

# DOCUMENT TRANSMITTAL

Document: **WILFRID LAURIER UNIVERSITY MILTON CAMPUS  
AGRICULTURAL IMPACT ASSESSMENT**

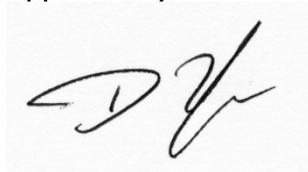
Prepared for: Ms. Ulrike L. Gross P.Eng. MBA LEED      Date      October 22, 2021  
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**DBH Soil Services Inc.**



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**October 22, 2021**



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# I BACKGROUND

DBH Soil Services Inc was retained by Wilfrid Laurier University (WLU) to complete an Agricultural Impact Assessment (AIA) for the purpose of assessing any potential impacts in locating Green Infrastructure within the Greenbelt as envisioned by the Town of Milton (the Town) and WLU through implementation of the Milton Education Village (MEV) Secondary Plan.

The vision for the WLU lands proposes future development of Green Infrastructure including but not limited to innovative storm water management systems and a broad range of activities related to the use of renewable resources and educational programming on the western portion of the WLU Milton Campus area extending westerly from the MEV Secondary Plan Area.

The WLU Milton Campus lands include Part Lot 8 in Concession 7 in the Town of Milton, Regional Municipality of Halton. These lands are generally bounded by Bell School Line to the west, are included in the built area of Milton on the east, agricultural lands and woodlots to the north, and woodlots to the south. This study will be specific to the WLU Milton Campus lands that are located west of the built area of Milton.

The proposed future development of these lands for the specific creation of Green Infrastructure within the Greenbelt, supporting the vision for the WLU Lands, requires the completion of an Agricultural Impact Assessment. The purpose of this AIA is to document the existing agricultural character, identify agricultural impacts (potential or real), and to provide avoidance or mitigative measures as necessary to offset any potential impacts. For this study, the WLU Campus area lands (located west of the MEV Secondary Plan Area) will be referred to as the Study Area.

In the Regional context, the Study Area is located in the Town of Milton, approximately 6 km northwest of Highway 407 and the City of Burlington and Town of Oakville, and approximately 6 km southeast of Highway 401.

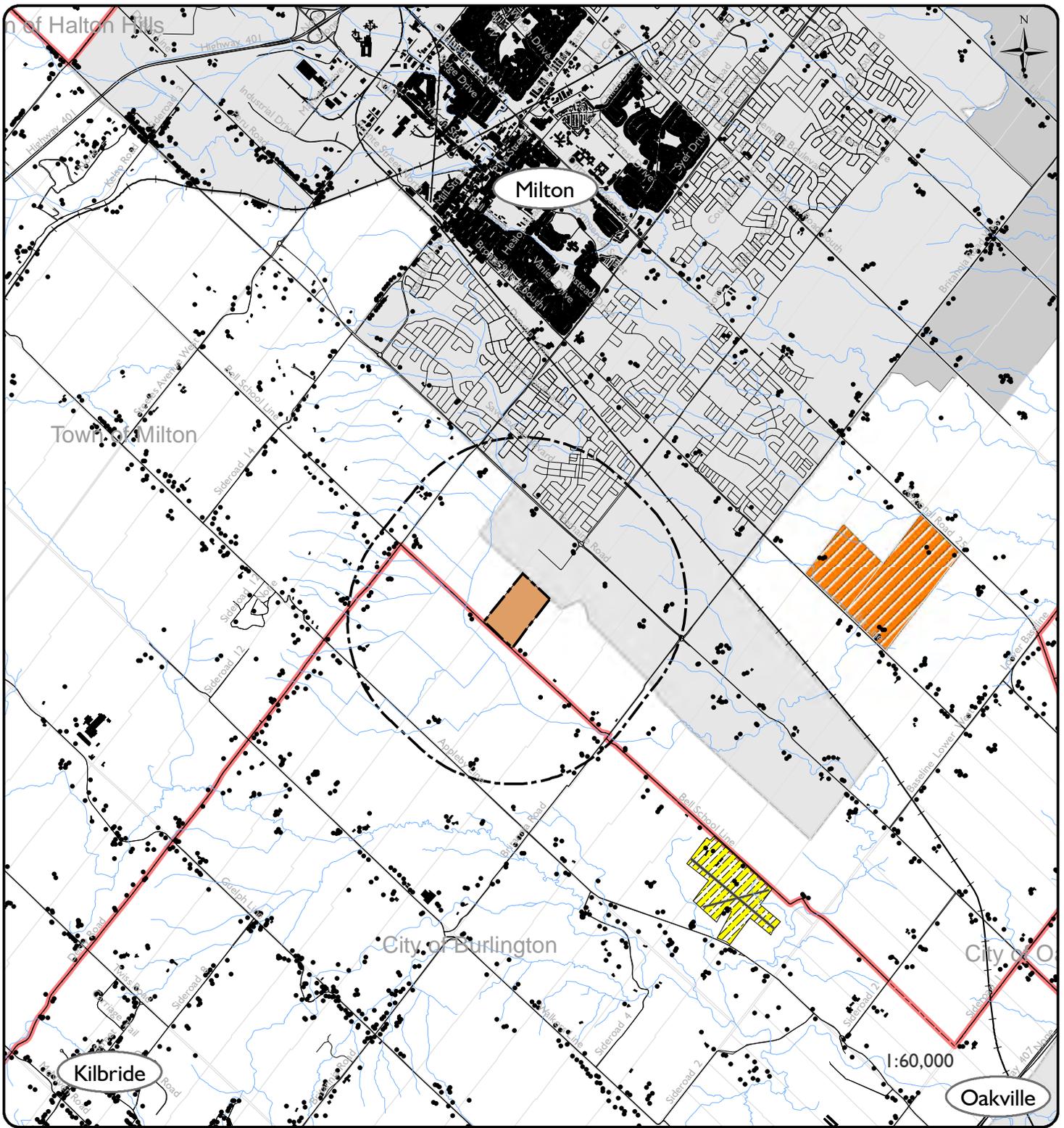
For the purpose of an Agricultural Impact Assessment (AIA) report, agricultural operations and activities are evaluated in a larger area, the Secondary Study Area, described as a potential zone of impact extending a minimum of 1500 m (1.5 km) beyond the boundary of the Study Area. This minimum 1500 m (1.5 km) area of potential impact outside the Study Area is used to allow for characterization of the agricultural community and the assessment of impacts both on and in the immediate vicinity of the Study Area.

The Study Area and the Secondary Study Areas comprise a mix of land uses including urban uses, rural uses, agricultural lands, transportation corridors, and woodlots. A large portion of the Secondary Study Area (east of the Study Area) rests within the built boundary of the Town of Milton. Portions of those areas are presently used for agriculture, but are designated within the Milton built boundary, therefore those lands have no long-term agricultural potential.

Figure 1 illustrates the relative location and shape of the Study Area and the Secondary Study

Area with respect to the above-mentioned community features.

This report documents the methodology, findings, conclusions, and mapping completed for this Study.



### Legend

•	Building (MNR)		Milton Built Area
—+—	Rail line		Municipal Boundary
—	Roads (MNR)		Secondary Plan Areas
—	Watercourse (MNR)		Secondary Study Area (1.5 km)
	Airport - Burlington Airport		Study Area
	Halton Regional Landfill - Milton		
	Lot Lines		

Figure 1

Location

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September 2021

## 2 METHODOLOGY

A variety of data sources were evaluated to characterize the extent of agriculture resources and to assess any potential existing (or future) impacts to agriculture within the Study Area and the surrounding Secondary Study Area that may occur as a result of the proposed future development of the WLU Milton Campus area lands.

A review of the Halton Region Official Plan (Official Plan for the Halton Planning Area, Regional Municipality of Halton, Office Consolidation July 19, 2018) was completed to determine if there are specific local guidelines and/or requirements for the completion of an Agricultural Impact Assessment study. It was noted that the Halton Region Official Plan (Section 77(5(q)) requires that an Agricultural Impact Assessment study be completed to determine the “*potential impact of urban development on existing agricultural operations, including the requirement for compliance with the Minimum Distance Separation formulae where an agricultural operation is outside the Urban area*”.

The review also determined that the Region of Halton has created a document titled “*Agricultural Impact Assessment Guidelines, October 1985*”, and has updated those guidelines with a newer version from June 2014. The Region of Halton has specific standards and guidelines for completing Agricultural Impact Assessments (AIA) within the boundaries of the Region of Halton. The Halton Region guidelines are comprehensive and require considerable detail to complete.

A further review was completed to determine the existence and use of Agricultural Impact Assessment Guidelines in Ontario.

The review on the existence and use of Agricultural Impact Assessment Guidelines revealed that the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) had released draft Agricultural Impact Assessment guidelines in a document titled “*Draft Agricultural Impact Assessment (AIA) Guidance Document, March 2018*”. This document is considered as “Draft for Discussion Purposes” and does not have status. Recent discussions with staff from OMAFRA indicate that the release of the final OMAFRA AIA guidance document is imminent.

Prior to the release of the OMAFRA AIA guidelines, the standard for completing Agricultural Impact Assessments in Southern Ontario, were the Halton Region Agricultural Impact Assessment Guidelines.

As a result of the review of the existence and use of Agricultural Impact Assessment guidelines in Ontario, this Agricultural Impact Assessment report has been completed with regard to the *Region of Halton Agricultural Impact Assessment Guidelines (2014)*, a review/reference to the OMAFRA “*Draft Agricultural Impact Assessment (AIA) Guidance Document, March 2018*” and through discussion with staff from the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA).

The Region of Halton Agricultural Impact Assessment Guidelines states that an AIA should include the following:

- Description of the proposal
- Purpose
- Applicable Planning Policies
- Onsite and Surrounding Area Physical Resource Inventory (including: soils; climate; slope; topography; drainage)
- Minimum Distance Separation (MDS) calculations
- On-site features (including: past farming practices; type and intensity of existing agricultural production; nonagricultural land use; parcel size, shape and accessibility; existing farm management; capital investment related to agriculture)
- Offsite Land Use Features (including: surrounding land use types; existing and potential constraints to onsite agriculture; regional land use, lot and tenure patterns)
- Agricultural Viability
- Assessment of Impact on Agriculture
- Mitigative Measures/Avoidance/Minimizing impact
- Conclusions

These tasks are also identified and presented in the OMAFRA “*Draft Agricultural Impact Assessment (AIA) Guidance Document, March 2018*”. As a result, this AIA will follow the above referenced task list.

## **2.1 DATA COLLECTION**

Background data and present-day existing land use data was collected from a variety of data sources including Official Plans/Zoning By-Laws, online data, and roadside reconnaissance surveys.

### **2.1.1 POLICY**

Relevant policy, by-laws and guidelines related to agriculture and infrastructure development were reviewed for this study.

The review included an examination of Provincial and Municipal policy as is presented in the *Provincial Policy Statement (2020)*, the *Greenbelt Plan (2017)*, the *Growth Plan for the Greater Golden Horseshoe (2019)*, the *Oak Ridges Moraine Conservation Plan (2017)*, the *Halton Region Official Plan Office Consolidation June 19, 2018*, the *Town of Milton Official Plan (Consolidation August 2008)*, and *The Corporation of the Town of Milton Report # PD-029-18 (June 18, 2018)*.

The review also included a search of *Town of Milton Comprehensive Zoning By-Law 016-2014 (HUSP Urban Area)*, and the *Town of Milton Comprehensive Zoning By-Law 144-2003*,

The review also included an evaluation of the *Official Plan of the Burlington Planning Area (City of Burlington Office Consolidation December 2019)* and the *City of Burlington Zoning By-Law (2020)*.

Further, the review included an assessment of the *Minimum Distance Separation (MDS) Document – Formulae and Guidelines for Livestock Facility and Anaerobic Digester Odour Setbacks. Publication 853. Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA, 2016)*. The MDS document was reviewed to determine the applicability of the document’s use for this study.

An assessment of online data resources including the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), the Ministry of Natural Resources and Forestry (MNRF) Land Information Warehouse (Land Information Ontario (LIO)), the Region of Halton website, the Town of Milton website combined with telephone, email and in person communication was used to derive a list of relevant policy, by-law and guidelines. Each relevant policy, by-law and guideline was collected in digital or paper format for examination for this study.

### **2.1.2 PHYSIOGRAPHY**

A review of the *Physiography of Southern Ontario 3rd Edition, Ontario Geological Survey Special Volume 2, Ministry of Natural Resources (1984)* was completed to document the type(s) and depth of bedrock and soil parent materials, and how these materials, in conjunction with glacial landforming processes, have led to the development of the existing soil resources.

### **2.1.3 TOPOGRAPHY AND CLIMATE**

Topographic information was reviewed from the 1:10000 scale Ontario Base Mapping, Land Information Ontario digital contour mapping and windshield surveys.

Climate data was taken from the OMAFRA document titled *Agronomy Guide for Field Crops – Publication 811 (June 2009)*.

### **2.1.4 AGRICULTURAL LAND USE**

Agricultural land use data was collected through observations made during roadside reconnaissance surveys and field surveys conducted on September 6 and 7, 2020. Data collected included the identification of land use (both agricultural and non-agricultural), the documentation of the location and type of agricultural facilities, the location of non-farm residential units and the location of non-farm buildings (businesses, storage facilities, industrial, commercial and institutional usage).

Agricultural land use designations were correlated to the *Agricultural Resource Inventory (ARI)* (Ontario Ministry of Agriculture and Food report and maps) and the information provided in the *Agricultural System Portal (OMAFRA)* for the purpose of updating the Ontario Ministry of Agriculture and Food Land Use Systems mapping for both the Study Area and Secondary Study Area.

### 2.1.5 MINIMUM DISTANCE SEPARATION

Minimum Distance Separation (MDS) formulae were developed by OMAFRA to reduce and minimize nuisance complaints due to odour from livestock facilities and to reduce land use incompatibility.

MDS Guideline # 3 states

“Certain proposed uses are not reasonably expected to be impacted by existing livestock facilities or anaerobic digesters and as a result, do not require an MDS I setback. Such uses may include, but are not limited to:

- extraction of minerals, petroleum resources and mineral aggregate resources;
- infrastructure; and
- landfills.

The proposed development of the Study Area would accommodate Green Infrastructure (storm water management ponds). As indicated in MDS Guideline #3, neither MDS I nor MDS II apply, as the proposed use is not reasonably expected to be impacted by existing livestock facilities.

Therefore, MDS I calculations are **NOT** required for this study and have not been completed.

### 2.1.6 LAND FRAGMENTATION

Land fragmentation data was collected through a review of online interactive mapping on the Agricultural Information Atlas (OMAFRA) website, the Agricultural System Portal (OMAFRA), the Town of Milton Website and assessment data, the Region of Halton website and assessment data. This data was used to determine the extent, location, relative shape of each parcel/property within both the Study Area and the Secondary Study Area.

Land fragmentation can be defined as the increase in the number of smaller parcels, which are generally non-agricultural uses, within a predominantly agricultural area. Over time the increase in smaller non-agricultural land uses creates a patchwork-like distribution of rural land uses, resulting in lands lost to agricultural production. Generally, good productive areas of farmland are comprised of larger parcels with few (if any) smaller parcels interspersed.

The assessment of fragmentation will look at the size, shape and number of parcels within a given area, and provide comment on the potential effect on agriculture.

### 2.1.7 SOIL SURVEY

Soil survey data and Canada Land Inventory (CLI) data was provided by the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) in digital format through the Land Information Ontario website warehouse. The soils/CLI data is considered the most recent iteration of the soil information from OMAFRA.

The digital soil survey data was also correlated to the printed soil survey report and map (*The*

*Soil Survey of Halton* (Report No. 43 of the Ontario Soil Survey. Gillespie, J. E., R. E. Wicklund and M. H. Miller, 1971) to determine if the digital soils data has been modified from the original soil survey data.

The OMAFRA draft AIA guidance document recommends that a soil survey be completed for areas that are going to be rehabilitated back to agriculture. This is particularly important with AIA studies that are completed for aggregate producers. In this instance a soil survey was not completed, as portions of the site are proposed for use as Green Infrastructure (storm water management ponds).

### **2.1.8 AGRICULTURAL SYSTEM**

The Ontario Ministry of Agriculture, Food and Rural Affairs online Agricultural Systems mapping were reviewed to determine the extent of agriculture on the Study Area, in the Secondary Study Area, within the Town of Milton and the Region of Halton.

The Agricultural System comprises two parts: Agricultural Land Base; and the Agri-Food Network.

The Agricultural Land Base illustrates the Prime Agricultural Areas (including Specialty Crop Areas), while the Agri-Food Network illustrates regional infrastructure/transportation networks, buildings, services, markets, distributors, primary processing, and agriculture communities.

The Agricultural Land Base mapping was provided through Land Information Ontario as a shapefile format for Geographic Information System (GIS) mapping applications. The Agri-food network information is provided through the OMAFRA Agricultural System Portal website.

### **2.1.9 AGRICULTURAL STATISTICS**

Agricultural statistics were provided by and downloaded from the OMAFRA website. The statistics were provided in Excel format for Southern Ontario, Halton, the Greater Golden Horseshoe, and the Greater Toronto Area. The Halton data included census information for the Town of Milton and the Region of Halton. The data sets provide information up to (and including) the 2016 Census.

### 3 POLICY REVIEW

Clearly defined and organized environmental practices are necessary for the conservation of land and resources. The long-term protection of quality agricultural lands is a priority of the Province of Ontario and has been addressed in the *Provincial Policy Statement (2020)*. Further, in an effort to protect agricultural lands, the Province of Ontario has adopted policy and guidelines to provide a framework for managing growth. These four provincial land use plans: *Greenbelt Plan (2017)*; *the Oak Ridges Moraine Conservation Plan (2017)*; *the Niagara Escarpment Plan (2017)*; and *the Growth Plan for the Greater Golden Horseshoe (GGH) (2019)* support the long-term protection of farmland. The four provincial land use plans have policy plans that require the completion of Agricultural Impact Assessment (AIA) studies for changes in agricultural land use.

Municipal Governments have similar regard for the protection and preservation of agricultural lands and address their specific concerns within their respective Official Plans on County/Regional level and Township level.

With this in mind, the: *Provincial Policy Statement (2020)*; *Greenbelt Plan (2017)*; *the Oak Ridges Moraine Conservation Plan (2017)*; *the Niagara Escarpment Plan (2017)*; and *the Growth Plan for the Greater Golden Horseshoe (GGH) (2019)* were reviewed for this study.

With respect to this AIA and the four provincial land use plans, a review of the boundaries of the Greenbelt Plan Area, the Oak Ridges Moraine Area, the Niagara Escarpment Plan Area, and the Growth Plan for the Greater Golden Horseshoe Area was completed. It was determined that the Study Area (and Secondary Study Area) were located within the Greenbelt Plan Area, and the Growth Plan for the Greater Golden Horseshoe Area.

A review of the agricultural policies in the *Halton Region Official Plan (Office Consolidation June 19, 2018)*, the *Town of Milton Official Plan (Consolidation August 2008)*, and *The Corporation of the Town of Milton Report # PD-029-18 (June 18, 2018)*, was completed.

The *Town of Milton Comprehensive Zoning By-Law 016-2014* and the *Town of Milton Comprehensive Zoning By-Law 144-2003* were also reviewed for this study.

It was determined through these reviews, that neither the Study Area nor the Secondary Study Area are located in a Provincially designated Specialty Crop Area.

The relevant policies from the above-mentioned documents are presented as follows.

#### 3.1 PROVINCIAL AGRICULTURAL POLICY

The *Provincial Policy Statement (2020)* was enacted to document the Ontario Provincial Governments development and land use planning strategies. The *Provincial Policy Statement* provides the policy foundation for regulating the development and use of land. With respect to

the potential future development of the Study Area, the following policies may apply. Agricultural policies are addressed within Section 2.3 of the Provincial Policy Statement (2020).

- 2.3.1 *Prime agricultural areas shall be protected for long-term use for agriculture. Prime agricultural areas are areas where prime agricultural lands predominate. Specialty crop areas shall be given the highest priority for protection, followed by Canada Land Inventory Class 1, 2, and 3 lands, and any associated Class 4 through 7 lands within the prime agricultural area, in this order of priority.*
- 2.3.2 *Planning authorities shall designate prime agricultural areas and specialty crop areas in accordance with guidelines developed by the Province, as amended from time to time. 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.*
- 2.3.3 *Permitted Uses*
- 2.3.3.1 *In prime agricultural areas, permitted uses and activities are: agricultural uses, agriculture-related uses and on-farm diversified uses. Proposed agriculture-related uses and on-farm diversified uses shall be compatible with, and shall not hinder, surrounding agricultural operations. Criteria for these uses may be based on guidelines developed by the Province or municipal approaches, as set out in municipal planning documents, which achieve the same objectives.*
- 2.3.3.2 *In prime agricultural areas, all types, sizes and intensities of agricultural uses and normal farm practices shall be promoted and protected in accordance with provincial standards.*
- 2.3.3.3 *New land uses in prime agricultural areas, including the creation of lots and new or expanding livestock facilities, shall comply with the minimum distance separation formulae.*
- 2.3.4 *Lot Creation and Lot Adjustments*
- 2.3.4.1 *Lot creation in prime agricultural areas is discouraged and may only be permitted for:*
- a) *agricultural uses, provided that the lots are of a size appropriate for the type of agricultural use(s) common in the area and are sufficiently large to maintain flexibility for future changes in the type or size of agricultural operations;*
  - b) *agriculture-related uses, provided that any new lot will be limited to a minimum size needed to accommodate the use and appropriate sewage and water services;*
  - c) *a residence surplus to a farming operation as a result of farm consolidation, provided that:*
    1. *the new lot will be limited to a minimum size needed to accommodate the use and appropriate sewage and water services; and*
    2. *the planning authority ensures that new residential dwellings are prohibited on any remnant parcel of farmland created by the severance. The approach used to ensure that no new residential dwellings are permitted on the remnant parcel may be recommended by the Province, or based on municipal approaches which achieve the same objective; and*
  - d) *infrastructure, where the facility or corridor cannot be accommodated through the use of easements or rights-of-way.*
- 2.3.4.2 *Lot adjustments in prime agricultural areas may be permitted for legal or technical reasons.*
- 2.3.4.3 *The creation of new residential lots in prime agricultural areas shall not be permitted, except in accordance with policy 2.3.4.1 (c).*
- 2.3.5 *Removal of Land from Prime Agricultural Areas*
- 2.3.5.1 *Planning authorities may only exclude land from prime agricultural areas for expansions of or identification of settlement areas in accordance with policy 1.1.3.8.*
- 2.3.6 *Non-Agricultural Uses in Prime Agricultural Areas*

2.3.6.1 Planning authorities may only permit non-agricultural uses in prime agricultural areas for:

- a) extraction of minerals, petroleum resources and mineral aggregate resources; or
- b) limited non-residential uses, provided that all of the following are demonstrated:
  - 1. the land does not comprise a specialty crop area;
  - 2. the proposed use complies with the minimum distance separation formulae;
  - 3. there is an identified need within the planning horizon provided for in policy 1.1.2 for additional land to accommodate the proposed use; and
  - 4. alternative locations have been evaluated, and
    - i. there are no reasonable alternative locations which avoid prime agricultural areas; and
    - ii. there are no reasonable alternative locations in prime agricultural areas with lower priority agricultural lands.

2.3.6.2 Impacts from any new or expanding non-agricultural uses on surrounding agricultural operations and lands are to be mitigated to the extent feasible.

## 3.2 THE GREENBELT PLAN

A review of the Greenbelt Plan (2017) mapping indicates that the Study Area is located within the Protected Countryside of the Greenbelt Area.

*The Protected Countryside contains an Agricultural System that provides a continuous, productive and permanent agricultural land base and a complementary agri-food network that together enable the agri-food sector to thrive.*

The review of the Greenbelt Plan mapping also indicated that portions of the Secondary Study Area are located within the Protected Countryside of the Greenbelt area, while other portions are located within the Niagara Escarpment Plan area.

Figure 2 illustrates the relative location of the Greenbelt Plan Area with respect to the Study Area and the Secondary Study Area.

