AGRICULTURAL IMPACT ASSESSMENT FOR EAST GWILLIMBURY SECONDARY PLAN

PREPARED FOR:

EAST GWILLIMBURY WHITEBELT LANDOWNERS GROUP INC

130 ADELAIDE STREET WEST TORONTO, ONTARIO M5H 3P5

PREPARED BY:

COLVILLE O

432 NIAGARA STREET, UNIT 2 St. Catharines, Ontario L2M 4W3



TABLE OF CONTENTS

E	XECUTIV	'E SUMMARY	1
1.	. Intr	ODUCTION	2
	1.1	Background	2
	1.2	Development in Ontario	2
	1.2.1	Planning Framework	2
	1.2.2	Defined Terms and Meanings	2
	1.2.3	Guidance Documents	2
	1.3	Qualified Professionals	3
	1.4	Description of Proposed Development	4
	1.5	Purpose of Study	4
	1.6	Study Area	4
	1.6.1	Primary Study Areas – Subject Lands	4
	1.6.2	Secondary Study Areas – Study Areas	6
2	. Sco	PE OF STUDY	7
3	MET	HODOLOGY	8
	3.1	Background Data Collection	
	3.2	Field Inventories.	
	3.2.1		
	3.2.2	·	
	3.3	Evaluation of the Agricultural System	
	3.4	Evaluation of Alternative Locations	
	3.5	Identification of Potential Impacts and Mitigation Measures	
	3.6	Assessment of Consistency with Agricultural Policies	
,	A on	ICULTURAL POLICIES	
4	. AGR 4.1	Provincial Planning Statement (2024)	
	4.1.1		
	4.1.1		
	4.1.2	1 oncics for settlement Area boundary Expansion	12

COLVILLE CONSULTING INC.

	4.2	York Regional Official Plan	13
	4.3	Town of East Gwillimbury Official Plan	13
5	. Stuc	DY FINDINGS	14
	5.1	Physiography	14
	5.2	Climate	14
	5.3	Agricultural Crop Statistics	15
	5.4	Specialty Crop Areas	15
	5.5	Regional Soils	16
	5.5.1	Soil Series	16
	5.5.2	CLI Agricultural Land Classification	16
	5.6	Land Use	18
	5.6.1	Agricultural Uses	26
	5.6.2	Agriculture-Related Uses	26
	5.6.3	On-Farm Diversified Uses	27
	5.6.4	Non-Agricultural Uses	27
	5.6.5	Land Use Summary	27
	5.6.6	Cropping Pattern	28
	5.7	Land Improvements	28
	5.7.1	Drainage Improvements in Subject Lands	30
	5.7.2	Drainage Improvements in Study Area	30
	5.7.3	Other Land Improvements	30
	5.8	Fragmentation of Agricultural Lands	30
	5.9	Minimum Distance Separation	31
	5.9.1	Requirements for MDS and Settlement Area Boundary Expansion	31
	5.9.2	MDS Guidelines	33
	5.9.3	MDS Results	35
	5.10	Economic and Community Benefits of Agriculture	41
6	. Assi	ESSMENT OF IMPACTS TO AGRICULTURE	43
	6.1	Direct Impacts	43
	6.1.1	Prime Agricultural Lands	43

COLVILLE CONSULTING INC.

6.1.2	Agricultural Infrastructure	43
6.1.3	Agricultural Land Improvements	43
6.1.4	Loss of Crop Land	43
6.2	Indirect Impacts	44
6.2.1	Disruption to Surficial Drainage	44
6.2.2	Disruption to Farm Operations	44
6.2.3	Trespass and Vandalism	44
6.2.4	Minimum Distance Separation	45
6.2.5	Transportation Impacts	45
6.2.6	Economic and Community Impacts	45
6.3	Implementation of Edge Planning Techniques	46
6.3.1	Subdivision design: density, road, and lot patterns	46
6.3.2	Building design and layout	46
6.3.3	Open space and landscape design	47
6.3.4	Urban-side buffer design	47
6.3.5	Trail System	47
6.4	Summary of Impacts	47
7. Cons	SISTENCY WITH AGRICULTURAL POLICIES	50
7.1	Provincial Planning Statement, 2024	50
7.2	Region of York Official Plan	50
7.3	Town of East Gwillimbury Official Plan	50
8. Cond	CLUSION	51
9. GLOS	SSARY OF TERMS	52
10. REFE	RENCES	56
LIST OF I	FIGURES Location	-
Figure 1:		
Figure 2:	Regional Soils and CLI Mapping	17
DIGHTO 40	r rangriss Wanning	19

