are the same.

2.5 Grey County Official Plan, 2013

The Grey County OP, adopted in 1997, provides the broad policy for the towns and townships that comprise the County. The policy seeks to provide as much direction and assistance to local municipalities in their planning process as possible to ensure that environmental, social, public and economic considerations are integrated into the decision-making process of planning and development (Grey County, 2016).

The Study Area is designated as Escarpment Recreation Area on Schedule A Map 2 of the County OP (**Appendix B**).

2.6 The Town of the Blue Mountains Official Plan

The Town of the Blue Mountains OP was approved in September 2006 with associated amendments approved in June 2016. It is intended that this OP will serve as the basis for land use and development goals, objectives and policies for the guidance of public and private development decisions within the Town of the Blue Mountains. This OP conforms to the policies of the PPS as well as the County of Grey OP, which came into effect in 1998.

The Study Area falls within areas designated as Residential Recreational Area and Special Study Area Subject to B3.13.5 (Schedule A-3) (refer to **Appendix B**). The Nipissing Ridge is a formation from the first bluff of the Lake Nipissing Shore cliff (**Figure 2**). The prominent geological feature is designated as "Hazard Land" with the Blue Mountain OP. The Study Area is directly adjacent to the Hazard Lands (Schedule A-3) (refer to **Appendix B**).

2.6.1 Blue Mountain Tree Preservation By-Law No. 2010-69

The Town's Tree Preservation By-law (By-law No. 2010-68) requires a permit to injure or destroy trees which have reached or can reach a height of at least four (4) metres at physiological maturity within the boundaries of the Municipality. An arborist report to support a permit to injure or destroy any trees in the Study Area may be required, which would be included in the Detailed Design phase of the project.

2.7 Grey Sauble Conservation Authority (Ontario Regulation 151/06)

In accordance with Section 28 of the Conservation Authorities Act, 1990, the GSCA is authorized to implement and enforce the Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulations (Ontario Regulation 151/06). The objective of Regulation 151/06 is to ensure public safety and protect properly with respect to natural hazard (steep slopes such as the Nipissing Ridge) and to safeguard watershed health by preventing pollution and destruction of sensitive environmental areas such as wetlands, shorelines and watercourses. Under this regulation, any proposed development, interference or alteration (e.g. placement or removal of material) within a Regulated Area requires a review of GSCA.

Section 2(1) of this Regulation lists areas within GSCAs jurisdiction where development is prohibited without proper permissions from the GSCA. Such areas include, but are not limited to, river or stream valleys, hazardous lands, and wetlands, including areas within 120 m of all provincially significant wetlands (**Figure 2**).

In participating in the review of applications under the *Planning Act*, GSCA ensures that applicants and approval authorities are aware of any Section 28 Regulation requirements under the *Conservation Authorities Act*, where applicable. Further, GSCA provides input to the County with respect to natural heritage features (GSCA, 2016).

CAMPERDOWN
TOWN OF BLUE MOUNTAINS
ENVIRONMENTAL IMPACT STUDY

PROVINCIAL PLAN AND AGENCY DESIGNATIONS
FIGURE 2

- Study Area
- Expressway / Highway
- Road
- 5m Contour (m asl)

Grey County Natural Heritage Systems Study

- Significant Woodlands

Town of The Blue Mountains Official Plan And Constraint Mapping

- Nipissing Ridge (approx.)
- Residential Recreational Area (approx.)
- Significant Woodlands

Grey Sauble Conservation Authority

- GSCA Regulated Area (approx.)
- Tributaries to Georgian Bay (approx.)

MNRF

- MNRF Wooded Area
- Unevaluated Wetland
- ANSI, Life Science

Niagara Escarpment Plan Designation

- Escarpment Recreation Area

0 12.5 25 50 m SCALE 1:1,500

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY ESRI, GEOGRATIS,
TOWN OF BLUE MOUNTAINS, GREY SAUBLE
CONSERVATION AUTHORITY (GSCA)
IMAGERY: October 2014

MAP CREATED BY: LK
MAP CHECKED BY: WM
MAP PROJECTION: NAD 1983 UTM Zone 17N

DILLON CONSULTING

PROJECT: 17-5859
STATUS: DRAFT
DATE: 2018-04-27

FILE LOCATION: \\dillon.ca\DILLON_DFS\Ottawa\Ottawa CAD\CAD\2017\175859 - Camperdown Blue Mountains ON\mxd\Figure2_ProvDesignations_2.mxd

3.0 Results of Background Review

The following sections provide a brief summary of the existing environmental conditions within the Study Area. This information provides the background information upon which the EIS was based.

3.1 Landforms, Soils, and Geology

The Study Area is located in the Beaver Valley physiographic region of Ontario (Chapman & Putnam, 1984). The Beaver Valley proves to show the considerable complexity of landforms, with lake plains, beaches, moraines, steep valley sides and vertical cliffs all present within the small region consisting of 77 square miles. The bedrock in the area is described as being part of the Blue Mountain Formation which is blue-grey to grey-brown shale with thin and minor sections of limestone and siltstone (Ontario Geological Survey, 2010).

A review of the Soil Survey of Grey County (Gillespie and Richards, 1954) indicates that the Study Area contains two soil types; Tecumseth sand and Waterloo sandy loam. Waterloo sandy loam is present on the north and south borders of the Study Area and is described as poorly-sorted outwash of Grey-Brown Podzolic soils with good drainage on irregular moderately sloping to irregularly steeply sloping terrain that is essentially stone free. Tecumseth sand is present centrally within the Study Area and is described as a well-sorted sandy outwash of Grey-Brown Podzolic soils with imperfect drainage, very gently sloping terrain that is essentially stone free.

Based on test-pit investigations during the Hydrogeological Assessment by Cambium Inc. (2018), bedrock was not encountered at the surface; however, the depth of overburden soils was observed to be relatively thin overlying the shale bedrock.

A review of aerial photos indicates that existing conditions within the Study Area have not changed significantly since at least 2009, with the exception of regenerating woodland covering the majority of the Study Area to the north (Google Earth).

3.2 Aquatic Environment

According to the Ontario Flow Assessment Tool (MNRF, 2014), there are no streams or rivers found within the Study Area; however, there is a watercourse identified at the east end of the Study Area that originates on the escarpment slope and flows through the Peaks Meadow development above the Nipissing Ridge. This watercourse becomes braided towards Old Lakeshore Road and flows may infiltrate into observed holes in the soils (GSCA, 2018; **Appendix C**).

In addition, the GSCA identified three seasonal watercourses that traverse the Study Area, which outlet to the roadside ditch and two concrete box culverts under Old Lakeshore Road. The watercourses were

identified as being intermittent in nature and the existing storm drainage on site is observed to flow in sheet fashion to these watercourses or to the Old Lakeshore Road ditch. The watercourses that GSCA identified are not within the GSCA's Regulated Areas.

An Information Request was submitted to the MNRF on June 5, 2017, requesting fish sampling information. Additionally, any fisheries data relevant to the Study Area was requested from GSCA. No fisheries data was available for the watercourses identified within and adjacent to the Study Area.

3.3 Natural Heritage Features

As mentioned in **Section 2.2**, natural heritage features as defined under the PPS require consideration within the EIS, discussed in subsequent sections. Note that consideration for fish habitat and *endangered* and *threatened* species has been included in **Section 3.2** and **3.4**, respectively.

3.3.1 Wetlands

Wetlands provide habitat for fish and wildlife and have important hydrological functions. A variety of wetland habitat types, significant locally and provincially, exists primarily above the escarpment because of the poor drainage. Wetlands within the Study Area are considered southern wetlands based on their location south of the northern limit of Ecoregions 5E, 6E, and 7E as shown in Figure 1 of the PPS, 2014.

No Provincially Significant Wetland (PSW) or locally significant wetlands were identified within or adjacent to the Study Area. An unevaluated wetland was identified during the background review associated with the watercourse directly adjacent to the eastern Study Area boundary (GSCA, 2018; **Figure 2**).

3.3.2 Woodlands

Significant Woodlands were specifically identified within the Study Area within the Town's OP (**Figure 2**; **Appendix B**).

3.3.3 Valleylands

No significant valleylands were identified within or adjacent to the Study Area.

3.3.4 Areas of Natural and Scientific Interest

No significant ANSIs were identified within the Study Area; one Life Science ANSI was identified approximately 285 m southeast of the Study Area, the Blue Mountain Slopes (**Figure 2**).

3.3.5 Significant Wildlife Habitat

The Significant Wildlife Habitat Technical Guide (MNRF, 2000) defines Species of Conservation Concern as globally, nationally, provincially, regionally, or locally rare (S-Rank of S2 or S3); and federally endangered and threatened species; but do not include SAR (listed as *endangered* or *threatened* under

the ESA, 2007). Through background review, several Species of Conservation Concern listed in **Table 2** have been identified with the potential to occur within or adjacent to the Study Area, and will help to determine the potential for Significant Wildlife Habitat (SWH).

Table 2: Species of Conservation Concern with the potential to occur within the Study Area

Scientific Name	Common Name	SARA[1]	ESA[2]	S-RANK[3]	Info Source[4]
Vascular Plants					
Asplenium scolopendrium var. *americanum*	Hart's-tongue Fern	SC	SC	S3	MNRF SAR by Area
Birds					
Haliaeetus leucocephalus	Bald Eagle	---	SC	S2N, S4B	MNRF SAR in Area
Chordeiles minor	Common Nighthawk	THR	SC	S4B	OBBA
Ammodramus savannarum	Grasshopper Sparrow	---	SC	S4B	OBBA
Falco peregrinus	Peregrine Falcon	SC	SC	S3B	MNRF SAR in Area
Hylocichla mustelina	Wood Thrush	---	SC	S4B	OBBA
Contopus virens	Eastern Wood-pewee	---	SC	S4B	OBBA
Herpetozoa					
Chelydra serpentina	Snapping Turtle	SC	SC	S3	MNRF SAR in Area; NHIC; OHA
Lepidoptera					
Danaus plexippus	Monarch	SC	SC	S2N,S4B	OBA

[1]Federal Species at Risk Act (THR= threatened; SC= Special Concern); [2]Provincial Endangered Species Act (SC= Special Concern); [3]S-Rank is an indicator of commonness in the Province of Ontario. A scale between 1 and 5, with 5 being very common and 1 being the least common. [4]Information sources include MNRF = Ministry of Natural Resources and Forestry; OBBA = Ontario Breeding Bird Atlas; ON = Ontario Nature: Ontario Reptile and Amphibian Atlas; TEA = Toronto Entomologists' Association; --- denotes no information or not applicable.

A review of the MNRF background data suggests that types of SWH may occur in association with the Significant Woodland and wetland communities within and adjacent to the Study Area, including:

- Bat Maternity Colonies;
- Woodland Raptor Nesting;
- Amphibian Breeding Habitat (Woodland);
- Amphibian Breeding Habitat (Wetlands);
- Woodland Area-sensitive Breeding Birds; and,
- Habitat for Special Concern and Rare Wildlife Species (**Table 2**).

It should be noted that, while the Significant Woodland may also provide habitat for area sensitive species and habitats such as Woodland Raptor Nesting and Woodland Area-sensitive Breeding Birds, the portion of woodland in which the Study Area is located is young in age and does not contain interior habits for wildlife (≥200 m from woodland edge). Therefore SWHs that require interior habitat and mature forest may be present within the Study Area but are not present within the Study Area.

The potential for SWH to be present within the Study Area is discussed further in **Section 5.4.3**.

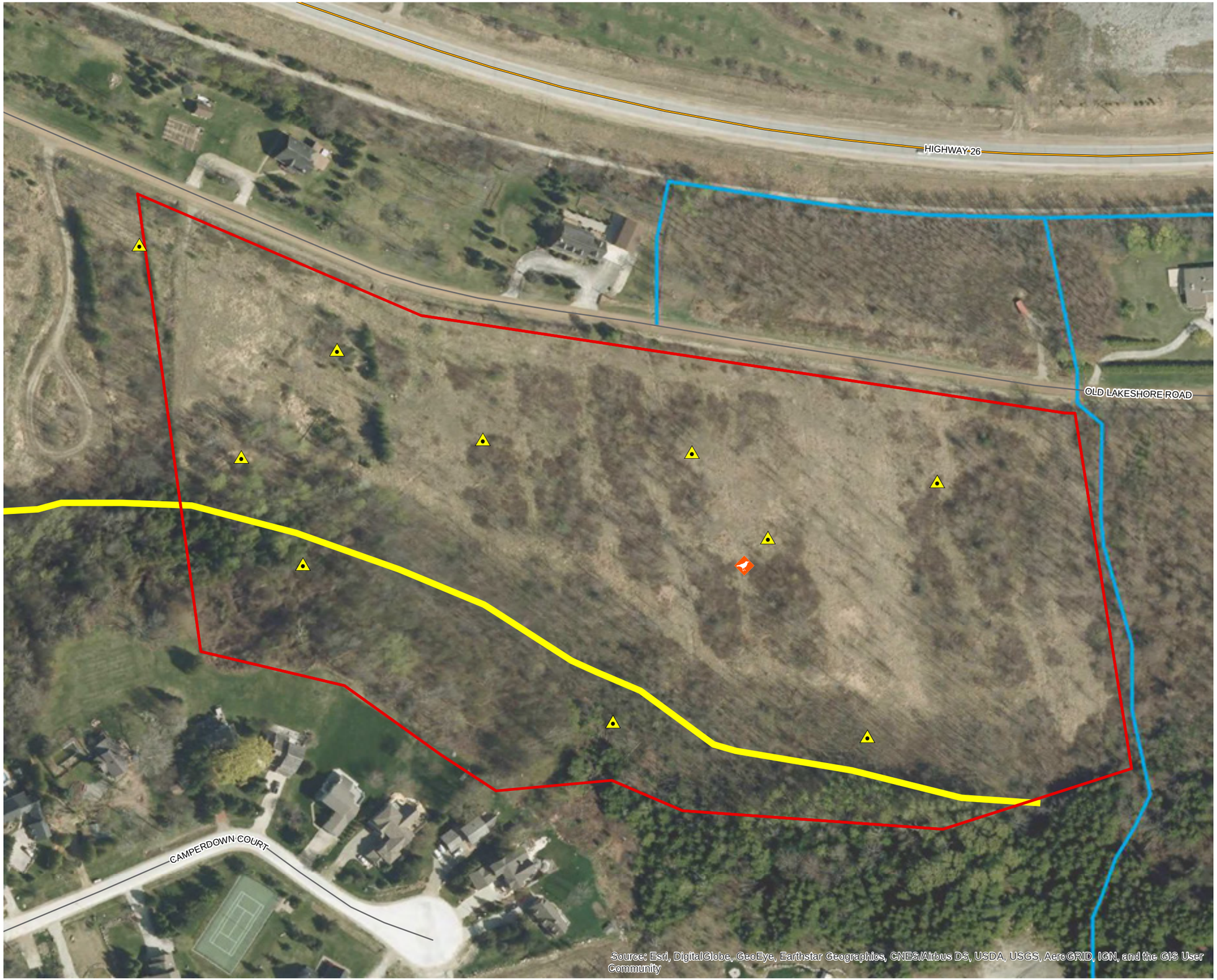
3.4 Species at Risk

A number of SAR listed as *endangered* and *threatened* under the ESA have been identified with the potential to occur within the vicinity of the Study Area (see **Table 3**).

