



**Scoped Environmental Impact Study
452 Raglan St., Town of Collingwood
(IndigO2)**

Prepared for:
Eden Oak (Raglan) Inc.

Prepared by:
Azimuth Environmental
Consulting, Inc.

December 2021

AEC 17-169



Environmental Assessments & Approvals

December 17, 2021

AEC 17-169

Eden Oak (Raglan) Inc.
1443 Hurontario St.
Mississauga ON L5G 3H5

Attention: Romas Kartavicius, President

Re: **Scoped Environmental Impact Study (IndigO2)**
452 Raglan St., Town of Collingwood, County of Simcoe

Dear Mr. Kartavicius:

As requested, Azimuth has updated its 2018 Environmental Impact Study based on input and review comments from the Town of Collingwood and the Nottawasaga Valley Conservation Authority in order to assess potential impacts associated with the updated development concept associated with the abovementioned property.

Should you have any questions or wish to discuss our findings and recommendations in greater detail, please do not hesitate to contact us directly.

Yours truly,

AZIMUTH ENVIRONMENTAL CONSULTING, INC.

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Terrestrial Ecologist

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1.0 INTRODUCTION

Azimuth Environmental Consulting, Inc. (Azimuth) was retained by Eden Oak (Raglan) Inc., to undertake a Scoped Environmental Impact Study (EIS) for the proposed development of a residential subdivision. The property is located at 452 Raglan St. on Part of Lot 40, Concession 8 within the Town of Collingwood (Town). Azimuth prepared an EIS in 2018 for a previous owner and development concept. The 2018 EIS was reviewed by the Nottawasaga Valley Conservation Authority (NVCA). In 2021, a pre-consultation meeting was held on May 12, 2021 between the Town, NVCA, Eden Oak (Raglan) Inc. and the project's consulting team. It was concluded that in order to assess the potential impacts associated with the new development concept to the identified natural heritage features and in order to support the application for the proposed Zoning By-law Amendment and Draft Plan of Subdivision, an updated EIS would be required.

The updated EIS is intended to identify the candidate significant natural heritage features present on the property and address potential impacts to the identified natural heritage features. Further, recommendations are provided to ensure avoidance and mitigation of potential impacts wherever feasible.

2.0 PLANNING CONTEXT

In the following sections we summarize the range of planning policies and regulations related to natural heritage that apply to the proposed development for the purpose of the Scoped EIS.

2.1 Provincial Policy Statement (2020)

The Provincial Policy Statement (PPS; MMAH, 2020) outlines policies related to natural heritage features (Section 2.1). Ontario's *Planning Act*, 1990 requires that planning decisions shall be consistent with the PPS. According to the PPS, development and site alteration shall not be permitted in:

- *Significant wetlands* in Ecoregions 5E, 6E and 7E; and
- *Significant coastal wetlands*.

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

- a) *significant wetlands* in the Canadian Shield north of Ecoregions 5E, 6E; and 7E;



- b) *significant woodlands* in Ecoregions 6E; and 7E;
- c) *significant valleylands* in Ecoregions 6E; and 7E;
- d) *significant wildlife habitat*;
- e) *significant areas of natural and scientific interest (ANSI)*; and
- f) *coastal wetlands* in Ecoregions 5E, 6E; and 7E that are not subject to policy 2.1.4(b)

It is ultimately the responsibility of the Province and/or the Municipality to designate areas identified within Section 2.1.4 and 2.1.5 of the PPS as "significant".

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

Furthermore, under Section 2.1.8 of the PPS, no development and site alteration will be permitted on lands adjacent to natural heritage features and areas identified in policies 2.1.4, 2.1.5 and 2.1.6 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated there will be no negative impacts on the natural features and ecological functions..

2.2 Endangered Species Act, 2007

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

The various schedules of the *ESA* included under *Ontario Regulation (O. Reg.) 230/08* identify Species at Risk (SAR) in Ontario. These include species listed as Extirpated, Endangered, Threatened and Special Concern. As noted above, only species listed as Endangered and Threatened receive protection from harm and destruction to habitat on which they depend. Species designated as Special Concern may receive protection under the Significant Wildlife Habitat provisions of the PPS.

2.3 Federal Fisheries Act

On August 28, 2019, provisions of the *Fisheries Act* came into force that included new protections for fish and fish habitat in the form of standards, codes of practice, and guidelines for projects near water. The *Act* provides protection against the "death of fish, other than by fishing", (Section 34.4(1)) and the "harmful alteration, disruption or



destruction of fish habitat”, (Section 35(1)), otherwise known as HADD.

If the death of fish, and/or HADD is likely to result from a project, the project will require an authorization from Fisheries and Oceans Canada (DFO) as per Paragraph 34.4(2)(b) or 35(2)(b) of the *Fisheries Act* Regulations. The fish and fish habitat protection provisions of the *Fisheries Act* are documented in the Fish and Fish Habitat Protection Policy Statement, which outlines how DFO will implement these provisions. The process of fisheries review is currently being revised as DFO unveils codes of practice. In the meantime, projects are being reviewed to determine potential impacts to fish and fish habitat, requirements for mitigative strategies to eliminate impacts, and determine approval requirements. Projects that take place near or in water have the potential to impact fish and fish habitat, and may require a permit from DFO.

2.4 Town of Collingwood (January 2019)

According to Schedule A: Land Use Plan within the Town’s Official Plan (OP), the property is designated as Residential and Environmental Protection (EP) (Appendix A). As per the Town’s OP, the Residential designation provides for a variety of housing opportunities and associated uses. The policies related to Residential land use are outlined in Section 4.3 of the Town’s OP.

Schedule B: Environmental Protection – Natural Heritage Resource Areas further identifies the EP lands as Category 1 Valleylands. Development is prohibited within Category 1 Environmental Protection lands. Fish habitat has been identified within the watercourse (*i.e.*, Pretty River) that traverses through the property (Appendix A).

Permitted uses within EP lands are outlined within Section 4.1.3 of the Town’s OP but are generally limited to conservation uses, public works/uses required for flood or erosion control or passive public recreation (*i.e.* trails), or public/private road, or public/private utility.

Development criteria for Adjacent Lands are found in Section 4.1.3.12.2 whereby no development shall be permitted on adjacent lands within 50 metres (m) of Category 1: Valleyland, Woodland or Fish/Nursery Habitat unless the proposed method of remediating the potential impacts of such development on the adjacent resources are satisfactory to the Town and the NVCA. This shall be demonstrated through the preparation of an EIS.

As per Section 4.1.3.13, naturally vegetated buffers, generally extending a minimum of 30m from the edge of Category 1 and 2 EP lands, shall be encouraged. The precise



nature of the buffers and their dimensions shall be determined on a site-by-site basis through the findings of an EIS.

2.5 Nottawasaga Valley Conservation Authority

The property is located within the jurisdiction of the NVCA, which administers the Regulation of Development, Interference with Wetlands and Alteration to Shorelines and Watercourses (O. Reg. 172/06) made under the *Conservation Authorities Act*, 1990. Lands regulated under O. Reg. 172/06 are contained within the property; therefore, the proposed development is subject to NVCA approval (Appendix B).

3.0 STUDY APPROACH

A combination of field investigations and searches of background information was used to fulfill objectives of the EIS. Azimuth undertook the following activities for this study to satisfy the informational requirements of the Town and NVCA.

3.1 Study Area

The "property" refers to the entire assessment parcel on which development is being proposed (Figure 1). The property is located in Ecoregion 6E in the Blue Mountain Subwatershed and is approximately 9.02 hectares (ha) in size.

This study refers to the property in addition to the 'adjacent lands', which include lands directly adjacent to the perimeter of the property and those lands within 120m of the property. This is consistent with the recommendations within the Natural Heritage Reference Manual (MNR, 2010). Adjacent lands may be pertinent when certain natural heritage features and functions are dependent on the contiguous natural cover beyond the boundaries of the property.

3.2 Background Data

Background information review for this EIS report included data from:

- Aerial images (Google, VuMap);
- Ministry of Northern Development, Mines, Natural Resources and Forestry's (NDMNRF) Natural Heritage Information Centre (NHIC) Make-A-Map: Natural Heritage Areas application (2021a)
- Atlas of the Breeding Birds of Ontario (OBBA);
- Ministry of Environment, Conservation and Parks' (MECP) SAR in Ontario list
- NDMNRF Land Information Ontario (2021b);
- NVCA Blue Mountain Subwatershed Health Check (2013);
- DFO Aquatic SAR Mapping (2021);



- Ontario Nature – Ontario Reptile and Amphibian Atlas;
- Dobbyn, J. (1994) – Atlas of the Mammals of Ontario;
- Township of Collingwood Official Plan (January, 2019); and
- NVCA Interactive Mapping [website].

3.3 Scope of Work

In 2017, Azimuth consulted with NVCA regarding the required scope of work for the EIS and confirmed the scope for the 2021 EIS Update (Appendix B). As part of the previous application, Azimuth completed the following scope of work for the EIS:

- Obtained background information related to the natural heritage features and wildlife species identified within the Study Area;
- Evaluated existing vegetation communities using Ecological Land Classification (ELC) for Southern Ontario (Lee *et al.* 1998);
- Conducted a single evening amphibian call survey and complete a search for potential amphibian breeding habitat (May, 2017);
- Conducted one in season vegetation survey including a search for Butternut (June, 2017);
- Conducted a single dawn breeding bird survey (June, 2017);
- Assessed the existing structure (residence) for potential to provide SAR habitat (*i.e.*, bats, Barn Swallow);
- Conducted a single aquatic habitat assessment to characterize aquatic features including fish habitat (October, 2017);
- Conducted a site walk with NVCA to confirm the top-of-bank and the dripline of the southern woodlot (November, 2017); and
- Recorded other wildlife observations and assessed wildlife habitat function of the property.

Subsequent to the submission of the January 2018 EIS, Butternut Health Assessments (BHA) were completed on the identified Butternut individuals on the property.

As part of the 2021 EIS update Azimuth completed the following:

- Utilized existing data collected throughout the 2017 field season;
- Conducted a single site visit during the growing season (August, 2021) to confirm the environmental conditions of the property which included a search for Butternut, review of vegetation in proximity to the adjacent rail trail;
- A BHA update was undertaken for some of the previously assessed Butternut that may be impacted;



- Initiated consultation with the MECP the proposed approach (*i.e.* setbacks, registration, compensation etc.) regarding Butternut to ensure compliance with Ontario's ESA;
- Conducted a desktop exercise to identify the Significant Woodland along the valley in addition to appropriate setbacks (where appropriate);
- Mapped and/or updated vegetation communities and other environmental features (watercourses, wetlands, areas of ground water discharge, *etc.*) on aerial photography;
- Provided a detailed description of the study area including natural heritage features and functions and the development proposal;
- Assessed the potential direct and indirect impacts of the proposed land-use on the sensitive or significant environmental features as described above;
- Evaluated the extent to which development can be accommodated in proximity to the natural heritage features without negative impact;
- Developed an appropriate avoidance/mitigation/restoration strategy to further reduce the potential environmental impacts; and
- Assessed conformity with the applicable policies of the Town, NVCA, PPS, and the ESA.

3.4 Methodology and Surveys

3.4.1 Vegetation Community Mapping and Surveys

The ELC for Southern Ontario was used to classify vegetation community types. Prior to undertaking field studies, Azimuth completed a cursory classification of habitats using recent air photo imagery for the study area. A vegetation survey was conducted on June 14, 2017 to compile a list of species by ELC community. Special attention was given to and vascular plant SAR that could potentially be on-site, such as Butternut (*Juglans cinerea*). An additional survey was undertaken on August 9, 2021 to review the conditions of the property and update the vegetation list and ELC communities, as required.

3.4.2 Wildlife Surveys

General

Incidental observations of wildlife were recorded during all field investigations. Candidate Significant Wildlife Habitat (SWH) functions were evaluated according to provincial criteria (Significant Wildlife Habitat Technical Guide (OMNR, 2000), Ecoregion 6E Criteria Schedules (MNRF, 2015a).



Birds

A single dawn breeding bird survey was completed on June 14, 2017 using point count protocol based on the Ontario Breeding Bird Atlas Guide for Participants (OBBA, 2001). Four point count stations were established to cover all upland habitat types on the property and all birds identified through visual or auditory confirmation were recorded at each station (Figure 2) during a five minute period. Species observed while on-route to the next station and species incidentally sighted during other surveys were recorded. Breeding evidence of species observed during survey periods was assessed based on the criteria of the OBBA.

Amphibians

Azimuth completed a single evening calling amphibian survey, on May 24, 2017 [Time: 21:20, Temperature: 16°C, Wind: Nil, Cloud Cover: 100%, Precipitation: Nil, Surveyor: S.Casutt] according to the Marsh Monitoring Program (Bird Studies Canada) protocol at the sampling locations shown on Figure 2. According to the methodology, surveys are to begin one half-hour after sunset and ending by midnight during evenings with suitable conditions [light winds and minimum night air temperatures of 10°C for the survey period, with an observation period of 3 minutes carried out at each point count station].

Fish and Fish Habitat Assessment

Azimuth completed a fish and fish habitat assessment on October 12, 2017. Aerial photographs and background information (e.g., DFO SAR mapping, NVCA 2013 Blue Mountain Subwatershed Health Check) were reviewed to determine potential fish habitat on the property and on adjacent lands. The purpose of the field survey was to confirm the presence of fish habitat on the property and identify potential fish habitat sensitivities that should be considered during the design and implementation of the proposed development.

Species at Risk

The SAR screening included an analysis of habitat requirements of SAR reported to occur in the overall planning area to identify those having potential to occur on or adjacent to the property based on habitats present (Table 1). The Ministry of Natural Resources and Forestry (MNR), Midhurst District, was contacted to acquire SAR and natural heritage information that may be relevant to this project (Appendix C). MNR responded to inform us of known and potential SAR within the area including on adjacent lands. Dawn breeding bird surveys helped to determine if any SAR birds are currently utilizing the property and/or adjacent lands. A search for Butternut was also conducted throughout the hedgerows and portion of the woodlot that extends onto the property. Habitat requirements and appropriate designations (Endangered, Threatened or Special Concern) for all species included in the screening are outlined in Table 1. Only species designated as Endangered or Threatened are currently afforded protection according to



Ontario's ESA. Species designated as Special Concern are currently not protected under the ESA but may be considered as potential SWH.

4.0 EXISTING CONDITIONS

4.1.1 On-site Land Use

The majority of the property is currently actively farmed (*i.e.*, soy/corn). A vacant residential home exists on the property that was accessed through a driveway off of Raglan Road. Several cultural communities are associated with the former homestead including a cultural woodland, thicket and meadow. Hedgerows border the property to the north and west. A community of planted conifer trees exists within the eastern portion of the property and a mature deciduous forest abuts the property to the south. A portion of the Pretty River traverses through the eastern portion of the property.

4.1.2 Adjacent Land Use

Land to the north and west is dominated by residential development. The Town's "Train Trail" runs adjacent to the western limit of the property. To the south and east are natural heritage communities including forested lands and the Pretty River. Beyond the natural heritage features to the east and southwest are lands largely maintained for agricultural use.

4.2 Vegetation Communities

ELC and natural heritage feature mapping was completed during site visits undertaken in 2017 and 2021. Seven vegetation communities were documented and are depicted on Figure 2. Vegetation communities documented on the property include:

1. Dry-Moist Old Field Meadow Type (CUM1-1, Figure 2): Small community located to the north of the driveway and is the location of a small former apiary. Disturbed community composed of a variety of herbaceous field species including Brome Grass (*Bromus inermis*), Orchard Grass (*Dactylis glomerata*), Common Milkweed (*Asclepias syriaca*) and Wild Carrot (*Daucus carota*). During the 2021 site visit, it was noted that some earthworks had occurred within this community and an access had been created from adjacent road (Peel Street). Similar composition of species found in proximity to Pretty River with a larger component of shrubs (Staghorn Sumac (*Rhus typhina*), Fragrant Sumac (*Rhus aromatic*), Red Raspberry (*Rubus idaeus*)).
2. White Pine Coniferous Plantation Type (CUP3-2, Figure 2): Community of young planted White Pine (*Pinus strobus*), White Spruce (*Picea glauca*) and Eastern White Cedar (*Thuja occidentalis*) trees. Limited groundcover where trees are



dense, otherwise trees are intermixed with common field species such as those found within the CUM1-1.

3. Sumac Cultural Thicket Type (CUT1-1, Figure 2): Small disturbed community associated with the homestead composed of primarily common field species (grasses, goldenrods (*Solidago spp.*), Wild Carrot) with a larger proportion of woody vegetation including Staghorn Sumac, hawthorn (*Crataegus spp.*), Alternate-leaf Dogwood (*Cornus alternifolia*) and Manitoba Maple (*Acer negundo*).
4. Mineral Cultural Woodland Ecosite (CUW1, Figure 2): Three CUW communities reside on the property. The first community is an extension of the hedgerow that runs along the northern limits of the property containing a variety of trees including Balsam Poplar (*Populus balsamifera*), Trembling Aspen (*Populus tremuloides*), White Ash (*Fraxinus americana*), Eastern White Cedar, American Basswood (*Tilia americana*) and Black Walnut (*Juglans nigra*). Common Buckthorn (*Rhamnus cathartica*) and Alternate-leaf Dogwood can be found in the understory while Virginia Creeper (*Parthenocissus quinquefolia*), Tall Buttercup (*Ranunculus acris*), False Solomon's- Seal (*Mainthemum racemosum*) and Bluebead Lily (*Clintonia borealis*) can be found as a ground layer. The second CUW community is associated with the Pretty River and is composed of a mix of tree and shrub species including Manitoba Maple, Alternate-leaf Dogwood, Black Locust (*Robinia pseudoacacia*), Common Buckthorn and American Elm (*Ulmus americana*). The third community abuts the CUT1-1 and is a mixture of species such as Green Ash (*Fraxinus pennsylvanica*), Black Walnut and Manitoba Maple. Cultural meadow (CUM1-1) species were found throughout the ground layer.
5. Dry Fresh Poplar Deciduous Forest Type (FOD3-1, Figure 2): Community composed of Large-tooth Aspen (*Populus grandidentata*) with Sugar Maple (*Acer saccharum*), White Ash, American Basswood and American Elm. Shrub layer includes an abundance of Common Buckthorn with Tartarian Honeysuckle (*Lonicera tatarica*), Red Raspberry and Alternative-leaf Dogwood. Groundcover layer includes Virginia Creeper, Dwarf Enchanters Nightshade (*Circaea alpina*), goldenrods, Virgin's Bower (*Clematis virginiana*), Lily-of-the-valley (*Maianthemum canadense*) and Hog-peanut (*Amphicarpaea bracteata*) among others.
6. Dry-Fresh Sugar Maple- White Ash Deciduous Forest Type (FOD5-8, Figure 2): Community primarily dominated by Sugar Maple and White Ash. Butternut, Basswood, Ironwood (*Ostrya virginiana*) and White Pine are also components of this community. Shrub layer includes Choke Cherry (*Prunus virginiana*) and Common Buckthorn. Groundcover layer includes Canada Anemone (*Anemone canadensis*), Prickly Gooseberry (*Ribes cynosbati*), trillium (*Trillium spp.*),



- Zigzag Goldenrod (*Solidago flexicaulus*), Garlic Mustard (*Alliaria petiolata*), Herb-robot (*Geranium robertianum*) and Wild Ginger (*Asarum canadense*).
7. Fresh-Moist Willow Lowland Deciduous Forest Type (FOD7-3, Figure 2): This riparian community is largely composed of large willows in tree form (Crack Willows (*Salix fragilis*)) with Manitoba Maple. Other associates include Sugar Maple, White Ash, Trembling Aspen, American Elm and Black Walnut. Shrubs and groundcover found within the riparian buffer include Staghorn Sumac, Tartarian Honeysuckle, Common Red Raspberry, Choke Cherry, Black Cherry (*Prunus serotina*) and field species such as Wild Carrot, Mullein (*Verbascum thapsus*), Riverbank Grape (*Vitis riparia*), Common Dandelion (*Taraxacum officinale*), strawberry (*Fragaria spp.*), violets (*Viola spp.*) and other grass species.

4.3 Plants

The results of our vegetation survey can be found within Table 2. The locations of the vegetation communities documented on site are depicted on Figure 2. The dripline of the southern woodland was confirmed on site within NVCA in November 2017. The dripline is depicted on Figure 2 and is the northernmost limit of the identified FOD5-8 community (Figure 2).

Azimuth ecologists documented approximately 112 species of vascular plants within the property (Table 2). Within this list of vascular plants, Butternut was the only observed SAR. Approximately 21 Butternut trees were documented on the property. Several Butternuts were observed on the adjacent property to the south within the woodland, some of which appeared to be in poor health (*i.e.* heavily cankered). The locations of the Butternut trees are presented in Figure 2.

With the exception of the Butternut, none of the identified species are considered a SAR and no identified plant species are designated provincially rare (*i.e.*, S Rank 1, 2, or 3).

4.4 Wildlife

4.4.1 Mammals

Mammals documented to be utilizing the property include Eastern Cottontail, Grey Squirrel, Red Squirrel and White-tailed Deer. No provincially or regionally rare species were documented within the property.

4.4.2 Amphibians

There were no amphibians documented on the property during our evening survey. There is no evidence of pooling or habitat suitable for amphibian breeding (*i.e.*, wetland/vernal



pools) present on the property. There was no amphibian activity documented on adjacent lands.

4.4.3 Birds

A total of 25 birds were documented during Azimuth's field studies. The results of our breeding bird survey can be found within Table 3.

Two Special Concern species were documented on the property. Eastern Wood-pewee was documented during Azimuth's breeding bird survey. A Bald Eagle was incidentally observed during the August 2021 field investigation. With the exception of the Eastern Wood-pewee and Bald Eagle, none of the birds documented on the property are of provincial conservation concern.

4.5 Fish and Fish Habitat

The property is located within the Blue Mountain Subwatershed. A portion of the main branch of the Pretty River flows through the property. The watercourse traverses the eastern boundary of the property, and flows in a northerly direction before outletting into Georgian Bay. The river meanders through a forested buffer feature, and has a natural watercourse morphology consisting of riffles, pools, and runs. The maximum observed river width was approximately 15m, with river depths of over 1m observed in the pool features. Substrate consisted predominantly of cobble and gravel. Crib walls and large boulders were observed along the outside bend of multiple pools, which were likely constructed for restoration purposes. A single lane bridge structure crosses the river near the northern border of the property, which is currently not in use but was formerly used to access the residential dwelling on the property (currently vacant).

During the October 12, 2017 site visit, multiple migratory adult Chinook Salmon were observed actively spawning throughout the river on the property. The Pretty River is also known to inhabit Rainbow Trout and Brown Trout (MNR, 2017). Therefore, the Pretty River functions as direct coldwater fish habitat and is a migratory corridor for migratory salmonids found in Georgian Bay. The stream health of the Pretty River on the property is characterized as "Below Potential" according to the NVCA 2013 Subwatershed Health Check, which is likely attributed to the abundant nearby agricultural lands and downstream flood control channel. No aquatic SAR are known to inhabit the Pretty River according to DFO SAR mapping (Appendix D).

Of note, in previous years the NVCA and stewardship groups have implemented a variety of erosion control and fish habitat enhancement strategies within the river corridor on the property. Some of these tactics have included the construction of bank protection at the



toe of an eroding slope, including tree revetments, riparian tree plantings, bioengineered fascines, skyhook bank structures, and rock rip-rap placement.

5.0 SIGNIFICANT NATURAL HERITAGE FEATURES

In the following sections we summarize the range of significant NHF and functions attributable to the property based on existing designations/delineations by agencies and as revealed through the application of municipal and provincial guidelines.

5.1 Wetland

MNRF unevaluated wetland has been mapped as in-part occurring on the property (Appendix C). Azimuth 2017 field investigations confirmed that there is no wetland habitat present on the property (Figure 2).

5.2 Woodland

Currently, there is no Significant Woodland identified on the property according to the various schedules of the Town's OP. According to the text within Section 4.1 of the Town's OP, Category 1 woodlands are woodlands in excess of 4ha in size that are more than 75 years old. The southern woodland that, in part, extends onto the property meets this criterion (FOD5-8, Figure 2). Through air photo interpretation, it was determined that the woodland is just over 4.0 ha in size. Our area calculation included woodlands that have the potential to be >75 years old but excluded young-mid-age woodlands based on historical aerial photography. Any gap that was >20m acted as a break in the community. Forested lands to the west of the rail trail that were at least 40m in width were included within the Significant Woodland area calculation. Therefore, although not currently mapped, the southern woodland on the property could be considered to be Category 1 woodlands according to the Town. The dripline of the Category 1 Woodland was established in the field with NVCA (November 2017) and subsequently surveyed (Figure 2 and 3).

According to the Town's Official Plan, Category 2 woodland includes younger woodland encompassing an area in excess of 10ha. The remaining younger woodland on the property does not meet the size criteria for significance and therefore would not be considered to be Category 2 woodland.

5.3 Valleyland

Category 1 Valleyland has been identified on the property according to the Town's OP (Appendix A, Figure 2). This valleyland feature is associated with the Pretty River and would be considered to be a Significant NHF. The Top of Bank limit was established in the field with the NVCA (November 2017) and GPS points were taken to document the limits of the Valleyland as depicted on Figure 2.



The Long Term Stable Top of Bank (LTSTOB) was assessed and identified by Toronto Inspection Ltd. (Figure 3).

The outer extent of either the Top of Bank and/or the LTSTOB form the limits of the valleyland (Figure 3).

5.4 Candidate Significant Wildlife Habitat

An assessment of the potential for SWH within the property is provided in Table 4. The SWH Tables are provided as a series of tables which utilize the criteria outlined within MNRF's Significant Wildlife Habitat Technical Guide (SWHTG; 2000) and the accompanying Ecoregion 6E Criteria Schedules (MNRF, 2015a). Based on this assessment and data collected to date, our findings indicate that the following could be considered candidate SWH within the property:

- Seasonal Concentration of Areas of Animals
 - Bat Maternity Colonies
- Specialized Habitat for Wildlife
 - Turtle Nesting Areas
- Habitat for Species of Conservation Concern (Not including Endangered or Threatened Species)
 - Special Concern Species – Eastern Wood-pewee and Bald Eagle

5.4.1 Seasonal Concentration of Areas of Animals

As outlined within the criteria for SWH in Ecoregion 6E Schedules, Seasonal Concentration Areas are areas where wildlife species occur annually in numbers at certain times of the year, sometimes highly concentrated within relatively small areas. As a result the loss of, or damage to, these features can result in a significant impact to populations.

Bat Maternity Colonies

The FOD5-8 forest community, that extends in part onto the property, has the potential to provide suitable habitat for bat maternity colonies.

5.4.2 Specialized Habitat for Wildlife

Areas that support wildlife species that have highly specific habitat requirements or areas that provide habitat that greatly enhances species' survival.

Turtle Nesting Areas

Open sandy areas along the Pretty River have the potential to provide suitable turtle nesting areas. No predated nests were observed along the river banks.



5.4.3 Special Concern and Rare Wildlife Species

These habitat features are considered SWH on the basis that the wildlife species are listed as Special Concern or rare, or otherwise important species that are declining. SWH is intended to protect large areas of habitat which are important for the long term survival and success of species which are either quite rare in the province or have experienced significant population decline.

According to the SWH Technical Guide Ecoregion 6E Criteria Schedules (MNR, 2015a), habitat for Special Concern and Rare Species is characterized by the presence of any species considered provincially rare (ranked S1-S3) or designated Special Concern under the ESA.

Eastern Wood-pewee

Woodland on and adjacent to the property have the potential to function as breeding habitat for this species. Eastern Wood-pewee was documented during Azimuth's 2017 breeding bird survey.

Bald Eagle

Bald Eagles utilize mature forest with scattered supercanopy trees located in proximity to large waterbodies. Bald Eagle habitat is known to occur along the shoreline of Lake Huron. The mature forested lands on the property may be used for perching and Pretty River for foraging. A Bald Eagle was observed incidentally in August 2021. There were no nests observed on the property.

5.5 Fish and Fish Habitat

The Pretty River provides direct fish habitat for a coldwater fish community, and is known to function as a migratory corridor and spawning grounds for salmonids (*e.g.*, Chinook Salmon, Rainbow Trout) found within Georgian Bay.

Geo Morphix calculated the average Bankfull Width which is depicted on Figure 3.

5.6 Confirmed and Potential Habitat of Threatened and Endangered Species

Potential and/or confirmed habitat for Species listed as Threatened or Endangered (ESA, 2007) was identified within the property. Our assessment identified the following species and/or SAR habitat potential as follows:

- Mammals: Little Brown Myotis, Northern Myotis and Tri-colored Bat;
- Birds: Bank Swallow and Barn Swallow;
- Plants: Butternut.



Surveys completed to date on the property revealed the presence of Butternut on and adjacent to the property (Figure 2).

5.6.1 Endangered Bat Species

Little Brown Myotis, Northern Myotis, and Tri-colored bat use a wide variety of habitats for summer roosting including rock crevices, buildings, bridges, caves, mines, and large snags (>25 centimetres (cm) diameter at breast height) in the early stages of decay (MNRF, 2015b; COSEWIC, 2013).

Potential suitable roosting habitat is associated with the mature forested communities present within the property limits. Surveys were not undertaken to further characterize the identified potential habitat given the limited size of this unit present within the property limits. The permanent structure (*i.e.*, active residential dwelling) was documented to be well-maintained and contained no features (*i.e.*, cracks, loose shingles) that would suggest potential bat maternity roosting habitat.

5.6.2 Butternut

A total of 21 Butternut trees were documented on the property. Butternut trees were also observed on adjacent lands to the south of the property (Figure 2).

The MNRF requires that a BHA occurs prior to any development or site alteration that may impact Butternut. The purpose of the assessment is to quantify the level of impact of the fungus on each specimen by recording the amount of living tree crown and the extent of surface wounds on the trees. The assessment characterizes the level of impact of the trees and employs an assessment matrix to assign one of three categories as follows:

- Category 1 – (Non- retainable) Trees affected by Butternut canker to such an advanced degree that retaining the tree would not support the protection or recovery of the species in the area in which the tree is located.
- Category 2 – (Retainable) Trees not affected by Butternut canker or affected by Butternut canker but the degree to which it is affected is not too advanced and retaining the tree could support the protection or recovery of in the area in which the tree is located.
- Category 3 – (Archivable) Trees that may be useful in determining sources of resistance to Butternut canker.

Trees designated as Category 1 do not receive protection under the ESA, whereas Category 2 and Category 3 trees are subject to individual and habitat protections under Section 9 and 10 of the ESA.



A BHA was completed for 21 trees on the property on August 14, 2018. The BHA concluded that there were a total of eight (8) Category 1 trees, eight (8) Category 2 trees and five (5) Category 3 trees. The BHA was submitted to MNRF on September 5, 2018 and subsequently accepted (Appendix C).

A re-assessment was completed on Butternut 681 on August 9, 2021 where it was determined to be a Category 1 tree (previously assessed as Category 2). The BHA was submitted to MECP on August 12, 2021 (electronic only). A receipt of submission was received on August 13, 2021 (Appendix C).

5.7 Area of Natural and Scientific Interest

There are no Areas of Natural and Scientific Interest identified on or adjacent to the property according to provincial or municipal mapping (Appendix A and C).

5.8 Significant Natural Heritage Features Summary

The results of the field studies, review of background information and assessment indicate the potential for the following significant natural heritage features and functions to be located on or adjacent to the property:

- Candidate Significant Woodland;
- Significant Valleyland;
- Potential SWH;
- Fish and Fish Habitat – Pretty River;
- Confirmed and Potential Habitat for Threatened and Endangered Species – Butternut and Endangered Bat Species

6.0 PROPOSED DEVELOPMENT

The Draft Plan of Subdivision currently proposes development consisting of 21 single detached homes, 107 townhouse units, 0.49ha of parkland, a 0.15ha stormwater management (SWM) area and 2.87ha open space (environmental protection) lands largely associated with the Pretty River Valley and an internal road network consisting of public roads (Street ‘A’, ‘B’, ‘C’ and ‘D’). Access to the site will be provided by extensions from the existing Williams Street and Peel Street, north of the site, as well as a connection (Street D) to the Eden Oak Indigo Estates subdivision (Kirby Avenue) at the southwest corner of the site (Figure 3, Appendix E).