COLVILLE CONSULTING INC.

Figure 3B:	Land Use Mapping	20	
Figure 3C:	Land Use Mapping	21	
Figure 3D:	Land Use Mapping	22	
Figure 3E:	Land Use Mapping	23	
Figure 3F:	Land Use Mapping	24	
Figure 3G:	Land Use Mapping	25	
Figure 4:	Tile Drainage	29	
Figure 5:	Fragmentation of Agricultural Land Base	32	
Figure 6A:	Minimum Distance Separation	36	
Figure 6B:	Minimum Distance Separation	37	
Figure 6C:	Minimum Distance Separation	38	
Figure 6D:	Minimum Distance Separation	39	
Figure 6E:	Minimum Distance Separation	40	
LIST OF TA	ABLES		
Table 1.	Regional Soil Series for Subject Lands	18	
Table 2.	Summary of Observed Land Uses	28	
Table 3.	MDS Setback Requirements for Proposed Development	41	
Table 4.	Summary of Impacts	48	
APPENDIC	ES		
Appendix A	A – Curriculum Vitae		
Appendix I	3 – Climate Normals Data		
Appendix (C – Agricultural Crop Statistics		
Appendix I	D – Soil Series Descriptions		
Appendix I	E – Canada Land Inventory Information		
Appendix F – Site Photographs			
Appendix (G – Land Use Notes		
Appendix I	H – AgriSuite MDS Reports		

EXECUTIVE SUMMARY

The purpose of the Agricultural Impact Assessment (AIA) is to identify and evaluate potential impacts on the *Agricultural System* associated with the ongoing Secondary Plan process to implement Secondary Plans for the remaining lands within the Town of East Gwillimbury's *settlement area* boundary and their subsequent *development*. Where impacts are identified, recommendations are provided to avoid, or where avoidance is not possible, minimize potential impacts to the extent feasible. The AIA includes a review of background information, field work, analysis of impacts, analysis of net impacts following mitigation measures, and an assessment of the proposal's consistency with provincial and municipal agricultural policies.

The Subject Lands are not located within a *prime agricultural area*, however, they are comprised primarily of *prime agricultural lands*. The Subject Lands have recently been identified as Designated Greenfield Area and New Community Area in the Region of York Official Plan and New Community Design Plan in the adopted Town of East Gwillimbury Official Plan. However, the Subject Lands cannot be developed for non-agricultural land uses until Secondary Plans have been established. One of the purposes of the Secondary Plan is to provide policies regarding the phasing of *development*. The purpose of the AIAs is to identify potential impacts which will be used to provide input regarding the phasing of *development* within the SPAs.

The Subject Lands are predominately in agricultural production of common field crops. There is one active agricultural operation, three remnant agricultural operation, and approximately 47 non-agricultural uses which includes approximately 42 non-farm residences.

The AIA determined that the subsequent *development* of the Subject Lands is consistent with provincial and municipal policies. Impacts associated with the proposal are primarily limited to the loss of *prime agricultural land* and cultivatable land within the existing settlement area boundary. The AIA has recommended mitigation measures that will avoid, or minimize, impacts to the local Agricultural System, to the extent possible. Net indirect impacts following implementation of recommended mitigation measures will be negligible.

