



GUIDING SOLUTIONS IN THE  
NATURAL ENVIRONMENT

# Agricultural Assessment Loon Call M-1 Property Meaford

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## 1. Introduction

Beacon Environmental Limited (Beacon) was retained to conduct a desktop Agricultural Assessment for lands owned by LC Development Group and located at 206105 Highway 26, Meaford, in the County of Grey (**Figure 1**).

The subject property is generally situated northwest of Meaford. The portion of the subject property associated with this assessment is in the southern and central sections and consists of approximately 12 ha (study area). Additionally, the most northern portion of the property is forested and contains a reach of Centreville Creek; this portion of the subject property, including the proposed stream setback, was not included in this assessment.

The study area is presently designated Urban Living Area and Urban Highway Commercial in the Municipality of Meaford Official Plan (Schedule A1), and Primary Settlement Area in Schedule A (Land Use Types) of the County of Grey Official Plan.

## 2. Objectives of Study

The study commenced with a background assessment of the present agricultural characteristics of the study area. Background information including published documents and information from provincial agencies was gathered and reviewed at the outset of the project.

The specific objectives that have been completed as part of this Agricultural Assessment include the following:

- Provide an evaluation of the existing agricultural capability in the study area through background review and field investigations; and
- Identify and map any key agricultural features, attributes, and sensitivities of the study area.

## 3. Policy Context

The applicable municipal and provincial policies that also are subject to review include:

- Provincial Policy Statement (2014 and 2020);
- Municipality of Meaford Official Plan (Office Consolidation November 2014); and
- County of Grey Official Plan (June 2019).

### 3.1 Provincial Policy (2020)

The Provincial Policy Statement (PPS) provides policy direction on matters of provincial interest related to land use planning and development including agriculture. The PPS establishes the policy framework for setting land use priorities in Ontario as well as regulating development.

The 2020 PPS modifies and updates many of the former policies from the 2005 and 2014 documents. In relation to agriculture, the 2020 PPS requires municipalities to designate *prime agricultural areas* at the municipal level. This means that municipalities must now more specifically distinguish between *prime agricultural areas* and rural areas that may contain lesser quality agricultural capabilities. Upper and lower tier Official Plans must now designate *prime agricultural areas* and rural areas separately and provide distinct policy direction for land uses in each of these designations.

Section 2.3.2 of the PPS requires that:

*Planning authorities are encouraged to use an agricultural system approach to maintain and enhance the geographic continuity of the agricultural land base and the functional and economic connections to the agri-food network.*

New to the PPS in 2020 is the definition of an Agricultural System as follows:

*A system comprised of a group of inter-connected elements that collectively create a viable, thriving agricultural sector. It has two components:*

- *An agricultural land base comprised of prime agricultural areas, including specialty crop areas, and rural lands that together create a continuous productive land base for agriculture; and*
- *An agri-food network which includes infrastructure, services, and assets important to the viability of the agri-food sector.*

The 2020 PPS also provides the following definitions, unchanged from the 2014 PPS:

*Prime agricultural area: means areas where prime agricultural lands predominate. This includes areas of prime agricultural lands and associated Canada Land Inventory Class 4 through 7 lands, and additional areas where there is a local concentration of farms which exhibit characteristics of ongoing agriculture. Prime agricultural areas may be identified by the Ontario Ministry of Agriculture and Food using guidelines developed by the Province as amended from time to time. A prime agricultural area may also be identified through an alternative agricultural land evaluation system approved by the Province.*

*Prime agricultural land: means specialty crop areas and/or Canada Land Inventory Class 1, 2, and 3 lands, as amended from time to time, in this order of priority for protection.*

*Specialty crop area: means areas designated using guidelines developed by the Province, as amended from time to time. In these areas, specialty crops are predominantly grown such as tender fruits (peaches, cherries, plums), grapes, other fruit crops, vegetable crops, greenhouse crops, and crops from agriculturally developed organic soil, usually resulting from:*