The existing driveway and bridge that currently crosses over the Pretty River will be decommissioned as the bridge is currently deemed not to be safe for use.



As outlined within the Functional Servicing & Stormwater Management Report prepared by C.F. Crozier & Associates Inc. (2021) the development will incorporate a dual drainage system consisting of a storm sewer system and catch basins (minor system) and the use of the roadway and overland flow routes (major system). Minor system drainage will be conveyed via gutters above ground and intercepted by catchbasins and storm sewers. The majority of the minor system flows will be directed to the proposed on site SWM facility which outlets to the Peel Street Sewer and into the Riverside Pond (located approximately 320m north of the property). The Riverside Pond SWM facility will provide quantity and quality control of the water. Additional quality control will be provided by the on-site dry pond SWM facility prior to discharge. Events exceeding the 5-year storm event will be conveyed overland into the Pretty River through a controlled weir and emergency overflow.

Flows generated in rear lots of the single detached homes will be directed into the Pretty River as they are considered clean. The discharge into the Pretty River will be controlled to pre-development flow rates prior to discharge through lot level controls.

SWM facilities must meet the ‘enhanced protection’ level since Georgian Bay is the ultimate receiver of the drainage from the property. Enhanced protection provides an 80% long term suspended solids removal rate. It has been confirmed that the existing SWM pond has the capacity to provide the required quality and quantity controls.

7.0 NATURAL ENVIRONMENTAL IMPACT ASSESSMENT

7.1 Candidate Significant Woodland

There will be no encroachment into the Town’s Category 1 woodland (Figure 3). Therefore, there will be no direct impacts to the Category 1 woodland. A 10m naturalized buffer will remain adjacent to the dripline of the woodland (Figure 3). This 10m buffer is sufficient to protect the root zone of the trees within the woodland and will maintain the overall form and function of the woodlot itself. It is recommended that the buffer lands be planted with a variety of native trees and shrubs in order to further enhance the woodland through additional screening function (noise/light) with the ultimate goal of creation of additional woodland area.

Open space will abut this 10m buffer which will be an intervening land use between the development and the woodland buffer – essentially creating a larger ‘buffer’. It is anticipated that the Open Space will be dedicated to the Town, therefore, it is unknown at this time whether it will be maintained (*i.e.* mowed grass) or naturalized.



During the pre-consultation meeting, NVCA indicated that they could support a 10m setback to the Significant Woodland with adequate justification provided there were sufficient plantings within the buffer to further enhance and protect the woodland.

7.2 Significant Valleyland – Category 1 Lands

The Significant Valleyland within the property is directly associated with the Pretty River riparian corridor and includes the top of bank and Pretty River itself. Significant Valleylands are depicted within the Town's OP (Schedule B, Appendix A) and contained within the NVCA regulation mapping (Appendix B). The boundaries of the valleyland feature was refined in the field with NVCA through the identification of the top-of-bank and through geotechnical investigations undertaken by Toronto Inspection Ltd. to determine the Long-term Stable Top of Slope (LTSTOS) (Figure 2). No development is proposed within the Significant Valleyland (Figure 3). Setbacks from the Significant Valleyland (*i.e.* top-of-bank and LTSTOS) will be at least 30m.

The proposed development along the eastern portion of the property in proximity to the Significant Valleyland is not expected to diminish the current function of the valley feature. Currently, land use within this portion of the property is in intensive agricultural management. There is no expectation that the proposed development will have a negative ecological impact to the Significant Valleylands present within the property provided that the recommended mitigation measures be applied accordingly as described in Section 8 below.

7.3 Candidate Significant Wildlife Habitat

Sections 2.1.5 d and 2.1.8 of the PPS specify that development and site alteration may be permitted within or adjacent to SWH if it is demonstrated that the SWH function(s) of concern is/are not negatively impacted (*i.e.*, ecological functions for which the area is identified are not degraded by stress factors arising from human activity to the point that the health and integrity of the ecological functions are threatened due to single, multiple or successive development or site alteration activities).

7.3.1 Seasonal Concentration of Areas of Animals

Bat Maternity Colonies

As discussed in Section 5.4.1, potential suitable habitat for bat maternity colonies is present within the FOD5-8 community. Other forested portions of the property are young and cultural in nature and generally do not contain features attributable to bat roosting habitat (*i.e.*, large decaying trees, cavities, loose peeling bark). The FOD5-8 community extends beyond the property limit to the south where similar deciduous forest habitat is present. Specific information relating to the presence of snag/cavity trees was not collected due to the difficulties with accessing private lands. However, given the age



class and species composition, it is likely that features attributable to bat roosting habitat are present in areas off property.

Woodland removals will not occur within the FOD5-8 community that may function as habitat for the species. A 10m naturalized buffer will remain adjacent to the dripline of the woodland (Figure 3). This 10m buffer is sufficient to protect the potential bat snag trees that are likely present within the woodland therefore protecting this potential SWH function.

7.3.2 Specialized Habitat for Wildlife

Turtle Nesting Areas

Turtle nesting was not observed along the Pretty River valleyland and banks. However, due to the presence of potentially suitable conditions (*i.e.*, open, sandy areas in proximity to a watercourse), there is potential that turtle may use this area for nesting. No development is proposed along the banks of the Pretty River or within the Significant Valleyland. A 30m setback from the top-of-bank and/or LTSTOS will remain adjacent to the Significant Valleyland post-development. As such, no direct impacts to this function are anticipated as a result of the proposed works. Mitigation measures are recommended in Section 8 to avoid any potential indirect impact (*i.e.*, sediment run-off) to this SWH function.

7.3.3 Special Concern and Rare Wildlife Species

Eastern Wood-pewee

The results of field studies indicated that the FOD5-8 communities present within the property and adjacent lands may function as habitat for Special Concern wildlife, specifically Eastern Wood-pewee, a woodland breeding bird designated Special Concern provincially.

A 10m naturalized buffer will remain adjacent to the dripline of the woodland (Figure 3). This 10m buffer is sufficient to protect the Eastern Wood-pewee habitat that is present within the woodland therefore protecting this potential SWH function.

Bald Eagle

The mature forested lands on the property may be used for perching and Pretty River for foraging.

A 10m naturalized buffer will remain adjacent to the dripline of the woodland (Figure 3). This 10m buffer is sufficient to protect the Bald Eagle habitat that is potentially present within the woodland therefore protecting this potential SWH function.



7.4 Fish and Fish Habitat

The proposed development plan includes no physical alterations to the Pretty River, therefore there are no anticipated fish and fish habitat impacts to the watercourse or requirements for review under the Federal *Fisheries Act*. Based on the Functional Servicing and Stormwater Management Report, the SWM Facility is designed to convey minor storms (up to 5-year events) into sewer systems that ultimately discharge into existing SWM ponds. Higher storm events will be controlled via a weir and emergency outflow into the Pretty River, ensuring that the flows do not exceed pre-development flows. Water Quality and Erosion control will be undertaken and in place at the outlet of the pond prior to discharge to the Pretty River. The peak flows outletting into the Pretty River were assessed from the SWM Pond and the rear yards of the townhouses to the east, and the pre-development flows were not exceeded. Therefore, the proposed stormwater management on the property is in place to minimize impacts to fish and fish habitat within the Pretty River.

Based on our field investigations and available background information, the Pretty River supports a coldwater fish community, including seasonal migrations and spawning of salmonid species in the spring and fall from Georgian Bay. Typically (as per NVCA/PPS), a minimum 30m natural buffer is required along this river from the top-of-bank. The proposed subdivision plan has incorporated a minimum 30m buffer to the Pretty River, therefore land use and associated buffers conform to protecting the existing natural buffer between development and the watercourse, and harmful alteration to fish and fish habitat is not expected.

7.5 Confirmed and Potential Habitat for Threatened and Endangered Species

7.5.1 Butternut

A total of 21 Butternut trees were identified on the property and 21 trees were included within the BHA (Figure 2). The nine (9) Category 1 trees are in poor health and are no longer protected by Ontario's ESA.

The remaining seven (7) Category 2 and five (5) Category 3 trees are considered healthy and therefore the individual Butternuts and their habitat continue to be protected from harm or destruction according to Ontario's ESA.

Current provincial direction indicates the general habitat for Butternut trees include suitable areas within a 50m radius whereby the first 25m is intended to protect the critical root zone and the 25-50m has the potential to provide habitat conditions for seedling establishment.



The lands located outside of the identified Significant Natural Heritage Features within 25m -50m of the Category 2 and 3 trees are currently being actively cultivated and do not offer suitable regeneration habitat. Currently, all potential regeneration habitat is limited to the edge of the forested communities and any openings within the woodland itself. Post-development, there will be a 10m setback to the Candidate Significant Woodland and a 30m setback to the top of bank/LTSTOS therefore protecting the existing potential regeneration habitat and introducing additional lands that will be naturalized in the long-term.

There is no development or site alteration proposed within 25m of the six (6) Category 2 Butternuts along the Pretty River Valley and the three (3) Category 3 Butternuts within the southern woodland (Figure 3a). Therefore, there are no anticipated impacts to these trees.

There is no development (*i.e.* hard surfaces, structures) proposed within 25m of one (1) Category 2 and two (2) Category 3 trees within the southern woodland (Figure 3a). At this time, it is unknown if there will be any grading requirements within the Open Space lands adjacent to the 10m woodland buffer. Details related to the grading requirements will be explored and solidified at detailed design. The Open Space lands will be situated approximately 16m from these three Butternuts (Figure 3a). Although there is no expectation that there will be any impacts to these three individuals, it should be confirmed once grading details are known.

Consultation with MECP has been initiated but further consultation will be required once details are known about the Open Space lands. There are several outstanding questions from MECP that need to be answered and/or are unknown at this time (Appendix C). Opportunities to mitigate impacts during construction within the 25m buffer area to avoid disturbance of the roots, soil, compaction etc. can be explored at detailed design. Once these details are known, consultation with MECP should continue to determine if additional actions are required in order to remain in compliance with Ontario's ESA as it relates to Butternut.

7.5.2 Endangered Bat Species

Ontario's ESA affords Little Brown Myotis, Northern Myotis, and Tri-colored Bat individual and habitat protection as an Endangered species.

Forest Roosting

The FOD5-8 forest community has the potential to provide maternity forest roosting habitat for Endangered bat species given the presence of mature trees.



A 10m naturalized buffer will remain adjacent to the dripline of the significant woodland (Figure 3). This 10m buffer is sufficient to protect the potential bat snag trees that are likely present within the woodland therefore protecting this potential SWH function.

Hedgerows and Immature Woodlands

Day roosting may occur within suitable trees within the identified hedgerows. Therefore, timing restrictions related to tree removals should be adhered to in order to avoid incidental contravention of the ESA.

Anthropogenic Structures

As previously discussed, the existing structures within the property are intact, well maintained, and did not display signs that would indicate potential bat roosting habitat. However, deterioration of the structures may occur over the years which would in turn make these structures suitable habitat. Screening of the structures prior to alteration or demolition is recommended to avoid accidental contravention of the ESA for Endangered bat species.

Provided that the environmental considerations and recommendations provided above and described further under Section 8 are followed, there is no expectation that the proposed works would constitute contravention of the ESA.

8.0 RECOMMENDATIONS

8.1 Buffers

All environmental buffers should be planted with a mix of native trees and shrubs with an appropriate native seed mix. The ultimate goal is to create woodland conditions within the natural heritage buffers.

NVCA has requested that a planting plan also be prepared for the 10m setback to the Town's rail trail system. Similar to the natural heritage buffers, the trail buffer planting plan should be composed of a mix of native trees and shrubs with an appropriate native seed mix.

The planting plans for these buffer lands can be prepared at detail design stage.



8.2 Timing Restrictions

8.2.1 Birds

Construction activities involving the removal of vegetation should be restricted from occurring during the bird breeding season. Migratory birds, nests, and eggs are protected by the *Migratory Birds Convention Act*, and the *Fish and Wildlife Conservation Act*.

In nesting Zones C2 and C3, where the property is located, vegetation clearing should be avoided between April 1st and August 30th of any given year. If vegetation clearing is required between these dates, screening by an ecologist with knowledge of bird species present in the area could be undertaken to ensure that the vegetation has been confirmed to be free of nests prior to clearing.

8.2.2 Bats

Construction activities involving the removal of vegetation, in particular potential cavity trees (*i.e.* within hedgerows), should be restricted from occurring during the active season for bats from April 1st through to September 30th to avoid accidental contraventions of the ESA associated with incidental bat use of the property.

8.3 Erosion and Sediment Controls

Runoff due to construction can contribute significant sediment loads to receiving watercourses. Thus, effective erosion and sediment control at construction sites are crucial in mitigating issues associated with sediment and erosion. The following best management practices should be considered for the planning and design of all proposed re-development activities:

- Installation and maintenance of silt fencing around the perimeter of the natural development will be required and monitored for the duration of construction activities to prevent sediment migration, runoff off of the construction area, and erosion into on-site and adjacent natural heritage features during and post construction. Silt fencing should consist of paige wire fencing and backing filter cloth that is properly anchored into the ground.
- All siltation control devices should be installed prior to the commencement of construction and maintained on a regular basis until soils are stabilized and re-development is complete.
- Bare areas should be stabilized with topsoil and seed or sod as soon as possible following construction.
- Timing of construction should coincide with dryer periods to further minimize the potential for transport of sediment and other deleterious substances into the adjacent watercourse and natural features.



8.4 Bridge Decommissioning

As previously described, a single lane bridge structure crosses the Pretty River near the northern border of the property (Figure 2). With access to the previously existing residential property no longer required, the decommissioning of the existing bridge is being proposed. Depending on the proposed construction plan, DFO review may be required, however if the bridge decommissioning works do not include in-water works (*i.e.* strictly deck removal) and environmental mitigation is installed and functioning during the deck removal works, DFO review is expected to not be required. Until the proposed construction details are confirmed for the bridge removal works, it is recommended that a Fisheries Ecologist reviews the bridge removal construction plan (when available) to determine environmental permitting (DFO submission) and mitigation requirements prior to the removal works.

8.5 Species at Risk

It should be noted that the absence of a protected species within the property does not indicate that they will never occur within the area. Given the dynamic character of the natural environment, there is a constant variation in habitat use. Care should be taken in the interpretation of presence of species of concern including those listed under the ESA. This report is intended as a point in time assessment of the potential to impact SAR; not to provide long term ‘clearance’ for SAR. While there is no expectation that the assessment should change significantly, it is the responsibility of the proponent to ensure that they are not in contravention of the ESA at the time that works are undertaken. A review of the assessment provided in this report by a qualified person should be sufficient to provide appropriate advice at the time of the onset of future work.

8.5.1 Butternut

Once details are known related to potential earthworks within 25m of the three (3) Butternut trees within the southern woodlot, consultation should resume with MECP to determine if additional measures are required to adequately protect these trees and/or if additional approvals/permits are required from MECP in order to remain in compliance with Ontario’s ESA.

8.5.2 Endangered Bats

Hedgerows

As highlighted in Section 8.1.2, future construction activities involving the removal of trees (particularly large trees >25 cm diameter at breast height in the early stages of decay) from occurring between April 1st to approximately September 30th to avoid impacting potential bat roosting habitat.



Where possible, we recommend retaining those cavity trees on-site that do not pose a falling hazard to future dwellings as a way of maintaining “wildlife cavity trees” in general as benefit to local wildlife.

Anthropogenic Structure

Bat exit surveys should be undertaken prior to the demolition of the existing home. Surveys would be completed in June/July of any given year as per the “Use of Buildings by Species at Risk Bats Survey Methodology” (2018) document provided by MECP.

8.6 General

If applicable, investigate the usage of cut-off luminaries, and reduce the use of flood lighting systems to minimize artificial lighting in the retained natural areas on and adjacent to the property.

The Environmental Protection lands (*i.e.* Significant Valleyland, Candidate Significant Woodland) should be fenced off from adjacent residences that back onto these features. This is important to limit potential disturbance to the Environmental Protection lands resulting from residents within the proposed community dumping or otherwise disturbing the features post-development.

9.0 CONCLUSION

The results of our assessment indicate that Candidate Significant Woodland, Significant Valleyland, Candidate SWH, fish habitat, and confirmed and potential habitat for Endangered Species are present within and/or adjacent to the property.

Based on our assessment, we can conclude that:

- A 10m setback to the Candidate Significant Woodland, 30m setback to the Significant Valleyland will remain post development thus retaining the overall ecological functions and attributes that contribute to the significance of this feature.
- The protection of the identified Significant Natural Heritage Features and proposed setbacks are consistent with the provincial and Town planning policies in addition to NVCA policy and/or recommendations obtained through the consultation process;
- The proposed development will not impact the potential SWH features that have been identified on and adjacent to the property.
- Within the property limits the Pretty River hosts direct coldwater fish habitat, including providing a migratory corridor and spawning habitat for salmonids.



The proposed land use is expected to have minimal impacts or not cause serious harm to fish and fish habitat. A minimum 30m buffer to the Pretty River (Significant Valleyland) LTSTOB has been incorporated into the proposed development plan, and all current natural buffers adjacent to the watercourse will be maintained post-development. As per the Functional Servicing and Stormwater Management Report, SWM design has been implemented to ensure that quantity and quality of post-development discharge entering the Pretty River will not cause harmful alteration to the fish and fish habitat found within the Pretty River. *Fisheries Act* review by DFO is not expected to be required for the proposed development.

- Additional works and consultation with MECP related to Butternut is required prior to any site alteration or development as per recommendations within the report in order to avoid contravention of Ontario's ESA.
- An NVCA work permit will be required prior to any development within lands regulated by the NVCA under O. Reg. 172/06.

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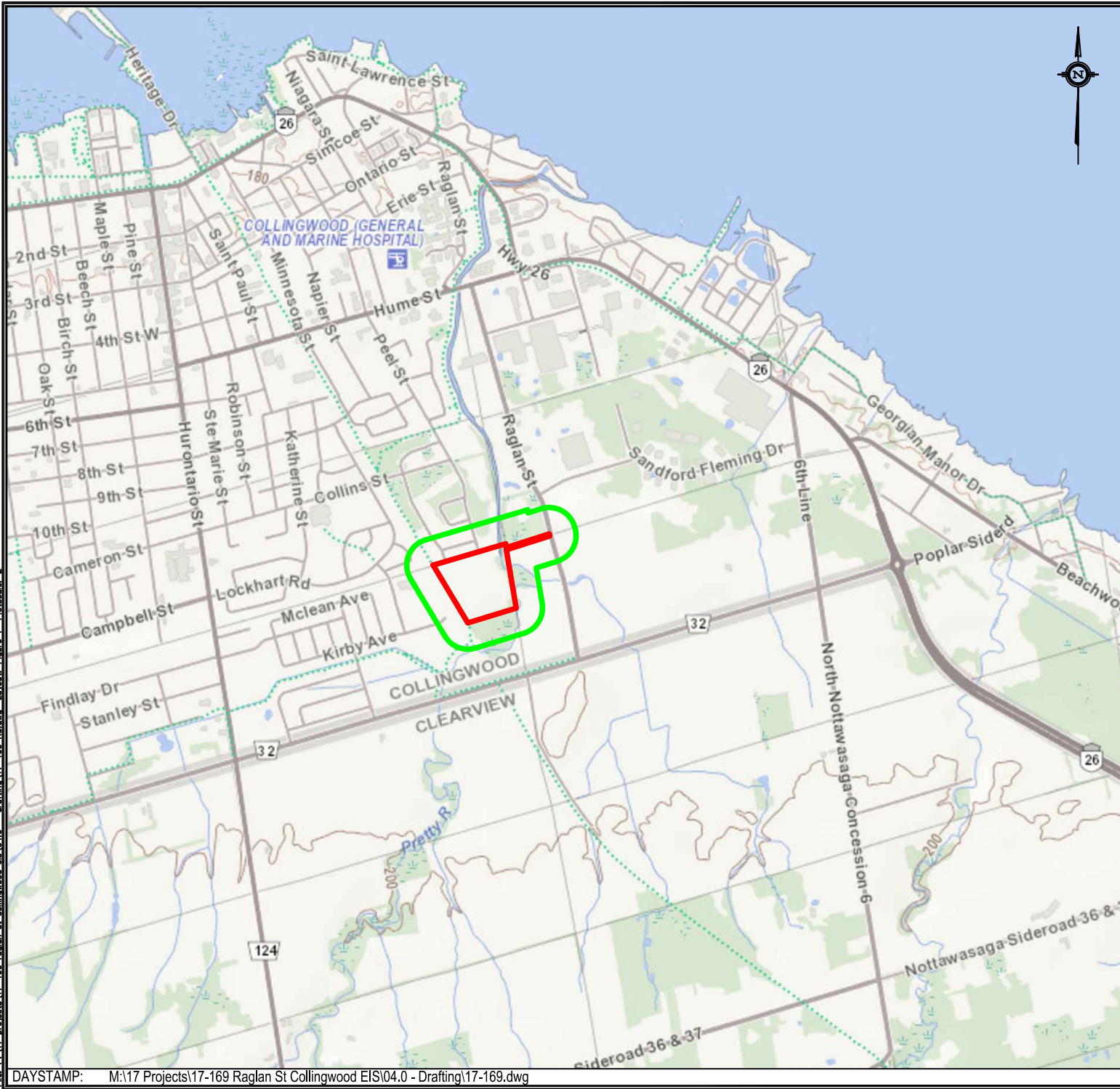
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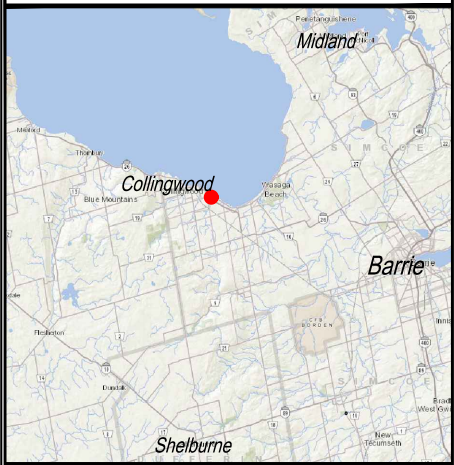
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LEGEND:

- Approx. Property Boundary
- Approx. Study Area



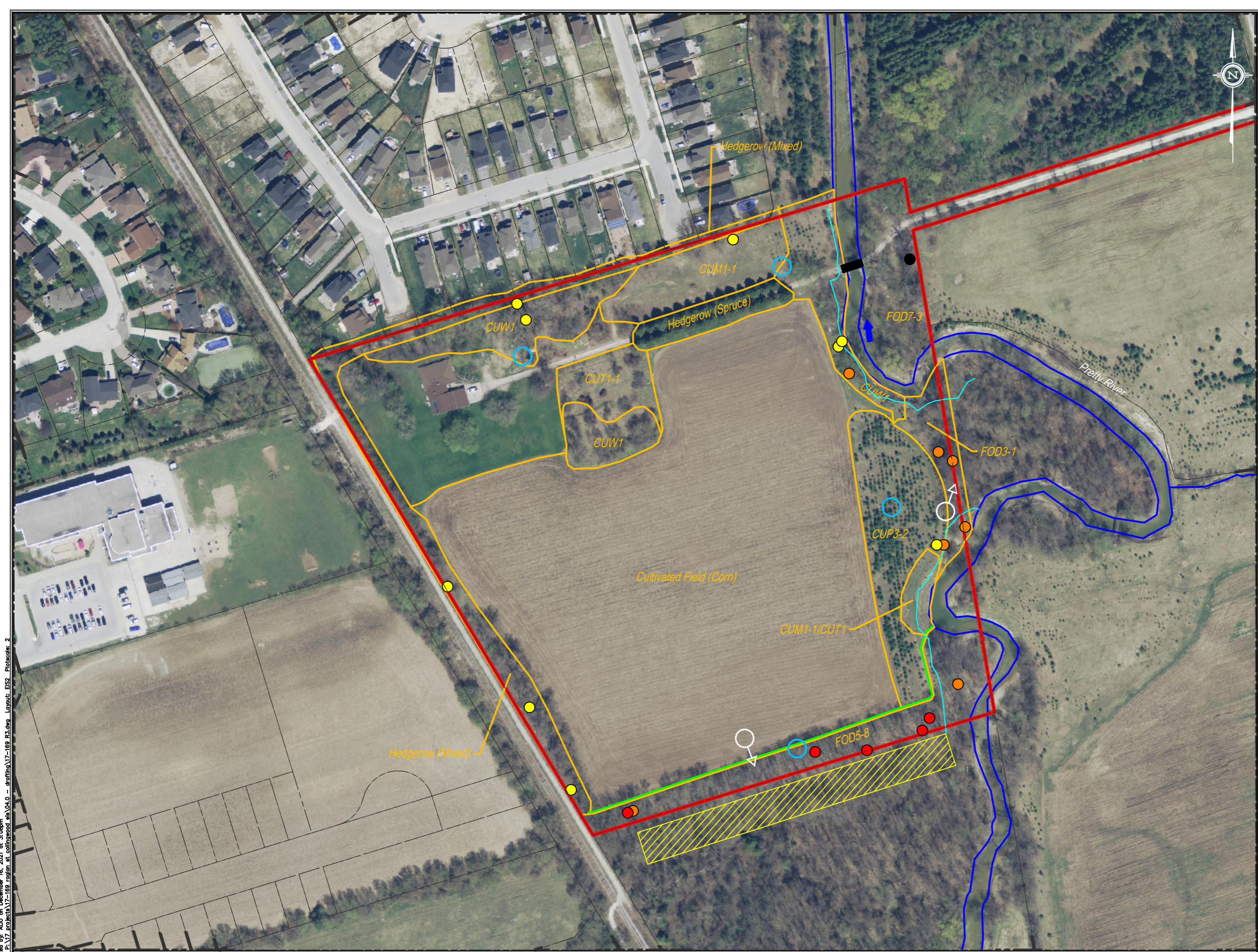
REG MAP



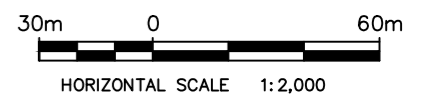
Study Area Location

452 Raglan St.
Town of Collingwood, ON

DATE ISSUED: December 2021	Figure No.
CREATED BY: JLM	1
PROJECT NO.: 17-169	
REFERENCE: MNR	



- LEGEND:**
- Approx. Property Boundary
 - Watercourse
 - ➔ Flow Direction
 - ⊕ Breeding Bird Point Count Station
 - ⊕ Amphibian Stations and Direction (white)
 - Category 1 Butternut Locations
 - Category 2 Butternut Locations
 - Category 3 Butternut Locations
 - Unassessed Butternut Locations
 - Adjacent Property Butternuts
 - Significant Woodland Dripline (Category 1 Woodland) [Confirmed with NVCA]
 - Top of Bank (TOB, confirmed with NVCA)
 - Existing Bridge
 - Vegetation Communities
- CUM1-1 Dry-Moist Old Field Meadow Type
 CUP3-2 White Pine Coniferous Plantation Type
 CUT1 Mineral Cultural Thicket Ecosite
 CUT1-1 Sumac Cultural Thicket Type
 CUW1 Mineral Cultural Woodland Ecosite
 FOD3-1 Dry Fresh Poplar Deciduous Forest Type
 FOD5-8 Dry-Fresh Sugar Maple-White Ash Deciduous Forest Type
 FOD7-3 Fresh-Moist Willow Lowland Deciduous Forest Type

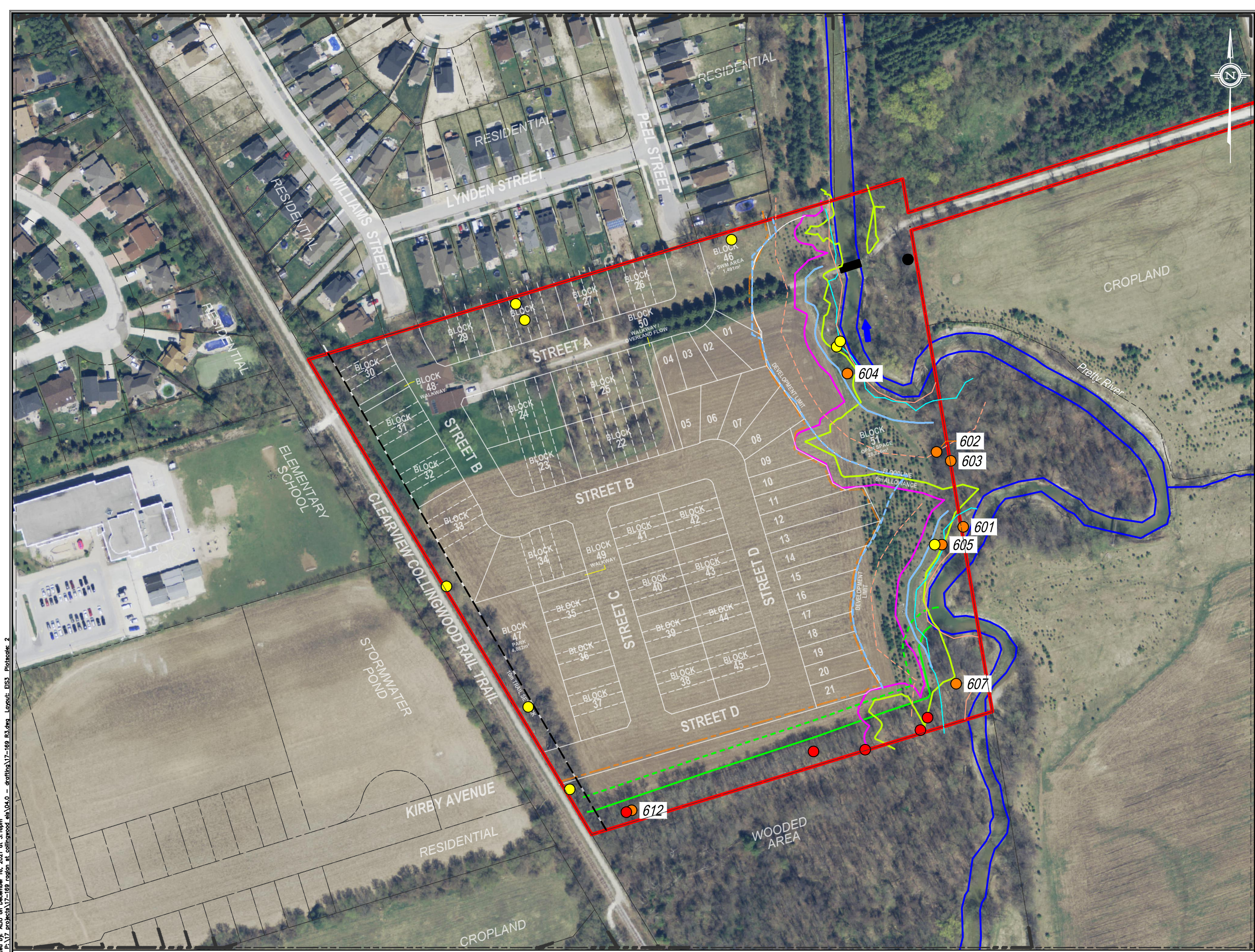


Environmental Features

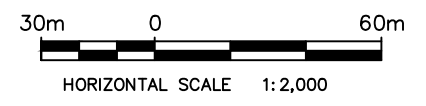
452 Raglan St.
 Town of Collingwood, ON

DATE ISSUED:	December 2021	Figure No.
CREATED BY:	JLM, AL	2
PROJECT NO.:	17-169	
REFERENCE:	Simcoe County Maps	

