SCOPED ENVIRONMENTAL IMPACT STUDY

PROJECT NAME/ADDRESS

TOWN/CITY

PREPARED FOR:

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CROZIER
CONSULTING ENGINEERS

Revision Number	Date	Comments
Rev. 0	July 2020	Submission to Municipality/Review Agencies

1.0 Executive Summary

CF Crozier & Associates Inc. (Crozier) was retained by **Mr. Don McCullough** (the "Proponent") to undertake a Scoped Environmental Impact Study (EIS) to support the planning applications for the development of the site located at **Part Lot 23, Concession BF** in the **Municipality of Meaford.**

This Scoped EIS is being prepared to support the proposed severances of the subject lands at **Part Lot 23, Concession BF** in the **Municipality of Meaford** for the creation of 5 residential lots. The purpose of the study is to assess the impacts of the proposed development on the natural heritage features and functions and to recommend any required mitigation measures, if warranted.

The analysis contained within this report was prepared using the most recent survey and 2019 field survey results. Any minor revisions to the development concept are not expected to affect the conclusions contained with this report.

Our review in summary has concluded that the development proposal is feasible from an environmental prospective in so long as the mitigation measures outlined herein are implemented.

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2.0 Introduction

CF Crozier & Associates Inc. (Crozier) was retained by **Mr. Don McCullough** (the "Proponent") to undertake a Scoped Environmental Impact Statement (EIS) to support the proposed severance of the subject lands located at **Part Lot 23, Concession BF in the Municipality of Meaford** (See Figure 1). The EIS is in response to comments from the Grey Sauble Conservation Authority (GSCA) dated July 12, 2018, which notes the GSCA would support the development of three residential lots on the subject lands however if an encroachment on the 30m setback from the on-site watercourses (drainage features) is proposed for the creation of additional lots, an EIS would be required. The proposed development concept includes the creation of 5 residential lots, therefore requiring an EIS.

2.1 Study Goals and Objectives

The purpose of this Scoped EIS is to provide a detailed description and background review of the physical and ecological characteristics of the natural heritage features from the subject lands including the functions, significance and sensitivity. Additionally, this report will address potential impacts to these features and outline how impacts can be minimized or mitigated. In consideration of this information, recommended protection and/or mitigation measures will ensure that the proposed development conforms to the requisite policies as outlined herein.

The policies and technical requirements of the Official Plans for the Municipality of Meaford and the County of Grey as well as the Provincial Policy Statement (PPS) have been considered as part of this study.

The goal of this Scoped EIS is to provide the following:

a) Ensure that the proposed development can proceed in a manner that will not result in negative impacts to significant ecological features and functions.
b) Demonstrate conformity to the Provincial Policy Statement, the County of Grey Official Plan, the Municipality of Meaford Official Plan and the Conservation Authorities Act.

The specific objectives that will be completed as part of this Scoped EIS include the following:

a) Provide an evaluation of the drainage features on the subject lands through detailed background review and field investigations;
b) Complete significant species data search (Natural Heritage Information Centre, Federal and Provincial Species at Risk, etc.);
c) Complete an early in-season breeding amphibian survey;
d) Complete an aquatic assessment of the on-site drainage features;
e) Determine the need for buffers for the on-site drainage features and provide recommendations for the mitigation and protection if required;
f) Complete a detailed assessment of potential impacts from development to the on-site drainage features; and
g) Assess long term and cumulative effects of the proposed development along with adjacent land use.

3.0 Natural Heritage Policy

Provincial and municipal planning policies guided the preparation of natural heritage constraints and opportunities for the proposed development on the subject lands. Existing background policy information sources were reviewed to identify any mapped natural heritage features that may occur on or adjacent to the subject lands. In addition, a review of background data from various

sources pertaining to the subject lands and adjacent lands was also completed. These policies and background information sources include:

a) Ontario Provincial Policy Statement (2020);
b) County of Grey Official Plan (2019);
c) Municipality of Meaford Official Plan (2014);
d) Grey Sauble Conservation Authority - Ontario Regulation 151/06 (2006, Updated 2013));
e) Ministry of Natural Resources Natural Heritage Reference Manual (2010) and the Significant Wildlife Habitat Technical Guide (2000);
f) Ontario Natural Heritage Information Centre database (2019) (www.nhic.mnr.gov.on.ca);
g) The Ontario Breeding Bird Atlas (www.birdsontario.org);
h) Ontario *Endangered Species Act* (2007, Amended 2019);
i) *Fisheries Act* (1985, Amended April 5, 2016); and
j) Aerial photographs.

3.1 Provincial Policy Statement (PPS)

The Provincial Policy Statement addresses the protection of Natural Heritage Features in relation to development.

According to the Provincial Policy Statement (2020), various provincially defined natural features shall be protected for the long term. Relevant sections state:

"*2.1.2* The diversity and connectivity of natural features in an area, and the long-term ecological function and biodiversity of *natural heritage systems*, should be maintained, restored or, where possible, improved, recognizing linkages between and among *natural heritage features* and *areas, surface water features* and *ground water features.*

2.1.4 *Development* and *site alteration* shall not be permitted in :
a) significant wetlands in Ecoregions 5E, 6E and 7E, and
b) significant coastal wetlands

2.1.5 *Development* and *site alteration* shall not be permitted in:
a) *significant wetlands* in the Canadian Shield north of Ecoregions 5E, 6E and 7E;
b) *significant woodlands* in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Mary's River);
c) *significant valleylands* in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Mary's River);
d) *significant wildlife habitat*; and
e) *significant areas of natural and scientific interest;* and
f) coastal wetlands in Ecoregions 5E, 6E and 7E that are not subject to policy 2.1.4(b)

unless it has been demonstrated that there will be no *negative impacts* on the natural features or the *ecological functions*.