- *Soils that have suitability to produce specialty crops, or lands that are subject to special climatic conditions, or a combination of both;*
- *Farmers skilled in the production of specialty crops; and*
- *A long-term investment of capital in areas such as crops, drainage, infrastructure and related facilities and services to produce, store, or process specialty crops.*

Policy 2.3.2 references Provincial guidelines to assist in the identification of *prime agricultural areas*. The Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) has provided technical guidance for the identification of *prime agricultural areas* as outlined in the Foodland Guidelines (1978-1992), the Comprehensive Set of Policy Statements (1994), four Provincial Policy Statements (including the 2020 PPS), and a draft Land Evaluation and Area Review Guideline.

As noted above, the definition of *prime agricultural area* references Provincial guidelines. More notably, the definition carries forward the provision from the 2005 and 2014 PPS that prime agricultural areas may also be identified using an alternate agricultural land evaluation as supported by the Province.

### **3.2 Municipality of Meaford Official Plan (Office Consolidation November 2014)**

The Municipality of Meaford Official Plan (Office Consolidation November 2014) provides planning strategy enabling and managing resource-based development including agriculture. Section A3.2 of the Official Plan provides principles and policies related to uses within the Municipalities Rural Area Designations, and more specifically, provides the following:

#### *A3.2.1 Agricultural*

*Lands designated Agricultural are those that are identified as being within a prime agricultural area as identified by the County of Grey Official Plan.*

As noted above, the study area is presently designated Urban Living Area and Urban Highway Commercial on Schedule A1).

### **3.3 County of Grey Official Plan (June 2019)**

The County of Grey Official Plan (June 2019) provides several policies related to agriculture with examples provided below.

Section 5 (Cultivate Grey) provides planning objectives related to Grey County's countryside, and more specifically:

Policy 5.2 (Agricultural Land Use Type) states:

*In the mid 1990's Grey County Council and staff worked with the Ministry of Agriculture, Food and Rural Affairs to develop an alternative land evaluation system for determining the highest priority agricultural lands. The Agricultural land use type is not just traditional Class 1, 2, or 3 agricultural land classifications, but also includes*

*the larger blocks of good agricultural land under active production, generally in blocks of 160 hectares or larger, as shown on Schedule A. This is intended to prevent the fragmentation of active agricultural land and to reduce the potential for nuisance complaints and farm limitations posed by non-agricultural uses. Within this land use type, the agricultural land base and the long-term viability of agriculture and the agri-food sector will be maintained and enhanced.*

The definition of Prime Agricultural Area in the Official Plan is all encompassing and is reproduced below:

*PRIME AGRICULTURAL AREA means areas within the Agricultural land use type of this Plan. This includes: areas of prime agricultural lands and associated Canada Land Inventory Class 4-7 lands; and additional areas where there is a local concentration of farms which exhibit characteristics of ongoing agriculture.*

As noted above, the study area is presently Primary Settlement Area in Schedule A.

## 4. Methodology

### 4.1 Background Review

Background information including published documents and information from provincial agencies was gathered and reviewed at the outset of the project. This involved documentation for the study area from sources that included, but was not limited to the following:

- Ontario Ministry of Natural Resources and Forestry (MNRF) Ontario Base Mapping;
- MNRF Land Information Ontario Database;
- OMAFRA Soil Survey Complex (<https://www.ontario.ca/data/soil-survey>);
- OMAFRA AgMaps Geographic Information Portal (<http://www.omafra.gov.on.ca/english/landuse/gis/portal.htm>); and
- Colour, orthorectified, 2006 and 2010 aerial photography from First Base Solutions.

