TOWN OF HALTON HILLS
PREMIER GATEWAY PHASE 1B EMPLOYMENT AREA
AGRICULTURAL IMPACT ASSESSMENT

DBH Soil Services Inc.

April 15, 2016

TOWN OF HALTON HILLS
PREMIER GATEWAY PHASE 1B EMPLOYMENT AREA
AGRICULTURAL IMPACT ASSESSMENT

Prepared for:

Ms. Elizabeth Howson
MaCaulay Shiomi Howson Ltd.
MSH Plan
600 Annette Street
Toronto, ON
M6S 2C4

April 15, 2016

Prepared by:

DBH Soil Services Inc.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

APPENDICIES

1 BACKGROUND

DBH Soil Services Inc was retained to complete an Agricultural Impact Assessment (AIA) for the Premier Gateway Phase 1B Employment Area Integrated Planning Project, for the Town of Halton Hills. The Premier Gateway Phase 1B Employment Area is an area described as:

- Part Lot 1, Concession 7, Town of Halton Hills
- Lot 1, Concession 8, Town of Halton Hills
- Lot 2, Concession 7, Town of Halton Hills
- Lot 2, Concession 8, Town of Halton Hills

These lands are henceforth referred to as the Subject Lands.

The Subject Lands are roughly bounded: on the north by agricultural lands and woodlots; on the east by Eighth Line; on the south by Steeles Avenue; and on the west by non-farm residential units, woodlots and Sixth Line.

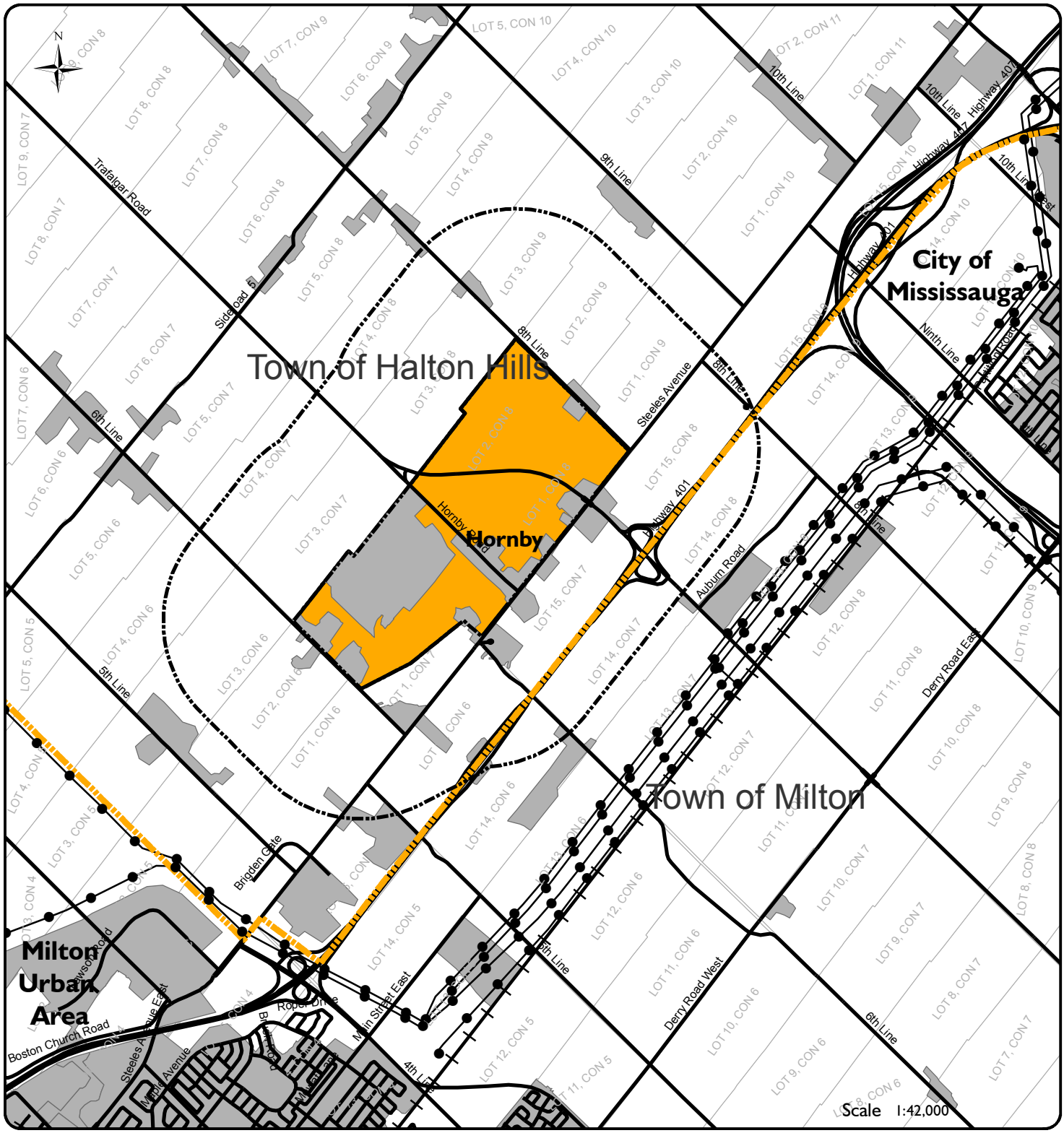
The Subject Lands are located approximately 0.5 km northwest of the Highway 401; approximately 2.5 km north of the Town of Milton; approximately 2.8 km west of the City of Mississauga; and approximately 1.8 km west of the interchange of Highway 401 and Highway 407.

The Subject Lands include the Rural Cluster Area of Hornby and an active recreational area (Hornby Glen Golf Course).

Figure 1 illustrates the relative location of the Subject Lands with respect to the above mentioned features.

For the purpose of an Agricultural Impact Assessment (AIA) report, agricultural operations and activities are evaluated in a larger area, the Study Area (Figure 1), described as a potential zone of impact extending a minimum of 1000 m (1 km) beyond the boundary of the Subject Lands as per the Ontario Ministry of Agriculture, Food and Rural Affairs, Minimum Distance Separation I Guidelines – Publication 707 (October 2006). Specifically, the Study Area comprises a Minimum 1000 m (1 km) area outside the Subject Lands to allow for characterization of the agricultural community and the assessment of impacts adjacent to and in the immediate vicinity of the Subject Lands.

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



Legend

- Electric Transmission Lines
- Railways
- Roads
- 1 km Buffer
- Built Up Areas (MNR data)
- Lot Lines
- Study Area
- Township Boundaries

Figure 1

Location

DBH Soil Services Inc.

February 2016

2 METHODOLOGY

A variety of data sources were evaluated to characterize the extent of agriculture resources and any potential existing (or future) impacts to agriculture within the Subject Lands and the surrounding Study Area.

2.1 DATA SOURCES

The following data sources were used to carry out the AIA for the Subject Lands and the Study Area:

- 1:10000 scale Ministry of Natural Resources (MNR) Aerial Photography, 1978,
- 1:10000 scale Ontario Base Map (1983 - paper) Ministry of Natural Resources:
  10 17 5900 48250
  10 17 5900 48200
  10 17 5950 48250
  10 17 5950 48200,
- 1:10000 scale Ontario Base Map (2009 – Digital data) Ministry of Natural Resources,
- 1:50000 scale NTS Map No 30 M/12. 1984. Ministry of Energy Mines and Resources, Canada,
- 1:50000 scale NTS Map No 30 M/12. Canada Land Inventory (CLI) Capability Mapping,
- *Agricultural Code of Practice for Ontario*, (April 1973). OMAF and OMOE,
- *Agricultural Information Atlas* (online tool, OMAF),
- *Agricultural Resource Inventory*, Ontario Ministry of Agriculture and Food, 1988,
- Birds Eye Imagery,
- Bing Imagery,
- Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for Application of the Canada Land Inventory in Ontario. OMAFRA,
- Comprehensive Policy Statements, Implementation Guidelines, Agricultural Land Policies. OMAFRA. 1995,
- Draft Guidelines on Permitted Uses in Ontario's Prime Agricultural Areas. (OMAFRA),
- Draft Livestock Facilities Guidelines (November 7, 2011) Halton Region,
- Google Earth On Line imagery,
- Growth Plan for the Greater Golden Horseshoe, 2006, (Office Consolidation, June 2013) MAH,
- *Guide to Agricultural Land Us*e, Ontario Ministry of Agriculture, Food and Rural Affairs, March 1995,
- Halton Region Official Plan Package – March 17, 2015 (November 28, 2014 Interim Office Consolidation),
- Halton Region – Regional Official Plan Guidelines – Agricultural Impact Assessment (AIA) Guidelines. (June 18, 2014),

- *Minimum Distance Separation I & II (MDS I & II)*, Ontario Ministry of Agriculture, Food and Rural Affairs Publication 707, October 2006,
- *Niagara Escarpment Plan (November 13, 2014),*
- *Ontario Ministry of Agriculture and Food - Land Use Systems Mapping*,
- *Ontario Ministry of Agriculture and Food - Artificial Drainage Mapping*,
- *Ontario Ministry of Agriculture, Food and Rural Affairs – Digital Soil Mapping 2015* (Halton Region),
- *Provincial Policy Statement*, 2014,
- Roadside and Onsite surveys September 2015 – February, 2016,
- *Sustainable Halton Report 3.03 (Phase 3) – An Agricultural Evaluation* (Planscape Consulting, 2009),
- *The Soils of Halton County;* Report No. 43 of the Ontario Soil Survey. (Gillespie, J.E. M.H. Miller and R.E. Wicklund, 1971), (Digital shape files, and paper copy report),
- *The Physiography of Southern Ontario* 3rd Edition, Ontario Geological Survey Special Volume 2, Ministry of Natural Resources, 1984,
- *Town of Halton Hills Zoning Bylaw 2010-0050* (July 2010),
- *Town of Halton Hills Official Plan* (Consolidated May 2008).

2.2 FIELD DATA COLLECTION

2.2.1 AGRICULTURAL LAND USE

Agricultural land use data was collected through observations made during roadside reconnaissance surveys and field surveys conducted between September 2015 and February 2016. Data collected included the identification of land use (both agricultural and non-agricultural), documentation of the location and type of agricultural facilities, non-farm residential units and 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) for the purpose of updating the Ontario Ministry of Agriculture and Food Land Use Systems mapping for the Subject Lands and the Study Area.

2.2.2 MINIMUM DISTANCE SEPARATION I

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 I was used for this study in compliance with the OMAFRA statement (*Minimum Distance Separation I (MDS I)*, Ontario Ministry of Agriculture, Food and Rural Affairs Publication 707, October 2006 (MDS) Formulae):

> "The objective of Minimum Distance Separation (MDS) Formulae is to minimize

nuisance complaints due to odour and thereby reduce potential land use conflicts. MDS does not account for other nuisance issues such as noise and dust."

"MDS I is used to determine a minimum setback distance between proposed new development and existing livestock facilities or permanent manure storages."

Minimum Distance Separation data was collected through observations made during the windshield surveys completed between September 2015 and February 2016, and through discussions with specific landowners/farmers. Data collected included the identification of land use, identification and visual assessment of barns or any building capable of housing livestock, identification of animal types (if observed on the property or noted on signage on the property) and number of animals (if observed) and barn location with respect to other land uses.

It should be noted that road side evaluations are often limited by 'line of sight' restrictions. Therefore, topography and vegetation (density and/or height) may preclude an accurate assessment of individual agricultural facilities. With this in mind, recent aerial photography and imagery was used to assist in the identification and assessment of any partially or totally concealed or obscured agricultural facility.

Further, the field data and aerial photographic interpretation was supplemented with Assessment Roll, Assessment Mapping and Geographic Information System (GIS) data for the purposes of determining the areal area and location of property boundaries.

MDS I calculations were completed on the following assumptions:

- completed with regard to Minimum Distance Separation I (MDS I), October 2006, OMAFRA;
- completed on a Land Base Assessment (when interviews could not be completed)
- livestock type was based on either the animals seen during roadside surveys, signs indicating the farm type (i.e. Horses), or in cases where no animals or signs were noted, on the most appropriate type of livestock for the type of facility observed;
- Type 'B' Land Use was used (includes applications to rezone or redesignate agricultural lands for residential, institutional, recreational use – high intensity, commercial or settlement area purposes.