Table 3: Species at Risk with the potential to occur within the Study Area

Scientific Name	Common Name	SARA[1]	ESA[2]	S-RANK[3]	Info Source[4]
Birds					
Chaetura pelagica	Chimney Swift	THR	THR	S4B,S4N	OBBA
Hirundo rustica	Barn Swallow	---	THR	S4B	MNRF SAR in Area , OBBA
Riparia riparia	Bank Swallow	---	THR	S4B	OBBA
Dolichonyx oryzivorus	Bobolink	---	THR	S4B	MNRF SAR in Area , OBBA
Sturnella magna	Eastern Meadowlark	---	THR	S4B	MNRF SAR in Area , OBBA
Mammals					
Myotis leibii	Eastern Small-footed Myotis	---	END	S2S3	MWH
Myotis lucifugus	Little Brown Myotis	END	END	S4	MWH
Myotis septentrionalis	Northern Myotis	END	END	S3	MWH
Pipistrellus subflavus	Tri-colored Bat	END	END	S3?	MWH

[1]Federal Species at Risk Act (END= Endangered, THR= threatened); [2]Provincial Endangered Species Act (END= Endangered, THR= threatened);[3]S-Rank is an indicator of commonness in the Province of Ontario. A scale between 1 and 5, with 5 being very common and 1 being the least common. [4]Information sources include MNRF = Ministry of Natural Resources and Forestry; OBBA = Ontario Breeding Bird Atlas; ON = Ontario Nature: Ontario Reptile and Amphibian Atlas; TEA = Toronto Entomologists' Association; --- denotes no information or not applicable.



CAMPERDOWN
TOWN OF BLUE MOUNTAINS
ENVIRONMENTAL IMPACT STUDY

2017 SURVEY LOCATIONS
FIGURE 3

- Study Area
- Snag and Cavity Survey Location
- Breeding Bird Survey Location
- Expressway / Highway
- Road
- Nipissing Ridge Slope (approx.)
- Tributaries to Georgian Bay (GSCA)

0 12.5 25 50 m SCALE 1:1,500

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY ESRI, GEOGRATIS, MNRF, GSCA
IMAGERY: October 2014

MAP CREATED BY: LK
MAP CHECKED BY: DL
MAP PROJECTION: NAD 1983 UTM Zone 17N

DILLON CONSULTING

PROJECT: 17-5859
STATUS: DRAFT
DATE: 2018-04-27

FILE LOCATION: \\dillon.ca\DILLON_DFS\Ottawa\Ottawa CAD\CAD\2017\175859 - Camperdown Blue Mountains ON\mxd\Figure3_2017SurveyLocations.mxd

3.4.1 Species at Risk Habitat

An Information Request was submitted to the MNRF Midhurst District Office in order to obtain SAR records to help narrow our focus on potential SAR and/or SAR habitat within the Study Area. The MNRF only identified one SAR; Butternut (*Juglans cinerea*) listed as *endangered;* with the potential to be found within the Study Area. MNRF correspondence has been included in **Appendix C**.

In addition, the Study Area was identified as potentially containing habitat for one or more SAR bats, based on the presence of woodlands. SAR bats may use woodland trees with cavities, crevices, cracks, hollows, or peeling bark (referred to as snag trees) and/or trees with clusters of dead leaves as habitats for maternity roosting and rearing young, while also using the surrounding woodlands as habitat for foraging and other life processes. Therefore, woodlands containing maternity roost trees may be considered habitat for SAR bats and thus may be protected under the regulations of the *Endangered Species Act* (2007). Determining the presence or absence of SAR bats in a woodland is necessary to determine whether the woodland is subject to the protections of the Act. SAR Bats with the potential habitat within the Study Area include:

- Eastern Small-footed Bat (*Myotis leibii*);
- Little Brown Bat (*Myotis lucifungus*);
- Tricoloured Bat (*Pipistrellus subflavus*); and,
- Northern Myotis (*Myotis septentrionalis*).

These species are discussed further in **Section 5.5.**

3.5 Incidental Wildlife

A review of aerial photos and local knowledge suggests that there are several common wildlife species found within the general area with potential to occur in the Study Area.

Incidental wildlife occurrences are discussed further in **Section 5.6**.

4.0 Field Work Methodology

4.1 Background

The results of the background review were used to assist in scoping the 2017 field program. Fieldwork conducted for the EIS occurred between April 2017 and August 2017 when weather conditions and timing were deemed suitable based on the survey protocols being implemented (**Table 4**). Fieldwork consisted of snag density searches, Ecological Land Classification (ELC) of vegetation communities, botanical surveys, aquatic surveys, and breeding bird surveys. Any incidental wildlife observations made during the surveys were also documented. The following sub-sections outline the survey methodologies used in the EIS.

Table 4: Dates and Times of Field Surveys

Date (2017)	Weather Conditions	Air Temp (°C)	Purpose of visit
May 30	Clear; south wind recorded 3 on Beaufort scale; no precipitation	22	Snag and Cavity Density Survey; Amphibian Breeding Habitat Assessment
June 12	Mostly cloudy; southwest wind recorded 2 on Beaufort scale; no precipitation	24	Breeding Bird Survey #1; Ecological Land Classification; Incidental Wildlife
June 28	Clear skies; south wind recorded 1 on Beaufort scale; no precipitation	17	Breeding Bird Surveys #2; Incidental Wildlife
July 31	Clear skies; east wind at 1 on Beaufort scale; no precipitation	24	Vegetation Survey; Incidental Wildlife

4.2 Ecological Land Classification

Vegetation communities were assessed using ELC as a first step to identify and assess potential natural heritage features within the Study Area. During the field investigations, vegetation was characterized using the ELC System for Southern Ontario (Lee et al., 1998) in order to classify and map ecological communities to the vegetation level. The ecological community boundaries were determined through the review of aerial photography and then further refined through on-site vegetation and tree surveys. In addition to the vegetation survey, a basic soil assessment was conducted to identify the soil moisture class within the ecosystem.

The ELC protocol recommends that a vegetation community be a minimum of 0.5 ha in size before it is defined. Based on the composition of vegetation communities within the Study Area, patches of vegetation less than 0.5 ha or disturbed/planted vegetation were described, provided they clearly fit within an ELC vegetation type.

Results of the ELC survey are included in **Section 5.1**.

4.3 Vegetation Inventory

A single-season vegetation inventory was conducted in July 2017 and dominant species within the Study Area and adjacent lands were identified. Surveys consisted of wandering transects and/or area searches to determine the presence, richness and abundance of floral species within the Study Area. Species nomenclature is based on the Ontario Plant List (Newmaster et al., 1998) with updates from the Flora Ontario – Integrated Botanical Information System (FOIBIS; 2005).

Results of the botanical surveys are discussed in **Section 5.2**.

4.4 Aquatic Assessment

The potential for watercourses within and adjacent to the Study Area was investigated through preliminary field visits (snag searches, amphibian breeding habitat assessment).

Results are discussed in **Section 5.3**.

4.5 Natural Heritage Features

4.5.1 Wetlands

The boundaries of wetland unit within the Study Area were delineated using the *Ontario Wetland Evaluation System* Rapid Assessment (MNRF 2013) by a certified OWES evaluator in conjunction with ELC surveys.

Further details on wetlands within the Study Area are discussed in **Section 5.4.1**.

4.5.2 Woodlands

Woodlands within the Study Area were investigated as part of the ELC and vegetation inventory.

Results of field studies relating to woodlands are discussed in **Section 5.4.2**.

4.5.3 Significant Wildlife Habitat

Breeding bird surveys were conducted to establish baseline conditions, and to determine whether SWH exists within the Study Area. Due to the size of the woodland, there is potential for woodland area-sensitive bird breeding habitat, as defined in the *Eco-region 6E Criterion Schedules* (MNRF, 2015). An assessment for suitable amphibian breeding habitat (woodland and wetland) was undertaken within the Study Area during the spring of 2017 in tandem with snag and cavity searches to determine the suitability of bat maternity colony habitat.

4.5.3.1 Breeding Bird Survey

Diurnal breeding bird surveys conducted within the Study Area followed the methods outlined in the Ontario Breeding Bird Atlas Guide for Participants (Cadman et al., 2007), and were completed in June of 2017 (two surveys). Specifically, surveys consisted of point counts generally conducted between dawn and five hours after sunrise that were used to establish quantitative estimates of bird abundance in suitable habitat types within the Study Area. During the surveys evidence of breeding behaviour was recorded which generally includes, but is not limited to, males singing, nest building, egg incubation, territorial defence, carrying food, and feeding their young.

Three breeding bird point count monitoring stations were surveyed within the Study Area, as shown in **Figure 3**. Results of breeding bird surveys within the Study Area are included in **Section 5.4.3.1**.

4.5.3.2 Bat Maternity Colonies Habitat Survey

Snag/cavity density searches were performed on May 30th, following the Midhurst District Maternity Roost Survey and Treed Habitats (April 2017). Ten survey locations were randomly selected within the Study Area. At each survey location, a leaf-off survey was conducted during the leaf-off period to search for and document snag trees, which are used by two species of SAR bat: Little Brown Myotis and Northern Myotis. Leaf-off surveys were to identify and geo-reference snag trees with DBH >25 cm, and to document the required tree attributes outlined in the protocol. The survey locations are shown on **Figure 3**. Results of snag/ cavity tree survey within the Study Area are included in **Section 5.4.3.2**.

4.5.3.3 Amphibian Breeding Habitat Survey

Based on MNRF's LIO mapping during the background review, a wetland was identified within the Study Area. An assessment of the Study Area for suitable Amphibian Breeding Habitat was undertaken on May 30, 2017. The field investigation consisted of walking transects within the Study Area to identify suitable habitat for amphibian breeding. Based on results of the field investigation, the potential for amphibian breeding was determined to be low (no standing water or vernal pools) and thus amphibian breeding surveys were excluded from the 2017 field investigations.

4.6 Species at Risk

Surveys for Butternut were completed in conjunction with ELC surveys within the Study Area. Habitat potential for SAR bats was assessed during the snag and cavity tree searched mentioned above.

Results relating to SAR within the Study Area have been included in **Section 5.5**.

4.7 Incidental Wildlife

A general wildlife assessment was completed within the Study Area through incidental observations while on site. Any incidental observations of wildlife were noted, as well as other wildlife evidence such

as dens, tracks, and scat. For each observation, notes, and when possible, photos were taken. These observations helped to determine potential ecological functions, linkages, etc. within the Study Area.

Results relating to incidental wildlife within the Study Area have been included in **Section 5.6**.

5.0 Biophysical Inventory Results

A biophysical inventory of natural features within the Study Area was completed in accordance with the methods detailed in **Section 4.0**. The analysis of data collected from secondary source information and during field studies in 2017, was used to evaluate the significance of natural heritage features within the Study Area.

5.1 Ecological Land Classification

A total of five ecological communities were observed within the Study Area during the ELC survey, four of which are considered natural vegetation communities. The location, type, and boundaries of these communities are delineated in **Figure 4**. All vegetation communities surveyed within the Study Area are considered common in Ontario. **Table 5** outlines the communities documented during ELC surveys and summarizes the dominant vegetation cover. Reference photos for each of the plant communities observed can be found in **Appendix D**.

5.2 Vegetation

A total of 86 plant species were documented during 2017 field studies. Of the 86 species, 59% are listed as native species considered to be common (S4) to very common (S5) in the province of Ontario; and 41% are listed as introduced species, therefore a status ranking is not applicable as the species is not a suitable target for conservation activities (SE or SNA rank).

The Co-efficient of Conservatism (CC) provides additional information on the nature of the vegetation communities within the Study Area. The CC values range from 0 to 10 and represent an estimated probability that a plant is likely to occur in a landscape that is relatively unaltered or is in a pre-settlement condition. For example, a CC of 0 is given to plants such as Manitoba Maple (*Acer negundo*) that demonstrate little fidelity to any remnant natural community, i.e. may be found almost anywhere. Similarly, a CC of 10 is applied to plants like Shrubby Cinquefoil (*Potentilla fructicosa*) that are almost always restricted to a pre-settlement remnant, i.e. a high-quality natural area. Introduced plants were not part of the pre-settlement flora, so no CC values have been applied to these species.

Of the 86 species identified within the Study Area, three have a CC value of 7 or greater; Northern Bedstraw (7), Woodland Horsetail (7) and Palmate Coltsfoot (8). The mean CC value for the site was 1.89 out of a possible 10, indicating an altered landscape. This is typical of altered environments as compared to naturally occurring environments. A full list of the vegetation species observed within the Study Area has been included in **Appendix E**.

Potential impacts related to vegetation within the Study Area are included in **Section 8.1.1**.

