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# TECHNICAL MEMORANDUM

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**To:** Harry Littler c/o Travis & Associates

**From:** Melissa Fuller, H.B.Sc, Ecologist, Birks Natural Heritage Consultants, Inc.

**Subject:** Birks NHC 03-010-2022 Natural Heritage Constraints Analysis  
412 Miller Street, Town of Meaford, Grey County

**Date:** April 21, 2022

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Dear Mr. Littler,

Birks Natural Heritage Consultants, Inc. (Birks NHC) was retained to prepare a Natural Heritage Constraints Analysis for the property described above and illustrated in the attached Figure 1. It is our understanding that you are currently exploring opportunities for the creation of a residential/commercial mixed use infill development on the existing agricultural lands.

This preliminary analysis provides a preliminary characterization of the natural heritage features associated the property that may represent opportunities or constraints to future land use change and assist in identifying lands which may be appropriate for development based upon the current applicable municipal, regional, and provincial policies. This Technical Memorandum also provides recommendations for additional studies, where necessary, to accurately define those natural heritage features associated with the property.



## 1 BACKGROUND DATA REVIEW AND SOURCES

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The following background documents and sources were reviewed as part of this analysis:

- Provincial, regional and local policies;
- Natural Heritage Information Centre (NDMNRF, 2022);
- Ontario Reptile and Amphibian Atlas (Ontario Nature, 2022);
- Land Information Ontario (NDMNRF, 2022);
- Species at Risk in Ontario list (MECP);
- Aquatic Species at Risk distribution map (DFO, 2019); and
- Grey Sauble Conservation Authority Regulation mapping.

## 2 SITE ASSESSMENT AND GENERAL OVERVIEW

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Birks NHC staff conducted a site assessment on March 31, 2022. This assessment consisted of an inspection of the natural areas of the property to identify any features that have the potential to be considered natural heritage features and functions. Consideration was given to the habitat requirements of species listed as Threatened or Endangered under Ontario Regulation (O. Reg) 230/08 of the *Endangered Species Act*, 2007 (ESA). Other natural heritage features were assessed based on the criteria set out in the Natural Heritage Reference Manual for the Natural Heritage Policies of the Provincial Policy Statement, 2005 (MNR, 2010).

The property measures approximately 7.1 hectares (ha) and contains a drive shed, barn, residence, and actively farmed field, with cash crops. An unnamed watercourse originates immediately north of the property, flowing north towards Georgian Bay. Adjacent lands (within 120 m of the property limits) contain rural and residential town lots (Figure 1).

## 3 POLICY FRAMEWORK

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### 3.1 PROVINCIAL POLICY STATEMENT (2020)

Ontario's *Planning Act*, 1990 requires that planning decisions be consistent with the Provincial Policy Statement (PPS, 2020). Section 2.1 of the PPS specifies policy related to protection of natural heritage features and functions. All proposed development needs to meet the "no negative impact" test and demonstrate that there will be no negative impacts to the natural features and their ecological functions per Section 2.1 of the PPS. According to Section 2.1.4 of the PPS, development and site alteration shall not be permitted in the following features:

- a) Significant wetlands in Ecoregions 5E, 6E, and 7E; and,
- b) Significant coastal wetlands.



Additional features are protected by Section 2.1.5 of the PPS which states that development and site alteration shall not be permitted in the following natural features unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions:

- a) Significant woodlands in Ecoregions 6E; and 7E;
- b) Significant valleylands in Ecoregions 6E; and 7E;
- c) Significant wildlife habitat (SWH);
- d) Significant areas of natural and scientific interest (ANSI); and
- e) Coastal wetlands in Ecoregions 5E, 6E; and 7E that are not subject to policy 2.1.4(b).

Sections 2.1.6 and 2.1.7 state that development and site alteration is not permitted in fish habitat or habitat of endangered and threatened species except in accordance with federal and provincial requirements.