Plotted by ALJ on December 16, 2021 at 3:08pm
 File: P:\17_projects\17-169_raglan_st_collingwood_eis\04.0 - Drafting\17-169_R3.dwg Layout: EIS2_PlotScale_2



- LEGEND:**
- Approx. Property Boundary
 - Watercourse
 - ➔ Flow Direction
 - Existing Bridge
 - Category 1 Butternut Locations
 - Category 2 Butternut Locations
 - Category 3 Butternut Locations
 - Unassessed Butternut Locations
 - Top of Bank (TOB, confirmed with NVCA)
 - Long Term Stable Top of Bank (LTSTOB, provided by Toronto Inspection Ltd.)
 - - - 30m LTSTOB/TOB Setback
 - Significant Woodland Dripline (Category 1 Woodland) [Confirmed with NVCA]
 - - - 10m Significant Woodland Setback
 - Regional Floodline (Provided by Crozier)
 - 6m Erosion Access Allowance
 - - - 10m Rail Trail Setback
 - Bankfull Width
 - - - 30m Bankfull Width Setback
 - - - Development Limit

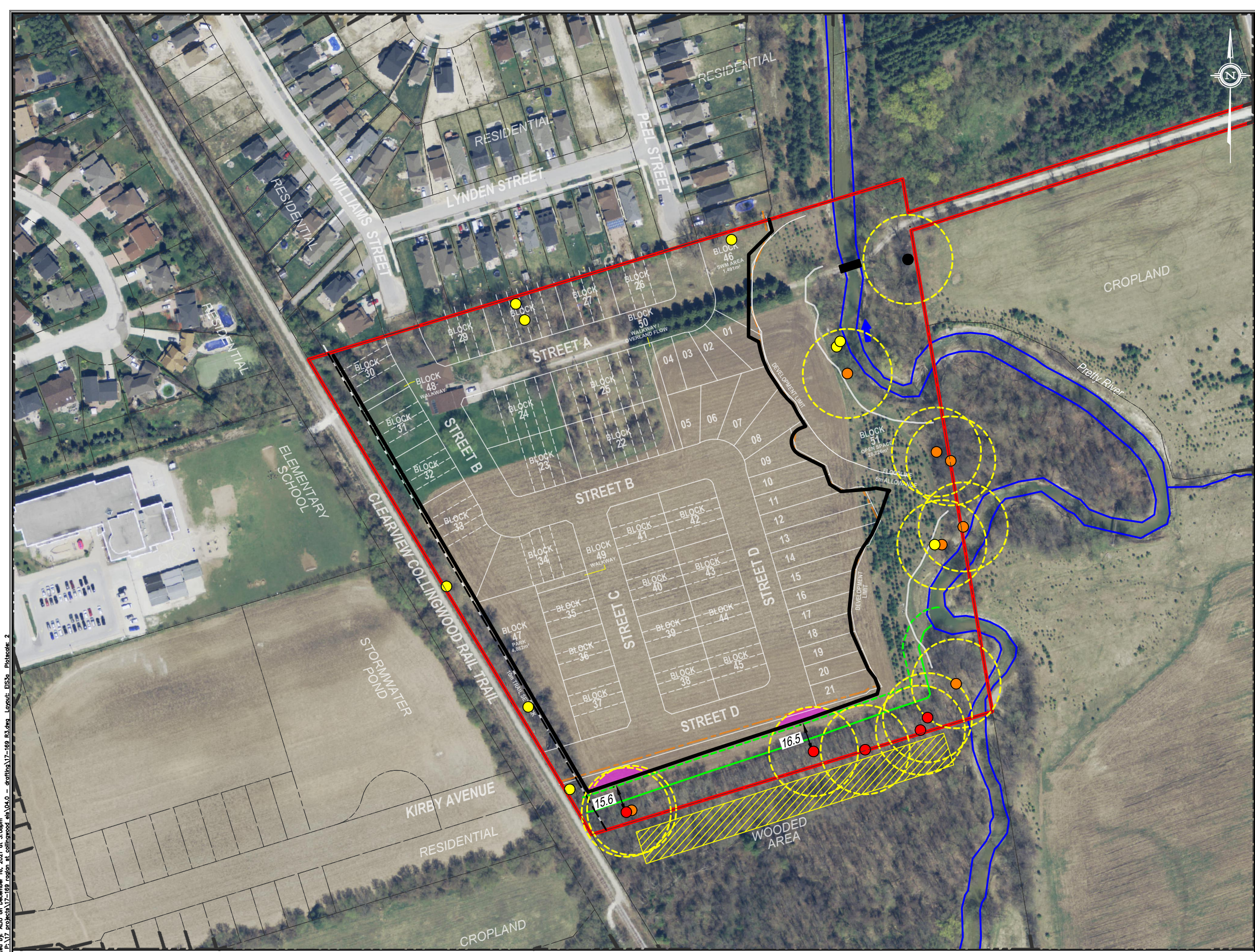


Overall Constraints and Proposed Development

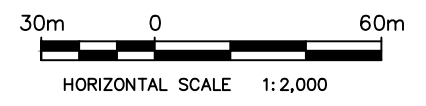
452 Raglan St.
Town of Collingwood, ON

DATE ISSUED:	December 2021	Figure No.
CREATED BY:	JLM, AL	3
PROJECT NO.:	17-169	
REFERENCE:	Simcoe County Maps	

Plotted by: ALU on December 16, 2021 at 3:16pm
 File: P:\17_projects\17-169_raglan_st_collingwood_eis\04.0 - Drafting\17-169_R3.dwg Layout: EIS3 PlotScale: 2



- LEGEND:**
- Approx. Property Boundary
 - Watercourse
 - ➔ Flow Direction
 - Existing Bridge
 - Category 1 Butternut Locations
 - Category 2 Butternut Locations
 - Category 3 Butternut Locations
 - Unassessed Butternut Locations
 - 25m Butternut Buffers
 - Potential Encroachment into 25m Setback
 - Significant Woodland Dripline (Category 1 Woodland) [Confirmed with NVCA]
 - - - 10m Significant Woodland Setback
 - - - Development Limit
 - Overall Constraint Limit



AZIMUTH ENVIRONMENTAL CONSULTING, INC.

Proposed Development Plan
(Butternuts)

452 Raglan St.
Town of Collingwood, ON

DATE ISSUED: December 2021	Figure No.
CREATED BY: JLM	3A
PROJECT NO.: 17-169	
REFERENCE: Simcoe County Maps	

Plotted by ALU on December 16, 2021 at 3:08pm
 File: P:\17_projects\17-169_raglan_st_collingwood_eis\04.0 - Drafting\17-169_R3.dwg Layout: EIS3a - PlotScale: 2

Table 1: Species at Risk Habitat Summary and Assessment

Common Name	Species Name	ESA	Key Habitats Used By Species ¹	Assessment
Restricted Species	<i>Not Applicable</i>	END	Broadly speaking, this species is associated with hardwood deciduous vegetation units. <i>ESA Protection: Species and regulated habitat protection</i>	Potential suitable habitat within FOD5-8 community within and adjacent to the Property. Species not identified during 2017 vegetation survey. No further assessment required.
Bald Eagle	<i>Haliaeetus leucocephalus</i>	SC	This species utilizes a variety of forested habitats, almost always near a major lake or river. <i>ESA Protection: N/A</i>	Potentially suitable habitat within the mature forested communities within and adjacent to the property (FOD5-8). Species incidentally observed during 2021 field investigation. No nests were detected on the property.
Bank Swallow	<i>Riparia riparia</i>	THR	Nests in burrows excavated in natural and human-made settings with vertical sand and silt faces. Commonly found in sand or gravel pits, road cuts, lakeshore bluffs, and along riverbanks (COSEWIC, 2013a). <i>ESA Protection: Species and general habitat protection</i>	No Bank Swallow identified during Azimuth's 2017 dawn breeding bird surveys. No nests observed along banks of Pretty River. The banks were largely vegetated and did not represent key habitat for this species. No further assessment required.
Barn Swallow	<i>Hirundo rustica</i>	THR	Ledges and walls of man-made structures such as buildings, barns, boathouses, garages, culverts and bridges. Also nest in caves, holes, crevices and cliff ledges (COSEWIC, 2011a). <i>ESA Protection: Species and general habitat protection</i>	No Barn Swallow identified during Azimuth's 2017 dawn breeding bird surveys. No Barn Swallow nests observed on the residential home or under bridge.
Black Tern	<i>Chlidonias niger</i>	SC	Colonial nesters typically found within marshes. Its preferred nesting habitat is a hemi-marsh (<i>i.e.</i> a wetland with 50:50 open water and emergent vegetation). Nests are usually built on an upturned cattail root, floating vegetation mat or patch of mud (Cadman <i>et al.</i> , 2007). <i>ESA Protection: N/A</i>	Species not expected to be present on or adjacent to the Property. Habitat is not representative of key habitat. No further assessment required.
Blanding's Turtle	<i>Emydoidea blandingii</i>	THR	Blanding's Turtles are a primarily aquatic species that prefer wetland habitats, lakes, ponds, slow-moving streams, etc., however they may utilize upland areas to search for suitable basking and nesting sites. In general, preferred wetland sites are eutrophic and characterized by clear, shallow water, with organic substrates and high density of aquatic vegetation (COSEWIC, 2005). <i>ESA Protection: Species and general habitat protection</i>	Species not expected to be present on or adjacent to the Property. Wetland habitat not identified within Property. Habitat is not representative of key habitat. No further assessment required.
Bobolink	<i>Dolichonyx oryzivorus</i>	THR	Nests primarily in forage crops (<i>e.g.</i> hayfields and pastures) dominated by a variety of species such as clover, Timothy, Kentucky Bluegrass, tall grass, and broadleaved plants. Also occurs in wet prairie, graminoid peatlands, and abandoned fields dominated by tall grasses. Does not generally occupy fields of row crops (<i>e.g.</i> corn, soybeans, wheat) or short-grass prairie. Sensitive to habitat size and has lower reproductive success in small habitat fragments (COSEWIC, 2010a). <i>ESA Protection: Species and general habitat protection</i>	Species not expected to be present on or adjacent to the Property. Open fields within the Property are active agricultural lands (<i>i.e.</i> , row crops) and are not suitable for this species. Bobolink not identified during 2017 dawn breeding bird survey. No further assessment required.
Butternut	<i>Juglans cinerea</i>	END	Commonly found in riparian habitats, but is also found in rich, moist, well-drained loams, and well-drained gravels. Butternut is intolerant of shade (COSEWIC, 2003). <i>ESA Protection: Species and general habitat protection</i>	Butternut were identified on and adjacent to the property (Figure 2). See Sections 5.6.1 and 7.5.1 for further assessment.
Cerulean Warbler	<i>Dendroica cerulea</i>	THR	Associated with large tracts of mature deciduous forest with tall trees and an open understorey. Found in both wet bottomland forests and upland areas (COSEWIC, 2010b). <i>ESA Protection: Species and general habitat protection</i>	Potential suitable habitat within FOD5-8 community within and adjacent to the Property. Species not identified during 2017 dawn breeding bird survey. No further assessment required.
Chimney Swift	<i>Chaetura pelagica</i>	THR	Nests primarily in chimneys though some populations (<i>i.e.</i> in rural northern areas) may nest in cavity trees (COSEWIC, 2007a). Recent changes in chimney design may be a significant factor in recent declines in numbers (Cadman <i>et al.</i> , 2007). <i>ESA Protection: Species and general habitat protection</i>	Chimney was capped on the residential home on the property. No Chimney Swift identified during Azimuth's 2017 dawn breeding bird surveys. No further assessment required.
Common Nighthawk	<i>Chordeiles minor</i>	SC	Open habitats including sand dunes, beaches recently logged/burned over areas, forest clearings, short grass prairies, pastures, open forests, bogs, marshes, lakeshores, gravel roads, mine tailings, quarries, and other open relatively clear areas (COSEWIC, 2007b). <i>ESA Protection: N/A</i>	Species not expected to be present on or adjacent to the Property. Habitat is not representative of key habitat. No further assessment required.
Eastern Meadowlark	<i>Sturnella magna</i>	THR	Most common in grassland, pastures, savannahs, as well as anthropogenic grassland habitats, including hayfields, weedy meadows, young orchards, golf courses, restored surface mines, <i>etc.</i> Occasionally nest in row crop fields such as corn and soybean, but there are considered low-quality habitat. Large tracts of grassland are preferred over smaller fragments and the minimum area required is estimated at 5ha (COSEWIC, 2011b).	Species not expected to be present on or adjacent to the Property. Open fields within the Property are active agricultural lands (<i>i.e.</i> , row crops) and are not suitable for this species. Eastern Meadowlark not identified during 2017 dawn breeding bird survey. No further assessment required.
Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	THR	Semi-open forests or patchy forests with clearings, such as barrens or forests that are regenerating following major disturbances, are preferred nesting habitats (COSEWIC, 2009). <i>ESA Protection: Species and general habitat protection</i>	Species not expected to be present on or adjacent to the Property. Habitat is not representative of key habitat. No further assessment required.
Eastern Wood-pewee	<i>Contopus virens</i>	SC	Mostly in mature and intermediate-age deciduous and mixed forests having an open understorey. It is often associated with forests dominated by Sugar Maple and oak. Usually associated with forest clearings and edges within the vicinity of its nest (COSEWIC, 2012c). <i>ESA Protection: N/A</i>	Eastern Wood-pewee documented during 2017 dawn breeding bird survey within woodlots on the property. See Sections 5.4.3 and 7.3.3 for further assessment.
Grasshopper Sparrow <i>pratensis</i> subspecies	<i>Ammodramus savannarum pratensis</i>	SC	Typically breeds in large human-created grasslands (\geq 5ha), such as pastures and hayfields, and natural prairies, such as alvars, characterized by well-drained, often poor soil dominated by low, sparse perennial herbaceous vegetation (COSEWIC, 2013b). <i>ESA Protection: N/A</i>	Species not expected to be present on or adjacent to the Property. Habitat is not representative of key habitat. No further assessment required.
Little Brown Myotis	<i>Myotis lucifugus</i>	END	Forests and regularly aging human structures as maternity roost sites. Regularly associated with attics of older buildings and barns for summer maternity roost colonies. Overwintering sites are characteristically mines or caves, but can often include buildings (MNR, 2015) COSEWIC, 2013c). <i>ESA Protection: Species and general habitat protection</i>	Potentially suitable habitat for species within deciduous forest communities on and adjacent to the property (<i>i.e.</i>, FOD5-8). Residential home was well maintained and there were no obvious openings accessible to bats. See Sections 5.6.2 and 7.5.2 for further assessment.
Loggerhead Shrike	<i>Lanius ludovicianus</i>	END	Breeding habitat characterized by open areas dominated by grasses and/or forbs, interspersed with scattered shrubs or small trees and bare ground. Suitable habitat includes pasture, old fields, prairie, savannah, pinyon-juniper woodland, shrub-steppe and alvar (COSEWIC, 2014). <i>ESA Protection: Species and general habitat protection</i>	Species not expected to be present on or adjacent to the Property. Habitat is not representative of key habitat. No further assessment required.
Louisiana Waterthrush	<i>Parkesia motacilla</i>	THR	Occupies specialized habitat, showing a strong preferences for nesting and wintering along relatively pristine headwater streams and wetlands situated in large tracts of mature forest. Prefers running water, but also inhabits heavily wooded swamps and vernal or semi-permanent pools (COSEWIC, 2015). <i>ESA Protection: N/A</i>	Potential suitable habitat within Property. Species not identified during 2017 dawn breeding bird survey. No further assessment required.

Table 1: Species at Risk Habitat Summary and Assessment

Common Name	Species Name	ESA	Key Habitats Used By Species ¹	Assessment
Monarch	<i>Danaus plexippus</i>	SC	Breeding habitat is confined to sites where milkweeds, the sole food of caterpillars, grow. Milkweeds grow in a variety of environments, including meadows in farmlands, along roadsides and in ditches, open wetlands, dry sandy areas, short and tall grass prairie, river banks, irrigation ditches, arid valleys, and south-facing hills (COSEWIC, 2010b). <i>ESA Protection: N/A</i>	Open areas within the property are maintained and do not represent key habitat for this species. No further assessment required.
Northern Myotis	<i>Myotis septentrionalis</i>	END	Maternity roost sites are generally located within deciduous and mixed forests and focused in snags including loose bark and cavities of trees. Overwintering sites are characteristically mines or caves (COSEWIC, 2013c). <i>ESA Protection: Species and general habitat protection</i>	Potentially suitable habitat for species within deciduous forest communities on and adjacent to the property (i.e., FOD5-8). See Sections 5.6.2 and 7.5.2 for further assessment.
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	SC	Occurs in open deciduous forests, particularly those dominated by oak and beech, grasslands, forest edges, orchards, pastures along rivers and roads, urban parks, golf courses, cemeteries, beaver ponds and timber stands that have been treated with herbicides (COSEWIC, 2007c). <i>ESA Protection: N/A</i>	Potentially suitable habitat on the property. Red-headed Woodpecker not observed during Azimuth's 2017 dawn breeding bird survey. No further assessment required.
Snapping Turtle	<i>Chelydra serpentina</i>	SC	Habitat is characterized by slow-moving water with a soft mud bottom and dense aquatic vegetation. Often located in ponds, sloughs, shallow bays or river edges and slow streams, or areas combining several of these wetland habitats (COSEWIC, 2008). <i>ESA Protection: N/A</i>	Species not expected to be present on or adjacent to the Property. Habitat is not representative of key habitat. No further assessment required.
Tri-colored Bat	<i>Perimyotis subflavus</i>	END	Maternity roost sites include forests and modified landscapes (barns or human-made structures). Overwintering sites include mines and caves (COSEWIC, 2013c). <i>ESA Protection: Species and general habitat protection</i>	Potentially suitable habitat for species within deciduous forest communities on and adjacent to the property (i.e., FOD5-8). Residential home was well maintained and there were no obvious openings accessible to bats. See Sections 5.6.2 and 7.5.2 for further assessment.
Wood Thrush	<i>Hylocichla mustelina</i>	SC	Found in moist, deciduous hardwood or mixed stands, often previously disturbed, with a dense deciduous undergrowth and with tall trees for singing perches (COSEWIC, 2012d). <i>ESA Protection: N/A</i>	Potentially suitable habitat on the property. Wood Thrush was not observed during Azimuth's 2017 dawn breeding bird survey. No further assessment required.

1. Habitat as outlined within the MNRF's Species at Risk in Ontario website files (<https://www.ontario.ca/environment-and-energy/species-risk-ontario-list>), or Species Specific COSEWIC Reports referenced in this document.

Species at Risk in Ontario List (Updated June 13, 2017)

Bold text indicates further assessment within EIS Report

Cadman, M., D. Sutherland, G. Beck, D. Lepage and A. Couturier. 2007. Atlas of the Breeding Birds of Ontario 2001-2005. Bird Studies Canada, Environment
COSEWIC. 2003. COSEWIC assessment and status report on the Butternut *Juglans cinerea* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 32 pp.
COSEWIC. 2005. COSEWIC assessment and update status report on the Blanding's Turtle *Emydoidea blandingii* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. viii + 40 pp.
COSEWIC. 2007a. COSEWIC assessment and update status report on the Chimney Swift *Chaetura pelagica* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 49 pp.
COSEWIC. 2007b. COSEWIC assessment and status report on the Common Nighthawk *Chordeiles minor* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 35 pp.
COSEWIC. 2007c. COSEWIC assessment and status report on the Red-headed Woodpecker *Melanerpes erythrocephalus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 27 pp.
COSEWIC. 2008. COSEWIC assessment and status report on the Snapping Turtle *Chelydra serpentina* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 47 pp.
COSEWIC. 2009. COSEWIC assessment and update status report on the Whip-poor-will *Caprimulgus vociferus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 28 pp.
COSEWIC. 2010b. COSEWIC assessment and update status report on the Cerulean Warbler *Dendroica cerulea* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 40 pp.
COSEWIC. 2010a. COSEWIC assessment and update status report on the Bobolink *Dolichonyx oryzivorus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 42 pp.
COSEWIC. 2010b. COSEWIC assessment and status report on the Monarch *Danaus plexippus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 43 pp.
COSEWIC. 2011a. COSEWIC assessment and update status report on the Barn Swallow *Hirundo rustica* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 37 pp.
COSEWIC. 2011b. COSEWIC assessment and update status report on the Eastern Meadowlark *Sturnella magna* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 40 pp.
COSEWIC. 2012c. COSEWIC assessment and status report on the Eastern Wood-pewee *Contopus virens* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 39 pp.
COSEWIC. 2012d. COSEWIC assessment and status report on the Wood Thrush *Hylocichla mustelina* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 46 pp.
COSEWIC. 2013a. COSEWIC assessment and update status report on the Bank Swallow *Riparia riparia* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 48 pp.
COSEWIC. 2013b. COSEWIC assessment and status report on the Grasshopper Sparrow pratensis subspecies *Ammodramus savannarum pratensis* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 36 pp.
COSEWIC. 2013c. COSEWIC assessment and update status report on the Little Brown Myotis *Myotis lucifugus*, Northern Myotis *Myotis septentrionalis* and Tri-colored Bat *Perimyotis subflavus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xxiv + 93 pp.
COSEWIC. 2014. COSEWIC assessment and update status report on the Loggerhead Shrike *Lanius ludovicianus* ssp. and the Prairie subspecies *Lanius ludovicianus excubitorides* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xiii + 51 pp.
COSEWIC. 2015. COSEWIC assessment and status report on the Louisiana Waterthrush *Parkesia motacilla* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 58 pp.
Ministry of Natural Resources and Forestry (MNRF) 2015. Technical Note on Species at Risk Bats

Table 2 - Vegetation List

Family	Scientific Name	Common Name	CUM1-1	CUP3-2	CUT1-1	CUW1	CUW1 (riparian)	FOD3-1	FOD5-8	FOD7-3	Hedgerows	Unmaintained Lawn	G-Rank	S-Rank	ESA
Aceraceae	<i>Acer negundo</i>	Manitoba Maple		X	X	X	X			X	X		G5	S5	
Aceraceae	<i>Acer saccharum</i>	Sugar Maple						X	X	X			G5	S5	
Anacardiaceae	<i>Rhus aromatica</i>	Fragrant Sumac			X								G5	S5	
Anacardiaceae	<i>Rhus typhina</i>	Staghorn Sumac	X		X		X			X	X		G5	S5	
Anacardiaceae	<i>Toxicodendron radicans</i>	Eastern Poison Ivy				X	X						GNR	S5	
Apiaceae	<i>Daucus carota</i>	Wild Carrot	X	X		X	X			X		X	GNR	SNA	
Apocynaceae	<i>Apocynum androsaemifolium</i>	Spreading Dogbane	X										G5	S5	
Aristolochiaceae	<i>Asarum canadense</i>	Canada Wild-ginger							X				G5	S5	
Asclepiadaceae	<i>Asclepias syriaca</i>	Common Milkweed	X	X	X								G5	S5	
Asteraceae	<i>Achillea millefolium</i>	Common Yarrow	X									X	G5	SE	
Asteraceae	<i>Ageratina altissima</i>	White Snakeroot								X			G5	S5	
Asteraceae	<i>Anaphalis margaritacea</i>	Pearly Everlasting					X						G5	S5	
Asteraceae	<i>Arctium minus</i>	Common Burdock						X	X	X	X		GNR	SNA	
Asteraceae	<i>Cirsium vulgare</i>	Bull Thistle									X		GNR	SE5	
Asteraceae	<i>Erigeron hyssopifolius</i>	Daisy Fleabane	X			X					X	X	G5	S5	
Asteraceae	<i>Euthamia graminifolia</i>	Grass-leaved Goldenrod	X			X				X			G5	S5	
Asteraceae	<i>Leucanthemum vulgare</i>	Oxeye Daisy	X										GNR	SE5	
Asteraceae	<i>Pilosella aurantiaca</i>	Orange Hawkweed		X									GNR	SNA	
Asteraceae	<i>Rudbeckia hirta</i>	Black-eyed Susan	X				X					X	G5T5	S5	
Asteraceae	<i>Solidago altissima</i>	Eastern Tall Goldenrod	X		X	X	X	X		X	X	X	GNR	S5	
Asteraceae	<i>Solidago canadensis</i>	Canada Goldenrod	X		X		X			X		X	G5T5	S5	
Asteraceae	<i>Solidago flexicaulis</i>	Zigzag Goldenrod							X				G5	S5	
Asteraceae	<i>Symphyotrichum novae-angliae</i>	New England Aster				X						X	G5	S5	
Asteraceae	<i>Symphyotrichum urophyllum</i>	Arrow-leaved Aster					X						G4G5	S4	
Asteraceae	<i>Taraxacum officinale</i>	Common Dandelion			X	X	X		X	X			G5	SNA	
Asteraceae	<i>Tussilago farfara</i>	Colt's-foot								X			GNR	SE5	
Balsaminaceae	<i>Impatiens capensis</i>	Spotted Jewelweed						X					G5	S5	
Berberidaceae	<i>Berberis vulgaris</i>	European Barberry						X					GNR	SE5	
Betulaceae	<i>Betula papyrifera</i>	Paper Birch		X		X			X				G5	S5	
Betulaceae	<i>Ostrya virginiana</i>	Eastern Hop-hornbeam							X				G5	S5	
Boraginaceae	<i>Echium vulgare</i>	Common Viper's-bugloss										X	GNR	SE5	
Brassicaceae	<i>Alliaria petiolata</i>	Garlic Mustard				X			X		X		GNR	SNA	
Brassicaceae	<i>Hesperis matronalis</i>	Dame's Rocket			X				X				G4G5	SNA	
Caprifoliaceae	<i>Lonicera sp.</i>	Honeysuckle					X		X						
Caprifoliaceae	<i>Lonicera tatarica</i>	Tartarian Honeysuckle				X	X	X		X	X		GNR	SE5	
Caprifoliaceae	<i>Sambucus canadensis</i>	Common Elderberry							X				G5T5	S5	
Caprifoliaceae	<i>Viburnum opulus</i>	Highbush Cranberry			X								GNR	S5	
Caprifoliaceae	<i>Viburnum opulus ssp. opulus</i>	Cranberry Viburnum				X							GNR	E3	
Caryophyllaceae	<i>Silene vulgaris</i>	Bladder Campion	X				X						GNR	SNA	
Clusiaceae	<i>Hypericum perforatum</i>	Common St. John's-wort				X	X						GNR	SE5	

Table 2 - Vegetation List

Cornaceae	<i>Cornus alternifolia</i>	Alternate-leaved Dogwood			X	X	X	X		X			G5	S5	
Cornaceae	<i>Cornus stolonifera</i>	Red-osier Dogwood			X		X						G5	S5	
Cupressaceae	<i>Thuja occidentalis</i>	Eastern White Cedar	X	X		X	X						G5	S5	
Cyperaceae	<i>Carex rosea</i>	Rosy Sedge			X								G5	S5	
Cyperaceae	<i>Carex sp.</i>	Sedge						X	X						
Cyperaceae	<i>Cyperus esculentus</i>	Perennial Yellow Flatsedge									X		G5	S5	
Dennstaedtiaceae	<i>Pteridium aquilinum</i>	Bracken Fern									X		G5	S5	
Dryopteridaceae	<i>Matteuccia struthiopteris</i>	Ostrich Fern								X			G5	S5	
Elaeagnaceae	<i>Shepherdia canadensis</i>	Canada Buffalo-berry					X						G5	S5	
Equisetaceae	<i>Equisetum arvense</i>	Field Horsetail				X							G5	S5	
Equisetaceae	<i>Equisetum sp.</i>	Horsetail							X						
Fabaceae	<i>Amphicarpaea bracteata</i>	American Hog-peanut						X		X			G5	S5	
Fabaceae	<i>Melilotus albus</i>	White Sweet-clover					X						G5	SE5	
Fabaceae	<i>Robinia pseudoacacia</i>	Black Locust					X				X		G5	SNA	
Fabaceae	<i>Trifolium pratense</i>	Red Clover										X	GNR	SE5	
Fabaceae	<i>Vicia cracca</i>	Tufted Vetch	X	X		X	X						GNR	SNA	
Fagaceae	<i>Quercus rubra</i>	Northern Red Oak					X						G5	S5	
Geraniaceae	<i>Geranium robertianum</i>	Herb-Robert							X				G5	S5	
Grossulariaceae	<i>Ribes cynosbati</i>	Prickly Gooseberry					X		X				G5	S5	
Hydrophyllaceae	<i>Hydrophyllum virginianum</i>	Virginia Waterleaf							X				G5	S5	
Juglandaceae	<i>Juglans cinerea</i>	Butternut					X		X				G4	S2?	END
Juglandaceae	<i>Juglans nigra</i>	Black Walnut				X	X			X	X	X	G5	S4?	
Lamiaceae	<i>Clinopodium vulgare</i>	Field Basil	X				X						G5	S5	
Lamiaceae	<i>Lamium amplexicaule</i>	Common Deadnettle					X						GNR	SNA	
Lamiaceae	<i>Nepeta cataria</i>	Catnip									X		GNR	SE5	
Lamiaceae	<i>Prunella vulgaris</i>	Self-heal										X	G5T5	S5	
Liliaceae	<i>Asparagus officinalis</i>	Garden Asparagus					X						G5?	SNA	
Liliaceae	<i>Clintonia borealis</i>	Blue Bead-lily				X							G5	S5	
Liliaceae	<i>Maianthemum canadense</i>	Wild Lily-of-the-valley				X	X	X					G5T5	S5	
Liliaceae	<i>Maianthemum racemosum</i>	False Solomon's-seal					X				X		G5	S5	
Liliaceae	<i>Polygonatum pubescens</i>	Hairy Solomon's Seal				X			X				G5	S5	
Liliaceae	<i>Trillium grandiflorum</i>	White Trillium							X				G5	S5	
Moraceae	<i>Morus alba</i>	White Mulberry			X	X					X		GNR	SE5	
Oleaceae	<i>Fraxinus americana</i>	White Ash	X		X	X	X	X	X	X	X		G5	S4	
Oleaceae	<i>Ligustrum vulgare</i>	European Privet						X					GNR	SE5	
Oleaceae	<i>Syringa reticulata</i>	Japanese Tree Lilac		X									GNR	TNR	SNA
Onagraceae	<i>Circaea alpina</i>	Small Enchanter's Nightshade				X		X					G5	S5	
Onagraceae	<i>Oenothera biennis</i>	Common Evening Primrose										X	G5	S5	
Pinaceae	<i>Picea glauca</i>	White Spruce		X		X	X						G5	S5	
Pinaceae	<i>Pinus strobus</i>	Eastern White Pine		X			X		X				G5	S5	
Pinaceae	<i>Pinus sylvestris</i>	Scots Pine				X							GNR	SNA	
Plantaginaceae	<i>Plantago major</i>	Common Plantain	X							X			G5	S5	
Poaceae	<i>Bromus arvensis</i>	Field Brome	X		X	X	X				X	X	GNR	SNA	