2.1.6 *Development* and *site alteration* shall not be permitted in *fish habitat* except in accordance with *provincial and federal requirements.*

2.1.7 *Development* and *site alteration* shall not be permitted in *habitat of endangered species* and *threatened species*, except in accordance with *provincial* and *federal requirements*.

2.1.8 Development and site alteration shall not be permitted *on adjacent lands* to the *natural heritage features and areas* identified in policies 2.1.4, 2.1.5 and 2.1.6 unless the *ecological function* of the *adjacent lands* has been evaluated and it has been demonstrated that there will be no *negative impacts* on the natural features or on their *ecological functions*."

3.1.1. Relevance to the Development Proposal

This development proposal shall be consistent with policy statements made under the Act.

3.2 County of Grey Official Plan

Section 7 – Natural Grey, of the County of Grey Official Plan describes the policies to address natural heritage land use types and constraints which include Hazard Lands, Provincially Significant Wetlands and Significant Coastal Wetlands. These land use types are identified on Schedule A and include specific policies and permitted uses that can be considered either within these areas or adjacent to these areas. Constraints, which include other natural features and areas, are identified on Appendix A and Appendix B. For constraints, development can be permitted within these areas or adjacent to these areas, subject to addressing the specific policies identified Section 7, or any provincial and federal requirements. Natural Grey land use types and constraints are as follows:

Land Use Types

- Hazard Lands
- Provincially Significant Wetlands and Significant Coastal Wetlands

Constraints

- Significant Areas of Natural and Scientific Interest
- Other Wetlands
- Significant Woodlands
- Karst Areas
- Core Areas
- Linkages
- Hazardous Forest Types for Wildland Fire
- Significant Valleylands
- Fish Habitat

3.2.1. Relevance to the Development Proposal

Portions of the subject lands associated with the ridge along the western property boundary and the on-site drainage features are designated as Hazard as noted on Schedule A of the Official Plan A (see Appendix A of this report). No constraints are noted on either Appendix A or Appendix B of the Official Plan.

3.3 Municipality of Meaford Official Plan

The Municipality of Meaford's Official Plan designates those areas which require protection as Environmental Protection. This designation is intended to include the following components of the Municipalities Natural Heritage System:

- All wetlands
- Provincially significant Areas of Natural and Scientific Interest
- Floodplains
- Hazardous slopes
- Lands identified as Escarpment Natural Area within the Niagara Escarpment Plan
- Any other areas that have been determined to be environmentally significant as a result of a development review process or detailed land use study, such as a Secondary Plan

3.3.1. Relevance to the Development Proposal

Portions of the subject lands associated with the ridge along the western property boundary and the on-site drainage features are designated as Hazard as noted in the Official Plan, on Schedule A, as Environmental Protection (See Appendix B of this report).

3.4 Grey Sauble Conservation Authority

Ontario Regulation 151/06 is the Generic Regulation of the Conservation Authorities Act, which came into effect in May 2006, specific to the regulation of development, interference with wetlands, and alterations to shorelines and watercourses. Under this regulation, hazardous lands, wetlands, shorelines and areas susceptible to flooding, and associated allowances within the Authority are delineated by the "Regulation Limit" shown on maps that are filed by the Authority. Crozier Consulting Engineers acquired GSCA mapping of the Hazard Regulation Limit(s) for the subject lands. The Generic Regulation layer indicates that the areas adjacent to the existing watercourses located within the subject lands are a potential flood and meander hazard.

Regulation 151/06, ***'Development, Interference with Wetlands and Alteration to Shorelines and Watercourses Regulation'***, requires that a permit be obtained from the Authority when undertaking any of the following:

- Straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream or watercourse or interfering in any way with a wetland;
- Development adjacent or close to the shoreline of inland lakes, in river or stream valleys, hazardous lands, wetlands or lands adjacent to wetlands.

Development as defined by the Conservation Act includes:

- The construction, reconstruction, erection or placing of a building or structure of any kind, or changes to an existing building or structure to alter its size or purpose;
- Site grading;
- The temporary or permanent placing, dumping or removal of any material, originating on the site or elsewhere.

The intent of the permit process is to ensure that activities in these areas will not result in a risk to public safety or property damage and that the natural features are protected through the conservation of land.

Under Ontario Regulation 151/06 Section 2, development is prohibited in or on the areas within the GSCA jurisdiction that are prone to flooding or meander hazards. The flood hazard line of the Regulation Limit is typically associated with the stable top of bank or regulatory floodplain plus a setback to facilitate access to the top of bank. Similarly, the meander belt line is depicted as the maximum extent of the predicted meander belt of the watercourse plus an allowance of 15m on each side. The Regulation Limit follows the maximum extent of the combined floodplain and meander belt limits. Under this regulation, written permission to develop within prohibited areas or alter a watercourse is required. Acquisition of this permission requires the completion of an Application for Permission to be filed with the Authority. It should therefore be assumed that an authorization would be required for any fill or alterations within the Regulation Limit area. If the extent of the fill or alterations identified in the Development Plan were deemed significant, an Environmental Impact Study may be triggered.

3.4.1. Relevance to the Development Proposal

Portions of the subject lands associated with the ridge along the western property boundary and the on-site drainage features are located within the GSCA Regulation Limit Area (see Figure 2).

3.5 Endangered Species Act

The Provincial *Endangered Species Act* (2007) protects the endangered species that are listed on the regulations under the act. It specifically prohibits wilful harm to endangered species that are listed in regulations under the Act and the wilful destruction of, or interference with, their habitats.

The Committee on the Status of Species at Risk in Ontario (COSSARO) assesses any Ontario species that might be experiencing declines based on research conducted by government staff or reports form other sources. Species are classified into categories based on the degree of risk that they face which include Extirpated, Endangered, Threatened or Special Concern. Only those species that are categorized as either Extirpated, Endangered or Threatened are afforded protection under the Endangered Species Act. A searchable online database of the species assessment reports is available at www.cossaroagency.ca/species .