The Greenbelt Plan has specific policies for Prime Agricultural Lands and provides the policies in Section 3.13. Section 3.1.3 states:

*For lands falling within prime agricultural areas of the Protected Countryside, the following policies shall apply:*

- 1. *All types, sizes and intensities of agricultural uses and normal farm practices shall be promoted and protected and a full range of agricultural uses, agriculture-related uses and on-farm diversified uses are permitted based on provincial Guidelines on Permitted Uses in Ontario's Prime Agricultural Areas. Proposed agriculture-related uses and on-farm diversified uses shall be compatible with and shall not hinder surrounding agricultural operations.*
- 2. *Lands shall not be redesignated in official plans for non-agricultural uses except for:*
  - a) *Refinements to the prime agricultural area and rural lands designations, subject to the policies of section 5.3; or*
  - b) *Settlement area boundary expansions, subject to the policies of section 3.4.*
- 3. *Non-agricultural uses may be permitted subject to the policies of sections 4.2 to 4.6. These uses are generally discouraged in prime agricultural areas and may only be permitted after the completion of an agricultural impact assessment.*

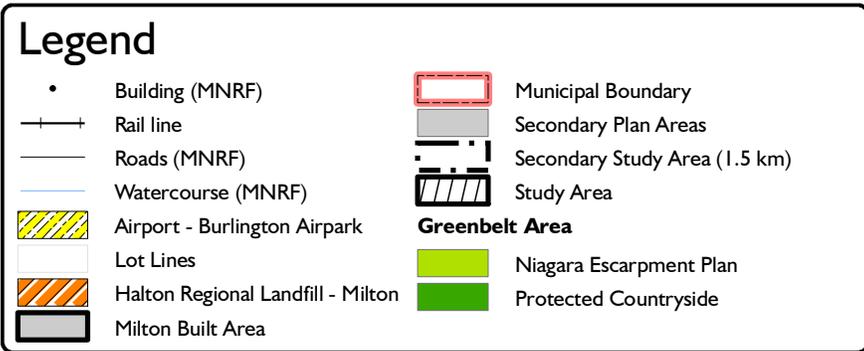
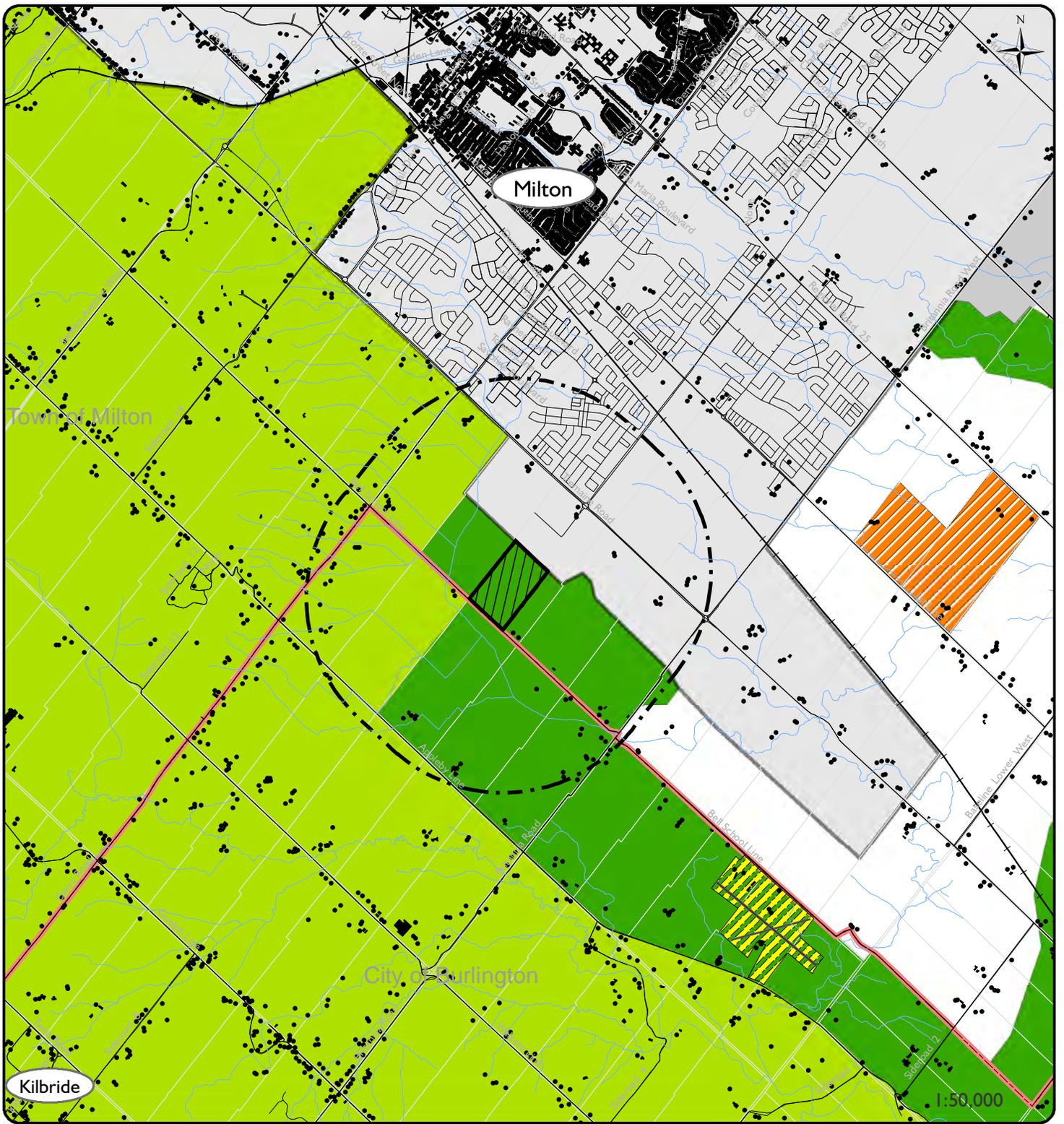


Figure 2  
Greenbelt Area Mapping

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September 2021

4. *New land uses, including the creation of lots (as permitted by the policies of this Plan), and new or expanding livestock facilities, shall comply with the minimum distance separation formulae.*
5. *Where agricultural uses and non-agricultural uses interface, land use compatibility shall be achieved by avoiding or, where avoidance is not possible, minimizing and mitigating adverse impacts on the Agricultural System, based on provincial guidance. Where mitigation is required, measures should be incorporated as part of the non-agricultural uses, as appropriate, within the area being developed.*
6. *The geographic continuity of the agricultural land base and the functional and economic connections to the agri-food network shall be maintained and enhanced.*

With respect to this AIA, where the proposed future development of portions of the Study Area would comprise Green Infrastructure (storm water management ponds), the General Policies for the Protected Countryside are provided in Section 4.2 Infrastructure. Select policies, relevant to this AIA are provided below.

2. *The location and construction of infrastructure and expansions, extensions, operations and maintenance of infrastructure in the Protected Countryside are subject to the following:*
  - a) *Planning, design and construction practices shall minimize, wherever possible, the amount of the Greenbelt, and particularly the Natural Heritage System and Water Resource System, traversed and/or occupied by such infrastructure;*
  - b) *Planning, design and construction practices shall minimize, wherever possible, the negative impacts on and disturbance of the existing landscape, including, but not limited to, impacts caused by light intrusion, noise and road salt;*
  - c) *Where practicable, existing capacity and co-ordination with different infrastructure services shall be optimized so that the rural and existing character of the Protected Countryside and the overall hierarchy of areas where growth will be accommodated in the GGH established by the Greenbelt Plan and the Growth Plan are supported and reinforced;*
  - d) *New or expanding infrastructure shall avoid key natural heritage features, key hydrologic features or key hydrologic areas unless need has been demonstrated and it has been established that there is no reasonable alternative;*
  - e) *Where infrastructure does cross the Natural Heritage System or intrude into or result in the loss of a key natural heritage feature, key hydrologic feature or key hydrologic areas, including related landform features, planning, design and construction practices shall minimize negative impacts on and disturbance of the features or their related functions and, where reasonable, maintain or improve connectivity;*
  - f) *New or expanding infrastructure shall avoid specialty crop areas and other prime agricultural areas in that order of priority, unless need has been demonstrated and it has been established that there is no reasonable alternative;*
  - g) *Where infrastructure crosses prime agricultural areas, including specialty crop areas, an agricultural impact assessment or equivalent analysis as part of an environmental assessment shall be undertaken;*

Section 4.2.3 of the Greenbelt Plan (2017) provides policy for Stormwater Management and Resilient Infrastructure. The policies relevant to this AIA are provided below.

4. *Applications for development and site alteration in the Protected Countryside shall be accompanied by a stormwater management plan which demonstrates that:*
  - a) *Planning, design and construction practices will minimize vegetation removal, grading and soil compaction, sediment erosion and impervious surfaces;*
  - b) *An integrated treatment approach will be used to minimize stormwater flows and mimic natural hydrology through lot level controls, low impact development and other conveyance techniques;*
  - c) *Applicable recommendations, standards or targets within a subwatershed plan or equivalent and*

*water budgets will be complied with; and*  
*d) Applicable objectives, targets, and any other requirements within a stormwater master plan will be met in accordance with the policies in subsection 3.2.7 of the Growth Plan.*

Therefore, as identified in the Greenbelt Plan (2017) policy, infrastructure is an allowable land use within the Protected Countryside.

### **3.3 THE NIAGARA ESCARPMENT PLAN**

A review of the boundaries of the Niagara Escarpment Plan (and associated digital mapping) was also completed. The review indicated that no portions of the Study Area are located within the Niagara Escarpment Plan area, however, portions of the Secondary Study Area were identified within the Niagara Escarpment Plan area. The portions of the Secondary Study Area within the Niagara Escarpment Plan area were located to the north and northwest of the Study Area.

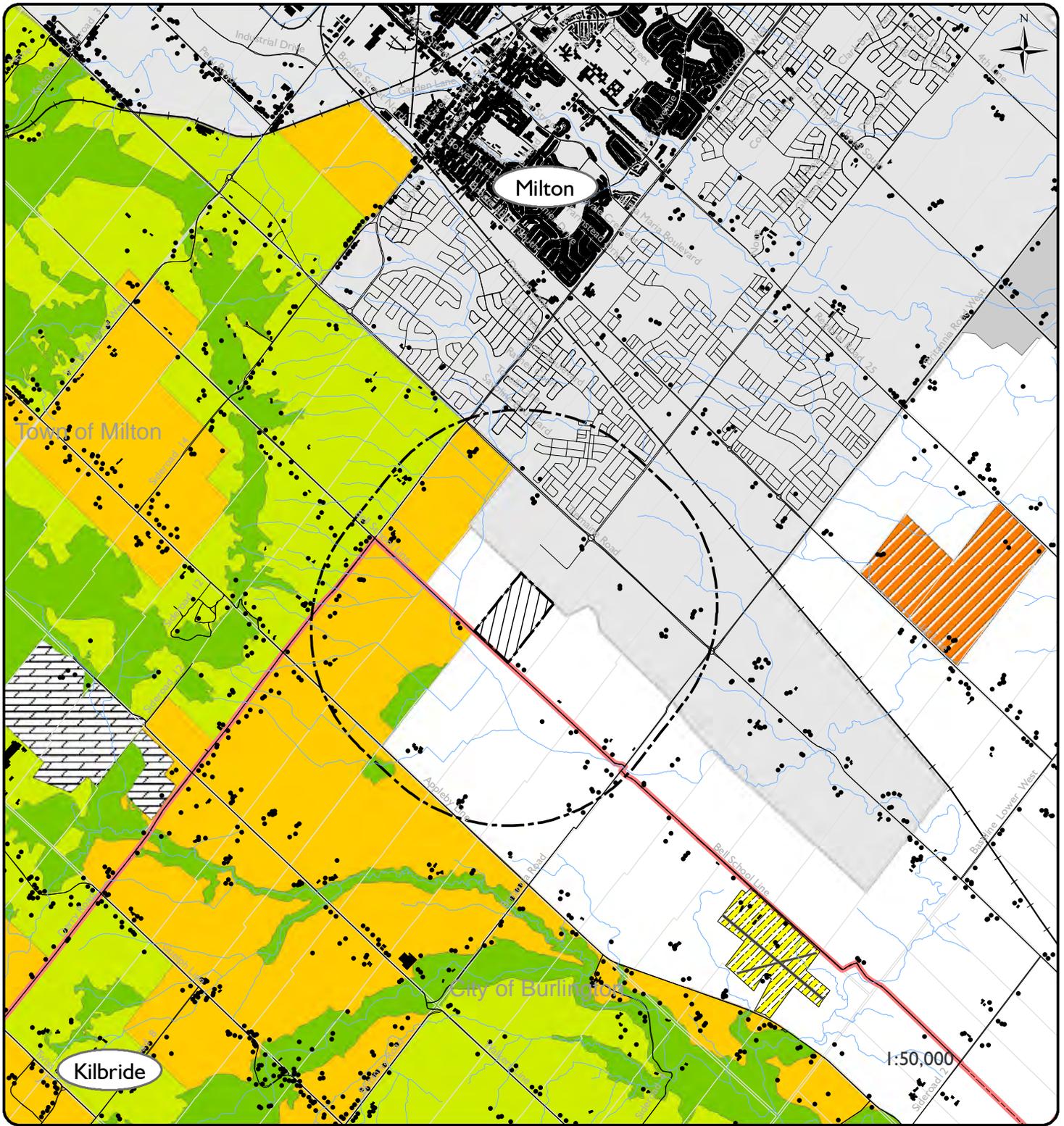
Portions of the Secondary Study Area were located within the Escarpment Natural Area, the Escarpment Rural Area and the Escarpment Protection Area. Figure 3 illustrates the location of the respective Niagara Escarpment Plan designations in relation to the Study Area and Secondary Study Area. The respective policies for the Escarpment Rural Area are presented in section 1.5 of the Niagara Escarpment Plan. The respective policies for the Escarpment Natural Area and the Escarpment Protection Area are presented in sections 1.3 and 1.4 of the Niagara Escarpment Plan respectively.

The Escarpment Rural Area and the Escarpment Protection Area include (among other uses) agricultural, agricultural related uses and on-farm diversified uses. The Escarpment Natural Area allows existing uses (for greater certainty, includes existing agricultural uses, existing agriculture-related uses and existing on-farm diversified uses).

### **3.4 THE GROWTH PLAN FOR THE GREATER GOLDEN HORSESHOE**

A review of the boundaries of the Growth Plan for the Greater Golden Horseshoe area was completed. It was determined that the Study Area lands are located within the Growth Plan for the Greater Golden Horseshoe mapped area and are designated as Prime Agricultural Lands. Portions of the Secondary Study Area were also designated as Prime Agricultural Lands. There are no Specialty Crop Lands within either the Study Area lands or the Secondary Study Area.

Figure 4 illustrates the relative location of the Study Area and the Secondary Study Area with respect to the Agricultural Land Base defined for the Growth Plan for the Greater Golden Horseshoe.

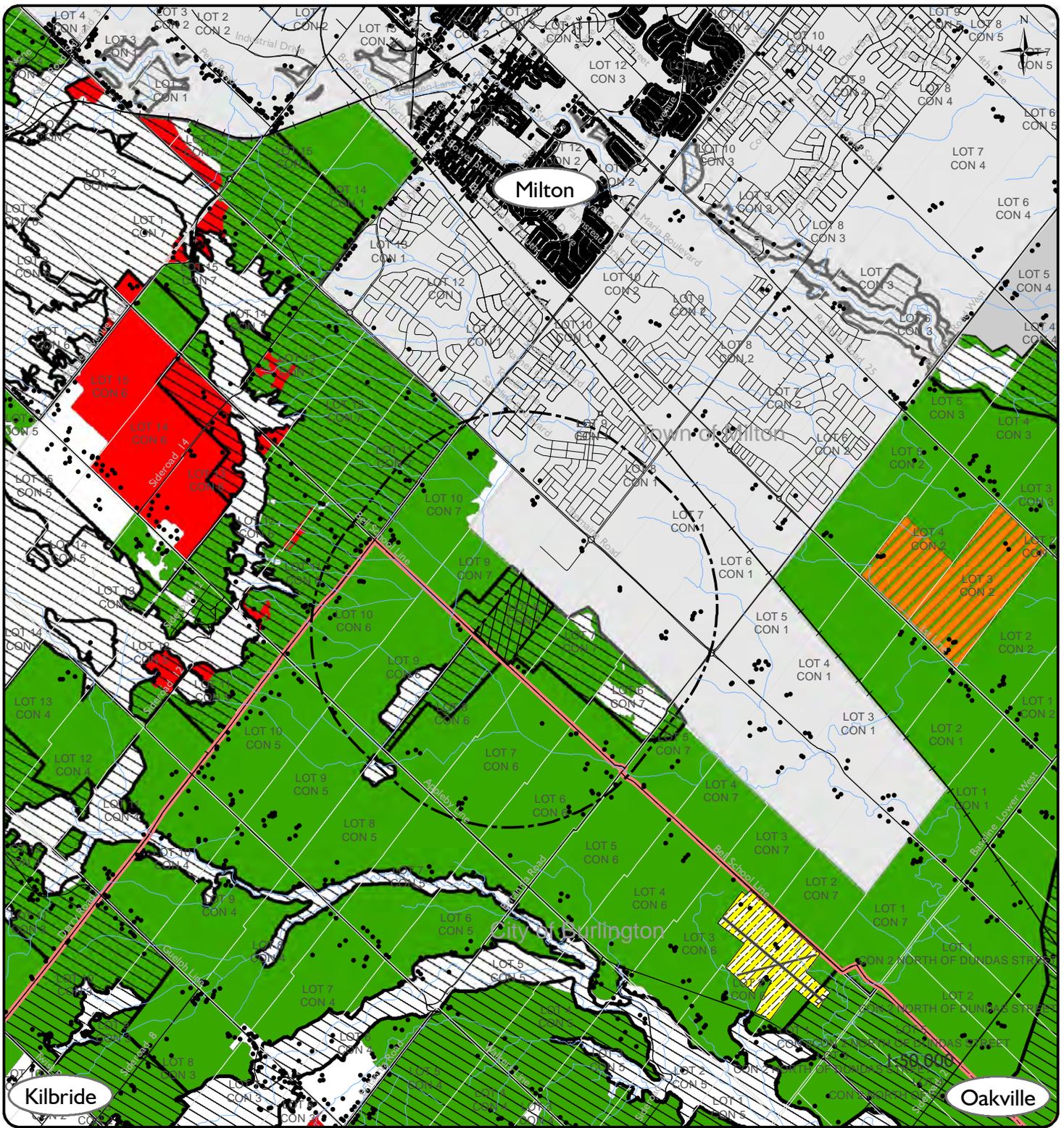


**Legend**

• Building (MNRF)	Secondary Plan Areas
— Rail line	Secondary Study Area (1.5 km)
— Roads (MNRF)	Study Area
— Watercourse (MNRF)	<b>Niagara Escarpment Plan Designations (MNRF)</b>
▨ Airport - Burlington Airpark	Escarpment Natural Area
▨ Halton Regional Landfill - Milton	Escarpment Protection Area
— Lot Lines	Escarpment Recreation Area
▨ Milton Built Area	Escarpment Rural Area
▨ Municipal Boundary	Mineral Resource Extraction Area
	Urban Area

Figure 3  
**Niagara Escarpment Plan**

DBH Soil Services Inc.  
 September 2021



### Legend

- |                                     |                                 |
|-------------------------------------|---------------------------------|
| • Building (MNRF)                   | ▭ Municipal Boundary            |
| —+— Rail line                       | ▭ Natural Heritage System Area  |
| — Roads (MNRF)                      | ▭ Secondary Plan Areas          |
| — Watercourse (MNRF)                | ▭ Study Area                    |
| ▨ Airport - Burlington Airport      | ▭ Secondary Study Area (1.5 km) |
| ▨ Halton Regional Landfill - Milton | <b>Provincial Land Base</b>     |
| ▭ Lot Lines                         | ▭ Candidate Area                |
| ▭ Milton Built Area                 | ▭ Prime Agricultural Area       |
|                                     | ▭ Specialty Crop Area           |

Figure 4

### Provincial Land Base

DBH Soil Services Inc.

September 2021

Chapter 4 of the *Growth Plan for the Greater Golden Horseshoe (2019)* provides policy and direction for protecting *what is valuable*. With respect to this AIA, the Agricultural System is *valuable*.

The respective policies for the Agricultural System are as follows:

#### 4.2.6 Agricultural System

1. An Agricultural System for the GGH has been identified by the Province.
2. Prime agricultural areas, including specialty crop areas, will be designated in accordance with mapping identified by the Province and these areas will be protected for long-term use for agriculture.
3. Where agricultural uses and non-agricultural uses interface outside of settlement areas, land use compatibility will be achieved by avoiding or where avoidance is not possible, minimizing and mitigating adverse impacts on the Agricultural System. Where mitigation is required, measures should be incorporated as part of the non-agricultural uses, as appropriate, within the area being developed. Where appropriate, this should be based on an agricultural impact assessment.
4. The geographic continuity of the agricultural land base and the functional and economic connections to the agri-food network will be maintained and enhanced.
5. The retention of existing lots of record for agricultural uses is encouraged, and the use of these lots for non-agricultural uses is discouraged.
6. Integrated planning for growth management, including goods movement and transportation planning, will consider opportunities to support and enhance the Agricultural System.
7. Municipalities are encouraged to implement regional agri-food strategies and other approaches to sustain and enhance the Agricultural System and the long-term economic prosperity and viability of the agri-food sector, including the maintenance and improvement of the agri-food network by:
  - a) providing opportunities to support access to healthy, local, and affordable food, urban and near-urban agriculture, food system planning and promoting the sustainability of agricultural, agri-food, and agri-product businesses while protecting agricultural resources and minimizing land use conflicts;
  - b) protecting, enhancing, or supporting opportunities for infrastructure, services, and assets. Where negative impacts on the agri-food network are unavoidable, they will be assessed, minimized, and mitigated to the extent feasible; and
  - c) establishing or consulting with agricultural advisory committees or liaison officers.
8. Outside of the Greenbelt Area, provincial mapping of the agricultural land base does not apply until it has been implemented in the applicable upper- or single-tier official plan. Until that time, prime agricultural areas identified in upper- and single-tier official plans that were approved and in effect as of July 1, 2017 will be considered the agricultural land base for the purposes of this Plan.
9. Upper- and single-tier municipalities may refine provincial mapping of the agricultural land base at the time of initial implementation in their official plans, based on implementation procedures issued by the Province. For upper-tier municipalities, the initial implementation of provincial mapping may be done separately for each lower-tier municipality. After provincial mapping of the agricultural land base has been implemented in official plans, further refinements may only occur through a municipal comprehensive review.

### 3.5 OFFICIAL PLAN POLICY

Official Plan policies are prepared under the Planning Act, as amended, of the Province of Ontario. Official Plans generally provide policy comment for land use planning while taking into consideration the economic, social and environmental impacts of land use and development concerns. For the purpose of this AIA study, a review of the agricultural policies in the *Halton Region Official Plan* (Office Consolidation June 19, 2018), the *Town of Milton Official Plan* (Consolidation August 2008), the *Official Plan of the Burlington Planning Area* (Office Consolidation

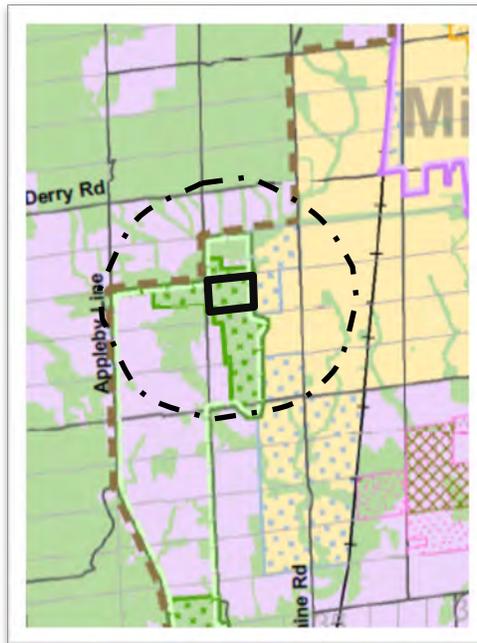
December 2019) and *The Corporation of the Town of Milton Report # PD-029-18* (June 18, 2018) was completed.

### 3.5.1 HALTON REGION OFFICIAL PLAN (OFFICE CONSOLIDATION)

A review of the *Halton Region Official Plan (Office Consolidation June 19, 2018)* Map I – Regional Structure revealed that the Subject Lands are identified as Regional Natural Heritage System\* and Greenbelt Natural Heritage System (Overlay). The Secondary Study Area comprises the Regional Natural Heritage System\*, Greenbelt Natural Heritage System (Overlay), Urban areas, and Prime Agricultural Areas

Figure 5 illustrates a select portion of the Regional Structure Map (Halton Region Official Plan). The approximate location of the Study Area is illustrated as a solid line, while the approximate location of the Secondary Study Area is illustrated as a dashed line.

Figure 5 Regional Structure (Halton Region Official Plan)



Source: Map I Regional Structure – Halton Region Official Plan (Office Consolidation June 19, 2018)



Halton's planning vision is defined in Sections 25 to 33 of the Halton Region Official Plan (Office Consolidation June 19, 2018). Halton Region supports sustainable development by making planning decisions based on a balance of factors that protect "the natural environment, preserving Prime Agricultural Areas, enhancing its economic competitiveness, and fostering a healthy, equitable society." Halton's planning vision consists of three principal categories of land uses:

1. *settlement areas with identifiable communities,*
2. *a rural countryside where agriculture is the preferred and predominant activity, and*
3. *a natural heritage system that is integrated within settlement areas and the rural countryside, to preserve and enhance the biological diversity and ecological functions of Halton.*

Section 139.9 of the Halton Region Official Plan (Office Consolidation June 19, 2018) provides policy on the Prime Agricultural Areas in the Region of Halton. Additional development policies related to agricultural lands are provided in Sections 90 – 101 (Agricultural System and Agricultural Area). The objectives of the Agricultural System are to recognize, promote and preserve agriculture uses and Prime Agricultural Lands and Areas. The objectives also promote the normal farming practices and protect the right to farm, aim to reduce fragmentation of lands. Section 101 provides the policy of the Region to recognize the Agricultural System.

Select policies are presented as follows.

77.5. *Require the Local Municipalities to prepare Area-Specific Plans or policies for major growth areas, including the development or redevelopment of communities. The area may contain solely employment lands without residential uses or solely an Intensification Area. Such plans or policies shall be incorporated by amendment into the Local Official Plan and shall demonstrate how the goals and objectives of this Plan are being attained and shall include, among other things:*

- q) *an Agricultural Impact Assessment on potential impact of urban development on existing agricultural operations, including the requirement for compliance with the Minimum Distance Separation formulae where an agricultural operation is outside the Urban Area.*

101. *It is the policy of the Region to:*

1. *Require Local Official Plans to recognize the Agricultural System as identified in this Plan and Local Zoning By-laws to permit agricultural operations within the Agricultural System in accordance with policies of this Plan.*

1.1 *Adopt and update from time to time, and incorporate by amendment to this Plan appropriate recommendations of an Aquifer Management Plan that will, among other things:*

- a) *determine whether the groundwater resources can support in the long term activities and land uses within the Agricultural Area and the Region's Natural Heritage System and in those parts of the Urban Area that rely on well water supply;*
- b) *identify those areas which are susceptible to water quantity and quality problems;*
- c) *identify those areas where good quality water is generally available to sustain additional rural settlement;*
- d) *examine the impact of private, individual wastewater disposal systems on the quality of groundwater; and*
- e) *propose procedures for the on-going monitoring and protection of the aquifers.*

1.2. *Prohibit the creation of new lots for residential purposes except in Hamlets or Rural Clusters, or otherwise permitted by policies of this Plan.*

1.3. *Require that all development in the Agricultural System be only on the basis of private, individual well water supply and private, individual waste water treatment system that conform to Regional By-laws and standards, and to Provincial legislation, regulations and standards, unless otherwise permitted by the policies of this Plan, with the following exception:*

1.6. Recognize and protect lands within the Agricultural System as an important natural resource to the economic viability of agriculture and to this end:

- a) Direct non-farm uses to the Urban Area, Hamlets and Rural Clusters unless specifically permitted by policies of this Plan.
- b) Promote the maintenance or establishment of woodlands and treescapes on farms.
- c) Encourage farmers to adopt farm practices that will sustain the long term productivity of the land and minimize adverse impact to the natural environment.

1.7. Require that new land uses, including the creation of lots, and new or expanding livestock facilities within the Agricultural System comply with the provincially developed Minimum Distance Separation formulae.

1.8. Require an Environmental Impact Assessment for new development in accordance with Sections 118(3), 118(3.1) and 139.3.7(4).

2. Recognize, encourage and protect agriculture as an important industry in Halton and as the primary long-term activity and land use throughout the Agricultural System, and to this end:

- a) Support and develop plans and programs that promote and sustain agriculture.
- b) Monitor, investigate and periodically report on its conditions, problems, trends and means to maintain its competitiveness.
- c) Adopt a set of Livestock Facility Guidelines to support and provide flexibility to livestock operations and to promote best management practices in improving their compatibility with non-farm uses. These guidelines shall be developed in accordance with Provincial Plans and policies, including but not limited to Minimum Distance Separation formulae and the Right to Farm legislation.
- d) Require Local Municipalities to apply provincially developed Minimum Distance Separation formulae in their Zoning By-laws.
- e) Require the proponent of any non-farm land use that is permitted by specific policies of this Plan but has a potential impact on adjacent agricultural operations to carry out an Agricultural Impact Assessment (AIA), based on guidelines adopted by Regional Council.
- f) Support programs to reduce trespassing on agricultural operations and discourage the location of public trails near agricultural operations.
- g) Preserve the agricultural land base by protecting Prime Agricultural Areas as identified on Map 1E.

139.9 The purpose of the Prime Agricultural Areas, as shown on Map 1E, is to assist in interpreting policies of this Plan and to assist the City of Burlington and the Towns of Milton and Halton Hills in developing detailed implementation policies for their respective Official Plans.

139.9.1 The Prime Agricultural Areas shown on Map 1E include lands in the Agricultural Area and Regional Natural Heritage System designations. Together these lands support and advance the goal to maintain a permanently secure, economically viable agricultural industry and to preserve the open space character and landscape of Halton's non-urbanized area.