## 5. Agricultural Resources

### 5.1 Bedrock and Physical Geography

The subject property lies over a complex of shale, limestone, dolostone and siltstone (Ontario Geological Survey 2003). The physiography of the area is described in Chapman and Putman (1984) as the Big Head Valley. The Big Head Valley is characterized by Chapman and Putnam as an indentation in the Niagara Escarpment back of Meaford, about 8 miles in width, and is covered in over 300 drumlins.

According to digital information, most of the study area consists of glaciolacustrine deposits, identified as nearshore deposits of the larger lake basin (Ontario Geological Survey 2003). The eastern boundary of the study area consists of lacustrine deposits of sand and gravel (beach deposits), while the northwestern and southeastern corners of the study area consist of undifferentiated till (Ontario Geological Survey 2003).

## 5.2 Topography and Drainage

The overland drainage from the study area is generally directed east toward Georgian Bay. The Ontario Base Map (OBM) reveals that the study area is gently sloped. Using slope class definitions found in the Field Manual for Describing Soils in Ontario, 4<sup>th</sup> Edition (Denholm and Schut, 1993), and OBM contours, most of the study area contains nearly level slopes to gentle slopes (i.e., 0.5% - 5.0%).

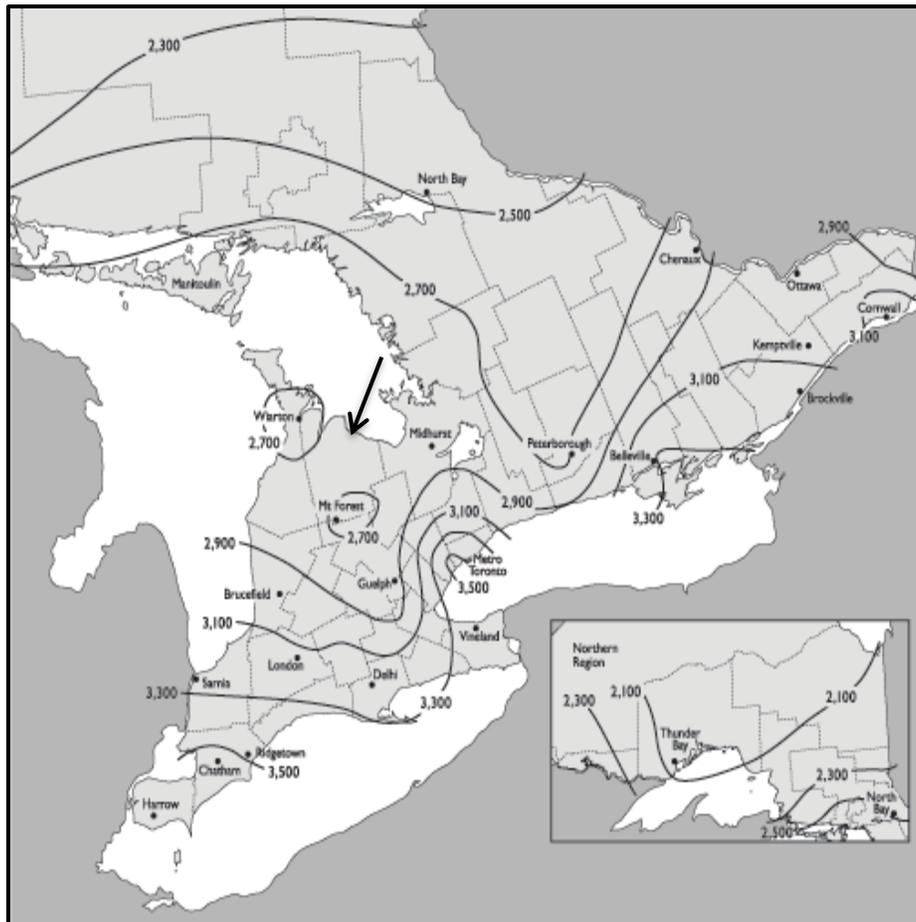
## 5.3 Climate

The analysis of climate was restricted to a review of existing published literature. Instrumentation was not employed to measure the climate of the study area.