1. Introduction

1.1 Background

The Town of East Gwillimbury includes the rural communities of Mount Albert, Queensville, Sharon, Holland Landing, and Green Lane West. The East Gwillimbury Whitebelt Landowners Group (EGWLOG), along with the Town of East Gwillimbury, is participating in an ongoing Secondary Plan process to implement Secondary Plans for the remaining lands within the Town of East Gwillimbury's *settlement area* boundary which do not already have a Secondary Plan. The Secondary Plan Areas (SPAs) will round out the existing *development* of these communities and connect the existing SPAs to form complete, cohesive, and efficient communities in East Gwillimbury.

The SPAs, herein referred to as the Subject Lands, are comprised of seven distinct areas, totalling approximately 1,225.31 ha (3,027.80 acres) of land. These seven areas have been assigned seven separate Secondary Plan names, which include Green Earth Village CDP, Holland Landing East CDP, Sharon Heights CDP, Sharon East CDP, Walnut Farms CDP, Yonge Corridor CDP, and No CDP Area. The Subject Lands have recently been identified as "Designated Greenfield Area" and "New Community Area" in the Region of York Official Plan and New Community Design Plan in the adopted Town of East Gwillimbury Official Plan. However, the Subject Lands cannot be developed for non-agricultural land uses until Secondary Plans have been established.

1.2 Development in Ontario

1.2.1 Planning Framework

The Provincial Planning Statement 2024 (PPS) provides the framework for land use planning and development in Ontario. It provides policy direction on matters of provincial interest related to land use planning and development. The intent of the planning statement is to ensure "Ontario's vibrant agricultural sector and sensitive areas will continue to form part of the province's economic prosperity and overall identity. Growth and development will be prioritized within urban and rural settlements that will, in turn, support and protect the long-term viability of rural areas, local food production, and the agri-food network. In addition, resources, including natural areas, water, aggregates and agricultural lands will be protected."

1.2.2 Defined Terms and Meanings

Italicized terms throughout this AIA are often consistent with terms and definitions contained in the Provincial Planning Statement and provincial guidance documents. The definitions of these italicized terms are provided in the Glossary of Terms section of this report.

1.2.3 Guidance Documents

This AIA refers to several provincial guidance documents, materials, and technical criteria that are frequently considered when preparing an AIA. These guidance documents are meant to inform and assist planning authorities and decision-makers when implementing the policies of the Provincial Planning Statement. The guidance documents also provide practitioners with direction on what the Province considers important and how studies such as an AIA are to be undertaken. As stated in the PPS,

"Information, technical criteria and approaches outlined in provincial guidance are meant to support implementation but not add to or detract from the policies of this Provincial Planning Statement".

1.3 Qualified Professionals

The Ontario Ministry of Agriculture, Food and Agribusiness and the Ministry of Rural Affairs (formerly combined and referred to as OMAFRA) prepared the draft Agricultural Impact Assessment Guidance Document and published it in 2018. This document provides guidance on how to prepare an AIA and the qualifications practitioners must have in order to prepare an AIA. It states that qualified persons should have knowledge in:

- Agri-businesses, agricultural supply chain linkages, rural/agricultural economic development in Ontario, and within the GGH, the agri-food network, where relevant
- Rural and agricultural land use planning
- Canada Land Inventory (CLI) classifications of capability for agriculture assessment and, where
 relevant a practical understanding of soil science, including the ability to review technical
 information from non-agricultural disciplines and assess its relevance and utility in identifying
 potential agricultural impacts and
- Assessment and evaluation of the potential effectiveness of agricultural impact mitigation measures to reduce impacts.

The guidance document goes on to say that Qualified Persons (QPs) "should have demonstrable experience evaluating and assessing agricultural impacts and university or college degree(s) in one or more of the following: agriculture, soil science, geoscience, landscape architecture, resource management-related disciplines, environmental-related disciplines, agricultural engineering, or land use planning."