139.9.2 It is the policy of the Region to:

- (1) Require Local Municipalities to designate Prime Agricultural Areas in accordance with Map 1E, within their Official Plans and include detailed supporting policies which implement the related goals, objectives and policies of this Plan.
- (2) Within the Greenbelt Plan Area, prohibit the redesignation of land within Prime Agricultural Areas to permit non-agricultural uses, except where permitted by the Greenbelt Plan.
- (3) Outside the Greenbelt Plan Area, permit the removal of land from Prime Agricultural Areas only where the following have been demonstrated through appropriate studies to the satisfaction of the Region:
  - a) necessity for such uses within the planning horizon for additional land to be designated to accommodate the proposed uses;
  - b) amount of land area needed for such uses;
  - c) reasons for the choice of location;
  - d) justification that there are no reasonable alternate locations of lower capability agricultural lands;
  - e) no negative impact to adjacent agricultural operations and the natural environment;
  - f) there are no reasonable alternatives that avoid Prime Agricultural Areas as shown on Map 1E, and
  - g) the land does not comprise a specialty crop area.

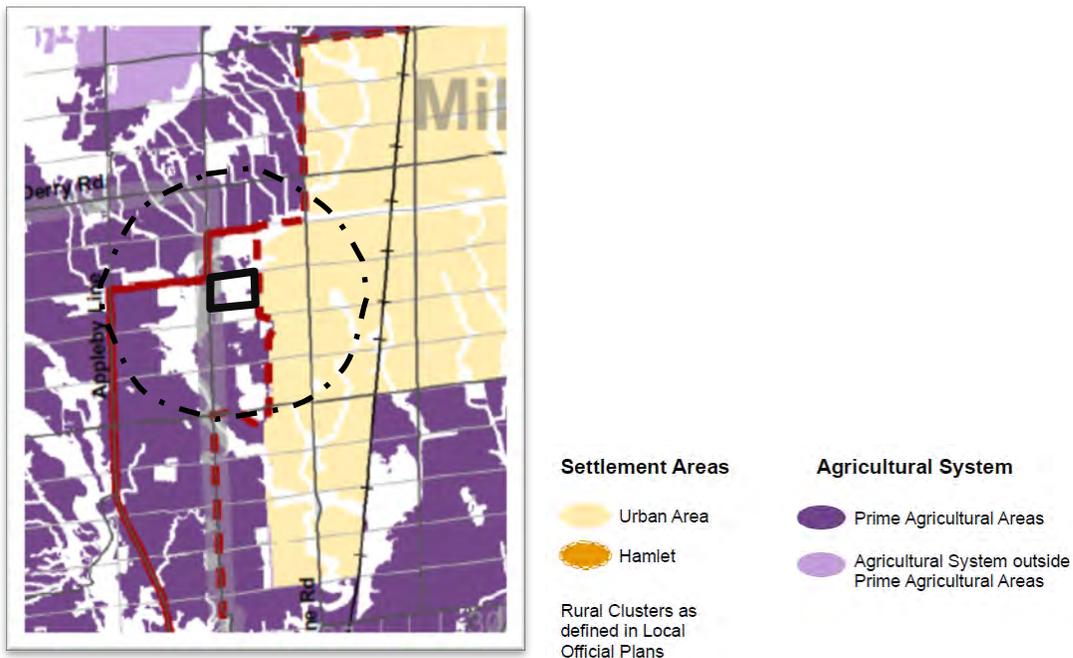
Extraction of mineral aggregate resources is permitted in Prime Agricultural Areas in accordance with Section 110(6.1).

A review of the Halton Region Official Plan (Office Consolidation June 19, 2018) Map 1E illustrates the Agricultural System and Settlement Areas. Figure 6 illustrates select portions of the Map 1E. As illustrated in Figure 6, the Study Area is comprised of two very small pieces of Prime Agricultural Areas.

The Secondary Study Area includes portions of Urban Areas and Prime Agricultural Areas.

There are no specialty crop areas defined within the Region of Halton. The Study Area and Secondary Study Areas do not comprise any lands designated as specialty crop lands/areas. The Study Area is illustrated as a solid black line, while the Secondary Study Area is illustrated as a dashed black line.

Figure 6 Agricultural System and Settlement Areas (Halton Region Official Plan)



Source: Map 1E Agricultural System and Settlement Areas – Halton Region Official Plan (Office Consolidation June 19, 2018)

### 3.5.2 TOWN OF MILTON OFFICIAL PLAN

The *Town of Milton Official Plan (Consolidated August 2008)* was reviewed to determine the designated land uses within the Study Area and Secondary Study Area. The review of the documentation indicated that there is an approved Official Plan and that there are Official Plan Amendments that are subject to approval. The following section provides policy, mapping and comment on the official plan.

### 3.5.2.1 Town of Milton Official Plan (Consolidated August 2008)

The *Town of Milton Official Plan (Consolidated August 2008) (Approved)* was reviewed for to determine the designated land uses within the Study Area and Secondary Study Area.

Figure 7 provides an illustration of select portions of the *Town of Milton Official Plan (Consolidated August 2008) Schedule A – Land Use*. As illustrated in Figure 7, portions of the Study Area are designated as Agricultural Area and Greenlands A Areas, with the majority of the Study Area illustrated as Greenlands A. Portions of the Secondary Study Area have been designated as Urban Areas (Milton), Escarpment Protection Area, Escarpment Rural Area, Agricultural Area, and Greenlands A Area. There are no specialty crop areas defined in the *Town of Milton Official Plan (Consolidated August 2008) Schedule A – Land Use*.

General Agricultural Area policies are presented in Section 4.4 of the *Town of Milton Official Plan (Consolidated August 2008)*. The respective policies are provided below.

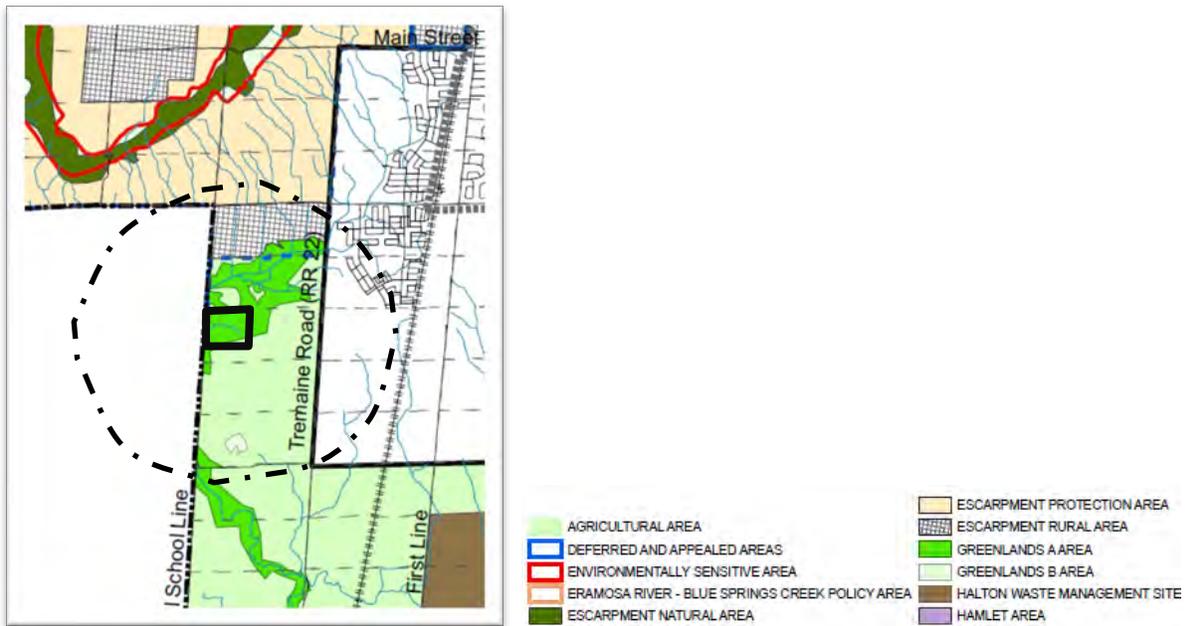
#### 4.4.1 GENERAL PURPOSE

4.4.1.1 The purpose of the Agricultural Area designation is:

- a) To recognize agriculture as the primary activity and land use;
- b) To preserve prime agricultural soil;
- c) To maintain as much as possible lands for existing and future farm use;
- d) To protect farms from incompatible activities and land uses which would limit agricultural productivity or efficiency;
- e) To reduce the fragmentation of lands suitable for agriculture and provide for their consolidation;
- f) To provide for the rental of farming lands for agricultural purposes;
- g) To promote a diverse, innovative and economically strong agricultural industry in Milton;
- h) To promote agriculture-related tourism and direct sales of farm produce and accessory products to visitors;
- i) To preserve the farm community as an important part of the Town's rural fabric;
- j) To promote environmentally sensitive and sustainable farm practice;
- k) To retain or increase tree cover for harvest, soil erosion protection and buffering from adjoining non-farm land;
- l) To preserve the open-space character, topography and landscape of the Agricultural Area;
- m) To ensure that lands can sustain agricultural activity without environmental degradation;
- n) To promote agricultural uses in a manner sensitive to the ecological balance and the farming community; and,
- o) To prohibit the dumping of non-agricultural soils, fill, concrete or other such materials anywhere within the Agricultural Area.

No portions of the Study Area or Secondary Study Area are located within a Municipality designated Specialty Crop Area.

Figure 7 Schedule A – Land Use (Town of Milton Official Plan)



Source: Schedule A – Land Use - Town of Milton Official Plan

### 3.5.3 THE CORPORATION OF THE TOWN OF MILTON REPORT # PD-029-18 (JUNE 18, 2018),

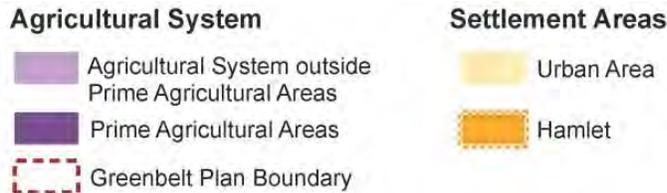
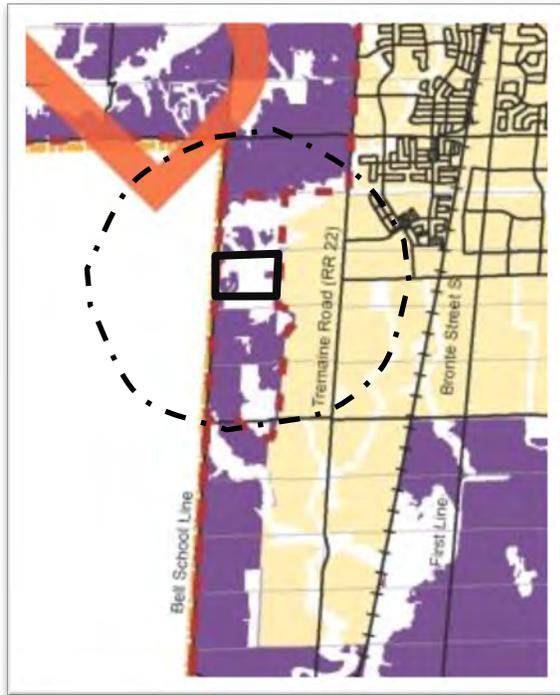
The Corporation of the Town of Milton Report # PD-029-18 (June 18, 2018), the Amendment No. \_\_\_ to the Official Plan of the Town of Milton (August 2020), and the Town of Milton website were reviewed to determine the status and changes to the land use mapping for the Town of Milton.

The review of the Corporation of the Town of Milton Report # PD-029-18 (June 18, 2018), the Amendment No. \_\_\_ to the Official Plan of the Town of Milton (August 2020) indicated that the built area of Milton has been expanded to the west of Tremaine Road (mid lot), south to Part Lot 2, and east to the rail line. Figure 8 illustrates this new urban area as illustrated in the Town of Milton Official Plan Schedule O – Agricultural System and Settlement Areas Draft.

For the purposes of this AIA, this urban boundary (built area) will be considered as the official urban boundary designated area. The approximate location of the Study Area is illustrated as a solid black line, while the approximate location of the Secondary Study Area is illustrated as a dashed black line.

Similar to the information provided in Figure 6, Figure 8 illustrates that two small portions of the Study Area are designated as Prime Agricultural lands, with the majority of the Study Area considered as non-prime agricultural lands.

Figure 8 The Corporation of the Town of Milton Report # PD-029-18 (June 18, 2018) – Schedule O



Source: *The Corporation of the Town of Milton Report # PD-029-18 (June 18, 2018) – Town of Milton Official Plan -Schedule O – Agricultural System and Settlement Areas (Draft)*

### 3.5.4 CITY OF BURLINGTON OFFICIAL PLAN

The *Official Plan of the Burlington Planning Area (City of Burlington Office Consolidation December 2019)* was reviewed to determine the extent of land use (agriculture) that occurs west of Bell School Line. As noted in Figure 7 and 8 (above), the Secondary Study Area extends beyond Bell School Road. As a result, it is necessary to determine the land uses in that area.

Figure 9 comprises portions of the *Official Plan of the Burlington Planning Area (City of Burlington Office Consolidation December 2019) Schedule C – Comprehensive Land Use Plan – Rural Planning Area*.

As illustrated in Figure 9, the Study Area is defined as a black line and the Secondary Study Area is presented as a dashed line. Portions of the Secondary Study Area comprise areas of Agricultural Rural Area, Greenlands (Escarpment Plan Area), Greenlands (Non-Escarpment Plan Area), and Escarpment Rural Area.

Agricultural Rural Area policy is provided in Section 2.2 of the *Official Plan of the Burlington Planning Area (City of Burlington Office Consolidation December 2019)*. Escarpment Rural Area and Greenlands (Escarpment Plan Area) are presented in Sections 2.3 and 2.5 respectively.

Select policy from the Agricultural Rural Area are provided below.

2.2.2 Policies \*D22, D23 Basis for designation

a) Lands designated Agricultural Rural Area include areas having rural open space landscape character, and containing agricultural lands. Permitted uses

Figure 9 Schedule C (Official Plan of the Burlington Planning Area)



Source: Schedule C – Comprehensive Land Use Plan – Rural Planning Area – Official Plan of the Burlington Planning Area (City of Burlington Office Consolidation December 2019)

b) The following uses may be permitted within the Agricultural Rural Area:

- (i) agricultural operations including accessory buildings, structures, facilities and dwellings;
- (ii) existing uses;
- (iii) single-detached dwellings on existing lots created under *The Planning Act*;
- (iv) dwellings accessory to an agricultural operation provided: the farm is operated by a commercial farmer; the accessory dwelling is required to house farm help or a retiring farmer; and the accessory dwelling is sited as part of the cluster of existing farm buildings. The accessory dwelling may be a mobile or portable home.
- (v) forest, wildlife and fisheries management;
- (vi) archaeological activities;
- (vii) transportation and utility facilities;

- (viii) accessory buildings, structures and facilities (e.g., a garage or farm pond) and site modifications to accommodate them;*
- (ix) incidental uses (e.g., swimming pools, tennis courts and ponds) and site modifications to accommodate them, provided the impact on the natural environment is minimal;*
- (x) wayside pits and quarries and portable asphalt plants for the purposes of public road construction;*
- (xi) businesses that may not be related to agriculture, provided that: OPA 55 i. their scale is minor and does not change the appearance of the farming operation; ii. their impact such as noise, odour and traffic on surrounding land uses is minimal and will not hinder surrounding agricultural uses; iii. they meet all Regional criteria as stated in the On-Farm Business Guidelines adopted by Regional Council;*
- (xii) home occupations and cottage industries with a gross floor area not exceeding 100 sq. m. or 25 per cent of the residential living area, whichever is lesser; OPA 55*
- (xiii) home industries with a gross floor area not exceeding 200 sq. m; and located on a commercial farm and secondary to the farming operation;*
- (xiv) retail uses with a gross floor area not exceeding 500 sq. m. if located on a commercial farm and secondary to the farming operation, and the majority of the commodities for sale, measured by monetary value, produced or manufactured on the farm; OPA 55*
- (xv) agricultural-related tourism uses with a gross floor area not exceeding 250 sq. m. and if located on a commercial farm and secondary to the farming operation; OPA 55*
- (xvi) bed and breakfast uses with 3 or less guest bedrooms;*
- (xvii) veterinary clinics serving the agricultural community;*
- (xviii) animal kennels in conjunction with a single-detached dwelling;*
- (xix) small-scale recycling depots for paper, glass and cans, etc., serving the local community; (xx) the Bruce Trail;*
- (xxi) watershed management and flood and erosion control projects carried out or supervised by a public agency.*

### **3.5.5 THE TOWN OF MILTON COMPREHENSIVE ZONING BY-LAW**

A review of the *Town of Milton Comprehensive Zoning By-Law 144-2003 (Consolidation October 2019)* and the *Town of Milton Comprehensive Zoning By-Law 016-2014 (HUSP Urban Area – Consolidation June 2019)* was completed to determine the respective zoning within the Study Area and Secondary Study Areas. It was determined the *Town of Milton Comprehensive Zoning By-Law 144-2003 (Consolidation October 2019)* provided zoning information for the rural areas, and the *Town of Milton Comprehensive Zoning By-Law 016-2014 (HUSP Urban Area – Consolidation June 2019)* provided zoning for the urban areas.

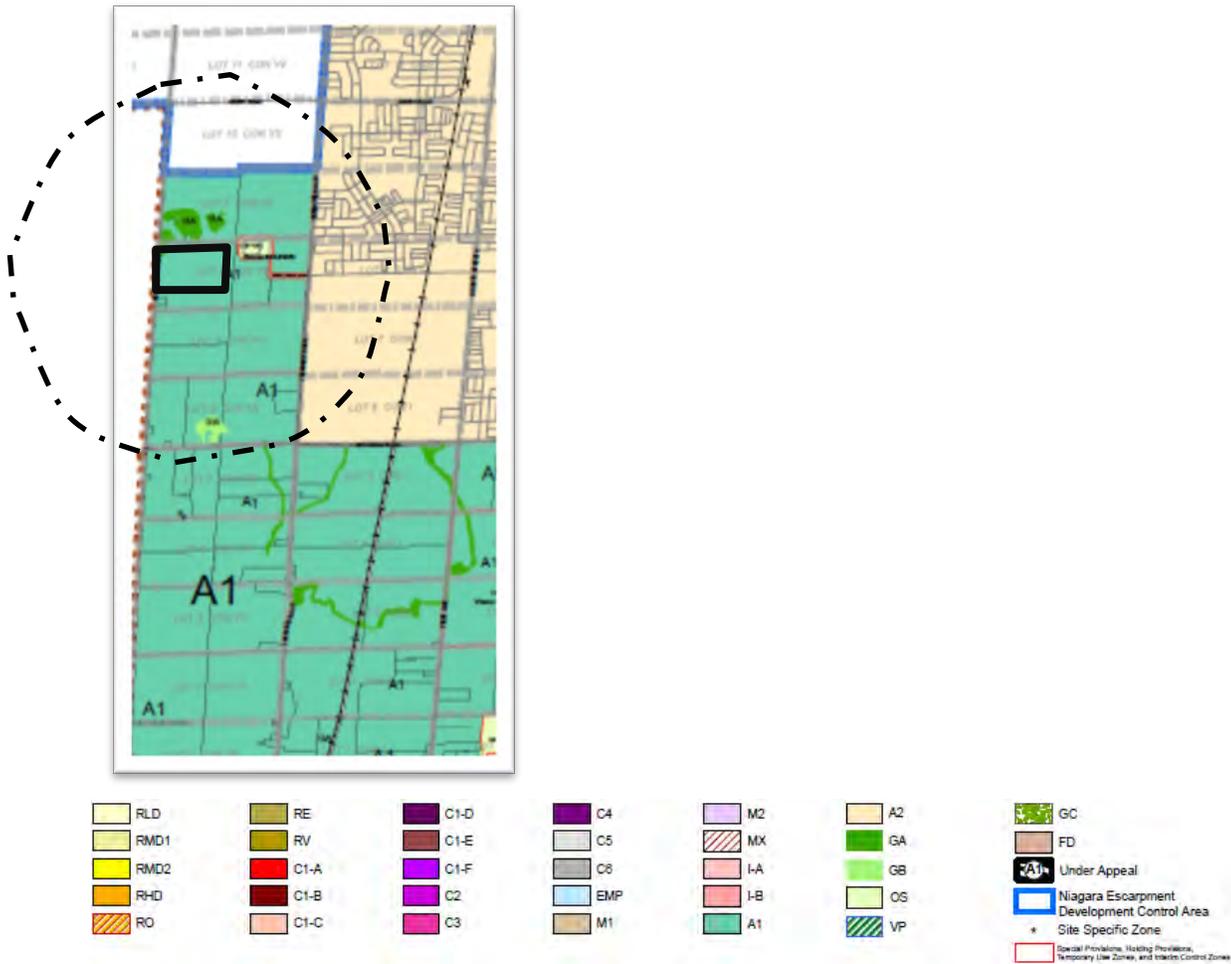
Figure 10 illustrates select portions of the *Town of Milton Comprehensive Zoning By-Law 144-2003 – Rural Area (Planning and Development Department)*. As illustrated in Figure 10, the Study Area comprises A1 Agriculture and a small area of GA. GA is identified as Greenlands A.

The Secondary Study Area comprised A1 Agricultural, GA Greenlands A, GB Greenlands B, residential, and OS\*169 (lands associated with the Velodrome).

The approximate location of the Study Area is illustrated with a solid black line circle. The approximate location of the Secondary Study Area is illustrated with a dashed black line circle.

There is no zoning in place for Specialty Crop lands.

Figure 10 Town of Milton Comprehensive Zoning By-Law 144-2003

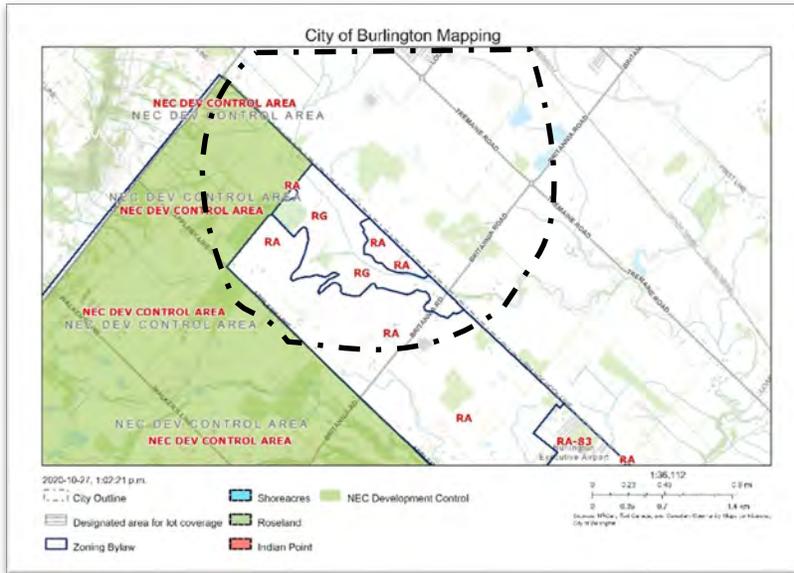


### 3.5.6 THE CITY OF BURLINGTON ZONING BY-LAW

A review of the *City of Burlington Zoning By-Law (2020)* was completed to determine the respective zoning the Secondary Study Area west of Bell School Road. Figure 11 illustrates an online mapping image from the City of Burlington website. As illustrated on Figure 11, the Secondary Study Area comprises portions of RA and RG zoning. RA zoning refers to Rural Agriculture, while RG refers to Rural Greenlands. Zoning information for the rural area is provided in Section 8 – Rural Zones. The Secondary Study Area is presented as a dashed line.

The minimum lot size in the RA and RG zones is 10 ha. There is no zoning in place for Specialty Crop lands.

Figure 11 City of Burlington Zoning By-Law



## **4 AGRICULTURAL RESOURCE POTENTIAL**

### **4.1 PHYSICAL CHARACTERISTICS**

The physiographic resources within the Study Area and the Secondary Study Area are described in this section. The physiographic resources identify the overall large area physical characteristics documented as background to the soils and landform features. These characteristics are used to support the description of the soils and agricultural potential of an area.

#### **4.1.1 PHYSIOGRAPHY**

On review of the Land Information Ontario (LIO) digital physiographic region data, and *The Physiography of Southern Ontario 3rd Edition*, (Ontario Geological Survey Special Volume 2, Ministry of Natural Resources, 1984), it was determined that the Study Area and most of the Secondary Study Area are located within the Peel Plain Physiographic unit. A small portion of the Secondary Study Area (extreme northwest section) is located within the Niagara Escarpment Physiographic unit.

The Peel Plain Physiographic unit is described as a level to undulating tract of clay soil material covering the central portions of Halton, Peel and York Regions. This area has a gradual slope toward Lake Ontario. Drainage from this area is through the Credit, Humber, Rouge and Don Rivers, each of which have cut deep valley systems.

The Niagara Escarpment Physiographic unit is described as an escarpment (rock outcrop/vertical cliffs) that extends from the Niagara River to the tip of the Bruce Peninsula, continuing north through Manitoulin Islands. The Niagara Escarpment is known for the jagged vertical cliffs of dolostone, with the slopes below carved in red shale materials. Specific to the Milton area, there is a large mesa-like formation that is separated from the main body of the Niagara Escarpment. The southernmost tip of this mesa-like feature is Rattlesnake Point. The soils on this mesa-like feature are thin, shallow and rocky.

#### **4.1.2 TOPOGRAPHY AND CLIMATE**

Topographic information was reviewed and correlated to the 1:10000 scale Ontario Base Mapping, Land Information Ontario digital contour mapping, aerial photo interpretation and windshield surveys.

The Study Area and the Secondary Study Area are a relatively simple mix of topography. The Study Area topography is gently undulating with a shallow depressional area associated with a stream located in the central and south-central area. The Secondary Study Area topography comprises gently sloping areas, and a shallow channelized, depressional area associated with a stream located north of the Study Area, continuing along the west side of Bell School Line to Britannia Road, before flowing south, southeast. This stream flows in a meandering channel.

The north west portion of the Secondary Study Area comprises steeper topography that is influenced by the Niagara Escarpment and steep slopes approaching the escarpment.

Climate data was taken from the OMAFRA document titled ‘Agronomy Guide for Field Crops – Publication 811 (June 2009)’ and the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) Factsheet – Crop Heat Units for Corn and Other Warm Season Crops in Ontario, 1993.

The Study Area and Secondary Study Area are located near the 3100 Crop Heat Units (CHU-MI) available for corn production in Ontario. The Crop Heat Units (CHU) index was originally developed for field corn and has been in use in Ontario for 30 years. The CHU ratings are based on the total accumulated crop heat units for the frost-free growing season in each area of the province. CHU averages range between 2500 near North Bay to over 3500 near Windsor. The higher the CHU value, the longer the growing season and greater are the opportunities for growing value crops.

Crop Heat Units for corn (based on 1971-2000 observed daily minimum and maximum temperature (OMAFRA, 2009)) map is illustrated on Figure 12. The approximate location of the Study Area and Secondary Study Area is marked with a blue star.