CAMPERDOWN
TOWN OF BLUE MOUNTAINS
ENVIRONMENTAL IMPACT STUDY

NATURAL HERITAGE FEATURES
FIGURE 4

- Study Area
- Expressway / Highway
- Road
- Tributaries to Georgian Bay (GSCA)
- Nipissing Ridge Slope (approx.)
- Significant Woodlands*
- Interior Woodland Habitat (100 m)
- Interior Woodland Habitat (200 m)
- Unevaluated Wetland as Delineated by Dillon

Ecological Land Classification

- 1. CVR_4: Rural Residential Property
- 2. FOCM2-2: Dry-Fresh White Cedar Coniferous Forest
- 3. FODM7-2: Green Ash-Hardwood Lowland Deciduous Forest
- 4. FODM8-1: Fresh-Moist Poplar Deciduous Forest
- 5. SWDM2-2: Green Ash Mineral Deciduous Swamp

* Significant Woodlands outside of project boundary from Grey County Natural Heritage Systems Study and Town of Blue Mountains Constraints Mapping

0 12.5 25 50 m SCALE 1:1,500

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY ESRI, GEOGRATIS, MNRF, GSCA
IMAGERY: October 2014

MAP CREATED BY: LK
MAP CHECKED BY: DL
MAP PROJECTION: NAD 1983 UTM Zone 17N

DILLON CONSULTING

PROJECT: 17-5859
STATUS: DRAFT
DATE: 2018-04-27

FILE LOCATION: \\dillon.ca\DILLON_DFS\Ottawa\Ottawa CAD\CAD\2017\175859 - Camperdown Blue Mountains ON\mxd\Figure4_ELC.mxd

Table 5: Ecological Land Classification

ELC code	Classification	Total Area within Study Area (ha)	Vegetation	Comments	Photo Appendix D
CVR_R	Rural Residential	1.180 ha	Species observed in this community consisted of European Larch (*Larix decidua*), Austrian Pine (*Pinus nigra*), Sugar Maple (*Acer saccharum*), Green Ash (*Fraxinus pennsylvanica*) and Norway Spruce (*Picea abies*).	This community consisted of manicured lawn and landscaped trees.	Photos 1 & 2
FOCM2-2	Dry-Fresh White Cedar Coniferous Forest	0.411 ha	The dominant species observed within this community was Eastern White Cedar (*Thuja occidentalis*). The species composition consisted of the same species recorded below for FODM8-1; with the exception of the following additional species; Field Horsetail (*Equisetum arvense*), Reed Canary Grass (*Phalaris arundinacea*) and Soft-stemmed Bulrush (*Schoenoplectus tabernaemontani*).	This community existed on top of a steep slope, adjacent to FODM8-1.	N/A
FODM7-2*	Green Ash-Hardwood Lowland Deciduous Forest	5.788 ha	This community was dominated by Green Ash (*Fraxinus pennsylvanica*) in the canopy (sub-canopy), with rare occurrences of Manitoba Maple (*Acer negundo*), Eastern White Cedar, American Elm (*Ulmus americana*), Balsam Poplar (*Populus balsamifera*), Eastern White Pine (*Pinus strobus*) and Trembling Aspen (*Populus tremuloides*). Other canopy species included Trembling Aspen and Norway Spruce. The understory consisted of occasional occurrences of Green Ash, Common Buckthorn (*Rhamnus cathartica*), and Tartarian Honeysuckle (*Lonicera tatarica*). Rare observations of Eastern Highbush Cranberry (*Viburnum opulus* ssp. *trilobum*), Staghorn Sumac (*Rhus hirta*), Black Walnut (*Juglans nigra*), Pussy Willow (*Salix discolour*), Eastern White Cedar, American Elm, Trembling Aspen were documented. The ground layer consisted of abundant occurrences of Poison Ivy (*Toxicodendron radicans*) and occasional observations of Goldenrod sp. (*Solidago* sp.), Tall Buttercup (*Ranunculus acris*), Common Teasel (*Dipsacus laciniatus*), Cleavers (*Galium aparine*), and Canada Bluegrass (*Poa compressa*). Rare observed of Riverbank Grape (*Vitis riparia*), Multiflora Rose (*Rosa multiflora*), White Sweet-clover (*Melilotus albus*), Black Medic (*Medicago lupulina*), Common Milkweed (*Asclepias syriaca*), Asparagus (*Asparagus officinalis*), Dame's Rocket (*Hesperis matronalis*), Palmate Colts-foot (*Petasites frigidus* var. *palmatus*), Garlic Mustard (*Alliaria petiolata*), True Forget-me-not (*Myosotis scorpioides*), Woodland Horsetail (*Equisetum sylvaticum*), and Reed Canary Grass.	This community consisted of small inclusions of meadows were observed throughout. The species compositision of the meadow inclusions consisted of abundant Orchard Grass (*Dactylis glomerata*), occasional Bird's-foot Trefoil (*Lotus corniculatus*), Cow Vetch (*Vicia cracca*), Perennial Ryegrass (*Lolium perenne*), and rare Wild Carrot (*Daucus carota*). **It should be noted that this polygon consists of regenerating woodland consisting with young growth trees and is not apparent in aerial imagery used in the figures (dated 2014). As defined under the ELC methods, criteria for determining "forest" ecosites is based on canopy cover. Where a community has greater than 60% canopy cover and is comprised of woody vegetation species (trees, shrubs), it is considered forest. As a result, although this community is early successional, it still meets the density for canopy cover to be considered a forest. It should also be noted that in early successional forests where the tree height doesn't meet "canopy" height of >10 m, the sub-canopy trees (2-10 m in height) become the canopy, which is the case in this community.*	Photos 3, 4 & 5
FODM8-1	Fresh-Moist Poplar Deciduous Forest	1.484 ha	The deciduous forest canopy consisted solely of abundant occurrences of Trembling Aspen. The sub-canopy species composition abundant Trembling Aspen, occasional Balsam Poplar, and rare observations of Eastern White Cedar, Green Ash and American Elm. The understory consisted of occasional occurrences of Trembling Aspen, Balsam Poplar and Green Ash with rare observations of Eastern White Cedar and Common Buckthorn. The ground layer consisted of Poison Ivy, Herb-Robert (*Geranium robertianum*), Wild Chervil (*Anthriscus sylvestris*), Palmate Coltsfoot, and Woodland Horsetail.	This community existsed on the slope between FODM7-2 and FOCM2-2.	Photos 6, 7 & 8
SWDM2-2	Green Ash Mineral Deciduous Swamp	0.818 ha	This community was dominated by Green Ash in the canopy (sub-canopy), with rare occurrences of Manitoba Maple, Eastern White Cedar, American Elm, Balsam Poplar. Additional species included European Common Reed (*Phragmites australis* ssp. *australis*), Narrow-leaved Cattails (*Typha angustifolia*), Broad-leaved Cattails (*Typha latifolia*), and Red-osier Dogwood (*Cornus sericea* ssp *sericea*).	Soils in these communities are wetter than the adjacent FODM7-2.	Photos 9 & 10

5.3 Aquatic Assessment

None of the potential seasonal watercourses identified within the Study Area by GRCA were detected during preliminary field surveys. It is possible that these watercourses were mapped prior to regeneration of the deciduous woodland (young regrowth) within the site and no longer exist as defined features. The watercourse identified to the east was observed; however, no specific aquatic assessments were conducted as it is outside of the Study Area boundary.

Potential impacts to the watercourse identified adjacent to the Study Area will be discussed further in **Section 8.1.2.**

5.4 Natural Heritage Features

5.4.1 Wetlands

The wetland boundary was surveyed by Dillon in 2017 in conjunction with ELC, using protocols outlined in the OWES manual (MNRF 2013) by an MNRF certified wetland evaluator. The wetland community is located within the Study Area along the eastern boundary; associated with the watercourse directly adjacent to the Study Area.

Potential impacts related to wetlands within the Study Area are included in **Section 8.1.2**.

5.4.2 Woodlands

The woodland was investigated through Dillon ELC surveys in 2017.

As mentioned, although the majority of the forest community within the Study Area is early successional, it still meets the density for canopy cover to be considered a forest. Further to that, the forest also meets the definition of a "woodland" in accordance with the Forestry Act, R.S.O. 1990, which defines woodlands as:

"…land with at least,

a) 1,000 trees, of any size, per hectare,
b) 750 trees, measuring over five cm in diameter, per hectare,
c) 500 trees, measuring over 12 cm in diameter, per hectare, or
d) 250 trees, measuring over 20 cm in diameter, per hectare,

but does not include a cultivated fruit or nut orchard or a plantation established for the purpose of producing Christmas trees."

In accordance with the County of Grey Official Plan, developed with assistance from the MNRF, a woodland must be greater than or equal to forty (40) ha in size outside of settlement areas. If woodlands fail to meet those criteria, woodlands can also be significant if it meets any two of the following three criteria:

a. Proximity to other woodlands i.e. if a woodland was within 30 metres of another significant woodland; or,
b. Overlap with other natural heritage features i.e. if a woodland overlapped the boundaries of a Provincially Significant Wetland or an Area of Natural and Scientific Interest; or,
c. The interior habitat of greater than or equal to eight (8) hectares, with 100-metre interior buffer on all sides.

Although the woodlands within the Study Area do not contain interior habitat, they form part of the Significant Woodland identified in both Town's Constraint Mapping (2016) and the Green for Grey Map 3: Woodlands (2017).

Potential impacts related to Significant Woodlands within the Study Area are included in **Section 8.1.1** and **Section 8.1.3**.

5.4.3 Significant Wildlife Habitat

The results of the field surveys as they apply to SWH are detailed below.

5.4.3.1 Breeding Bird Survey

A total of 31 bird species were observed during breeding bird surveys in 2017 (

Table 6). Of the 31 species observed, none are considered area sensitive and all are considered common and secure (S4) to very common (S5) in the province of Ontario based on the provincial conservation rankings assigned by the NHIC.

As mentioned, due to the shape of the Significant Woodland within the Study Area, there is no interior habitat for area-sensitive breeding birds and raptor habitat (>200 m from the woodland edge) (**Figure 4**). In addition, as no SCC or area-sensitive breeding birds species were observed during breeding bird surveys, it was determined that no SWH for breeding birds is present within or immediately adjacent to the Study Area.

Table 6: Breeding Bird Survey Results

Scientific Name	Common Name	SRank[1]	SARA[2]	ESA[3]	Breeding Evidence	Abundance in Study Area
Corvus brachyrhynchos	American Crow	---	---	S5B	Fly over	Sparse
Carduelis tristis	American Goldfinch	---	---	S5B	S	Common
Setophaga ruticilla	American Redstart	---	---	S5B	T	Sparse
Turdus migratorius	American Robin	---	---	S5B	T	Sparse
Poecile atricapillus	Black-capped Chickadee	---	---	S5	T	Sparse
Setophaga striata	Blackpoll Warbler	---	---	S4B	S	Sparse

Scientific Name	Common Name	SRank[1]	SARA[2]	ESA[3]	Breeding Evidence	Abundance in Study Area
Setophaga caerulescens	Black-throated Blue Warbler	---	---	S5B	S	Rare
Bombycilla cedrorum	Cedar Waxwing	---	---	S5B	T	Common
Setophaga pensylvanica	Chestnut-sided Warbler	---	---	S5B	S	Rare
Quiscalus quiscula	Common Grackle	---	---	S5B	X	Common
Geothlypis trichas	Common Yellowthroat	---	---	S5B	CF	Sparse
Phalacrocorax auritus	Double-crested Cormorant	---	---	S5B	X	Sparse
Sayornis phoebe	Eastern Phoebe	---	---	S5B	P	Sparse
Pipilo erythrophthalmus	Eastern Towhee	---	---	S4B	O	Rare
Dumetella carolinensis	Gray Catbird	---	---	S4B	S	Sparse
Myiarchus crinitus	Great Crested Flycatcher	---	---	S4B	T	Sparse
Larus argentatus	Herring Gull	---	---	S5B,S5N	X	Common
Troglodytes aedon	House Wren	---	---	S5B	T	Sparse
Charadrius vociferus	Killdeer	---	---	S5B,S5N	S	Rare
Setophaga magnolia	Magnolia Warbler	---	---	S5B	S	Rare
Zenaida macroura	Mourning Dove	---	---	S5	S	Rare
Cardinalis cardinalis	Northern Cardinal	---	---	S5	P	Sparse
Colaptes auratus	Northern Flicker	---	---	S4B	S	Sparse
Vireo olivaceus	Red-eyed Vireo	---	---	S5B	S/P	Sparse
Agelaius phoeniceus	Red-winged Blackbird	---	---	S4	FY	Common
Larus delawarensis	Ring-billed Gull	---	---	S5B,S4N	X	Common
Melospiza melodia	Song Sparrow	---	---	S5B	P/T	Common
Tachycineta bicolor	Tree Swallow	---	---	S4B	X	Sparse
Vireo gilvus	Warbling Vireo	---	---	S5B	S	Rare
Setophaga petechia	Yellow Warbler	---	---	S5B	S	Sparse
Vireo flavifrons	Yellow-throated Vireo	---	---	S4B	S	Rare

[1]Federal Species at Risk Act; [2]Ontario Endangered Species Act, 2007; [3]S-Rank is an indicator of commonness in the province of Ontario. A scale between 1 and 5, with 5 being very common and 1 being the least common; THR = Threatened, SC= Special Concern; "---" denotes no information or not applicable.

Breeding Bird Codes from Breeding Bird Atlas of Ontario (Cadman *et al.* 2007)

Observed

X Species observed in its breeding season (no breeding evidence)

Possible

Confirmed

NB Nest-building or excavation of nest hole by a species other than a wren or a woodpecker

H Species observed in its breeding season in suitable nesting habitat
S Singing male(s) present, or breeding calls heard, in suitable nesting habitat in breeding season

Probable

P Pair observed in suitable nesting habitat in nesting season
T Permanent territory presumed through registration of territorial song, or the occurrence of an adult bird, at the same place, in breeding habitat, on at least two days a week or more apart, during its breeding season.
D Courtship or display, including the interaction between a male and a female or two males, including courtship feeding or copulation
V Visiting probable nest site
A Agitated behaviour or anxiety calls of an adult
B Brood Patch on adult female or cloacal protuberance on adult male
N Nest-building or excavation of nest hole, except by a wren or a woodpecker

DD Distraction display or injury feigning
NU Used nest or egg shells found (occupied or laid within the period of the survey)
FY Recently fledged young (nidicolous species) or downy young (nidifugous species), including incapable of sustained flight
AE Adult leaving or entering nest sites in circumstances indicating an occupied nest
FS Adult carrying fecal sac
CF Adult carrying food for young
NE Nest containing eggs
NY Nest with young seen or heard

5.4.3.2 Bat Maternity Colonies Habitat Survey

Trees within the Study Area were also assessed for potential bat maternity roosts during ELC and vegetation surveys in 2017. The Study Area consisted mostly of young growth regenerating woodland, with tree maturity increasing towards the south. The majority of trees within each of the survey locations were found to be well under 25 cm DBH (young growth).