3.5.1. Relevance to the Development Proposal

No endangered species were observed on the subject lands during field studies.

4.0 Study Area

4.1 Existing Conditions

The subject lands are located in a rural residential and agricultural use area along the Nipissing Ridge. A majority of the eastern portion of the subject lands has been used for agricultural purposes while the remaining portion of lands along the western property boundary includes the slope of the Nipissing Ridge. The subject lands contain three ephemeral drainage features which carry spring runoff from the east across the subject lands.

4.2 Field Reconnaissance and Inventories

4.2.1. Breeding Amphibians

An evening frog/toad calling survey was conducted on April 25, 2019 at six monitoring locations on the subject lands, in accordance with the Bird Studies Canada Marsh Monitoring Program protocol. Survey locations are shown on Figure 3. The evening temperature of 14°C was sufficiently high in order to conduct the survey, and background noise levels were low and suitable for the survey.

The survey detected a single Spring Peeper between Amphibian Sampling Points 2 and 5, in an area with <0.03m of standing water. All other calls (Spring Peeper and Chorus Frog) came from off property, likely from ponds to the east and south. Based on these results, it is determined that the property does not provide breeding habitat for frogs or toads.

4.2.2. Aquatic Assessment

Field surveys confirmed that three drainage features as mapped by the GSCA, are present on the subject lands. All three features convey water from east to west, flowing from the subject lands and across what is known as the Nipissing Ridge before crossing under Bayshore Road (See Figure 4). All three systems ultimately discharge to Georgian Bay approximately 350m downstream.

Drainage Feature 1

Drainage Feature 1 (DF1) enters the subject lands from adjacent lands to the east, and drains overland with no defined channel through a fallow farm field (See Figure 4). No coarse substrate was present and the flow pathway was densely vegetated with dead grasses and other herbaceous species. Flow was present in the spring, with an average water depth of 0.09m and wetted widths of 0.8-2.0m.

DF1 enters a narrow treed corridor and the feature has a defined channel bed with weakly defined banks. This segment has abundant coarse substrate (sand, gravel and small/medium cobble). Spring water levels averaged 0.5m in width, with water depths of 0.1m.

The channel becomes steep across the Nipissing Ridge, with substrates comprised of large cobble and boulders. Banks become erosive, typical of a high gradient watercourse/gully resulting in an increase in channel width to 3m in some locations. The channel was dry at the time of the July site visit.

At Bayshore Road, flows split both north and south in the roadside ditch, with conveyance across the road via a corrugated steel pipe (CSP) culvert to the north. Water depths in the ditch ranged between 0.02-0.05m but was dry during the summer visit.

No fish were observed in DF1. Based on the steep slope of the Nipissing Ridge (estimated to be 29°C through desktop review), and the described conditions, fish passage into DF1 on the subject lands is not possible. Based on the flow contributions of DF1 to direct fish habitat in Georgian Bay, DF1 is classified as seasonal, indirect fish habitat.

Drainage Feature 2

Drainage Feature 2 (DF2) is the central drainage feature of the three identified on the subject lands (See Figure 4). The channel form of DF2 is weakly defined (both bed and banks) for most of its length, and had minimal water in the spring. DF2 was completely dry by the summer site visit.

DF2 appears to be a manmade/historically altered swale with no water or flow present during either the spring or summer field visit. This segment contains no coarse substrate and was dominated by herbaceous vegetation.

Downstream of DF2, the channel becomes more defined and drops steeply down the Nipissing Ridge towards Bayshore Road. Similar to DF1, substrate in the channel/ gully consists of large boulders and coarse substrates.

No fish were observed in DF2. Based on site conditions, fish passage onto the property within DF2 is not possible. Given seasonal flow conditions, DF2 is classified as seasonal, indirect fish habitat.

Drainage Feature 3

Drainage Feature 3 (DF3) is located at the southern extent of the property and only partially contained within the property, as shown on Figure 4. In the spring drainage through DF3-2 was minimal (0.04m water depth on average) through dead herbaceous vegetation with no defined flow pathway.

Downstream of the DF3-1/DF3-2 confluence, flows are conveyed within a small defined channel with weakly defined banks. This channel is approximately 0.25m wide, with a shallow water depth of 0.05m in the spring. The channel is vegetated with no coarse substrate. Watercress (Nasturtium sp.) was observed in one location within this channel, indicating that potential groundwater inputs may occur.

Similar to DF1 and DF2, DF3 discharges down the slope of the Nipissing Ridge. As with DF1 and DF2, flows continue towards Bayshore Road within a steep, entrenched channel/gully with large stone and minimal water depths. This segment dried up by July 10, 2019.

As with the other features on the subject lands, fish cannot access DF3 because of the steep slope. Due to its flow contribution function to Georgian Bay, this feature is classified as seasonal, indirect

habitat.

5.0 Significant Natural Heritage Features

5.1 Significant Valleylands

There are no significant valleylands on the subject lands.

5.2 Significant Woodlands

There are no significant woodlands on the subject lands.

5.3 Significant Wetlands

There are no significant wetlands on the subject lands.

5.4 Significant Wildlife Habitat Assessment

Significant Wildlife Habitat (SWH) is identified by four principal components in the Ontario Ministry of Natural Resources (OMNR) Significant Wildlife Habitat Technical Guide (OMNR 2000) including:

1. Seasonal Concentrations of Animals;
2. Animal Movement Corridors;
3. Rare Vegetation Communities or Specialized Habitats; and
4. Habitats of Species of Conservation Concern.

Significant Wildlife Habitat can be difficult to appropriately determine at the site-specific level, as in many cases the assessment must incorporate information from a wide geographic area and consider other factors such as regional resource patterns and landscape effects. Under the PPS, the planning authorities have the responsibility to identify SWH. The following sections provide an assessment of existing wildlife features found on the subject lands against the four component parts of SWH (OMNR, 1999).