Figure 12 Crop Heat Units Map



Source: Figure I-1 Crop Heat Units – Agronomy Guide for Field Crops (Publication 811)

## 4.2 LAND USE

The land use for both the Study Area and the Secondary Study Area was completed through a windshield survey (completed in September 2021), a review of recent aerial photography, Google Earth Imagery, Bing Imagery, Birdseye Imagery, the Region of Halton online Imagery, the Town of Milton online imagery, and correlation to the OMAFRA Land Use Systems mapping. Agricultural and non-agricultural land uses are illustrated on Figure 13.

The terms used in the Agricultural Land Use assessment were derived from the OMAFRA Agricultural Resource Inventory (ARI) 1983 Coverage. It should be noted that not all terms were relevant or used in this AIA. Only the terms that were appropriate for this area were utilized. For the purposes of this AIA additional terms or more relevant terms such as 'common field crop' were used. As example, 'common field crop' indicates crop production that includes corn and soybean. The ARI 1983 Coverage land use terms include:

- Built up
- Cherries
- Corn System
- Extraction Pits and Quarries
- Grazing System
- Hay System
- Idle Agricultural Land (5 - 10 years)
- Idle Agricultural Land (> 10 years)
- Market Gardens/Truck Farms
- Mixed System
- Nursery
- Orchard
- Pasture System
- Recreation
- Reforestation
- Sod Farm
- Swamp/Marsh/Bog
- Unknown
- Vineyard
- Vineyard-Orchard
- Water
- Woodlands

The windshield survey identified the types of land uses including farm and non-farm uses (built up areas, commercial, and roads). Farms were identified as livestock or cash crop. Livestock operations were further differentiated to the type of livestock based on the livestock seen at the time of the survey, through a review of on farm infrastructure (type of buildings,

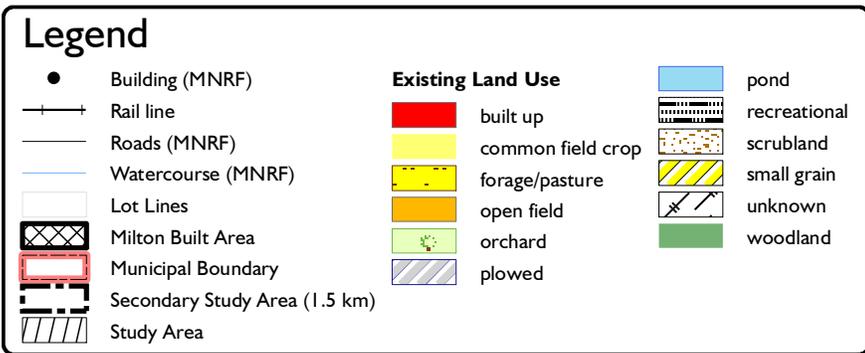
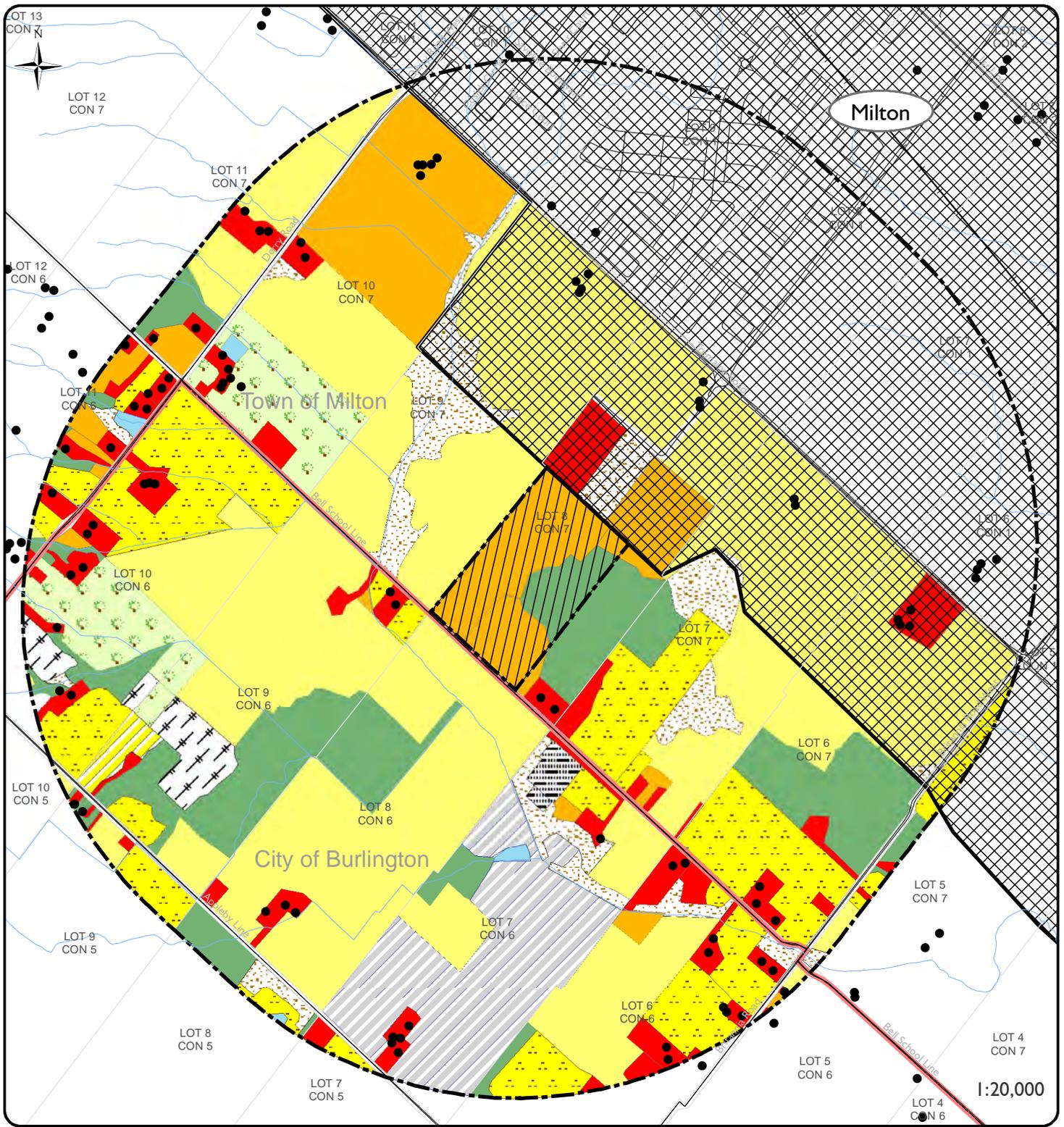


Figure 13  
Existing Land Use

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manure system, feed (bins, bales), and types of equipment) or through any signage associated with the respective agricultural operation.

It should be noted that the roadside survey is based on a line-of-sight assessment process. Therefore, dense brush, fence/tree rows, woodlands, and topography can prevent an accurate assessment of some fields and/or buildings. In those instances, measures are taken to try to identify the crop and/or buildings through conversations with landowners (if applicable) or review of aerial photography. In some instances, no information is available. In those instances, the field polygon will be identified as ‘unknown crop’ or ‘unknown building use or type’.

Agricultural cropping patterns were identified and mapped. Corn and soybean crops were mapped as common field crops. Small grains are typically characterized as including winter wheat, barley, spring wheat, oats and rye. Forage crops may include mixed grasses, clovers and alfalfa. Other areas used for pasture, haylage or hay were mapped as ‘forage/pasture’.

Non-farm (built up or disturbed areas) uses may include non-farm residential units, commercial, recreational, estate lots, services (utilities), industrial development and any areas that have been man-modified and are unsuitable for agricultural land uses (cropping).

Land Use information was digitized in Geographic Information System (GIS - Arcmap) to illustrate the character and extent of Land Use in both the Study Area and the Secondary Study Area. Area calculations for each land use polygon (area) were calculated within the GIS software and exported as tabular data. The data is presented as follows. Land use designations and land use definitions are provided in Table 1.

Table 1 Typical Land Use Designations

Land Use Designation	Land Use Definitions
Built Up/Disturbed Areas	Residential, commercial, industrial, man modified, existing road system and Velodrome area
Common Field Crop	Corn, Soybean, Cultivated
Forage/Pasture	Forage/Pasture
Quarry Lands	Quarry
Peat	Peat Production
Ponds	Ponds
Scrublands	Unused field (>5 years)
Sod	Sod Production
Small Grains	Wheat, Oats, Barley
Woodlands	Forested Areas

#### 4.2.1 LAND USE – STUDY AREA

The Study Area land use comprises open fields and woodlands. The predominant land use is open field. The Study Area comprises land uses of approximately 79.2 percent open field lands and 20.8 percent as woodlands.

#### 4.2.2 LAND USE – SECONDARY STUDY AREA

The Secondary Study Area consists of a variety of land uses including, but not limited to built-up/disturbed areas (including road corridors and the built area of Milton), common field crops, forage/pasture lands, grains, open field, orchard, open field, ponded areas, and woodland areas.

The Secondary Study Area comprises land use of approximately 26.2 percent as built up, 35.9 percent as common field crop, 9.9 percent as forage/pasture, 0.3 percent as grains, 3.4 percent as orchard lands, 5.6 percent as open field, 4.9 percent as plowed field areas, 0.2 percent as ponded areas, 0.3 percent as recreational lands (soccer fields), 4.3 percent as scrubland, 1.0 percent as unknown land use (not visible from roadside), and 8.0 percent as woodlands.

On review of the Land Use data it was observed that the predominant land uses in the Secondary Study Area include built-up areas and areas for the production of common field crops. The next greatest percent of land use is derived from forage/pasture lands, and woodlands.

Table 2 illustrates the percent occurrence of the land uses for both the Study Area and Secondary Study Area.

Table 2 Land Use – Study Area and Secondary Study Area

Land Use Designation	Study Area Percent Occurrence	Secondary Study Area Percent Occurrence
Built Up/Disturbed Areas	-	26.2
Common Field Crop	-	35.9
Forage/Pasture	-	9.9
Grains	-	0.3
Orchard	-	3.4
Open Field	79.2	5.6
Plowed	-	4.9
Pond	-	0.2
Recreational	-	0.3
Scrubland	-	4.3
Unknown	-	1.0
Woodlands	20.8	8.0
Totals	100.0	100.0

## **4.3 AGRICULTURAL INVESTMENT**

Agricultural investment is directly associated with the increase in capital investment to agricultural lands and facilities. In short, the investment in agriculture is directly related to the money used for the improvement of land through tile drainage or irrigation equipment, and through the improvements to the agricultural facilities (barns, silos, manure storage, sheds).

As a result, the lands and facilities that have increased capital investment are often considered as having greater tendency for preservation than similar capability lands and facilities that are undergoing degradation and decline. The investment in agriculture is often readily identifiable through observations of the condition and type of the facilities, field observations and a review of OMAFRA artificial tile drainage mapping.

Investment in agricultural is illustrated in Figure 14 – Agricultural Investment.

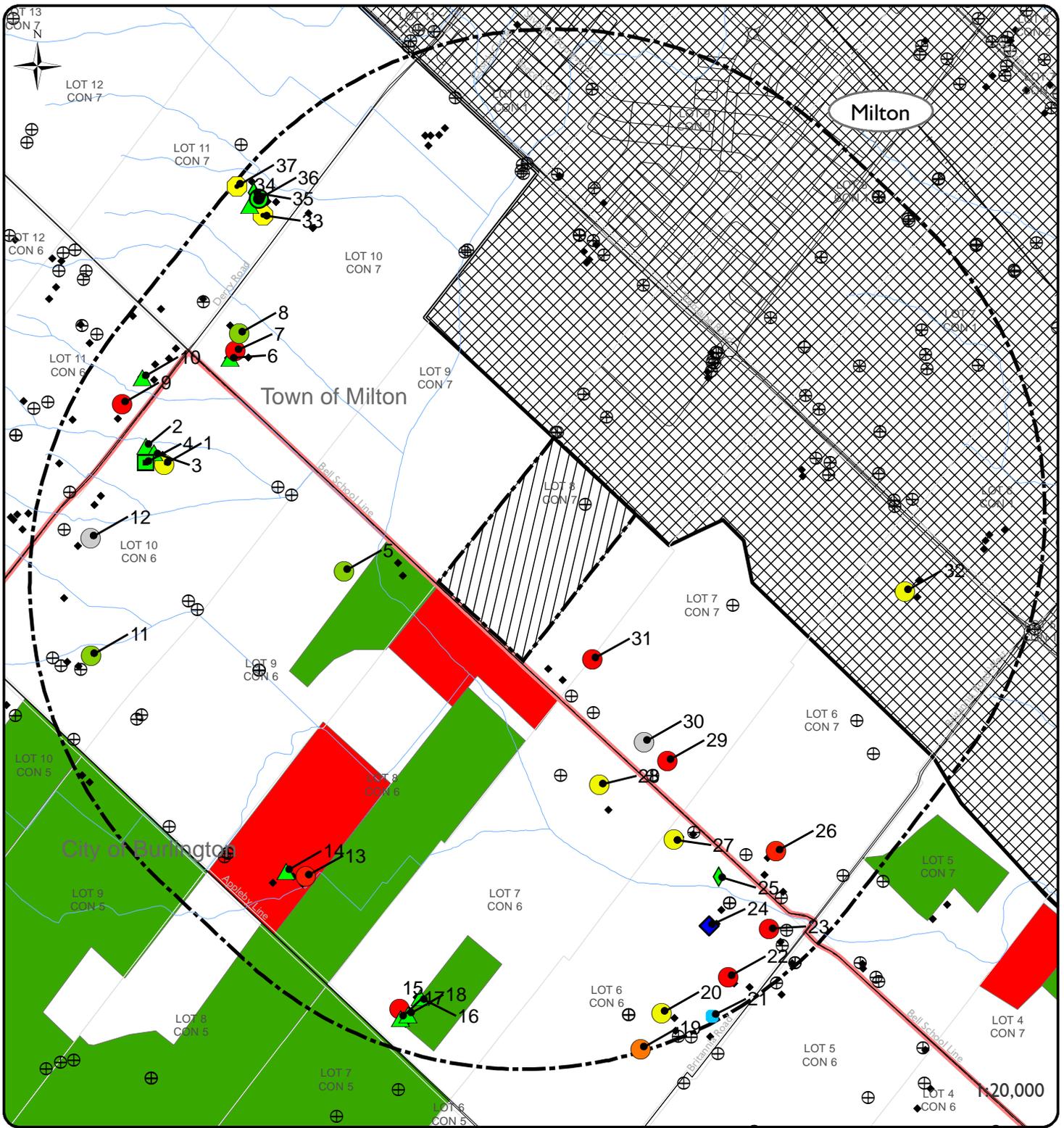
### **4.3.1 AGRICULTURAL FACILITIES**

Agricultural facilities (facilities that may be capable of housing livestock) and barns were identified through a combination of aerial photographic interpretation, a review of online digital imagery (Google Earth Pro, Bing Mapping, and Birds Eye Imagery), a review of Ontario Base Mapping and roadside evaluations. The agricultural facilities or potential livestock facilities that were identified on mapping and imagery prior to conducting field investigations included buildings used for the active housing of livestock, barns that were empty and not used to house livestock, barns in poor structural condition, barns used for storage and any other large building that had the potential to house livestock. Field investigations revealed that some of the buildings identified from the preliminary mapping and imagery no longer existed (torn down), or were not agricultural, but used for commercial activities.

Agricultural activities such as livestock rearing usually involve an investment in agricultural facilities. Dairy operations require extensive facilities for the production of milk. Poultry and hog operations require facilities specific for those operations. Beef production, hobby horse and sheep operations usually require less investment capital (when compared to dairy operations or other high value operations).

Some cash crop operations are considered as having a large investment in agriculture if they have facilities that include grain handling equipment such as storage, grain driers and mixing equipment that is used to support ongoing agricultural activities. Figure 14 illustrates the location of buildings, agricultural facilities and tile drainage for both the Study Area and the Secondary Study Area.

A total of 37 agricultural facilities/buildings or areas where facilities are located were identified from the various imagery sources. No agricultural facilities were identified or located in the Study Area. The 37 agricultural facilities/buildings were observed only in the Secondary Study Area.



Legend			
◆	Building (MNRF)	○	pole barn - remnant
⊕	Water Wells (MNRF)	●	pole barn - retired
—	Rail line	●	pole barn - stable
—	Roads (MNRF)	●	pole barn/machine shed
—	Watercourse (MNRF)	◇	tension fabric
—	Lot Lines	●	pole barn; pole barn
⊠	Milton Built Area	■	riding arena
▬	Municipal Boundary	●	sheds
▬	Secondary Study Area (1.5 km)		
▬	Study Area		
Tile System Type			
■	Random		
■	Systematic		
Type of Building			
●	3 storey poultry barn	●	garage
◆	commercial	▲	machine shed
●	bank barn	▲	machine shed
●	bank barn - retired		

Figure 14  
Agricultural Investment

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#### **4.3.1.1 Study Area**

No agricultural facilities or buildings were observed or located within the Study Area. There will be no loss of investment in agricultural buildings as a result of the proposed development of the Study Area.

#### **4.3.1.2 Secondary Study Area**

A total of 37 agricultural facilities/buildings (active, remnant, vestige) were identified in the Secondary Study Area. One of the agricultural facilities/buildings was located within Milton's built area (agricultural facility 32).

Agricultural facility numbers 1, 2, 3, and 4 were located at 5274 Derry Road West (south side of Derry Road, west of Bell School Line). This operation includes horses, horse shipping, custom agricultural services and hay sales (Halton Hay) ([www.haltonhay.ca](http://www.haltonhay.ca)). Previous discussions, and emails, with this landowner indicated that the operation includes horses and hay sales. This operation comprises a residential unit, pole barn (1), two large machine sheds (2 and 3), riding arena (4), numerous run-in sheds and an office. This operation is considered a large and active horse operation. This operation is a major supplier of hay to equine operations throughout Halton Region. Their crops include switch grass and they are involved in biomass production.

Agricultural facility number 5 was located at 6500 Bell School Line (west side). This facility comprises a residential unit, machine shed, and pole barn with extension. Previous discussions with the landowner indicated that the barn is not used for livestock and has no potential for livestock. This agricultural facility is considered as retired.

Agricultural facility number 6, 7, and 8 were located at 5408 Derry Road West (south side of Derry Road, east of Bell School Line). This operation is part of the Bousfield's Apple and Cider farm, including Organic Farm (Food for Health) sales, and are a 'Simply Local' participant (a Regional buy local program). Previous discussions with the landowner indicated that they are an active orchard (apples and pears) and had a few chickens in the barn, but no large livestock. This operation comprises a residential unit with attached garage, a machine shed (6), a pole barn (8) with open topped concrete silo, a sales facility, machine shed (7), and numerous small sheds for equipment and storage.

Agricultural facility number 9 was located at 5267 Derry Road West (north side of Derry Road, west of Bell School Line). This facility comprised a residential unit with attached garage, and two small pole barns (attached). Small pastures/paddocks were noted between the barn and Derry Road. No livestock was observed. No hay bales, feed or manure storage was observed at this location. This operation was considered as a hobby horse operation due to the relatively small size of the operation.

Agricultural facility number 10 was located at 5315 Derry Road West (north side of Derry Road, west of Bell School Line). This facility comprised a residential unit and machine shed. No livestock was observed. No hay bales, feed or manure storage was observed at this location.

This operation was considered to have only cash crop and is recognized as only having a machine shed.

Agricultural facility number 11 is located at 6705 Appleby Line. This agricultural operation comprises a residential unit and a bank barn. Google maps identifies the operation as the Morland Farm. No additional information was available online. The farm appears to be a cash crop operation as there is no evidence of livestock, feed, or manure system.

Agricultural facility number 12 is located at 5118 Derry Road. This agricultural operation is part of the Applevale Orchards (<https://applevalorchards.com/>) whose products include apples, pears, and cider. This property is part of the Applevale Orchards operation that includes a head office and a 50 acre fruit and vegetable operation in Mississauga. The operation at this location includes a residential unit, older remnant barn (missing roof panels) (12), plus a market building. There are no livestock at this location.

Agricultural facilities numbered 13 and 14 are located at 6409 Appleby Line. This agricultural operation includes a residential unit, machine shed with extensions (13), a smaller machine shed, a bank barn with extensions (14), two concrete silos (capped), and two grain bins. There is no evidence of livestock at this location. There was no feed, no manure storage, no observed livestock, or paddock areas. It is assumed that this is a cash crop operation.

Agricultural facilities numbered 15, 16, 17, and 18 were located 6273 Appleby Line. This operation comprised a residential unit, large machine shed, bank barn with capped silo, and 3 machine sheds. There is no evidence of livestock at this operation. There was no feed, no manure storage, no observed livestock, or paddock areas. It is assumed that this is a cash crop operation. There appear to be numerous logs adjacent to the sheds. This may also include a sawmill operation. A search online for the address did not provide any additional details of the operation.

Agricultural facility number 19 was located at 5087 Britannia Road West. This facility comprises a residential unit, a large machine shed, and a second large building with an addition attached. Although not seen from the roadside, beef cattle were noted on the aerial imagery and appear to be associated with this second large building (19). The other large machine shed is part of the Deca Stone Landscaping business (sign on the front lawn). For the purposes of this assessment, this facility will be considered as a commercial landscape operation and a beef cattle operation. Assistance from Regional staff, on review of ConnectOntario (an online economic development tool), has confirmed that these lands were used for beef production.

Agricultural facility number 20 was located at 5191 Britannia Road West (north side). This facility comprises a residential unit, machine shed, pole barn (20), and possible riding arena. A horse track was noted on the Google Earth imagery. It is assumed that this is a horse operation.

Agricultural facility number 21 was located at 5227 Britannia Road West. This facility comprises a residential unit with attached garage, and three small sheds, with fenced areas extending from

the sheds. No livestock, feed or manure storage was noted at this facility. This small facility is considered as retired.

Agricultural facility number 22 was located at 5269 Britannia Road West. This facility comprised a residential unit, machine shed and small pole barn (22) with extension. No livestock, feed or manure storage was observed at this location. A review of Google Earth history suggests that there was a horse track just east of the barn and that this barn had been used for livestock. For the purposes of this AIA, this facility is considered as a horse operation.

Agricultural facility number 23 was located at 5327 Britannia Road West (north side). This facility comprises a residential unit, and possible pole barn (23) with extension. A chain link fence enclosure was noted at the back of the property. No livestock, feed or manure storage was noted for this property. It is assumed that this was a retired horse operation.

Agricultural facility number 24 was located at 6080 Bell School Line (west side). This facility comprises a residential unit, and 3 Quonset style storage buildings. This facility is associated with Master Concrete and Interlocking Inc. This facility is not considered an agricultural facility

Agricultural facility number 25 was located at 6100 Bell School Line. This facility comprises a residential unit with attached garage, a small pole barn and a small plastic covered storage building. A small pasture was noted between the small pole barn and Bell School Line. This facility is considered as a hobby horse operation.

Agricultural facility number 26 was located at 6063 Bell School Line (east side). This facility comprises a residential unit, machine shed and pole barn. A horse track was noted on the Google Earth history. No livestock was observed at this location. No feed or manure storage was observed. For the purposes of this AIA, it is assumed that this operation was a retired horse facility. Assistance from Regional staff, on review of ConnectOntario (an online economic development tool), has indicated that these lands were used for the production of soybean, apple and raspberry production.

Agricultural facility number 27 was located at 6144 Bell School Line (west side). This facility comprises a residential unit, garage, pole barn and possible riding arena. This address is also associated with Jarlian Construction Inc. Horses were observed in the paddock area beside the barn. It is assumed that this is a horse operation

Agricultural facility number 28 was located at 6220 Bell School Line (west side). This facility comprises a residential unit, a pole barn (28) and attached riding arena (based on online imagery and roadside observation). No livestock were observed due to the presence of large berms along the roadside. Online imagery suggests that there are no paddocks or pastures adjacent to the barn. No manure piles or feed were noted. It is assumed that this facility is a horse operation. Assistance from Regional staff, on review of ConnectOntario (an online economic development tool), has indicated that these lands were used as a cash crop operation.

Agricultural facility number 29 was located at 6235 Bell School Line (east side of Bell School Line, north of Britannia Road). This facility comprises a pole barn/machine shed. There was no

livestock, feed or manure storage observed at this facility. It appears that this facility is used for storage. A review of Google Earth history indicates that this facility was used for livestock (horses). For the purposes of this project, this facility will be considered as a hobby horse operation.

Agricultural facility number 30 was located at 6235 Bell School Line (east side of Bell School Line, north of Britannia Road). This facility comprises a residential unit and small pole barn in poor condition (missing roof panels). Horses were observed in the pasture area between the barn and Bell School Line. This barn is considered as a remnant barn.

Agricultural facility number 31 was located at 6321 Bell School Line (east side of Bell School Line, north of Britannia Road). This facility comprises a residential unit with attached garage, small building with extension and a small pole barn. The small building with extension is near a small ponded area. A review of online imagery suggests that there may be ducks or geese in this area. The small pole barn (31) was located farther east on this property and appears to be used to house livestock, based on a review of Google Earth imagery. Beef cattle were observed during the field survey. The review of online imagery indicated that there were livestock in the fields in 2016, although the type of livestock could not be determined. For the purposes of this AIA, it will be assumed that the small pole barn, paddock and pastures were used to house beef cattle. Assistance from Regional staff, on review of ConnectOntario (an online economic development tool), has indicated that these lands were used for sheep and lamb production, with winter wheat as a field crop.

Agricultural facility number 32 was located at 6116 Tremaine Road. This facility included a residential unit, small pole barn, machine sheds, and a run-in shed. Small pasture areas were noted, along with bales of hay. A track and horse trailer were also noted at this location. A horse was noted on the online imagery. This operation was considered as a hobby horse operation due to the relatively small size of the operation.

Agricultural facility number 33, 34, 35, 36, and 37 were located at 5519 Derry Road West (north side of Derry Road, between Tremaine Road and Bell School Line). This is a poultry operation (chickens). This operation comprises a residential unit, garage (36), 3 machine sheds (34)/maintenance buildings, tension fabric building (35), 2 large 3 story chicken barns (with attached feed bins) (33 and 37), and a large 2 story chicken barn (with attached feed bins) that is located just outside the Secondary Study Area. This is an active and large-scale poultry agricultural operation. Previous discussions with the owner (years ago) indicated that he was looking to expand the operation. The expansion of the operation is verified by the presence of a new poultry barn, representing a significant expansion and investment in this operation.

The proposed development of the Study Area will not result in the loss of any building investment in agriculture.

Photographs and/or aerial photography/satellite imagery of the respective barns are located in Appendix A.

### 4.3.2 ARTIFICIAL DRAINAGE

An evaluation of artificial drainage in the Study Area and within the Secondary Study Area was completed through a correlation of observations noted during the reconnaissance roadside survey, aerial photographic/aerial imagery interpretation and a review of the Ontario Ministry of Agriculture and Food (OMAF) Artificial Drainage System Mapping.

Visual evidence supporting the use of subsurface tile drains would have included observations of drain outlets to roadside ditches or surface waterways, and surface inlet structures (hickenbottom or French drain inlets). There was no observed evidence of artificial tile drainage in either the Study Area or the Secondary Study Area.

Evidence in support of subsurface tile drainage on aerial photographs would be based on the visual pattern of tile drainage lines as identified by linear features in the agricultural lands and by the respective light and dark tones on the aerial photographs, often referred to as a 'herring bone' pattern. The light and dark tones relate to the moisture content in the surface soils at the time the aerial photograph was taken.