2.2.3 LAND TENURE

Land Tenure data was collected through a review of online interactive mapping on the Town of Halton Hills and the Town of Milton websites. This data was used to determine the extent, location and relative shape of each parcel/property within both the Subject Lands and the Study Area. Each respective Town Office was visited to access the Assessment Roll data to determine the address of the parcel owner and whether the land

is tenant farmed. The reviewed Assessment Roll data had been collected for the 2015 Tax Year.

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 (2014). Municipal Governments have similar regard for the protection and preservation of agricultural lands, and address their specific concerns within their respective Official Plans. With this in mind, the *Provincial Policy Statement 2014*, Halton Region Official Plan Package – March 17, 2015 (November 28, 2014 Interim Office Consolidation) (complete with the Halton Region – Regional Official Plan Guidelines – Agricultural Impact Assessment (AIA) Guidelines. (June 18, 2014)), and Town of Halton Hills Official Plan (Consolidated May 2008), and the Town of Halton Hills Zoning Bylaw 2010-0050 (July 2010) were reviewed. The relevant policies are indicated as follows.

3.1 PROVINCIAL AGRICULTURAL POLICY

The Provincial Policy Statement (2014) 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. Agricultural policies are addressed within Section 2.3 of the Provincial Policy Statement. Section 2.3.1 states that 'Prime agricultural areas shall be protected for long term use for agriculture.' Prime agricultural areas are defined as Specialty Crop Areas and Classes 1 – 3 lands with the order of preservation being Specialty Crop Areas, Classes 1, 2 and 3 in that order respectively, followed by any associated Class 4 through 7 lands within the prime agricultural area, in this order of priority.

Section 2.3.3.3 states "new land uses, including the creation of lots, and new or expanding livestock facilities shall comply with the *minimum distance separation formulae*."

Section 2.3.6 provides comment on Non-Agricultural Uses in Prime Agricultural Areas.

Section 2.3.6.1 states:

> "Planning authorities may only permit non-agricultural uses in prime agricultural areas for:
> 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 be designated to accommodate the proposed use;
> 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."

Further it is stated in Section 2.3.6.2 that:
"Impacts from any new or expanding non-agricultural uses on surrounding agricultural operations and lands are to be mitigated to the extent feasible."

This AIA will address the PPS Sections 2.3.1, 2.3.3.3, 2.3.6.1 b1, b2 and 2.3.6.2.

3.2 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 report the Halton Region Official Plan Package – March 17, 2015 (November 28, 2014 Interim Office Consolidation) (complete with the Halton Region – Regional Official Plan Guidelines – Agricultural Impact Assessment (AIA) Guidelines. (June 18, 2014)), and Town of Halton Hills Official Plan (Consolidated May 2008) were reviewed for policy related to agriculture.

The municipal government is a two tier system in this area. The Region sets broad level policies while the local (township) municipalities provide more detailed policies for planning and development.

3.2.1 HALTON REGION OFFICIAL PLAN

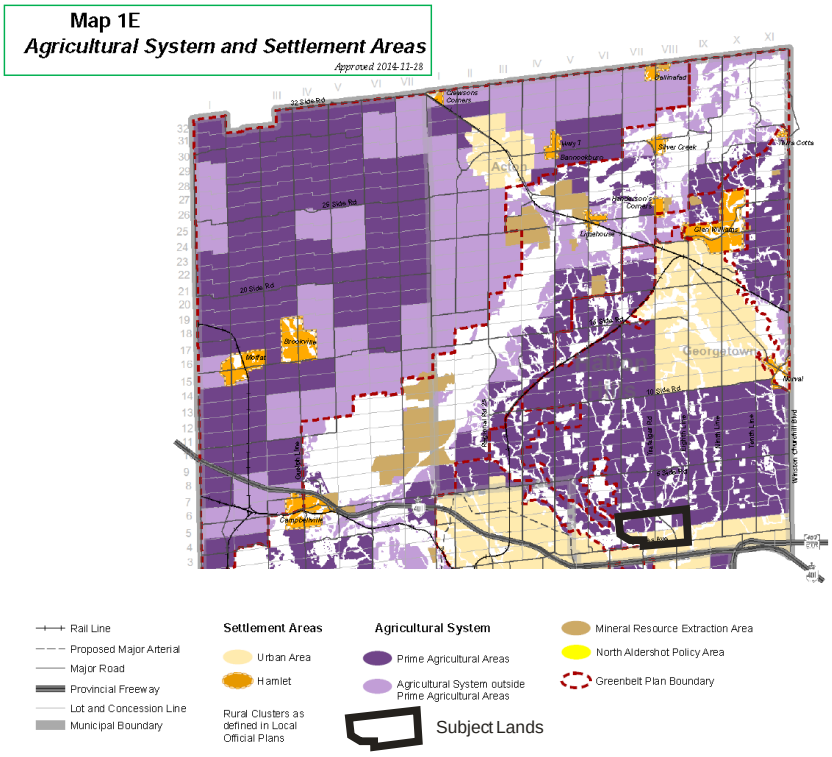
The Halton Region Official Plan (Halton Region Official Plan Package – March 17, 2015, Interim Office Consolidation) was reviewed for this study. This version of the Official Plan includes the Partially Approved Regional Official Plan Amendment (ROPA 38).

The review of the Halton Region Official Plan Map 1E – Agricultural System and Settlement Areas (Approved 2014-11-28) illustrates that the Subject Lands comprise lands that are designated as Urban, Prime Agricultural Area, and Greenbelt Plan Boundary (see figure 2). The Urban lands comprise the lower half of the Subject Lands (Part Lot 1, Concession 7 and Lot 1, Concession 8).

The Subject Lands are bounded on the south by Urban lands, on the west by Urban and Agricultural lands, on the north by Agricultural lands, and on the east by Urban and Agricultural lands.

Agricultural policies are presented in Part III Land Stewardship Policies, Land Use Designations – Agricultural System and Agricultural Area (Sections 91 – 101). Some of the more pertinent policies (with respect to this study) are presented as follows:

Figure 2 Region of Halton Official Plan - Map 1E



The *objectives* of the Agricultural System are:

99(1) To recognize *agriculture* as the primary activity and land use in the Agricultural System. *Approved 2014-11-28*

99(2) To preserve *Prime Agricultural Areas*, as shown on Map 1E, and *prime agricultural lands*.
99(3) To maintain as much as possible lands for existing and future farm use.
99(4) To protect farms from incompatible activities and land uses which would limit agricultural productivity or efficiency.
99(4.1) To promote *normal farm practices* and to protect the *right to farm*.
99(5) To reduce the fragmentation of lands suitable for *agriculture* and provide for their consolidation.

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

101(1.6) [Formerly Section 101(1)]Recognize and protect lands within the

Agricultural System as an important natural resource to the economic viability of *agriculture* and to this end: *Approved 2014-11-28*

a) Direct non-farm uses to the Urban Area, *Hamlets* and *Rural Clusters* unless specifically permitted by *policies* of this Plan. ***, R15***

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*.

101(1.7) Require that new land uses, including the creation of *lots*, and new or expanding livestock facilities within the Agricultural Area System comply with the provincially developed *Minimum Distance Separation formulae*.

101(1.8) Require an Environmental Impact Assessment for new *development* in accordance with Sections 118(3), 118(3.1) and 139.3.7(4).

101(1.9) Ensure that *Key Features*, identified in Section 115.3 that may exist outside the Regional Natural Heritage System are protected in accordance with Section 139.12.

101(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: *Approved 2014-11-28*

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. *Approved 2013-10-21*

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. *Approved 2014-02-18*

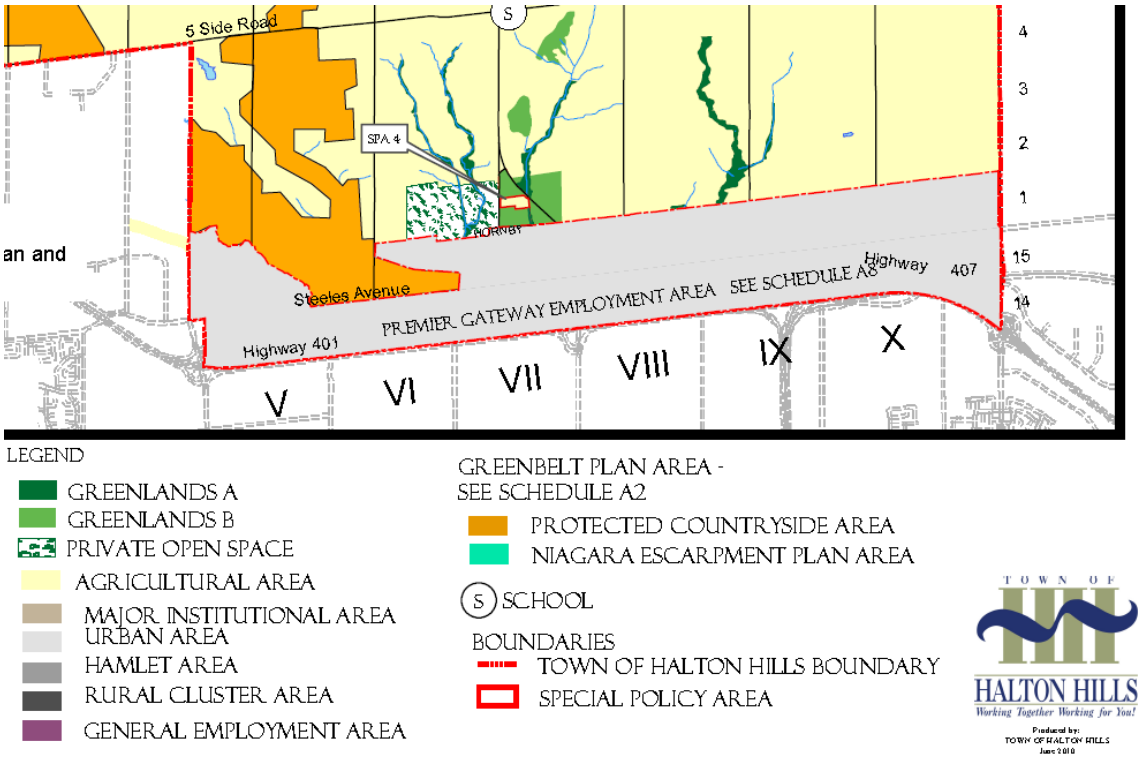
3.2.2 TOWN OF HALTON HILLS OFFICIAL PLAN

The *Town of Halton Hills Official Plan* (Consolidated May 2008) provides policy and land use designation to guide development in the Township.

The review of the *Town of Halton Hills Official Plan Amendment 10* (Proposed Modifications) Schedule A1 – Land Use illustrates that the Subject Lands are defined as a mix of Agricultural, Private Open Space, Greenlands B, and Greenlands A Areas (see below).

The Subject Lands are included in and bounded on the south by the 401/407 Employment Area and on the west by the Protected Countryside Area. Agricultural Areas are predominant on the lands to the north and east.

Figure 3 Town of Halton Hills Official Plan – Schedule A1 – Land Use



Agricultural/Rural Area Land Use Policies are presented in Part E of the *Town of Halton Hills Official Plan*.

The following represent pertinent policies for Agriculture as defined within the *Town of Halton Hills Official Plan*.

E1.2 LOCATION

The *Agricultural Area* designation as shown on OPA 10 Schedule A1 to this Plan applies to lands generally located north and east of the lands within the *Protected*

Countryside Area designation that are predominantly utilized for agricultural purposes and which have an agricultural character. The *Agricultural Area* primarily consists of lands that are Class 1, 2 or 3 soils according to the Canada Land Inventory. The lands within this designation are considered by this Plan to form a major component of the Town's prime agricultural area.

E2.4.1 The Creation of New Lots
In accordance with the intent of this Plan to maintain and protect the agricultural resources and rural character of the Town, lot creation is prohibited unless specifically provided for in Section F1.2 of this Plan. Section F1.2 provides policy for New Lots By Consent.

Neither the Study Area nor the Subject Lands are designated as Specialty Crop lands.

3.2.3 TOWN OF HALTON HILLS – ZONING BY-LAW 2010-0050

The Town of Halton Hills Zoning By-Law 2010-0500 (July 2010) provides additional policy for lands in Halton Hills.