Section 2.1.8 extends protection of those features defined above in policies 2.1.4, 2.1.5 and 2.1.6 to adjacent lands, typically those within 120 m of the potential impact. Section 2.1.8 states that development and site alteration shall not be permitted on adjacent lands to natural heritage features 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 function.

While many of these features are mapped and direction is available to allow for candidate features and functions to be identified, it remains 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. The Natural Heritage Reference Manual (MNR, 2010) and Significant Wildlife Habitat Criterion Schedule for Ecoregion 6E (MNRF, 2015) were used within this report to identify candidate features and functions not currently identified by the province and/or municipality.

### **3.2 ENDANGERED SPECIES ACT (2007)**

Ontario's ESA provides regulatory protection to Extirpated, Endangered and Threatened species listed within O. Reg 230/08, 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 which the species depends on, directly or indirectly, to carry on its life processes. As noted above, only species listed as Endangered or Threatened receive species and habitat protection through the ESA. Species designated as Special Concern may receive protection under the Significant Wildlife Habitat provisions of the PPS.

### **3.3 FISHERIES ACT (1985)**

The purpose of the federal *Fisheries Act*, 1985 is, in part, to provide a framework for the conservation and protection of fish and fish habitat through the various regulations that serve to protect against serious harm to fish by death or any permanent or temporary harmful alteration, disruption or destruction



(HADD) to their habitat. Fish habitat is defined as “spawning grounds and any other areas, including nursery, rearing, food supply and migration areas, on which fish depend directly or indirectly in order to carry out their life processes”.

The interpretation and application of the regulations of the *Fisheries Act* is overseen by Fisheries and Oceans Canada (DFO). Under the direction of DFO, projects that have potential to affect fish and fish habitat are to be screened using their online guidance platform, 'Projects Near Water' to determine if the project will require review under the *Fisheries Act*.

### **3.4 GREY SAUBLE CONSERVATION AUTHORITY**

A small portion of the property is regulated by Grey Sauble Conservation Authority (GSCA) in accordance with O. Reg. 151/06 - *Development, Interference with Wetlands and Alterations to Shorelines and Watercourses* due to the presence of an unnamed watercourse that originates north of the property. Under this regulation, the GSCA requires that approvals be obtained for any proposed development within regulated areas.

### **3.5 GREY COUNTY OFFICIAL PLAN (2019)**

Schedule A - Land Use Types, Map 1 of the County of Grey (County) Official Plan illustrates the property as being within the Primary Settlement Area of Meaford, with Hazard Lands identified in the central portion of the property. Appendix A, Map 1 of the County of Grey Official Plan further identifies Intake Protection Zones 1 and 2 identified within the property limits.

Primary Settlement Areas are suitable for high intensification targets, and development and land use policies are to be in accordance with local official plans or secondary plans. Permitted uses within the Hazard Lands land use type are those associated with the conservation of water, soil, wildlife, and other natural resources. In the Hazard Land use type, development and site alterations will only be considered if hazards can be safely addressed, no new hazards are created, and no adverse environmental impacts will result (Section 7.2.9 of the County Official Plan). The County generally encourages development be setback from features characterized as hazard lands associated with natural features (wetlands, streams, rivers) by at least 30 metres. In some cases, this 30 m distance can be reduced based on site specific circumstances or through the completion of a suitable site specific natural environmental assessment (Section 7.9.2 of the County Official Plan).

The County has identified numerous vulnerable areas within the County limits, associated with the protection of water and water resources. The property is located within Surface Water Intake Protection Zones (IPZ) 1 and 2 due to the proximity of the property to the municipal water intake and the potential for runoff from the property to influence water quality at the municipal drinking water intake. Land use decisions within IPZ zones should protect, improve, or restore the quality and quantity of water and development of the property should occur in consideration of the applicable source water protection plan (Saugeen- Grey-Sauble- Northern Bruce Peninsula Source Protection Plan, 2015).