### 5.3.1 Crop Heat Units

The Crop Heat Unit (CHU) measurement was originally designed for selecting corn varieties and can be used as a means of comparing the climactic conditions of different areas of the province. The CHU value of an area is based upon temperature and is detailed in a Factsheet 93-119 (Brown and Bootsma 1997) produced by OMAFRA. Specifically, crop heat units are determined using daily minimum and maximum air temperatures accumulated over the growing season. The CHU rating of an area is determined by the total accumulated crop heat units for the frost-free growing season in the various areas of the province (Brown and Bootsma 1997).

The CHU measurement system was revised in accordance with changing farming practices and crop varieties (OMAFRA 2011). Under the new CHU measurement system, the proportion of crop heat units in the study area is found to be slightly above 2700 CHU (**Figure 2**), consistent with moderately good farming opportunity. More specific measurements are not available for this method.



**Figure 2. Crop Heat Units, (OMAFRA, 2011). Study Area Indicated by Arrow**

## 5.4 Municipal Drainage

Municipal drains have been a fixture of rural Ontario's infrastructure since the 1800s. Most municipal drains were constructed to improve the drainage of agricultural land by serving as the discharge point for private agricultural tile drainage systems. Tile drainage is both agronomically and economically beneficial for reasons including better growing conditions, improved soil structure, better trafficability, reduced energy consumption, more timely planting and harvest, and improved yields for a variety of crops.

OMAFRA maintains records of artificial drainage in Ontario. The (Land Information Ontario (LIO) online database was accessed for the most up to date records of artificial drainage within and adjacent to the study area. There are no Agricultural/Municipal drains recorded within or adjacent to the study area. The web-based mapping service from OMAFRA (AgMaps) was consulted and although there no systematic drainage located within the study area, systematic drainage is identified adjacent to the study area, to the west and south.

## **5.5 Agricultural Land Use and Infrastructure**

A desktop survey was undertaken to identify agricultural land uses within and surrounding the study area.

### ***5.5.1 Subject Property***

A review of aerial photography available on Google Earth, as well as First Base Solutions, ranging from 2006 to 2019 indicates that the central and southeastern portions of the study area have been continuously used for agricultural purposes, likely hay crops. Additionally, the aerial photography does not show any indication of the study area containing livestock operations, nor was there any indication of recent upgrades or related investment into the existing agricultural infrastructure.

### ***5.5.2 Surrounding Use***

There is a mix of land uses in the area surrounding the study area, consistent with the regional land uses. The primary land uses to the southeast of the study area include a settlement area (Meaford) with associated residential, industrial, and commercial components, as well as golf course. The primary land use directly west of the study area has likely been continuously used for row crop agricultural purposes, likely corn, or soybean crops. Further west, on the west side of 7<sup>th</sup> Line, the lands are designated agricultural (specialty crop) with a fruit/vegetable wholesale operation. The area within the general location of the study area also consists of some forest and wetland areas.

The Agricultural Resources Inventory or ARI (OMAFRA 2015) provides an overview and reference of the use of agricultural land in Ontario. The ARI evaluates the mix of crops and classifies the study area as a mixture of grain and corn, and idle agricultural land.

## **6. Assessment**

Land use planning decisions attempt to balance the competing demands for land. Generally, the evaluation of agricultural lands includes capability ratings, the existing investments in agricultural facilities, land and infrastructure and changes to agricultural land use patterns, the presence of rural non-farm residents and their integration, land fragmentation, intrusions of non-agriculture land uses, and non-resident ownership of lands.

The following analysis considers agricultural resources, agricultural infrastructure, fragmentation, municipal drainage, and land use conflict.

### **6.1 Agricultural Resources**

A desktop survey of the study area was undertaken to examine the existing agricultural information. Although parts of the study area are presently used for agricultural purposes, likely hay crops, the

subject property is designated Urban Living Area and Urban Highway Commercial in the Municipality of Meaford Official Plan (Schedule A1), and Primary Settlement Area in Schedule A (Land Use Types) of the County of Grey Official Plan.