The guidance document states that the authors of the AIA, and those contributing to it, should have a "relevant academic base, Ontario experience, and preferably membership in a professional organization with a code of ethics and ongoing professional development requirements". As an example of such a professional organization, it specifically refers to the Ontario Institute of Agrologists (OAI) and registered professional agrologists (P.Ag.). All QPs should have demonstrated experience providing objective, professional judgment, advice, and testimony as an expert witness.

Colville Consulting Inc. was established in 2003 and provides agricultural and environmental consulting services to both private and public sector clients throughout Ontario. Colville Consulting Inc. has extensive experience preparing Agricultural Impact Assessments for proposed *developments* related to *settlement area* boundary expansion applications across the province of Ontario.

This study was led by Sean Colville, B.Sc., P.Ag., has over 35 years of experience preparing Agricultural Impact Assessments in Ontario, and assisted with the preparation of the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) draft Agricultural Impact Assessment Guidance Document (2018).

John Liotta, B.Sc., P.Ag., was responsible for completing the field investigations and preparation of the AIA. John has over seven combined years of formal education in Environmental and Agricultural Planning and work experience preparing Agricultural Impact Assessments with Colville Consulting Inc.

Colville Consulting Inc. staff meet the guidance documents qualifications for QPs. The curriculum vitae (CV) of Sean Colville and John Liotta can be found in Appendix A.

1.4 Description of Proposed Development

The Secondary Plan process seeks to connect the existing communities of East Gwillimbury through the *development* of the Subject Lands. The proposed development will contain a mix of urban land uses, however, at this time, the specific land use types and locations have not been determined. Before *development* of the Subject Lands can commence, one Secondary Plan for each of the seven SPAs must be completed. The Town of East Gwillimbury Official Plan states that the Secondary Plan will "define overall mix of housing and density; assess requirements for institutional and community facilities; define natural and built heritage, open space and recreation areas; provide for commercial and employment land uses; preliminary arterial and collector road network; and population and employment projections and overall phasing policies." Following the completion of the Secondary Plans, a Community Design Plan will be completed, which will further detail the location, size and character of land use types for the SPAs.

1.5 Purpose of Study

As stated above, the SPAs are located within the existing *settlement area* boundary of the Town of East Gwillimbury and are planned for non-agricultural lands uses. One of the purposes of the Secondary Plan is to provide policies regarding the phasing of *development*. This AIA will identify the potential indirect impacts of the *development* of the Subject Lands on the surrounding agricultural operations. The assessment of these impacts will be used to provide input regarding the phasing of *development* within the SPAs.