Schedule A1 (Rural Lands) and Schedule A15 (Hornby) to Zoning By-Law 2010-0500 were reviewed to determine the Zoning for the Subject Lands. The Subject Lands are comprised of lands that are zoned Agricultural, Environmental Protection One, Environmental Protection Two, Open Space Four and the Area defined as Hornby. The Area defined as Hornby effectively divides the Subject Lands in half. The eastern half being bounded by Agricultural lands to the north and east. The western half of the Subject Lands being bounded by a slim Agricultural area on the west, and Agricultural land to the north.

Hornby includes lands zoned as Rural Cluster Residential One, Rural Cluster Commercial, Development, Environmental Protection One and Environmental Protection Two.

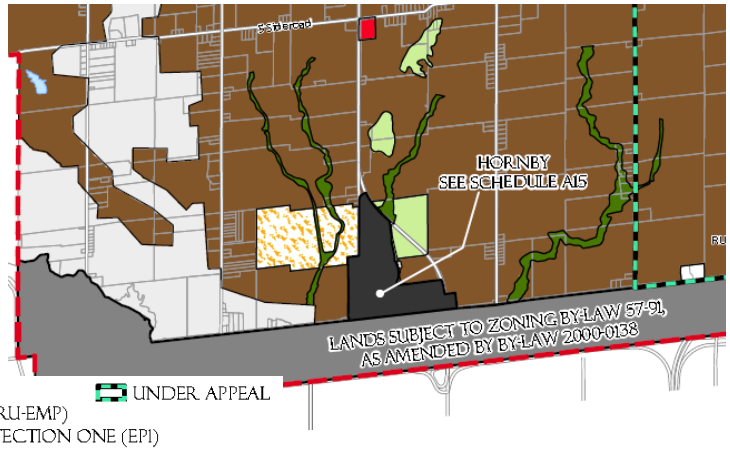
The **AGRICULTURAL (A) ZONE** applies to lands that are designated Agricultural by the Halton Hills Official Plan, and within this zone, only agriculture and agriculture-related uses as well as single detached dwellings are permitted.

Figure 4 illustrates the Schedule A1 to Zoning By-Law 2010-0500 and Schedule A15 to Zoning By-law 2010-0500 for the Town of Halton Hills.

Neither the Study Area or the Subject Lands are zoned as Specialty Crop lands.

Figure 4 Schedules A1 and A15 to Zoning By-Law 2010-0500 (Town of Halton Hills)

Schedule A1 to Zoning By-Law 2010-0550



AGRICULTURAL (A)
RURAL EMPLOYMENT (RU-EMP)
ENVIRONMENTAL PROTECTION ONE (EP1)
ENVIRONMENTAL PROTECTION TWO (EP2)
MINERAL AGGREGATE RESOURCES (MAR)
INSTITUTIONAL (I)
OPEN SPACE FOUR (OS4)
TRANSPORTATION (T)
MUNICIPAL BOUNDARY
UNDER APPEAL

Schedule A15 to Zoning By-Law 2010-0550

RURAL CLUSTER RESIDENTIAL ONE (RCR1)
RURAL CLUSTER COMMERCIAL (RCC)
DEVELOPMENT (D)
ENVIRONMENTAL PROTECTION ONE (EP1)
ENVIRONMENTAL PROTECTION TWO (EP2)
MUNICIPAL BOUNDARY

4 AGRICULTURAL RESOURCE POTENTIAL

4.1 PHYSICAL CHARACTERISTICS

The physiographic resources within the Subject Lands and the 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 agricultural potential of an area.

4.1.1 PHYSIOGRAPHY AND CLIMATE

The *Physiography of Southern Ontario* Physiographic Unit Map indicates that the Subject Lands and the Study Area are located in an area that comprises the Peel Plain.

The Peel Plain area is described as a fairly level clay plain extending through the central sections of the Regional Municipalities of Halton, Peel and York. The surface is generally characterized by level to gently rolling topography with a gradual slope to Lake Ontario.

The Study Area is located within the 3100 – 3300 average accumulated Crop Heat Units (CM – H1) 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 <2700 east of Parry Sound to over 3500 near Windsor. The higher the CHU value, the longer the growing season and greater are the opportunities for growing value crops.

The topography of the Subject Lands is comprised of gentle to moderate sloping lands primarily used for agricultural production of common field crops. Steep sloping lands were noted in areas adjacent to stream courses.

4.1.2 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 a mineral 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.

The Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) provided upgraded digital soil and Canada Land Inventory (CLI) mapping for the Halton Region area. The digital maps represent the soil boundary (polygon) information that is contained within the *Soils of Halton County; Report No. 43 of the Ontario Soil Survey*. (Gillespie, J.E. M.H. Miller and R.E. Wicklund, 1971) and has been upgraded to a 1:50000 scale detail.

The digital soil mapping indicated that at a 1:50000 scale, the Subject Lands are a mix of Oneida Clay Loam, Oneida Silt Loam, Chinguacousy Clay Loam and Jeddo Clay Loam. These soils are rated as Class 3T, 3T, 1 and 3DW in the Canada Land Inventory (for Agriculture) classification system respectively.

Where 'D' indicates a limitation due to undesirable soil structure and/or low permeability, 'T' indicates a limitation due to topography, and 'W' indicates a limitation due to excess moisture.

Oneida Clay Loam and Oneida Silt Loam soils are the well-drained members of the Oneida soil catena. The Oneida soils formed on calcareous silty clay to silty clay loam till that are derived from a mix of shale and limestone bedrock that underlies the Peel Plain. These soils typically occur on moderately sloping topography.

Chinguacousy Clay Loam soils are the imperfectly drained member of the Oneida soil catena. These soils have a higher water holding capacity. These soils occur on gentle to moderately sloping topography.

Jeddo Clay Loam soils are the poorly drained member of the Oneida soil catena. These soils are found on smooth very gentle to nearly level slopes and along surficial drainage features (streams, creeks).

Figure 2 illustrates the 1:50000 scale Provincially (OMAFRA) recognized Canada Land Inventory (CLI) classification for the soils within the Subject Lands, Study Area, and in the general area. It is evident that the Subject Lands, Study Area and the general area are located in an extensive area of higher capability lands comprised of Prime Agricultural Lands (CLI Class 1 - 3).

Table 1 illustrates the Canada Land Inventory Class percent occurrence for the Subject Lands and the Study Area.

The Provincial Policy Statement (2014) (PPS) directs development to lands which have a lower priority for preservation (CLI Class 4 -7). It is noted that both the Subject Lands and the Study Area are comprised completely of Class 1 – 3 lands. In these instances, development should be directed firstly to the poorer of the Prime Agricultural Lands (CLI Class 3, then CLI Class 2).

Table 1 Percent Occurrence Canada Land Inventory (CLI)

Canada Land Inventory Class (CLI)	Subject Lands (percent occurrence)	Study Area (percent occurrence)
Class 1	76.0	51.2
Class 2	-	3.1
Class 3	24.0	45.7
Class 4	-	
Class 5	-	
Class 6	-	
Class 7	-	
Totals	100.0	100.0

Figure 5 OMAF/OMRA Canada Land Inventory

4.2 LAND USE

The land use for both the Study Area and the Subject Lands was completed through a combination of windshield and field surveys (completed in September 2015 – February 2016), a review of recent aerial photography, discussions with landowners, Google Imagery, Bing Imagery, Birdseye Imagery, Halton Region Online Imagery, Town of Halton Hills Online Imagery and correlation to the OMAFRA Land Use Systems mapping. Agricultural and non-agricultural land uses are illustrated on Figure 6.

The windshield survey identified the types of land uses including farm and non-farm uses (built up areas). 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, or through a review of on farm infrastructure (type of buildings, manure system, feed).

Agricultural cropping patterns were identified and mapped. Corn and soybean crops were mapped as 'common field crops'. Small grains included winter wheat, barley, spring wheat, oats and rye. Forage crops such as mixed grasses, clovers and alfalfa used for pasture, haylage or hay were mapped as 'forage/pasture'.

Non-farm (built up areas) uses included non-farm residential units, commercial, recreational, estate lots, services (utilities) and industrial development.

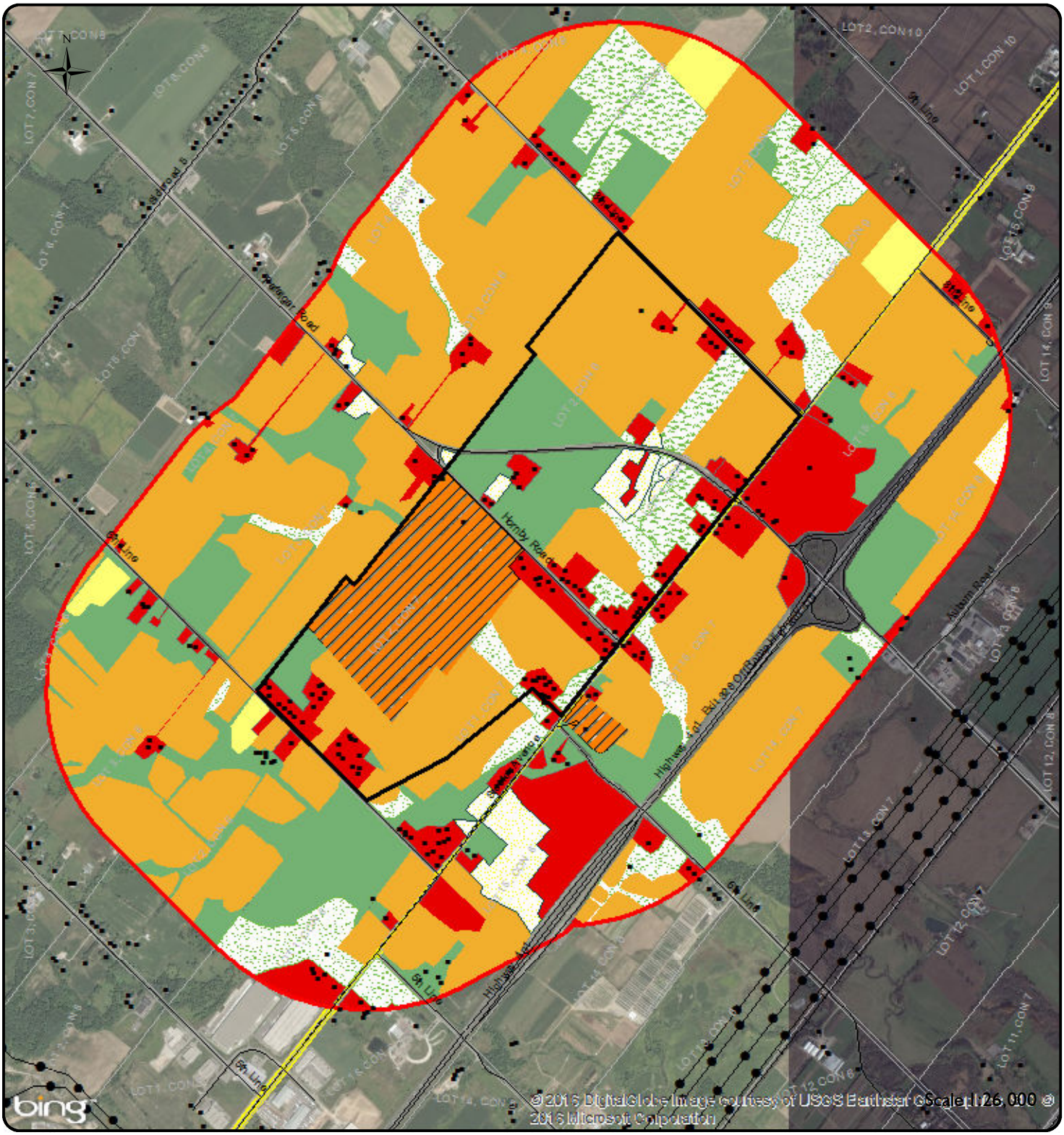
Figure 6 illustrates the land use both on the Subject Lands and within the Study Area.

Land Use information was digitized in Geographic Information System (GIS - Arcmap) to illustrate the character and extent of Land Use in both the Subject Lands and the Study Area.

Land use designations and land use definitions are provided in Table 2.