There is a mix of land uses in the area surrounding the study area, consistent with the regional land uses, including a settlement area (Meaford) with associated residential, industrial, and commercial components, a golf course, and row crop agriculture, likely corn, or soybean crops. Further west, on the west side of 7<sup>th</sup> Line, the lands are designated agricultural (specialty crop) with a fruit/vegetable wholesale operation (Bay Ridge Orchards). The development of the subject property is consistent with adjacent land uses and will not consume specialty crop agricultural land.

## **6.2 Agricultural Infrastructure**

Agricultural investment is directly related to the improvement of land through tile drainage or irrigation equipment, and through the improvements to agricultural infrastructure (barns, manure storage, sheds). Agricultural fields and facilities that have increased capital investment are generally more worthy of preservation and are readily identifiable through visual inspection of the facilities.

Livestock rearing requires an investment in agricultural facilities, dairy operations require a relatively large investment in maintaining facilities to produce milk, and poultry and hog operations require specific production facilities that involve capital investment. Conversely, beef production, hobby horse and sheep operations generally require less infrastructure, and therefore, less investment. A large investment in infrastructure can occur for certain cash crops as well, as some facilities include large storage and drying equipment.

Within the study area there was no indication of recent upgrades or related investment into the existing agricultural infrastructure.

## **6.3 Fragmentation**

The conversion of farmed lands to residential, recreational or commercial land can have a variety of effects, including fragmentation of the landscape. Development of the study area would remove ~4 ha of farmed land.

Fragmentation of farmlands generally reduces the economic viability of the lands by reducing the efficiency of which lands can be farmed and increasing the operating costs for other farms, particularly if the fragmentation results in several small and separated parcels.

The area to the north and east of the study area include woodland and residential uses. The proposed development would not reduce the efficiencies of farmed lands in the area.

## 6.4 Municipal Drainage

The LIO online database has no records of any Agricultural/Municipal drains adjacent to or within the subject property. Similarly, there are no agricultural drains shown on the web based AgMap service from OMAFRA. There does not appear to be any recent improvements to the local drainage.

## 6.5 Land Use Conflict

The level of compatibility between differing land uses obviously varies. As a rule, uses that have few 'people' interfacing with agriculture enhance compatibility. Land use conflict can be described on a micro (neighbour to neighbour) level and a macro (urban form) level. Micro conflicts can include dust, odours, noise, chemicals, etc., while macro conflict can include pollutants in water sources, flooding and livestock noise.

The development of the subject property for more intensive residential use should not pose an increased potential conflict for land use compatibility based on an aerial photographic analysis of nearby agricultural operations. As noted previously, on the west side of 7<sup>th</sup> Line, the lands are designated agricultural (specialty crop) with a fruit/vegetable wholesale operation (Bay Ridge Orchards). As a result of the distance from the study area (>700 m), and the warehouse operation of the wholesaler, there should be no land use conflict (agricultural impact) on the proposed development from the Bay Ridge Orchards operation.

### 6.5.1 Minimum Distance Separation

Land use planning principles promote the grouping together of compatible land uses, while providing distance between unlike or incompatible land uses. Minimum Distance Separation (MDS) formulae were developed to be used as a basis for reducing and minimizing nuisance complaints due to odour from livestock facilities and to reduce land use incompatibility in relation to livestock operations. The MDS is a land use planning tool that determines a recommended separation distance between a livestock barn or manure storage and another land use. The objective of MDS is to minimize nuisance complaints due to odour and thereby reduce potential land use conflicts.

MDS is made up of two separate, but related formulae (MDS I and MDS II). MDS I provides the minimum distance separation between proposed new development and existing livestock facilities and/or permanent manure storages located in areas where the keeping of livestock is permitted. MDS II provides the minimum distance separation between proposed new, enlarged or remodelled livestock facilities and/or permanent manure storages and existing or approved development located in areas where the keeping of livestock is permitted.