Table 2 - Vegetation List

Poaceae	<i>Bromus inermis</i>	Smooth Brome		X	X		X				X		G5TNR	SNA	
Poaceae	<i>Dactylis glomerata</i>	Orchard Grass		X			X		X				GNR	SNA	
Poaceae	<i>Elymus virginicus</i>	Virginia Wildrye								X			G5T5	S5	
Poaceae	<i>Phalaris arundinacea</i>	Reed Canary Grass	X							X			G5	S5	
Poaceae	<i>Phleum pratense</i>	Common Timothy	X									X	GNR	SE5	
Poaceae	<i>Poa pratensis</i>	Kentucky Bluegrass					X					X	G5T5	SNA	
Polygonaceae	<i>Rumex crispus</i>	Curly Dock				X				X	X		GNR	SE5	
Ranunculaceae	<i>Anemone canadensis</i>	Canada Anemone							X				G5	S5	
Ranunculaceae	<i>Clematis virginiana</i>	Virginia Virgin's-bower			X			X					G5	S5	
Ranunculaceae	<i>Ranunculus acris</i>	Tall Buttercup			X	X	X	X					G5	SNA	
Ranunculaceae	<i>Thalictrum dioicum</i>	Early Meadow-rue						X					G5	S5	
Rhamnaceae	<i>Rhamnus cathartica</i>	Common Buckthorn			X	X	X	X	X	X	X		GNR	SNA	
Rosaceae	<i>Aruncus dioicus</i>	Common Goatsbeard		X				X					G5	SNA	
Rosaceae	<i>Crataegus sp.</i>	Hawthorn			X										
Rosaceae	<i>Fragaria virginiana</i>	Wild Strawberry					X			X			G5	S5	
Rosaceae	<i>Malus pumila</i>	Common Apple			X								G5	SE4	
Rosaceae	<i>Prunus virginiana</i>	Choke Cherry							X	X			G5	S5	
Rosaceae	<i>Rubus idaeus</i>	Common Red Raspberry	X					X	X	X	X	X	G5T5	SNA	
Rubiaceae	<i>Galium triflorum</i>	Three-flowered Bedstraw	X									X	G5	S5	
Salicaceae	<i>Populus balsamifera</i>	Balsam Poplar			X	X							G5	S5	
Salicaceae	<i>Populus grandidentata</i>	Large-toothed Aspen		X			X	X			X		G5	S5	
Salicaceae	<i>Populus tremuloides</i>	Trembling Aspen				X	X	X		X	X		G5	S5	
Salicaceae	<i>Salix euxina</i>	Crack Willow					X			X			GNR	SNA	
Salicaceae	<i>Salix sp.</i>	Willow (shrub form)				X	X								
Scrophulariaceae	<i>Verbascum thapsus</i>	Common Mullein	X										GNR	SE5	
Tiliaceae	<i>Tilia americana</i>	American Basswood	X			X		X	X	X			G5	S5	
Ulmaceae	<i>Ulmus americana</i>	American Elm					X	X	X	X	X		G5	S5	
Vitaceae	<i>Parthenocissus quinquefolia</i>	Virginia Creeper		X	X	X	X	X	X	X		X	G5	S4?	
Vitaceae	<i>Vitis riparia</i>	Riverbank Grape	X	X	X	X	X		X	X	X		G5	S5	

Family	Scientific Name	English Common Name	Point Count Station ^A					Area sensitive? ^D	Conservation Rank ^B		
			1 ^C	2	3	4	Incidental		S RANK	G RANK	SARO STATUS
Accipitridae	<i>Haliaeetus leucocephalus</i>	Bald Eagle					X	X	S2N,S4B	G5	SC
Alcedinidae	<i>Megaceryle alcyon</i>	Belted Kingfisher					X		S4B	G5	
Bombycillidae	<i>Bombycilla cedrorum</i>	Cedar Waxwing	S ^E						S5B	G5	
Cardinalidae	<i>Cardinalis cardinalis</i>	Northern Cardinal			S	S			S5	G5	
Cardinalidae	<i>Passerina cyanea</i>	Indigo Bunting		S					S4B	G5	
Cathartidae	<i>Cathartes aura</i>	Turkey Vulture					X		S5B	G5	
Columbidae	<i>Zenaida macroura</i>	Mourning Dove				S	X		S5	G5	
Corvidae	<i>Corvus brachyrhynchos</i>	American Crow			C				S5B	G5	
Corvidae	<i>Cyanocitta cristata</i>	Blue Jay					X		S5	G5	
Emberizidae	<i>Melospiza melodia</i>	Song Sparrow	S	S					S5B	G5	
Emberizidae	<i>Passerculus sandwichensis</i>	Savannah Sparrow	S						S4B	G5	
Emberizidae	<i>Spizella passerina</i>	Chipping Sparrow	S						S5B	G5	
Fringillidae	<i>Carduelis tristis</i>	American Goldfinch	S	S	S				S5B	G5	
Hirundinidae	<i>Stelgidopteryx serripennis</i>	Northern Rough-winged Swallow		FO					S4B	G5	
Icteridae	<i>Agelaius phoeniceus</i>	Red-winged Blackbird			OBS				S4	G5	
Icteridae	<i>Icterus galbula</i>	Baltimore Oriole			S				S4B	G5	
Icteridae	<i>Quiscalus quiscula</i>	Common Grackle				H			S5B	G5	
Mimidae	<i>Dumetella carolinensis</i>	Gray Catbird	FO	S		S			S4B	G5	
Paridae	<i>Poecile atricapillus</i>	Black-capped Chickadee					X		S5	G5	
Parulidae	<i>Geothlypis trichas</i>	Common Yellowthroat		S					S5B	G5	
Parulidae	<i>Setophaga ruticilla</i>	American Redstart		S				X	S5B	G5	
Troglodytidae	<i>Troglodytes aedon</i>	House Wren			S	S			S5B	G5	
Turdidae	<i>Turdus migratorius</i>	American Robin			H	H	X		S5B	G5	
Tyrannidae	<i>Contopus virens</i>	Eastern Wood-pewee		S	S		X		S4B	G5	SC
Vireonidae	<i>Vireo olivaceus</i>	Red-eyed Vireo		S	S	S			S5B	G5	

Surveys Conditions:

^AJune 14, 2017; Start Time 08:39hr/ End Time 09:23hr; Start Temperature +16°C; Wind B2; Cloud Cover 0%; Precipitation Null; Observer L. Moran

^BConservation Rank - from OMNRF, NHIC, SAR and SARO Lists 2014
 S-rank - S1 - Extremely Rare, S2 - Very Rare, S3 - Rare to Uncommon, S4 - Common, S5 - Very Common
 G-Rank - G1 - Critically Imperiled, G2 - Imperiled, G3 - Vulnerable, G4 - Apparently Secure, G5 - Secure
 SARO - EXP (Extirpated), END (Endangered), THR (Threatened), SC (Special Concern)

^C Refer to Figure 2 for Point Count Station Locations

^D According to Appendix C of the Significant Wildlife Habitat Technical Guide (MNRF, 2000)

^EOBBA Breeding Evidence Codes:
 H - Species observed in its breeding season in suitable nesting habitat
 S - Singing male present, or breeding calls heard, in suitable nesting habitat in nesting season.
 C - Call
 OBS - Observed
 FO - Fly Over

Significant Wildlife Habitat Criteria Schedule for Ecoregion 6E

Table 5.1 Seasonal Concentrations of Areas of Animals

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
<p>Waterfowl Stopover and Staging Areas (Terrestrial)</p> <p>Rationale: Habitat important to migrating waterfowl.</p>	American Black Duck Wood Duck Green-winged Teal Blue-winged Teal Mallard Northern Pintail Northern Shoveler American Wigeon Gadwall	CUM1 CUT1 Plus evidence of annual spring flooding from melt water or run-off within these Ecosites.	Fields with sheet water during Spring (mid-March to May). <ul style="list-style-type: none"> Fields flooding during springmelt and run-off provide important invertebrate foraging habitat for migrating waterfowl. Agricultural fields with waste grains are commonly used by waterfowl, these are not considered SWH unless they have spring sheet water available. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Anecdotal information from the landowner, adjacent landowners or local naturalist clubs may be good information in determining occurrence. Reports and other information available from Conservation Authorities Sites documented through waterfowl planning processes (eg. EHJV implementation plan) Field Naturalist Clubs Ducks Unlimited Canada Natural Heritage Information Centre (NHIC) Waterfowl Concentration Area 	Studies carried out and verified presence of an annual concentration of any listed species, evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” <ul style="list-style-type: none"> Any mixed species aggregations of 100 or more individuals required. The flooded field ecosite habitat plus a 100-300m radius area, dependant on local site conditions and adjacent land use is the significant wildlife habitat. Annual use of habitat is documented from information sources or field studies (annual use can be based on studies or determined by past surveys with species numbers and dates). SWHMiST Index #7 provides development effects and mitigation measures. 	ELC ecosite codes present on the property, however, no evidence of sheet water within fields in the spring. No further evaluation undertaken.
<p>Waterfowl Stopover and Staging Areas (Aquatic)</p> <p>Rationale: Important for local and migrant waterfowl populations during the spring or fall migration or both periods combined. Sites identified are usually only one of a few in the eco-district.</p>	Canada Goose Cackling Goose Snow Goose American Black Duck Northern Pintail Northern Shoveler American Wigeon Gadwall Green-winged Teal Blue-winged Teal Hooded Merganser Common Merganser Lesser Scaup Greater Scaup Long-tailed Duck Surf Scoter White-winged Scoter Black Scoter Ring-necked duck Common Goldeneye Bufflehead Redhead Ruddy Duck Red-breasted Merganser Brant Canvasback Ruddy Duck	MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 SWD1 SWD2 SWD3 SWD4 SWD5 SWD6 SWD7	<ul style="list-style-type: none"> Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration. Sewage treatment ponds and storm water ponds do not qualify as a SWH, however a reservoir managed as a large wetland or pond/lake does qualify. These habitats have an abundant food supply (mostly aquatic invertebrates and vegetation in shallow water) <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Environment Canada. Naturalist clubs often are aware of staging/stopover areas. OMNRF Wetland Evaluations indicate presence of locally and regionally significant waterfowl staging. Sites documented through waterfowl planning processes (eg. EHJV implementation plan) Ducks Unlimited projects Element occurrence specification by Nature Serve: http://www.natureserve.org Natural Heritage Information Centre (NHIC) Waterfowl Concentration Areas 	Studies carried out and verified presence of: <ul style="list-style-type: none"> Aggregations of 100[©] or more of listed species for 7 days[©], results in > 700 waterfowl use days. Areas with annual staging of ruddy ducks, canvasbacks, and redheads are SWH The combined area of the ELC ecosites and a 100m radius area is the SWH Wetland area and shorelines associated with sites identified within the SWHTG Appendix K are significant wildlife habitat. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” Annual Use of Habitat is Documented from Information Sources or Field Studies (Annual can be based on completed studies or determined from past surveys with species numbers and dates recorded). SWHMiST Index #7 provides development effects and mitigation measures. 	Property does not meet ELC criteria. No further evaluation undertaken.

<p>Shorebird Migratory Stopover Area</p> <p>Rationale: High quality shorebird stopover habitat is extremely rare and typically has a long history of use.</p>	<p>Greater Yellowlegs Lesser Yellowlegs Marbled Godwit Hudsonian Godwit Black-bellied Plover American Golden-Plover Semipalmated Plover Solitary Sandpiper Spotted Sandpiper Semipalmated Sandpiper Pectoral Sandpiper White-rumped Sandpiper Baird's Sandpiper Least Sandpiper Purple Sandpiper Stilt Sandpiper Short-billed Dowitcher Red-necked Phalarope Whimbrel Ruddy Turnstone Sanderling Dunlin</p>	<p>BBO1 BBO2 BBS1 BBS2 BBT1 BBT2 SDO1 SDS2 SDT1 MAM1 MAM2 MAM3 MAM4 MAM5</p>	<ul style="list-style-type: none"> • Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats. • Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores, are extremely important for migratory shorebirds in May to mid-June and early July to October. • Sewage treatment ponds and storm water ponds do not qualify as a SWH. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> • Western hemisphere shorebird reserve network. • Canadian Wildlife Service (CWS) Ontario Shorebird Survey. • Bird Studies Canada • Ontario Nature • Local birders and naturalist clubs • Natural Heritage Information Center (NHIC) Shorebird Migratory Concentration Area 	<p>Studies confirming:</p> <ul style="list-style-type: none"> • Presence of 3 or more of listed species and > 1000 shorebird use days during spring or fall migration period. (shorebird use days are the accumulated number of shorebirds counted per day over the course of the fall or spring migration period) • Whimbrel stop briefly (<24hrs) during spring migration, any site with >100 Whimbrel used for 3 years or more is significant. • The area of significant shorebird habitat includes the mapped ELC shoreline ecosites plus a 100m radius area • Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects" • SWHMiST Index #8 provides development effects and mitigation measures. 	<p>Property does not meet ELC criteria. No further evaluation undertaken.</p>
<p>Raptor Wintering Area</p> <p>Rationale: Sites used by multiple species of individuals and used annually are most significant</p>	<p>Rough-legged Hawk Red-tailed Hawk Northern Harrier American Kestrel Snowy Owl</p> <p>Special Concern: Short-eared Owl Bald Eagle</p>	<p><u>Hawks/Owls:</u> Combination of ELC Community Series; need to have present one Community Series from each land class; Forest: FOD, FOM, FOC.</p> <p>Upland: CUM; CUT; CUS; CUW.</p> <p><u>Bald Eagle:</u> Forest community Series: FOD, FOM, FOC, SWD, SWM or SWC on shoreline areas adjacent to large rivers or adjacent to lakes with open water (hunting area).</p>	<ul style="list-style-type: none"> • The habitat provides a combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors. • Raptor wintering sites (hawk/owl) need to be > 20 ha with a combination of forest and upland. • Least disturbed sites, idle/fallow or lightly grazed field/meadow (>15ha) with adjacent woodlands • Field area of the habitat is to be wind swept with limited snow depth or accumulation. • Eagle sites have open water, large trees and snags available for roosting <p><u>Information Sources:</u></p> <ul style="list-style-type: none"> • OMNRF Ecologist or Biologist Field Naturalist Clubs • Natural Heritage Information Center (NHIC) Raptor Winter Concentration Area • Data from Bird Studies Canada • Results of Christmas Bird Counts Reports and other information available from Conservation Authorities. 	<p>Studies confirm the use of these habitats by:</p> <ul style="list-style-type: none"> • One or more Short-eared Owls or; One or more Bald Eagles or; At least 10 individuals and two of the listed hawk/owl species. • To be significant a site must be used regularly (3 in 5 years) for a minimum of 20 days by the above number of birds. • The habitat area for an Eagle winter site is the shoreline forest ecosites directly adjacent to the prime hunting area • Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects" • SWHMiST Index #10 and #11 provides development effects and mitigation measures. 	<p>Potentially suitable ELC ecosites present on the property (FOD). Agricultural lands on the property are cultivated (<i>i.e.</i> highly disturbed) hence would not be considered to be suitable upland foraging habitat. The FOD habitat may contribute to potentially suitable raptor wintering areas beyond the limits of the property. No further evaluation undertaken.</p>

Table 4: Significant Wildlife Habitat Assessment

<p>Bat Hibernacula</p> <p>Rationale: Bat hibernacula are rare habitats in all Ontario landscapes.</p>	<p>Big Brown Bat Tri-coloured Bat</p>	<p>Bat Hibernacula may be found in these ecosites: CCR1 CCR2 CCA1 CCA2 (Note: buildings are not considered to be SWH)</p>	<ul style="list-style-type: none"> Hibernacula may be found in caves, mine shafts, underground foundations and Karsts. Active mine sites should not be considered as SWH The locations of bat hibernacula are relatively poorly known. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> OMNRF for possible locations and contact for local experts Natural Heritage Information Center (NHIC) Bat Hibernaculum Ministry of Northern Development and Mines for location of mine shafts. Clubs that explore caves (eg. Sierra Club) University Biology Departments with bat experts. 	<ul style="list-style-type: none"> All sites with confirmed hibernating bats are SWH. The habitat area includes a 200m radius around the entrance of the hibernaculum, for most development types and 1000m for wind farms Studies are to be conducted during the peak swarming period (Aug. – Sept.). Surveys should be conducted following methods outlined in the “Bats and Bat Habitats: Guidelines for Wind Power Projects. SWHMiST Index #1 provides development effects and mitigation measures. 	<p>Property and adjacent lands do not meet ELC criteria. No further evaluation undertaken.</p>
<p>Bat Maternity Colonies</p> <p>Rationale: Known locations of forested bat maternity colonies are extremely rare in all Ontario landscapes.</p>	<p>Big Brown Bat Silver-haired Bat</p>	<p>Maternity colonies considered SWH are found in forested Ecosites.</p> <p>All ELC Ecosites in ELC Community Series: FOD FOM SWD SWM</p>	<ul style="list-style-type: none"> Maternity colonies can be found in tree cavities, vegetation and often in buildings (buildings are not considered to be SWH). Maternity roosts are not found in caves and mines in Ontario. Maternity colonies located in Mature deciduous or mixed forest stands with >10/ha large diameter (>25cm dbh) wildlife trees Female Bats prefer wildlife tree (snags) in early stages of decay, class 1-3 or class 1 or 2. Silver-haired Bats prefer older mixed or deciduous forest and form maternity colonies in tree cavities and small hollows. Older forest areas with at least 21 snags/ha are preferred <p><u>Information Sources</u></p> <ul style="list-style-type: none"> OMNRF for possible locations and contact for local experts University Biology Departments with bat experts. 	<ul style="list-style-type: none"> Maternity Colonies with confirmed use by; >10 Big Brown Bats[®] >5 Adult Female Silver-haired Bats The area of the habitat includes the entire woodland or a forest stand ELC Ecosite or an Ecoelement containing the maternity colonies. Evaluation methods for maternity colonies should be conducted following methods outlined in the “Bats and Bat Habitats: Guidelines for Wind Power Projects”. SWHMiST Index #12 provides development effects and mitigation measures. 	<p>The property and adjacent lands contains features with potential to function as Bat Maternity Colonies (FOD). See Sections 5.4.1 and 7.3.1 for further assessment.</p>
<p>Turtle Wintering Areas</p> <p>Rationale: Generally sites are the only known sites in the area. Sites with the highest number of individuals are most significant.</p>	<p>Midland Painted Turtle</p> <p>Special Concern: Northern Map Turtle Snapping Turtle</p>	<p>Snapping and Midland Painted Turtles; ELC Community Classes; SW, MA, OA and SA, ELC Community Series; FEO and BOO</p> <p>Northern Map Turtle; Open Water areas such as deeper rivers or streams and lakes with current can also be used as over-wintering habitat.</p>	<ul style="list-style-type: none"> For most turtles, wintering areas are in the same general area as their core habitat. Water has to be deep enough not to freeze and have soft mud substrates. Over-wintering sites are permanent water bodies, large wetlands, and bogs or fens with adequate Dissolved Oxygen Man-made ponds such as sewage lagoons or storm water ponds should not be considered SWH. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> EIS studies carried out by Conservation Authorities. Local field naturalists and experts, as well as university herpetologists may also know where to find some of these sites. OMNRF Ecologist or Biologist Field Naturalist clubs Natural Heritage Information Center (NHIC) 	<ul style="list-style-type: none"> Presence of 5 over-wintering Midland Painted Turtles is significant. One or more Northern Map Turtle or Snapping Turtle over-wintering within a wetland is significant. The mapped ELC ecosite area with the over wintering turtles is the SWH. If the hibernation site is within a stream or river, the deep-water pool where the turtles are over wintering is the SWH. Over wintering areas may be identified by searching for congregations (Basking Areas) of turtles on warm, sunny days during the fall (Sept. – Oct.) or spring (Mar. – May) Congregation of turtles is more common where wintering areas are limited and therefore significant SWHMiST Index #28 provides development effects and mitigation measures for turtle wintering habitat. 	<p>Study area does not meet ELC criteria. No further evaluation undertaken.</p>

Table 4: Significant Wildlife Habitat Assessment

<p>Reptile Hibernaculum Rationale; Generally sites are the only known sites in the area. Sites with the highest number of individuals are most significant.</p>	<p>Snakes: Eastern Gartersnake Northern Watersnake Northern Red-bellied Snake Northern Brownsnake Smooth Green Snake Northern Ring-necked Snake</p> <p>Special Concern: Milksnake Eastern Ribbonsnake</p> <p>Lizard: Special Concern (Southern Shield population): Five-lined Skink</p>	<p>For all snakes, habitat may be found in any ecosite other than very wet ones. Talus, Rock Barren, Crevice, Cave, and Alvar sites may be directly related to these habitats.</p> <p>Observations or congregations of snakes on sunny warm days in the spring or fall is a good indicator.</p> <p>For Five-lined Skink, ELC Community Series of FOD and FOM and Ecosites: FOC1 FOC3</p>	<ul style="list-style-type: none"> For snakes, hibernation takes place in sites located below frost lines in burrows, rock crevices and other natural or naturalized locations. The existence of features that go below frost line; such as rock piles or slopes, old stone fences, and abandoned crumbling foundations assist in identifying candidate SWH. Areas of broken and fissured rock are particularly valuable since they provide access to subterranean sites below the frost line Wetlands can also be important over-wintering habitat in conifer or shrub swamps and swales, poor fens, or depressions in bedrock terrain with sparse trees or shrubs with sphagnum moss or sedge hummock ground cover. Five-lined skink prefer mixed forests with rock outcrop openings providing cover rock overlaying granite bedrock with fissures . <p><u>Information Sources</u></p> <ul style="list-style-type: none"> In spring, local residents or landowners may have observed the emergence of snakes on their property (e.g. old dug wells). Reports and other information available from Conservation Authorities. Field Naturalists clubs University herpetologists Natural Heritage Information Center (NHIC) OMNRF ecologist or biologist may be aware of locations of wintering skinks 	<p>Studies confirming:</p> <ul style="list-style-type: none"> Presence of snake hibernacula used by a minimum of five individuals of a snake sp. or; individuals of two or more snake spp. Congregations of a minimum of five individuals of a snake sp. or; individuals of two or more snake spp. near potential hibernacula (eg. foundation or rocky slope) on sunny warm days in Spring (Apr/May) and Fall (Sept/Oct) Note: If there are Special Concern Species present, then site is SWH Note: Sites for hibernation possess specific habitat parameters (e.g. temperature, humidity, etc.) and consequently are used annually, often by many of the same individuals of a local population (i.e. strong hibernation site fidelity). Other critical life processes (e.g. mating) often take place in close proximity to hibernacula. The feature in which the hibernacula is located plus a 30 m radius area is the SWH SWHMiST Index #13 provides development effects and mitigation measures for snake hibernacula. Presence of any active hibernaculum for skink is significant. SWHMiST Index #37 provides development effects and mitigation measures for five-lined skink wintering habitat. 	<p>No obvious features (<i>i.e.</i> rock piles, slopes, old foundations) documented on the property that could provide potential reptile hibernaculum. No further assessment undertaken.</p>
<p>Colonially - Nesting Bird Breeding Habitat (Bank and Cliff)</p> <p>Rationale: Historical use and number of nests in a colony make this habitat significant. An identified colony can be very important to local populations. All swallow population are declining in Ontario.</p>	<p>Cliff Swallow Northern Rough-winged Swallow (this species is not colonial but can be found in Cliff Swallow colonies)</p>	<p>Eroding banks, sandy hills, borrow pits, steep slopes, and sand piles. Cliff faces, bridge abutments, silos, barns.</p> <p>Habitat found in the following ecosites: CUM1 CUT1 CUS1 BLO1 BLS1 BLT1 CLO1 CLS1 CLT1</p>	<ul style="list-style-type: none"> Any site or areas with exposed soil banks, undisturbed or naturally eroding that is not a licensed/permitted aggregate area. Does not include man-made structures (bridges or buildings) or recently (2 years) disturbed soil areas, such as berms, embankments, soil or aggregate stockpiles. Does not include a licensed/permitted Mineral Aggregate Operation. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Reports and other information available from Conservation Authorities. Ontario Breeding Bird Atlas Bird Studies Canada; <i>NatureCounts</i> http://www.birdscanada.org/birdmon/ Field Naturalist Clubs. 	<p>Studies confirming:</p> <ul style="list-style-type: none"> Presence of 1 or more nesting sites with 8or more cliff swallow pairs and/or rough-winged swallow pairs during the breeding season. A colony identified as SWH will include a 50m radius habitat area from the peripheral nests Field surveys to observe and count swallow nests are to be completed during the breeding season. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” SWHMiST Index #4 provides development effects and mitigation measures 	<p>The banks along the portion of the Pretty River that traverses through the property are largely vegetated. Only minor areas of exposed, eroding soils are present. There was no evidence of Swallow nesting within these areas. There were no Swallows documented to be utilizing the property during Azimuth’s 2017 breeding bird survey. No further assessment undertaken.</p>

Table 4: Significant Wildlife Habitat Assessment

<p>Colonially - Nesting Bird Breeding Habitat (Tree/Shrubs) Rationale: Large colonies are important to local bird population, typically sites are only known colony in area and are used annually.</p>	<p>Great Blue Heron Black-crowned Night-Heron Great Egret Green Heron</p>	<p>SWM2 SWM3 SWM5 SWM6 SWD1 SWD2 SWD3 SWD4 SWD5 SWD6 SWD7 FET1</p>	<ul style="list-style-type: none"> Nests in live or dead standing trees in wetlands, lakes, islands, and peninsulas. Shrubs and occasionally emergent vegetation may also be used. Most nests in trees are 11 to 15 m from ground, near the top of the tree. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Ontario Breeding Bird Atlas, colonial nest records. Ontario Heronry Inventory 1991 available from Bird Studies Canada or NHIC (OMNRF). Natural Heritage Information Center (NHIC) Mixed Wader Nesting Colony Aerial photographs can help identify large heronries. Reports and other information available from CAs. MNRF District Offices. Local naturalist clubs. 	<p>Studies confirming:</p> <ul style="list-style-type: none"> Presence of 5 or more active nests of Great Blue Heron or other listed species. The habitat extends from the edge of the colony and a minimum 300m radius or extent of the Forest Ecosite containing the colony or any island <15.0ha with a colony is the SWH Confirmation of active heronries are to be achieved through site visits conducted during the nesting season (April to August) or by evidence such as the presence of fresh guano, dead young and/or eggshells SWHMiST Index #5 provides development effects and mitigation measures. 	<p>Property does not meet ELC criteria. No further evaluation undertaken.</p>
<p>Colonially - Nesting Bird Breeding Habitat (Ground) Rationale: Colonies are important to local bird population, typically sites are only known colony in area and are used annually.</p>	<p>Herring Gull Great Black-backed Gull Little Gull Ring-billed Gull Common Tern Caspian Tern Brewer's Blackbird</p>	<p>Any rocky island or peninsula (natural or artificial) within a lake or large river (two-lined on a 1:50,000 NTS map).</p> <p>Close proximity to watercourses in open fields or pastures with scattered trees or shrubs (Brewer's Blackbird)</p> <p>MAM1 – 6; MAS1 – 3; CUM CUT CUS</p>	<ul style="list-style-type: none"> Nesting colonies of gulls and terns are on islands or peninsulas associated with open water or in marshy areas. Brewers Blackbird colonies are found loosely on the ground in low bushes in close proximity to streams and irrigation ditches within farmlands. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Ontario Breeding Bird Atlas , rare/colonial species records. Canadian Wildlife Service Reports and other information available from CAs. Natural Heritage Information Center (NHIC) Colonial Waterbird Nesting Area MNRF District Offices. Field Naturalist clubs. 	<p>Studies confirming:</p> <ul style="list-style-type: none"> Presence of > 25 active nests for Herring Gulls or Ring-billed Gulls, >5 active nests for Common Tern or >2 active nests for Caspian Tern. Presence of 5 or more pairs for Brewer's Blackbird. Any active nesting colony of one or more Little Gull, and Great Black-backed Gull is significant. The edge of the colony and a minimum 150m radius area of habitat, or the extent of the ELC ecosites containing the colony or any island <3.0ha with a colony is the SWH Studies would be done during May/June when actively nesting. Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects" SWHMiST Index #6 provides development effects and mitigation measures. 	<p>Property does not meet key criteria. No further evaluation undertaken.</p>

Table 4: Significant Wildlife Habitat Assessment

<p>Migratory Butterfly Stopover Areas</p> <p>Rationale: Butterfly stopover areas are extremely rare habitats and are biologically important for butterfly species that migrate south for the winter.</p>	<p>Painted Lady Red Admiral</p> <p><u>Special Concern</u> Monarch</p>	<p>Combination of ELC Community Series; need to have present one Community Series from each land class:</p> <p><u>Field:</u> CUM CUT CUS</p> <p><u>Forest:</u> FOC FOD FOM CUP</p> <p>Anecdotally, a candidate site for butterfly stopover will have a history of butterflies being observed.</p>	<p>A butterfly stopover area will be a minimum of 10 ha in size with a combination of field and forest habitat present, and will be located within 5 km of Lake Ontario.</p> <ul style="list-style-type: none"> The habitat is typically a combination of field and forest, and provides the butterflies with a location to rest prior to their long migration south The habitat should not be disturbed, fields/meadows with an abundance of preferred nectar plants and woodland edge providing shelter are requirements for this habitat. Staging areas usually provide protection from the elements and are often spits of land or areas with the shortest distance to cross the Great Lakes <p><u>Information Sources</u></p> <ul style="list-style-type: none"> OMNRF (NHIC) Agriculture Canada in Ottawa may have list of butterfly experts. Field Naturalist Clubs Toronto Entomologists Association Conservation Authorities 	<p>Studies confirm:</p> <ul style="list-style-type: none"> The presence of Monarch Use Days (MUD) during fall migration (Aug/Oct). MUD is based on the number of days a site is used by Monarchs, multiplied by the number of individuals using the site. Numbers of butterflies can range from 100-500/day, significant variation can occur between years and multiple years of sampling should occur. Observational studies are to be completed and need to be done frequently during the migration period to estimate MUD. MUD of >5000 or >3000 with the presence of Painted Ladies or Red Admiral's is to be considered significant. SWHMiST Index #16 provides development effects and mitigation measures. 	<p>Property does not meet key requirement related to proximity to Lake Ontario. No further assessment undertaken.</p>
<p>Landbird Migratory Stopover Areas</p> <p>Rationale: Sites with a high diversity of species as well as high numbers are most significant.</p>	<p>All migratory songbirds. Canadian Wildlife Service Ontario website.</p> <p>All migratory songbirds. Canadian Wildlife Service Ontario website:</p>	<p>All Ecosites associated with these ELC Community Series;</p> <p>FOC FOM FOD SWC SWM SWD</p>	<p>Woodlots need to be >10 ha in size and within 5 km of Lake Ontario.</p> <ul style="list-style-type: none"> If multiple woodlands are located along the shoreline those Woodlands <2km from Lake Ontario are more significant Sites have a variety of habitats; forest, grassland and wetland complexes. The largest sites are more significant Woodlots and forest fragments are important habitats to migrating birds, these features located along the shore and located within 5km of Lake Ontario are Candidate SWH . <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Bird Studies Canada Ontario Nature Local birders and naturalist club Ontario Important Bird Areas (IBA) Program 	<p>Studies confirm:</p> <ul style="list-style-type: none"> Use of the habitat by >200 birds/day and with >35 spp with at least 10 bird spp. recorded on at least 5 different survey dates. This abundance and diversity of migrant bird species is considered above average and significant. Studies should be completed during spring (Apr./May) and fall (Aug/Oct) migration using standardized assessment techniques. Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects" SWHMiST Index #9 provides development effects 	<p>Property does not meet key requirement related to proximity to Lake Ontario. No further assessment undertaken.</p>