### **3.6 TOWN OF MEAFORD OFFICIAL PLAN (OFFICE CONSOLIDATION NOVEMBER 2014)**

The Town of Meaford (Town) Official Plan Schedule A depicts the property as containing 'Urban Living Area' and 'Environmental Protection'. Schedule B of the Official Plan identifies Intake Protection Zones associated with the property.

Lands designated 'Urban Living Area' represent areas in the town that will enhance the character and identity of existing residential areas and encourage the provision of a full range of housing opportunities utilizing planned infrastructure (Section B1.1 of the Meaford Official Plan).

The 'Environmental Protection' (EP) Designation includes components of the Town's Natural Heritage System and has been designated as such within this locale due to the presence of a watercourse north of the property limits. Section B3.1.2 of the Official Plan notes that the location of EP lands is considered to be generally accurate and should be corroborated with site specific information (Section B3.1 of the Meaford Official Plan).

Development or site alteration shall be permitted on adjacent lands provided that the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impact on the natural features or their ecological functions (Section B3.1.4.3 of the Meaford Official Plan).

## **4 KEY NATURAL HERITAGE FEATURES AND FUNCTIONS**

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### **4.1 PROVINCIALY SIGNIFICANT WETLAND (PSW)**

There are no Provincially Significant Wetlands mapped on the property or within adjacent lands.

### **4.2 OTHER WETLAND HABITAT**

There is no other wetland habitat associated with the property.

### **4.3 SIGNIFICANT WOODLAND**

There is no mapped Significant Woodland within or adjacent to the property limits. The property does not contain any treed habitat that would be considered a woodland.

### **4.4 SIGNIFICANT VALLEYLANDS**

The Natural Heritage Reference Manual (MNR, 2010) defines valleylands as *a natural area that occurs in a valley or other landform depression that has water flowing through or standing for some period of the year*. No Significant Valleylands are present in the Study Area.



#### **4.5 CANDIDATE SIGNIFICANT WILDLIFE HABITAT**

Significant Wildlife Habitat functions were assessed utilizing knowledge of the site. Habitat and species data sources were reviewed in addition to field data gathered by Birks NHC ecologists. According to the Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNRF, 2015), the property and adjacent lands have the potential to provide the following Significant Wildlife Habitat functions:

- Special Concern and Rare Wildlife Species: Snapping Turtle (Special Concern)

#### **4.6 AREAS OF NATURAL AND SCIENTIFIC INTEREST (ANSI)**

There are no ANSI areas mapped within the property or study area.

#### **4.7 FISH HABITAT**

The property is located within the subwatershed of an unnamed tributary of Georgian Bay (Figure 1). The March 2022 site visit occurred during the melt period of a late spring snow, and thus seasonal drainage patterns present on the property were apparent. A tributary of the un-named drainage feature originates along the property line, immediately north-east of a central raspberry shrub thicket (Figure 1). Some pooling of water was noted within the property limits, however, the area did not demonstrate permanence in the landscape; no wetland vegetation was observed, and the area had been ploughed to facilitate future planting. Flow from the ponding became concentrated within a residential lawn swale along the northern property limit, which was then conveyed northwards approximately 40 m to a meadow marsh. Given the absence of a dedicated aquatic feature on property, it appears that the feature is intermittent in nature, indirectly providing organics and nutrient inputs to downstream fish communities during spring freshet and heavy precipitation events.

No fish sampling information was available from Land Information Ontario for the water feature and no aquatic Species at Risk are mapped in the area (DFO, 2019).