5.4.1. Seasonal Concentrations of Animals

Some species of animals gather together from geographically wide areas at certain times of year. This could be to hibernate or to bask (e.g., some reptiles), over-winter (e.g., deer yards) or to breed (e.g., Bullfrog breeding and nursery areas). Maintenance of the habitat features that result in these concentrations can be critical in sustaining local or even regional populations of wildlife.

No seasonal concentrations of animals as defined in the SWH Technical Guide (OMNR, 2000) were identified on the subject lands during the field investigations.

5.4.2. Animal Movement Corridors

Landscape connectivity (often referred to as "wildlife corridors") has become recognized as an important part of natural heritage planning and a wide range of benefits have been attributed to the maintenance or re-connection of the undisturbed landscape. In essence, corridors are relatively protected passageways for animals to move between areas of high habitat importance. Conservation of distinct habitat types to protect species is not effective unless the corridors between them are also protected.

The majority of the subject and adjacent lands have been previously disturbed for agricultural and residential purposes and as such there are limited opportunities for animal movement corridors. The

majority of the wooded areas on the subject lands are within lands designated as Hazard and as no development can occur in lands designated as Hazard, any use of these areas for animal movement corridors can be maintained.

5.4.3. Rare Vegetation Communities or Specialized Habitats

Rare vegetation communities apply to the maintenance of biodiversity and of rare plant communities (rather than individual rare species). Specialized habitat conditions can include species of breeding birds that are associated with large blocks of wetland (generally >25 ha) that also include interior habitat (i.e., that which is more than 100 m from an edge).

No rare vegetation communities were identified within the subject lands.

Specialized habitats for wildlife can include habitat for species of breeding birds that are associated with large blocks of habitat (i.e., area-sensitive birds), old-growth forests, calving areas for moose, cliffs and a variety of other specialized habitats. The continuous forest cover found on and adjacent to the subject lands provides habitat for three area-sensitive birds. The area-sensitive habitat function of this wooded area would not be considered significant at the provincial, regional, or local levels.

No specialized habitats were identified on the subject lands.

5.4.4. Species of Conservation Concern

This category is quite complex and includes species that may be locally rare or in decline, but that have not reached the level of rarity that is normally associated with Endangered or Threatened designations. The Significant Wildlife Habitat Technical Guide (MNR, 2000) suggests that the highest priority for protection be provided to habitats of the most rare species (on a scale of global through to local municipality) and that habitats that support large populations of a species of concern should be considered significant. The determination of Significant Wildlife Habitat (SWH) under the Species of Concern category (and under other categories) is a comparative process that must extend across the jurisdiction of the planning authority to be considered definitive.

5.5 Resource Significance

The Natural Heritage Information Centre (NHIC) compiles, maintains and distributes information on natural species, plant communities and spaces of conservation concern in Ontario. The NHIC provides a searchable database for occurrences of rare species, rare vegetation communities, Living Legacy Sites, Life or Earth Science Areas of Natural and Scientific Interest (ANSIs) and specialized habitats.

A search of the NHIC database in December 2019 found that only a very small corner of the southeast portion of the subject lands was is within the NHIC database grid (17NK1244). The search revealed the presence of three (3) element occurrences for species recorded within the 1km squares that cover the subject lands. Species with an NHIC S-Rank of S1, S2 or S3 are considered rare in Ontario (NHIC 2010). Species listed under the Provincial *Endangered Species Act* are designated and regulated as either extirpated (EXT), endangered (END), threatened (THR) or of Special Concern (SC).

An element occurrence (EO ID 102188) for Bobolink (*Dolichonyx oryzivorus)* with an S-Rank of S4B, was recorded in 2010. This bird species is listed as Threatened however it was not found during the site visits.

Two element occurrences (EO IDs 105824 and 105825) were also recorded in 2010 for Eastern Meadowlark (*Sturnella magna*). This bird species has an S-Rank of S4B and is also listed as

Threatened. There were no sitings of this bird species during the 2019 field visits.

5.6 *Endangered Species Act* (Species at Risk in Ontario – SARO)

For the purposes of this report, Species at Risk (SAR) are considered to be those species formally designated provincially by COSSARO. SAR listings at the provincial levels for the area that includes the subject lands were reviewed. Along with the NHIC, a search the Ontario Breeding Bird Atlas (Bird Studies Canada *et al.* 2006) records for Region 9 – Grey; Breeding Bird Squares 17NK14 was also reviewed to provide a perspective of potential birds breeding in the area of the subject lands. Within the 10km by 10km square that includes the subject lands, Bobolink (*Dolichonyx oryzivorus)* was confirmed as a breeder and Eastern Meadowlark (*Sturnella magna*) was recorded as a probable breeder. There were no sitings of either bird species during the 2019 field visits.

5.7 *Fisheries Act*

Under the *Fisheries Act* (1986), no one may carry out any work, development or other undertaking that results in a HADD (harmful alteration, disruption or destruction of fish habitat) unless authorized by the Department of Fisheries and Oceans Canada (DFO). While no authorization from DFO will be required for this submission, it is recommended that any crossings of the drainage features present on the subject lands proposed as part of a development concept should be screened under Fisheries and Oceans Canada (DFO) "Projects Near Water" guidelines by a qualified fisheries ecologist. DFO review is required for new crossings in fish habitat, however as the drainage features on the subject lands constitute indirect fish habitat, if it is determined by the fisheries ecologist that the proposed designs are of low risk, with no downstream impacts to fish-bearing waters and no loss of fish habitat/ unacceptable residual effects, project works may be able to be "self-assessed" without project review.

6.0 Proposed Development Concept

The proposed development concept includes severances of the subject lands for the creation of 5 residential lots on a private condominium road. The proposed development envelope within each lot respects all zoning requirements from the Municipality of Meaford and does not encroach into the hazard areas (See Figure 5). Stormwater management will be included in the Functional Servicing and Stormwater Management Report to be completed by Crozier Consulting Engineers.