A single tree over 25 cm DBH with a suitable cavity was observed during the assessment (Trembling Aspen, 32 cm DBH, cavity observed ~33 feet from ground level) located near the development boundary. Therefore the snag density was very low (<10 snags/ ha) and did not meet the minimum criteria to be considered SWH. The overall health of trees in the Study Area was also observed to be good, as the trees themselves are young in age.

5.5 Species at Risk

During vegetation and ELC surveys, no Butternut trees were identified within the Study Area.

As discussed in **Section 5.4.3.2**, due to the lack of suitable habitat identified within the Study Area, availability of suitable habitat for SAR bats within the immediate vicinity of the Study Area, the likelihood for impacts to SAR bats as a result of development activities is low. Additionally, MNRF noted that “it is unlikely this habitat would meet MNRF ELC requirements for candidate bat habitat” (**Appendix C**).

The habitat requirements of each of the other SAR were crossed reference with habitats identified within the Study Area and no other SAR or SAR habitat was identified.

Potential impacts related to general wildlife are addressed further in **Section 8.1.4**.

5.6 Incidental Wildlife

Incidental wildlife species were not encountered during the field investigations within the Study Area.

6.0 Ecological Function

Natural features within and adjacent to the Study Area were investigated to determine their ecological function. At the larger landscape scale, the Study Area is part of a larger woodland identified as '*Blue Mountain Slopes Earth ANSI*' in the Green for Grey initiative to delineate a Natural Heritage System within Grey County (Map 7: Significant Natural Features) , Core Areas, as well as '*Significant Woodland*' on the Town of the Blue Mountains Constraint Mapping (2016). Although the woodland within the Study Area does not contain interior habitat, it contributes to the amount of interior habitat within the larger woodland and allows for connectivity to natural heritage features outside of the ANSI. Additionally, the base of the Nipissing Ridge can allow for wildlife movement between habitats.

The woodlands within the Study Area provides important habitat for wildlife. Terrestrial habitat was identified within the Study Area, as opposed to aquatic, providing habitat for general wildlife. During field surveys completed in 2017 it was determined that no SWH was present within the Study Area. Additionally, no habitat for endangered or threatened wildlife species was documented within the Study Area.

General ecological functions of natural features within the Study Area include prevention of erosion and runoff, facilitating hydrological and nutrient cycling, and improving localized soil, water and air quality. Within the proposed development area, treed areas provide limited cover, foraging, refuge, and nesting habitat for urban terrestrial wildlife.

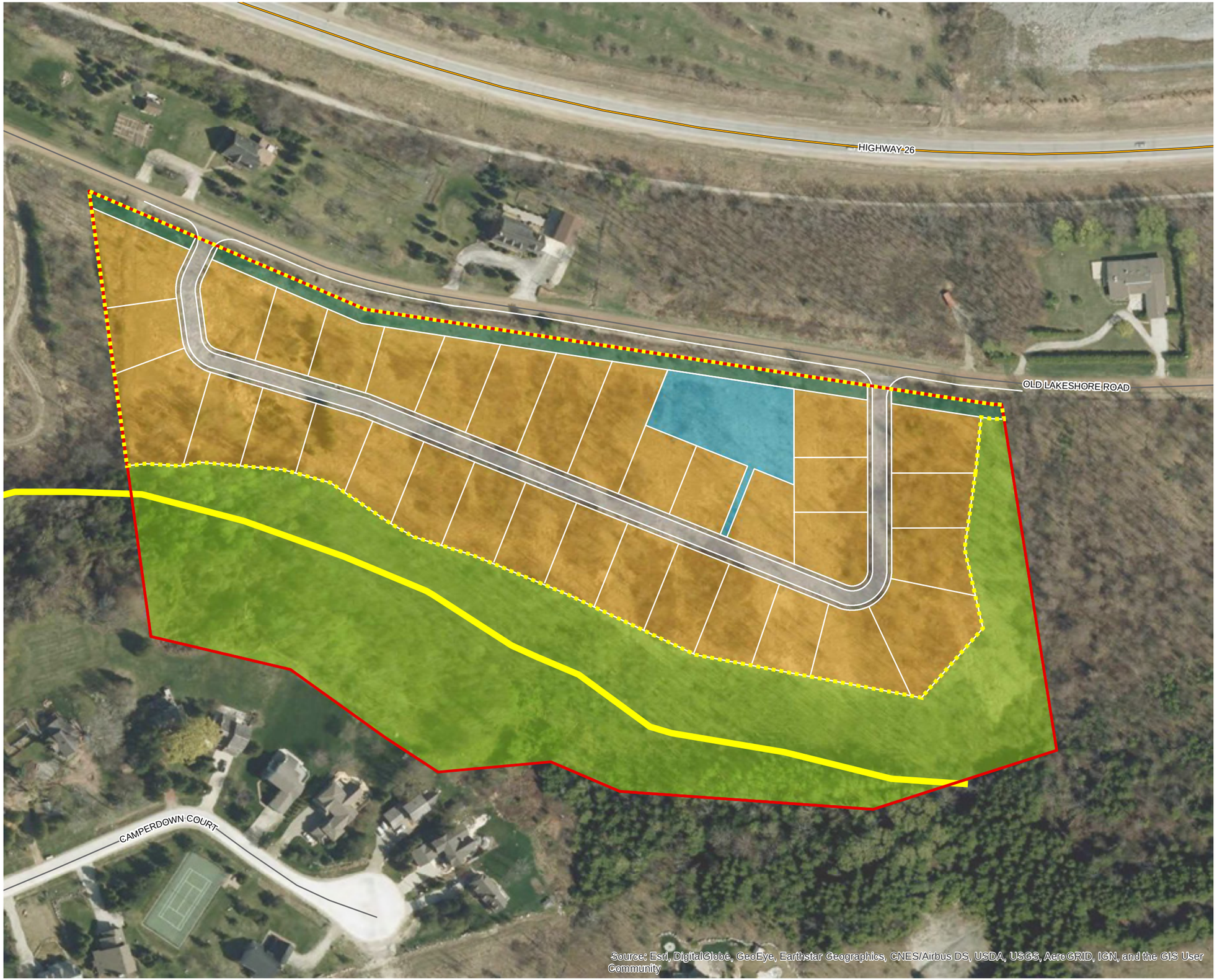
The connectivity and linkage function of the Study Area was analysed based on the existing natural features that are present on-site as well as in the nearby adjacent areas. The woodland within the Study Area is at the northwestern periphery of the woodland connecting to Georgian Bay to the Blue Mountain Slopes Earth ANSI; continuing southeast across multiple ANSI in Grey County (NRSI, 2017). Additionally, the base of the Nipissing Ridge has been identified as a wildlife corridor by the GSCA; documented to be utilized by white-tailed deer and bird species.

7.0 Description of Proposed Development

As previously mentioned, prior Draft Plan Approval had been granted by the Town for the development of this property. Due to delays in other planning and approvals, the Draft Plan approval lapsed; and, therefore, a new application is now required to be submitted to the Town for approval. The identical limit of natural feature and development has been carried over from the past approval. The project will include the development of the following:

- Thirty-four residential units;
- 10 m condominium road allowance;
- Open space (non-developable land);
- A walking trail (6 m); and,
- Stormwater Management Block.

Refer to **Figure 5** for the proposed development. Access to the development will be off of Old Lakeshore Road. Construction of the proposed development would include the removal of trees and vegetation from the development area, construction of buildings, placement of hardscape (parking areas, sidewalks, asphalt) and underground servicing for SWM and sanitary water. Landscaping may include, but is not limited to, the the insallation of sod, and tree plantings. The potential impacts of the proposed development and the recommended mitigation measures will be discussed in **Sections 8** and **9**.



CAMPERDOWN
TOWN OF BLUE MOUNTAINS
ENVIRONMENTAL IMPACT STUDY

PROPOSED DEVELOPMENT PLAN
FIGURE 5

- Study Area
- Proposed Site Plan
- Development Area
- Expressway / Highway
- Road
- Nipissing Ridge Slope (approx.)
- Tributaries to Georgian Bay (GSCA)
- Condo Development
- Stormwater Management
- Roadway
- Open Space (2.8 ha)
- Trailway

0 12.5 25 50 m SCALE 1:1,541

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY ESRI, GEOGRATIS, MNRF, GSCA
IMAGERY: October 2014

MAP CREATED BY: LK
MAP CHECKED BY: DL
MAP PROJECTION: NAD 1983 UTM Zone 17N

DILLON CONSULTING

PROJECT: 17-5859
STATUS: DRAFT
DATE: 2018-04-27

FILE LOCATION: \\dillon.ca\DILLON_DFS\Ottawa\Ottawa CAD\CAD\2017\175859 - Camperdown Blue Mountains ON\mxd\Figure5_ProposedDevAndImpacts.mxd

8.0 Impact Assessment

8.1 Direct Impacts

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

- Tree and vegetation removal;
- Diversion of surface water flows;
- Erosion and sedimentation into adjacent natural features (ANSI, Significant Woodland); and,
- Loss of/disturbance to general wildlife and wildlife habitat.

8.1.1 Tree and Vegetation Removal

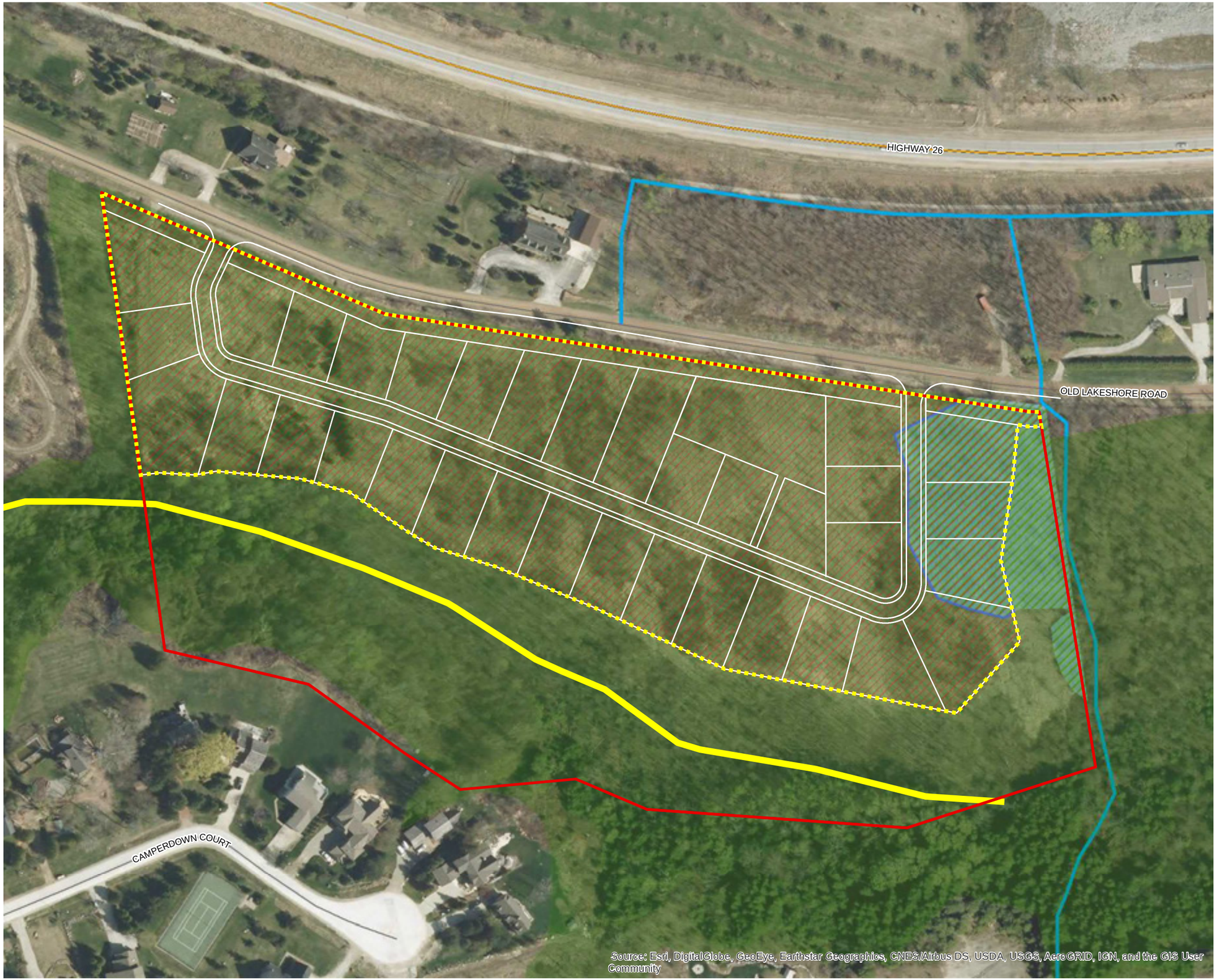
The proposed development plan indicates tree and ground vegetation removal limited to the development area as shown in **Figure 5** to facilitate grading and construction of the development. The proposed development was designed to generally avoid, and eliminate impacts, to natural features identified along the southern boundary of the Study Area (Nipissing Ridge). The development footprint is 58% of the total Study Area size. Additionally, the Open Space shown on **Figure 6** accounts for 42% of the total Study Area; which will be left to be undeveloped and providing a buffer to the Nipissing Ridge, and continue to provide a wildlife corridor/ linkage within the Significant Woodland

Tree removal would be proposed for the single detached residential dwellings, stormwater management pond, 10 m Condominium Road and the 6 m Trailway which will result in removal of approximately 3.81 ha of Significant Woodland; including approximately 0.33 ha of unevaluated wetland (**Figure 6**).

Tree removal will result in a reduction of tree cover, wildlife habitat loss, and alteration of soil conditions. On a site level, the impacts of tree and vegetation removal may include:

- Direct loss of trees;
- Negative edge effects include altered soil conditions and water availability;
- Alteration of microclimate;
- Loss of native seed banks; and,
- Physical injury, root damage, and compaction of trees not intended for removal that may result from construction operations.