<p>Deer Yarding Areas</p> <p>Rationale: Winter habitat for deer is considered to be the main limiting factor for northern deer populations. In winter, deer congregate in “yards” to survive severe winter conditions. Deer yards typically have a long history of annual use by deer, yards typically represent 10-15% of an areas summer range.</p>	<p>White-tailed Deer</p>	<p>Note: OMNRF to determine this habitat. ELC Community Series providing a thermal cover component for a deer yard would include; FOM, FOC, SWM and SWC.</p> <p>Or these ELC Ecosites; CUP2 CUP3 FOD3 CUT</p>	<ul style="list-style-type: none"> Deer yarding areas or winter concentration areas (yards) are areas deer move to in response to the onset of winter snow and cold. This is a behavioural response and deer will establish traditional use areas. The yard is composed of two areas referred to as Stratum I and Stratum II. Stratum II covers the entire winter yard area and is usually a mixed or deciduous forest with plenty of browse available for food. Agricultural lands can also be included in this area. Deer move to these areas in early winter and generally, when snow depths reach 20 cm, most of the deer will have moved here. If the snow is light and fluffy, deer may continue to use this area until 30 cm snow depth. In mild winters, deer may remain in the Stratum II area the entire winter. The Core of a deer yard (Stratum I) is located within the Stratum II area and is critical for deer survival in areas where winters become severe. It is primarily composed of coniferous trees (pine, hemlock, cedar, spruce) with a canopy cover of more than 60%. OMNRF determines deer yards following methods outlined in “Selected Wildlife and Habitat Features: Inventory Manual” Woodlots with high densities of deer due to artificial feeding are not significant. 	<p>No Studies Required:</p> <ul style="list-style-type: none"> Snow depth and temperature are the greatest influence on deer use of winter yards. Snow depths > 40cm for more than 60 days in a typically winter are minimum criteria for a deer yard to be considered as SWH. Deer Yards are mapped by OMNRF District offices. Locations of Core or Stratum 1 and Stratum 2 Deer yards considered significant by OMNRF will be available at local MNRF offices or via Land Information Ontario (LIO). Field investigations that record deer tracks in winter are done to confirm use (best done from an aircraft). Preferably, this is done over a series of winters to establish the boundary of the Stratum I and Stratum II yard in an "average" winter. MNRF will complete these field investigations. If a SWH is determined for Deer Wintering Area or if a proposed development is within Stratum II yarding area then Movement Corridors are to be considered as outlined in Table 1.4.1 of this Schedule. SWHMiST Index #2 provides development effects and mitigation measures. 	<p>ELC ecosite codes present on the property, however, the communities are too young and small to be functioning as Deer Yarding Areas. There are no deer wintering areas identified on or adjacent to the property according to the province. No further assessment undertaken.</p>
<p>Deer Winter Congregation Areas</p> <p>Rationale: Deer movement during winter in the southern areas of Ecoregion 6E are not constrained by snow depth, however deer will annually congregate in large numbers in suitable woodlands to reduce or avoid the impacts of winter conditions.</p>	<p>White-tailed Deer</p>	<p>All Forested Ecosites with these ELC Community Series; FOC FOM FOD SWC SWM SWD</p> <p>Conifer plantations much smaller than 50 ha may also be used.</p>	<ul style="list-style-type: none"> Woodlots will typically be >100 ha in size. Woodlots <100ha may be considered as significant based on MNRF studies or assessment. Deer movement during winter in the southern areas of Ecoregion 6E are not constrained by snow depth, however deer will annually congregate in large numbers in suitable woodlands . If deer are constrained by snow depth refer to the Deer Yarding Area habitat within Table 1.1 of this Schedule. Large woodlots > 100ha and up to 1500 ha are known to be used annually by densities of deer that range from 0.1-1.5 deer/ha . Woodlots with high densities of deer due to artificial feeding are not significant. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> MNRF District Offices LIO/NRVIS 	<p>Studies confirm:</p> <ul style="list-style-type: none"> Deer management is an MNRF responsibility, deer winter congregation areas considered significant will be mapped by MNRF Use of the woodlot by white-tailed deer will be determined by MNRF, all woodlots exceeding the area criteria are significant, unless determined not to be significant by MNRF Studies should be completed during winter (Jan/Feb) when >20cm of snow is on the ground using aerial survey techniques, ground or road surveys. or a pellet count deer density survey. If a SWH is determined for Deer Wintering Area or if a proposed development is within Stratum II yarding area then Movement Corridors are to be considered as outlined in Table 1.4.1 of this Schedule. SWHMiST Index #2 provides development effects and mitigation measures. 	<p>Not within geographical range where Deer Winter Congregation occurs (<i>i.e.</i> not in southern areas of Ecoregion 6E). No further assessment undertaken.</p>

Table 5.2 - Rare Vegetation Communities

Rare Vegetation Community	Candidate SWH			Confirmed SWH	Assessment
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria	
<p>Cliffs and Talus Slopes Rationale: Cliffs and Talus Slopes are extremely rare habitats in Ontario.</p>	<p>Any ELC Ecosite within Community Series: TAO TAS TAT CLO CLS CLT</p>	<p>A Cliff is vertical to near vertical bedrock >3m in height. A Talus Slope is rock rubble at the base of a cliff made up of coarse rocky debris</p>	<p>Most cliff and talus slopes occur along the Niagara Escarpment. <u>Information Sources</u> <ul style="list-style-type: none"> The Niagara Escarpment Commission has detailed information on location of these habitats. OMNRF District Natural Heritage Information Center (NHIC) has location information available on their website Field Naturalist clubs Conservation Authorities </p>	<ul style="list-style-type: none"> Confirm any ELC Vegetation Type for Cliffs or Talus Slopes SWHMiST Index #21 provides development effects and mitigation measures. 	<p>Property does not meet key criteria. No further assessment required.</p>
<p>Sand Barren Rationale: Sand barrens are rare in Ontario and support rare species. Most Sand Barrens have been lost due to cottage development and forestry</p>	<p>ELC Ecosites: SBO1 SBS1 SBT1 Vegetation cover varies from patchy and barren to continuous meadow (SBO1), thicket-like (SBS1), or more closed and treed (SBT1). Tree cover always ≤ 60%</p>	<p>Sand Barrens typically are exposed sand, generally sparsely vegetated and caused by lack of moisture, periodic fires and erosion. Usually located within other types of natural habitat such as forest or savannah. Vegetation can vary from patchy and barren to tree covered, but less than 60%.</p>	<p>A sand barren area >0.5ha in size. <u>Information Sources</u> <ul style="list-style-type: none"> MNR Districts. Natural Heritage Information Center (NHIC) has location information available on their website. Field Naturalist clubs Conservation Authorities </p>	<ul style="list-style-type: none"> Confirm any ELC Vegetation Type for Sand Barrens Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.) SWHMiST Index #20 provides development effects and mitigation measures. 	<p>Property does not meet key criteria. No further assessment required.</p>

Table 4: Significant Wildlife Habitat Assessment

<p>Alvar</p> <p>Rationale: Alvares are extremely rare habitats in Ecosregion 6E. Most alvars in Ontario are in Ecoregions 6E and 7E. Alvars in 6E are small and highly localized just north of the Palaeozoic-Precambrian contact.</p>	<p>ALO1 ALS1 ALT1 FOC1 FOC2 CUM2 CUS2 CUT2-1 CUW2</p> <p>Five Alvar Species: 1) <i>Carex crawei</i> 2) <i>Panicum philadelphicum</i> 3) <i>Eleocharis compressa</i> 4) <i>Scutellaria parvula</i> 5) <i>Trichostema brachiatum</i></p> <p>These indicator species are very specific to Alvars within Ecoregion 6E</p>	<p>An alvar is typically a level, mostly unfractured calcareous bedrock feature with a mosaic of rock pavements and bedrock overlain by a thin veneer of soil. The hydrology of alvars is complex, with alternating periods of inundation and drought. Vegetation cover varies from sparse lichen-moss associations to grasslands and shrublands and comprising a number of characteristic or indicator plants. Undisturbed alvars can be phyto- and zoogeographically diverse, supporting many uncommon or are relict plant and animal species. Vegetation cover varies from patchy to barren with a less than 60% tree cover</p>	<p>An Alvar site > 0.5 ha in size.</p> <p>Information Sources</p> <ul style="list-style-type: none"> Alvars of Ontario (2000), Federation of Ontario Naturalists. Ontario Nature – Conserving Great Lakes Alvars. Natural Heritage Information Center (NHIC) has location information available on their website OMNRF Districts Field Naturalist clubs. Conservation Authorities. 	<ul style="list-style-type: none"> Field studies that identify four of the five Alvar Indicator Species at a Candidate Alvar site is Significant. Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.). The alvar must be in excellent condition and fit in with surrounding landscape with few conflicting land uses SWHMiST Index #17 provides development effects and mitigation measures. 	<p>Property does not meet key criteria. No further assessment required.</p>
<p>Old Growth Forest</p> <p>Rationale: Due to historic logging practices, extensive old growth forest is rare in the Ecoregion. Interior habitat provided by old growth forests is required by many wildlife species.</p>	<p>Forest Community Series: FOD FOC FOM SWD SWC SWM</p>	<p>Old Growth forests are characterized by heavy mortality or turnover of over-storey trees resulting in a mosaic of gaps that encourage development of a multi-layered canopy and an abundance of snags and downed woody debris.</p>	<p>Woodland areas 30 ha or greater in size or with at least 10 ha interior habitat assuming 100 m buffer at edge of forest.</p> <p>Information Sources</p> <ul style="list-style-type: none"> OMNRF Forest Resource Inventory mapping OMNRF Districts. Field Naturalist clubs Conservation Authorities Sustainable Forestry Licence (SFL) companies will possibly know locations through field operations. Municipal forestry departments 	<p>Field Studies will determine:</p> <ul style="list-style-type: none"> If dominant trees species of the are >140 years old, then the area containing these trees is Significant Wildlife Habitat The forested area containing the old growth characteristics will have experienced no recognizable forestry activities (cut stumps will not be present) The area of forest ecosites combined or an eco-element within an ecosite that contains the old growth characteristics is the SWH. Determine ELC vegetation types for the forest area containing the old growth characteristics SWHMiST Index #23 provides development effects and mitigation measures. 	<p>Property does not meet key criteria. No further evaluation undertaken.</p>
<p>Savannah</p> <p>Rationale: Savannahs are extremely rare habitats in Ontario.</p>	<p>TPS1 TPS2 TPW1 TPW2 CUS2</p>	<p>A Savannah is a tallgrass prairie habitat that has tree cover between 25 – 60%.</p>	<p>No minimum size to site. Site must be restored or a natural site. Remnant sites such as railway right of ways are not considered to be SWH.</p> <p>Information Sources</p> <ul style="list-style-type: none"> Natural Heritage Information Center (NHIC) has location information available on their website OMNRF Districts Field Naturalist clubs. Conservation Authorities. 	<p>Field studies confirm one or more of the Savannah indicator species listed in Appendix N should be present. Note: Savannah plant spp. list from Ecoregion 6E should be used.</p> <ul style="list-style-type: none"> Area of the ELC Ecosite is the SWH. Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.). SWHMiST Index #18 provides development effects and mitigation measures. 	<p>Property does not meet key criteria. No further evaluation undertaken.</p>

Table 4: Significant Wildlife Habitat Assessment

<p>Tallgrass Prairie</p> <p>Rationale: Tallgrass Prairies are extremely rare habitats in Ontario.</p>	<p>TPO1 TPO2</p>	<p>A Tallgrass Prairie has ground cover dominated by prairie grasses. An open Tallgrass Prairie habitat has < 25% tree cover.</p>	<p>No minimum size to site. Site must be restored or a natural site. Remnant sites such as railway right of ways are not considered to be SWH.</p> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Natural Heritage Information Center (NHIC) has location information available on their website OMNRF Districts Field Naturalist clubs. Conservation Authorities. 	<p>Field studies confirm one or more of the Prairie indicator species listed in Appendix N should be present. Note: Prairie plant spp. list from Ecoregion 6E should be used</p> <ul style="list-style-type: none"> Area of the ELC Ecosite is the SWH. Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.). SWHMiST Index #19 provides development effects and mitigation measures. 	<p>Property does not meet key criteria. No further assessment required.</p>
<p>Other Rare Vegetation Communities</p> <p>Rationale: Plant communities that often contain rare species which depend on the habitat for survival.</p>	<p>Provincially Rare S1, S2 and S3 vegetation communities are listed in Appendix M of the SWHTG. Any ELC Ecosite Code that has a possible ELC Vegetation Type that is Provincially Rare is Candidate SWH.</p>	<p>Rare Vegetation Communities may include beaches, fens, forest, marsh, barrens, dunes and swamps.</p>	<p>ELC Ecosite codes that have the potential to be a rare ELC Vegetation Type as outlined in appendix M</p> <p>The OMNRF/NHIC will have up to date listing for rare vegetation communities.</p> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Natural Heritage Information Center (NHIC) has location information available on their website OMNRF Districts Field Naturalist clubs. Conservation Authorities. 	<p>Field studies should confirm if an ELC Vegetation Type is a rare vegetation community based on listing within Appendix M of SWHTG.</p> <ul style="list-style-type: none"> Area of the ELC Vegetation Type polygon is the SWH. SWHMiST Index #37 provides development effects and mitigation measures. 	<p>Property does not meet key criteria. No further assessment required.</p>

5.3 - Specialized Habitat for Wildlife

Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
<p>Waterfowl Nesting Area</p> <p>Rationale: Important to local waterfowl populations, sites with greatest number of species and highest number of individuals are significant.</p>	<p>American Black Duck Northern Pintail Northern Shoveler Gadwall Blue-winged Teal Green-winged Teal Wood Duck Hooded Merganser Mallard</p>	<p>All upland habitats located adjacent to these wetland ELC Ecosites are Candidate SWH:</p> <p>MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SWT1 SWT2 SWD1 SWD2 SWD3 SWD4</p> <p>Note: includes adjacency to Provincially Significant Wetlands</p>	<p>A waterfowl nesting area extends 120 m from a wetland (> 0.5 ha) or a wetland (>0.5ha) and any small wetlands (0.5ha) within 120m or a cluster of 3 or more small (<0.5 ha) wetlands within 120 m of each individual wetland where waterfowl nesting is known to occur.</p> <ul style="list-style-type: none"> Upland areas should be at least 120 m wide so that predators such as racoons, skunks, and foxes have difficulty finding nests. Wood Ducks and Hooded Mergansers utilize large diameter trees (>40cm dbh) in woodlands for cavity nest sites. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Ducks Unlimited staff may know the locations of particularly productive nesting sites. OMNRF Wetland Evaluations for indication of significant waterfowl nesting habitat. Reports and other information available from Conservation Authorities. 	<p>Studies confirmed:</p> <ul style="list-style-type: none"> Presence of 3 or more nesting pairs for listed species excluding Mallards, or; Presence of 10 or more nesting pairs for listed species including Mallards. Any active nesting site of an American Black Duck is considered significant. Nesting studies should be completed during the spring breeding season (April - June). Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” A field study confirming waterfowl nesting habitat will determine the boundary of the waterfowl nesting habitat for the SWH, this may be greater or less than 120 m from the wetland and will provide enough habitat for waterfowl to successfully nest. SWHMiST Index #25 provides development effects and mitigation measures. 	<p>Property does not meet ELC criteria. No further evaluation undertaken.</p>

<p>Bald Eagle and Osprey Nesting, Foraging and Perching Habitat</p> <p>Rationale: Nest sites are fairly uncommon in Eco-region 6E and are used annually by these species. Many suitable nesting locations may be lost due to increasing shoreline development pressures and scarcity of habitat.</p>	<p>Osprey</p> <p>Special Concern Bald Eagle</p>	<p>ELC Forest Community Series: FOD, FOM, FOC, SWD, SWM and SWC directly adjacent to riparian areas – rivers, lakes, ponds and wetlands</p>	<p>Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands, or on structures over water.</p> <ul style="list-style-type: none"> Osprey nests are usually at the top a tree whereas Bald Eagle nests are typically in super canopy trees in a notch within the tree’s canopy. Nests located on man-made objects are not to be included as SWH (e.g. telephone poles and constructed nesting platforms). <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Natural Heritage Information Center (NHIC) compiles all known nesting sites for Bald Eagles in Ontario. MNRF values information (LIO/NRVIS) will list known nesting locations. Note: data from NRVIS is provided as a point and does not represent all the habitat. Nature Counts, Ontario Nest Records Scheme data. OMNRF Districts. Check the Ontario Breeding Bird Atlas or Rare Breeding Birds in Ontario for species documented Reports and other information available from Conservation Authorities. Field Naturalists clubs 	<p>Studies confirm the use of these nests by:</p> <ul style="list-style-type: none"> One or more active Osprey or Bald Eagle nests in an area. Some species have more than one nest in a given area and priority is given to the primary nest with alternate nests included within the area of the SWH. For an Osprey, the active nest and a 300 m radius around the nest or the contiguous woodland stand is the SWH , maintaining undisturbed shorelines with large trees within this area is important . For a Bald Eagle the active nest and a 400-800 m radius around the nest is the SWH. , Area of the habitat from 400-800m is dependent on site lines from the nest to the development and inclusion of perching and foraging habitat To be significant a site must be used annually. When found inactive, the site must be known to be inactive for > 3 years or suspected of not being used for >5 years before being considered not significant. Observational studies to determine nest site use, perching sites and foraging areas need to be done from mid March to mid August. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” SWHMiST Index #26 provides development effects and mitigation measures 	<p>FOD community is situated along the Pretty River. A Bald Eagle was incidentally observed during 2021 field investigation. No Bald Eagle or Osprey nests observed during Azimuth’s 2017 field investigations. No further assessment undertaken.</p>
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<p>Woodland Raptor Nesting Habitat</p> <p>Rationale: Nests sites for these species are rarely identified; these area sensitive habitats and are often used annually by these species.</p>	<p>Northern Goshawk Cooper’s Hawk Sharp-shinned Hawk Red-shouldered Hawk Barred Owl Broad-winged Hawk</p>	<p>May be found in all forested ELC Ecosites. May also be found in SWC, SWM, SWD and CUP3</p>	<p>All natural or conifer plantation woodland/forest stands >30ha with >10ha of interior habitat. Interior habitat determined with a 200m buffer</p> <ul style="list-style-type: none"> Stick nests found in a variety of intermediate-aged to mature conifer, deciduous or mixed forests within tops or crotches of trees. Species such as Coopers hawk nest along forest edges sometimes on peninsulas or small off-shore islands. In disturbed sites, nests may be used again, or a new nest will be in close proximity to old nest. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> OMNRF Districts. Check the Ontario Breeding Bird Atlas or Rare Breeding Birds in Ontario for species documented. Check data from Bird Studies Canada. Reports and other information available from Conservation Authorities. 	<p>Studies confirm:</p> <ul style="list-style-type: none"> Presence of 1 or more active nests from species list is considered significant. Red-shouldered Hawk and Northern Goshawk – A 400m radius around the nest or 28 ha area of habitat is the SWH . (the 28 ha habitat area would be applied where optimal habitat is irregularly shaped around the nest) Barred Owl – A 200m radius around the nest is the SWH. Broad-winged Hawk and Coopers Hawk– A 100m radius around the nest is the SWH. Sharp-Shinned Hawk – A 50m radius around the nest is the SWH. Conduct field investigations from mid-March to end of May. The use of call broadcasts can help in locating territorial (courting/nesting) raptors and facilitate the discovery of nests by narrowing down the search area. SWHMiST Index #27 provides development effects and mitigation measures. 	<p>Forested habitat can be found on the property and adjacent lands however, forest is not of sufficient size to be considered potentially suitable habitat for Woodland Raptor Nesting Habitat. No further assessment undertaken.</p>
<p>Turtle Nesting Areas</p> <p>Rationale: These habitats are rare and when identified will often be the only breeding site for local populations of turtles.</p>	<p>Midland Painted Turtle</p> <p><u>Special Concern Species</u> Northern Map Turtle Snapping Turtle</p>	<p>Exposed mineral soil (sand or gravel) areas adjacent (<100m) or within the following ELC Ecosites: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 BOO1 FEO1</p>	<ul style="list-style-type: none"> Best nesting habitat for turtles are close to water and away from roads and sites less prone to loss of eggs by predation from skunks, raccoons or other animals. For an area to function as a turtle-nesting area, it must provide sand and gravel that turtles are able to dig in and are located in open, sunny areas. Nesting areas on the sides of municipal or provincial road embankments and shoulders are not SWH. Sand and gravel beaches adjacent to undisturbed shallow weedy areas of marshes, lakes, and rivers are most frequently used. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Use Ontario Soil Survey reports and maps to help find suitable substrate for nesting turtles (well-drained sands and fine gravels). Check the Ontario Herpetofaunal Summary Atlas records or other similar atlases for uncommon turtles; location information may help to find potential nesting habitat for them. Natural Heritage Information Center (NHIC) Field Naturalist clubs 	<p>Studies confirm:</p> <ul style="list-style-type: none"> Presence of 5 or more nesting Midland Painted Turtles One or more Northern Map Turtle or Snapping Turtle nesting is a SWH. The area or collection of sites within an area of exposed mineral soils where the turtles nest, plus a radius of 30-100m around the nesting area dependant on slope, riparian vegetation and adjacent land use is the SWH. Travel routes from wetland to nesting area are to be considered within the SWH as part of the 30-100m area of habitat. Field investigations should be conducted in prime nesting season typically late spring to early summer. Observational studies observing the turtles nesting is a recommended method. SWHMiST Index #28 provides development effects and mitigation measures for turtle nesting habitat. 	<p>Potential turtle nesting habitat may be present along the banks of the Pretty River. See Sections 5.4.2 and 7.3.2 for further assessment.</p>

<p>Seeps and Springs</p> <p><u>Rationale:</u> Seeps/Springs are typical of headwater areas and are often at the source of coldwater streams.</p>	<p>Wild Turkey Ruffed Grouse Spruce Grouse White-tailed Deer Salamander spp.</p>	<p>Seeps/Springs are areas where ground water comes to the surface. Often they are found within headwater areas within forested habitats. Any forested Ecosite within the headwater areas of a stream could have seeps/springs.</p>	<p>Any forested area (with <25% meadow/field/pasture) within the headwaters of a stream or river system.</p> <ul style="list-style-type: none"> Seeps and springs are important feeding and drinking areas especially in the winter will typically support a variety of plant and animal species <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Topographical Map. Thermography. Hydrological surveys conducted by Conservation Authorities and MOE. Field Naturalists clubs and landowners. Municipalities and Conservation Authorities may have drainage maps and headwater areas mapped. 	<p>Field Studies confirm:</p> <ul style="list-style-type: none"> Presence of a site with 2 or more seeps/springs should be considered SWH. The area of a ELC forest ecosite or an ecoelement within ecosite containing the seeps/springs is the SWH. The protection of the recharge area considering the slope, vegetation, height of trees and groundwater condition need to be considered in delineation the habitat. SWHMiST Index #30 provides development effects and mitigation measures 	<p>There were no seeps or springs documented on the property. No further assessment undertaken.</p>
<p>Amphibian Breeding Habitat (Woodland).</p> <p><u>Rationale:</u> These habitats are extremely important to amphibian biodiversity within a landscape and often represent the only breeding habitat for local amphibian populations</p>	<p>Eastern Newt Blue-spotted Salamander Spotted Salamander Gray Treefrog Spring Peeper Western Chorus Frog Wood Frog</p>	<p>All Ecosites associated with these ELC Community Series; FOC FOM FOD SWC SWM SWD</p> <p>Breeding pools within the woodland or the shortest distance from forest habitat are more significant because they are more likely to be used due to reduced risk to migrating amphibians</p>	<ul style="list-style-type: none"> Presence of a wetland, pond or woodland pool (including vernal pools) >500m² (about 25m diameter) within or adjacent (within 120m) to a woodland (no minimum size). Some small wetlands may not be mapped and may be important breeding pools for amphibians. Woodlands with permanent ponds or those containing water in most years until mid-July are more likely to be used as breeding habitat <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Ontario Herpetofaunal Summary Atlas (or other similar atlases) for records Local landowners may also provide assistance as they may hear spring-time choruses of amphibians on their property. OMNRF District. OMNRF wetland evaluations Field Naturalist clubs Canadian Wildlife Service Amphibian Road Call Survey Ontario Vernal Pool Association: http://www.ontariovernalpools.org 	<p>Studies confirm;</p> <ul style="list-style-type: none"> Presence of breeding population of 1 or more of the listed newt/salamander species or 2 or more of the listed frog species with at least 20 individuals (adults or eggs masses) or 2 or more of the listed frog species with Call Level Codes of 3. A combination of observational study and call count surveys will be required during the spring (March-June) when amphibians are concentrated around suitable breeding habitat within or near the woodland/wetlands. The habitat is the wetland area plus a 230m radius of woodland area. If a wetland area is adjacent to a woodland, a travel corridor connecting the wetland to the woodland is to be included in the habitat. SWHMiST Index #14 provides development effects and mitigation measures. 	<p>FOD is present on the property. Azimuth's 2017 field investigations revealed that there is no wetland habitat or vernal pools conducive to amphibian breeding located on or adjacent to the property. No further assessment undertaken.</p>

<p>Amphibian Breeding Habitat (Wetlands)</p> <p>Rationale: Wetlands supporting breeding for these amphibian species are extremely important and fairly rare within Central Ontario landscapes.</p>	<p>Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted Salamander Gray Treefrog Western Chorus Frog Northern Leopard Frog Pickerel Frog Green Frog Mink Frog Bullfrog</p>	<p>ELC Community Classes SW, MA, FE, BO, OA and SA.</p> <p>Typically these wetland ecosites will be isolated (>120m) from woodland ecosites, however larger wetlands containing predominantly aquatic species (e.g. Bull Frog) may be adjacent to woodlands.</p>	<ul style="list-style-type: none"> Wetlands > 500m² (about 25m diameter), supporting high species diversity are significant; some small or ephemeral habitats may not be identified on MNRF mapping and could be important amphibian breeding habitats. Presence of shrubs and logs increase significance of pond for some amphibian species because of available structure for calling, foraging, escape and concealment from predators. Bullfrogs require permanent water bodies with abundant emergent vegetation. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Ontario Herpetofaunal Summary Atlas (or other similar atlases) Canadian Wildlife Service Amphibian Road Surveys and Backyard Amphibian Call Count. OMNRF Districts and wetland evaluations Reports and other information available from Conservation Authorities. 	<p>Studies confirm:</p> <ul style="list-style-type: none"> Presence of breeding population of 1 or more of the listed newt/salamander species or 2 or more of the listed frog/toad species with at least 20 individuals (adults or eggs masses) or 2 or more of the listed frog/toad species with Call Level Codes of 3. or; Wetland with confirmed breeding Bullfrogs are significant. The ELC ecosite wetland area and the shoreline are the SWH. A combination of observational study and call count surveys will be required during the spring (March-June) when amphibians are concentrated around suitable breeding habitat within or near the wetlands. If a SWH is determined for Amphibian Breeding Habitat (Wetlands) then Movement Corridors are to be considered as outlined in Table 1.4.1 of this Schedule. SWHMiST Index #15 provides development effects and mitigation measures. 	<p>The Pretty River would be classified as Open Aquatic (OA) however, there was no amphibian breeding activity documented within the segment of the Pretty River that traverses through the property. The flows within the Pretty River preclude it as suitable amphibian breeding habitat. No further evaluation undertaken.</p>
<p>Woodland Area-Sensitive Bird Breeding Habitat</p> <p>Rationale: Large, natural blocks of mature woodland habitat within the settled areas of Southern Ontario are important habitats for area sensitive interior forest song birds.</p>	<p>Yellow-bellied Sapsucker Red-breasted Nuthatch Veery Blue-headed Vireo Northern Parula Black-throated Green Warbler Blackburnian Warbler Black-throated Blue Warbler Ovenbird Scarlet Tanager Winter Wren</p> <p>Special Concern: Cerulean Warbler Canada Warbler</p>	<p>All Ecosites associated with these ELC Community Series; FOC FOM FOD SWC SWM SWD</p>	<p>Habitats where interior forest breeding birds are breeding, typically large mature (>60 yrs old) forest stands or woodlots >30 ha, • Interior forest habitat is at least 200 m from forest edge habitat.</p> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Local bird clubs. Canadian Wildlife Service (CWS) for the location of forest bird monitoring. Bird Studies Canada conducted a 3-year study of 287 woodlands to determine the effects of forest fragmentation on forest birds and to determine what forests were of greatest value to interior species Reports and other information available from Conservation Authorities. 	<p>Studies confirm:</p> <ul style="list-style-type: none"> Presence of nesting or breeding pairs of 3 or more of the listed wildlife species. Note: any site with breeding Cerulean Warblers or Canada Warblers is to be considered SWH. Conduct field investigations in spring and early summer when birds are singing and defending their territories. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” SWHMiST Index #34 provides development effects and mitigation measures. 	<p>FOD communities present on the property, however, they do not meet the size criteria for significance. No further assessment undertaken.</p>

5.4 - Habitat for Species of Conservation Concern (Not including Endangered or Threatened Species)

Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH Defining Criteria	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources		
<p>Marsh Breeding Bird Habitat</p> <p>Rationale: Wetlands for these bird species are typically productive and fairly rare in Southern Ontario landscapes.</p>	<p>American Bittern Virginia Rail Sora Common Moorhen American Coot Pied-billed Grebe Marsh Wren Sedge Wren Common Loon Sandhill Crane Green Heron Trumpeter Swan</p> <p>Special Concern: Black Tern Yellow Rail</p>	<p>MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SAS1 SAM1 SAF1 FEO1 BOO1</p> <p>For Green Heron: All SW, MA and CUM1 sites.</p>	<ul style="list-style-type: none"> Nesting occurs in wetlands. All wetland habitat is to be considered as long as there is shallow water with emergent aquatic vegetation present. For Green Heron, habitat is at the edge of water such as sluggish streams, ponds and marshes sheltered by shrubs and trees. Less frequently, it may be found in upland shrubs or forest a considerable distance from water. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> OMNRF District and wetland evaluations. Field Naturalist clubs Natural Heritage Information Center (NHIC) Records. Reports and other information available from Conservation Authorities. Ontario Breeding Bird Atlas. 	<p>Studies confirm:</p> <ul style="list-style-type: none"> Presence of 5 or more nesting pairs of Sedge Wren or Marsh Wren or 1 pair of Sandhill Cranes; or breeding by any combination of 5 or more of the listed species. Note: any wetland with breeding of 1 or more Black Terns, Trumpeter Swan, Green Heron or Yellow Rail is SWH. Area of the ELC ecosite is the SWH. Breeding surveys should be done in May/June when these species are actively nesting in wetland habitats. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” SWHMiST Index #35 provides development effects and mitigation measures 	<p>Property does not meet ELC criteria. No further evaluation undertaken.</p>
<p>Open Country Bird Breeding Habitat</p> <p>Sources Defining Criteria</p> <p>Rationale: This wildlife habitat is declining throughout Ontario and North America. Species such as the Upland Sandpiper have declined significantly the past 40 years based on CWS (2004) trend records.</p>	<p>Upland Sandpiper Grasshopper Sparrow Vesper Sparrow Northern Harrier Savannah Sparrow</p> <p>Special Concern Short-eared Owl</p>	<p>CUM1 CUM2</p>	<p>Large grassland areas (includes natural and cultural fields and meadows) >30 ha</p> <ul style="list-style-type: none"> Grasslands not Class 1 or 2 agricultural lands, and not being actively used for farming (i.e. no row cropping or intensive hay or livestock pasturing in the last 5 years). Grassland sites considered significant should have a history of longevity, either abandoned fields, mature hayfields and pasturelands that are at least 5 years or older. The Indicator bird species are area sensitive requiring larger grassland areas than the common grassland species. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Agricultural land classification maps, Ministry of Agriculture. Local bird clubs. Ontario Breeding Bird Atlas Reports and other information available from Conservation Authorities. 	<p>Field Studies confirm:</p> <ul style="list-style-type: none"> Presence of nesting or breeding of 2 or more of the listed species. A field with 1 or more breeding Short-eared Owls is to be considered SWH. The area of SWH is the contiguous ELC ecosite field areas. Conduct field investigations of the most likely areas in spring and early summer when birds are singing and defending their territories. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” SWHMiST Index #32 provides development effects and mitigation measures 	<p>ELC ecosite (CUM) present on the property, however, study area does not meet key criteria (i.e. <<30ha in size). No further evaluation undertaken.</p>