OMAFRA Artificial Drainage System Maps were downloaded from Land Information Ontario (LIO) in September 2021 and were reviewed to determine if an agricultural tile drainage system had been registered anywhere in the Study Area, or in the Secondary Study Area. The OMAFRA Artificial Drainage System data illustrates the location and type of tile drainage systems. The type of tile drainage system is defined as either 'random' or 'systematic'. A random tile drainage system is installed to drain only the low areas or areas of poor drainage within a field. A systematic tile drainage system refers to a method of installing drain tile at specific intervals across a field, in an effort to drain the entire field area. From a cost perspective, a systematic tile drainage system would be a greater cost, or investment in agriculture when compared to a random tile drainage system.

Figure 14 illustrates the OMAFRA Artificial Drainage Systems Mapping for the Study Area and Secondary Study Area.

As noted in Figure 14, there is no tile drainage registered to the Study Area.

A review of Figure 14 illustrates the pattern of systematic and random tile drainage in the Secondary Study Area. Small areas of systematic and random tile drainage were noted west of Bell School Line (between Bell School Line and Appleby Line), south of Britannia Road West (between Bell School Line and Tremaine Road), and a large area of systematic tile drainage to the west of Appleby Line.

The proposed development of the Study Area will not result in the loss of investment in tile drainage on the Study Area or in the Secondary Study Area.

### **4.3.3 WATER WELLS**

A review was completed of the MNRF Water Well records to determine the extent of water wells in the Study Area and the Secondary Study Area. The review of water well records involved a download of the latest version of the Water Well Records from the Land Information (LIO) data warehouse. The Water Well locations are identified on Figure 14. As illustrated on Figure 14, numerous water wells are located within both the Study Area and the Secondary Study Area. One water well was noted on the Study Area lands. The information associated with this water well in the LIO database indicates that this well was completed on 5/11/2012. The well has a borehole identification of 1004198400, and a well identification of 7189029.

The review of water well records was completed to determine the location and extent of water wells in the area, and to identify any potential concerns or impacts that may occur as a result of the proposed development of the Study Area lands. Generally, many livestock operations use ground water for their livestock, and any disruption to the water in terms of quality and/or quantity could have a significant impact to the operation.

Due to the location of the water well in the Study Area, it will be important to either preserve the existing well on the Study Area, or properly engineer the closing/capping of the well to prevent potential groundwater contamination.

### **4.3.4 IRRIGATION**

Observations noted during the reconnaissance survey indicated that the Study Area and the Secondary Study Area lands are not irrigated. It was noted that these lands are not set up for the use of irrigation equipment. Visual evidence supporting the use of irrigation equipment would include the presence of the irrigation equipment (piping, water guns, sprayers, tubing/piping, etc), the presence of a body of water (pond, lake, water course) capable of sustaining the irrigation operation and lands that are appropriate for the use of such equipment (large open and level fields).

A further review of online imagery for possible use of irrigation focused on the orchard areas that were identified in the land use mapping. The review confirms the presence of a pond at agricultural facility numbers 6, 7 and 8 (Bousfield's Orchard), although no irrigation piping was observed. A review of the second orchard area (Applevale Orchards), revealed that there is no ponded area, nor were irrigation pipes observed.

There is no capital investment in irrigation on the Study Area, and there appears to be no capital investment related to irrigation systems Secondary Study Area.

### **4.3.5 LANDFORMING**

Landforming is the physical movement of soil materials to create more uniformly sloped lands for the ease of mechanized operations. The costs associated with landforming can be exorbitant and prohibitive, depending on the volumes of soils moved and graded.

No landforming for the purposes of enhancing an agricultural operation was noted within the Study Area or the Secondary Study Area.

#### **4.4 FRAGMENTATION**

The fragmentation of the land base has been recognized by OMAFRA important factor in determining the agricultural potential of an area. The Provincial Land Evaluation and Area Review (LEAR) study included fragmentation as one of the two Area Review (AR) components. The other component of the AR factor was the area of land in agricultural production.

For this AIA study, assessment data was evaluated to determine the characteristics and the degree of land fragmentation.

In order to evaluate land fragmentation, the most recent Assessment Roll mapping and Assessment Roll information from the Town of Milton and the Region of Halton were referenced on a property-by-property basis (for the Study Area and the Secondary Study Area) to determine the approximate location, shape and size of each parcel. It should be noted that this AIA study did not have access to the individual parcel data for the parcels within the urban area of Milton.

As a result of an incomplete parcel data set (no small parcels within the urban area of Milton), it is not possible to collect tabular data to illustrate a comparison between the degree of fragmentation in the Study Area, Secondary Study Area and the Town of Milton (Census data). As a result, this AIA study will comment relative degree of fragmentation in the areas outside the urban area of Milton.

In an effort to determine what defines ‘fragmentation’, a review of policy and guidelines was completed.

While a minimum size for an agricultural property is not specified in the *Provincial Policy Statement* (PPS, 2020), the PPS does state in Section 2.3.3.2 that:

“In *prime agricultural areas*, all types, sizes and intensities of *agricultural uses* and *normal farm practices* shall be promoted and protected in accordance with provincial standards.”

A review of *Town of Milton Official Plan (Consolidated August 2008)* revealed that there is no minimum lot size for an agricultural property. A similar review was completed on the *Halton Region Official Plan (Office Consolidation June 19, 2018)*. There is no minimum lot size for an agricultural property.

A review of *Town of Milton Comprehensive Zoning By-Law 144-2003 (Consolidation October 2019)* indicates in Section 10.1 (Table 10A), that an agricultural operation is permitted only on a lot having an area of greater than 4.0 hectares.

Statistics Canada Census of Agriculture (2011) indicates that the average farm size in Ontario was 98.7 ha (244 acres). This average size is based on the number of Census farms divided by the acreage of those Census farms (Total Farm Area). The Total Farm Area is land owned or operated by an agricultural operation and includes cropland, summer fallow, improved and unimproved pasture, woodlands and wetlands, and all other lands (including idle land, and land on which farm buildings are located) (Statistics Canada, 2017). It should be noted that the average farm size is based on farmland holdings, which may include more than one parcel (property).

Census of Agriculture (2016) data indicates that the average farm size in Ontario (for Census farms) was 100.8 ha (249) acres. Again, the Census of Agriculture (2016) average farm size is based on farmland holdings, which may include more than one parcel (property). Further, the Census of Agriculture (2016) information indicates that the average farm size in Halton Region is 152 acres, and the average farm size for the Town of Milton is 112 acres. The 2016 Census data for the Town of Milton recognizes a total of 191 census farms.

The Census data provides detailed information on Census farms (farms which provided census data), while the data within the Secondary Study Area refers to all parcel data (agricultural areas and non-agricultural areas). Census data is provided in the unit format of acres, with the splits in the data at 0.0 – 9.9, 10.0 – 69.9, 70.0 – 129.9, 130.0 – 179.9 and greater than 180.0 acres. For the purposes of this AIA, similar splits in acre data were used for the comparison.

Figure 15 illustrates the degree of land fragmentation within the Study Area and the Secondary Study Area. GIS was utilized to calculate the area (in acres) of each parcel within the Secondary Study Area from which MPAC (Municipal Property Assessment Corporation) data was not available. Acre calculations were completed to allow an assessment or comparison of the parcels.

As illustrated in Figure 15, the Study Area comprises one parcel in the range of 70.0 – 129.9 acres. It should be noted that the Study Area is part of a larger parcel (70.0 – 129.9 acres), portions of which are located within the MEV lands. For the purposes of this AIA study, the Study Area only refers to the portion of the parcel that is west of the MEV lands.

Figure 15 illustrates that the Secondary Study Area has a complex pattern of fragmentation, with numerous small parcels within the urban area of Milton, and extensive fragmentation including smaller parcels along Derry Road, and fragmentation (slightly larger parcels) along Britannia Road between Bell School Line and Appleyby Line. The majority of the Secondary Study Area west of Tremaine Road is comprised of parcels in the 70.0 – 129.9 acre range.

This type of fragmentation pattern is common in areas near urban boundaries and within the Greater Toronto Area (GTA). It is noted that there are two clusters of smaller parcels, both associated with road intersections on Bell School Line. One cluster located at Bell School Line and Derry Road, the other at Bell School Line and Britannia Road.

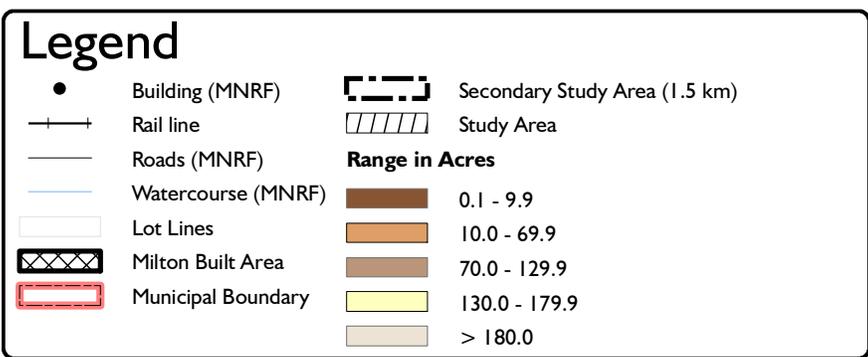
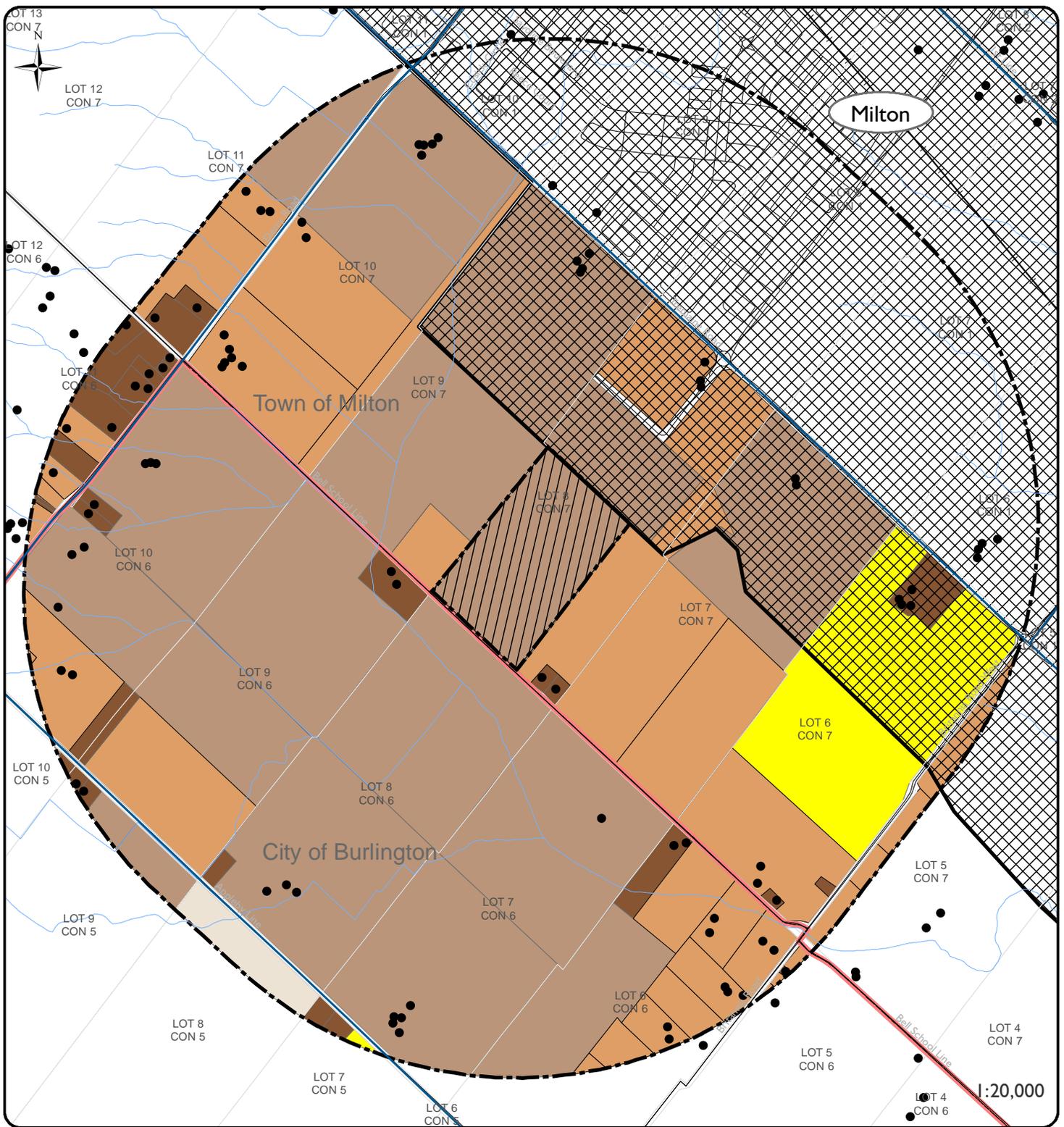


Figure 15  
Fragmentation

DBH Soil Services Inc.  
September 2021

The proposed development of the Study Area lands will not result in a severance or the creation of additional fragmentation.

#### **4.5 SOILS AND CANADA LAND INVENTORY (CLI)**

A review was completed of the soils and Canada Land Inventory (CLI) data base for the Study Area and Secondary Study Area lands. The review was completed to determine the extent and location of the high capability soils. Digital soils data was retrieved from the Land Information Ontario data warehouse in September 2021.

The review included a download of the latest version of the soils data from the Land Information Ontario website and discussions with OMAFRA staff to determine if the downloaded data set is the latest iteration of the soils data. It should be noted that the digital information is provide at a scale of 1:50000, which is appropriate for Township level soils mapping. A review of the OMAFRA AIA draft guidance document has suggested that an onsite soil survey is appropriate for land where there will be a return to agriculture. For the purposes of this AIA an onsite soil survey was not completed.

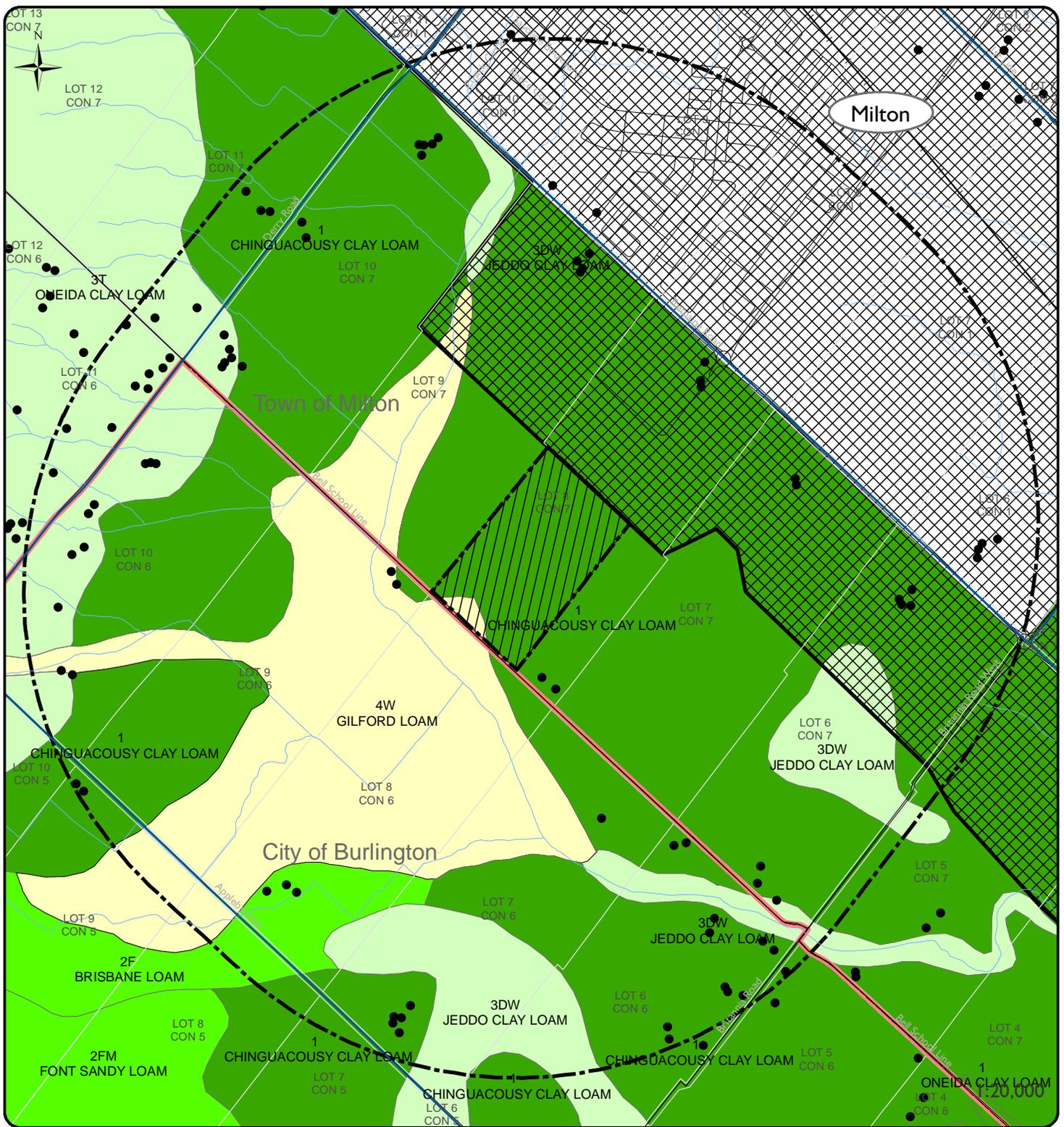
Due to the continual updates to the soil survey complex datasets, it is prudent to verify or at least confirm that the soil series data and Canada Land Inventory (CLI) information within the datasets is accurate across the Region of Halton. In an effort to confirm the correctness of the soils and the Canada Land Inventory data on a soil series basis, the dbase data file that is associated with the Region of Halton soil survey complex file was exported to excel to run a unique symbols list based on Soil Series, topography (slope), CLI class and CLI subclass.

The unique symbols list (based on the SYMBOL1 column) provided 146 unique symbols combined with the associated slope and CLI class and CLI subclass (CLI\_1 and CLI\_2). The unique symbols list is provided in Appendix C. A review of this list indicated that there were some issues with a few symbols of the soils and the respective CLI class and/or subclass. The soils with issues are highlighted in yellow. A review of these soil polygon issues indicated that none of the affected soil polygons were located within the Secondary Study Area.

As noted in the list in Appendix C, the a few symbols for a particular soil series would have two or more CLI classes listed for a mineral soil. Similar conditions were associated with the CLI subclass, where two or more CLI and CLI subclass combinations were associated with the soil series symbol. In many cases the difference between the CLI classification was related only to the subclass. Therefore, in those instances, the Canada Land Inventory (CLI) rating or classification for a particular soil did not change, only the subclass did which relates to a different limitation in the soil, but not a change in CLI class.

In other instances, the CLI Class changed. In those instances, the change in some CLI Class were related to topography. The greater the slope results in the lower the capability of the land. In those instances, the CLI Class change was appropriate.

For the purposes of this AIA, the soil and CLI data presented on Figure 16 is considered appropriate in soil code and CLI rating.



**Legend**

- Building (MNRF)
- +— Rail line
- Roads (MNRF)
- Watercourse (MNRF)
- Lot Lines
- ▨ Milton Built Area
- ▭ Municipal Boundary
- ▭ Secondary Study Area (1.5 km)
- ▭ Study Area

**Canada Land Inventory - Soils**

- Class 1
- Class 2
- Class 3
- Class 4
- Class 5
- Class 6
- Class 7

Figure 16  
**Canada Land Inventory (CLI)**

DBH Soil Services Inc.  
 September 2021

#### 4.5.1 SOIL CAPABILITY FOR AGRICULTURE

Basic information about the soils of Ontario is made more useful by providing an interpretation of the agricultural capability of the soil for various crops. The Canada Land Inventory (CLI) system combines attributes of the soil to place the soils into a seven-class system of land use capabilities. The CLI soil capability classification system groups mineral soils according to their potentialities and limitations for agricultural use. The first three classes are considered capable of sustained production of common field crops, the fourth is marginal for sustained agriculture, the fifth is capable for use of permanent pasture and hay, the sixth for wild pasture and the seventh class is for soils or landforms incapable for use for arable culture or permanent pasture.

Organic or Muck soils are not classified under this system. Disturbed Soil Areas are not rated under this system.

The Ontario Ministry of Agriculture, Food and Rural Affairs document “Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for Application of the Canada Land Inventory in Ontario” defines the Canada Land Inventory (CLI) classification as follows:

- “Class 1 - Soils in this class have no significant limitations in use for crops. Soils in Class 1 are level to nearly level, deep, well to imperfectly drained and have good nutrient and water holding capacity. They can be managed and cropped without difficulty. Under good management they are moderately high to high in productivity for the full range of common field crops*
- Class 2 - Soils in this class have moderate limitations that reduce the choice of crops, or require moderate conservation practices. These soils are deep and may not hold moisture and nutrients as well as Class 1 soils. The limitations are moderate and the soils can be managed and cropped with little difficulty. Under good management they are moderately high to high in productivity for a wide range of common field crops.*
- Class 3 - Soils in this class have moderately severe limitations that reduce the choice of crops or require special conservation practices. The limitations are more severe than for Class 2 soils. They affect one or more of the following practices: timing and ease of tillage; planting and harvesting; choice of crops; and methods of conservation. Under good management these soils are fair to moderately high in productivity for a wide range of common field crops.*
- Class 4 - Soils in this class have severe limitations that restrict the choice of crops, or require special conservation practices and very careful management, or both. The severe limitations seriously affect one or more of the following practices: timing and ease of tillage; planting and harvesting; choice of crops; and methods of conservation. These soils are low to medium in productivity for a narrow to wide range of common field crops, but may have higher productivity for a specially adapted crop.*
- Class 5 - Soils in this class have very severe limitations that restrict their capability to producing perennial forage crops, and improvement practices are feasible. The limitations are so severe that the soils are not capable of use for sustained production of annual field crops. The soils are capable of producing native or tame species of perennial forage plants and may be improved through the use of farm machinery.*

*Feasible improvement practices may include clearing of bush, cultivation, seeding, fertilizing or water control.*

*Class 6 - Soils in this class are unsuited for cultivation, but are capable of use for unimproved permanent pasture. These soils may provide some sustained grazing for farm animals, but the limitations are so severe that improvement through the use of farm machinery is impractical. The terrain may be unsuitable for the use of farm machinery, or the soils may not respond to improvement, or the grazing season may be very short.*

*Class 7 - Soils in this class have no capability for arable culture or permanent pasture. This class includes marsh, rockland and soil on very steep slopes.”*

With respect to the soils and Canada Land Inventory (CLI) identified in the Study Area and Secondary Study Area, The Ontario Ministry of Agriculture, Food and Rural Affairs document “Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for Application of the Canada Land Inventory in Ontario” defines the Canada Land Inventory (CLI) subclassification as follows:

*Subclass D – Undesirable Structure and/or Low Permeability*

*Subclass D denotes soils which are difficult to till, or which absorb or release water very slowly, or in which the depth of rooting zone is restricted by conditions other than a high water table or consolidated bedrock. In Ontario this Subclass is based on the existence of critical clay contents in the upper soil profile. These soils are generally more susceptible to compaction than are lighter textured soils.*

*Subclass F - Low Natural Fertility*

*Subclass F denotes soils having low fertility that is either correctable through fertility management or is difficult to correct in a feasible way. Low fertility may be due to low cation exchange capacity, low pH, presence of elements in toxic concentrations (primarily iron and aluminum), or a combination of these factors.*

*Subclass T - Topography*

*The steepness of the surface slope and the pattern or frequency of slopes in different directions are considered topographic limitations if they: 1) increase the cost of farming the land over that of level or less sloping land; 2) decrease the uniformity of growth and maturity of crops; and 3) increase the potential of water and tillage erosion.*

*Subclass W – Excess Water*

*The presence of excess soil moisture (other than that from inundation) may result from inadequate soil drainage, a high water table, seepage, or runoff from surrounding areas. This limitation only applies to soils classified as poorly drained or very poorly drained.*

Disturbed soil areas (built up or developed areas) are considered as Not Rated within the Canada Land Inventory (CLI) classification system. Muck (organic soils) are not rated in the Canada Land Inventory (CLI) classification system.

Figure 16 – Canada Land Inventory (CLI) illustrates the OMAFRA digital soils data for the Secondary Study Area. The OMAFRA soils data base has not removed or discounted soils from roads, rails, urban or developed areas. It is evident in Figure 16 that the majority of the Study Area are CLI class 1 lands, with a small section of CLI class 4 lands. The CLI classification presented in the OMAFRA data illustrates the soil class as if any potential improvements or enhancement to increase the soil capability have been made to the soil. Therefore, if a soil requires tile drainage to improve the capability, then the rating illustrated assumes that improvement in tile drainage has been completed.

Table 3 illustrates the soils data as derived by percent occurrence within the respective polygons and summarizes the relative percent area occupied by each capability class for the Study Area and the Secondary Study Area.

Table 3 Canada Land Inventory – Secondary Study Area

Canada Land Inventory Class (CLI)	Study Area Percent Occurrence	Secondary Study Area Percent Occurrence
Class 1	95.8	37.2
Class 2	-	1.8
Class 3	-	12.0
Class 4	4.2	15.3
Class 5	-	-
Class 6	-	-
Class 7	-	-
Not Rated	-	33.7
Totals	100.0	100.0

The Study Area comprises approximately 95.8 percent CLI class 1 lands, with the remaining 4.2 percent identified as CLI class 4 lands.

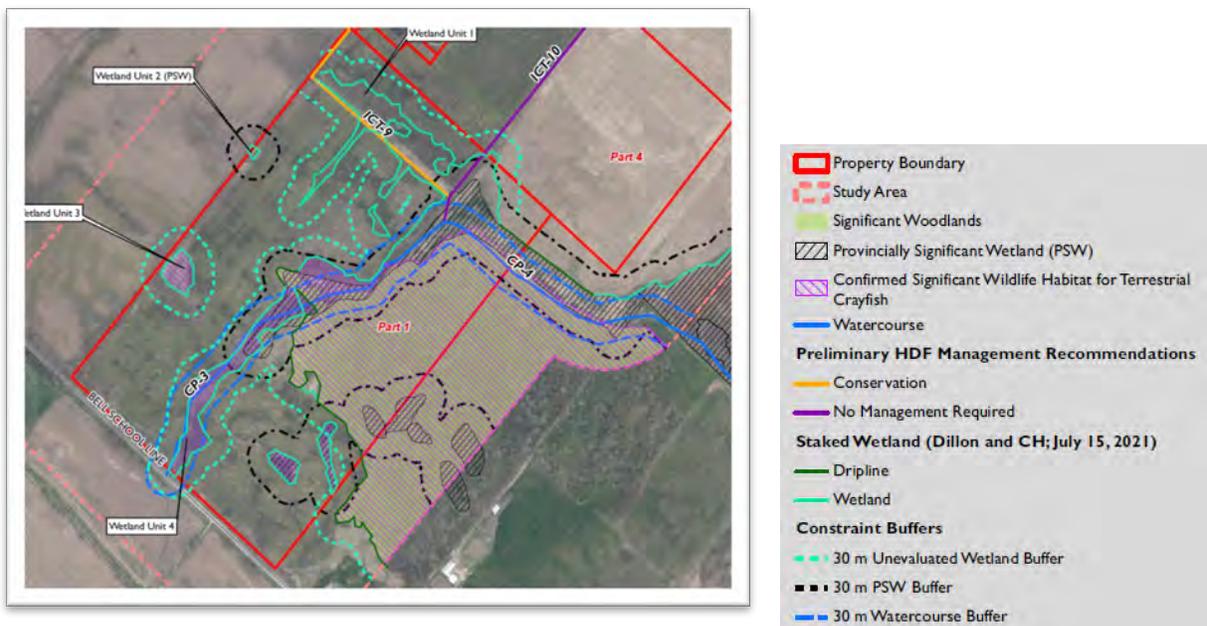
The Secondary Study Area comprises approximately 51.0 percent Canada Land Inventory (CLI) capability of Class 1 – 3, with approximately 37.2 percent as CLI class 1 lands, 1.8 percent as CLI class 2 lands, 12.0 percent as CLI class 3 lands, 15.3 percent as CLI class 4 lands, and approximately 33.7 percent as Not Rated lands that are associated with the urban area of Milton.