7.0 Impacts Assessment

Potential impacts to the existing natural heritage systems located on the subject and adjacent lands resulting from the proposed development plan were compiled through research of literature and relevant authorities. The current plan for the proposed development is based on efforts to avoid impacts to the natural heritage features and functions of the subject and adjacent lands, achieve an economically feasible development, and accommodate engineering requirements.

A summary of anticipated impacts from development and proposed mitigation is outlined in Table 1.

Table 1: Summary of Potential Impacts to Natural Heritage Features

Category	Function of Feature	Potential Impact	Anticipated Impacts/Proposed Mitigation
Hydrology	Water Conveyance	The undertaking poses no impact on the function of the intermittent/ephemeral swales within the subject lands.	To be addressed in the Functional Servicing and Stormwater Management Report to be completed by Crozier Consulting Engineers.
Hydrogeology	Groundwater	Groundwater resource quality may be impacted by the introduction /infiltration of contaminated stormwater.	To be addressed in the Functional Servicing and Stormwater Management Report to be completed by Crozier Consulting Engineers.
Vegetation	Upland Communities	The majority of the wooded portion of the subject lands are within the designated Hazard areas. The proposed development envelopes are mostly devoid of vegetation and they do not encroach into the Hazard areas. Some upland species may need to be removed for future lot grading and house construction.	The removal of any vegetation on the subject lands will be minimal and can be mitigated by proposed landscape plantings utilizing native species to the extent possible.
Wildlife	Fisheries	The proposed development will not remove any indirect fish habitat found within the subject lands.	The intermittent/ephemeral swales located within the subject lands are located in areas designated by the GSCA as Hazard. Development is not permitted within Hazard areas and as such no negative impacts will occur the indirect fish habitat created by these swales. Lot grading will be addressed in the Functional Servicing and Stormwater Management Report to be completed by Crozier Consulting Engineers .
	Bird Habitat	The proposed development will not remove bird habitat found within the subject lands .	The removal of any tree cover and site alterations required for construction and grading should occur outside prime bird breeding season (preferably occurring from October to mid-March, and not during April 15 to July 30).
	Mammals	The proposed development will not remove mammal habitat found within the subject lands.	The proposed development envelopes on the subject lands will not have an impact on any habitat and will have minimal impact to mammal species that potentially access the subject lands. No mitigation is proposed.
Significant Natural Habitat	Landscape Connectivity	As the majority of the proposed development envelope areas have been previously cleared for past agricultural uses there is limited corridor function provided by the subject lands. The proposed development will not infringe upon any wildlife corridors that may exist.	The proposed development plan will not provide the opportunity to establish any potential corridor function of natural heritage features within or adjacent to the subject lands.

8.0 General Impacts Mitigation

The general mitigation measures and recommendations described herein are provided to further ensure that development of the subject lands proceeds in an environmentally and socially responsible manner with the aim of reducing impacts on the functions and integrity of the study area's natural heritage features, during the construction process.

1. A temporary construction work zone shall be delineated by construction fencing designed to impede access by equipment and the storage of construction materials. Once the residence has been constructed and the soils in and around the newly constructed lot have been stabilized and vegetated, the temporary fencing can be removed.

2. Erosion and sediment controls must be installed and approved by Crozier Consulting Engineers in advance of any construction related activities on the building envelope and driveway corridor that may affect onsite and adjacent lands (i.e. granular fill placement).

3. The Grading/Drainage Plan must designate specific locations for stockpiling of soils and other materials including snow (for both during and after construction) to reduce runoff potential.

4. A spill-prevention program should be developed, as well as ensuring that vehicle re-fuelling occurs off-site.

5. Sediment fencing should be erected on the down slope of all fill material to prevent sediment transport, until full vegetation cover has been achieved on all disturbed areas. The fences should subsequently be monitored on a scheduled basis during construction, and checked both before and after all precipitation events to ensure stability.

6. Barrier fencing should be placed at the property line or at the drip-line of trees where trees identified for retention and/or protection are identified. Avoid inadvertent root compaction. In the event that roots or branches of trees to be protected are inadvertently damaged during construction, they should be clean cut as soon as possible. Exposed roots should then be covered with topsoil and mulched under the guidance of a biologist, arborist or landscape architect.

7. Areas that are to be cleared for development but are planned to later undergo landscape plantings should implement plans that includes native seed/planting materials wherever appropriate.

8. Organic landscaping methods should be used to minimize impacts to the plant community and reduce the chance of non-native or invasive species from establishing.

9. When possible, in order to reduce the potential for negative impacts on the surrounding area's breeding birds, it is recommended that construction and its associated noises be minimized between 5:00 a.m. and 10:00 a.m. from early April to late August. These time windows are the peak calling and breeding periods for the majority of Ontario's breeding birds; a bird's ability to sing and be heard by potential mates and defend against rivals is imperative to their reproductive health and success. The Federal *Migratory Bird Convention Act* and its regulations prohibit the damage or destruction of a migratory bird, its nest and eggs.

9.0 Conclusions

Based on the proposed development concept and the 2019 collected field data, we conclude that the proposed severances and creation of 5 residential lots are feasible on the subject lands so long as the recommendations and mitigations noted herein are implemented.

If you require additional information regarding this submission, please do not hesitate to contact us.

Respectfully submitted by,

C.F. CROZIER & ASSOCIATES INC.