Table 4: Significant Wildlife Habitat Assessment

<p>Shrub/Early Successional Bird Breeding Habitat</p> <p>Rationale: This wildlife habitat is declining throughout Ontario and North America. The Brown Thrasher has declined significantly over the past 40 years based on CWS (2004) trend records.</p>	<p>Indicator Spp: Brown Thrasher Clay-coloured Sparrow Common Spp. Field Sparrow Black-billed Cuckoo Eastern Towhee Willow Flycatcher</p> <p>Special Concern: Yellow-breasted Chat Golden-winged Warbler</p>	<p>CUT1 CUT2 CUS1 CUS2 CUW1 CUW2</p> <p>Patches of shrub ecosites can be complexed into a larger habitat for some bird species</p>	<p>Large field areas succeeding to shrub and thicket habitats >10ha in size.</p> <ul style="list-style-type: none"> Shrub land or early successional fields, not class 1 or 2 agricultural lands, not being actively used for farming (i.e. no row-cropping, haying or live-stock pasturing in the last 5 years). Shrub thicket habitats (>10 ha) are most likely to support and sustain a diversity of these species. Shrub and thicket habitat sites considered significant should have a history of longevity, either abandoned fields or pasturelands. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Agricultural land classification maps, Ministry of Agriculture. Local bird clubs. Ontario Breeding Bird Atlas Reports and other information available from Conservation Authorities. 	<p>Field Studies confirm:</p> <ul style="list-style-type: none"> Presence of nesting or breeding of 1 of the indicator species and at least 2 of the common species. A habitat with breeding Yellow-breasted Chat or Golden-winged Warbler is to be considered as Significant Wildlife Habitat. The area of the SWH is the contiguous ELC ecosite field/thicket area. Conduct field investigations of the most likely areas in spring and early summer when birds are singing and defending their territories Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” SWHMiST Index #33 provides development effects and mitigation measures. 	<p>ELC ecosite (CUT) present on the property, however, study area does not meet key criteria (i.e. <<10ha in size). No further evaluation undertaken.</p>
<p>Terrestrial Crayfish</p> <p>Rationale: Terrestrial Crayfish are only found within SW Ontario in Canada and their habitats are very rare.</p>	<p>Chimney or Digger Crayfish; (Fallicambarus fodiens)</p> <p>Devil Crayfish or Meadow Crayfish; (Cambarus Diogenes)</p>	<p>MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 MAS1 MAS2 MAS3 SWD SWT SWM</p> <p>CUM1 with inclusions of above meadow marsh or swamp ecosites can be used by terrestrial crayfish.</p>	<p>Wet meadow and edges of shallow marshes (no minimum size) should be surveyed for terrestrial crayfish.</p> <ul style="list-style-type: none"> Constructs burrows in marshes, mudflats, meadows, the ground can't be too moist. Can often be found far from water. Both species are a semi-terrestrial burrower which spends most of its life within burrows consisting of a network of tunnels. Usually the soil is not too moist so that the tunnel is well formed. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Information sources from “Conservation Status of Freshwater Crayfishes” by Dr. Premek Hamr for the WWF and CNF March 1998 	<p>Studies Confirm:</p> <ul style="list-style-type: none"> Presence of 1 or more individuals of species listed or their chimneys (burrows) in suitable meadow marsh, swamp or moist terrestrial sites Area of ELC ecosite or an ecoelement area of meadow marsh or swamp within the larger ecosite area is the SWH. Surveys should be done April to August in temporary or permanent water. Note the presence of burrows or chimneys are often the only indicator of presence, observance or collection of individuals is very difficult SWHMiST Index #36 provides development effects and mitigation measures. 	<p>Property does not meet ELC criteria. No further evaluation undertaken.</p>
<p>Special Concern and Rare Wildlife Species</p> <p>Rationale: These species are quite rare or have experienced significant population declines in Ontario.</p>	<p>All Special Concern and Provincially Rare (S1-S3, SH) plant and animal species. Lists of these species are tracked by the Natural Heritage Information Centre.</p>	<p>All plant and animal element occurrences (EO) within a 1 or 10km grid.</p> <p>Older element occurrences were recorded prior to GPS being available, therefore location information may lack accuracy</p>	<p>When an element occurrence is identified within a 1 or 10 km grid for a Special Concern or provincially Rare species; linking candidate habitat on the site needs to be completed to ELC Ecosites</p> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> Natural Heritage Information Centre (NHIC) will have Special Concern and Provincially Rare (S1-S3, SH) species lists with element occurrences data. NHIC Website “Get Information” : http://nhic.mnr.gov.on.ca Ontario Breeding Bird Atlas Expert advice should be sought as many of the rare spp. have little information available about their requirements. 	<p>Studies Confirm:</p> <ul style="list-style-type: none"> Assessment/inventory of the site for the identified special concern or rare species needs to be completed during the time of year when the species is present or easily identifiable. The area of the habitat to the finest ELC scale that protects the habitat form and function is the SWH, this must be delineated through detailed field studies. The habitat needs be easily mapped and cover an important life stage component for a species e.g. specific nesting habitat or foraging habitat. SWHMiST Index #37 provides development effects and mitigation measures. 	<p>There is potential for and data confirming the presence of multiple Special Concern and Rare Wildlife Species on the property. See Sections 5.4.3 and 7.3.3 for further assessment.</p>

5.5 - Animal Movement Corridors

Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH	Assessment
		ELC Ecosite	Habitat Criteria and Information Sources	Defining Criteria	
<p>Amphibian Movement Corridors</p> <p>Rationale: Movement corridors for amphibians moving from their terrestrial habitat to breeding habitat can be extremely important for local populations.</p>	<p>Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted Salamander Gray Treefrog Western Chorus Frog Northern Leopard Frog Pickerel Frog Green Frog Mink Frog Bullfrog</p>	<p>Corridors may be found in all ecosites associated with water.</p> <ul style="list-style-type: none"> Corridors will be determined based on identifying the significant breeding habitat for these species in Table 1.1 	<p>Movement corridors between breeding habitat and summer habitat.</p> <ul style="list-style-type: none"> Movement corridors must be determined when Amphibian breeding habitat is confirmed as SWH from Table 1.2.2 (Amphibian Breeding Habitat –Wetland) of this Schedule. <p><u>Information Sources</u></p> <ul style="list-style-type: none"> MNRF District Office. Natural Heritage Information Center (NHIC). Reports and other information available from Conservation Authorities. Field Naturalist Clubs. 	<ul style="list-style-type: none"> Field Studies must be conducted at the time of year when species are expected to be migrating or entering breeding sites. Corridors should consist of native vegetation, with several layers of vegetation. Corridors unbroken by roads, waterways or bodies, and undeveloped areas are most significant Corridors should have at least 15m of vegetation on both sides of waterway or be up to 200m wide of woodland habitat and with gaps <20m. Shorter corridors are more significant than longer corridors, however amphibians must be able to get to and from their summer and breeding habitat. SWHMiST Index #40 provides development effects and mitigation measures 	<p>No amphibian breeding habitat confirmed on the property. No further evaluation undertaken.</p>
<p>Deer Movement Corridors</p> <p>Rationale: Corridors important for all species to be able to access seasonally important life-cycle habitats or to access new habitat for dispersing individuals by minimizing their vulnerability while travelling.</p>	<p>White-tailed Deer</p>	<p>Corridors may be found in all forested ecosites.</p> <p>A Project Proposal in Stratum II Deer Wintering Area has potential to contain corridors.</p>	<p>Movement corridor must be determined when Deer Wintering Habitat is confirmed as SWH from Table 1.1 of this schedule.</p> <ul style="list-style-type: none"> A deer wintering habitat identified by the OMNRF as SWH in Table 1.1 of this Schedule will have corridors that the deer use during fall migration and spring dispersion. Corridors typically follow riparian areas, woodlots, areas of physical geography (ravines, or ridges). <p><u>Information Sources</u></p> <ul style="list-style-type: none"> MNRF District Office. Natural Heritage Information Center (NHIC). Reports and other information available from Conservation Authorities. Field Naturalist Clubs. 	<ul style="list-style-type: none"> Studies must be conducted at the time of year when deer are migrating or moving to and from winter concentration areas. Corridors that lead to a deer wintering habitat should be unbroken by roads and residential areas. Corridors should be at least 200m wide with gaps <20m and if following riparian area with at least 15m of vegetation on both sides of waterway. Shorter corridors are more significant than longer corridors. SWHMiST Index #39 provides development effects and mitigation measures 	<p>Deer wintering habitat was not confirmed to be present within the property and adjacent lands. No further assessment undertaken.</p>

APPENDICES

Appendix A: Planning Information

Appendix B: Nottawasaga Valley Conservation Authority Information

Appendix C: Ministry of Natural Resources and Forestry Information

Appendix D: Fisheries Information

Appendix E: Draft Plan of Subdivision



APPENDIX A

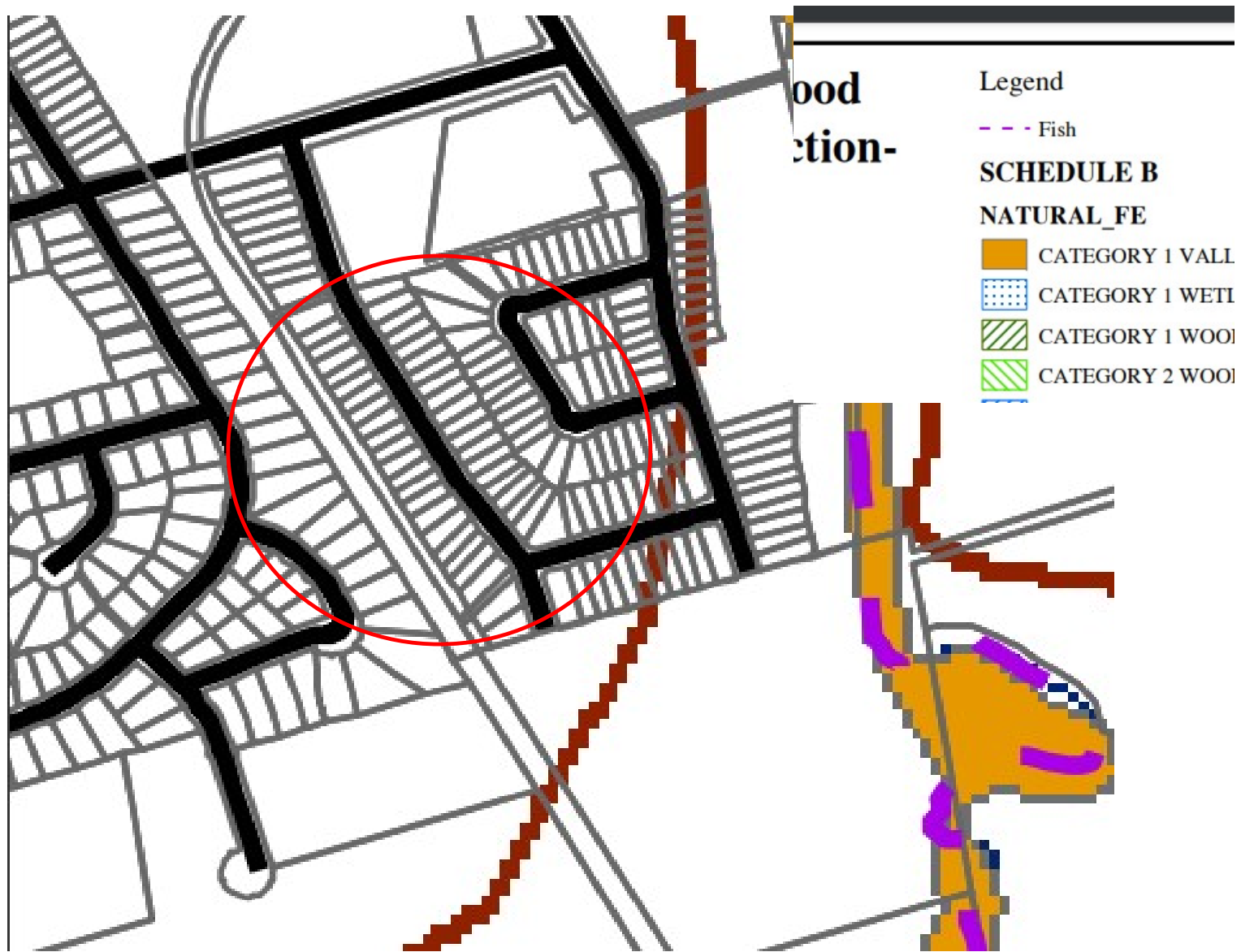
Planning Information



Legend

- Inactive Priv
- Industrial Fr
- Pretty River
- Secondary I
- Waste Dispo
- Business Pa
- Downtown C
- Environmen
- Highway Co
- Industrial Pa
- Light Indust
- Mixed Use C
- Industrial
- Recreation
- Regional Co
- Residential
- Resort Com
- Restrictive C

Appendix A: Excerpt from the Town of Collingwood Schedule A: Land Use Plan (January 2019) Note: Property contained within red circle drawn on map.



Appendix A: Excerpt from the Town of Collingwood's Schedule B: Environmental Protection – Natural Heritage Resource Areas (June 2014).
 Note: Property contained within red circle drawn on map.



APPENDIX B

Nottawasaga Valley Conservation Authority Information



Property Screening Report

15-Oct-2021

Information Resources for Regulated Properties

[Do I need a permit?](#)

[Submit a Property Inquiry](#)

[Google Driving Directions](#)

[Info Regarding Covid-19](#)

Email the Regulations Department

permits@nvca.on.ca

NVCA Contact Information

(705) 424-1479

8195 8th Line,
Utopia, ON L0M 1T0

www.nvca.on.ca

Monday to Friday

8:30 a.m. to 4:30 p.m.

except between 12:00 p.m. - 1:00 p.m.



Lisa Moran

From: Dave Featherstone [dfeatherstone@nvca.on.ca]
Sent: June-20-17 12:27 PM
To: Lisa Moran
Cc: Timothy Salkeld
Subject: RE: 452 Raglan St, Collingwood - EIS Scope

Hi Lisa. The proposed work scope in support of the EIS (below) is satisfactory given site context and types of natural heritage features on and adjacent to the property. I believe that hazard studies (likely floodplain/meander/erosion) are also required here = Tim can likely shed more light on these if needed.

David Featherstone, B.Sc.
Manager, Watershed Monitoring Program
Nottawasaga Valley Conservation Authority
8195 8th Line, Utopia, ON
L0M 1T0
(705) 424-1479 Ext. 242
dfeatherstone@nvca.on.ca

From: Lisa Moran [<mailto:Lisa@Azimuthenvironmental.Com>]
Sent: June-20-17 11:29 AM
To: Dave Featherstone
Subject: RE: 452 Raglan St, Collingwood - EIS Scope

Hi Dave,

I am following up on my email below.

If you could please review the proposed terms of reference it would be appreciated.

Regards,

Lisa

From: Lisa Moran
Sent: May-31-17 9:48 AM
To: 'Dave Featherstone'
Subject: 452 Raglan St, Collingwood - EIS Scope

Good morning Dave,

Azimuth has been retained to conduct an Environmental Impact Study for a property located at 452 Raglan St in Collingwood. The proponent wishes to develop the site for residential use.

The property is currently actively cultivated. A portion of the Pretty River traverses through the property. Woodlot abuts the property to the south and east. Unevaluated wetland has been mapped on adjacent lands.

Based on our preliminary screening of the property, we propose the following scope of work:

Field Program

- Conduct a single evening amphibian call survey and complete a search for potential amphibian breeding habitat (completed, no amphibian habitat present on property);
- Conduct a single dawn breeding bird survey;
- Conduct a single in-season survey for vegetation which includes a search for Butternut;
- Assess the structure for potentially suitable bat habitat;
- Evaluate vegetation communities, using protocols of the Ecological Land Classification for Southern Ontario (Lee *et al.*, 1998. Ecological land classification for southern Ontario: first approximation and its applications. SCSS Field Guide FG-02);
- Record all incidental wildlife observations during site visits;
- Complete a SAR habitat assessment using field data collected by Azimuth staff during site visits including other data available and/or provided by agencies to confirm environmental constraints, and approval requirements under the ESA; and
- Conduct a single site visit to characterize the aquatic features and potential fish habitat.

Assessment

- Assess the potential direct, and indirect impacts of the proposed development on the sensitive or significant environmental features as described above;
- Assess the need for setbacks/buffers to the identified significant natural heritage features; and
- Prepare a Scoped EIS report for agency review.

The purpose of this email is to confirm the above proposed scope of work for the property. We would also like to take this opportunity to request any information that NVCA may have that would be useful for the completion of our studies.

Do not hesitate to contact me to discuss.

Regards,

Lisa Moran

Terrestrial Ecologist

Azimuth Environmental Consulting, Inc

642 Welham Road

Barrie, ON, L4N 9A1

ph: (705) 721-8451 ext 202

cell: (705) 331-1479

lisa@azimuthenvironmental.com

www.azimuthenvironmental.com

*Providing services in **hydrogeology, terrestrial and aquatic ecology & environmental engineering***

Lisa Moran

From: Mike Francis [mfrancis@nvca.on.ca]
Sent: May-26-21 6:45 AM
To: Lisa Moran
Cc: 'layers@collingwood.ca'; Amy Knapp
Subject: RE: 452 Raglan St, Collingwood - Environmental Impact Study - Terms of Reference

Hi, Lisa. Apologies for the delayed response. This looks fine to me and reflects our conversation on scoping. The only other item we spoke about was naturalization planning for the buffer along the trail system. These details may not fall under your EIS but the report should address that subject in mitigation discussions.

Mike Francis, H.B.Sc., M.E.S., E.P. | Planning Ecologist

Nottawasaga Valley Conservation Authority
8195 8th Line, Utopia, ON L0M 1T0
T 705-424-1479 ext. 236
mfrancis@nvca.on.ca | nvca.on.ca

IMPORTANT NOTE

I am currently working remotely as the Nottawasaga Valley Conservation Authority is taking preventative measures to limit the spread of COVID-19. You may experience some delays or disruptions as we follow recommendations of health professionals in this regard.

This e-mail message, including any attachments, is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender and destroy all copies of the original message.

From: Lisa Moran <Lisa@Azimuthenvironmental.Com>
Sent: Monday, May 17, 2021 2:19 PM
To: layers@collingwood.ca; Mike Francis <mfrancis@nvca.on.ca>
Cc: Romas Kartavicius <romas@edenoak.com>; Kory Chisholm <kchisholm@mhbcplan.com>; Andrew Edwards <aedwards@mhbcplan.com>; Amy Knapp <aknapp@nvca.on.ca>
Subject: 452 Raglan St, Collingwood - Environmental Impact Study - Terms of Reference

Good afternoon Lindsay and Mike,

Further to our meeting on May 12, 2021, I wanted to provide the Terms of Reference for the Environmental Impact Study (EIS) Update for Raglan St, Town of Collingwood (Town).

As part of the previous application, Azimuth completed the following scope of work for the EIS:

- Obtained background information related to the natural heritage features and wildlife species identified within the Study Area;

- Evaluated existing vegetation communities using Ecological Land Classification (ELC) for Southern Ontario (Lee *et al.* 1998. Ecological Land Classification for Southern Ontario: first approximation and its applications. SCSS Field Guide FG-02) to vegetation type;
- Conducted a single evening amphibian call survey and complete a search for potential amphibian breeding habitat (May, 2017);
- Conducted one in season vegetation survey including a search for Butternut (June 2017);
- Conducted a single dawn breeding bird survey (June 2017);
- Assessed the existing structure (residence) for potential to provide SAR habitat (*i.e.*, bats, Barn Swallow);
- Conducted a single aquatic habitat assessment to characterize aquatic features including fish habitat (October 2017);
- Conducted a site walk with Nottawasaga Valley Conservation Authority (NVCA) to confirm the top-of-bank and the dripline of the southern woodlot (November 2017); and
- Recorded other wildlife observations and assessed wildlife habitat function of the property.

Based on the May 12, 2021 discussion with the Town and NVCA, it is my understanding that an EIS Update will be required as part of this new development application. The Town and NVCA has requested that the Terms of Reference for the EIS update be circulated for review and comment.

Azimuth proposes the following for the 2021 EIS update:

- Utilize existing data collected throughout the 2017 field season;
- Attend a single site visit during the growing season (summer 2021) to confirm the environmental conditions of the property which will include a search for Butternut, review of vegetation in proximity to the adjacent rail trail and in the vicinity to any proposed trail system within the EP lands;
- A Butternut Health Assessment (BHA) will be undertaken on any new Butternut that may be identified during the 2021 field investigation and may be impacted by the proposed development. Where required, a BHA update will be undertaken for any previously assessed Butternut;
- Consult/confirm with the Ministry of Environment, Conservation and Parks (MECP) the proposed approach (*i.e.* setbacks, registration, compensation etc.) regarding Butternut to ensure compliance with Ontario's Endangered Species Act (ESA);
- Conduct a desktop exercise to identify the Significant Woodland along the valley in addition to appropriate setbacks;
- Map and/or update vegetation communities and other environmental features (watercourses, wetlands, areas of ground water discharge, etc.) on aerial photography;
- Provide a detailed description of the study area including natural heritage features and functions and the development proposal;
- Assess the potential direct and indirect impacts of the proposed land-use on the sensitive or significant environmental features as described above;
- Evaluate the extent to which development can be accommodated in proximity to the natural heritage features without negative impact;
- Develop an appropriate avoidance/mitigation/restoration strategy to further reduce the potential environmental impacts;
- Assess conformity with the applicable policies of the Town, County, NVCA, Provincial Policy Statement, and the ESA; and
- Prepare one Scoped EIS report for agencies review.

At this time, we request that you review the appropriateness of the proposed TOR for the EIS update and provide comment.

Please do not hesitate to contact me should you wish to discuss.

Regards,

Lisa Moran

Terrestrial Ecologist

Azimuth Environmental Consulting, Inc

642 Welham Road

Barrie, ON, L4N 9A1

ph: (705) 721-8451 ext 202

cell: (705) 331-1479

lisa@azimuthenvironmental.com

www.azimuthenvironmental.com

*Providing services in **hydrogeology, terrestrial and aquatic ecology & environmental engineering***

At this time, I am working remotely. The Azimuth office is currently closed to the public but I can be reached on my cell or email.



APPENDIX C

Ministry of Natural Resources and Forestry Information



Environmental Assessments & Approvals
June 27, 2017

AEC 17-169

Ministry of Natural Resources and Forestry
Midhurst District
2284 Nursery Road
Midhurst, Ontario
L0L 1X0

Attention: District Planner - Midhurst District

Re: Preliminary Species at Risk Information Request for a lot at 452 Raglan Street, Town of Collingwood, County of Simcoe

Azimuth Environmental Consulting, Inc. (Azimuth) has been retained to complete an Environmental Impact Study (EIS) including a Species at Risk Inventory, for a proposed development of the above noted project. We are undertaking an assessment of Species at Risk that could potentially be utilizing the property to complete their life functions. Please see attached mapping for property location.

EXISTING CONDITIONS

The Town of Collingwood (Town) designates the area as Environmental Protection and Category 1 Valleylands (Town of Collingwood Official Plan, Schedules A and B). The County of Simcoe identifies the area as Settlement lands (County of Simcoe Official Plan, Schedule 5.1).

The proposed development is regulated by the Nottawasaga Valley Conservation Authority (NVCA). There is a portion of the Pretty River within the boundaries of the property.

BACKGROUND SAR DATA

The Ontario Breeding Bird Atlas (square #17NK62) has been queried to determine the avian SAR birds recorded within the 100km² data square that contains the property. The following species were listed in the data summary: Black Tern, Common Nighthawk, Whip-poor-will, Chimney Swift, Red-headed Woodpecker, Eastern Wood-Pewee, Loggerhead Shrike, Bank Swallow, Wood Thrush, and Bobolink.



Available information from the Natural Heritage Information Centre (NHIC) indicates that there are no SAR recorded within the study area and adjacent data squares (see attached data pull).

Mapping from the Department of Fisheries and Oceans does not identify this property as being an area of critical habitat for SAR or within which one or more species listed under SAR Act (SARA) may be found (Ontario South West, Map 4).

The purpose of this letter is to request any additional information regarding SAR and sensitive areas associated with the study area, aside from those identified above, and to request any background information that may be relevant to our study.

It is generally our intention to append this correspondence in the resulting EIS. If restricted species occur in the area and the MNR determines that the restricted species needs to be considered in the EIS, please provide two copies of the response - one with the species name replaced with (Restricted Species) for inclusion in the appendices of our EIS, the other retaining the identity of the species for Azimuth's internal use only.


Thank you very much for your assistance in this matter. If you have any questions regarding this project please do not hesitate to contact us.

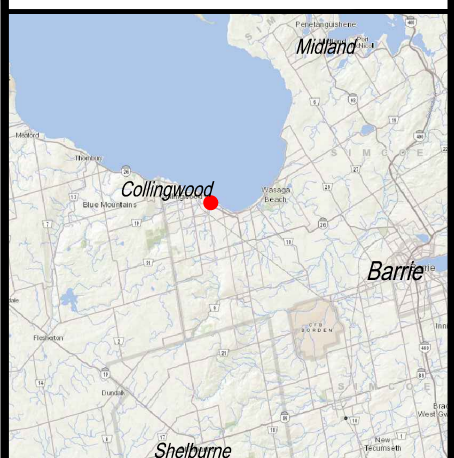
Yours truly,
AZIMUTH ENVIRONMENTAL CONSULTING, INC.

Lisa Moran
Terrestrial Ecologist


Plotted by: MCCARTNEY on May 24, 2017 at 4:33pm
File: M:\17 Projects\17-169 Raqlan St Collingwood EIS\04.0 - Drafting\17-169.dwg Layout: Figure 1 Potcode: 05




LEGEND:
 *Approx. Property Boundary*



REG MAP



HORIZONTAL SCALE 1: 25,000



Study Area Location

Raqlan St.
Collingwood, ON

DATE ISSUED: <i>May 2017</i>	Figure No.
CREATED BY: <i>JLM</i>	1
PROJECT NO.: <i>17-091</i>	
REFERENCE: <i>MNRF</i>	



LEGEND:

- Approx. Property Boundary
- Watercourse

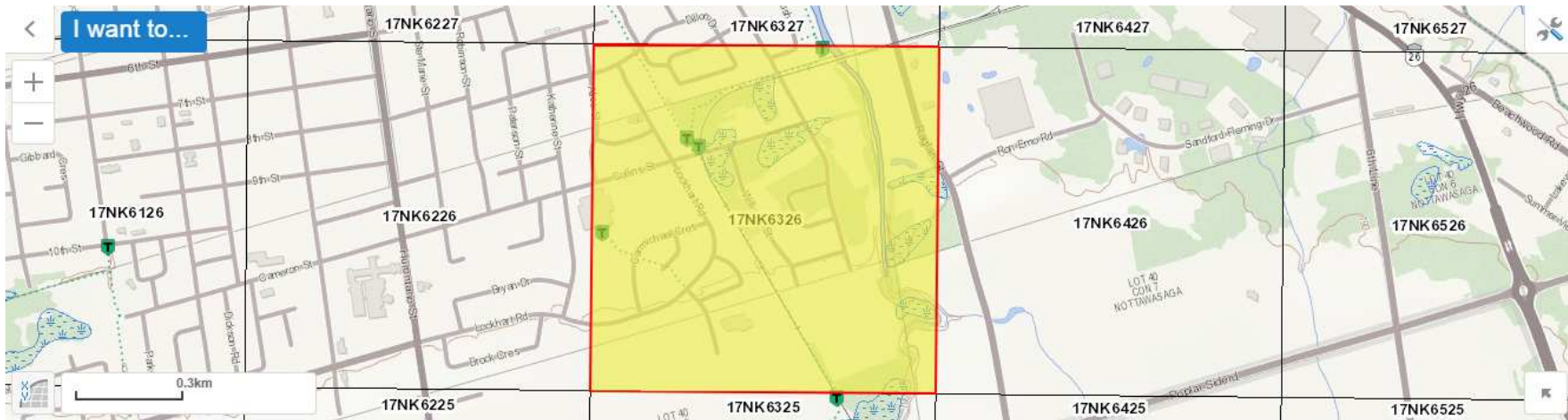
HORIZONTAL SCALE 1:2,000

Environmental Features

Raglan St.
Collingwood, ON

DATE ISSUED: <i>May 2017</i>	Figure No.
CREATED BY: <i>JLM</i>	2
PROJECT NO.: <i>17-091</i>	
REFERENCE: <i>Simcoe County Maps</i>	

Plotted by: MCCARTNEY on May 24, 2017 at 4:31pm
 File: M:\17 Projects\17-091 Beachwood Estates EIS\04.0 - Drafting\17-091.dwg Layout: EIS2 Plotcode: 0.5
 DAYSTAMP: M:\17 Projects\17-091 Beachwood Estates EIS\04.0 - Drafting\17-091.dwg



NHIC Data -- Grid ID = 968370

Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	Last Obs Date	EO ID	Details URL
RESTRICTED SPECIES	RESTRICTED SPECIES	RESTRICTED SPECIES				1974-06-11	35636	
SPECIES	Shining-branch Hawthorn	<i>Crataegus magniflora</i>	S3			1958-08-08	59752	http://nhic.mnr.gov.on.ca/reports/public
SPECIES	Stiff Yellow Flax	<i>Linum medium</i> var. <i>medium</i>	S3?				59926	http://nhic.mnr.gov.on.ca/reports/public
SPECIES	A Lichen	<i>Melanelia subargentifera</i>	S1S3			1976-07-27	67809	http://nhic.mnr.gov.on.ca/reports/public

Cassandra Sinclair

From: Eplett, Megan (MNRF) [Megan.Eplett@ontario.ca]
Sent: July 13, 2017 2:34 PM
To: Cassandra Sinclair
Subject: RE: SAR Info Request

Hello Cassandra,

Thank you for providing detailed background information on the study area. In addition to the species listed in your letter MNRF suggests including the following species:

- Eastern Meadowlark (THR)
- Barn Swallow (THR)
- Butternut (END) – Please note MNRF has records of Butternut adjacent to the existing trail on the west side of the property.

Should any proposed works on site include tree removal MNRF would recommended adding species at risk bats (Northern Myotis, Little Brown Myotis, and Tri-coloured bat) to your list of species to be considered.

Please note there is also a portion of unevaluated wetland present on site. If any species at risk are confirmed on site please contact Midhurst District for further advice.

Thank you,

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: Sucharzewski, Stephen (MNRF)
Sent: June-27-17 2:39 PM
To: Eplett, Megan (MNRF)
Cc: Allan, Brad (MNRF)
Subject: FW: SAR Info Request

Hey Megan,

Can you please respond?

Thanks

Stephen

From: Cassandra Sinclair [<mailto:csinclair@azimuthenvironmental.com>]
Sent: June-27-17 2:32 PM
To: MIDHURSTINFO (MNRF)
Cc: Lisa Moran
Subject: SAR Info Request

Good afternoon,

please, review our SAR Info Request Letter at your earliest convenience.

Kind regards,
Cassandra

Enclosures:

1. Information from the Ministry of Natural Resources and Forestry about Butternut and the *Endangered Species Act, 2007*
2. Butternut Health Assessor's Report
3. Original data forms
4. Electronic and printed copies of the Excel data spreadsheet (BHA Tree Analysis)
5. Map showing approximate locations of Butternut trees

Ministry of Natural
Resources and Forestry

Species At Risk
P.O. Box 7000, 300 Water Street
Peterborough ON K9J 8M5

Ministère des Richesses
naturelles et des Forêts

Espèces en péril
C.P. 7000, 300, rue Water
Peterborough ON K9J 8M5



The enclosed Butternut Health Assessor's Report documents the results of the Butternut health assessment that was conducted by the designated Butternut Health Assessor (BHA) identified in the top section of the report. If there are other Butternut trees (of any size or age) at the site that may be affected by the activity and they are not identified in the enclosed BHA Report, they too must be assessed by a designated BHA.

Butternut is listed as an endangered species on the Species at Risk in Ontario List, and as such, it is protected under the *Endangered Species Act, 2007* (ESA) from being killed, harmed, or removed. If you are planning to undertake an activity that may affect Butternut, you may be eligible to follow the requirements set out in section 23.7 of Ontario Regulation 242/08 under the ESA, or you may need to seek an authorization under the ESA (e.g., a permit).

Please visit e-laws at the link provided below for the legal requirements of eligible activities under section 23.7 of Ontario Regulation 242/08 and conditions that must be fulfilled. Information about Butternut is also available at: <http://www.ontario.ca/environment-and-energy/butternut-trees-your-property>.