Table 2 Land Use Designations

Land Use Designation	Land Use Definitions
Built Up	Residential, Commercial, Industrial
Common Field Crop	Corn, Soybean, Cultivated
Forage/Pasture	Forage/Pasture
Scrublands	Unused field (>5 years)
Open Field	Unused field (< 5 years)
Small Grains	Wheat, Oats, Barley
Recreational	Golf Course, Ball Diamond
Woodlot	Forested Areas



Legend

- Buildings (MNR Layer)
- Railways
- Roads
- Electric Transmission Lines
- 1 km Buffer
- Lot Lines
- Study Area
- Township Boundary

Land Use

- Built Up
- Common Field Crop
- Forage/Pasture
- Open Field
- Recreation
- Scrubland
- Small Grains
- Woods

Figure 6

Land Use

DBH Soil Services Inc.

February 2016

There is a mix of land uses within the Subject Lands and the Study Area. Non-farm residential units and linear development are common and scattered throughout both the Subject Lands and the Study Area.

4.2.1 LAND USE – SUBJECT LANDS

The Subject Lands include the Hornby Glen Golf Course and a large wooded area (northern central portion of the Subject Lands) designated as the Halton Region Forest Stand – Coulson Forest. This forested area straddles Trafalgar Road, with the western extent of the forest abutting Hornby Road.

For the purposes of this study, the Land Use identifies the use of the lands including the lands that occur within the 401/407 Employment Area.

The production of common field crops occupied approximately 39.4 percent of the Subject Lands. The common field crops grown within the Subject Lands included soybean and corn crops. The land used for the production of common field crop was scattered throughout the Subject Lands, with larger blocks occurring in the southwest and northeast sections.

The recreation area has been defined as the Hornby Glen Golf Course which occupies approximately 20.6 percent of the Subject Lands. Woodlots comprise approximately 14.8 percent, with the largest portion of woods being associated with the Coulson Forest area. Built up areas account for approximately 12.7 percent, with much of it occurring as non-farm residential units and linear development along Sixth Line, Hornby Road, Eighth Line and Steeles Avenue.

Smaller areas of scrubland, open field and pasture lands were scattered throughout the Subject Lands.

4.2.2 LAND USE - STUDY AREA

The Study Area consists of a variety of land uses including, but not limited to built up areas, common field crops, forage/pasture, recreation (baseball diamonds), scrubland, small grains and woodlots. The Highway 401 corridor and other road allowances were not included in the calculated percent area. The Highway 401 corridor extends across the southeastern portion of the Study Area, with a large interchange occurring with Trafalgar Road.

The built up areas within the Study Area include commercial operations (gas stations, auto repair shops, the Toronto Premium Outlet Mall (east corner of Trafalgar Road and Steeles Avenue), the Combined Cycle Plant (CCP – Halton Hills Generating Station), parts of Urban Milton, estate residential and non-farm residential units.

Built up areas comprise approximately 10.6 percent of the Study Area. Agricultural

production areas for common field crop account for approximately 56.3 percent, with large blocks of this land use occurring to the east and northeast of the Subject Lands. Smaller fields of common field crop were noted to the northwest and west of the Subject Lands.

Smaller areas of forage/pasture, scrublands, open field, recreational and small grains were noted as scattered areas throughout the Study Area. These areas represent approximately 3.2 percent, 7.5 percent, 2.0 percent, 0.4 percent and 1.9 percent of the Study Area respectively. Woodlot areas comprise approximately 18.0 percent of the Study Area. Woodlots areas were scattered throughout the Study Area, with some larger woodlots occurring in the western portions and along low lying lands adjacent to stream courses.

The predominant agricultural land use in the Study Area is common field crop comprising large areas of corn and soybeans.

Table 3 illustrates the percent occurrence of the land uses for both the Subject Lands and the Study Area.

Table 3 Land Use – Subject Lands and Study Area

Land Use Designation	Subject Lands Percent Occurrence	Study Area Percent Occurrence
Built Up	12.7	10.6
Common Field Crop	39.4	56.3
Forage/Pasture	6.9	3.2
Scrublands	3.1	7.5
Open Field	2.6	2.0
Recreational	20.6	0.4
Woodlot	14.8	18.0
Small Grains	-	1.9
Totals	100.0	100.0

Table 3 illustrates the percent occurrence of the land uses for both the Subject Lands and the Study Area.

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, these lands and facilities that have increased capital investment are often considered as more worthy of 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 facilities, field observations and a review of OMAFRA artificial tile drainage mapping.

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. 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.

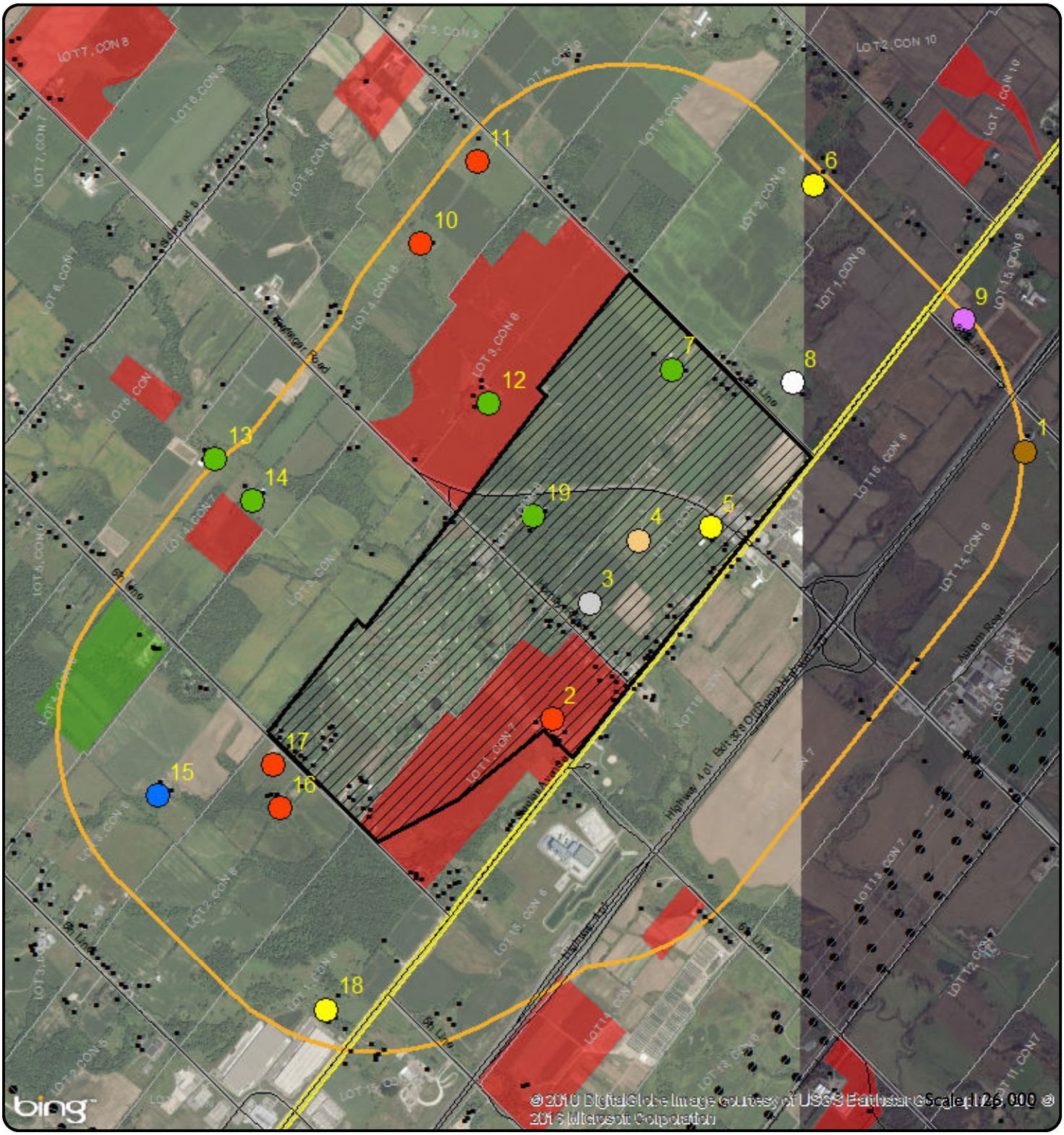
4.3.1 ARTIFICIAL DRAINAGE

An evaluation of artificial drainage on the Subject Lands and within the Study Area was completed through a correlation of observations noted during the soil survey, aerial photographic 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 included observations of drain outlets to roadside ditches or surface waterways, and surface inlet structures (hickenbottom or french drain inlets).

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. 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 downloaded from Land Information Ontario (LIO) in February 2016 and were reviewed to determine if an agricultural tile drainage system had been registered for the Subject Lands or in the Study Area. Figure 7 illustrates the OMAFRA Artificial Drainage Systems Mapping for the Subject Lands and the Study Area.



Legend

- Buildings (MNR Layer)
- Railways
- Roads
- Electric Transmission Lines
- Study Area
- 1 km Buffer
- Lot Lines
- Township Boundary

Tile Drainage System Type

- Random
- Systematic

Agricultural Facility

- Commercial
- Dairy
- Derelict
- Grain Dryer
- Horse
- Kennel
- Poultry
- Remnant
- Retired

Figure 7

Agricultural Facilities

DBH Soil Services Inc.

February 2016

The OMAFRA Artificial Drainage Systems Mapping revealed that one area of systematic agricultural drainage system was registered to a parcel in the southwest portion of the Subject Lands.

Further, that the Study Area comprised three areas of systematic tile drainage, with one large area located just north of the Subject Lands, and two smaller areas (one area north west of the Subject Lands, and the second located south of the Subject Lands). One additional area of random tile drainage was noted to the west of the Subject Lands.

4.3.2 IRRIGATION

Observations noted during the detailed soil survey indicated that none of the properties associated with the Subject Lands are irrigated, further, that none of these properties were 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 capable of sustaining the irrigation operation and lands that are appropriate for the use of such equipment (large open and level fields).

Similar observations were made of the lands within the Study Area. No irrigation equipment was noted on any property within the Study Area.

There is no investment in irrigation in this area.

4.3.3 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, depending on the volumes of soils moved.

No landforming was observed on the Subject Lands or within the Study Area during the time of the field surveys, on any of the aerial photographs or identified on any topographic or base map.

There is no investment in landforming in this area.

4.3.4 AGRICULTURAL FACILITIES

A review and assessment of existing agricultural (livestock) facilities on and within 1 kilometre (1000 m) of the Subject Lands was completed during field surveys completed between September 2015 and February 2016.

The potential livestock facilities were identified through a combination of aerial photographic interpretation, a review of online digital imagery (Google Earth, Bing Mapping, and Birds Eye Imagery), a review of Ontario Base Mapping and roadside

evaluations. The 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 mapping and imagery were not agricultural, but used for commercial activities.

Further, discussion with area land owners/farmers provided additional information regarding agricultural buildings within the Subject Lands and the Study Area.

A total of 19 potential livestock facilities were identified from mapping and imagery. Of these 19 potential livestock facilities 6 were identified within the Subject Lands, while the remaining 13 were located within the Study Area. The 19 potential livestock facilities are illustrated on Figure 7.

4.3.4.1 Subject Lands

Six (6) Potential livestock facilities numbered 2, 3, 4, 5, 7 and 19 were located within the Subject Lands. Potential livestock facilities numbered 3, 5 and 19 were located within the Urban Area identified in OPA 10 (Modified).

Potential livestock facility number 2 was considered a remnant barn. Discussions with local land owners indicated that a dairy barn had occupied this area, and that the dairy barn had been torn down by a previous owner. The associated residential unit, machine sheds, ancillary buildings and feed storage buildings still exist at this location.

Potential livestock facility number 3 was a pair of unused pole barns set up for poultry. The laneway to the pole barns was shared with a two adjacent residential units. The pole barns are immediately adjacent to numerous non-farm residential units. Numerous trailers and vehicles were stored adjacent to these buildings.

Potential livestock facility number 4 was a two story pole barn used for poultry. Communication with a landowner relative indicated that this barn has not been used for housing poultry for approximately 10 years.

Potential livestock facility number 5 was a small bank barn situated immediately adjacent to a gas station located at the corner of Trafalgar Road and Steeles Avenue. Horses were observed in the pasture/paddock area beside the barn. A manure pile was noted beside the barn. A residential unit, machine shed and garage were also noted at this location.