Michael J. Hensel, OALA, CSLA
Senior Development Consultant

MH/sh

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APPENDIX A

County of Grey Official Plan, Schedule A

Bruce County

GEORGIAN BAY

Land Force Central Area Training Centre

Subject Lands

OXENDEN

JONES RANGE

COLPOY'S RANGE

BIG BAY

KEMBLE

GEORGIAN ROAD

COBBLE BEACH

EAST LINTON

BALMY BEACH

SHALLOW LAKE

SCONCD

CRUICKSHANK

BROOKE

OWEN SOUND

SPRINGMOUNT

HALF MILE STRIP

CREAMERY HILL

ROCKFORD

KILSYTH

KEADY

LEITH

ANNAN

WOODFORD

MEAFORD

BOGNOR

SYDENHAM RIVER

SEE SCHEDULE A - MAP 2

SEE SCHEDULE A - MAP 3

N

THE COUNTY OF GREY
OFFICIAL PLAN

SCHEDULE A
Land Use Types

MAP 1

LEGEND

- Provincial Highway Connecting Link
- Provincial Highway
- County Road
- Local Road
- Seasonal Road
- Agricultural
- Special Agricultural
- Rural
- Primary Settlement Area *
- Secondary Settlement Area *
- Inland Lakes & Shoreline
- Recreational Resort Area
- Sunset Strip Area
- Industrial Business Park
- Space Extensive Industrial and Commercial
- Niagara Escarpment Plan Boundary **
- Niagara Escarpment Development Control Area
- Escarpment Recreation Area
- Hazard Lands
- Provincially Significant Wetlands and Significant Costal Lands

* refer to Secondary Schedules for further detail.

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

SCALE 1:95,000

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

AUTHOR: Grey County Planning and Development
FILE NAME: GR_OP_SchedA_Map1northX36.mxd
APPLICATION: ArcMap
DATE: June 7, 2019
PROJECTION: UTM zone 17N / NAD83
SOURCE: Teranet, Ministry of Natural Resources and Forestry

INTERACTIVE MAP: geo.grey.ca
DOWNLOAD PDF: grey.ca/planning-development

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

APPENDIX B

Municipality of Meaford Official Plan, Schedule A

Municipality of Meaford

Official Plan Schedule A Land Use

Georgian Bay

Georgian Bay

Subject Lands

[Under appeal - OMB Case # PL131162]

Department of National Defence
Military Maneuver and Training Area

See Schedule A-1

BALACLAVA
JOHNSON
MORLEY
SILCOTE
LEITH
ANNAN
GARRYOWEN
WOODFORD
BAYVIEW
OXMEAD
ELMHEDGE
MINNIEHILL
GRIERSVILLE
BOTHWELL CORNERS
HOATH HEAD
ROCKFORD
BOGNOR
STRATHNAIRN

Highway 26
Grey Rd 12
Grey Rd 17
Grey Rd 18
Grey Rd 19
Grey Rd 20
Grey Rd 21
Highway 6 & 10

City of Owen Sound

Township of Georgian Bluffs

Township of Chatsworth

Municipality of Grey Highlands

Town of The Blue Mountains

Legend

- Environmental Protection
- Federal Lands
- Shoreline
- Rural Settlement Area
- Rural
- Agricultural
- Specialty Agricultural
- Mineral Resource Extraction Area
- Major Open Space
- Waste Disposal Site - Closed

Niagara Escarpment

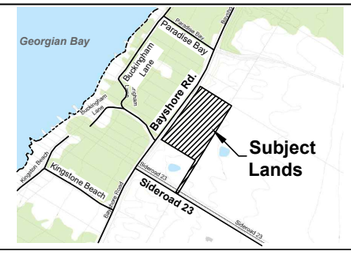
- Escarpment Plan Boundary
- Natural Area
- Protection Area
- Rural Area

0 1 2 4 6 8 km

Source of Information: County of Grey, OMAFRA, Niagara Escarpment Commission, GSCA and MNR.

Updated: June 2014

FIGURES



KEY PLAN
SCALE: N.T.S.

LEGEND

SUBJECT LANDS BOUNDARY
(Ref: Hewett & Milne Limited / Land Survey, July 2016)