If you are eligible to kill, harm or take Butternut under section 23.7 of the regulation, your first step is to submit the BHA Report and the original data forms enclosed in this package to the local Ministry of Natural Resources and Forestry (MNRF) District Manager. Note that MNRF cannot accept photocopies or scanned electronic copies of the data forms.

Note regarding changes:

If the enclosed BHA Report does not identify which Butternut tree(s) are proposed to be killed, harmed, or taken in Table 1 (i.e., if "unknown" is indicated in the second last column of Table 1), or, if the information in the last two columns of Table 1 has changed since the date this BHA Report was produced, **do not make any edits to the BHA Report**. Instead, please attach a cover letter that identifies which Butternut tree(s) are proposed to be killed, harmed, or taken (by referencing the tree identification numbers) when you submit the enclosed BHA Report to the local MNRF District Manager.

The BHA Report must be submitted at least 30 days prior to registering an eligible activity to kill, harm, or remove a Butternut tree. During this 30 day period, no Butternut trees (of any category) may be killed, harmed, or removed, and MNRF may contact you for an opportunity to examine the trees. If MNRF chooses to examine the trees, a representative of MNRF will contact you using the information you supplied when you submitted the BHA Report.

If you are eligible to follow the rules in regulation under section 23.7, you may register your activity using the “Notice of Butternut Impact” form on the [MNRF Registry](#) **after the 30 day period has elapsed.**

If you are **not** eligible to follow the rules in regulation under section 23.7, please contact the local MNRF district office to determine whether you will need to seek an authorization (e.g., a permit). A link to the directory of MNRF offices is provided below.

Note that municipal by-laws and legislation other than the ESA may also be applicable to the removal or harming of trees.

Please retain this information and a copy of the BHA Report (including copies of all data forms) for your records, along with any other documentation you may receive from MNRF should an examination of the trees occur. If you have any questions, please contact your local MNRF district office.

Links:

Endangered Species Act, 2007:

http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_07e06_e.htm

Ontario Regulation 242/08 (refer to section 23.7):

http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_080242_e.htm

MNRF Office Locations:

<https://www.ontario.ca/government/ministry-natural-resources-and-forestry-regional-and-district-offices>

Butternut Health Assessor's Report Number: 450-012

Lisa Moran, BHA # 450
 C/O Azimuth Environmental Consulting Inc.
 642 Welham Road
 Barrie, Ontario
 L4N 9A1
 (705) 721-8451 x202
 lisa@azimuthenvironmental.com

Pat Giglio
 Urban Pro Developments
 1885 Wilson Ave Suite
 Toronto, Ontario
 M9M 1A2
 zuccstoronto@gmail.com

Site location: 452 Raglan Street, Town of Collingwood

Date(s) of Butternut health assessment: August 14, 2018

Date BHA Report prepared: August 29, 2018

Map datum used: NAD83 WGS84

Total number of trees assessed in this BHA Report: 21

The assessed trees were numbered on site using white paint &/or orange flagging tape plus numbered tree tag – attached with single staple. The numbers at the site correspond to the tree numbers referenced in this report.

This BHA Report includes the following tables:

- Table 1: Butternut Trees Assessed
- Table 2: Trees Determined by BHA to be Butternut Hybrids
- Table 3: Summary of Assessment Results

Note to BHAs: add/remove table rows as necessary

Table 1: Butternut Trees Assessed

Tree #	UTM coordinates	Category ¹ (1, 2, or 3 ²)	dbh ³ (cm)	Cultivated? (Y/N)	Proposed to be: (enter one: unknown ⁴ , killed, harmed or taken)	If tree is proposed to be killed, harmed, or taken, indicate reason tree is proposed to be killed, harmed or taken:
--------	-----------------	---	-----------------------	----------------------	---	---

¹ The extent to which the tree is affected by Butternut Canker is presented in the Excel document titled, "BHA Tree Analysis" that accompanies this BHA Report.

² Category 3 trees are not eligible to be killed, harmed or taken under section 23.7 of Ontario Regulation 242/08.

³ dbh: diameter at breast height, rounded to nearest cm (if tree is shorter than breast height, enter zero)

⁴ In this column, "unknown" indicates that at the time of assessment, there are no proposals to kill, harm or take this tree that are known to the BHA.

Tree #	UTM coordinates	Category ¹ (1, 2, or 3 ²)	dbh ³ (cm)	Cultivated? (Y/N)	Proposed to be: (enter one: unknown ⁴ , killed, harmed or taken)	If tree is proposed to be killed, harmed, or taken, indicate reason tree is proposed to be killed, harmed or taken:
682	563837 4926298	1	2	N	Unknown	
681	5638394 4926301	2	7	N	Unknown	
601	563908 4926197	2	17	N	Unknown	
602	563893 4926239	2	17	N	Unknown	
603	563901 4926234	2	44	N	Unknown	
604	563843 4926283	2	4	N	Unknown	
605	563896 4926187	2	1	N	Unknown	
606	563892 4926187	1	2	N	Unknown	
607	563904 4926109	2	45	N	Unknown	
608	563887 4926090	3	44	N	Unknown	
609	563884 4926083	3	30	N	Unknown	
610	563853 4926072	3	63	N	Unknown	
611	563824 4926071	3	23	N	Unknown	
612	563722 4926038	2	15	N	Unknown	
613	563719 4926037	3	34	N	Unknown	
614	563686 4926049	1		N	Unknown	
615	563664 4926096	1		N	Unknown	
616 a	563618 4926162	1	32	N	Unknown	
616 b	563778 4926358	1	1	N	Unknown	
617	563662 4926313	1	15	N	Unknown	
618	563658 4926322	1	14	N	Unknown	

Table 2: Trees Determined by BHA to be Butternut Hybrids

Tree #	UTM coordinates	Method used (genetic testing or field identification):

Tree #	UTM coordinates	Method used (genetic testing or field identification):

Table 3: Summary of Assessment Results

Result:	Total #:	Important information for persons planning activities that may affect Butternut:
Category 1	8	<ul style="list-style-type: none"> A Category 1 tree is one that is affected by butternut canker to such an advanced degree that retaining the tree would not support the protection or recovery of butternut in the area in which the tree is located; and is considered “non-retainable”. During the 30 day period that follows your submission of this BHA Report to the MNRF District Manager, no Butternut trees (of Category 1, 2, or 3) may be killed, harmed, or taken, and MNRF may contact you for an opportunity to examine the trees. Category 1 trees may be killed, harmed or taken after the 30 day period that follows submission of this BHA Report to the MNRF District Manager, unless the results of an MNRF examination indicate that the assessment has not been conducted in accordance with the document entitled “Butternut Assessment Guidelines: Assessment of Butternut Tree Health for the Purposes of the <i>Endangered Species Act, 2007</i>”.
Category 2	8	<ul style="list-style-type: none"> A Category 2 tree is one that is not affected by Butternut Canker, or is affected by Butternut Canker but the degree to which it is affected is not too advanced and retaining the tree could support the protection or recovery of butternut in the area in which the tree is located, and is considered “retainable”. During the 30 day period that follows your submission of this BHA Report to the MNRF District Manager, no Butternut trees (of Category 1, 2, or 3) may be killed, harmed, or taken, and MNRF may contact you for an opportunity to examine the trees. Activities that may kill, harm or take up to a maximum of ten (10) Category 2 trees may be eligible to follow the rules in section 23.7 of Ontario Regulation 242/08, in accordance with the conditions and requirements set out in the regulation. Refer to e-Laws for the legal requirements of eligible activities under section 23.7 of Ontario Regulation 242/08 and conditions that must be fulfilled: http://www.e-laws.gov.on.ca/html/reg/english/elaws_regs_080242_e.htm Activities that may kill, harm or take more than ten (10) Category 2 trees are not eligible to follow the rules in section 23.7 of Ontario Regulation 242/08. Contact the local MNRF district office for information on how to seek an ESA authorization (e.g., a permit) or consider an alternative that would be eligible for the regulation.
Category 3	5	<ul style="list-style-type: none"> A Category 3 tree is one that may be useful in determining sources of resistance to Butternut Canker, and is considered “archivable”. Category 3 trees are not eligible to be killed, harmed or taken under section 23.7 of Ontario Regulation 242/08. Contact the local MNRF district office for information on how to seek an ESA authorization, or consider an alternative that will avoid killing, harming or taking any Category 3 trees.
Cultivated	0	<ul style="list-style-type: none"> An activity that involves killing, harming, or taking a cultivated Butternut tree that was not required to be planted to fulfill a condition of an ESA permit or a condition of a regulation, may be eligible for the exemption provided by subsection 23.7 (11) of O. Reg. 242/08. Prior to undertaking the activity, the owner or occupier of the land on which the Butternut is located (or person acting on their behalf) will need to determine whether the exemption for

Result:	Total #:	Important information for persons planning activities that may affect Butternut:
		<p>cultivated trees is applicable by determining whether or not the tree was cultivated as a result of the requirements for an exemption under O. Reg. 242/08 or a condition of a permit issued under the ESA. This information can be accessed by contacting the local MNRF district office.</p> <ul style="list-style-type: none"> The owner or occupier of the land on which the Butternut is located (or person acting on their behalf) is encouraged to append the details regarding whether the tree was planted to satisfy a requirement (e.g., the permit number or registration number) to this BHA Report for their records.
Hybrid	0	<ul style="list-style-type: none"> Hybrid Butternut trees are not protected under the ESA, but their removal may be subject to municipal by-laws and other legislation.

Butternut Health Assessor's Comments:

This concludes the summary of the BHA Report. A complete BHA Report must also include:

1. All original (hard copy) data forms (i.e., all completed sets of Form 1 and Form 2), and
2. Electronic and printed copies of the Excel data analysis spreadsheet.

Butternut Data Collection FORM 2 (2010 Edition)

(PLEASE USE BLOCK LETTERS)

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

Shaded fields are mandatory for Butternut Health Assessments

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

Surveyor ID or BHA # **450**

Date (dd/mm/yyyy)

14-08-2018

Surveyor Last Name **MORAN**

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

Tree # **68217563837** Zone **1** Easting **100** Northing **02**

Crown Class **4** Live Crown % **100** Main Stem Length(m) **02**

Butternut Origin: Natural Planted Unknown
 Signs: Male Flowers Female Flowers Seed Set None

Assess below live crown
 #Epic-Live: **00** #Open: **00** #Sooty: **00**
 #Epic-Dead: **00** Root: **00**
 Bark Type: **S** = <2m: **00** **02**
 # Callused Wounds: **00** >2m: **00** **00**

Metres from badly cankered tree
 < 40 > 40 None Found

Competing Species
JUGLCLIN
ACERNEG

Tree # **68117563839** Zone **1** Easting **100** Northing **02**

Crown Class **4** Live Crown % **100** Main Stem Length(m) **02**

Butternut Origin: Natural Planted Unknown
 Signs: Male Flowers Female Flowers Seed Set None

Assess below live crown
 #Epic-Live: **00** #Open: **05** #Sooty: **00**
 #Epic-Dead: **00** Root: **00**
 Bark Type: **S** = <2m: **00** **00**
 # Callused Wounds: **00** >2m: **00** **00**

Metres from badly cankered tree
 < 40 > 40 None Found

Competing Species
CORNALT
ACERNEG

Tree # **60117563908** Zone **1** Easting **08** Northing **4926197**

Crown Class **2** Live Crown % **080** Main Stem Length(m) **08**

Butternut Origin: Natural Planted Unknown
 Signs: Male Flowers Female Flowers Seed Set None

Assess below live crown
 #Epic-Live: **00** #Open: **01** #Sooty: **05**
 #Epic-Dead: **01** Root: **00**
 Bark Type: **S** = <2m: **00** **00**
 # Callused Wounds: **01** >2m: **01** **00**

Metres from badly cankered tree
 < 40 > 40 None Found

Competing Species
TILIAME
CORNALT

Tree # **60217563893** Zone **1** Easting **93** Northing **4926239**

Crown Class **2** Live Crown % **100** Main Stem Length(m) **04**

Butternut Origin: Natural Planted Unknown
 Signs: Male Flowers Female Flowers Seed Set None

Assess below live crown
 #Epic-Live: **00** #Open: **00** #Sooty: **02**
 #Epic-Dead: **00** Root: **00**
 Bark Type: **S** = <2m: **00** **01**
 # Callused Wounds: **00** >2m: **01** **03**

Metres from badly cankered tree
 < 40 > 40 None Found

Competing Species
TILIAME
ACERSAS
FRAXAME

Tree # **60317563901** Zone **1** Easting **01** Northing **4926234**

Crown Class **2** Live Crown % **080** Main Stem Length(m) **12**

Butternut Origin: Natural Planted Unknown
 Signs: Male Flowers Female Flowers Seed Set None

Assess below live crown
 #Epic-Live: **00** #Open: **01** #Sooty: **01**
 #Epic-Dead: **00** Root: **00**
 Bark Type: **D** = <2m: **00** **01**
 # Callused Wounds: **01** >2m: **00** **00**

Metres from badly cankered tree
 < 40 > 40 None Found

Competing Species
TILIAME
POPUTRE

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Shaded fields are mandatory for Butternut Health Assessments

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

Surveyor ID or BHA # **0450**

Date (dd/mm/yyyy)

14-08-2018

Surveyor Last Name **MORAN**

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

Tree # **604** Zone **17** Easting **563843** Northing **4926283**

Crown Class **4** Live Crown % **100** Main Stem Length(m) Below crown **01** Seed

Butternut Origin Natural Planted Unknown None
 Signs Male Flowers Female Flowers Seed Set None

Assess below live crown
 #Epic-Live **00** #Open **00** #Sooty **00**
 #Epic-Dead **00** Root **00** **00**
 Bark Type **S** =<2m **00** **00**
 # Callused **00** >2m **00** **00**
 Wounds **00**

Metres from badly cankered tree < 40 > 40 None Found

Competing Species
SALI
RHAMCAT

Tree # **605** Zone **17** Easting **563896** Northing **4926187**

Crown Class **1** Live Crown % **100** Main Stem Length(m) Below crown **01** Seed

Butternut Origin Natural Planted Unknown None
 Signs Male Flowers Female Flowers Seed Set None

Assess below live crown
 #Epic-Live **00** #Open **00** #Sooty **00**
 #Epic-Dead **00** Root **00** **00**
 Bark Type **S** =<2m **00** **00**
 # Callused **00** >2m **00** **00**
 Wounds **00**

Metres from badly cankered tree < 40 > 40 None Found

Competing Species
JUGLCIN
VITIRIP

Tree # **606** Zone **17** Easting **563892** Northing **4926187**

Crown Class **2** Live Crown % **100** Main Stem Length(m) Below crown **01** Seed

Butternut Origin Natural Planted Unknown None
 Signs Male Flowers Female Flowers Seed Set None

Assess below live crown
 #Epic-Live **00** #Open **00** #Sooty **00**
 #Epic-Dead **00** Root **00** **00**
 Bark Type **S** =<2m **01** **00**
 # Callused **00** >2m **00** **00**
 Wounds **00**

Metres from badly cankered tree < 40 > 40 None Found

Competing Species
FRAXAME
PINUSTR
TILIAME

Approx. 2m tall.

Tree # **607** Zone **17** Easting **563904** Northing **4926109**

Crown Class **1** Live Crown % **080** Main Stem Length(m) Below crown **15** Seed

Butternut Origin Natural Planted Unknown None
 Signs Male Flowers Female Flowers Seed Set None

Assess below live crown
 #Epic-Live **00** #Open **02** #Sooty **02**
 #Epic-Dead **00** Root **00** **02**
 Bark Type **D** =<2m **00** **01**
 # Callused **00** >2m **01** **02**
 Wounds **00**

Metres from badly cankered tree < 40 > 40 None Found

Competing Species
ACERSAS

Unable to properly assess crown. View obstructed.

Tree # **608** Zone **17** Easting **563887** Northing **4926090**

Crown Class **1** Live Crown % **080** Main Stem Length(m) Below crown **15** Seed

Butternut Origin Natural Planted Unknown None
 Signs Male Flowers Female Flowers Seed Set None

Assess below live crown
 #Epic-Live **00** #Open **00** #Sooty **01**
 #Epic-Dead **00** Root **00** **01**
 Bark Type **D** =<2m **00** **01**
 # Callused **00** >2m **00** **00**
 Wounds **00**

Metres from badly cankered tree < 40 > 40 None Found

Competing Species
JUGLCIN
ACERSAS

DBH = 30cm & 33cm (2 stems). 30cm from root.

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

Surveyor ID or BHA # **0450**

Date (dd/mm/yyyy)

14-08-2018

Surveyor Last Name

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

Tree # **609** Zone **17** Easting **563884** Northing **4926083**

Crown Class **1** Live Crown % **080** Main Stem Length(m) **15** Below crown

Butternut Signs
 Twig Dieback
 Branch Dieback
 Defoliation
 Discolouration
 Male Flowers
 Female Flowers
 Seed Set
 None

Assess below live crown
 #Epic-Live **00**
 #Epic-Dead **00**
 Bark Type **S**
 # Callused Wounds **01**

Metres from badly cankered tree
 < 40 > 40 None Found

Competing Species
JUGLCIN
ACERSAS

Tree # **610** Zone **17** Easting **563853** Northing **4926072**

Crown Class **1** Live Crown % **090** Main Stem Length(m) **12** Below crown

Butternut Signs
 Twig Dieback
 Branch Dieback
 Defoliation
 Discolouration
 Male Flowers
 Female Flowers
 Seed Set
 None

Assess below live crown
 #Epic-Live **00**
 #Epic-Dead **00**
 Bark Type **S**
 # Callused Wounds **02**

Metres from badly cankered tree
 < 40 > 40 None Found

Competing Species
ACERSAS

Tree # **611** Zone **17** Easting **563824** Northing **4926071**

Crown Class **2** Live Crown % **080** Main Stem Length(m) **08** Below crown

Butternut Signs
 Twig Dieback
 Branch Dieback
 Defoliation
 Discolouration
 Male Flowers
 Female Flowers
 Seed Set
 None

Assess below live crown
 #Epic-Live **02**
 #Epic-Dead **00**
 Bark Type **S**
 # Callused Wounds **01**

Metres from badly cankered tree
 < 40 > 40 None Found

Competing Species
ACERSAS
BETUPAP

Tree # **612** Zone **17** Easting **563722** Northing **4926038**

Crown Class **3** Live Crown % **080** Main Stem Length(m) **06** Below crown

Butternut Signs
 Twig Dieback
 Branch Dieback
 Defoliation
 Discolouration
 Male Flowers
 Female Flowers
 Seed Set
 None

Assess below live crown
 #Epic-Live **01**
 #Epic-Dead **00**
 Bark Type **S**
 # Callused Wounds **00**

Metres from badly cankered tree
 < 40 > 40 None Found

Competing Species
POPUGRA
JUGLCIN

Tree # **613** Zone **17** Easting **563719** Northing **4926037**

Crown Class **2** Live Crown % **090** Main Stem Length(m) **08** Below crown

Butternut Signs
 Twig Dieback
 Branch Dieback
 Defoliation
 Discolouration
 Male Flowers
 Female Flowers
 Seed Set
 None

Assess below live crown
 #Epic-Live **00**
 #Epic-Dead **00**
 Bark Type **S**
 # Callused Wounds **02**

Metres from badly cankered tree
 < 40 > 40 None Found

Competing Species
POPUGRA
ACERSAS

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Shaded fields are mandatory for Butternut Health Assessments

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

Surveyor ID or BHA# **0450**

Date (dd/mm/yyyy)

14-08-2018

Surveyor Last Name **MORAN**

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

Tree # **614175636864926049**

Zone **000** Live Crown % **000** Main Stem Length(m) **000**

Butternut Origin Natural Planted Unknown

Assess below live crown

<input type="checkbox"/>	#Epic-Live	#Open	#Sooty
<input type="checkbox"/>	#Epic-Dead	Root	
<input type="checkbox"/>	Bark Type	=<2m	
<input type="checkbox"/>	# Callused Wounds	>2m	

Metres from badly cankered tree < 40 > 40 None Found

Competing Species

Under hydro line. Only 2 stumps with 4 shoots remain (previous maintenance)

Tree # **615175636644926096**

Zone **000** Live Crown % **000** Main Stem Length(m) **000**

Butternut Origin Natural Planted Unknown

Assess below live crown

<input type="checkbox"/>	#Epic-Live	#Open	#Sooty
<input type="checkbox"/>	#Epic-Dead	Root	
<input type="checkbox"/>	Bark Type	=<2m	
<input type="checkbox"/>	# Callused Wounds	>2m	

Metres from badly cankered tree < 40 > 40 None Found

Competing Species

Main stems previously cut. Shoots from stump remains. Hydro maintenance

Tree # **6161756361849261162**

Zone **080** Live Crown % **080** Main Stem Length(m) **080**

Butternut Origin Natural Planted Unknown

Assess below live crown

00	#Epic-Live	#Open	#Sooty
00	#Epic-Dead	Root	0303
S	Bark Type	=<2m	0007
01	# Callused Wounds	>2m	0101

Metres from badly cankered tree < 40 > 40 None Found

Competing Species

616a. Appears to have been cut in past due to hydro line.

Tree # **616175637784926358**

Zone **100** Live Crown % **100** Main Stem Length(m) **100**

Butternut Origin Natural Planted Unknown

Assess below live crown

00	#Epic-Live	#Open	#Sooty
00	#Epic-Dead	Root	0000
S	Bark Type	=<2m	0100
00	# Callused Wounds	>2m	0000

Metres from badly cankered tree < 40 > 40 None Found

Competing Species

POPUBAB					
POPUTRE					

616b

Tree # **6171756366249263113**

Zone **000** Live Crown % **000** Main Stem Length(m) **000**

Butternut Origin Natural Planted Unknown

Assess below live crown

02	#Epic-Live	#Open	#Sooty
00	#Epic-Dead	Root	0000
S	Bark Type	=<2m	0100
00	# Callused Wounds	>2m	0400

Metres from badly cankered tree < 40 > 40 None Found

Competing Species

POPUBAB					
ACERNEG					

Main stem broken off at top.

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

Surveyor ID or BHA # **0450**

Date (dd/mm/yyyy) **14-08-2018**

Surveyor Last Name **MORAN**

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

Tree # **618175636584926322**
 Zone **1** Easting **175636584926322** Northing **175636584926322**

Crown Class **2** Live Crown % **000** Main Stem Length(m) **000**
 Below crown **000** Seed **000**
 Twig Dieback Branch Dieback Defoliation Discolouration **0114** DBH(cm)
 #Stems **0114**
 Butternut Origin Natural Planted Unknown None
 Male Flowers Female Flowers Seed Set None

Assess below live crown
 #Epic-Live #Epic-Dead Bark Type # Callused Wounds
 #Open **00** #Sooty **00**
 Root **0604** **0201**
 =<2m
 >2m

Metres from badly cankered tree < 40 > 40 None Found
 Competing Species **POPULAR**

Top of main stem broken off. Unable to fully assess root due to vegetation.

Tree # **1** Zone **1** Easting **1** Northing **1**

Crown Class **1** Live Crown % **100** Main Stem Length(m) **1**
 Below crown **1** Seed **1**
 Twig Dieback Branch Dieback Defoliation Discolouration **1** DBH(cm)
 #Stems **1**
 Butternut Origin Natural Planted Unknown None
 Male Flowers Female Flowers Seed Set None

Assess below live crown
 #Epic-Live #Epic-Dead Bark Type # Callused Wounds
 #Open **1** #Sooty **1**
 Root **1**
 =<2m
 >2m

Metres from badly cankered tree < 40 > 40 None Found
 Competing Species

Tree # **1** Zone **1** Easting **1** Northing **1**

Crown Class **1** Live Crown % **100** Main Stem Length(m) **1**
 Below crown **1** Seed **1**
 Twig Dieback Branch Dieback Defoliation Discolouration **1** DBH(cm)
 #Stems **1**
 Butternut Origin Natural Planted Unknown None
 Male Flowers Female Flowers Seed Set None

Assess below live crown
 #Epic-Live #Epic-Dead Bark Type # Callused Wounds
 #Open **1** #Sooty **1**
 Root **1**
 =<2m
 >2m

Metres from badly cankered tree < 40 > 40 None Found
 Competing Species

Tree # **1** Zone **1** Easting **1** Northing **1**

Crown Class **1** Live Crown % **100** Main Stem Length(m) **1**
 Below crown **1** Seed **1**
 Twig Dieback Branch Dieback Defoliation Discolouration **1** DBH(cm)
 #Stems **1**
 Butternut Origin Natural Planted Unknown None
 Male Flowers Female Flowers Seed Set None

Assess below live crown
 #Epic-Live #Epic-Dead Bark Type # Callused Wounds
 #Open **1** #Sooty **1**
 Root **1**
 =<2m
 >2m

Metres from badly cankered tree < 40 > 40 None Found
 Competing Species

Tree # **1** Zone **1** Easting **1** Northing **1**

Crown Class **1** Live Crown % **100** Main Stem Length(m) **1**
 Below crown **1** Seed **1**
 Twig Dieback Branch Dieback Defoliation Discolouration **1** DBH(cm)
 #Stems **1**
 Butternut Origin Natural Planted Unknown None
 Male Flowers Female Flowers Seed Set None

Assess below live crown
 #Epic-Live #Epic-Dead Bark Type # Callused Wounds
 #Open **1** #Sooty **1**
 Root **1**
 =<2m
 >2m

Metres from badly cankered tree < 40 > 40 None Found
 Competing Species

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BHA Tree Analysis (version: December 2013)

This table is to be completed by a designated Butternut Health Assessor (BHA).

BHA Report #	450-012	Assessment Date(s)	14-Aug-18						Total # Butternut Trees in BHA Report	21																
BHA ID #	450	BHA Name	Lisa Moran																							
Landowner / Client Name		Urban Pro Developments																								
Property Location		452 Raglan Street, Town of Collingwood, County of Simcoe																								
input field data										automatic calculations from field data						Categories:										
Tree #	Live Crown %	Tree dbh (cm)	# bole cankers				# root flare (RF) cankers		<40 m from cankered tree? (Y or N)	Circ. (cm) = Pi x dbh	total bole canker width (sooty x 2.5 + open x 5)	total RF canker width (sooty x 2.5 + open x 5)	bole canker % of circ.	RF canker % of circ.	total bole & root canker % of 2xCirc	LC% >= 50 & BC% = 0	LC% >70 & BRC % <20	LC% >70 & BC % <20	Preliminary tree call	FINAL TREE CALL a Cat 2, dbh>20cm <40m from a Cat 1						
			sooty (S) (will be assigned 2.5 cm per canker)		open (O) (will be assigned 5 cm per canker)		RF S	RF O													Circ (cm)	BC (cm)	RC (cm)	BC%	RC%	BRC%
			S <2 m	S >2 m	O <2 m	O >2 m																				
682	100	2	2	0	0	0	0	0	n	6.28	5.0	0.0	79.6	0.0	39.8	1	1	1	1	1						
681	100	7	0	0	0	0	0	0	n	21.98	0.0	0.0	0.0	0.0	0.0	2	2	2	2	2						
601	80	17	0	0	0	1	5	1	n	53.38	5.0	17.5	9.4	32.8	21.1	1	1	2	2	2						
602	100	17	1	3	0	1	2	0	n	53.38	15.0	5.0	28.1	9.4	18.7	1	2	1	2	2						
603	80	44	1	0	0	0	1	1	n	138.2	2.5	7.5	1.8	5.4	3.6	1	2	2	2	2						
604	100	4	0	0	0	0	0	0	n	12.56	0.0	0.0	0.0	0.0	0.0	2	2	2	2	2						
605	100	1	0	0	0	0	0	0	n	3.14	0.0	0.0	0.0	0.0	0.0	2	2	2	2	2						
606	100	2	0	0	1	0	0	0	n	6.28	5.0	0.0	79.6	0.0	39.8	1	1	1	1	1						
607	80	45	1	2	0	1	2	2	n	141.3	12.5	15.0	8.8	10.6	9.7	1	2	2	2	2						
608	80	44	1	1	0	0	1	0	y	138.2	5.0	2.5	3.6	1.8	2.7	1	2	2	2	3						
609	80	30	1	0	0	0	2	0	y	94.2	2.5	5.0	2.7	5.3	4.0	1	2	2	2	3						
610	90	63	6	1	0	0	2	5	y	197.8	17.5	30.0	8.8	15.2	12.0	1	2	2	2	3						
611	80	23	0	0	0	0	0	0	y	72.22	0.0	0.0	0.0	0.0	0.0	2	2	2	2	3						
612	80	15	1	0	1	0	2	1	y	47.1	7.5	10.0	15.9	21.2	18.6	1	2	2	2	2						
613	90	34	2	0	0	0	0	2	y	106.8	5.0	10.0	4.7	9.4	7.0	1	2	2	2	3						
614										0	0.0	0.0	#####	#####	#####	#####	###	###	###	##	#DIV/0!					
615										0	0.0	0.0	#####	#####	#####	#####	###	###	###	##	#DIV/0!					
616	80	32	7	1	0	1	3	3	n	100.5	25.0	22.5	24.9	22.4	23.6	1	1	1	1	1						
616	100	1	0	0	1	0	0	0	n	3.14	5.0	0.0	159.2	0.0	79.6	1	1	1	1	1						
617	0	15	0	0	1	4	0	0	n	47.1	25.0	0.0	53.1	0.0	26.5	1	1	1	1	1						
618	0	14	4	1	6	2	0	0	n	43.96	52.5	0.0	119.4	0.0	59.7	1	1	1	1	1						

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Status:	Delivered: 09/05/2018 4:43 PM Signed for By: C.GAGNON
Reference:	17-169
Signed for by:	C.GAGNON
Delivery location:	Midhurst, ON
Delivered to:	Receptionist/Front Desk
Service type:	FedEx Priority Overnight®
Packaging type:	FedEx® Envelope
Number of pieces:	1
Weight:	1.00 lb.
Special handling/Services:	Deliver Weekday
Standard transit:	9/5/2018 by 5:00 pm

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Thank you for your business.

Romas Kartavicius
Eden Oak (McNabb) Inc.
1443 Hurontario Street
Mississauga ON L5G 3H5

August 9, 2021

Dear Mr. Kartavicius:

As requested, I completed an updated Butternut Health Assessment (BHA) on a Butternut tree located on your lands located at 452 Raglan Street, Town of Collingwood.

A copy of this BHA report will be submitted to the Ministry of Environment, Conservation and Parks.

Please retain this information and a copy of the BHA Report (including copies of all data forms) for your records.

If you have questions or require additional information please do not hesitate to contact me.

Lisa Moran, BHA # 450
C/O Azimuth Environmental Consulting Inc.
642 Welham Road
Barrie, Ontario
L4N 9A1

c.c. Kory Chisholm, MHBC Planning, Urban Design and Landscape Architecture

Enclosures:

1. Information from the Ministry of Natural Resources and Forestry about Butternut and the *Endangered Species Act, 2007*
2. Butternut Health Assessor's Report
3. Original data forms (electronic)
4. Electronic copies of the Excel data spreadsheet (BHA Tree Analysis)
5. Map showing approximate location of Butternut tree

Ministry of Natural
Resources and Forestry

Species At Risk
P.O. Box 7000, 300 Water Street
Peterborough ON K9J 8M5

Ministère des Richesses
naturelles et des Forêts

Espèces en péril
C.P. 7000, 300, rue Water
Peterborough ON K9J 8M5



The enclosed Butternut Health Assessor's Report documents the results of the Butternut health assessment that was conducted by the designated Butternut Health Assessor (BHA) identified in the top section of the report. If there are other Butternut trees (of any size or age) at the site that may be affected by the activity and they are not identified in the enclosed BHA Report, they too must be assessed by a designated BHA.

Butternut is listed as an endangered species on the Species at Risk in Ontario List, and as such, it is protected under the *Endangered Species Act, 2007* (ESA) from being killed, harmed, or removed. If you are planning to undertake an activity that may affect Butternut, you may be eligible to follow the requirements set out in section 23.7 of Ontario Regulation 242/08 under the ESA, or you may need to seek an authorization under the ESA (e.g., a permit).