#### **4.8 POTENTIAL HABITAT OF THREATENED AND ENDANGERED SPECIES**

The habitat requirements of those species listed as Threatened and Endangered under the ESA were considered in relation to the habitat features noted within the property limits and the adjacent lands. Based on habitat use, site knowledge and data available, it was determined that potential habitat for the following Threatened and Endangered species may be present in the property or adjacent lands:

##### **4.8.1 Butternut (Endangered)**

Butternut is a small to medium sized deciduous tree that is listed as an Endangered species in Ontario. The Endangered status of Butternut is based on observed declines due to a fungal disease known as Butternut Canker that often results in tree mortality. This tree species can grow in a variety of treed and open habitats, individually or in small groups. Disturbed areas (*i.e.*, fencerows, roads, trails) are more likely to have Butternut because the tree species is intolerant of shade and requires open sunlight,



however Butternut can also occur in forested communities in a canopy opening or near the forest edge. No Butternut trees were observed during the site visit.

#### 4.8.2 Endangered Bat Species

Assessment of the characteristics of woodlands and buildings as they relate to potential use by Endangered bat species (Little Brown Myotis, Northern Myotis, Tri-colored Bat) is a consideration in land development. Endangered bats have the potential to roost within anthropogenic structures that provide suitable habitat for summer maternity roosting and overwintering. Thus, the existing house and barn may provide potential habitat for the Endangered Bat species noted above.

#### 4.8.4 Barn Swallow (Threatened)

Barn Swallow is listed as a Threatened species under the ESA. These species will construct nests under the eaves or in the rafters of buildings that provide access but are sheltered from the elements. They are aerial insectivores that will forage over open fields and riparian habitats. The buildings, open fields and riparian habitats within the property limits, as well as within those lands adjacent to the property, may therefore provide suitable habitat for Barn Swallow. No nests were observed at the time of the site visit, however there is potential for the species to construct nests on the anthropogenic structures in the future.

## 5 DEVELOPMENT OPPORTUNITIES AND CONSTRAINTS

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Natural heritage constraints mapping for the property is presented in Figure 2. Two categories of environmental constraints have been outlined based on a review of site conditions and applicable municipal and provincial policies. Based on the analysis, areas of moderate (0.13 hectares) and low (7 hectares) development constraint have been identified within the property.

### 5.1 MEDIUM CONSTRAINT (0.13 HA)

#### 5.1.1 Fish Habitat

Due to the presence of an un-named watercourse, a portion of the property is regulated by GSCA. Under this regulation, the GSCA requires that approvals be obtained for any proposed development within regulated areas.

This watercourse also has the potential to provide nutrient and organic contributions to downstream fish habitat during storm events and spring freshet. Thus, the feature has been identified as seasonal indirect fish habitat and a 15 m feature setback from the centre line of the defined channel has been applied. The medium constraint area identified represents this 15 m setback to the watercourse. The watercourse setback has been mapped as Moderate Constraint due to the variability possible in size based on discussions with appropriate authorities and level of development proposed. Once established, setbacks would represent a high constraint as typically no development is permitted in a natural feature setback



Setbacks are important for providing appropriate protections to natural heritage and hydrological features and their inherent functions. The setback which would be required to protect those functions can vary depending on the sensitivity. Given the seasonality of the features, as well as the lack of permanent fish habitat provided by the feature, in proximity to the property, a 15 m naturalized setback to the swale would be sufficient to mitigate for potential impacts that may occur through development of the property.

#### 5.1.2 Anthropogenic Structures

Based on the site assessment and preliminary analysis, the property provides candidate habitat for Threatened and/or Endangered species. Additional survey efforts will be required at the time of building demolition and site alteration to ensure that the activity proceeds in consideration of protection of the identified species, as well as their potential habitat. Should candidate Species at Risk habitat be identified, there are still avenues to allow for development opportunity of the property. Development may require securing necessary permits and/or authorizations issued under the ESA. Obtaining an ESA permit would require actions on the part of the proponent including achieving overall net benefit to the species in question. This generally involves some form of compensation and habitat creation on or near the habitat loss. An alternative is to demonstrate avoidance of impacts to the species or their habitat which allows for development project to move forward without requiring permits.

### 5.3 OPPORTUNITIES

The majority of the property (7 ha) has been identified as an area of low constraint, and therefore provides opportunity for development, without the requirement for additional consideration of natural heritage features and functions. It should be noted, however, that the property is located within an IPZ, and thus development of the property should proceed in consideration of the Saugeen -Grey-Sauble-Northern Bruce Peninsula Source Water Plan (2015).