N

0 25 50 100 150 200 m

1 : 5000

Project

CON BF PT LOT 23
COUNTY OF GREY, ONTARIO

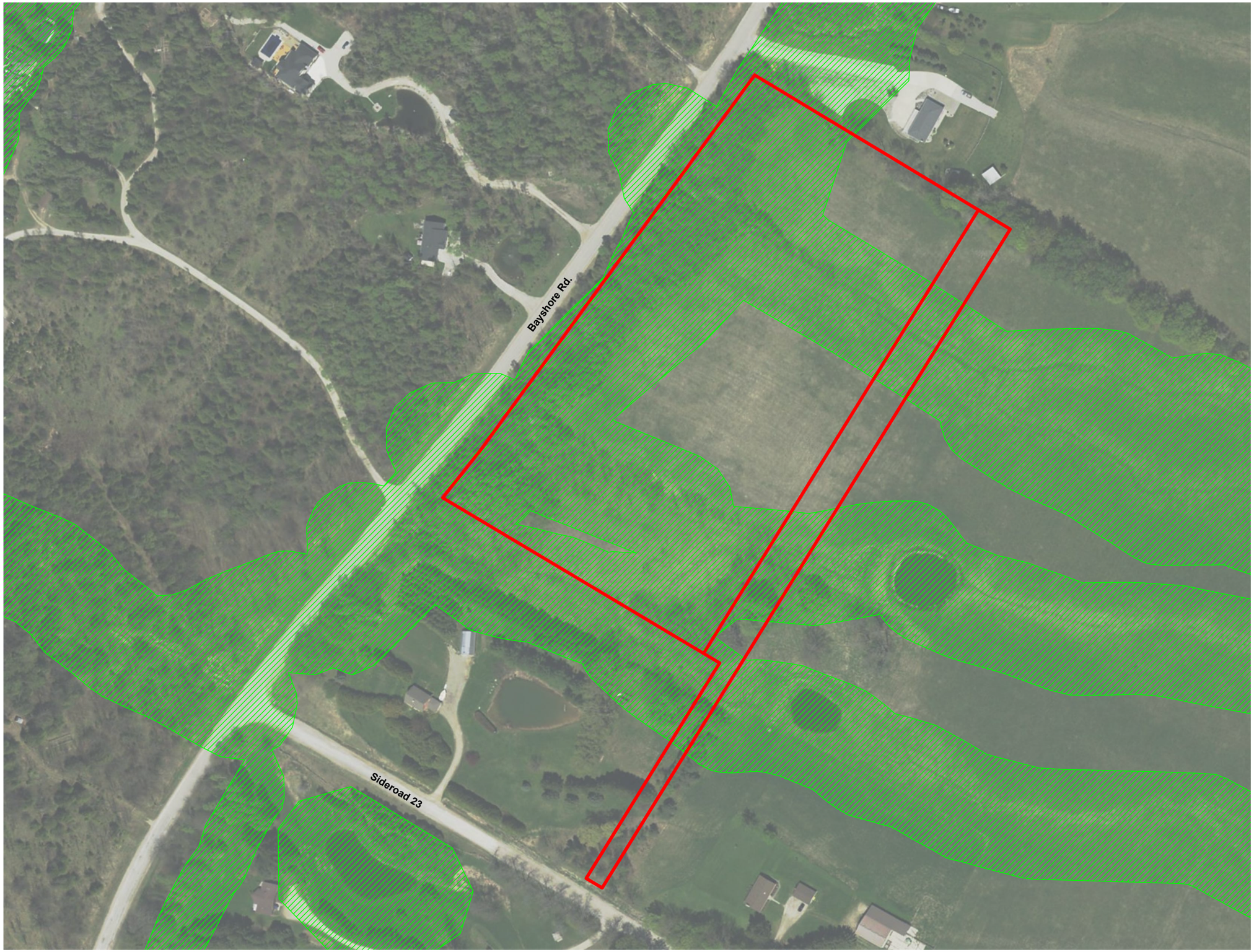
Title

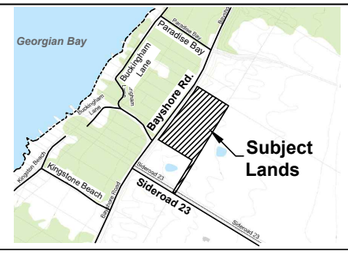
SITE LOCATION

CROZIER CONSULTING ENGINEERS
The HarbourEdge Building,
40 Huron Street, Suite 301,
Collingwood, ON L9Y 4R3
705 446-3510 T
705 446-3520 F
WWW.CFCROZIER.CA
INFO@CFCROZIER.CA

Drawn By	D.C.	Design By	M.H.	Project	CR-EIS-McC
Date	2020/02/20	Check By	M.H.	Scale	1:5000
				Drawing	Figure 1

Date Plotted: February 20, 2020





KEY PLAN
SCALE: N.T.S.

LEGEND

- SUBJECT LANDS BOUNDARY (Ref: Hewett & Milne Limited / Land Survey, July 2016)
- GSCA REGULATED AREAS

N

0 10 20 40 60 80 m

1 : 2000

Project

CON BF PT LOT 23
COUNTY OF GREY, ONTARIO

Title

GREY SAUBLE CONSERVATION AUTHORITY (GSCA) REGULATED AREAS

CROZIER CONSULTING ENGINEERS
The HarbourEdge Building,
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Collingwood, ON L9Y 4R3
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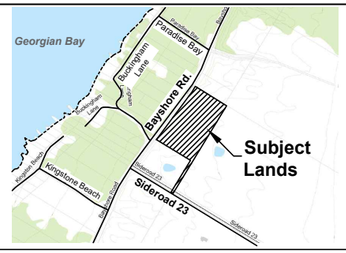
info@cfcrozier.ca

Drawn By	D.C.	Design By	M.H.	Project	CR-EIS-McC
Date	2020/02/20	Check By	M.H.	Scale	1:2000
				Drawing	Figure 2

Date Plotted: February 20, 2020



KEY PLAN
SCALE: N.T.S.

LEGEND

SUBJECT LANDS BOUNDARY
(Ref: Hewett & Milne Limited / Land Survey, July 2016)

1 BREEDING AMPHIBIANS SAMPLING LOCATIONS

N

0 10 20 40 60 80 m

1 : 2000

Project

CON BF PT LOT 23
COUNTY OF GREY, ONTARIO

Title

BREEDING AMPHIBIANS
SAMPLING LOCATIONS

CROZIER CONSULTING ENGINEERS
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705 446-3520 F
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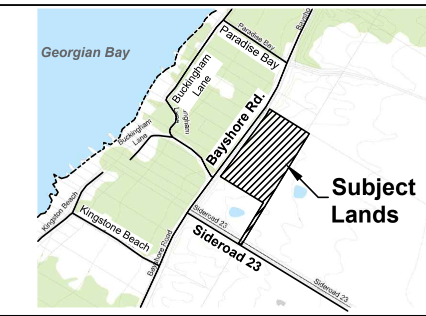
info@cfcrozier.ca

Drawn By	D.C.	Design By	M.H.	Project	CR-EIS-McC
Date	2020/02/20	Check By	M.H.	Scale	1:2000
				Drawing	Figure 3

Date Plotted: February 20, 2020



KEY PLAN
SCALE: N.T.S.