As indicated previously in this AIA, the digital soils data is provided at a scale of 1:50000 which is appropriate for Township level planning. A review of the OMAFRA draft AIA guidance document indicated a recommendation for completing a detailed onsite soil survey for studies related to areas that will be restored to agriculture (aggregate applications). This study does not include the component of soil restoration, and as a result, an onsite soil survey was not completed.

A review of the Dillon Consulting Wilfrid Laurier University MEV Lands Part I and Part 4: Wetland, Watercourse and HDF Features Summary Memo (August 27, 2021) revealed a detailed assessment of wetland features onsite. The Dillon Consulting mapping was completed in conjunction with an onsite survey with Conservation Halton (July 15, 2021) whereby agreed wetland boundaries were defined.

Figure 17 illustrates a portion of the Dillon Consulting *Figure 2 - Constraints – Wilfrid Laurier University Tremaine Road and Britannia Road Milton Ontario (August 30, 2021)*. It is evident from Figure 17 that a significant portion of the Study Area has been defined as wetlands, including Provincially Significant Wetland areas. This indicates that these wetland areas are wet for significant portions of the year and will have soils that have excess moisture limitations.

Figure 17 Wetland Mapping



A review of the OMAFRA document *Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for Application of the Canada Land Inventory in Ontario (online version October 22, 2021)* (<http://www.omafra.gov.on.ca/english/landuse/classify.htm>) provided a section on the determination of subclasses and capability ratings.

Subclass W indicates the presence of excess soil moisture and is a limitation to field crop agriculture. Excess water may result from inadequate soil drainage, a high water table, seepage or runoff from surrounding areas. This limitation applies to poorly drained or very poorly drained soils.

Table 4 identifies the appropriate CLI Class rating for soils with excess moisture. With respect to the Study Area and the information provided in the Dillon Consulting report, it would be appropriate to downgrade the CLI rating as is presented in the 1:50000 scale mapping, from a Class 1 soil to a minimum of a Class 3. This downgrade is based on the identified soils

(Chinguacousy Clay Loam) being clay materials with a soil depth of greater than one metre. The CLI Class of 3W is also based on the soils being improved with tile drainage. If tile drainage cannot be installed due to there being no reasonable outlet, then the soils would be classified as CLI Class 5W.

Table 4 Class Descriptions for Soils with Excess Moisture Limitations (Subclass W)

Soil Textures and Depths	Depth to Bedrock (cm)	Soil Class (Drainage in place or feasible)	Soil Class (Drainage not feasible)
Very gravelly, sandy, or loamy extending >40cm from the surface, or, <40 cm of any other textures overlying very gravelly, sandy or loamy textures	> 100	2W	4W,5W
>40 cm depth of clayey or very fine clayey textures, or, < 40 cm of any other texture overlying clayey or very fine clayey textures	> 100	3W	5W
<40 cm of peaty material overlying any texture	> 100	3W	5W
All textures	50-100	4W	5W
All textures	0-50	NA	5W

Therefore, the CLI classification as based on the OMAFRA soils resource database is not accurate for this location and a more appropriate rating would be CLI Class 5W for those soils within the designated wetland areas.

## 4.6 AGRICULTURAL SYSTEMS PORTAL

A review of the OMAFRA Agricultural System Portal online resource for agricultural services/agricultural network (markets, abattoirs, renderers, livestock auctions, investment, warehousing and storage, wineries and breweries) noted that the Study Area and much of the Secondary Study Area were located in the Prime Agricultural Area of the Agricultural Land Base of the Greater Golden Horseshoe.

A review of the online Agricultural System Portal (OMAFRA) indicated that there were no farmers markets, pick your own operations, nurseries, specialty farms (crop or livestock), frozen food manufacturing, refrigerated warehousing/storage, livestock assets or abattoirs in the Study Area. There are no agricultural services associated with the Study Area.

The review of the online Agricultural System Portal (OMAFRA) for the Secondary Study Area also indicated that there are no agricultural services or agricultural systems within the Secondary Study Area. The roadside reconnaissance surveys did reveal that there are two orchards (Bousfield's Apples and Cider, and Applevaile Orchards) along the south side of Derry Road. A farm market based on bee products (Backed by Bees) (<https://backedbybees.com/>) was noted west of the Secondary Study Area, west side of Appleby Line.

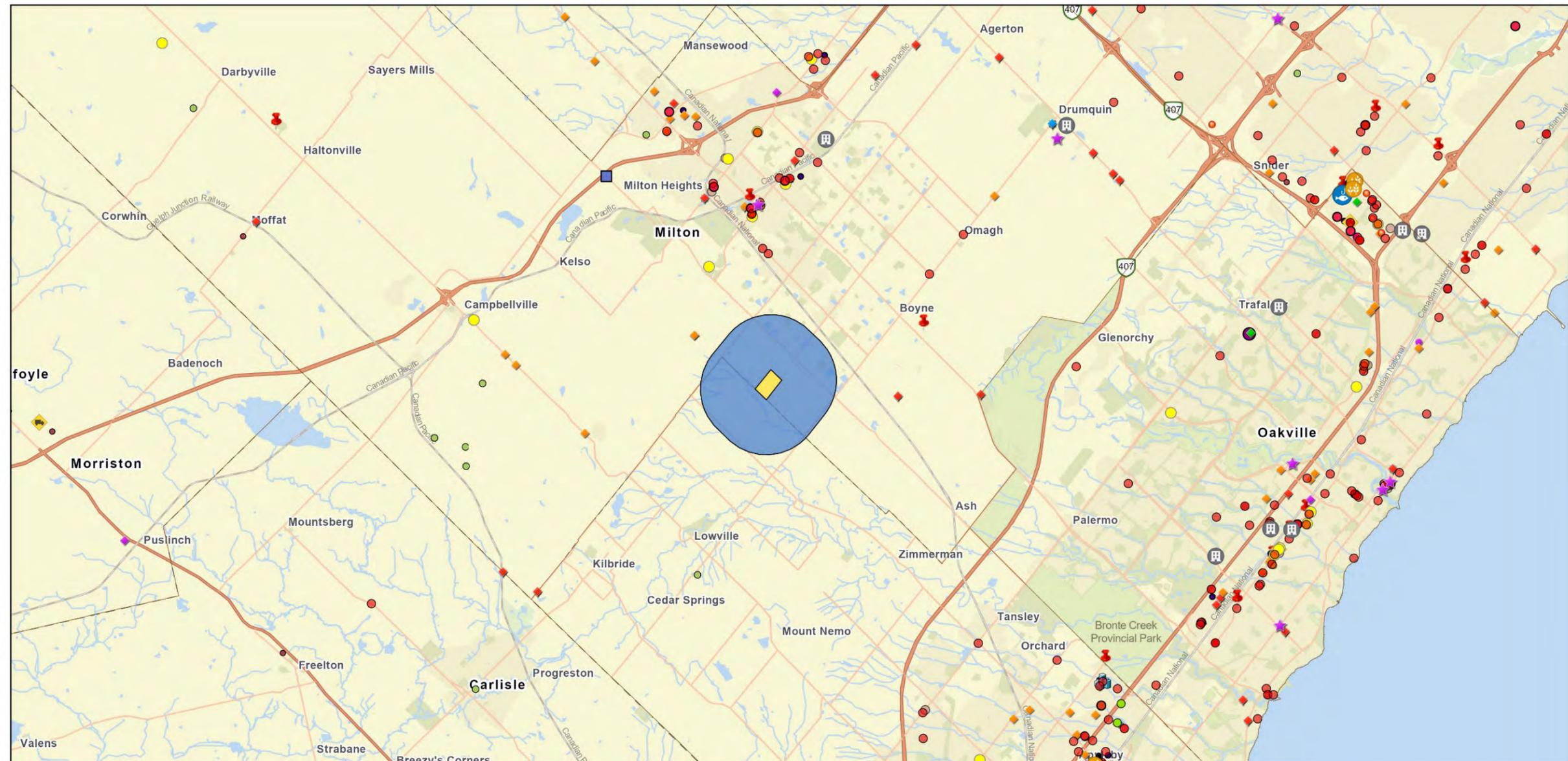
In the larger, Township area, Springridge Farms (<https://www.springridgefarm.com/>) was noted to the north of the Secondary Study Area.

A copy of the online image has been provided in Figure 18 – Agricultural Systems Portal Mapping. This figure includes a large area (Township scale coverage) around the Study Area and the Secondary Study Area, for the purposes of identifying agricultural services and networks in the local community.

As illustrated in this image there are no agricultural services within the Study Area or Secondary Study Area. The closest transportation network (major roadway) is Highway 401 which is located north of the Milton Urban area.

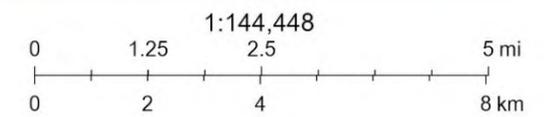
Figure 18 Agricultural Systems Mapping (OMAFRA)

# Agricultural Systems Portal 2021



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- |   |   |   |  |
|---|---|---|--|
| <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: yellow; border: 1px solid black; margin-right: 5px;"></span> mapping - Study Area</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: lightblue; border: 1px solid black; margin-right: 5px;"></span> mapping - Buffer of Study Area_2</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> Single and Lower Tier Municipalities (LIO)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> Upper Tier Municipalities and District (LIO)</li> <li><span style="display: inline-block; width: 0; height: 0; border-left: 5px solid transparent; border-right: 5px solid transparent; border-bottom: 10px solid purple; margin-right: 5px;"></span> Farmers Markets (Farmers Markets ON)</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: blue; border: 1px solid black; margin-right: 5px;"></span> Food Hubs (OMAFRA)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Grain and Oilseed Milling (ConnectON)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Fruit and Vegetable Canning, Drying and Pickling (ConnectON)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Maple Syrup and Products Production (ConnectON)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Food Manufacturing (ConnectON)</li> </ul> | <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Meat Manufacturing (ConnectON)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Dairy Product Manufacturing (ConnectON)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Beverage and Tobacco Manufacturing (ConnectON)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Frozen Food Manufacturing (ConnectON)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Agricultural Implement Manufacturing (ConnectON)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Pesticide, Fertilizer and Other Agricultural Chemical Manufacturing (ConnectON)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Refrigerated Warehouses (OMAFRA)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Agricultural Supplies Merchant Wholesalers (ConnectON)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Beverage Merchant Wholesalers (ConnectON)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Food Merchant Wholesalers (ConnectON)</li> </ul> | <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Farm, Lawn &amp; Garden Machinery Equipment Supplies Merchants Wholesalers (ConnectON)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Farm Product Merchant Wholesalers (ConnectON)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Agricultural Chemical and Other Merchant Wholesalers (ConnectON)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Agricultural Feed Merchant Wholesalers (ConnectON)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Red Meat and Meat Product Merchant Wholesalers (ConnectON)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Fresh Fruit and Vegetable Merchant Wholesalers (ConnectON)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Fish and Seafood Product Merchant Wholesalers (ConnectON)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Poultry and Egg Merchant Wholesalers (ConnectON)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Dairy and Milk Products Merchants Wholesalers (ConnectON)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Nursery Stock and Plant Merchant Wholesalers (ConnectON)</li> </ul> | <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Seed Merchant Wholesalers (ConnectON)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Other Farm Product Merchant Wholesalers (ConnectON)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Breweries (<a href="http://saintjohnswort.ca/">http://saintjohnswort.ca/</a>)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Distilleries (Ontario Craft Distillers Association)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Override 1</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Feedmills (OMAFRA)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Provincially Licensed Fish Processing Operations (OMAFRA)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Provincially Licensed Meat Plants (OMAFRA)</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Federally Regulated Meat Plants (Canadian Food Inspection Agency)</li> </ul> |
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City of Burlington, City of Hamilton, Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, NRCan, Parks Canada, Esri Canada

OMAFRAGIS

Esri Canada | City of Burlington, Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, NRCan, Parks Canada | OMAFRA | Ontario small distillers <https://www.lcbo.com/content/lcbo/en/pages/spirits/brand-shop-ontario-craft-distillers-association.html>, <https://>

## 4.7 AGRICULTURAL CENSUS DATA

A review of the Census of Agricultural data (Census 2016, including 2006 and 2011 data) was completed to determine the agricultural characteristics of the Region of Halton and the Town of Milton, and to allow comparison to the agricultural characteristics on the Study Area and Secondary Study Area.

### 4.7.1 REGION OF HALTON

Table 4 provides Census 2016 data for agricultural land use in the Region of Halton and provides a comparison to the Provincial Census 2011 agricultural data. As indicated in the census data, the Region of Halton comprise approximately 0.56 percent of the total area of farms in Ontario (Census 2016).

Table 5 Region of Halton Census 2016 Data – Land Use

Item	Halton	Province	Percent of province	Percent from 2011
<b>Land Use, 2016 Census (acres)</b>				
Land in crops.....	52,602	9,021,298	0.58	-14.71
Summerfallow land.....	243	15,885	1.53	-66.11
Tame or seeded pasture.....	1,850	514,168	0.36	-21.84
Natural land for pasture.....	3,414	783,566	0.44	-11.67
Christmas trees, woodland & wetland.....	5,789	1,542,637	0.38	-24.78
All other land.....	4,778	470,909	1.01	47.06
Total area of farms.....	68,676	12,348,463	0.56	-13.69

Table 5 provides a more detailed inventory of agricultural lands and it is evident from this data that the Region of Halton comprises a large land base for common field crops (corn and soybean) and forage/hay crops (as based on Census farm data). Winter wheat is also a major crop within Region of Halton. A further review indicates that Region of Halton is a significant producer of raspberries, accounting for over 4.12 percent of the Provincial acreage in production.

Table 6 Region of Halton Census 2016 Data - Crops

Item	Halton	Province	Percent of province	Percent from 2011
<b>Major Field Crops, 2016 Census (acres)</b>				
Winter wheat .....	7,643	1,080,378	0.71	-16.00
Oats for grain .....	193	82,206	0.23	12.21
Barley for grain.....	229	103,717	0.22	-56.38
Mixed grains .....	243	92,837	0.26	-35.03
Corn for grain .....	12,272	2,162,004	0.57	-5.09
Corn for silage .....	625	295,660	0.21	16.17
Hay .....	10,642	1,721,214	0.62	-27.81
Soybeans .....	17,409	2,783,443	0.63	-11.15

Item	Halton	Province	Percent of province	Percent from 2011
<b>Major Fruit Crops, 2016 Census (acres)</b>				
Total fruit crops .....	424	51,192	0.83	-18.93
Apples .....	127	15,893	0.80	-32.09
Sour Cherries.....	x	2,121	-	-
Peaches .....	13	5,232	0.25	-
Grapes .....	77	18,718	0.41	4.05
Strawberries .....	63	2,915	2.16	-33.68
Raspberries.....	28	680	4.12	12.00

Table 5 also illustrates the change in production (percent) from 2011. The Census data indicates a significant reduction in grain production (winter wheat, barley and mixed grains), and a reduction in hay and soybeans, while there has been an increase in the production of corn for silage and oats for grain.

Table 6 illustrates the 2016 livestock census data. As shown in Table 8, the Region of Halton provides a limited portion of the total cattle and calves, beef cows, dairy cows, total pigs and total sheep and lambs for the Province. When compared to the 2011 Census data, there have been decrease in all livestock inventories, with the exception of total sheep and lambs. There has been an increase in total hens and chicken production since 2011.

**Table 7 Region of Halton Census 2016 Data - Livestock**

Item	Halton	Province	Percent of province	Percent from 2011
<b>Livestock Inventories, 2016 Census (number)</b>				
Total cattle and calves .....	3,209	1,623,710	0.20	-34.60
Steers .....	385	305,514	0.13	-41.93
Beef cows .....	826	236,253	0.35	-30.65
Dairy cows .....	379	311,960	0.12	-32.80
Total pigs .....	139	3,534,104	-	-
Total sheep and lambs .....	1,583	321,495	0.49	24.94
<b>Poultry Inventories, 2016 Census (number)</b>				
Total hens and chickens .....	162,456	50,759,994	0.32	16.11
Total turkeys .....	x	3,772,146	-	-

## 4.7.2 TOWN OF MILTON

A review of Census 2016 data for the Town of Milton reveals that the total area in farms is 21,314 acres, as based on Census Farms. The majority of the farmed land is in crops with a total of 14,928 acres. The remaining lands are listed as summerfallow land, tame or seed pasture, natural land for pasture, and Christmas trees, woodlands and wetlands.

Table 7 provides Census 2016 data for agricultural land use in the Town of Milton and provides a comparison to the Provincial Census 2011 agricultural data. As indicated in the census data, the Town of Milton comprises approximately 0.0017 percent of the total area of farms in Ontario (Census 2016).

**Table 8 Town of Milton Census 2016 Data – Land Use**

Item	Milton	Province	Percent of province	Percent from 2011
<b>Land Use, 2016 Census (acres)</b>				
Land in crops.....	14,928	9,021,298	0.17	-27.11
Summerfallow land.....	x	15,885	-	-
Tame or seeded pasture.....	x	514,168	-	-
Natural land for pasture.....	1,222	783,566	0.16	-29.04
Christmas trees, woodland & wetland.....	2,485	1,542,637	0.16	-22.39
All other land.....	1,828	470,909	0.39	24.18
Total area of farms.....	21,314	12,348,463	0.17	-23.59

Table 8 provides a breakdown of the major field crops in the Town of Milton and provides a comparison of the Town of Milton’s contribution to the Provincial totals.

The 2016 Census data illustrates that corn for grain, hay and soybeans are the major field crops grown in Town of Milton. In comparison to the 2011 Census data there has been a decrease in corn for grain, corn for silage, hay and soybeans. There have been no noticeable increases in the production of any major field crop since 2011. The Town of Milton has limited production in major fruit crops and major vegetable crops, with the exception of Strawberries and Raspberries, where the production accounts for 2.06 and 3.53 of the Provincial totals.

**Table 9 Town of Milton Census 2016 Data - Crops**

Item	Milton	Province	Percent of province	Percent from 2011
<b>Major Field Crops, 2016 Census (acres)</b>				
Winter wheat .....	0	1,080,378	0.00	-
Oats for grain .....	109	82,206	0.13	-
Barley for grain.....	0	103,717	0.00	-
Mixed grains .....	133	92,837	0.14	-
Corn for grain .....	3,283	2,162,004	0.15	-19.77
Corn for silage .....	244	295,660	0.08	-14.08
Hay .....	3,427	1,721,214	0.20	-24.85
Soybeans .....	4,913	2,783,443	0.18	-30.60
<b>Major Fruit Crops, 2016 Census (acres)</b>				
Total fruit crops .....	181	51,192	0.35	-5.24
Apples .....	29	15,893	0.18	-6.45
Sour Cherries.....	0	2,121	0.00	-
Peaches .....	x	5,232	-	-

Item	Milton	Province	Percent of province	Percent from 2011
Grapes .....	25	18,718	0.13	-58.33
Strawberries .....	60	2,915	2.06	13.21
Raspberries.....	24	680	3.53	500.00
<b>Major Vegetable Crops, 2016 Census (acres)</b>				
Total vegetables .....	180	135,420	0.13	-60.87
Sweet corn .....	50	22,910	0.22	42.86
Tomatoes .....	31	15,744	0.20	-
Green peas .....	5	16,268	0.03	-
Green or wax beans .....	1	9,732	0.01	-

Table 9 illustrates the census data (2016) for livestock for the Town of Milton. As indicated below, the Town of Milton has limited input to the Provincial totals for livestock inventories.

**Table 10 Town of Milton Census 2016 Data - Livestock**

Item	Milton	Province	Percent of province	Percent from 2011
<b>Livestock Inventories, 2016 Census (number)</b>				
Total cattle and calves .....	1,382	1,623,710	0.09	-25.46
Steers .....	127	305,514	0.04	-34.54
Beef cows .....	282	236,253	0.12	-
Dairy cows .....	171	311,960	0.05	-
Total pigs .....	39	3,534,104	-	-
Total sheep and lambs .....	947	321,495	0.29	88.65

Table 10 provides a side-by-side comparison of the Region of Halton and the Town of Milton 2016 Census data. Table 10 also provides a calculation of the percent occurrence of the Town of Milton agricultural census data as a comparison to the Region of Halton agricultural census data.

As illustrated in Table 10, the Town of Milton provides significant contribution to the major field crop agricultural crops in the Region of Halton, as evidenced by values of 56.48 percent for oats for grain, 54.73 percent for mixed grains, 26.75 percent for corn for grain, 39.04 percent for corn for silage, 32.20 percent for hay and 28.22 percent for soybeans.

The Town of Milton contribution to the major fruit crops production in Region of Halton illustrates input of 42.69 percent of total fruit crops, with 22.86 percent in apples, 32.47 percent in grapes, 95.24 percent in strawberries and 85.71 percent in raspberries.

The Town of Milton contribution to the major vegetable crops grown in the Region of Halton illustrates inputs of 28.04 percent for total vegetables, 60.24 percent for sweet corn and 70.45 percent of the tomato crop.

Table 11 Comparison of Township and Region Census 2016 Data - Crops

Item	Milton	Halton	Percent of Halton Region
<b>Major Field Crops, 2016 Census (acres)</b>			
Winter wheat .....	0	7,643	0.00
Oats for grain .....	109	193	56.48
Barley for grain.....	0	229	0.00
Mixed grains .....	133	243	54.73
Corn for grain .....	3,283	12,272	26.75
Corn for silage .....	244	625	39.04
Hay .....	3,427	10,642	32.20
Soybeans .....	4,913	17,409	28.22
Potatoes .....	0	10	0.00
<b>Major Fruit Crops, 2016 Census (acres)</b>			
Total fruit crops .....	181	424	42.69
Apples .....	29	127	22.83
Sour Cherries.....	0	x	
Peaches .....	x	13	
Grapes .....	25	77	32.47
Strawberries .....	60	63	95.24
Raspberries.....	24	28	85.71
<b>Major Vegetable Crops, 2016 Census (acres)</b>			
Total vegetables .....	180	642	28.04
Sweet corn .....	50	83	60.24
Tomatoes .....	31	44	70.45
Green peas .....	5	x	
Green or wax beans .....	1	x	

Table 11 provides a comparison of the Town of Milton and the Region of Halton census data (2016) for livestock inventories. As illustrated in Table 11, the Town of Milton is a significant contributor to the overall livestock inventories of the Region of Halton. The Town of Milton contributes approximately 43.07 percent of the total cattle and calves, with 32.99 percent of the steers, 34.14 percent of beef cows, 45.12 percent of the dairy cows, 28.06 percent of the total pigs and 59.82 percent of the total sheep and lambs.

Table 12 Comparison of Township and Region Census 2016 Data – Livestock

Item	Milton	Halton	Percent of Halton Region
<b>Livestock Inventories, 2016 Census (number)</b>			
Total cattle and calves .....	1,382	3,209	43.07
Steers .....	127	385	32.99
Beef cows .....	282	826	34.14
Dairy cows .....	171	379	45.12
Total pigs .....	39	139	28.06
Total sheep and lambs .....	947	1,583	59.82
<b>Poultry Inventories, 2016 Census (number)</b>			
Total hens and chickens .....	159,864	162,456	98.40
Total turkeys .....	x	x	

When compared to the Study Area, the Study Area has one hobby horse operation located on a small parcel of land. There are no other livestock operations in the Study Area.

When compared to the Secondary Study Area, there are numerous hobby horse, and horse farms. No dairy cattle were observed. A major poultry operation was noted north of Derry Road West. There are no major livestock operations abutting or in close proximity to the Study Area.

## **5 RESOURCE ALLOCATION AND CONFLICT POTENTIAL**

Land use planning decisions involves trade-offs among the competing demands for land. The fundamental base used for the evaluation of agricultural lands is land quality, i.e. CLI soil capability ratings. Within the rural/urban interface, there are a number of other factors which contribute to the long-term uncertainty of the economic viability of the industry and these, in turn, are reflected in the lack of investments in agricultural facilities, land and infrastructure and changes to agricultural land use patterns in these areas. Several of these factors include, but are not limited to, the presence of rural non-farm residents, land fragmentation, intrusions of non-agriculture land uses, non-resident ownership of lands and inflated land values. This section summarizes the impact of these factors on agriculture in the area.

### **5.1 IMPACTS, ASSESSMENT AND COMPATABILITY WITH SURROUNDING LAND USES**

The identification and assessment of potential impacts is paramount to determining potential mitigation measures to either eliminate or offset the impact to the extent feasible. A review of the OMAFRA draft Agricultural Impact Assessment guidance document identified numerous potential impacts to agriculture which may include:

- Interim or permanent loss of agricultural lands
- Fragmentation, severing or land locking of agricultural lands and operations
- The loss of existing and future farming opportunities
- The loss of infrastructure, services or assets
- The loss of investments in structures and land improvements
- Disruption or loss of functional drainage systems
- Disruption or loss of irrigation systems
- Changes to soil drainage
- Changes to surface drainage
- Changes to landforms
- Changes to hydrogeological conditions
- Disruption to surrounding farm operations
- Effects of noise, vibration, dust
- Potential compatibility concerns
- Traffic concerns
- Changes to adjacent cropping due to light pollution

It should be noted that this Agricultural Impact Assessment (AIA) report should be read in conjunction with all other discipline reports in an effort to provide an adequate evaluation of the above-mentioned potential impacts that are beyond the scope of agriculture.

It has been documented within this report, the agricultural character of both the Study Area and the Secondary Study Area. It has been determined that the Study Area comprises open field

and woodland areas. It has been documented in the Dillon Consulting memo that portions of the Study Area are also designated wetlands.

The Secondary Study Area comprises portions of active agricultural land uses (including livestock and cash crop operations), built areas (urban land uses), commercial enterprises, and rural residential use.

It has been documented that the Study Area abuts the MEV lands and that large portions of the Secondary Study Area (particularly to the east) are located within the built area of Milton.