Potential livestock facility number 7 was located along the eastern portion of the Subject Lands, on the west side of Eighth Line. This facility comprised a large barn, smaller barn, machine sheds, metal grain bin, two concrete silos (capped) and a residential unit. This

facility had been used for dairy production (online search) in the past. This facility appears to be part of a cash crop operation. No livestock were observed during the roadside surveys or on the online imagery. Attempts to contact the landowner/farmer were unsuccessful due to the presence of a locked gate on the laneway to the farm buildings. Communication with a previous owner indicated that the property had been sold to a developer, that the last dairy operation ended in 1994 and that the last livestock on the property was beef in 2004.

Potential livestock facility number 19 was bank barn with three extensions, a concrete silo (capped), a liquid manure tank (open top) with growing vegetation (from online imagery). A concrete yard extends from the barn toward the concrete silo. Two residential units, a garage and machine shed were also noted at this location. No livestock was observed on the imagery or during the roadside survey. Communications with an owner indicated that the barns had been converted into offices, workshops and a large "party" room.

The buildings at this location are bounded on three sides by the Halton Regional Coulson Forest Stand.

4.3.4.2 Study Area

Thirteen (13) Potential livestock facilities numbered 1, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, and 18 were located within the Study Area.

Potential livestock facility number 1 was located within the Town of Milton south of the Highway 401. The roadside survey identified this facility as a kennel.

Potential livestock facility number 6 was a large horse farm located to the west of Ninth Line (County Road 13). This facility comprised a large pole barn (stable), outdoor jumping area, paddocks, metal grain bin and residential unit. A large manure pile was noted to the south of the stable buildings.

Potential livestock facility number 8 was a derelict barn located in the north corner of Eighth Line and Steeles Avenue (diagonally across the intersection from the Toronto Premium Outlet Mall).

Potential livestock facility number 9 was a commercial building located to the east of Eighth Line south of Steeles Avenue.

Potential livestock facilities numbers 10 and 11 were remnant barns.

Potential livestock facility number 12 comprised a large pole barn with extensions, two metal grain bins, one steel silo, two concrete silos (capped) and a concrete yard behind the barn. Also observed were three residential units, garage, machine shed and Quonset hut. This facility appears to be set up for dairy production, however, an online search

based on the signage (Falgarbrook Farm (with picture of a Holstein cow) for this property near Trafalgar Road indicates that this property had been used for horses.

Potential livestock facility number 13 (Ridgebrook Farms) is comprised of a bank barn with extensions, one concrete silo (capped), one concrete silo (open top), concrete yard behind barn, large machine shed, shed and residential unit. An online search of 'Ridgebrook Farms' indicated that this farm had been used for dairy production. No livestock were present at the time of the roadside survey.

Potential livestock facility number 14 included a large bank barn with extensions, a metal grain bin, two steel silos, machine shed, plastic covered structure and a residential unit. Discussions with the residents indicated that this facility had been used for dairy production but was not being used for agricultural production at present. No livestock were observed during the roadside survey.

Potential livestock facility number 15 comprised a large machine shed, grain dryer, three metal grain bins and a residential unit. Discussions with the landowner indicated that no livestock are kept at this location.

Potential livestock facilities numbered 16 and 17 were both remnant barns.

Potential livestock facility number 18 comprised a large bank barn, a small bank barn, a shed, garage and residential unit. Horses were observed at this facility.

4.4 MINIMUM DISTANCE SEPARATION I

Land use planning principles promote the grouping together of compatible land uses, while providing distance between unlike or incompatible land uses. The Minimum Distance Separation (MDS) calculation is a tool provided by the Ontario Ministry of Agriculture and Food, and used to determine a recommended distance between a livestock operation and another land use. The objective is to prevent land use conflicts and to minimize nuisance complaints from odour (the MDS does not account for noise and dust issues). The MDS is based on a number of variables including: type of livestock; numbers of animals; size of the farm operation; type of manure system and the form of the development proposed. MDS I calculations are employed to determine the minimum distance separation for new development from existing livestock facilities, while MDS II calculations are used to determine the minimum distance separation for new or expanding livestock facilities from existing or approved development. With this in mind, MDS I calculations were completed for this study.

As per General Guideline 1, 'MDS will be applied in Prime Agricultural Areas and Rural Areas as defined by the Provincial Policy Statement, 2005'.

As per General Guideline 35, 'For the purposes of MDS I, Type A land uses include applications to rezone or redesignate agricultural lands for industrial, agricultural-related or recreational uses – low intensity purposes.

As per General Guideline 36, Type B land uses include applications to rezone or redesignate agricultural lands for residential, institutional, recreational use – high intensity, commercial or settlement area purposes. Type B land uses are typically characterized by uses that have a higher density of human occupancy, habitation or activity.

Therefore, as per General Guideline 6, 'For Type A applications apply MDS I for livestock facilities within a 1000 metre radius', and for Type B applications apply MDS 1 for livestock facilities within a 2000 metre radius.

Therefore, MDS I calculations were assessed for livestock facilities within a 2000 m buffer surrounding) the Subject Lands.

According to MDS Publication 707 General Guideline 20, MDS I calculations are to be completed for livestock facility even if the facility is not being used. In those cases, MDS was based on the most probable use for the livestock facility.

A windshield survey for agricultural facilities within 2.0 km (2000 m) of the Subject Lands indicated that there were no large scale intensive agricultural operations in close proximity to the Subject Lands. For the purpose of clarity of mapping, only agricultural facilities within 1 km (1000 m) of the Subject Lands were illustrated for this MDS assessment.

General Guideline 1 states the 'MDS will be applied in Prime Agricultural Areas and Rural Areas as defined by the Provincial Policy Statement, 2005'. Potential Agricultural Facility numbers 2, 3, 4, 5 and 18 were located in a 'development area', therefore MDS 1 was not applied to these facilities.

General Guideline 2 states the MDS applies to livestock facilities. It does not apply to 'abattoirs, apiaries, assembly yards, fairgrounds, feed storages, field shade structures, greenhouses, kennels, livestock facilities that are less than 10 m^2 in floor area, machinery sheds, mushroom farms, pasture, slaughter houses, stockyards or temporary field nutrient storage sites.' Potential Agricultural Facility number 1 was a kennel, therefore MDS 1 was not applied. Potential Agricultural Facility number 15 was a grain drying operation, therefore MDS 1 was not applied. Potential Agricultural Facility number 9 was a commercial building, therefore MDS 1 was not applied. Potential Agricultural Facility number 19 had been converted into non-agricultural uses, therefore MDS 1 was does not apply and MDS 1 calculations were not completed for this facility.

General Guideline 12 states: 'Where there are four of more existing non-farm uses closer to the subject livestock facility and in immediate proximity to the current application, MDS 1 will not be applied'. Agricultural facility number 6 was located in an area where there were four or more existing non-farm uses closer to the subject livestock facility. Therefore, MDS 1 was not completed for this facility.

With respect to OMAFRA MDS 1 General Guideline 20, livestock facility number 8, 10, 11, 16 and 17 were considered not structurally sound (remnant or derelict barns with missing roof and wall boards, sagging structures, cracked foundations). Therefore MDS 1 calculations were not completed for these facilities.

The remaining Potential Agricultural Facilities that did not fall under the above mentioned General Guidelines were identified as numbers 7, 12, 13 and14. MDS calculations were completed for these facilities.

Attempts were made to contact the landowner/farmer/tenant at each of these facilities for the purpose of collecting the site specific data for the respective Potential Livestock Facility. In some instances, contact could not be made with the landowner/farmer/tenant due to locked gates to the residences or no one being at the residence. One landowner declined to provide information on the facility.

For the purposes of this report, MDS calculations were completed for these Potential Agricultural Facilities with the following assumptions:

- each of these facilities were assumed to be in 'good' condition and capable of housing livestock
- the MDS calculations were based on the livestock type that was most probable for that type of facility
- the MDS 1assessment completed in this fashion would provide a 'worse

case' situation, in that the assumptions used for calculating the MDS 1 distance will provide the largest possible distance for that particular agricultural facility.
- It was assumed that the entire area of the barn was used for housing livestock (no offices, no feed store room, no tack rooms, no equipment rooms)
- Barn floor area calculations were based on measurements taken from digital imagery (Google Earth, Google Earth Pro, Bing Imagery)
- Tillable hectare measurement were based on measurements taken from digital imagery (Google Earth, Google Earth Pro, Bing Imagery)
- The location and type of manure system and manure storage.

Further, the view of a few of the Potential Livestock Facilities was partially obstructed from the roadside due to location (behind other buildings, topography and/or vegetation), a review of the Google Online imaging and Bing imagery was used to assist in the determination of the extent of livestock at these facilities.

Section 4.3.4 of this report provided comment on the Potential Agricultural Facilities documented for this study.

Potential Agricultural Facility number 7 was an unused dairy operation. This facility appears to be used for the production of cash crops. Discussions with local landowners had indicated that this farm had been used for dairy production in the past. No livestock were observed during the roadside survey. Contact could not be made with the landowner/farmer/tenant due to a locked gate at the roadside leading to the residential unit. MDS 1 calculations were completed on this facility with the assumption that the main barn was in good condition and could be used to house livestock. An MDS 1 value of 500 m was calculated from the building and a similar value was calculated from the manure storage. It was noted that this building was in close proximity to the linear development along Eighth Line and that the nearest non-farm residential unit was a measured distance of 207 m from the Potential Livestock Facility. Therefore, the MDS 1 value for this facility would be 207 m.

Potential Agricultural Facility number 12 was an unused dairy operation. This facility appears to be used for the production of cash crops. Discussions with local landowners had indicated that this farm had been used for dairy production in the past. No livestock were observed during the roadside survey (Falgarbrook Farms). Contact could not be made with the landowner/farmer/tenant due to a locked gate at near the residential units. An online search based on the farm name observed on a sign by Trafalgar Road indicated that this farm was used for horse rearing. MDS 1 calculations were completed on this facility with the assumption that the main barn could be used to house horses. An MDS 1 value of 500 m was calculated from the building and a similar value was calculated from the manure storage.

Potential Agricultural Facility number 13 was an unused dairy operation. This facility appears to be used for the production of cash crops. No livestock were observed during the roadside survey. Contact could not be made with the landowner/farmer/tenant as no one was at the residence when it was visited on multiple occasions. MDS 1 calculations were completed on this facility with the assumption that the main barn could be used to house dairy livestock. An MDS 1 value of 472 m was calculated from the building and a similar value was calculated from the manure storage.