Refer to **Section 9** for mitigation and enhancement opportunities.



CAMPERDOWN
TOWN OF BLUE MOUNTAINS
ENVIRONMENTAL IMPACT STUDY

POTENTIAL IMPACTS
FIGURE 6

- Study Area
- Proposed Site Plan
- Development Area
- Expressway / Highway
- Road
- Tributaries to Georgian Bay (GSCA)
- Nipissing Ridge Slope (approx.)
- Unevaluated Wetland as Delineated by Dillon
- Unevaluated Wetland Removal (0.33 ha)
- Significant Woodlands
- Significant Woodland Removal (3.81 ha)

0 12.5 25 50 m SCALE 1:1,500

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY ESRI, GEOGRATIS, MNRF, GSCA
IMAGERY: October 2014

MAP CREATED BY: LK
MAP CHECKED BY: DL
MAP PROJECTION: NAD 1983 UTM Zone 17N

DILLON CONSULTING

PROJECT: 17-5859
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FILE LOCATION: \\dillon.ca\DILLON_DFS\Ottawa\Ottawa CAD\CAD\2017\175859 - Camperdown Blue Mountains ON\mxd\Figure6_Impacts.mxd

8.1.2 Diversion of Surface Water Flows

A Hydrogeological Assessment (HA) was completed for the proposed development by Cambium Inc. in 2018. Results indicate that surface water flows northerly in sheet fashion towards Georgian Bay. Soils are predominately fine-grained with shallow deposits over bedrock. Results of the HA should be incorporated into future stormwater management or functional servicing plans, as required.

The soils identified within the Study Area are categorized as having 'good to imperfect' drainage which results in moderate infiltration. Surface water appears to flow northeast through the Study Area and crosses Old Lakeshore Road through existing concrete box culverts. Stormwater continues to travel east after crossing Old Lakeshore Road, crossing Highway 26 through existing culverts where it outlets to an existing watercourse and ultimately discharging into Nottawasaga Bay (C.C. Tatham & Associates Ltd., 2018).

Refer to **Section 9.1** and **Section 9.3** for mitigation measures related to surface flows.

8.1.3 Erosion and Sedimentation of Natural Features

Due to the anticipated reduction in infiltration rate post-development, there is the potential for swamp, woodlands, and adjacent watercourses to be impacted as a result of development if construction best management practices are not implemented. Potential impacts to these features may include, but are not limited to:

- Reduced water quality and degradation of downstream aquatic habitat (e.g. surface water flow into the watercourse along the eastern boundary of the Study Area); and,
- Disturbance to or loss of additional vegetation due to the deposition of dust and/or overland mobilization of soil.

Wetlands delineated within the Study Area were examined in light of the municipal policies and were determined not to be designated "other wetlands" within the OP nor identified on Appendix 1 of the OP.

Furthermore, wetlands described under Section B5.3 of the OP states "*The purpose of the wetlands designation is to recognize and protect Provincially Significant Wetlands*." In addition, within the table under Section B5.2.1, only two types of wetlands that are afforded protection, and protection of their adjacent lands: PSW and "Other Identified Wetlands". Therefore, wetlands within the Study Area are not identified as PSW or "Other Wetlands", and are not protected by policy.

Refer to **Section 9.3** for mitigation measures related to erosion and sedimentation within the Study Area.

8.1.4 Loss of and/or Disturbance to General Wildlife and Wildlife Habitat

Habitat for flora and fauna may be impacted due to vegetation clearing within the proposed development area. Habitat for flora and fauna may be impacted by construction in the following ways:

- Displacement, injury, or death resulting from contact with heavy equipment during clearing and grading activities;
- Disturbance to wildlife as a result of noise associated with construction activities, particularly during breeding periods;
- Sedimentation to adjacent woodlands from construction activities; and
- Loss of general wildlife habitat.

Accordingly, wildlife impact mitigation measures have been recommended for the development area and are included in **Section 9.4**.

8.2 Indirect Impacts

Indirect impacts are those that do not always manifest in the core development area but in the lands adjacent to the development. Indirect impacts can begin in the construction phase; however, they can continue post-construction. The potential indirect impacts of the proposed residential development include:

- Anthropogenic disturbance; and,
- Increased potential for invasion of non-native species.

8.2.1 Anthropogenic disturbance

Disturbance to local wildlife communities due to indirect impacts on the lands adjacent to the proposed development could result if left unmitigated. Noise, light, vibration and human presence are indirect impacts that can adversely influence the population size and breeding success of local wildlife. These effects are more pronounced when new development is introduced in non-urban areas. Lands within the development area are already disturbed with adjacent residential areas. Therefore, development of this small area is not anticipated to cause a negative impact on surrounding natural areas.

8.2.2 Colonization of Non-native and/or Invasive Species

Physical site disturbance may increase the likelihood that non-native and/or invasive flora species will be introduced to the surrounding vegetation communities. Invasive flora can establish in disturbed sites more efficiently than native flora and can then encroach into adjacent undisturbed areas. This type of colonization is currently occurring within the FODM7-2 community adjacent to Old Lakeshore Road. In order to maximize ecological function within the Study Area, removal of invasive species paired with the planting of native tree and shrub species is recommended.

Mitigation measures related to control of invasive species are addressed in **Section 9.1**.

9.0 Mitigation and Opportunities for Enhancement

Mitigation involves the avoidance or minimization of developmental impacts through good design, construction practices and/or restoration and enhancement activities. The feasibility of mitigation options has been evaluated based on the natural features within and adjacent to the Study Area. The impact assessment highlighted four potential direct impacts, which include tree and vegetation removal, diversion of surface water flows, potential loss of wildlife and wildlife habitat, and erosion and sedimentation of natural features. The development area will be limited to the boundaries shown on **Figure 6** with an approximately 2.8 ha of Open Space to protect the Nipissing Ridge and the wildlife corridor it provides.

A variety of mitigation techniques can be used to minimize or eliminate the above-mentioned impacts. These measures include a Stormwater Management Plan, Erosion and Sediment Control Plan and an Environmental Monitoring Plan. Each mitigation measure is introduced below. Detailed mitigation measures will be finalized in consultation with the GSCA and the Town as part of the preliminary and Detailed Design of the development.

9.1 Landscaping and Planting Plan

The proposed development plan will require the removal several trees, as well as shrubs, wildflowers and other vegetation within the Study Area. As a result, it is recommended that a Landscaping and Planting Plan be prepared for the proposed development to off-set vegetation removal as best possible and incorporate natural plantings within the development. Compensation plantings of trees are generally based on the number of removals required to facilitate construction of the development. The exact number of compensation plantings and locations may be determined through the tree inventory and Detailed Design of the development. The planting plan may include, but is not limited to; a mix of native deciduous and coniferous trees and shrubs throughout the development, and sodding. Additional tree compensation measures, if required, would be determined in consultation with the Town, and GSCA.

9.2 Stormwater Management Plan

A SWM Plan for the Study Area, outlined in C.C. Tatham & Associates Ltd. Preliminary Stormwater Management Report (March 2018), presents specific measures to address SWM strategies based on:

- Preliminary Servicing & Stormwater Management Report, the Camperdown East 1 Limited Residential Development (C.F. & Associates Inc., 2009);
- Ontario Regulation 151/06; Grey Sauble Conservation Authority (2010);
- The Blue Mountains Engineering Standards (2009); and,

- Stormwater Management Planning and Design Manual, Ministry of Environment (2003).

The existing design of the SWM facility was reviewed along with a report that documented the post-construction conditions. In accordance with the Camperdown East Limited Residential Development Preliminary Servicing and SWM Report (February 2009), the proposed drainage conditions will include multiple interceptor ditches along the south limit of the development. These ditches will intercept drainage into a series of ditch inlets catch basins (DICB) and will be directed to an end-of-pipe SWM facility via an internal storm sewer system (minor system) and overland flow through the roadway (major system). The on-site SWM facility will achieve a Level 1 'Enhancement' water quality treatment in the form of 80% total suspended solids (TSS) removed prior to off-site discharge.

Under post-development conditions, approximately 7.39 ha of water will drain to the proposed pond at the combined imperviousness level of 21.4%. The required permanent pool and extended detention volumes are approximately 230 m^3 and 110 m^3, respectively. Approximately 405 m^3 of the permanent pool and 1385 m^3 of extended detention will be provided which is well above the quality control requirements for Level 1 Enhancement Treatment (C.C. Tatham & Associates Ltd., 2018).

Control measures during construction activities will need to be realized to mitigate any adverse impacts on ecology, native vegetation, existing development and SWM facilities through soil erosion and discharges to the environment including sediment. These controls will include silt fencing and other measures to eliminate sediment discharge through filtration methods and/or temporary sediment collection ponds. Revegetation of disturbed areas should be completed at the earliest opportunity and sediment controls maintained until the revegetation has been established (Dillon, 2017).

9.3 Erosion and Sediment Control Plan

Construction activity, especially operations involving the handling of earthen material, dramatically increases the availability of sediment for erosion and transport by surface drainage. In order to mitigate the adverse environmental impacts caused by the release of sediment-laden runoff into receiving watercourses, measures for erosion and sediment control are required for construction sites. This is an extremely important component of land development that plays a large role in the protection of downstream watercourses and aquatic habitat.

Control measures must be selected that are appropriate for the erosion potential of the site and it is important that they are implemented and modified on a staged basis to reflect the site activities. Furthermore, their effectiveness decreases with sediment loading and therefore, inspection and maintenance are required.

In addition, an Erosion and Sediment Control Plan will be developed as part of Detailed Design for the proposed development. The plan may include, but is not limited to, measures such as installation of geotextile silt fences, rock check dams, ditch checks, mud mats, temporary sediment ponds, designated

topsoil stockpile areas, and cut-off swales and ditches to divert surface flows to the appropriate sediment control area; with provisions for re-vegetating the area as soon as construction is completed. More specifically, the plan may include the following measures:

- Standard duty silt fencing (OPSD 219.110) and/ or other equivalent erosion and sediment controls should be installed around the perimeter of the work area to clearly demarcate the development area and prevent erosion and sedimentation into adjacent habitats. Erosion and sediment control measures should be monitored regularly to ensure they are functioning properly and if issues are identified should be dealt with promptly;
- Stockpiling of excavated material should not occur outside the delineated work area. If stockpiling is to occur outside of this area, silt fencing should be used to contain any spoil piles to prevent sedimentation into adjacent areas. Further, stockpiling of excavated materials will not occur within 30 m of watercourses;
- A spill response plan should be developed and implemented as required; and
- The use of silt socks, dewatering ponds, etc. should be implemented to avoid sedimentation and erosion in adjacent areas as required. If dewatering requires more than 50,000 L of water to be pumped per day, appropriate permits must be obtained from the Ministry of Environment and Climate Change prior to the dewatering.

9.4 Wildlife Impact Mitigation Plan

Strategies to mitigate impacts for general wildlife prior to and during construction are proposed. These may include (but are not limited to):

- Clearing trees and vegetation outside the breeding bird season (April 1st to August 31st). Should any clearing be required during the breeding bird season, nest searches conducted by a qualified person must be completed 48 hours prior to clearing activities. If nests are found, work within 10 m of the tree should cease until the nest has fledged. If no nests are present, clearing may occur. This is in accordance with the federal *Migratory Birds Convention Act*;
- Schedule vegetation clearing and grading activities to avoid disturbance to sensitive wildlife species where possible;
- Where possible, maximize the distance of construction equipment used from the woodland edge to avoid disturbing wildlife;
- Limit the use of lighting where possible. Avoid light effects entering the woodland (eliminate light trespass) where possible;
- Installation of wildlife exclusion fencing and escape routes, which direct wildlife away from the construction area and to more suitable habitat (e.g. woodland corridor to the south and east of the Study Area);
- Visual monitoring for wildlife species and avoidance where encountered if possible;

- If necessary, have a qualified biologist monitor construction in the areas of potential wildlife habitat. If wildlife is found within the construction area they will be relocated to an area outside of the development into an area of appropriate habitat, as necessary;
- Construction crews working on site should be educated on local wildlife and take appropriate measures for avoiding wildlife; and
- Should an animal be injured or found injured during construction they should be transported to an appropriate wildlife rehabilitation centre.

9.4.1 Corridor Conservation and Wildlife Movement Strategy

The development footprint is limited to the northern portion of the Study Area; leaving 2.8 ha as open space within the southern portion to continue to provide and function as a wildlife corridor along the base of the Nipissing Ridge. The preservation of Significant Woodland within the southern portion of the Study Area will thereby maintain connectivity between natural features in the area.

9.5 Monitoring Plan

The Environmental Monitoring Plan (EMP) should be carried out through the duration of construction activities on-site to ensure that the erosion and sediment control measures operate effectively and to monitor the potential impact, if any, upon the natural environment. The duration of construction is defined as the period of time from the beginning of earthworks until the site is stabilized. Site stabilization is defined as the point in time when the roads have been paved, buildings have been built, lawns have been sodded and restoration plantings have been completed.

The EMP would consist of monitoring the erosion and sediment measures and the restoration/compensation plantings. Erosion and sediment control measures would be regularly monitored and they will require periodic cleaning (e.g. removal of accumulated silt), maintenance and/or reconstruction. Inspections of all of the erosion and sediment controls on the construction site should be undertaken by a certified sediment and erosion control monitor. If damaged control measures are found they should be repaired and/or replaced promptly. Site inspection staff and construction managers should refer to the *Erosion and Sediment Control Inspection Guide* (2008) prepared by the Greater Golden Horseshoe Area Conservation Authorities. This guide provides information related to the inspection reporting, problem response and proper installation techniques.

The EMP would be implemented during active construction periods in the development area with the following frequency:

- On a bi-weekly basis; and/or
- After every 10 mm or greater rainfall event.

Restoration planting and protected vegetation areas will require periodic monitoring to ensure that they are not impacted by adjacent development. Should any impacts be observed, necessary steps will be taken to ensure that the impacted vegetation is either restored or replaced.

10.0 Summary

This EIS report was prepared on behalf of 2220740 Ontario Inc. for the proposed development in Camperdown. The findings of the biophysical inventory, which consisted of secondary source reviews and comprehensive field studies, are presented in this EIS.