## 6 RECOMMENDED ADDITIONAL STUDIES

Further studies would allow for better understanding and characterization of the natural heritage features and functions at the time of buildout.

- An updated Species at Risk habitat assessment for the property to determine if appropriate habitat is present, and whether there would be reasonable expectation for Species at to occur on the property. This assessment should include both those species identified herein, as well as those that may receive protection in the interim, between the release of this document and eventual site alteration.



## 7 CLOSURE

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We trust the information provided will be sufficient to meet your requirements for the property as you consider moving forward. Birks NHC staff are able to continue on the project and would be happy to discuss the requirement for additional field surveys at your convenience. If you have any questions or require further information, please do not hesitate to contact the undersigned.

Yours truly,  
Birks Natural Heritage Consultants Inc.

Melissa Fuller, H.BSc.  
Ecologist



## 8 REFERENCES

- County of Grey. 2019. Recolour Grey – Grey County Official Plan. Adopted by Grey County Council October 25, 2018. Approved by the Province June 6, 2019. (Effective Date June 7, 2019)
- Department of Fisheries and Oceans Canada (DFO). 2019. Aquatic Species at Risk Map. <https://www.dfo-mpo.gc.ca/species-especes/sara-lep/map-carte/index-eng.html>
- Endangered Species Act*, Ontario. 2007. An Act to protect species at risk and to make related changes to other Acts. Bill 184 Chapter 6, Statutes of Ontario 2007.
- Ministry of the Environment, Conservation and Parks (MECP). 2018. O. Reg. 230/08 Species at Risk in Ontario List. <https://www.ontario.ca/laws/regulation/080230>
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- Ministry of Municipal Affairs and Housing. 2020. Provincial Policy Statement. 2020. <https://www.ontario.ca/page/provincial-policy-statement-2020>
- Ministry of Natural Resources (MNR). 2010. Natural Heritage Reference Manual. <https://www.ontario.ca/document/natural-heritage-reference-manual>
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- Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNR). 2022. Natural Heritage information Centre. <https://www.ontario.ca/page/get-natural-heritage-information>
- Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNR). 2022. Land Information Ontario. <https://www.ontario.ca/page/land-information-ontario>
- [Municipality of Meaford Official Plan. Office Consolidation November 2014](#)
- Ontario Nature. 2022. Ontario Reptile and Amphibian Atlas Interactive Map <https://www.ontarioinsects.org/herp/index.html?Sort=6&area2=squaresCounties&records=all&myZoom=5&Lat=42.95&Long=-81.01>



412 Miller Street  
Municipality of Meaford

- Property Limit

120m Study Area
- Watercourse (LIO)
- Wetland (LIO)

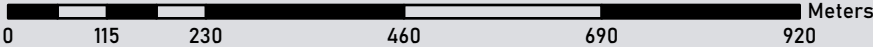
Un-evaluated

Provincially Significant

Figure 1:  
Study Area



MAP DRAWING INFORMATION:  
DATA PROVIDED BY: LIO  
MAP CREATED BY: SB  
MAP CHECKED BY: BB  
MAP PROJECTION: NAD 1983 UTM ZONE 17N



FILE LOCATION:  
Path: C:\Users\S\_Brady\BirksNHC\Birks NHC Team for all - Documents\Project Folders\SBrady Projects\ArcGIS - Projects here\Projects - here\412Meaford  
PROJECT: 03-010-2022      STATUS: DRAFT      DATE: 04/04/2022



412 Miller Street  
Municipality of Meaford

Property Limit (7.13 ha)

Watercourse (LIO)

15m Watercourse Setback

Constraints Mapping

Low (7 ha)

Moderate (0.13 ha)

Figure 2:  
Preliminary Natural Heritage  
Constraints Mapping