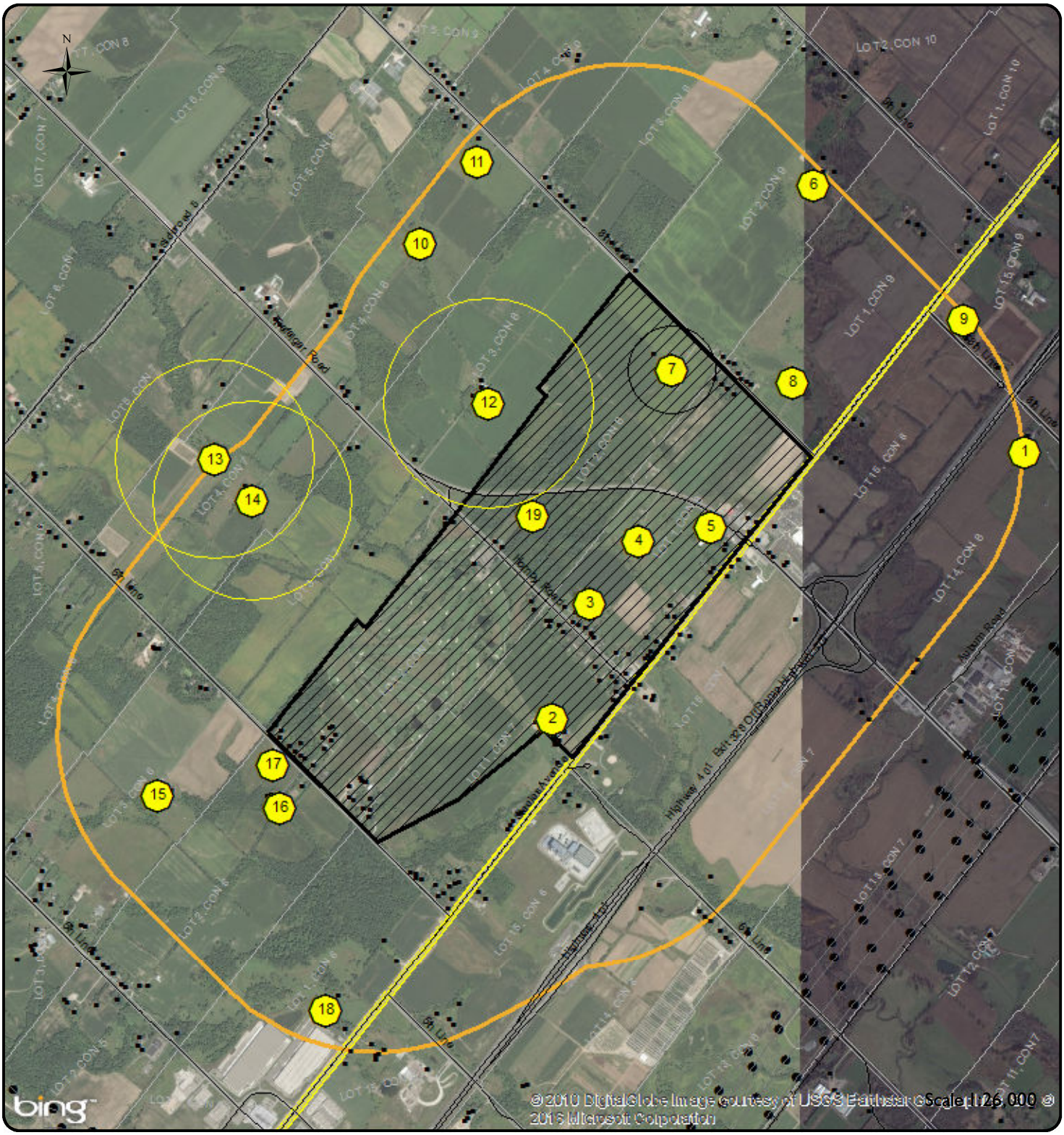
Potential Agricultural Facility number 14 was an unused dairy operation. This facility appears to be used for the production of cash crops. No livestock were observed during the roadside survey. Discussions with the resident indicated that this farm had been used for dairy production in the past. The resident preferred to not participate in the MDS 1 portion of this study. MDS 1 calculations were completed on this facility with the assumption that the main barn could be used to house dairy livestock. An MDS 1 value of 471 m was calculated from the building and a similar value was calculated from the manure storage.

MDS 1 calculations were completed for these facilities and the MDS 1 arcs are illustrated on Figure 8.

The resultant MDS arcs indicate that the eastern portions of the Subject Lands are impacted by the MDS 1 arcs from Agricultural Facilities numbered 7 and 12. Agricultural Facility number 7 MDS 1 arc extends from a barn located within the Subject Lands. Agricultural Facility number 12 MDS 1 arc extends from the Study Area south into the Subject Lands near the intersection of Trafalgar Road and Hornby Road.

MDS arcs from the remaining Agricultural Facilities (13 and 14) do not impact the Subject Lands.

Table 4 presents the individual Agricultural Facilities Number, the livestock type and the calculated Minimum Distance Separation 1 arc value.



Legend

- Agricultural Facilities
- Buildings (MNR Layer)
- Electric Transmission Lines
- Railways
- Roads
- 1 km Buffer
- Lot Lines
- Study Area
- Township Boundary
- Calculated MDS Arc
- MDS Arc limited by four or more non-farm uses (MDS Guideline 12), calculated arc reduced to nearest of the non-farm use

Figure 8

Minimum Distance Separation (MDS 1)

DBH Soil Services Inc.

April 2016

Table 4 Minimum Distance Separation I (MDS I) Calculations

Facility Number	Facility Type	Livestock Type	Manure System	MDS – Barn (metres)	MDS – Manure (metres)	Modified MDS (metres)
1	Kennel (Redwood Pet Resort)	-	-	-	-	-
2**	Remnant Barn - Dairy	-	-	-	-	-
3**	Unused – Poultry	-	-	-	-	-
4**	Poultry	-	-	-	-	-
5**	Horses	-	-	-	-	-
6*	Horses	-	-	-	-	-
7***	Unused – Dairy	Assume Dairy	Solid	500	500	207
8	Derelict Barn	-	-	-	-	-
9	Business (metal clad building)	-	-	-	-	-
10	Remnant Barn	-	-	-	-	-
11	Remnant Barn	-	-	-	-	-
12	Dairy barn	Assume Horses (Falgarbrook Farms)	Solid	500	500	-
13	Unused – Dairy	Assume Dairy	Solid	472	472	-
14	Unused – Dairy	Assume Dairy	Solid	471	471	-
15	Grain Dryer, Grain Bins, Machine Shed	-	-	-	-	-
16	Remnant Barn	-	-	-	-	-
17	Remnant Barn	-	-	-	-	-
18**	Horses	-	-	-	-	-
19	Converted Dairy Barn (offices, workshops)	-	-	-	-	-

Assumptions:

* - MDS Guideline 12 – Existing uses that do not conform to MDS – "Where there are four, or more, existing non-farm uses closer to the subject livestock facility and in immediate proximity to the current application, MDS 1 will not be applied".

** - Located in "development area" – MDS Guideline 1 – "MDS will be applied in Prime Agricultural Areas and Rural Areas as defined by the Provincial Policy Statement". MDS 1 is not applied.

*** - MDS Guideline 12 (in consultation with OMAF), in instances where there are barns within the Subject Area and in close proximity to four or more non-farm uses, the MDS arc will extend to the closest of the non-farm use. (MDS modified to illustrate distance to the closest non-farm use).

Remnant Barn – an old ruin or scraped building once used for agricultural purposes (livestock)

Derelict Barn – an old run-down barn

Photographs of the respective agricultural facilities (barns) are provided in Appendix A.

Minimum Distance Separation I calculations are provided in Appendix B.

4.5 LAND TENURE AND FRAGMENTATION

Land tenure was evaluated to determine the characteristics of land ownership and the degree of land fragmentation in the Subject Lands and the Study Area. In order to evaluate land tenure, the most recent Assessment Roll mapping and Assessment Roll information from the Town of Milton and the Town of Halton Hills was referenced on a property by property basis (for the Study Area and the Subject Lands) to determine the approximate location, shape and size of each parcel. The approximate location and shape of each property were digitized into the Geographic Information System (GIS) to provide an overview of land tenure and land fragmentation.

For the purpose of this study, the most recent Assessment Roll mapping and Assessment Roll information for the Town of Milton and the Town of Halton Hills was evaluated. The Assessment mapping information and Assessment Roll information was acquired from online interactive mapping and the respective Town Offices. Discussions with the staff at the respective Town Offices indicated that the Assessment Mapping and Roll information was compiled in 2014 for the 2015 Taxation Year. Assessment information is illustrated on the Land Tenure map in Figure 9.

The Provincial Policy Statement (PPS) identifies the provincial land use policies and provides context for the protection of agriculture. The PPS does not provide an indication of a minimum lot size for agriculture, but does state in Section 2.3.4.1that:

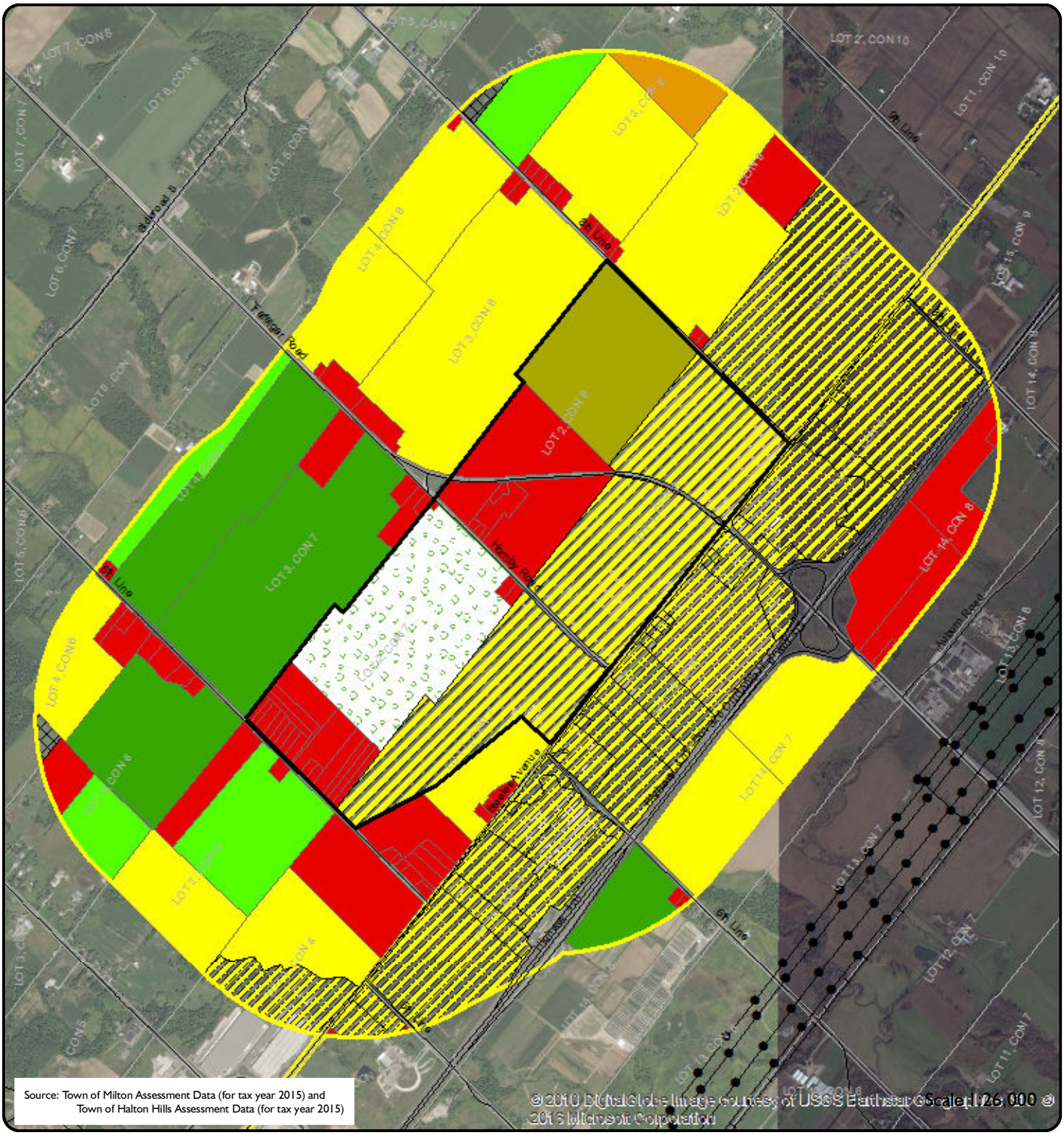
> "lots are of a size appropriate for the type of agricultural use(s) common in the area and are sufficiently large to maintain flexibility for future changes in the type or size of agricultural operations."

Statistics Canada (2006) indicates that the average farm size in Ontario is 94 ha (232 acres). Farms comprise many types, sizes and intensities. They may consist of larger areas for livestock operations or tender fruit farms on smaller parcels.

Areas of high agricultural activities generally have larger tracts or blocks of land with few smaller severed parcels in close proximity. In areas of transition from the agricultural land base to more rural residential, there will be many smaller severed parcels and fewer large blocks of agricultural land.

Locally owned parcels reflect the owners desire to live and work in the immediate area. Non-locally owned parcels often reflect areas of properties purchased for speculation development.

For the purpose of this study, the minimum lot size was established at 20 ha (50 acres).



Legend

- Electric Transmission Lines
- Railways
- Roads
- 1 km Buffer
- Lot Lines
- Study Area
- Township Boundary

Tenure

- Local Owner Operator
- Local Owner Tenant Farmer
- Non-Local Owner with Tenant Farmer
- Non-Local Owner with Owner to Advise
- 401/407 Employment Area
- Recreational
- Property < 20 ha (50 acres)
- No Data

Figure 9

Land Tenure

DBH Soil Services Inc.