The EIS has been prepared in general accordance with the policies of GSCA, following the Terms of Reference established in consultation with the GSCA and agreed to through correspondence between Dillon and GSCA submitted on June 27, 2017.

A large portion of the Study Area consists of deciduous forest with small swamp communities on the east boundary and two coniferous forest communities along the southern boundary at the bottom of the Nipissing Ridge slope. A total of 86 plant species were documented during 2017 field studies; 59% were listed as native species and 41% are listed as introduced species in the province of Ontario. The mean Coefficient of Conservation value for the site was 1.89 out of a possible 10, indicating an altered landscape. A total of 31 common bird species were observed during field studies, none of which are considered area sensitive; therefore no significant wildlife habitat for birds is present within the Study Area.

The wetland community identified within the Study Area was found to be associated with the braided watercourse directly adjacent to the Study Area. However, the wetlands are not identified on Grey County or Blue Mountains OP as PSW or LSW, and therefore, have no protection under the OPs. At a landscape scale, natural features within the Study Area connect to features on adjacent properties (e.g. Blue Mountains Slopes Earth ANSI). Additionally, an area of 2.8 ha of Open Space is being left undeveloped to account for the Nipissing Ridge and the wildlife corridor function it currently provides.

The proposed development will require the removal of trees. Potential impacts of development may include tree and vegetation removal, diversion of surface water flows, sedimentation of forest areas, and loss of potential wildlife habitat. These impacts will be avoided or minimized by implementing the mitigation, restoration, and management measures described in this report. To ensure maintenance of existing surface water run-off patterns, a stormwater management plan is required as well as a Functional and Servicing Report to maintain existing surface water run-off patterns. In addition, an Erosion and Sediment Control Plan will be developed at Detailed Design to ensure the natural features located in proximity to the proposed development are not adversely affected as a result of construction activities. Lastly, an Environmental Monitoring Plan is recommended during construction to monitor impacts on the natural environment and ensure mitigation measures are implemented.

Appendix A

Terms of Reference

MEMO

TO: Andy Sorensen, Lake Grey Sauble Conservation Authority

FROM: Allen Benson, Dillon Consulting Limited

cc: Bill Ulicki, Romspen Investment Corporation
Darren Vella, Innovative Planning Solutions

DATE: June 27, 2017

SUBJECT: Environmental Impact Study Terms of Reference for the Camperdown property located at Part Lot 26, Concession 6, in the Town of the Blue Mountains.

OUR FILE: 17-5859

Introduction

Dillon Consulting Limited (Dillon) has been retained by 2220740 Ontario Inc. to undertake environmental studies for a proposed development at a property in Camperdown, legally described as Part Lot 26, Concession 6 in the Town of the Blue Mountains (referred to herein as the Study Area), depicted in **Figure 1** (attached). As such, 2220740 Ontario Inc. and Dillon are taking a pro-active approach to environmental-first planning and undertaking the appropriate environmental studies that are required to complete an Environmental Impact Study (EIS) and utilizing the results in the planning of this property.

In keeping with the general policies of the Grey Sauble Conservation Authority (GSCA), we have prepared the following Terms of Reference (TOR). Below, we present the TOR in a check-list format to ensure that the required work and/or studies are known and agreed to prior to the commencement of work, to facilitate a stream-lined and timely review process.

Terms of Reference

General Policies

☒ The EIS must be undertaken by a qualified professional in environmental or related sciences to the satisfaction of the GSCA.

☒ A visit to the site may be required by the GSCA prior to, during, or upon receipt of the EIS.

☒ The staking of significant natural features (i.e., woodlands, etc.) by GSCA may be required. Staking will generally occur between the end of May and the end of October. Any staking that occurs outside of this time may require a confirmatory visit between May and October.

Existing Conditions

☒ The existing conditions of the Study Area must be clearly described and clearly mapped on aerial photographs.

☒ Land use designations from applicable planning documents (i.e., Town of the Blue Mountains OP, Niagara Escarpment Plan) must be clearly described and the limits identified in the mapping.

☒ The EIS shall identify the components of the Natural Heritage System (NHS). The boundaries of the NHS shall be confirmed in the field by the proponent, mapped on a figure in the report and approved by GSCA and the planning authority.

☒ All designated environmental features (i.e., NHS, natural hazards, or natural features identified in the OPs) must be identified in the mapping and described in the report. These features include provincial or regional Areas of Natural and Scientific Interest (ANSIs), Provincially and Locally Significant Wetlands (PSWs and LSWs), Environmentally Significant Areas (ESAs), Significant Wildlife Habitat, Significant Valleylands, unevaluated wetlands, etc.

☒ The vegetation communities must be identified using the Ecological Land Classification (ELC) (Lee, et. al., second approximation codes) system to vegetation type, where possible. The communities must be identified in the mapping, using the appropriate ELC codes, as well as described in the text. As a component of the ELC, a plant list must be included in the report. The list must include an analysis for the presence of federal, provincial, regional and/or watershed rare, threatened or endangered species. This should include information from the MNRF district office and NHIC.

☒ A single-season (summer) plant survey is required and must be included in the report. The list must include an analysis for the presence of federal, provincial, regional and/or watershed rare, threatened or endangered species. This should include information from the MNRF district office and NHIC.

☒ The EIS requires breeding bird surveys. The surveys must be conducted during the breeding bird season at an appropriate time of day in appropriate weather conditions and by a qualified professional. A minimum of two surveys are required and they must follow generally accepted scientific protocols, not necessarily atlasing methods. A list of the breeding birds must be included in the report. The list must include an analysis for the presence of federal or provincial rare, threatened or endangered species. Watershed rarity status shall be determined in conjunction with GSCA.

☐ The EIS requires amphibian breeding surveys. The surveys must be conducted during the breeding amphibian season and by a qualified professional. For calling amphibians a minimum of three surveys are required. These surveys must span the full amphibian breeding season to ensure that the peak periods of activity for early and late breeding species are accounted for. For non-calling amphibians, appropriate methodology must be used. A list of the breeding amphibians must be included in the report. The list must include an analysis for the presence of federal, provincial, threatened or endangered species. Watershed rarity status shall be determined in conjunction with GSCA.

Note: No suitable habitat for amphibians was identified within or adjacent to the Study Area.

☒ A fisheries habitat assessment shall be provided due to the presence of suitable fish habitat. Existing data regarding fish species shall be obtained from GSCA and/or the MNRF and used for the fisheries assessment. The assessment shall include a description of watercourses or other fish habitat on and/or adjacent to the Study Area.

Note: A watercourse was identified flowing directly adjacent to eastern property boundary.

☐ The fisheries assessment will include community sampling through electrofishing and/or netting during the appropriate season, under a collection permit issued by the MNRF.

Note: Fish community sampling is not proposed. An information request was submitted to MNRF on June 5, 2017 requesting fisheries sampling information; and, at this time we kindly request any fisheries data relevant to the Study Area from GSCA be provided.

☒ Natural features identified through ELC as coniferous, deciduous or mixed wooded ecosites, including treed swamps, may be considered suitable bat maternity roost habitat(s). For the purposes of determining presence of Species at Risk bat(s), or lack thereof, and in accordance with MNRF Midhurst District 2017 protocol, suitable maternity roost trees will be identified and mapped during the leaf-off for the purposes of identifying acoustic monitoring locations. Following the completion of the snag density searches, further consultation will occur with the MNRF for the purposes of determining whether the activity is likely to impact Species at Risk bats and/or their habitat(s).

Note: ELC and snag density searches and have been completed, and through consultation with the MNRF Midhurst District, it was determined that no further surveys for bats are required.

☒ All incidental wildlife observed shall be reported on and listed in the report. The list must include an analysis for the presence of federal or provincial rare, threatened or endangered species. Watershed rarity status shall be determined in conjunction with GSCA.

☒ A functional assessment of the Study Area describing the ecology of the natural heritage features and functions (including components of the NHS) within and adjacent to the Study Area should be provided. The functional assessment may include ecological function, wetland functions, natural heritage features and landscapes, benefits of importance to humans, and corridors and linkages, as required.

☒ Mapping (at a minimum) shall consist of the following:

a) All mapping must have a title, figure number, north arrow, legend and scale or scale bar.
b) A site location map that provides the regional or watershed context of the Study Area.
c) The extent of the NHS and its components must be clearly demarcated on an air photo base, if applicable.
d) The locations of all watercourses and waterbodies and an indication of their flow.
e) Vegetation communities must be delineated and identified using ELC.

f) The location of any rare, threatened or endangered species and/or populations shall be identified, if appropriate.
g) The location of any important wildlife features (i.e., hibernacula, den, stick nest, etc.) shall be identified.

Evaluation of the Ecological Impacts

☒ An assessment of the potential impacts to the features and functions of natural areas and natural heritage features (including the NHS and linkages areas etc.) shall be identified and discussed.

☒ An assessment of the potential impact on wildlife at a local, watershed and provincial (if applicable) level shall be provided using the Ecoregion 6E criterion schedules (MNRF, 2015).

☒ In the case of significant natural features (as confirmed through field studies), the EIS must demonstrate that there is no development or site alteration within the feature with the exception of uses as specified in the OP and/or prior approvals. The EIS must determine appropriate buffers from significant natural features.

☒ If applicable, where natural features or natural vegetation communities are proposed for removal, the quantity of removal shall also be included.

Recommendations and Mitigation Measures

☒ Avoidance of any NHS feature is the preferred approach to mitigation unless otherwise specified in the OP and/or prior approvals.

☒ A Management Plan identifying how the adverse effects will be avoided or minimized over the construction period and the life of the undertaking will be included in the report. The Management Plan will establish the limits of buffers and setback adjacent to designated natural features to protect the attributes and ecological functions from potential impacts development.

☒ Where avoidance of a feature is not feasible or possible, mitigation approaches/techniques must be provided. These may include edge management plans, buffer plantings, fencing, low impact designs (LID), etc.

☒ In cases where a linkage area has been identified on a property, the EIS must demonstrate how it will be integrated into the proposed development plan.

☒ Recommendations for Best Management Practices during construction should be provided. This may include silt fencing, tree protection, fencing, identification of timing or seasonal constraints to construction or restoration, etc.

☒ If monitoring is required, the details of a monitoring program must be agreed to in writing by GSCA, planning authority and other parties.

Conclusions

The EIS will address the following:

☒ Conformity with the policies and requirements of the Town of the Blue Mountains and Grey County Official Plans.

☒ Conformity with the policies and requirements of other applicable planning documents (i.e., Niagara Escarpment Plan etc.).

☒ Conformity with the requirements of the GSCA.

Species at Risk

Should any Species at Risk or their habitat be identified during the EIS process and confirmed in the field, the MNRF will be notified and we will address any Species at Risk requirements as outlined in the *Endangered Species Act, 2007* under separate cover with MNRF. GSCA will be informed of MNRF approvals that are required.

Information Request

At this time we are requesting any of the following background information, if available:

- Watercourse/drain classifications and thermal stream classifications;
- Fish community information;
- Natural environment studies in and/or adjacent to the subject property;
- Regionally or locally significant/rare flora, fauna, vegetation communities;
- Any additional natural environment data you may have for the indicated area; and,
- GIS Mapping
  - Regulation limits,
  - Floodplain mapping.

We would to thank you for your time in establishing these Terms of Reference with us and look forward to working together with you on this and other projects as we move forward.

Please let me know if you have any questions.