The Study Area comprises a single parcel that extends into the MEV lands. The Secondary Study Area comprise a mix of land fragmentation, with large parcels of agricultural lands to the west. In addition to the fragmented lands within the urban area of Milton, two areas of smaller parcels with residential uses were noted near the intersections of Bell School Line and Derry Road West, and Bell School Line and Britannia Road West. A landscaping company (Deca Stone) was associated with one of the smaller parcels along Britannia Road West, a construction company (Jarlian Construction) was associated with a smaller parcel along the west side of Bell School Line, and a masonry/stone/concrete business (Master Concrete) was associated with a small parcel along the west side of Bell School Line (north of Britannia Road West).

These types of fragmentation (and business/commercial intrusions) are a clear indication of an area impacted by non-agricultural uses. These types of uses provide an indication of lands that are in transition from an agricultural land base to a more rural environment. The large number of small parcels and commercial/industrial lands provide an indication as to the lack of long-term intentions for agriculture in those portions of the Secondary Study Area.

With respect to the potential impacts as listed on the previous page of this report, and the proposed future development of the Study Area lands, the following provides some context as to the extent of the potential impacts.

- Interim or permanent loss of agricultural lands – There are two small designated agricultural areas in the Study Area. There may be a loss of the use of these small agricultural lands, if the agricultural lands are not within the wetland defined portions of the Study Area. The loss of lands will be dependent on the design and location of the Green Infrastructure within the Study Area lands. It should be noted that the lands that will be used for the Green Infrastructure (storm water management ponds) and is an allowed land use within the Greenbelt Protected Countryside.
- There will be no fragmentation, severing or landlocking of agricultural lands as a result of the proposed future development of the Study Area.
- The loss of existing and future farming opportunities – there may a loss of existing and future farming opportunities on the Study Area lands depending on the design and location of the Green Infrastructure.
- The loss of agricultural infrastructure, services or assets – there is no loss of infrastructure, services or assets as a result of the proposed future development

- of the Study Area lands.
- The loss of investments in structures and land improvements – there is no net loss of investment in agriculture as a result of the proposed future development of the Study Area lands.
  - The loss of the use of a ground water well – there exists the potential for impact from the loss of the use of a ground water well. There is one well in the Study Area as documented in the Land Information Ontario database for water wells. It will be necessary to either preserve the existing well, or properly engineer the closing/capping of the well to prevent potential groundwater contamination.
  - Disruption or loss of functional drainage systems – there is no net loss of artificial tile drainage on the Study Area, and there is no net loss or disruption to artificial tile drainage systems in the Secondary Study Area.
  - Disruption or loss of irrigation systems – there is no loss of investment in irrigation systems.
  - Changes to soil drainage – there may be a change in soil drainage in the areas where there will be storm water management ponds created. There will be no net change in soil drainage in the Secondary Study Area as a result of proposed future development of the Study Area lands.
  - Changes to surface drainage – there may be a change in surface drainage within the Study Area as a result of the proposed Green Infrastructure. There will be no change in surface drainage within the Secondary Study Area as a result of proposed future development of the Study Area lands.
  - Changes to landforms – there will be the creation/construction of Green Infrastructure (storm water management ponds) on the Study Area lands. There will be no changes to landforms (with respect to agriculture) in the Secondary Study Area as a result of proposed future development of the Study Area lands.
  - Changes to hydrogeological conditions – would need to be addressed under separate cover by the hydrogeological consultant.
  - Effects of noise, vibration, dust - there should be limited potential for additional noise, vibration and dust during the operations of the proposed future development of the Study Area lands. There is a potential for noise, vibration and dust during the initial construction phase.
  - Potential compatibility concerns – there will be limited potential for compatibility concerns with the proposed future development of the Study Area lands and the adjacent agricultural lands as the proposed future development is the creation of Green Infrastructure (storm water management ponds).
  - Traffic concerns – there will be no traffic issues as the proposed future development is for the construction and operation of Green Infrastructure (storm water management ponds). There will be no additional traffic as a result.
  - Changes to adjacent cropping due to light pollution – there is no potential for changes in cropping due to light pollution, as the proposed future development of the Study Area lands will not include urban uses where there is typically a need for lighting.
  - Disruption to surrounding farm operations – there should be no disruption for surrounding/adjacent farms as the proposed future development would be the

creation/construction of Green Infrastructure (storm water management ponds).

## **5.2 TRAFFIC, TRESPASS AND VANDALISM**

Specific to agriculture, increased vehicle traffic along roadways can lead to safety issues with respect to the movement of slow moving, long, wide farm machinery and, as well, interrupt or alter farm traffic flow patterns.

Trespassing and vandalism impacts are generally related to development within agricultural areas predominated by specialty crop operations or large livestock operations, and in areas of close proximity to urban environments.

The proposed future development of the Study Area lands for Green Infrastructure (storm water management ponds) will not result in an increase in traffic.

Trespassing and vandalism are more often a concern with specialty crop operations and livestock operations. The Study Area lands are not used for or designated as specialty crop lands. The proposed future development will result in storm water management ponds. There will be no opportunities for trespassing or vandalism as a result of the proposed future development of the Study Area lands.

## **5.3 AGRICULTURAL INFRASTRUCTURE**

The reconnaissance level land use survey failed to identify any agricultural equipment dealers, seed dealers/cleaning/drying services or farm equipment maintenance service businesses within the Study Area or Secondary Study Area.

A review of the OMAFRA Agricultural System Portal was completed to identify the presence of any livestock assets and services (renderers, meat plants, abattoirs), refrigerated warehousing and storage, frozen food manufacturing, farm markets, wineries, or cideries within the Study Area. None of these features was identified within the agricultural areas of the Study Area, or Secondary Study Area.

The lack of local agricultural business and infrastructure is also indicative of areas in limited or marginal agriculture activities, as these services rely on the business supplied by the local farm operators.

## **5.4 MITIGATION MEASURES**

Mitigation measures are designed and integrated to offset any potential negative impact that may occur as the result of a development. The following provides comment and context on mitigation measures.

### **5.4.1 AVOIDANCE**

Any change in land use within or adjacent to an identified or designated prime agricultural area will result in the potential for impacts to the adjacent agricultural area. The severity of the potential impacts is related to the type and size of the change in land use, and the degree of agricultural activities and operations in the surrounding area.

The first method of addressing potential impacts is to avoid the potential impact. In this study, the proposed future development of the Study Area lands will be a permanent use adjacent to an agricultural area.

There may be a loss of the use of all, or a portion of, the small areas of designated agricultural lands, if the agricultural lands are not within the Dillon Consulting defined wetland portions of the Study Area. Any potential loss of lands (agriculture or non-agriculture) will be dependent on the design and location of the Green Infrastructure within the Study Area lands. It should be noted that the lands that will be used for the Green Infrastructure (storm water management ponds) and is an allowed land use within the Greenbelt Protected Countryside.

### **5.4.2 MINIMIZING IMPACTS**

When avoidance is not possible, the next priority would be to minimize impacts to the extent feasible. As a result, mitigation measures should be developed to lessen any potential impacts. The minimization of impacts may be achieved during the design process and through proactive planning measures that provide for the separation of land uses.

In this instance the proposed future development of Green Infrastructure (storm water management ponds) on portions of the Study Area lands (of which only small portions are designated Prime Agricultural lands), will be related to the potential loss of Prime Agricultural lands. If the design of the Green Infrastructure includes the use of the small portions of Prime Agricultural lands, then the impact will be related to the loss of land. As the loss of lands cannot be avoided, mitigation should limit the amount of land lost and direct the design of the Green Infrastructure to avoid the Prime Agricultural areas. The design of the Green Infrastructure (storm water management ponds) should take into consideration to use the smallest footprint for the ponds.

### **5.4.3 MITIGATING IMPACTS**

When avoidance techniques and minimizing potential impacts to agriculture have not achieved the desired effect the next priority is to mitigate any further impact. These potential mitigation measures have been provided in an effort to suggest measures (if necessary) to mitigate impacts (if any) to the Secondary Study Area. It has been identified previously in this AIA report, that there will be no impacts to the adjacent agricultural lands. Therefore, these mitigation measures are provided as potential enhancements to the Study Area lands.

Potential mitigation measures may include:

- The creation of berms or vegetated feature between the different types and intensities of land uses to reduce the potential for trespassing and potential vandalism. Vegetated buffers should include the use of deciduous and coniferous plants, with foliage from base to crown. These types of plantings will be effective in the capture of dust and spray drift.
- The use of adequate fencing between the different types of land uses to reduce the potential for trespassing and potential vandalism.
- The use of signage between the different types and intensities of land uses to indicate No Trespassing or Private Property.
- The use of plantings/vegetation as screens and buffers to reduce visual impacts and sounds.
- The use of reduced speed limits in the agricultural areas.
- Implementation of surface and/or groundwater monitoring in areas where agricultural operations make use of surface or groundwater as part of their normal farm practices.

It should be noted that the use of fencing, signage, berms, vegetation screening, etc as part of a mitigation effect, will require that these types of mitigation are used/created on the lands that are to be developed and not on the adjacent agricultural lands. The adjacent landowners should not incur any expense to themselves as a result of the future development of the Study Area lands.

This AIA has provided comment on the avoidance (if possible), minimizing potential impacts and mitigation measures in the instances where avoidance is not possible.

## 6 SUMMARY AND CONCLUSIONS

DBH Soil Services Inc was retained by Wilfrid Laurier University (WLU) to complete an Agricultural Impact Assessment (AIA) for the purpose of assessing any potential impacts in locating Green Infrastructure within the Greenbelt as envisioned by the Town of Milton (the Town) and WLU through implementation of the Milton Education Village (MEV) Secondary Plan.

The WLU Milton Campus lands include Part Lot 8 in Concession 7 in the Town of Milton, Regional Municipality of Halton. These lands are generally bounded by Bell School Line to the west, are included in the built area of Milton on the east, agricultural lands and woodlots to the north, and woodlots to the south. This study was specific to the WLU Milton Campus lands that are located west of the built area of Milton.

The proposed future development of these lands for the specific creation of Green Infrastructure within the Greenbelt, supporting the vision for the WLU Lands, required the completion of an Agricultural Impact Assessment. The purpose of this AIA was to document the existing agricultural character, identify agricultural impacts (potential or real), and to provide avoidance or mitigative measures as necessary to offset any potential impacts.

In the Regional context, the Study Area is located in the Town of Milton, approximately 6 km northwest of Highway 407 and the City of Burlington and Town of Oakville, and approximately 6 km southeast of Highway 401.

The Study Area and the Secondary Study Areas comprise a mix of land uses including urban uses, rural uses, agricultural lands, transportation corridors, and woodlots. A large portion of the Secondary Study Area (east of the Study Area) rests within the built boundary of Milton. Portions of those areas are presently used for agriculture, but are designated within the Milton built boundary, therefore those lands have no long-term agricultural potential.

The results of this Agricultural Impact Assessment are presented below:

- **Geographical Limits**

The Study Area and most of the Secondary Study Area are located within the Peel Plain Physiographic unit. The northwestern portion of the Secondary Study Area is located within the Niagara Escarpment Physiographic unit.

The Peel Plain Physiographic unit is described as a level to undulating tract of clay soil material covering the central portions of Halton, Peel and York Regions. This area has a gradual slope toward Lake Ontario.

The Niagara Escarpment Physiographic unit is described as an escarpment (rock outcrop/vertical cliffs) that extends from the Niagara River to the tip of the Bruce Peninsula, continuing north through Manitoulin Islands. The Niagara Escarpment is known

for the jagged vertical cliffs of dolostone, with the slopes below carved in red shale materials. Specific to the Milton area, there is a large mesa-like formation that is separated from the main body of the Niagara Escarpment. The southernmost tip of this mesa-like feature is Rattlesnake Point. The soils on this mesa-like feature are thin, shallow and rocky. The Study Area and the Secondary Study Area are a relatively simple mix of topography. The Study Area topography is gently undulating with a shallow depressional area associated with a stream located in the central and south-central area. The Secondary Study Area topography comprises gently sloping areas, and a shallow channelized, depressional area associated with a stream located north of the Study Area, continuing along the west side of Bell School Line to Britannia Road, before flowing south, southeast. This stream flows in a meandering channel. The northwest portion of the Secondary Study Area comprises steeper topography that is influenced by the Niagara Escarpment and steep slopes approaching the escarpment.

The Study Area and Secondary Study Area are located near the 3100 Crop Heat Units (CHU-M1) available for corn production in Ontario. The Crop Heat Units (CHU) index was originally developed for field corn and has been in use in Ontario for 30 years. The CHU ratings are based on the total accumulated crop heat units for the frost-free growing season in each area of the province. CHU averages range between 2500 near North Bay to over 3500 near Windsor. The higher the CHU value, the longer the growing season and greater are the opportunities for growing value crops.

A review of the OMAFRA soils and Canada Land Inventory (CLI) digital data (1:50000 scale) indicated that the Study Area comprised approximately 95.8 percent CLI class 1 lands, with the remaining 4.2 percent identified as CLI class 4 lands. The review also determined that the Secondary Study Area comprises approximately 51.0 percent Canada Land Inventory (CLI) capability of Class 1 – 3, with approximately 37.2 percent as CLI class 1 lands, 1.8 percent as CLI class 2 lands, 12.0 percent as CLI class 3 lands, 15.3 percent as CLI class 4 lands, and approximately 33.7 percent as Not Rated lands that are associated with the urban area of Milton.

A review of the Dillon Consulting Wilfrid Laurier University MEV Lands Part 1 and Part 4: Wetland, Watercourse and HDF Features Summary Memo (August 27, 2021) revealed a detailed assessment of wetland features onsite. This indicates that these wetland areas are wet for significant portions of the year and will have soils that have excess moisture limitations.

A review of the OMAFRA document *Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for Application of the Canada Land Inventory in Ontario* (online version October 22, 2021) (<http://www.omafra.gov.on.ca/english/landuse/classify.htm>) indicated that CLI classification as based on the OMAFRA soils resource database (1:50000) is not accurate for this location and a more appropriate rating would be CLI Class 5W for those soils within the designated wetland areas.

- **Agricultural Policy**

A review of the Greenbelt Plan (2017) mapping indicates that the Study Area is located within the Protected Countryside of the Greenbelt Area and that infrastructure is an allowable land use within the Protected Countryside.

A review of the boundaries of the Niagara Escarpment Plan (and associated digital mapping) was also completed. The review indicated that no portions of the Study Area are located within the Niagara Escarpment Plan area, however, portions of the Secondary Study Area were identified within the Niagara Escarpment Plan area.

A review of the boundaries of the Growth Plan for the Greater Golden Horseshoe area was completed. It was determined that the Study Area lands are located within the Growth Plan for the Greater Golden Horseshoe mapped area and are designated as Prime Agricultural Lands. Portions of the Secondary Study Area were also designated as Prime Agricultural Lands. There are no Specialty Crop Lands within either the Study Area lands or the Secondary Study Area.

A review of the *Halton Region Official Plan (Office Consolidation June 19, 2018) Map I – Regional Structure* revealed that the Subject Lands are identified as Regional Natural Heritage System\* and Greenbelt Natural Heritage System (Overlay). The Secondary Study Area comprises the Regional Natural Heritage System\*, Greenbelt Natural Heritage System (Overlay), Urban areas, and Prime Agricultural Areas

A review of the *Halton Region Official Plan (Office Consolidation June 19, 2018) Map 1E* illustrated that the Study Area is comprised of two very small pieces of Prime Agricultural Areas. The Secondary Study Area includes portions of Urban Areas and Prime Agricultural Areas. There are no specialty crop areas defined within the Region of Halton. The Study Area and Secondary Study Areas do not comprise any lands designated as specialty crop lands/areas

The *Town of Milton Official Plan (Consolidated August 2008) (Approved)* illustrated that portions of the Study Area are designated as Agricultural Area and Greenlands A Areas.

A review of the *Town of Milton Comprehensive Zoning By-Law 144-2003 (Consolidation October 2019)* and the *Town of Milton Comprehensive Zoning By-Law 016-2014 (HUSP Urban Area – Consolidation June 2019)* determined that the Study Area comprises A1 Agriculture and a small area of GA, where GA is identified as Greenlands A.

No lands within the Study Area or Secondary Study Area are located within any Provincially designated Specialty Crop areas or in any municipally zoned specialty crop area.

Therefore, the policy documents have indicated that only small portions of the Study Area are designated as prime agricultural lands.

- **Agricultural Land Use**

The Study Area land use comprises open fields and woodlands. The predominant land use is open field. The Study Area comprises land uses of approximately 79.2 percent open field lands and 20.8 percent as woodlands.

The Secondary Study Area consists of a variety of land uses including, but not limited to built-up/disturbed areas (including road corridors and the built area of Milton), common field crops, forage/pasture lands, grains, open field, orchard, open field, ponded areas, and woodland areas.

The Secondary Study Area comprises land use of approximately 26.2 percent as built up, 35.9 percent as common field crop, 9.9 percent as forage/pasture, 0.3 percent as grains, 3.4 percent as orchard lands, 5.6 percent as open field, 4.9 percent as plowed field areas, 0.2 percent as ponded areas, 0.3 percent as recreational lands (soccer fields), 4.3 percent as scrubland, 1.0 percent as unknown land use (not visible from roadside), and 8.0 percent as woodlands.

On review of the Land Use data it was observed that the predominant land uses in the Secondary Study Area include built-up areas and areas for the production of common field crops. The next greatest percent of land use is derived from forage/pasture lands, and woodlands.

- **Agricultural Investment**

A total of 37 agricultural facilities/buildings or areas where facilities are located were identified from the various imagery sources. No agricultural facilities were identified or located in the Study Area. The 37 agricultural facilities/buildings were observed only in the Secondary Study Area.

Numerous horse farms and hobby horse farms were scattered throughout the Secondary Study Area. One large poultry operation was noted in the Secondary Study Area.

There is no investment in artificial tile drainage or irrigation on the Study Area. There will be no loss of investment in artificial tile drainage or irrigation as a result of the development of the proposed Green Infrastructure.

Within the Secondary Study Area, systematic and random tile drainage was noted on various lands to the north, west and south of the Study Area.

There is no investment in irrigation in either the Study Area or the Secondary Study Area.

There is no investment in landforming for agricultural purposes in either the Study Area or the Secondary Study Area. There will be no loss of investment in landforming for agricultural purposes as a result of the development of the proposed Green Infrastructure.

Minimum Distance Separation I (MDS I) calculations were not required for this study as this study comprises the proposed future development of the Study Area for infrastructure (storm water management ponds). Therefore, according to the MDS guidelines, MDS is not required.

A review of the online Agricultural System Portal (OMAFRA) indicated that there were no nurseries, specialty farms (crop or livestock), frozen food manufacturing, refrigerated warehousing/storage, livestock assets or abattoirs in the Study Area or Secondary Study Area. Two farm markets/orchards (Bousfields Farms and Applevale Orchards) were located within the Secondary Study Area. Springridge Farms was located just to the north, outside the Secondary Study Area boundary.

There are no agricultural services within the Study Area or Secondary Study Area. There will be no loss of agricultural services as a result of the development of the proposed Green Infrastructure.

The closest transportation network (major roadway) is Highway 401 which is located immediately north of the Milton urban area.

- **Land Fragmentation – Land fragmentation represents a major impact to the long term viability of agriculture in the Secondary Study Area and is typical of areas under pressure from non-agricultural land uses.**

The Study Area is comprised of a portion of one parcel, with the remainder of the parcel extending into the MEV lands.

The Secondary Study Area has a complex pattern of fragmentation, with numerous small parcels within the urban area of Milton, and extensive fragmentation including smaller parcels along Derry Road, and fragmentation (slightly larger parcels) along Britannia Road between Bell School Line and Appleyby Line. This type of fragmentation pattern is common in areas near urban boundaries and within the Greater Toronto Area (GTA).

The proposed development of the Study Area lands will not result in the creation of additional fragmentation of the agricultural land base.

The foregoing represents a comprehensive Agricultural Impact Assessment with the purpose of evaluating the Study Area and Secondary Study Area to document the existing agricultural character and to determine any potential impacts to agriculture as a result of the proposed future development of the Study Area lands.

Given the geographical location of these lands, it is the conclusion of this study that the proposed future development of portions of the Study Area lands for Green Infrastructure (storm water management ponds) would have no impact on the surrounding agricultural activities within the Secondary Study Area. It is also the conclusion of this study that the proposed future development for Green Infrastructure is an allowed use of lands and it is my opinion that these lands can reasonably be developed for Green Infrastructure.

Sincerely

**DBH Soil Services Inc.**

A handwritten signature in black ink, appearing to read "D Hodgson", is placed over a light gray rectangular background.

Dave Hodgson, P. Ag  
President

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## **APPENDIX A**

AGRICULTURAL FACILITIES PHOTOGRAPHS

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### Agricultural Facility # 1, 2, 3 and 4