LEGEND

- SUBJECT LANDS BOUNDARY (Ref: Hewett & Milne Limited / Land Survey, July 2016)
- UNEVALUATED WETLANDS
- DRAINAGE FEATURE

N

0 10 20 40 60 80 m

1 : 2000

Project

CON BF PT LOT 23
COUNTY OF GREY, ONTARIO

Title

AQUATIC ASSESSMENT

CROZIER CONSULTING ENGINEERS
THE HARBOUREDGE BUILDING,
40 HURON STREET, SUITE 301,
COLLINGWOOD, ON L9Y 4R3
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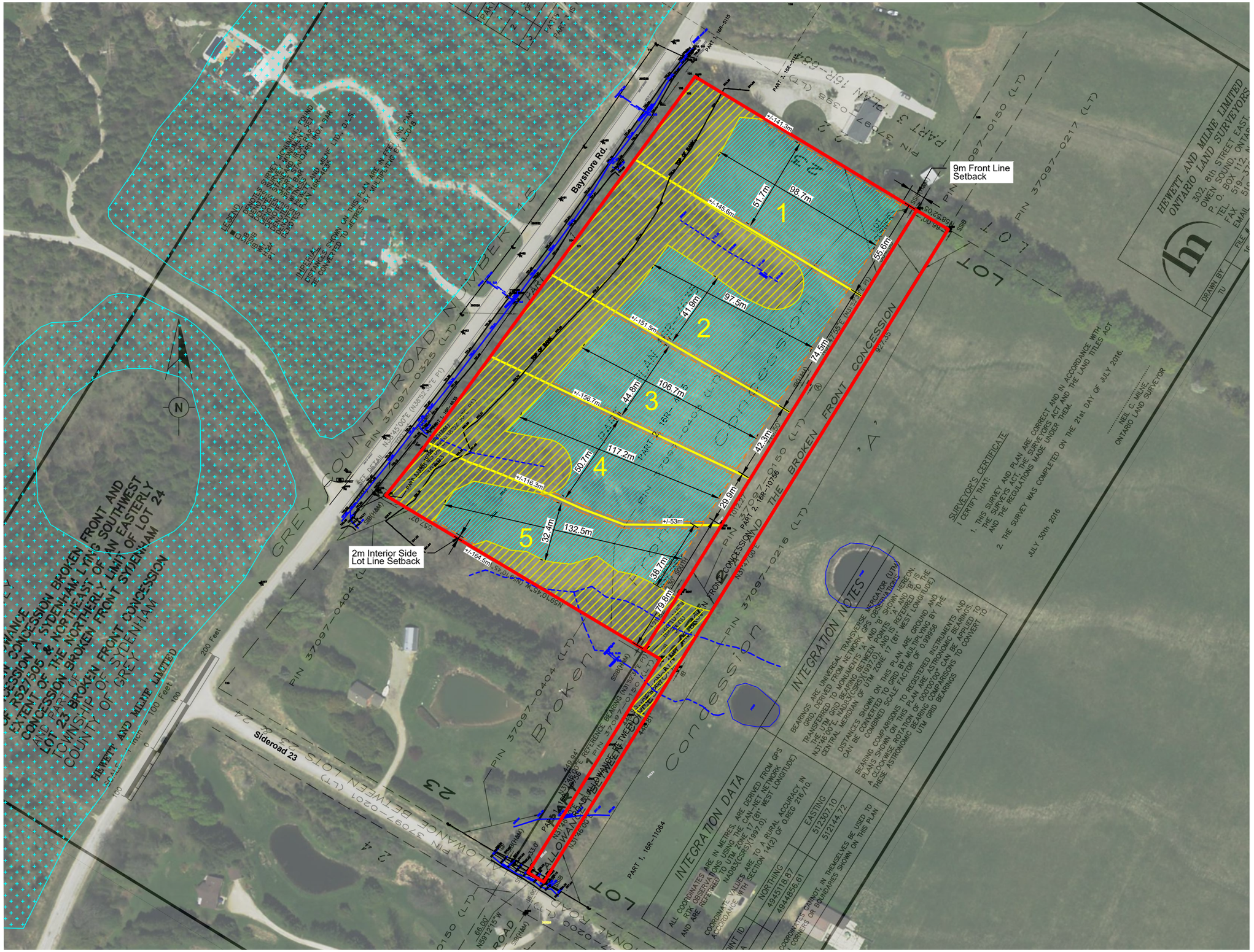
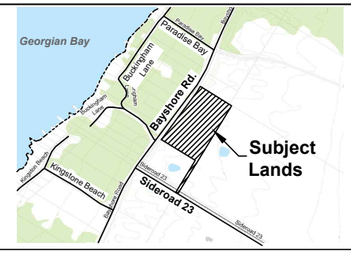
INFO@CFCROZIER.CA

Drawn By D.C.	Design By M.H.	Project CR-EIS-McC	
Date 2020/02/20	Check By M.H.	Scale 1:2000	Drawing Figure 4

Date Plotted: February 20, 2020





KEY PLAN
SCALE: N.T.S.

LEGEND

- SUBJECT LANDS BOUNDARY (Ref: July 30,2016 Survey)
- ENVIRONMENTAL PROTECTED / HAZARD AREAS (Ref: 15m Setback from Surveyed Top of Bank and Surveyed Swales)
- DEVELOPMENT ENVELOPE AREAS (Ref: 9m Front Lot Line Setback / 2m Interior Side Lot Line Setback)
- UNEVALUATED WETLANDS
- INTERMITTENT / EPHEMERAL SWALES
- PROPOSED LOT LINES

Total Lot Area / Lot Development Envelope Area:

Lot 1
7999.8m² / 5111.9m²
Lot 2
11282.9m² / 4801.5m²
Lot 3
7482.7m² / 4639.7m²
Lot 4
8102m² / 4454m²
Lot 5
8159.7m² / 3814m²

N

0 10 20 40 60 80 m

1 : 2000

Project
CON BF PT LOT 23
COUNTY OF GREY, ONTARIO

Title
DEVELOPMENT OPPORTUNITIES AND CONSTRAINTS

CROZIER CONSULTING ENGINEERS
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Drawn By	D.C.	Design By	M.H.	Project	CR-EIS-McC
Date	2020/09/01	Check By	M.H.	Scale	1:2000
				Drawing	Figure 5

Date Plotted: September 1, 2020