Yours sincerely,

DILLON CONSULTING LIMITED

Allen Benson, B.Sc. (Hons), LEED AP
Associate
Project Manager

CAMPERDOWN
TOWN OF BLUE MOUNTAINS

PROJECT LOCATION
FIGURE 1

- Property Boundary
- Study Area
- Roads
- Watercourse

0 25 50 100 Metres

SCALE 1:7,000

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY ESRI & GEOGRATIS

MAP CREATED BY: PH
MAP CHECKED BY: WM
MAP PROJECTION: NAD 1983 UTM Zone 17N

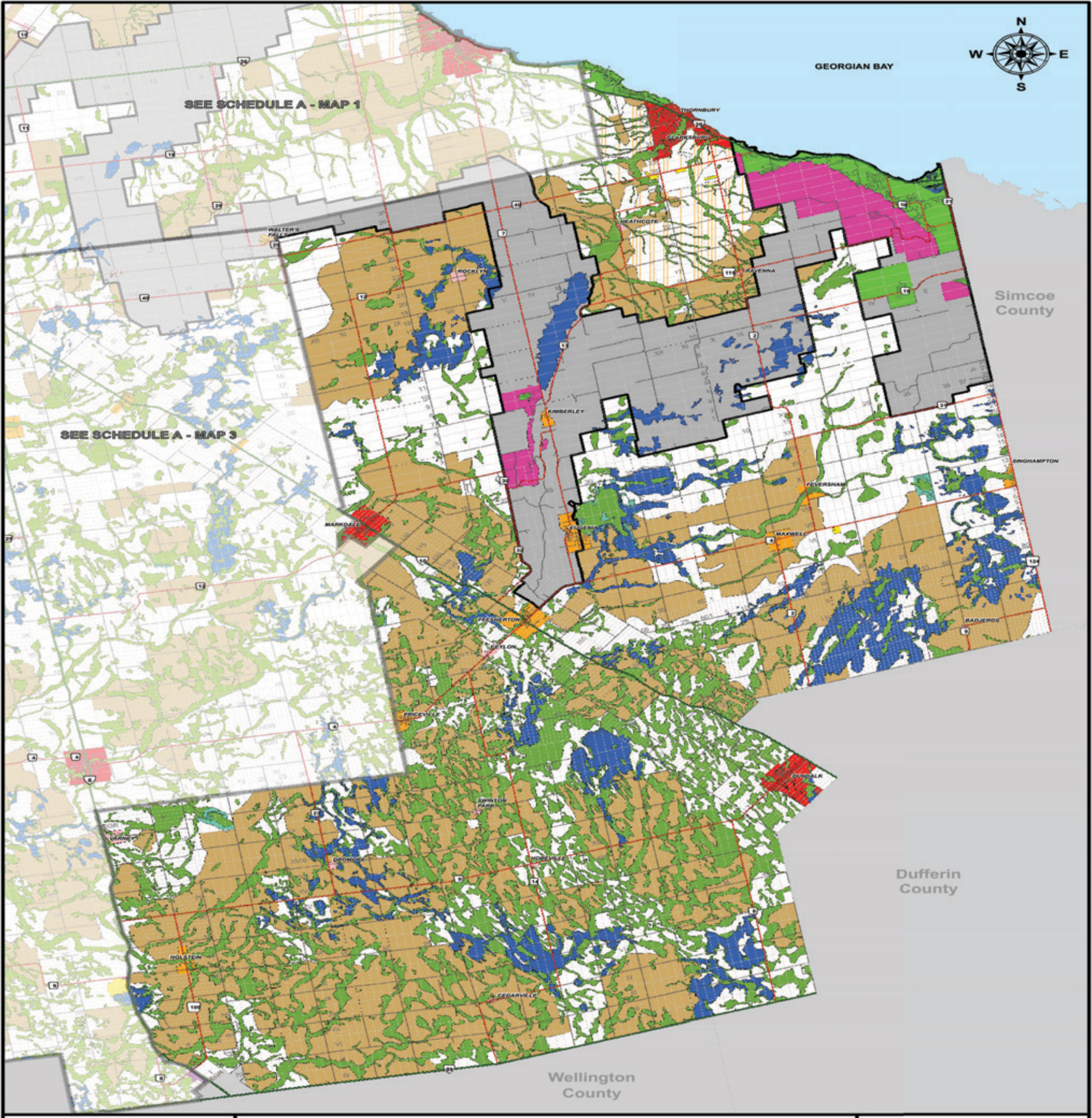
DILLON CONSULTING

STATUS: DRAFT
DATE: 2017-06-05

FILE LOCATION: G:\GIS\Temporary Folder\Campertown property.mxd

Appendix B

Background Mapping



Grey County

THE COUNTY OF GREY OFFICIAL PLAN

SCHEDULE A
Land Use Designations

MAP 2

LEGEND

- Provincial Highway
- County Road
- Local Road
- Seasonal Road
- Agricultural
- Special Agriculture
- Rural
- Primary Settlement Area *
- Secondary Settlement Area *
- Tertiary Settlement Area *
- Inland Lakes & Shoreline
- Recreational Resort Area
- Space Extensive Commercial
- Space Extensive Industrial
- Hazard Lands
- Provincially Significant Wetlands
- Niagara Escarpment Plan Boundary **
- Niagara Escarpment Development Control Area
- Escarpment Recreation Area

* *refer to Secondary Schedules for further detail.*

** *certain settlement areas within the Niagara Escarpment Plan Boundary may be subject to Development Control.*

SCALE 1: 95,000

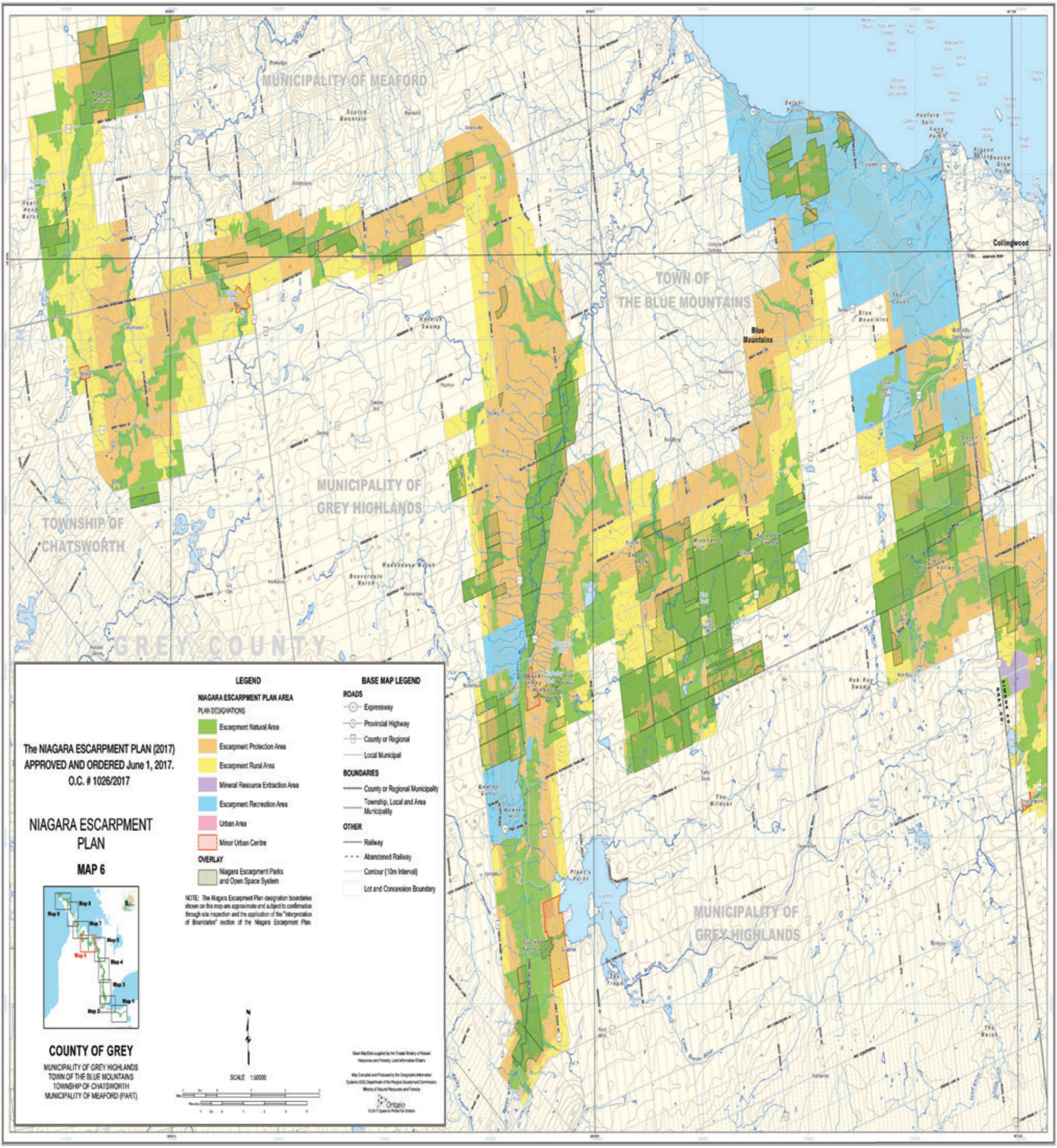
0 1,125 2,250 4,500 6,750 9,000 Meters

AUTHOR:	Grey County Planning and Development
FILE NAME:	GR_OP_SchedA_Map2east0K36.mxd
APPLICATION:	ArcMap
DATE:	Consolidated to June 25, 2013
PROJECTION:	UTM zone 17N / NAD83
SOURCE:	Teranet / Ontario Ministry of Natural Resources

INTERACTIVE MAP: maps.grey.ca
DOWNLOAD PDF: grey.ca

This map is for illustrative purposes only. Do not rely on this map as being a precise indicator of routes, location of features or surveying purposes. This map may contain cartographical errors or omissions.

County of Grey



The Blue Mountains Constraint Mapping Appendix 1

Designations

- 100 Year Flood Elevation
- Stream / River
- Aggregate Resource Area
- ANSI
- Deer Wintering Area
- Escarpment Plan Boundary
- Karst
- Mineral Resource Extraction
- Permanent Water Area
- Provincially Significant Wetlands
- Other Wetlands
- Sewage Treatment Plant Buffer
- Significant Woodlands

0 0.5 1 2 3 4 5 Kilometers

N W E S

Note: This Schedule forms part of the Official Plan and must be read and interpreted in conjunction with the text. The information depicted on this Schedule has been compiled from various sources.While every effort has been made to accurately depict the information, data/mapping errors may exist.

Download PDF: www.thebluemountains.ca

June 2016

TOWN OF THE BLUE MOUNTAINS

Deer Wintering Area

Heathcote

Ravenna

Subject to Special Study Area Policies in Section B3.7.6.16

Refer to Secondary Plan mapping

Map 7

Grey County Natural Heritage Systems Study

Significant Natural Features, Core Areas, and Linkages

Legend

- Grey County Boundary
- Grey County Settlement Area
- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse (CA)
- Intermittent Watercourse (CA)
- Waterbody (CA)
- Wetlands >= 2ha
- Provincially Significant Wetland (PSW)(MNRF)
- Significant Woodland (County)
- Significant Valleylands
- ANSI, Life Science
- Deer Yard (Stratum 1) and Deer Wintering Area (Stratum 2)
- Core Area
- Linkage

NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Ecologists

Note: Map layers were obtained from various sources as indicated and were not verified on the ground for accuracy. Mapping errors may be present. The GCNHSS recommends map refinements on a site specific basis be completed as needed.

Project: 1575
Date: January 6, 2017

NAD83 – UTM Zone 17
Scale: 40k/36"
1:365,000

0 2 4 6 8 10 Kms

Appendix C

Agency Communications

Grey Sauble Conservation

237897 Inglis Falls Road, R.R.#4, Owen Sound, ON N4K 5N6
Telephone 519.376.3076 Fax 519.371.0437 Email admin@greysauble.on.ca
www.greysauble.on.ca

November 8, 2010

Mr. Randy Scherzer, MCIP, RPP
Director of Planning and Development
County of Grey Planning and Development Department
595 -9th Ave East
Owen Sound ON
N4K 3E3

Dear Mr. Scherzer:

RE: Draft Plan of Condominium 42-CDM-2010-01
(2220740 Ontario Inc. c/o Wes Roitman), Part of Lot 26, Concession 6
Town of the Blue Mountains formerly Collingwood Township
Our File: P9169

The Grey Sauble Conservation Authority has reviewed the above noted application according to our mandate for Natural Hazards and the Memorandum of Agreement with the Town of The Blue Mountains. We offer the following comments.

Background
The subject lands have had a draft plan of subdivision approval for 12 lots on the lands now proposed for 30 condominium units and internal road system. Zoning By-law 2006-22 was passed to recognize residential development in the block proposed for condominium with frontage on the municipal road known as Old Lakeshore Road.

Site Description
The property is situated between Old Lakeshore Road and the glacial Lake Nipissing shoreline ridge. Vegetation on the site is dominated by deciduous species including ash, maple, ironwood, elm, white birch, balsam poplar among others. Eastern white cedar is located in the along portions of the ridge and a number of small plantings of white pine, and white spruce are located in the northwestern part of the site. The majority of the proposed development area has imperfect drainage with small pockets of poor drainage with cattails and red osier dogwood.

Three seasonal watercourses traverse the site that outlet to the road side ditch and two concrete box culverts under Old Lakeshore Road. The watercourses are intermittent in nature. The existing storm drainage on the site tends to flow in sheet fashion to these watercourses or to Old Lakeshore Road roadside ditch.
The watercourse at the east end of the property originates on the escarpment slope and flows through the Peaks Meadow development above the Nipissing ridge. This watercourse becomes braided towards Old Lakeshore Road and flow may infiltrate into observed holes in the soils. There is small wetland patch associated with this braided channel area in the vicinity of proposed lots 18, and 19. The watercourse in the middle of the property is not well defined but does outlet to a rock shoot along Old Lake Shore Road. The watercourse in the southwest portion of the site eventually discharges to Old shoreline road.

. . ./2

There is evidence of white tailed deer travel corridor along the base of slope and across the properties to the east and north.

GSCA Regulations
A portion of the subject property is affected by the conservation authority's Development, Interference with Wetlands, and Alteration to Shorelines and Watercourses Regulation (Ontario Regulation 151/06, effective May 4, 2006). The regulated area is associated with main watercourse flowing through the property and the glacial Lake Nipissing shoreline ridge. A permit is required from this office prior to development and/or site alteration within the affected area as outlined on the enclosed map.

Provincial Policy Statement
3.1 Natural Hazards
Natural hazards on the property include flood and erosion prone areas associated with the main watercourse on at the east end of the property and the slopes associated with the Nipissing Ridge. There is obviously water being conveyed across the site in sheet fashion and to the other two seasonal drainage features. The previous zoning by-law 2006-22 included a hazard zone on the property to preclude development along the ridge hazard area and the east watercourse. The proposal was to address drainage through the rest of the property through the stormwater management plan.
We are generally satisfied that natural hazards can be appropriately addressed through this process.
Additionally, the property is within the Special Policy Area of the Grey County Official Plan which may be indicative of potential karst topography and/or shallow soils over bedrock. During our recent site inspection, it was noted in the braided channel area of the east watercourse that cracks in the surface soils may be indicative of karst topography and should be further investigated.

2.1 Natural Heritage
According to our review of the previous application we did not note any provincially significant natural heritage features. We did however, recommend that a wildlife corridor be maintained along the base on the Nipissing ridge in accordance with section 2.3.3. of the Provincial Policy Statement. This wildlife corridor was primarily utilized for large mammals such as white tailed deer and a variety of bird species. The proposed hazard land/open space block does provide a corridor for some these species that may be utilized post development.

In reviewing breeding bird atlas data there are two rare species that were noted in this breeding bird atlas square during the last atlas data. The regionally rare Northern Parula (parula americana) and the recently listed threatened species the Bobolink (Dolichonyx oryzivorus). The site does provide potentially suitable habitat for these two species.

The application does not provide environmental impact study for the development as part of the application.

. . ./3

Stormwater Management
We have completed a preliminary review of the stormwater management plan and generally concur with the approach taken. As the regional storm for this watershed is the Timmins Storm of 1961, calculations for the regional storm should be included in the report and addressed to predevelopment levels.

Recommendations
Due to the increase density of housing in the residential area and the potential presence of rare species, we recommend that an environmental impact study be completed to assess breeding birds and amphibians on the site.

We also recommend that a hydrogeological study be completed to assess the presence or absence of karst topography in accordance with the Special Policy Area under the Grey County Official Plan.

Based on the above, we are prepared to recommend draft plan approval provided that the following conditions are included in the approval:

1) An environmental impact study is to be completed to the satisfaction of the Grey Sauble Conservation Authority. A detailed terms of reference for study should be developed to the satisfaction of the Grey Sauble Conservation Authority.
2) An hydrogeology report is to be completed to the satisfaction of the Grey Sauble Conservation Authority to assess karst topography on the site.
3) A tree retention plan is to be completed to the satisfaction of the Grey Sauble Conservation Authority.
4) That a detailed stormwater Management is to be completed to the satisfaction of the Grey Sauble Conservation Authority
5) The above noted reports are to be implemented through the subdivision agreement in acceptable wording to the Grey Sauble Conservation Authority.