April 2016

Table 5 Land Tenure

	Subject Lands (Percent Occurrence)	Study Area (Percent Occurrence)
401/403 Employment Lands	43.7	28.8
Local Owner - Operator	-	16.5
Local Owner - Tenant Farmer	-	6.8
Local Owner – Vacant Land	-	-
Non-Local Owner – Tenant Farmer	-	33.6
Non-Local Owner – Owner to Advise Town on who farms the lands	14.3	1.0
< 20 ha (50 acres)	21.1	12.7
Golf Course	20.8	-
Unknown (no data)	-	0.3
Totals	100.0	100.0

4.5.1 SUBJECT LANDS

The land tenure in the Subject Lands illustrates a mix of ownership.

The Subject Lands comprise approximately 14.3 percent as Non-Local Owner (to advise the Town of farmer), 21.1 percent as small parcels (20 ha), 20.8 percent as recreational and 43.7 percent as Urban lands within the 401/407 Employment Area.

The land tenure of the Subject Lands is typical of agricultural areas that are under pressure from non-agricultural land uses. Lands that are under pressure generally comprise numerous small parcels advancing as linear development along the area roads.

4.5.2 STUDY AREA

The land tenure in the Study Area illustrates a mix of ownership. Locally Owned and Operated lands occur in the western portions of the Study Area. These lands account for approximately 16.5 percent of the land in the Study Area.

Lands identified as Locally Owned with Tenant Farmers were noted in the west and north east areas and comprise approximately 6.8 percent of the land in the Study Area.

Lands identified as Non-Local Owner with Tenant Farmer comprise approximately 33.6 percent and occur throughout the Study Area. Lands identified as Non-Local Owner with Owner to advise the Town on the farmer occupy 1.0 percent.

Lands identified as parcels smaller than 20 ha (50 acres) account for approximately 12.7 percent of the Study Area and approximately 0.3 percent as Unknown Owner due to an incomplete address data set in the online interactive mapping.

As illustrated in Figure 9, agriculture within the Study Area is under pressure due to land fragmentation (particularly along the Trafalgar Road and Eighth Line), undersized agricultural lots, Urban areas and Non-Local ownership.

On review of the Land Tenure mapping various observations can be made.

Land Tenure near the Subject Lands is typical of areas under pressure from non-agricultural land uses and comprises large tracts of non-local and small parcel ownership.

4.6 AGRICULTURAL VIABILITY

The Halton Region Agricultural Impact Assessment Guidelines indicate that an assessment of 'viability of the site property as an agricultural operation on its own and in consolidation with a larger existing operation' should be conducted. This study is addressing the potential redesignation of a larger area that comprises numerous parcels. As a result it would be practical to review the agricultural characteristics of the Subject Lands.

The review of the Halton Region Official Plan Map 1E – Agricultural System and Settlement Areas (Approved 2014-11-28) illustrates that the Subject Lands comprise lands that are designated as Urban, Prime Agricultural Area, and Greenbelt Plan Boundary (see figure 2). The Urban lands comprise the lower half of the Subject Lands

The Subject Lands are located within 0.5 km of the Highway 401.

The Subject Lands are comprised of Canada Land Inventory Class 1 – 3 lands, lands that are defined as Prime Agricultural lands within the PPS (2014).

The Subject Lands comprise a mix of land uses including non-farm residences, recreation (golf course), Regional Forest lands and limited agricultural cropland.

The Subject Lands are under predominantly Non-Local Ownership with numerous small parcels and linear development along all roadways.

The Subject Lands are include portions of and are in immediately proximity to the Highway 401/407 Employment Lands.

These agricultural characteristics are typical of areas that are under pressure from non-agricultural land uses. Lands that are under pressure generally comprise numerous small parcels advancing as linear development along the area roads.

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 SOIL CAPABILITY FOR AGRICULTURE

The Subject Lands were evaluated for Canada Land Inventory (CLI) for common field crop to determine the extent of lands considered prime land for agriculture within the Provincial Policy Statement and the Official Plans of the Halton Region and the Town of Halton Hills. Each of these documents indicates that as a minimum lands with CLI Classification 1 – 3 are considered for preservation of agriculture.

A detailed soil survey of the Subject Lands indicated that the area comprises 100.0 percent Class 1 – 3 lands.

A review of the digital OMAFRA soil mapping and Canada Land Inventory (CLI) classification for soils in the Study Area identified that 100.0 percent of these lands are Class 1 - 3 lands.

5.2 MINIMUM DISTANCE SEPARATION I

A total of 19 potential agricultural facilities were observed on or within 1 km of the Subject Lands. Of the nineteen (19) facilities, four (4) facilities numbered 7, 12, 13 and 14 were determined to have potential to house livestock. Potential Livestock Facility number 7 was on the Subject Lands, while numbers 12, 13 and 14 were located within the Study Area. MDS 1 calculations were completed for these four facilities.

The results indicate that the north eastern portions of the Subject Lands are impacted by MDS arcs from agricultural facilities numbered 7 (in the Subject Lands) and 12 (located within the Study Area). MDS arcs from the remaining agricultural facilities in the Study Area impact the Subject Lands do not impact the Subject Lands.

5.3 COMPATABILITY WITH SURROUNDING LAND USES

The Subject Lands are bounded: on the north by agricultural lands and woodlots; on the west by Sixth Line (agricultural lands, wooded areas and residential estate units); on the south by Steeles Avenue (401/407 Employment Lands and the Highway 401); and on the east by Eighth Line (agricultural lands, wooded areas and non-farm residences).

The Study Area comprises a mix of land fragmentation, with many smaller severed parcels dominating along Trafalgar Road, Sixth Line, Steeles Avenue and Eighth Line.

The land tenure in the Study Area illustrates a mix of ownership. The Subject Lands contain no Locally Owned farm lands.

The Study Area contains a mix of land ownership with areas of Locally Owned lands occurring in the west and areas of Non-Local ownership and small parcels in the north, east and south.

These types of development send a clear, negative signal to the agricultural community as to the long term intensions for agriculture in the Subject Lands and in the Study Area.

Should the Subject Lands be redesignated the impact on the surrounding agricultural operations will be minimal. The areas to the north and east are characteristic of areas in decline for agriculture; smaller parcels, land fragmentation and numerous rural nonfarm residences are evident along roadsides.

Given the existing land use pattern in the vicinity of the Subject Lands the introduction of the proposed Land Use Designation change would not have a significant impact on agriculture in the area.

5.4 TRAFFIC, TRESPASS AND VANDALISM

Steeles Avenue and Trafalgar Road are major paved roadways heavy with non-farm traffic. Trafalgar Road is a main roadway linking to the Highway 401, with Steeles Avenue paralleling the Highway 401.

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. A proposed change in Land Use designation of the Subject Lands is not expected to be a great source of an increase in traffic or an increase in traffic related impacts to agriculture, as the transportation routes in the area are already well traveled by non-farm vehicles.

Trespassing and vandalism impacts are generally related to development within agricultural areas predominated by specialty crop operations or large livestock

operations. As the Subject Lands are not located near any specialty crop areas, vandalism is not expected to be an issue. Trespassing and vandalism from the proposed development of the Subject Lands is not expected to be an issue on surrounding agricultural lands.

Mitigation measures may include, but are not limited to improved fencing between the respective land uses, the use of signage indicating prosecution for violation of trespassing and plantings of thorny shrub and woody vegetation as a physical barrier.

6 SUMMARY AND CONCLUSIONS

DBH Soil Services Inc was retained to complete an Agricultural Impact Assessment (AIA) for the Premier Gateway Phase 1B Employment Area Integrated Planning Project, for the Town of Halton Hills. The Premier Gateway Phase 1B Employment Area is an area described as:

- Part Lot 1, Concession 7, Town of Halton Hills
- Lot 1, Concession 8, Town of Halton Hills
- Lot 2, Concession 7, Town of Halton Hills
- Lot 2, Concession 8, Town of Halton Hills

The Subject Lands are roughly bounded: on the north by agricultural lands and woodlots; on the east by Eighth Line; on the south by Steeles Avenue; and on the west by non-farm residential units, woodlots and Sixth Line.

The Subject Lands are located approximately 0.5 km northwest of the Highway 401; approximately 2.5 km north of the Town of Milton; approximately 2.8 km west of the City of Mississauga; and approximately 1.8 km west of the intersection of Highway 401 and Highway 407.

The Subject Lands include Urban Lands and an active recreational area (Hornby Glen Golf Course)

The results of this assessment indicate the following:

- **Geographical Limits**

  The review of the Halton Region Official Plan Map 1E – Agricultural System and Settlement Areas (Approved 2014-11-28) illustrates that the Subject Lands comprise lands that are designated as Urban, Prime Agricultural Area, and Greenbelt Plan Boundary.

  The review of the *Town of Halton Hills Official Plan* – Official Plan Amendment 10 - Schedule A1 – Land Use illustrates that the Subject Lands are defined as a mix of Agricultural, Urban, Private Open Space, Greenlands B, and Greenlands A Areas.

  The Subject Lands are comprised of lands that are zoned Agricultural, Environmental Protection One, Environmental Protection Two, Open Space Four and Urban Areas.

- **Agricultural Land Use**

  The Subject Lands include Urban lands, the Hornby Glen Golf Course and a large wooded area (northern central portion) designated as the Halton Region Forest

Stand – Coulson Forest. This forested area straddles Trafalgar Road, with the western extent of the forest abutting Hornby Road.

The production of common field crops occupied approximately 39.4 percent of the Subject Lands. The common field crops grown within the Subject Lands included soybean and corn crops. The land used for the production of common field crop was scattered throughout the Subject Lands, with larger blocks occurring in the southwest and northeast sections.

The recreation area has been defined as the Hornby Glen Golf Course which occupies approximately 20.6 percent of the Subject Lands. Woodlots comprise approximately 14.8 percent, with the largest portion of woods being associated with the Coulson Forest area. Built up areas account for approximately 12.7 percent, with much of it occurring as non-farm residential units and linear development along Sixth Line, Hornby Road, Eighth Line and Steeles Avenue.

Smaller areas of scrubland, open field and pasture lands were scattered throughout the Subject Lands.

The Study Area consists of a variety of land uses including, but not limited to built up areas, common field crops, forage/pasture, recreation (golf course), scrubland, small grains and woodlots. The Highway 401 corridor and other road allowances were not included in the calculated percent area. The Highway 401 corridor extends across the southeastern portion of the Study Area, with a large interchange occurring with Trafalgar Road.

The built up areas within the Study Area include commercial operations (gas stations, auto repair shops, the Toronto Premium Outlet Mall (east corner of Trafalgar Road and Steeles Avenue), the Combined Cycle Plant (CCP – Halton Hills Generating Station), parts of Urban Milton, estate residential and non-farm residential units.

Built up areas comprise approximately 10.6 percent of the Study Area. Agricultural production areas for common field crop account for approximately 56.3 percent, with large blocks of this land use occurring to the east and northeast of the Subject Lands. Smaller fields of common field crop were noted to the northwest and west of the Subject Lands.

Smaller areas of forage/pasture, scrublands, open field, recreational and small grains were noted as scattered areas throughout the Study Area. These areas represent approximately 3.2 percent, 7.5 percent, 2.0 percent, 0.4 percent and 1.9 percent of the Study Area respectively. Woodlot areas comprise approximately 18.0 percent of the Study Area. Woodlots areas were scattered throughout the Study Area, with some larger woodlots occurring in the western portions and along low lying lands adjacent to stream courses.

The predominant agricultural land use in the Study Area is common field crop comprising large areas of corn and soybeans.

No active specialty crop operations were noted within the Subject Lands or the Study Area (1km).

- **Agricultural Investment**

The OMAFRA Artificial Drainage Systems Mapping revealed that one area of systematic agricultural drainage system was registered to a parcel in the southwest portion of the Subject Lands.

Further, that the Study Area comprised three areas of systematic tile drainage, with one large area located just north of the Subject Lands, and two smaller areas (one area north west of the Subject Lands, and the second located south of the Subject Lands). One additional area of random tile drainage was noted to the west of the Subject Lands.

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

There is no investment in landforming on either the Subject Lands or the Study Area.

A total of 19 potential livestock facilities were identified from mapping and imagery. Of these 19 potential livestock facilities 6 were identified within the Subject Lands, while the remaining 13 were located within the Study Area.

- **Minimum Distance Separation**

A total of 19 potential livestock facilities were identified from mapping and imagery. Of these 19 potential livestock facilities 6 were identified within the Subject Lands, while the remaining 13 were located within the Study Area.