The MDS Implementation Guideline #6 indicates that *"all existing livestock facilities or anaerobic digesters within a 750 m distance of a proposed Type A land use and within a 1,500 m distance of a proposed Type B land use shall be investigated and MDS I setback calculations undertaken where warranted"*, and Implementation Guideline #34 lists Type B Land Uses as a higher density of human occupancy, habitation or activity including, *"the creation of one or more lots for development on land*

*outside a settlement area, that results in four or more lots for development, which are in immediate proximity to one another”.*

Potential farm operations were identified during the desktop review of recent aerial photography. Additional data needed for MDS analysis includes the identification of land use, identification of barns or any building capable of housing livestock, identification of animal types, number of animals and barn location with respect to other land uses.

That said, based on the desktop analysis, it would appear that the subject property is outside of the minimum distance required from any livestock barns in the area and would therefore comply with the MDS requirements.

### **6.5.2 Right to Farm**

Agricultural practices may result in discomfort or inconveniences in areas adjacent to farming operations. The *Farming and Food Production Protection Act (2002)* protects farms from nuisance complaints made by neighbours, provided they are following normal farm practices. As defined in the *Act*, a normal farm practice is one that:

- Is conducted in a manner consistent with proper and acceptable customs and standards as established and followed by similar agricultural operations under similar circumstances; or
- Makes use of innovative technology in a manner consistent with proper advanced farm management practices.

The bulk of farm nuisance complaints are about odours emanating from manure handling and storage. However, examples of other nuisance complaints might include light from greenhouses at night, vibration from trucks, fans, or boilers, smoke from burning tree pruning, or other organic wastes, flies from manure, spilled feed, noise from crop drying fans, irrigation pumps, dust from field tillage equipment, or truck traffic.

Due to the location and intensity of the surrounding farm operations, disruption to farm practices surrounding the subject lands is unlikely.

## **7. Conclusions**

Beacon was retained to provide a desktop Agricultural Assessment of lands owned by LC Development Group and located at 206105 Highway 26, Meaford, in the County of Grey.

A desktop survey of the study area was undertaken to examine the existing agricultural information. Although parts of the study area are presently used for agricultural purposes, likely hay crops, the subject property is designated Urban Living Area and Urban Highway Commercial in the Municipality of Meaford Official Plan (Schedule A1), and Primary Settlement Area in Schedule A (Land Use Types) of the County of Grey Official Plan.

There is a mix of land uses in the area surrounding the study area, consistent with the regional land uses, including a settlement area (Meaford), a golf course, and to the west, row crop agriculture. The area to the north and east of the study area include woodland and residential uses. The proposed development would not reduce the efficiencies of farmed lands in the area.

Further west, on the west side of 7<sup>th</sup> Line, the lands are designated agricultural (specialty crop) with a fruit/vegetable wholesale operation (Bay Ridge Orchards). The development of the study area will not consume specialty crop agricultural land. Additionally, because of the distance from the study area, and the warehouse operation of the wholesaler, there should be no land use conflict (agricultural impact) on the proposed development from the Bay Ridge Orchards operation.

Within the subject property there was no indication of recent upgrades or related investment into the existing agricultural infrastructure. There does not appear to be any recent improvements to the local drainage. Therefore, no recent or significant agricultural investments or infrastructure would be impacted by development of the study area.

Based on the desktop analysis, it is most likely that the study area is outside of the minimum distance required from any livestock barns in the area and would therefore comply with the MDS requirements.

Finally, due to the location and intensity of the existing local farm operations, disruption to farm practices surrounding the subject lands is unlikely.

Beacon appreciates the opportunity to provide you with this Agricultural Assessment. If there are questions or concerns, please contact the undersigned.

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