### Agricultural Facility #5



Agricultural Facility #6, 7 and 8



Agricultural Facility # 9



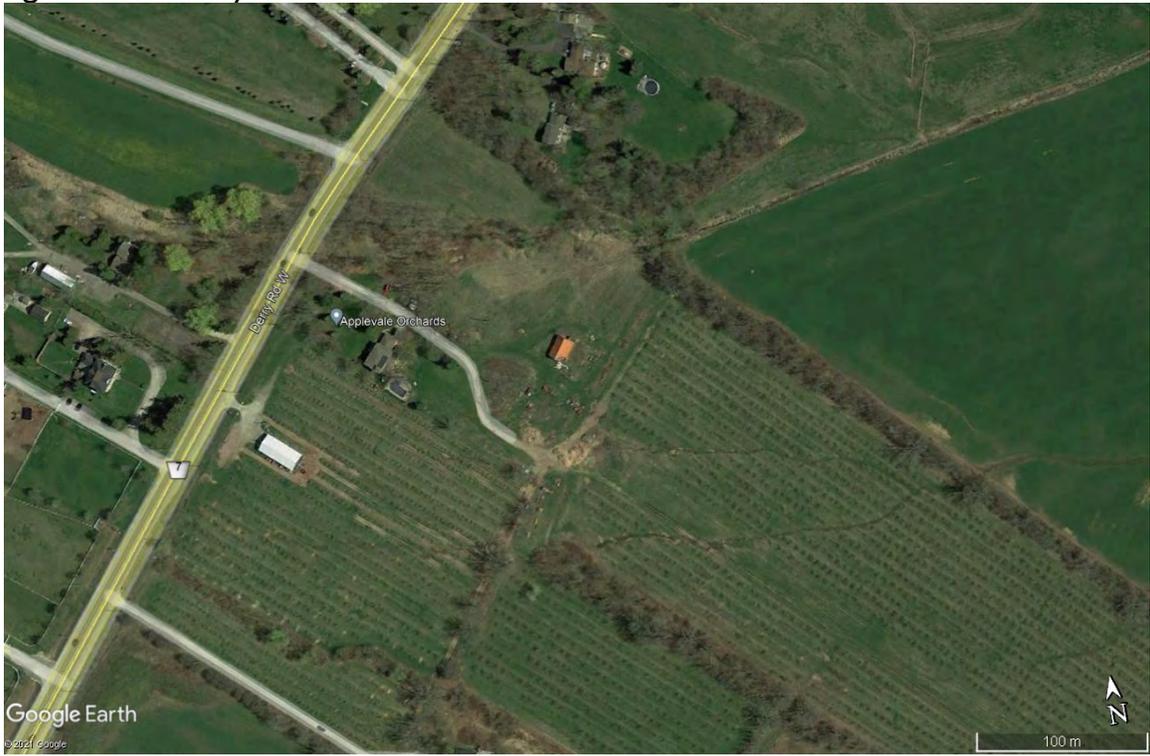
Agricultural Facility # 10



Agricultural Facility # 11



Agricultural Facility #12



Agricultural Facility #13 and 14



Agricultural Facility # 15, 16, 17 and 18



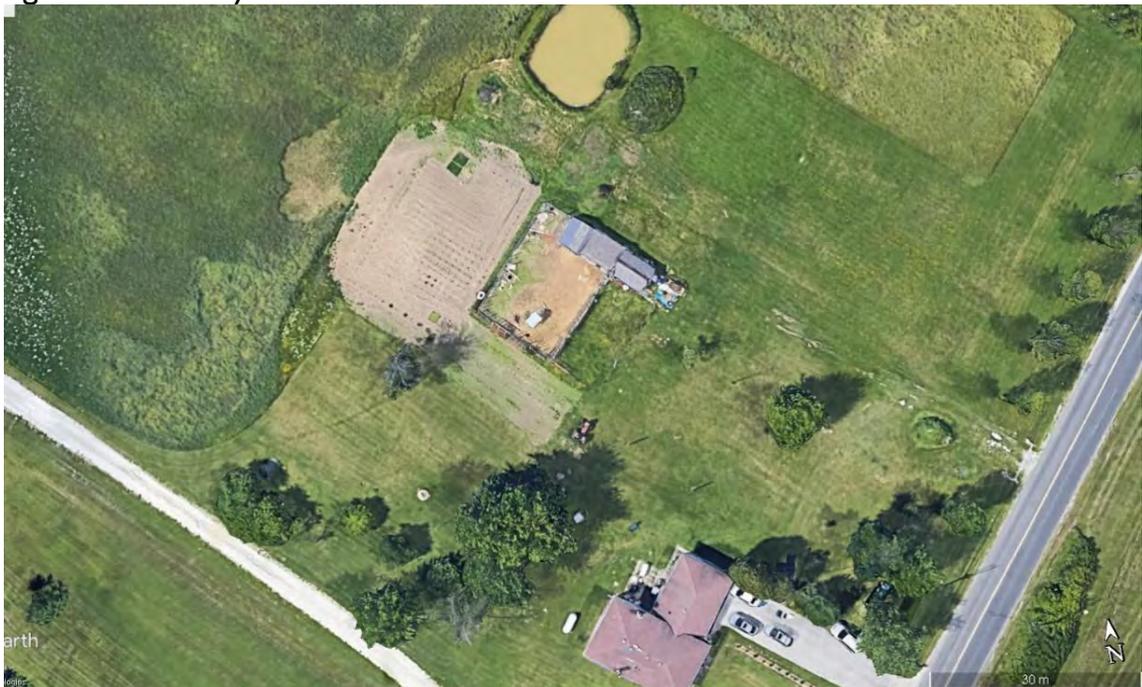
Agricultural Facility # 19



Agricultural Facility #20



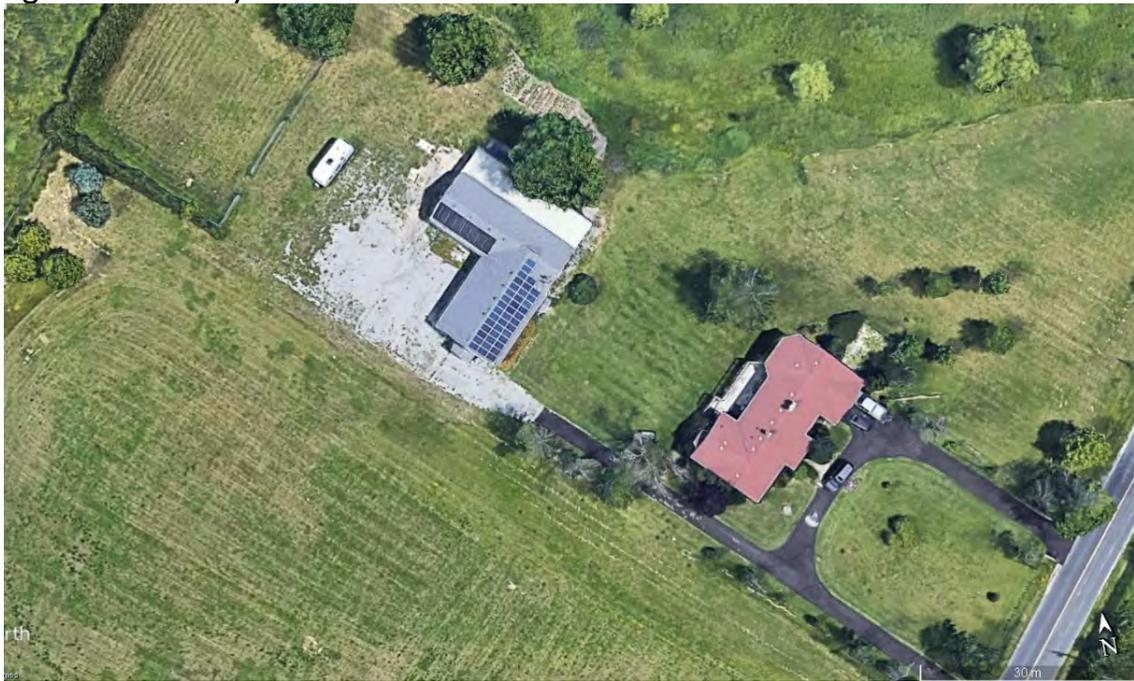
Agricultural Facility #21



Agricultural Facility #22



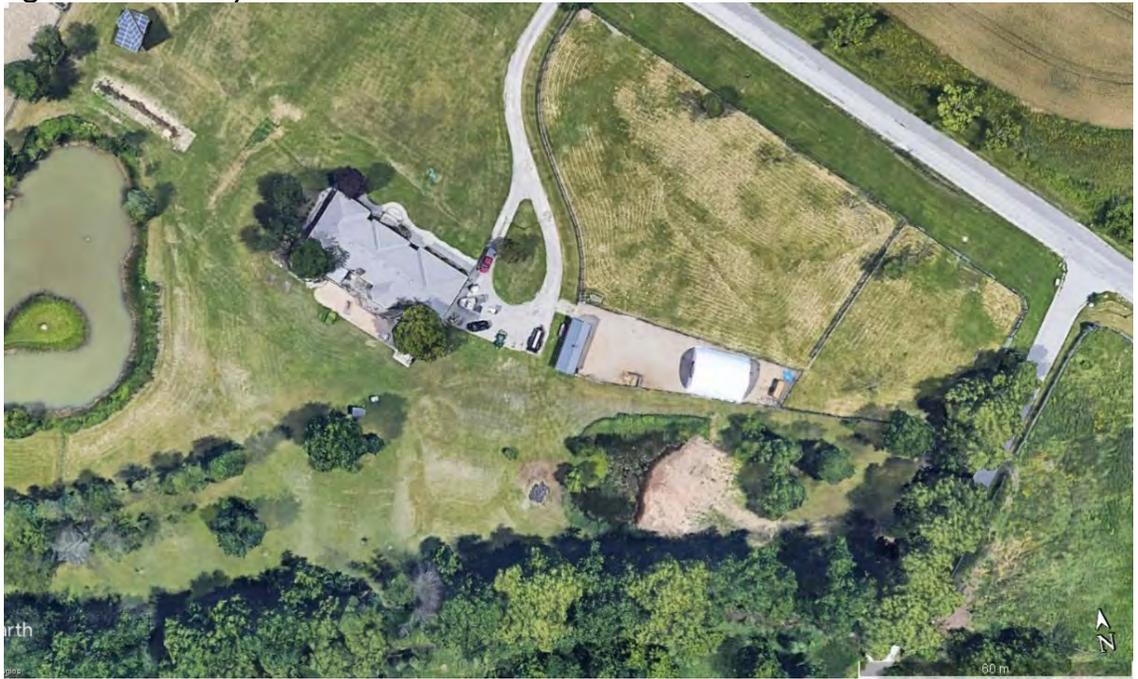
Agricultural Facility #23



Agricultural Facility #24



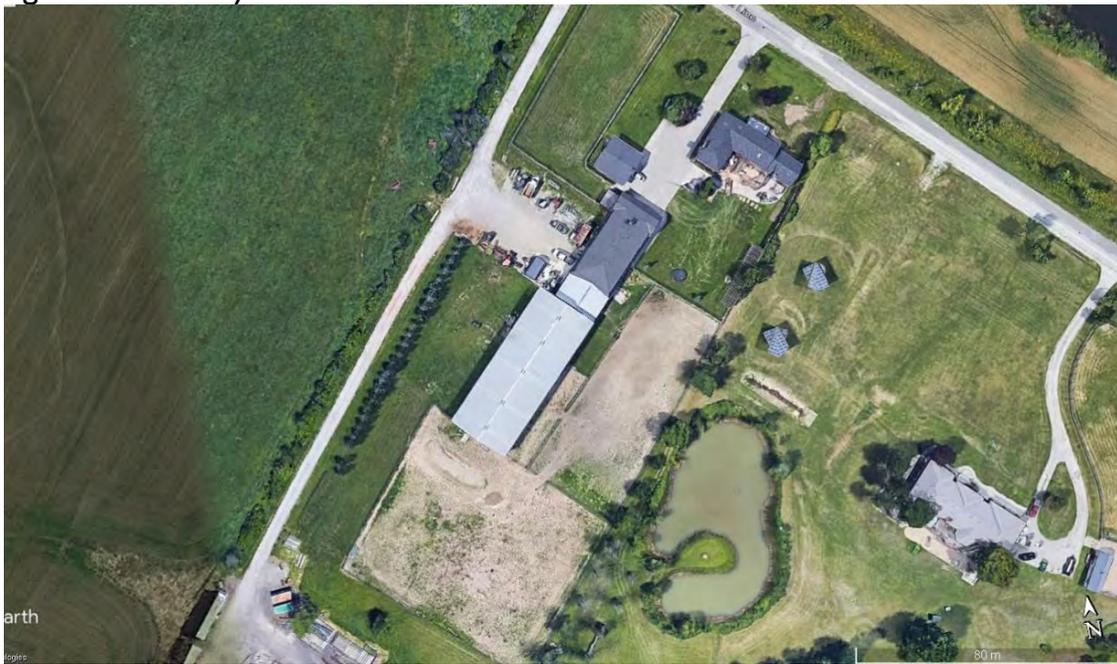
Agricultural Facility #25



Agricultural Facility #26



Agricultural Facility #27



Agricultural Facility #28



Agricultural Facility #29



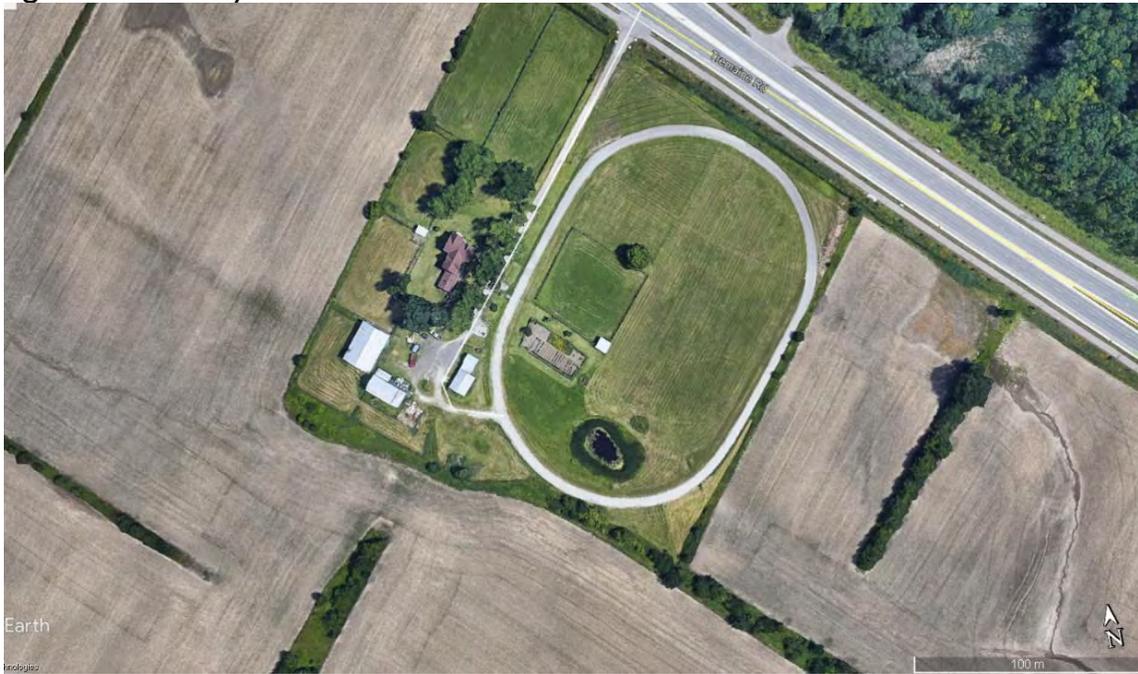
Agricultural Facility #30



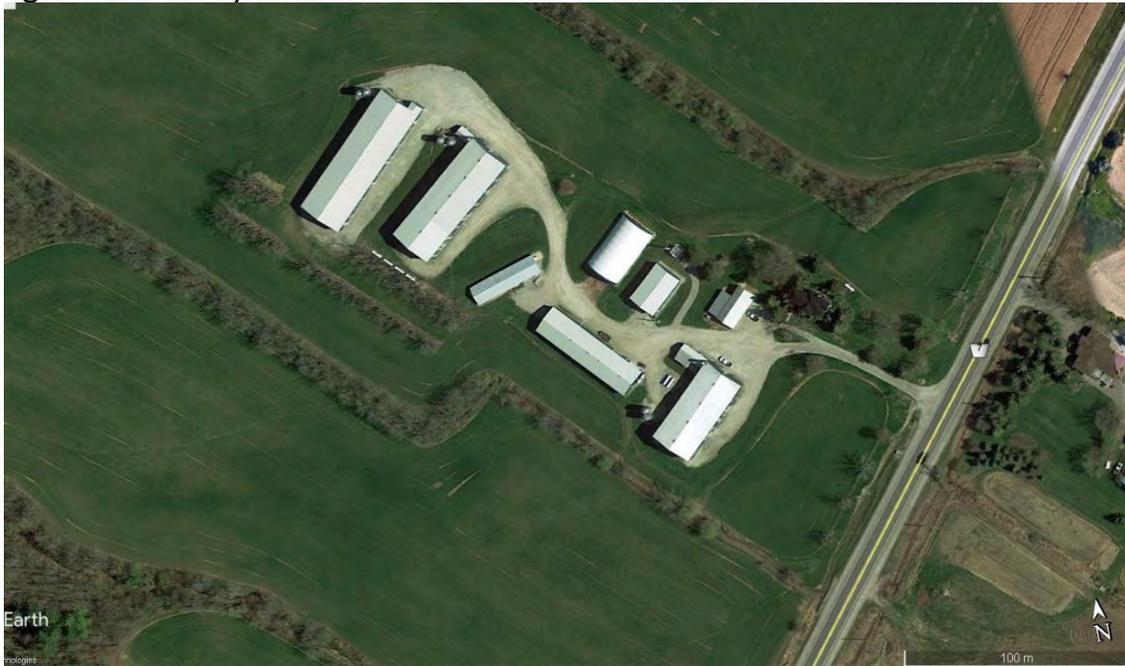
Agricultural Facility #31



Agricultural Facility #32



Agricultural Facility #33, 34, 35, 36 and 37



## **APPENDIX B**

### **Unique Soil Symbols and Canada Land Inventory (CLI) List**

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soilcode	slope	cli	clisub1	clisub2
10	N	5	I	
11	N	7	T	
12	15 - 30	7	R	T
13	N	7	R	
B.L.	N	5	I	
Ba	2 - 5	2	F	
Ba	0 - 0.5	2	F	
Ba	0.5 - 2	2	F	
Be	2 - 5	2	F	
Be	0.5 - 2	2	F	
Bl	2 - 5	2	F	
Bl	0.5 - 2	2	F	
Br	5 - 9	5	R	
Bs	2 - 5	4	F	R
Bu	2 - 5	2	F	M
Bu	5 - 9	3	T	
Bu	9 - 15	4	T	
Cd	0 - 0.5	2	W	
Cd	0.5 - 2	2	W	
Ch	2 - 5	1		
Ch	5 - 9	1		
Ch	0 - 0.5	1		
Ch	0.5 - 2	1		
Ch	15 - 30	1		
Ci	2 - 5	1		
Ck	2 - 5	2	F	
Cl	2 - 5	1		
Co	2 - 5	2	W	
Co	0 - 0.5	2	W	
Co	0.5 - 2	2	W	
Cs	0 - 0.5	4	R	W
Cs	0.5 - 2	4	R	W
Dk	2 - 5	4	F	M
Dk	5 - 9	4	S	T
Dk	9 - 15	4	S	T
Dk	0 - 0.5	4	F	M
Dk	0.5 - 2	4	F	M
Dk	15 - 30	6	T	S
Dk	30 - 45	6	T	S
DI	2 - 5	3	S	P

soilcode	slope	cli	clisub1	clisub2
Di	5 - 9	3	S	P
Di	5 - 9	3	M	F
Di	9 - 15	4	S	T
Di	9 - 15	5	P	I
Di	0 - 0.5	3	S	P
Di	15 - 30	5	T	
Dr	5 - 9	6	R	P
Ds	5 - 9	6	R	P
Du	9 - 15	4	S	T
Fl	2 - 5	6	R	
Fl	5 - 9	6	R	
Fl	9 - 15	6	R	
Fl	0 - 0.5	6	R	
Fl	0.5 - 2	6	R	
Fn	2 - 5	2	F	M
Fn	5 - 9	2	S	T
Fn	5 - 9	3	T	I
Fn	9 - 15	4	T	
Fn	0 - 0.5	2	F	M
Fo	2 - 5	2	F	M
Fo	5 - 9	3	S	T
Fo	9 - 15	4	S	T
Fo	0.5 - 2	2	F	M
Fo	15 - 30	5	T	
Fo	30 - 45	6	T	
Fp	9 - 15	4	R	T
Fr	5 - 9	7	R	
Fs	0.5 - 2	5	R	
Gf	9 - 15	4	W	
Gf	0.5 - 2	4	W	
Gi	2 - 5	2	F	M
Gi	5 - 9	2	S	T
Gi	5 - 9	3	T	I
Gi	9 - 15	4	T	
Gi	0.5 - 2	2	F	M
Gi	15 - 30	5	T	
Gl	2 - 5	1		
Gl	5 - 9	3	T	
Gl	9 - 15	4	T	
Gl	15 - 30	5	T	

soilcode	slope	cli	clisub1	clisub2
Gp	2 - 5	5	R	
Gr	0 - 0.5	5	W	
Gr	0.5 - 2	5	W	
Gs	2 - 5	3	R	
Gs	5 - 9	3	R	T
Gu	2 - 5	1		
Gu	5 - 9	3	T	
Gu	9 - 15	4	T	
Jc	2 - 5	3	D	W
Jc	0.5 - 2	3	D	W
Kl	2 - 5	4	P	W
Kl	5 - 9	4	P	W
Kl	0.5 - 2	4	P	W
Lc	5 - 9	3	E	T
Lc	9 - 15	4	T	
Lc	0 - 0.5	2	D	
Lc	15 - 30	5	T	
Lc	30 - 45	5	D	
Li	2 - 5	5	P	W
Li	5 - 9	5	P	W
Li	0.5 - 2	5	P	W
Ll	2 - 5	1		
Ll	0.5 - 2	1		
Lo	2 - 5	1		
M	0 - 0.5	0		
Ma	0 - 0.5	7	I	
Ml	2 - 5	4	D	W
Ml	0 - 0.5	4	D	W
Ms	0 - 0.5	0		
Oi	5 - 9	3	T	
Oi	9 - 15	4	T	
Oi	15 - 30	5	T	
Ol	2 - 5	1		
Ol	5 - 9	3	T	
Ol	9 - 15	4	T	
Ol	15 - 30	5	T	
On	2 - 5	1		
On	5 - 9	3	T	
On	9 - 15	1	I	
On	9 - 15	4	T	

soilcode	slope	cli	clisub1	clisub2
On	0 - 0.5	1		
On	0.5 - 2	1		
On	15 - 30	5	T	
On	30 - 45	6	T	
Or	0 - 0.5	5	P	
P	0 - 0.5	0		
Pl	2 - 5	2	W	
Pl	0 - 0.5	2	W	
Pl	0.5 - 2	2	W	
PT	N	0		
QY	N	0		
Sp	2 - 5	2	F	M
Sp	5 - 9	2	T	
Sp	9 - 15	3	T	
Tc	2 - 5	3	D	
Tc	5 - 9	3	D	T
Tc	0 - 0.5	3	D	
Tr	9 - 15	4	T	
Tr	15 - 30	5	T	
Tu	2 - 5	1		
Tu	0 - 0.5	1		
Tu	0.5 - 2	1		
UL	N	0		
Vi	2 - 5	2	F	
Wi	0.5 - 2	2	F	
ZZ	N	W		

## **APPENDIX C**

DAVE HODGSON CURRICULUM VITAE

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**DAVID B. HODGSON, B.Sc., P. Ag.**  
**PRESIDENT – Senior Pedologist/Agrologist**

- EDUCATION**
- B.Sc. (Agriculture), 1983-1987; University of Guelph, Major in Soil Science
  - Agricultural Engineering, 1982-1983; University of Guelph.
  - Materials Science Technology, 1981-1982; Northern Alberta Institute of Technology (NAIT), Edmonton, Alberta.

**AREAS OF PROFESSIONAL EXPERIENCE**

2000 to Present **Senior Pedologist/President. DBH Soil Services Inc., Kitchener, Ontario.**  
Mr. Hodgson provides expertise in the investigation, assessment and resource evaluation of agricultural operations/facilities and soil materials. Dave is directly responsible for the field and office operations of DBH Soil Services and for providing advanced problem solving skills as required on an individual client/project basis. Dave is skilled at assessing soil and agricultural resources, determining potential impacts and is responsible for providing the analysis of and recommendations for the remediation of impacts to soil/agricultural/environmental systems in both rural and urban environments.

1992 to 2000 **Pedologist/Project Scientist. Ecologistics Limited, Waterloo, Ontario.**  
As pedologist (soil scientist), Mr. Hodgson provided expertise in the morphological, chemical and physical characterization of insitu soils. As such, Mr. Hodgson was involved in a variety of environmental assessment, waste management, agricultural research and site/route selection studies.  
Dave was directly responsible for compiling, analysis and management of the environmental resource information. Dave is skilled at evaluating the resource information utilizing Geographic Information System (GIS) applications.

Dave was also involved the firms Environmental Audit and Remediation Division in the capacity of: asbestos identification; an inspector for the remediation of a pesticide contaminated site; and an investigator for Phase I and Phase II Audits.

**SELECT PROJECT EXPERIENCE**

**Environmental Assessment Studies**

- Agricultural Component of the Green for Life (GFL) Environmental, Moose Creek, Eastern Ontario Waste Handling Facility (EOWHF) Expansion, 2020 – 2021.
- Agricultural Component of the Greater Toronto Area West (GTAW) Highway Corridor Assessment, 2019 – ongoing.
- Peer Review of the Walker Environmental Group (WEG) Inc. Southwestern Landfill Proposal, Ingersoll, 2013 – ongoing.
- Agricultural Component for the High-Speed Rail Kitchener to London –Terms of Reference, 2018,
- Agricultural Component of the Mount Nemo Heritage District Conservation Study – City of Burlington, 2014 – 2015.
- Agricultural Component of the Greater Toronto Area West (GTAW) Highway Corridor Assessment – Phase 2, 2014 – 2016.
- Peer Review of the Agricultural Component of the Walker Group Landfill – Ingersoll, 2013 – 2015.
- Agricultural Component of the Highway 407 East Extension Design and Build Phase, 2012 – 2013.
- Agricultural Component of the Beechwood Road Environmental Centre (Landfill/Recycling) – Napanee, 2012 – 2013.



- Agricultural Component of the Clean Harbors Hazardous Waste Landfill Lambton County 2009 – 2015.
- Agricultural Component of the Highway 401 widening Cambridge to Halton Region 2009 – 2012.
- Agricultural Component of the Upper York Sanitary Sewer Study, York Region, 2009 – 2013.
- Agricultural Component of the Greater Toronto Area West Corridor Environmental Assessment Study 2007 – 2013 (Phase I).
- Agricultural Component of the Niagara to GTA Planning and Environmental Assessment Study, 2007 – 2013.
- Agricultural Component of the Highway 401 widening, Chatham, 2006 - 2007.
- Agricultural Component of the Trafalgar Road study, Halton Region, 2005.
- Agricultural Component of the Highway 404 Extension North, 2004.
- Agricultural Component of the Highway 404 – 400 Bradford Bypass, 2004.
- Agricultural Component of the Highway 407 East Extension, 2002 – 2010.

### **Agricultural Impact Studies**

- Milton, CRH Quarry Expansion, Agricultural Impact Assessment, 2020 – ongoing.
- Grimsby, Specialty Crop Area Redesignation, Agricultural Impact Assessment, 2020-ongoing.
- Halton Hills, Premier Gateway Phase 2 Employment Lands Secondary Plan, Agricultural Impact Assessment, 2020-ongoing.
- Milton Education Village Secondary Plan, Agricultural Impact Assessment, 2020-ongoing.
- Woodstock, Pattullo Avenue Realignment, Agricultural Impact Assessment, 2020-ongoing.
- Smithville, West Lincoln Master Community Plan, Agricultural Impact Assessment, AECOM, 2019 – On-going.
- Kirby Road Agricultural Impact Assessment, HDR, Vaughan, 2019 – On-going.
- Elfrida Lands, City of Hamilton, Agricultural Impact Assessment Update, WSP, 2019 – On-going.
- Dorsay Development – Durham Region High Level Agricultural Assessment, 2019.
- Stoney Creek Landfill AIA Update – GHD, 2019.
- Town of Wilmot, Agricultural Impact Assessment (AIA) Aggregate Pit Study (Hallman Pit), 2018, On-going.
- Courtice Area South East Secondary Plan (Clarington) Agricultural Impact Assessment (AIA), 2019,
- Town of Halton Hills, Minimum Distance Separation (MDS I), August 2018,
- Cedar Creek Pit/Alps Pit (North Dumfries), Agricultural Impact Assessment (AIA), 2018 – On-going,
- Belle Aire Road (Simcoe County) Agricultural Impact Assessment (AIA) Study, 2019,
- Vinemount Quarry Extension (Niagara) Agricultural Impact Assessment (AIA) Study, December 2017.
- Grimsby – Agricultural Impact Assessment Opinion, November 2017.
- City of Hamilton, Urban Core Developments – Agricultural Capability Assessment, February 2017.
- Township of North Dumfries – Minimum Distance Separation (MDS I), February 2017.
- Township of Erin, County of Wellington – Minimum Distance Separation I (MDS I Study), 2016.
- Halton Hills Employment Area Secondary Plan, Halton, 2015 - 2016.
- Peer Review of Agricultural Impact Assessment, Oro-Medonte Township, 2015.
- Greenwood Construction Aggregate Pit, Mono Township, 2014 - 2015.
- Innisfil Mapleview Developments, Town of Innisfil – Minimum Distance Separation (MDS I), 2014.
- Loyalist Township – Minimum Distance Separation (MDS I & 2), 2014.
- Rivera Fine Homes, Caledon – Minimum Distance Separation (MDS I), 2014.
- Town of Milton PanAm Velodrome – Minimum Distance Separation (MDS) 2012 – 2013.

### **Soil Surveys/Soil Evaluations**

- Soil Survey and Canada Land Inventory Evaluation, Burlington, Nelson Quarry, 2020-2021.
- City of Kitchener, City Wide Soil Study, 2020-ongoing.
- Soil Survey, Fallowfield Drive, City of Kitchener Development Manual Study, 2020-ongoing.
- Soil Survey, Williamsburg Estates, City of Kitchener Development Manual Study, 2020-ongoing.
- Soil Survey, South Estates, City of Kitchener Development Manual Study, 2020-ongoing.
- Soil Survey and Canada Land Inventory Evaluation, Burlington, Nelson Quarry, 2019.
- Soil Survey and Canada Land Inventory Evaluation, Maryhill Pit, 2019.



- Soil Survey and Canada Land Inventory Evaluation, Glen Morris Pit, Lafarge Canada, 2018,
- Soil Survey and Canada Land Inventory Evaluation, Brantford Pit Extension, Lafarge Canada, 2018,
- Soil Survey and Canada Land Inventory Evaluation, Pinkney Pit Extension, Lafarge Canada, May 2018,
- Soil evaluation and opinion, King-Vaughan Road, March 2018,
- Soil Sampling, Upper Medway Watershed, Agriculture and Agri-Food Canada. December 2017 – June 2018.
- Soil Survey and Canada Land Inventory Evaluation, Hillsburgh Pit Extension, SBM St Marys, December 2017.
- Soil Survey and Canada Land Inventory Evaluation, Erin South Pit Extension, Halton Crushed Stone, December 2017.
- City of Kitchener, City Wide Urban Soil Assessments, 2016 – On-going.
- Soil Survey and Canada Land Inventory Evaluation, Solar Feed-In Tariff (FIT) Program Study, 2016.
  - Bruce County (15 sites)
  - Grey County (4 sites)
- Soil Survey and Canada Land Inventory Evaluation, Wasaga Beach area, County of Simcoe, 2016.
- Soil Survey and Canada Land Inventory Evaluation Study, MHBC Bradford, Simcoe County, 2016.
- Soil Survey and Canada Land Inventory Evaluation, Solar Feed-In Tariff (FIT Program Study), Carbon Foot Print Offsetters, Durham Region, 2015.
- Soil Survey and Canada Land Inventory Evaluation, Solar Feed-In Tariff (FIT Program Study), Abundant Solar Energy (12 Sites – Peterborough, Madoc, Havelock, Belleville), 2015.
- Soil Survey and Canada Land Inventory Evaluation, Solar Feed-In Tariff (FIT Program Study), City of Hamilton, 2015.

### **Municipal Comprehensive Review Studies (MCR)**

- Simcoe County, 2020-ongoing.
- Northumberland County, 2020-ongoing.
- Halton Region, 2019-ongoing.

### **Land Evaluation and Area Review Studies (LEAR)**

- Mapping Audit Halton Region. Comparison of Regional and Provincial Prime Agricultural Area Mapping – 2019 - ongoing.
- Land Evaluation and Area Review – Soils Component, in Association with AgPlan Ltd, Kanata/Munster. December 2017 – July 2018.
- Land Evaluation and Area Review – Soils Component, Prince Edward County, 2016 – 2017.
- Land Evaluation and Area Review – Soils Component, Peel Region, 2013 - 2014.
- Land Evaluation and Area Review, Minto Communities, Ottawa, 2012 – 2013.
- GIS and LE component of Land Evaluation and Area Review, York Region 2008 – 2009.
- Land Evaluation and Area Review, Mattamy Homes, City of Ottawa – Orleans, 2008 – 2009.
- GIS for Manitoba Environmental Goods and Services (EG&S) Study. 2007 – 2008.
- GIS and LE component of Land Evaluation and Area Review, Halton Region 2007 - 2008.
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