If any questions should arise, please contact the undersigned.

Yours very truly,

Andrew Sorensen
Environmental Planner

enclosure
Cc Micheal Martin, Authority Town of the Blue Mtns.
David Finbow, Town of The Blue Mountains
Glen Broll, Glen Scnarr and Associates Inc.
Judy Rhodes Munk, NEC

GSCA:Regulation of Development, Interference with Wetlands, and Alteration to Shorelines and Watercourses Regulation (Ontario Regulation 151/06)

Subject Properrty
ON Regulation 151/06
Hazard Zone

N

Scale = 1:2500

Draft Plan of Condominium 42-CDM-2010-01
Part of Lot 26, Concession 6
Town of The Blue Mountians
formerly Township of Collingwood
File: P9169

Friday, November 05, 2010

Grey Sauble Conservation

Projection: UTM Default
Datum: North American 1983 (mean for Canada)

LeClair, Dayna <dleclair@dillon.ca>

Fwd: Bat Searches at Camperdown

Moore, Whitney <wmoore@dillon.ca> Mon, Nov 6, 2017 at 12:02 PM
To: Dayna LeClair <dleclair@dillon.ca>

Whitney Moore B.Sc. (Hons.)
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177 Colonnade Rd South, Suite 101
Ottawa, Ontario, K2E 7J4
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WMoore@dillon.ca
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Vacation alert: November 10th- 24th

-------- Forwarded message --------
From: **Eplett, Megan (MNRF)** <Megan.Eplett@ontario.ca>
Date: Thu, Jun 22, 2017 at 3:53 PM
Subject: RE: Bat Searches at Camperdown
To: "Moore, Whitney" <wmoore@dillon.ca>
Cc: Allen Benson <abenson@dillon.ca>, "Shirley, Brent (MNRF)" <brent.shirley@ontario.ca>

Hi Whitney,

I reviewed the information your provided below regarding the site at Camperdown. As the area where development is proposed is mostly thicket habitat it is unlikely this habitat would meet MNRF ELC requirements for candidate bat habitat and therefore we will not require further surveys for bats within the proposed development area. As you have indicated below mitigation measures (i.e. timing) should be implemented for site clearing in order to prevent any incidental impacts to wildlife. Should the development proposal change and the woodland area to the south will be impacted there may be a requirement to conduct snag surveys to assess the potential for habitat in this area.

In regards to other species at risk that may be present on site and require further assessment to confirm presence/ absence, there is the potential for Butternut (END), Golden-winged Warbler (SC), Eastern Wood-pewee (SC), Wood Thrush (SC), Snapping Turtle (SC) if suitable habitat exists on site. Special concern species are not afforded habitat protection under the ESA so mitigation for these species would be consistent with what you have proposed below. If there are any Butternut confirmed on site and they would need to be removed to accommodate the development further consultation with MNRF will be required.

In your voicemail you asked about snakes and potential snake surveys in this area. MNRF does not have any occurrence of species at risk snakes in the area or reason to believe they would be present on site therefore snake surveys will not be necessary for this project.

Thanks,

Megan

Megan Eplett

A/ Management Biologist | Ministry of Natural Resources and Forestry | Midhurst District

2284 Nursery Road, Midhurst, Ontario, L9X 1N8 | ☎ (705) 725-7513 | megan.eplett@ontario.ca

From: Moore, Whitney [mailto:wmoore@dillon.ca]
Sent: June-06-17 2:39 PM
To: Eplett, Megan (MNRF)
Cc: Allen Benson
Subject: Bat Searches at Camperdown

Hi Megan,

Snag/cavity density searches were performed at a property referred to as 'Camperdown', located in the Town of the Blue Mountains, on May 30th, following the Midhurst District Maternity Roost Surveys and Treed Habitats (April, 2017). Ten survey locations were randomly placed within the property boundaries, and the entire site was walked. The GPS coordinates can be found in the attached kmz file.

The Study Area consisted mostly of thicket and scrubland, with tree density increasing towards the south (outside of the development area-see figures attached). The highest density of trees was found in the area designated as "Open Space" in the Concept Plan, i.e., will be protected throughout the development process. The dominant vegetation (upper to mid canopy) consisted of deciduous trees and shrubs, with sporadic observations of White Cedar (*Thuja occidentalis*). Ash species, Trembling Aspen (*Populus tremuloides*), Red Osier Dogwood (*Cornus sericea*) and Grey Dogwood (*Cornus racemosa*), were found to be in the highest abundance. Common Buckthorn (*Rhamnus cathartica*), ironwood, willow species, elm, White Pine (*Pinus strobus*), Manitoba Maple (*Acer negundo*) and Black Cherry (*Prunus serotina*) were also observed on site in relatively low abundance. Ground cover primarily consisted of grass species, goldenrod species and Poison Ivy (*Toxicodendron radicans*). The vast majority of trees within each of the survey locations were found to be well under 25 cm DBH (young growth).

A single tree over 25 cm DBH with a suitable cavity was observed during the assessment at waypoint #895 (Trembling Aspen, 32 cm DBH, cavity observed ~33 feet from ground level)(located near the development boundary). Therefore the snag density was very low (<10 snags/ ha).The overall health of trees in the Study Area was also observed to be good, as the canopy is open and the trees themselves area young in age.

Photos of the site are attached. I have also attached a google street view shot from Lakeshore Road showing the young age of the woodlands within the development area.

Mitigation measures related to birds, bats, and other wildlife will be incorporated into our EIS report to minimize potential impacts as a result of development. These may include (but are not limited) wildlife sweeps prior to tree removal and/or removal of trees outside of active breeding/ maternity periods.

Due to the lack of suitable habitat identified within the Study Area, availability of suitable habitat for SAR bats (expansive woodland areas) within the immediate vicinity of the Study Area, and implementation of mitigation measures related to wildlife and wildlife habitat at the EIS stage, the likelihood for impacts to SAR bats as a result of development activities is low. Therefore, bat acoustic monitoring should not be required.

Thanks very much,

Whitney

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Please consider the environment before printing this email

Appendix D

Site Photos

Photo 1

June 12, 2017

Rural Residential (CVR_R)

Photo 2

June 12, 2017

Rural Residential (CVR_R)

Photo 3

June 12, 2017

Green Ash-Hardwood Lowland Deciduous Forest (FODM7-2)

Photo 4

June 12, 2017

Green Ash-Hardwood Lowland Deciduous Forest (FODM7-2)

Photo 5

June 12, 2017

Green Ash-Hardwood Lowland Deciduous Forest (FODM7-2)

Photo 6

June 12, 2017

Fresh-Moist Poplar Deciduous Forest (FODM8-1)

Photo 7

June 12, 2017

Fresh-Moist Poplar Deciduous Forest (FODM8-1)

Photo 8

June 12, 2017

Fresh-Moist Poplar Deciduous Forest (FODM8-1)

Photo 9

June 12, 2017

Green Ash Mineral Deciduous Swamp (SWDM2-2)

Photo 10

June 12, 2017

Green Ash Mineral Deciduous Swamp (SWDM2-2)

Appendix E

Vegetation Inventory

Scientific Name	Common Name	Federal SARA Registry Status	Ontario ESA Species At Risk List Status	Provincial Conservation Rank (SRank)	CC	CW
Ulmus americana	American Elm	---	---	S5	3	-2
Populus balsamifera	Balsam Poplar	---	---	S5	4	-3
Waldsteinia fragarioides	Barren Strawberry	---	---	S5	5	5
Medicago lupulina	Black Medic	---	---	SNA	---	1
Pinus nigra	Black Pine	---	---	SNA	---	-5
Juglans nigra	Black Walnut	---	---	S4	5	3
Typha latifolia	Broad-leaved Cattail	---	---	S5	3	-5
Circaea canadensis	Broad-leaved Enchanter's Nightshade	---	---	S5	3	3
Centaurea jacea	Brown Knapweed	---	---	SNA	---	5
Poa compressa	Canada Bluegrass	---	---	SNA	0	2
Solidago canadensis var. *canadensis*	Canada Goldenrod	---	---	S5	1	3
Cirsium arvense	Canada Thistle	---	---	SNA	---	3
Cichorium intybus	Chicory	---	---	SNA	---	5
Prunus virginiana	Choke Cherry	---	---	S5	2	1
Galium aparine	Cleavers	---	---	S5	4	3
Toxicodendron radicans	Climbing Poison Ivy	---	---	S5	5	-1
Rhamnus cathartica	Common Buckthorn	---	---	SNA	---	3
Taraxacum officinale	Common Dandelion	---	---	SNA	---	3
Asclepias syriaca	Common Milkweed	---	---	S5	0	5
Rubus idaeus ssp. *idaeus*	Common Red Raspberry	---	---	SNA	---	5
Phragmites australis ssp. *americanus*	Common Reed	---	---	S4?	---	---
Hypericum perforatum	Common St. John's-wort	---	---	SNA	---	5
Phleum pratense	Common Timothy	---	---	SNA	---	3
Achillea millefolium	Common Yarrow	---	---	SE	---	3
Carex cristatella	Crested Sedge	---	---	S5	3	-4
Rumex crispus	Curly Dock	---	---	SNA	---	-1
Dipsacus laciniatus	Cut-leaf Teasel	---	---	SNA	---	5
Hesperis matronalis	Dame's Rocket	---	---	SNA	---	5
Populus deltoides ssp. *deltoides*	Eastern Cottonwood	---	---	S5	4	-1
Solidago altissima ssp. *altissima*	Eastern Late Goldenrod	---	---	S5	1	3

Scientific Name	Common Name	Federal SARA Registry Status	Ontario ESA Species At Risk List Status	Provincial Conservation Rank (SRank)	CC	CW
Thuja occidentalis	Eastern White Cedar	---	---	S5	4	-3
Pinus strobus	Eastern White Pine	---	---	S5	4	3
Inula helenium	Elecampane	---	---	SNA	---	5
Larix decidua	European Larch	---	---	SNA	---	5
Equisetum arvense	Field Horsetail	---	---	S5	0	0
Crataegus succulenta	Fleshy Hawthorn	---	---	S5	4	5
Dipsacus fullonum	Fuller's Teasel	---	---	SE5	---	5
Asparagus officinalis	Garden Asparagus	---	---	SNA	---	3
Lotus corniculatus	Garden Bird's-foot Trefoil	---	---	SNA	---	1
Alliaria petiolata	Garlic Mustard	---	---	SNA	---	0
Euthamia graminifolia	Grass-leaved Goldenrod	---	---	S5	2	-2
Fraxinus pennsylvanica	Green Ash	---	---	S4	3	-3
Salix eriocephala	Heart-leaved Willow	---	---	S5	4	-3
Geranium robertianum	Herb-Robert	---	---	S5	---	5
Viburnum opulus ssp. *trilobum*	Highbush Cranberry	---	---	S5	---	---
Agrimonia gryposepala	Hooked Agrimony	---	---	S5	2	2
Poa pratensis ssp. *pratensis*	Kentucky Bluegrass	---	---	S5	0	1
Acer negundo	Manitoba Maple	---	---	S5	0	-2
Viburnum acerifolium	Maple-leaf Viburnum	---	---	S5	6	5
Rosa multiflora	Multiflora Rose	---	---	SNA	---	3
Typha angustifolia	Narrow-leaved Cattail	---	---	SNA	3	-5
Galium boreale	Northern Bedstraw	---	---	S5	7	0
Picea abies	Norway Spruce	---	---	SNA	---	5
Dactylis glomerata	Orchard Grass	---	---	SNA	---	3
Leucanthemum vulgare	Oxeye Daisy	---	---	SNA	---	5
Petasites frigidus var. *palmatus*	Palmate Coltsfoot	---	---	S5	8	-3
Betula papyrifera	Paper Birch	---	---	S5	2	2
Lolium perenne	Perennial Ryegrass	---	---	SNA	---	3
Lythrum salicaria	Purple Loosestrife	---	---	SNA	---	-5
Salix discolor	Pussy Willow	---	---	S5	3	-3
Cornus sericea ssp sericea	Red-osier Dogwood	---	---	S5	2	-3
Phalaris arundinacea	Reed Canary Grass	---	---	S5	0	-4

Scientific Name	Common Name	Federal SARA Registry Status	Ontario ESA Species At Risk List Status	Provincial Conservation Rank (SRank)	CC	CW
Vitis riparia	Riverbank Grape	---	---	S5	0	-2
Carex rosea	Rosy Sedge	---	---	S5	5	5
Schoenoplectus tabernaemontani	Soft-stemmed Bulrush	---	---	S5	5	-5
Dryopteris carthusiana	Spinulose Wood Fern	---	---	S5	5	-2
Rhus hirta	Staghorn Sumac	---	---	S5	1	5
Acer saccharum	Sugar Maple	---	---	S5	4	3
Ranunculus acris	Tall Buttercup	---	---	SNA	---	-2
Lonicera tatarica	Tartarian Honeysuckle	---	---	SNA	---	3
Parthenocissus inserta	Thicket Creeper	---	---	S5	3	3
Populus tremuloides	Trembling Aspen	---	---	S5	2	0
Myosotis scorpioides	True Forget-me-not	---	---	SNA	---	-5
Vicia cracca	Tufted Vetch	---	---	SNA	---	5
Parthenocissus quinquefolia	Virginia Creeper	---	---	S4?	6	1
Picea glauca	White Spruce	---	---	S5	6	3
Melilotus albus	White Sweet-clover	---	---	SNA	---	3
Prunus serotina	Wild Black Cherry	---	---	S5	3	3
Ribes americanum	Wild Black Currant	---	---	S5	4	-3
Daucus carota	Wild Carrot	---	---	SNA	---	5
Anthriscus sylvestris	Wild Chervil	---	---	SNA	---	5
Fragaria virginiana	Wild Strawberry	---	---	S5	2	1
Equisetum sylvaticum	Woodland Horsetail	---	---	S5	7	-3
Fragaria vesca	Woodland Strawberry	---	---	S5	4	4
Geum aleppicum	Yellow Avens	---	---	S5	2	-1
Solidago flexicaulis	Zigzag Goldenrod	---	---	S5	6	3

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