Minimum Distance Separation calculations were completed for four (4) barns (7, 12, 13 and 14). The resultant MDS arcs indicate that the north eastern portions of the Subject Lands are impacted by the MDS 1 arcs from Agricultural Facilities numbered 7 and 12.

Agricultural Facility number 7 MDS 1 arc extends from a barn located within the Subject Lands. Agricultural Facility number 12 MDS 1 arc extends from the Study Area south into the Subject Lands near the intersection of Trafalgar Road and Hornby Road.

MDS arcs from the remaining Agricultural Facilities (13 and 14) do not impact the Subject Lands.

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

  Land Tenure on the Subject Lands is typical of areas under pressure from non-agricultural land uses and is predominantly in non-local and severed parcel ownership. The adjacent lands in the Study Area, particularly to the west and north, comprise more of the locally owned lands which are typical of agricultural areas less impacted by urban pressures. The portions of the Study Area that are in the south and east are under pressure from non-local ownership and severed parcels.

- **Traffic Impacts – The proposed redesignation of Land Use is not expected to be a great source of traffic or access related traffic impacts to agriculture as the transportation routes surrounding the Subject Lands are already well traveled by non-farm vehicles**.

  The proposed change in Land Use designation of the Subject Lands is not expected to be a great source of an increase in traffic or an increase in traffic related impacts to agriculture as the transportation routes in the area are already well traveled by non-farm vehicles. Steeles Avenue and Trafalgar Road are main roads that are well travelled by non-farm traffic.

- **Canada Land Inventory (CLI) Soil Capability**

  The Subject Lands were evaluated for Canada Land Inventory (CLI) for common field crop to determine the extent of lands considered prime land for agriculture within the Provincial Policy Statement and the Official Plans of the Halton Region and the Town of Halton Hills. Each of these documents indicates that as a minimum lands with CLI Classification 1 – 3 are considered for preservation of agriculture and are considered as Prime Agricultural Lands.

  The Subject Lands, Study Area and the general area are located in an extensive area of higher capability lands comprised of Prime Agricultural Lands (CLI Class 1 - 3).

The foregoing represents a comprehensive Agricultural Impact Assessment with the purpose of evaluating the Subject Lands to document the existing agricultural character and to determine any potential impacts to agriculture should the Subject Lands be redesignated.

It was determined that the Subject Lands are located in an area of transition. This area of transition incorporates many attributes including: a change in land use from the large agricultural lands to the north to the smaller lands in the south and east; and a change from larger land holdings in the south to the smaller parcels in the north and west.

Given the geographical location of these lands, it is the conclusion of this study that the proposed change in Land Use designation would have minimal impact on the surrounding agricultural activities within the Study Area.

7 REFERENCES

- 1:10000 scale Ministry of Natural Resources (MNR) Aerial Photography, 1978,
- 1:10000 scale Ontario Base Map (1983 - paper) Ministry of Natural Resources:
  10 17 5900 48250
  10 17 5900 48200
  10 17 5950 48250
  10 17 5950 48200,
- 1:10000 scale Ontario Base Map (2009 – Digital data) Ministry of Natural Resources,
- 1:50000 scale NTS Map No 30 M/12. 1984. Ministry of Energy Mines and Resources, Canada,
- 1:50000 scale NTS Map No 30 M/12. Canada Land Inventory (CLI) Capability Mapping,
- *Agricultural Code of Practice for Ontario*, (April 1973). OMAF and OMOE,
- *Agricultural Information Atlas* (online tool, OMAF),
- *Agricultural Resource Inventory*, Ontario Ministry of Agriculture and Food, 1988,
- Birds Eye Imagery,
- Bing Imagery,
- Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for Application of the Canada Land Inventory in Ontario. OMAFRA,
- Comprehensive Policy Statements, Implementation Guidelines, Agricultural Land Policies. OMAFRA. 1995,
- Draft Guidelines on Permitted Uses in Ontario's Prime Agricultural Areas. (OMAFRA)
- Draft Livestock Facilities Guidelines (November 7, 2011) Halton Region,
- Google Earth On Line imagery,
- Growth Plan for the Greater Golden Horseshoe, 2006, (Office Consolidation, June 2013) MAH,
- *Guide to Agricultural Land Use*, Ontario Ministry of Agriculture, Food and Rural Affairs, March 1995,
- Halton Region Official Plan Package – March 17, 2015 (November 28, 2014 Interim Office Consolidation),
- Halton Region – Regional Official Plan Guidelines – Agricultural Impact Assessment (AIA) Guidelines. (June 18, 2014),
- *Minimum Distance Separation I & II (MDS I & II)*, Ontario Ministry of Agriculture, Food and Rural Affairs Publication 707, October 2006,
- *Niagara Escarpment Plan (November 13, 2014),*
- *Ontario Ministry of Agriculture and Food - Land Use Systems Mapping*,
- *Ontario Ministry of Agriculture and Food - Artificial Drainage Mapping*,
- *Ontario Ministry of Agriculture, Food and Rural Affairs – Digital Soil Mapping 2015* (Halton Region),
- *Provincial Policy Statement*, 2014,
- Roadside and Onsite surveys September 2015 – February, 2016,

- *Sustainable Halton Report 3.03 (Phase 3) – An Agricultural Evaluation* (Planscape Consulting, 2009)
- *The Soils of Halton County;* Report No. 43 of the Ontario Soil Survey. (Gillespie, J.E. M.H. Miller and R.E. Wicklund, 1971),
- *The Physiography of Southern Ontario* 3rd Edition, Ontario Geological Survey Special Volume 2, Ministry of Natural Resources, 1984,
- *Town of Halton Hills Zoning Bylaw 2010-0050* (July 2010),
- *Town of Halton Hills Official Plan* (Consolidated May 2008).

APPENDIX A

AGRICULTURAL FACILITIES PHOTOGRAPHS

Agricultural Facility # 1


Agricultural Facility #2

Agricultural Facility #3


Agricultural Facility #4

Agricultural Facility #5

Agricultural Facility #6

Agricultural Facility # 7

Agricultural Facility #8

Agricultural Facility #9

Agricultural Facility #10

Agricultural Facility #11

Agricultural Facility #12

Agricultural Facility #13

Agricultural Facility #14

Agricultural Facility # 15

Agricultural Facility # 16 – no photo (no barn)

Agricultural Facility # 17 – no photo (no barn)

Agricultural Facility # 18

Agricultural Facility # 19

APPENDIX B

MINIMUM DISTANCE SEPARATION I (MDS I) CALCULATIONS

Minimum Distance Separation I (MDS I) Report

File: MDS.mds

Calculation #2

Barn # 7

Unused dairy barns. Buildings in good condition. Gated laneway.

Adjacent Farm Contact Information

Reid
Halton Hills
8250 Eighth Line
Halton Hills, ON, Canada

Farm Location

Regional Municipality of Halton
Town of Halton Hills
Geotownship: ESQUESING
Concession: 8
Lot: 2
Roll Number: 241507000123600

Manure Form	Type of Livestock/Material	Existing Capacity	Existing NU	Estimated Barn Area
Solid	Dairy; Milking-age Cows (dry or milking) Large Frame (545 - 636 kg) (eg. Holsteins); 3 Row Free Stall	88	125.7	858 m²

Encroaching Land Use Factor: Type B Land Use

Tillable area of land on this lot: 40 ha

Manure/Material Storage Type: V3. Solid, outside, no cover, >= 30% DM

Factor A (Odour Potential): 0.7
Factor B (Nutrient Units): 464
Factor D (Manure/Material Type): 0.7
Factor E (Encroaching Land Use): 2.2
Total Nutrient Units: 126

	Required Setback	Actual Setback
Distance from nearest livestock building 'F' (A x B x D x E):	500 m (1640 ft)	
Distance from nearest permanent manure/material storage 'S':	500 m (1640 ft)	

Signature of Preparer: _____ Date: _____

Dave Hodgson, DBH Soil Services Inc.

Ontario

Minimum Distance Separation I (MDS I) Report

File: MDS.mds

Calculation #3

Barn # 12

Large pole barns. Possibly old dairy barns, not used for livestock. Gated laneway to houses and barns.

Fargarbrook Farms. Online search indicates farm is for sport horses.

Adjacent Farm Contact Information

Naomi Murphy
Halton Hills
8471 Trafalgar Road
Halton Hills, ON, Canada

Farm Location

Regional Municipality of Halton
Town of Halton Hills
Geotownship: ESQUESING
Concession: 8
Lot: 3

Manure Form	Type of Livestock/Material	Existing Capacity	Existing NU	Estimated Barn Area
Solid	Horses; Large-framed, mature; > 680 kg (including unweaned offspring)	42	60.0	1268 m²

Encroaching Land Use Factor: Type B Land Use

Tillable area of land on this lot: 63.36 ha

Manure/Material Storage Type: V3. Solid, outside, no cover, >= 30% DM

Factor A (Odour Potential): 0.7
Factor B (Nutrient Units): 464
Factor D (Manure/Material Type): 0.7
Factor E (Encroaching Land Use): 2.2
Total Nutrient Units: 60

	Required Setback	Actual Setback
Distance from nearest livestock building 'F' (A x B x D x E):	500 m (1640 ft)	
Distance from nearest permanent manure/material storage 'S':	500 m (1640 ft)	

Signature of Preparer: _____ Date: _____

Dave Hodgson, DBH Soil Services Inc.

Minimum Distance Separation I (MDS I) Report

File: MDS.mds

Calculation #4

Barn # 13

Possibly old dairy operation. No livestock observed. No one home when trying to contact owner

Adjacent Farm Contact Information

Joseph Brownridge
Halton Hills
8788 Trafalgar Road
Halton Hills, ON, Canada

Farm Location

Regional Municipality of Halton
Town of Halton Hills
Geotownship: ESQUESING
Concession: 7
Lot: 4
Roll Number: 241507000128100

Manure Form	Type of Livestock/Material	Existing Capacity	Existing NU	Estimated Barn Area
Solid	Dairy; Milking-age Cows (dry or milking) Large Frame (545 - 636 kg) (eg. Holsteins); 3 Row Free Stall	77	110.0	751 m²

Encroaching Land Use Factor: Type B Land Use

Tillable area of land on this lot: 34 ha

Manure/Material Storage Type: V3. Solid, outside, no cover, >= 30% DM

Factor A (Odour Potential):	0.7
Factor B (Nutrient Units):	438
Factor D (Manure/Material Type):	0.7
Factor E (Encroaching Land Use):	2.2
Total Nutrient Units:	110

	Required Setback	Actual Setback
Distance from nearest livestock building 'F' (A x B x D x E):	472 m (1550 ft)	
Distance from nearest permanent manure/material storage 'S':	472 m (1550 ft)	

Signature of Preparer: _____ Date: _____

Dave Hodgson, DBH Soil Services Inc.

Ontario

Calculation #5

Barn # 14

Large pole barn with extensions. No livestock seen. Setup is for dairy.

Family members indicated that it was dairy, but that they do not have livestock.

Adjacent Farm Contact Information

Raldo Waters
Halton Hills
8646 Trafalgar Road
Halton Hills, ON, Canada

Farm Location

Regional Municipality of Halton
Town of Halton Hills
Geotownship: ESQUESING
Concession: 7
Lot: 4

Manure Form	Type of Livestock/Material	Existing Capacity	Existing NU	Estimated Barn Area
Solid	Dairy; Milking-age Cows (dry or milking) Large Frame (545 - 636 kg) (eg. Holsteins); 3 Row Free Stall	77	110.0	751 m²

Encroaching Land Use Factor: Type B Land Use

Tillable area of land on this lot: 33.7 ha

Manure/Material Storage Type: V3. Solid, outside, no cover, >= 30% DM

Factor A (Odour Potential): 0.7
Factor B (Nutrient Units): 437
Factor D (Manure/Material Type): 0.7
Factor E (Encroaching Land Use): 2.2
Total Nutrient Units: 110

	Required Setback	Actual Setback
Distance from nearest livestock building 'F' (A x B x D x E):	471 m (1545 ft)	
Distance from nearest permanent manure/material storage 'S':	471 m (1545 ft)	

Signature of Preparer: _____ Date: _____

Dave Hodgson, DBH Soil Services Inc.