Please visit e-laws at the link provided below for the legal requirements of eligible activities under section 23.7 of Ontario Regulation 242/08 and conditions that must be fulfilled. Information about Butternut is also available at: <http://www.ontario.ca/environment-and-energy/butternut-trees-your-property>.

If you are eligible to kill, harm or take Butternut under section 23.7 of the regulation, your first step is to submit the BHA Report and the original data forms enclosed in this package to the local Ministry of Natural Resources and Forestry (MNRF) District Manager. Note that MNRF cannot accept photocopies or scanned electronic copies of the data forms.

Note regarding changes:

If the enclosed BHA Report does not identify which Butternut tree(s) are proposed to be killed, harmed, or taken in Table 1 (i.e., if "unknown" is indicated in the second last column of Table 1), or, if the information in the last two columns of Table 1 has changed since the date this BHA Report was produced, **do not make any edits to the BHA Report**. Instead, please attach a cover letter that identifies which Butternut tree(s) are proposed to be killed, harmed, or taken (by referencing the tree identification numbers) when you submit the enclosed BHA Report to the local MNRF District Manager.

The BHA Report must be submitted at least 30 days prior to registering an eligible activity to kill, harm, or remove a Butternut tree. During this 30 day period, no Butternut trees (of any category) may be killed, harmed, or removed, and MNRF may contact you for an opportunity to examine the trees. If MNRF chooses to examine the trees, a representative of MNRF will contact you using the information you supplied when you submitted the BHA Report.

If you are eligible to follow the rules in regulation under section 23.7, you may register your activity using the “Notice of Butternut Impact” form on the [MNRF Registry](#) **after the 30 day period has elapsed.**

If you are **not** eligible to follow the rules in regulation under section 23.7, please contact the local MNRF district office to determine whether you will need to seek an authorization (e.g., a permit). A link to the directory of MNRF offices is provided below.

Note that municipal by-laws and legislation other than the ESA may also be applicable to the removal or harming of trees.

Please retain this information and a copy of the BHA Report (including copies of all data forms) for your records, along with any other documentation you may receive from MNRF should an examination of the trees occur. If you have any questions, please contact your local MNRF district office.

Links:

Endangered Species Act, 2007:

http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_07e06_e.htm

Ontario Regulation 242/08 (refer to section 23.7):

http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_080242_e.htm

MNRF Office Locations:

<https://www.ontario.ca/government/ministry-natural-resources-and-forestry-regional-and-district-offices>

Butternut Health Assessor's Report Number: 450-016

Lisa Moran, BHA # 450
 C/O Azimuth Environmental Consulting Inc.
 642 Welham Road
 Barrie, Ontario
 L4N 9A1
 (705) 721-8451 x202
 lisa@azimuthenvironmental.com

Romas Kartavicius
 Eden Oak (McNabb) Inc.
 1443 Hurontario Street
 Mississauga ON L5G 3H5

August 9, 2021

Site location: 452 Raglan Street, Town of Collingwood

Date(s) of Butternut health assessment: August 9, 2021

Date BHA Report prepared: August 9, 2021

Map datum used: NAD83 WGS84

Total number of trees assessed in this BHA Report: 1

The assessed trees were numbered on site using **white paint &/or orange flagging tape plus numbered tree tag – attached with single staple**. The numbers at the site correspond to the tree numbers referenced in this report.

This BHA Report includes the following tables:

- Table 1: Butternut Trees Assessed
- Table 2: Trees Determined by BHA to be Butternut Hybrids
- Table 3: Summary of Assessment Results

Note to BHAs: add/remove table rows as necessary

Table 1: Butternut Trees Assessed

Tree #	UTM coordinates	Category ¹ (1, 2, or 3 ²)	dbh ³ (cm)	Cultivated? (Y/N)	Proposed to be: (enter one: unknown ⁴ , killed, harmed or taken)	If tree is proposed to be killed, harmed, or taken, indicate reason tree is proposed to be killed, harmed or taken:

¹ The extent to which the tree is affected by Butternut Canker is presented in the Excel document titled, "BHA Tree Analysis" that accompanies this BHA Report.

² Category 3 trees are not eligible to be killed, harmed or taken under section 23.7 of Ontario Regulation 242/08.

³ dbh: diameter at breast height, rounded to nearest cm (if tree is shorter than breast height, enter zero)

⁴ In this column, "unknown" indicates that at the time of assessment, there are no proposals to kill, harm or take this tree that are known to the BHA.

Tree #	UTM coordinates	Category ¹ (1, 2, or 3 ²)	dbh ³ (cm)	Cultivated? (Y/N)	Proposed to be: (enter one: unknown ⁴ , killed, harmed or taken)	If tree is proposed to be killed, harmed, or taken, indicate reason tree is proposed to be killed, harmed or taken:
681	5638394 4926301	1	9	N	Unknown	

Table 2: Trees Determined by BHA to be Butternut Hybrids

Tree #	UTM coordinates	Method used (genetic testing or field identification):

Table 3: Summary of Assessment Results

Result:	Total #:	Important information for persons planning activities that may affect Butternut:
Category 1	1	<ul style="list-style-type: none"> A Category 1 tree is one that is affected by butternut canker to such an advanced degree that retaining the tree would not support the protection or recovery of butternut in the area in which the tree is located; and is considered “non-retainable”. During the 30 day period that follows your submission of this BHA Report to the MNRF District Manager, no Butternut trees (of Category 1, 2, or 3) may be killed, harmed, or taken, and MNRF may contact you for an opportunity to examine the trees. Category 1 trees may be killed, harmed or taken after the 30 day period that follows submission of this BHA Report to the MNRF District Manager, unless the results of an MNRF examination indicate that the assessment has not been conducted in accordance with the document entitled “Butternut Assessment Guidelines: Assessment of Butternut Tree Health for the Purposes of the <i>Endangered Species Act, 2007</i>”.
Category 2	0	<ul style="list-style-type: none"> A Category 2 tree is one that is not affected by Butternut Canker, or is affected by Butternut Canker but the degree to which it is affected is not too advanced and retaining the tree could support the protection or recovery of butternut in the area in which the tree is located, and is considered “retainable”. During the 30 day period that follows your submission of this BHA Report to the MNRF District Manager, no Butternut trees (of Category 1, 2, or 3) may be killed, harmed, or taken, and MNRF may contact you for an opportunity to examine the trees. Activities that may kill, harm or take up to a maximum of ten (10) Category 2 trees may be eligible to follow the rules in section 23.7 of Ontario Regulation 242/08, in accordance with the conditions and requirements set out in the regulation.

Result:	Total #:	Important information for persons planning activities that may affect Butternut:
		<ul style="list-style-type: none"> Refer to e-Laws for the legal requirements of eligible activities under section 23.7 of Ontario Regulation 242/08 and conditions that must be fulfilled: http://www.e-laws.gov.on.ca/html/regis/english/elaws_regs_080242_e.htm Activities that may kill, harm or take more than ten (10) Category 2 trees are not eligible to follow the rules in section 23.7 of Ontario Regulation 242/08. Contact the local MNRF district office for information on how to seek an ESA authorization (e.g., a permit) or consider an alternative that would be eligible for the regulation.
Category 3	0	<ul style="list-style-type: none"> A Category 3 tree is one that may be useful in determining sources of resistance to Butternut Canker, and is considered “archivable”. Category 3 trees are not eligible to be killed, harmed or taken under section 23.7 of Ontario Regulation 242/08. Contact the local MNRF district office for information on how to seek an ESA authorization, or consider an alternative that will avoid killing, harming or taking any Category 3 trees.
Cultivated	0	<ul style="list-style-type: none"> An activity that involves killing, harming, or taking a cultivated Butternut tree that was not required to be planted to fulfill a condition of an ESA permit or a condition of a regulation, may be eligible for the exemption provided by subsection 23.7 (11) of O. Reg. 242/08. Prior to undertaking the activity, the owner or occupier of the land on which the Butternut is located (or person acting on their behalf) will need to determine whether the exemption for cultivated trees is applicable by determining whether or not the tree was cultivated as a result of the requirements for an exemption under O. Reg. 242/08 or a condition of a permit issued under the ESA. This information can be accessed by contacting the local MNRF district office. The owner or occupier of the land on which the Butternut is located (or person acting on their behalf) is encouraged to append the details regarding whether the tree was planted to satisfy a requirement (e.g., the permit number or registration number) to this BHA Report for their records.
Hybrid	0	<ul style="list-style-type: none"> Hybrid Butternut trees are not protected under the ESA, but their removal may be subject to municipal by-laws and other legislation.

Butternut Health Assessor’s Comments:

Original assessment completed in 2018 BHA #450-012 where Tree # 681 was assessed as a Category 2 tree.

This concludes the summary of the BHA Report. A complete BHA Report must also include:

1. All original (hard copy) data forms (i.e., all completed sets of Form 1 and Form 2), and
2. Electronic and printed copies of the Excel data analysis spreadsheet.

Butternut Data Collection FORM 2 (2010 Edition)

(PLEASE USE BLOCK LETTERS)

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

Shaded fields are mandatory for Butternut Health Assessments

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

Surveyor ID or BHA # **0450**

Date (dd/mm/yyyy)

09 - 08 - 2021

Surveyor Last Name **MORAN**

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

Tree # **681** Zone **17** Easting **563839** Northing **4926301**

Crown Class **4** Live Crown % **100** Main Stem Length(m) Below crown **03** Seed

Twig Dieback Branch Dieback Defoliation Discolouration #Stems **1** DBH(cm) **009** Butternut Origin Natural Planted Unknown Male Flowers Female Flowers Seed Set None

Assess below live crown
 #Epic-Live **00** #Epic-Dead **02** Bark Type **S** # Callused Wounds **01**
 #Open **00** #Sooty **00**
 Root = <2m **03** >2m **00**

Metres from badly cankered tree < 40 > 40 None Found

Competing Species
CORNALT
ACERNEG

Tree # Zone Easting Northing

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

Twig Dieback Branch Dieback Defoliation Discolouration #Stems DBH(cm) Butternut Origin Natural Planted Unknown Male Flowers Female Flowers Seed Set None

Assess below live crown
 #Epic-Live #Epic-Dead Bark Type # Callused Wounds
 #Open #Sooty
 Root = <2m >2m

Metres from badly cankered tree < 40 > 40 None Found

Competing Species

Tree # Zone Easting Northing

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

Twig Dieback Branch Dieback Defoliation Discolouration #Stems DBH(cm) Butternut Origin Natural Planted Unknown Male Flowers Female Flowers Seed Set None

Assess below live crown
 #Epic-Live #Epic-Dead Bark Type # Callused Wounds
 #Open #Sooty
 Root = <2m >2m

Metres from badly cankered tree < 40 > 40 None Found

Competing Species

Tree # Zone Easting Northing

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

Twig Dieback Branch Dieback Defoliation Discolouration #Stems DBH(cm) Butternut Origin Natural Planted Unknown Male Flowers Female Flowers Seed Set None

Assess below live crown
 #Epic-Live #Epic-Dead Bark Type # Callused Wounds
 #Open #Sooty
 Root = <2m >2m

Metres from badly cankered tree < 40 > 40 None Found

Competing Species

Tree # Zone Easting Northing

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

Twig Dieback Branch Dieback Defoliation Discolouration #Stems DBH(cm) Butternut Origin Natural Planted Unknown Male Flowers Female Flowers Seed Set None

Assess below live crown
 #Epic-Live #Epic-Dead Bark Type # Callused Wounds
 #Open #Sooty
 Root = <2m >2m

Metres from badly cankered tree < 40 > 40 None Found

Competing Species

Please enter matching page link code on forms 1 and 2

Page Link

563839

(Contact Information follows all applicable privacy policies and guidelines)

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

49731



BHA Tree Analysis (version: December 2013)

This table is to be completed by a designated Butternut Health Assessor (BHA).

BHA Report #	450-016	Assessment Date(s)	09-Aug-21				Total # Butternut Trees in BHA Report	1												
BHA ID #	450	BHA Name	Lisa Moran																	
Landowner / Client Name		Eden Oak (McNabb) Inc																		
Property Location		452 Raglan Street, Town of Collingwood, County of Simcoe																		
input field data										automatic calculations from field data						Categories:				
Tree #	Live Crown %	Tree dbh (cm)	# bole cankers				# root flare (RF) cankers		Y or N 40 m from cankered tree?	Circ. (cm) = Pi x dbh	total bole canker width (sooty x 2.5 + open x 5)	total RF canker width (sooty x 2.5 + open x 5)	bole canker % of circ.	RF canker % of circ.	total bole & root canker % of 2xCirc	LC% >= 50 & BC% = 0	LC% & BRC% >70 <20	LC% & BC% >70 <20	Preliminary tree call	FINAL TREE CALL a Cat 2, dbh>20cm <40m from a Cat 1
			sooty (S) (will be assigned 2.5 cm per canker)		open (O) (will be assigned 5 cm per canker)		RF S	RF O												
			S <2 m	S >2 m	O <2 m	O >2 m														
									0	0.0	0.0	#####	#####	#####	####	###	###	##	#DIV/0!	
681	100	9	8	3	3	0	0	0	n	28.26	42.5	0.0	150.4	0.0	75.2	1	1	1	1	1

Raglan Street, Collingwood ON

Butternut Health Assessment

Legend

● Butternut 681



Google Earth

© 2021 Google



200 m

Lisa Moran

From: Species at Risk (MECP) [SAROntario@ontario.ca]
Sent: August 13, 2021 3:31 PM
To: Lisa Moran
Subject: RE: BHA Report 450-016 - Town of Collingwood

Dear Lisa,

Thank you for submitting your BHA to the Ministry. Please use this email as receipt of your submission, dated August 12, 2021.

If you are proposing to rely on section 23.7 of the Regulation 242/08 for the Category 1 trees identified, please note that you are eligible to do so 30 days after August 12, 2021.

Thanks,
Ratna Timsina

From: Lisa Moran <Lisa@Azimuthenvironmental.Com>
Sent: August 12, 2021 5:56 PM
To: Species at Risk (MECP) <SAROntario@ontario.ca>
Subject: BHA Report 450-016 - Town of Collingwood

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Good afternoon,

Please find attached a BHA report for a single Butternut in the Town of Collingwood.

Regards,

Lisa Moran
Terrestrial Ecologist

Azimuth Environmental Consulting, Inc
642 Welham Road
Barrie, ON, L4N 9A1
ph: (705) 721-8451 ext 202
cell: (705) 331-1479
lisa@azimuthenvironmental.com
www.azimuthenvironmental.com

Providing services in hydrogeology, terrestrial and aquatic ecology & environmental engineering

At this time, I am working remotely. The Azimuth office is currently closed to the public but I can be reached on my cell or email.

Lisa Moran

From: Species at Risk (MECP) [SAROntario@ontario.ca]
Sent: January-19-21 2:21 PM
To: Lisa Moran
Subject: RE: Butternut Inquiry (Town of Collingwood)

Hi Lisa,

Thanks for providing the BHA and additional map.

A couple of additional questions:

1. What is proposed for the 10m dripline setback area? Will this area be left natural or even planted?
2. What will be the final land use after development within the 25m buffer areas? For example, are these planned for rear yards or paved areas? Will any permanent structures be placed within the 25m buffer area?
3. Is it possible to mitigate impacts during construction within the 25m buffer area to avoid disturbance to roots, soil compaction, etc.?

Cheers,

Kathleen Buck
Permissions & Compliance, Species at Risk Branch
Ministry of the Environment, Conservation & Parks

Learn more about Ontario's Species at Risk: <https://www.ontario.ca/page/species-risk>

From: Lisa Moran <Lisa@Azimuthenvironmental.Com>
Sent: January 18, 2021 1:42 PM
To: Species at Risk (MECP) <SAROntario@ontario.ca>
Subject: RE: Butternut Inquiry (Town of Collingwood)

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Hi Kathleen,

Thank-you for the information. I have attached the BHA that was submitted to MNRF.

Within this email is a figure where you can see the location of the 6 Butternut discussed in my original email. The black line in the figure represents the 10m setback from the dripline of the woodland.

A 25m buffer will remain to the E, S and W of the three Butternuts. There is development potential within about 16m to the north of the three individuals (category 2 and 2 category 3).

Regards,

Lisa



From: Species at Risk (MECP) [<mailto:SAROntario@ontario.ca>]

Sent: January-18-21 1:10 PM

To: Lisa Moran

Subject: RE: Butternut Inquiry (Town of Collingwood)

Hi Lisa,

Though you are correct in your assessment that the active agriculture field would not likely provide habitat for regeneration, the potential development may harm the roots of the butternut trees (depending on what is proposed). Would you be able to provide the BHA that was completed (including DBHs of each tree) and an aerial map showing the location of each tree and the 25m buffer zone?

As a general rule, the 25m buffer zone around a Butternut is protected. The Ministry considers this to be the Critical Root Zone, where critical roots that support the growth and life functions of the tree are located. This area is considered to have the lowest threshold for alterations.

The Ministry also protects the 25m-50m buffer around the tree, as this is the area that Butternut individuals depend upon for nut dispersal and seedling establishment, two critical components of successful reproduction. However, this buffer is considered to have a moderate threshold to alterations.

Thank you,

Kathleen Buck
Permissions & Compliance, Species at Risk Branch
Ministry of the Environment, Conservation & Parks

Learn more about Ontario's Species at Risk: <https://www.ontario.ca/page/species-risk>

From: Lisa Moran <Lisa@Azimuthenvironmental.Com>

Sent: January 7, 2021 2:39 PM

To: Species at Risk (MECP) <SAROntario@ontario.ca>

Cc: Scheifley, Jody (MNR) <Jody.Scheifley@ontario.ca>

Subject: Butternut Inquiry (Town of Collingwood)

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Good afternoon,

I wanted to touch base with MECP for some direction related to Butternut.

We are currently working on a property within the Town of Collingwood. Several Butternuts have been identified within a woodlot. A BHA has been conducted for each of the trees which has been submitted and accepted by the province.

In this particular situation, we have five Category 3 trees and one Category 2 tree that are located within the woodlot. Adjacent to the woodlot is active agriculture (i.e. corn). At this point, the proponent is contemplating potential development within 10m of the woodlot (*i.e.* a 10m buffer will be provided adjacent to the woodland). I would like to provide them with direction as it pertains to the Butternut.

Based on this information, there will be a buffer of approximately 15m-16m to two of the Category 3 trees. There will be a setback of at least 25m (or greater) to the other three Category 3 trees. Based on my knowledge of the *ESA*, the Category 3 trees will be adequately protected (no direct harm to the tree) and no habitat will be lost (lands beyond woodland within 25m of the Category 3 trees are active agriculture and do not represent potential regeneration habitat). Therefore, the proposed development within 10m of the woodland (or 15-16m of the Category 3) would not contravene the *ESA*.

My interpretation related to the Category 2 tree would align with the as well – development within approximately 15m from the Category 2 tree will ensure protection of the tree. No registration would be required.

If you could please confirm the above interpretation, it would be appreciated. Do not hesitate to call to discuss.

Regards,

Lisa Moran

Terrestrial Ecologist

Azimuth Environmental Consulting, Inc
642 Welham Road
Barrie, ON, L4N 9A1
ph: (705) 721-8451 ext 202
cell: (705) 331-1479
lisa@azimuthenvironmental.com
www.azimuthenvironmental.com

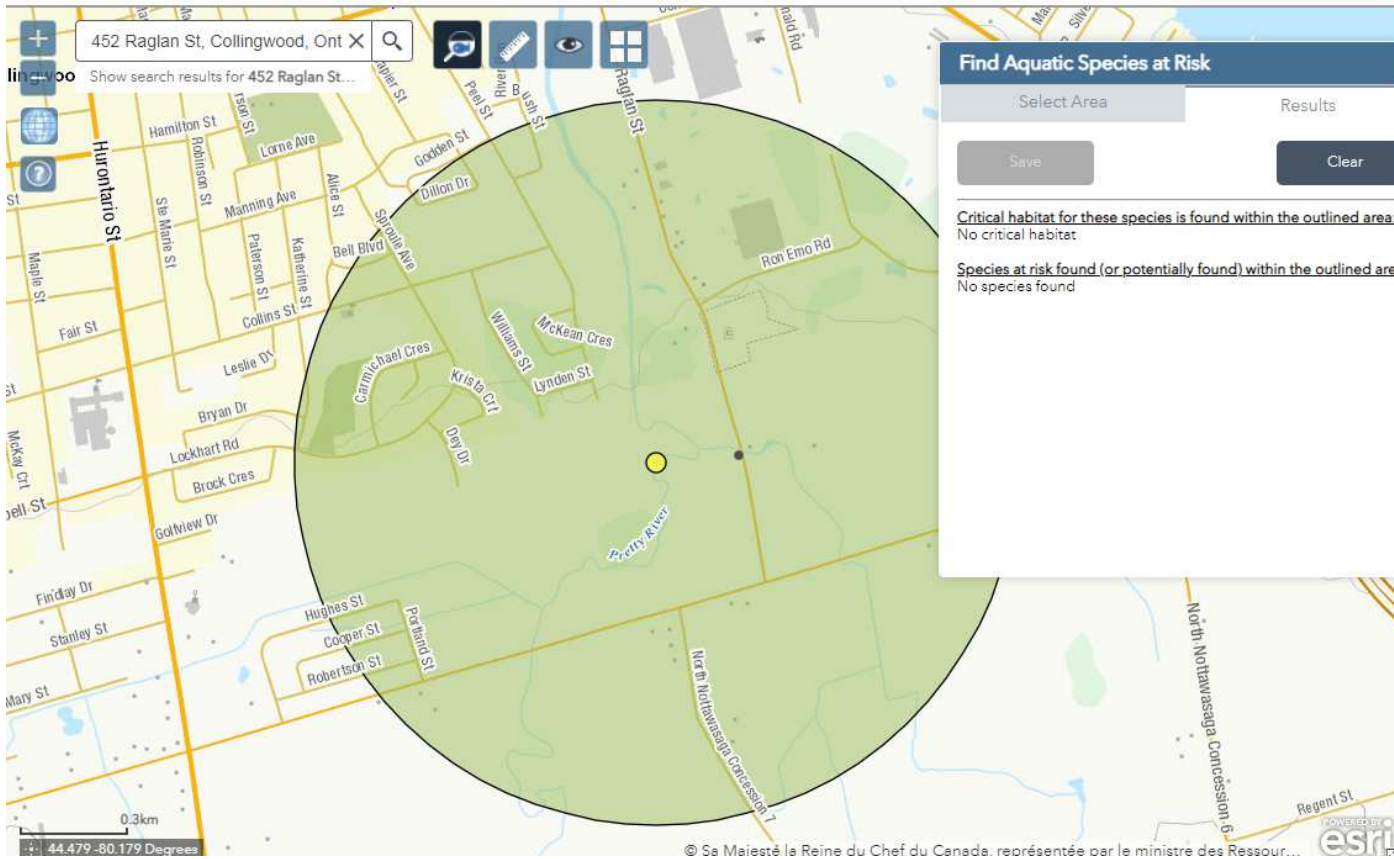
*Providing services in **hydrogeology, terrestrial and aquatic ecology & environmental engineering***

At this time, I am working remotely. The Azimuth office is currently closed to the public but I can be reached on my cell or email.



APPENDIX D

Fisheries Information

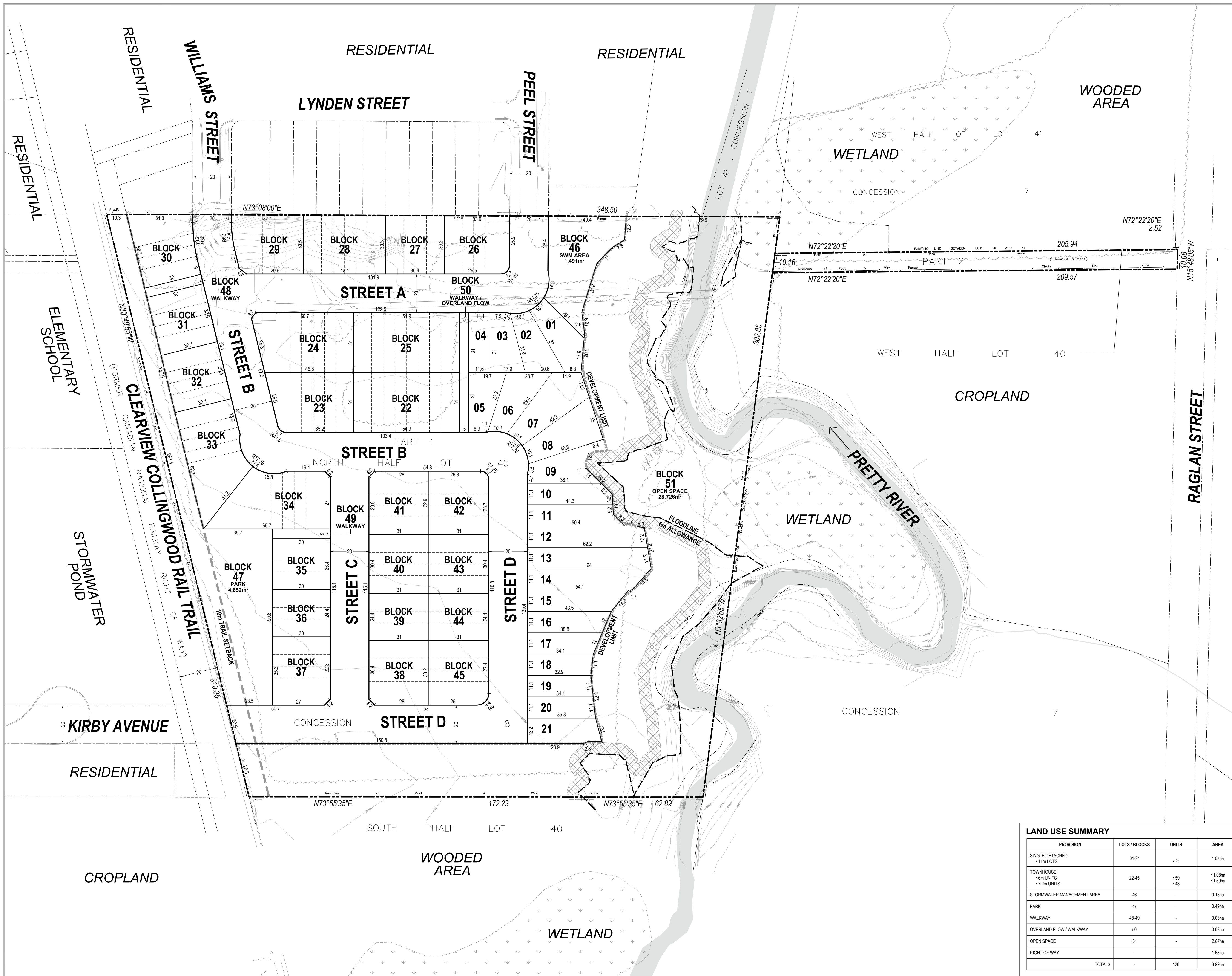


Information obtained from Fisheries and Oceans Canada mapping (Produced December 2021)



APPENDIX E

Draft Plan of Subdivision



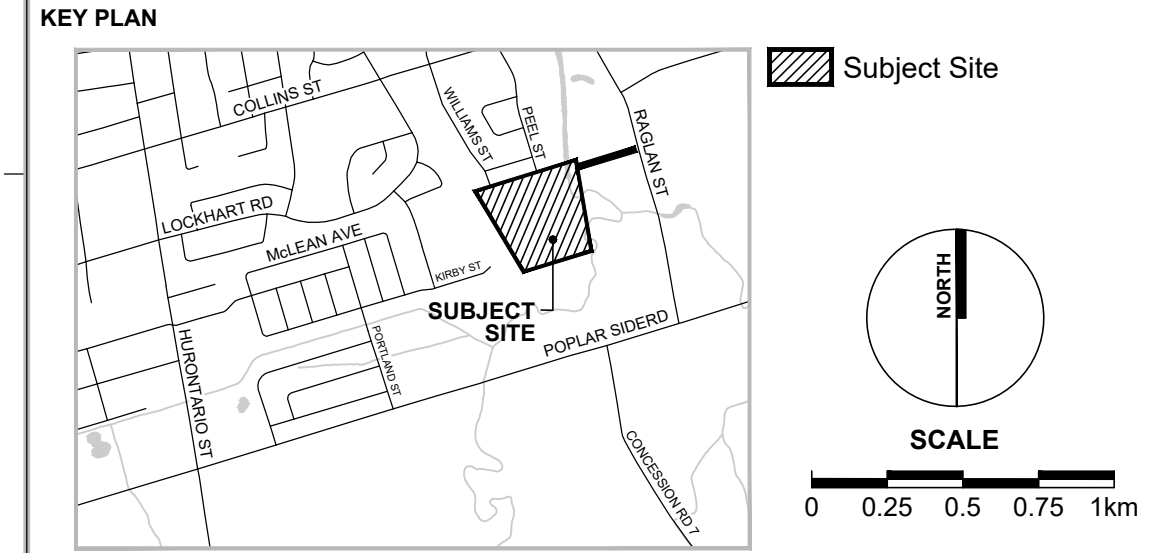
LEGAL DESCRIPTION
 PART OF LOT 40,
 IN CONCESSION SEVEN AND EIGHT
 TOWNSHIP OF NOTTAWASAGA
 COUNTY OF SIMCOE

OWNER'S CERTIFICATE
 I HEREBY AUTHORIZE MACNAUGHTON HERMSEN BRITTON CLARKSON PLANNING LIMITED
 TO SUBMIT THIS PLAN FOR APPROVAL.

DATE: _____ XXXXXXXXXXXX - PRESIDENT
 XXXXXXXXXXXX

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

DATE: _____ XXXXXXXXXXXX - O.L.S.
 XXXXXXXXXXXX



LEGEND

- PROJECT BOUNDARY LINE
- RIGHT OF WAY LINE
- BLOCK LINE
- LOT LINE
- UNIT LINE
- LOT FRONTAGE
- PARCEL FABRIC

REVISION No.	DATE	ISSUED / REVISION	BY
ADDITIONAL INFORMATION REQUIRED UNDER SECTION 51(17) OF THE PLANNING ACT R.S.O. 1990 C.P.13 AS AMENDED			
A. AS SHOWN	E. AS SHOWN	J. AS SHOWN	
B. AS SHOWN	F. AS SHOWN	K. FULL MUNICIPAL SERVICES	
C. AS SHOWN	G. AS SHOWN	L. AS SHOWN	
D. 21 SINGLE DETACHED & 107 TOWNHOUSE UNITS	H. MUNICIPAL WATER SUPPLY I. SOIL		

PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
MHBC PLANNING

113 COLLIER STREET
 BARRIE, ONT. L4M 1H2
 P: 705 728 0045 F: 705 728 2010
 WWW.MHBCPLAN.COM

STAMP	DATE	NOV. 16, 2021
FILE No.	Y537R	
SCALE	1:900 (ARCH D)	
DRAWN BY	M.M.	
CHECKED BY	K.C.	
OTHER		

PROJECT
452 RAGLAN STREET
 EDEN OAK INC.
 1443 HURONTARIO STREET
 MISSISSAUGA, ONTARIO
 L5G 3H5

FILE NAME
DRAFT PLAN OF SUBDIVISION

DWG No.
1 of 1

LAND USE SUMMARY

PROVISION	LOTS / BLOCKS	UNITS	AREA
SINGLE DETACHED • 11m LOTS	01-21	+21	1.07ha
TOWNHOUSE • 6m UNITS • 7.2m UNITS	22-45	+59	+1.08ha +1.59ha
STORMWATER MANAGEMENT AREA	46	-	0.15ha
PARK	47	-	0.49ha
WALKWAY	48-49	-	0.03ha
OVERLAND FLOW / WALKWAY	50	-	0.03ha
OPEN SPACE	51	-	2.87ha
RIGHT OF WAY	-	-	1.68ha
TOTALS	-	128	8.99ha