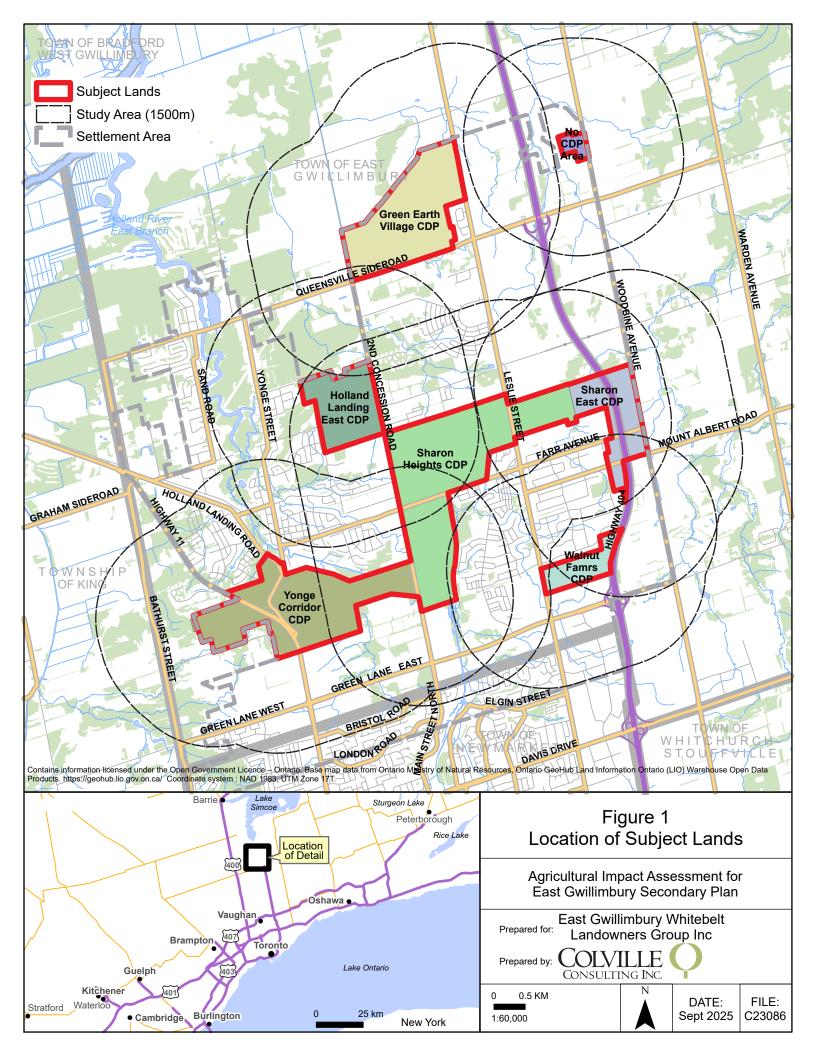
This AIA has been prepared in accordance with OMAFRA's Draft Agricultural Impact Assessment (AIA) Guidance Document (2018). The AIA assesses and evaluates the potential impacts of the proposed *development* on agricultural operations, the farming community, and the broader *Agricultural System*. In cases where impacts cannot be avoided, the AIA recommends ways to minimize and mitigate adverse impacts. The AIA will also assess whether the proposed *development* is consistent with provincial and municipal agricultural policies.

1.6 Study Area

To be consistent with the draft Agricultural Impact Assessment Guidance Document (2018), the AIA must identify a *Primary Study Area* (*PSA*) and a *Secondary Study Area* (*SSA*). For this AIA, each Secondary Plan area comprises a *Primary Study Area* (*PSA*), collectively referred to as the Subject Lands. The *Secondary Study Areas*, herein referred to as the *Study Areas*, includes all lands within approximately 1.5 km (1,500 m) of the Subject Lands' boundaries. Figure 1 shows the location of the Subject Lands and *Study Areas*.

1.6.1 Primary Study Areas - Subject Lands

The Subject Lands are comprised of seven SPAs which combined, are approximately 1,225.31 ha (3,027.80 acres) in size. These lands are primarily in agricultural production, with most areas immediately abutting lands within the Town of East Gwillimbury that have been developed for non-agricultural land uses.



1.6.2 Secondary Study Areas - Study Areas

The *Study Areas* include all lands within 1.5 km (1,500 m) of the Subject Lands' boundaries but excludes those lands that are already within the Town of East Gwillimbury *settlement area*. It is generally bounded to the east by Warden Avenue, to the south by Davis Drive, to the west by Dufferin Street, and to the north by Holborn Road.

The lands within the *Study Area* contain a mix of agricultural and *non-agricultural land uses*. Lands within the *Study Areas*, excluding those within the settlement area of East Gwillimbury, are designated Prime Agricultural Area and Environmental Protection Area within the Town of East Gwillimbury Official Plan.

2. SCOPE OF STUDY

To be consistent with the Draft Agricultural Impact Assessment Guidance Document (2018), the study scope includes:

- a review of applicable agricultural policies, land use information, and other background information for lands within the surrounding area (e.g., aerial photography);
- a review of data sources such as AgMaps, the Agricultural Systems Portal, and OMAFRA's digital soil resource database (for soil and CLI information, parcel fabric and land fragmentation, artificial drainage, agri-food components, etc.);
- a land use survey of all lands within one and a half kilometres (1.5 km) of the Subject Lands and a characterization of the area;
- an assessment of the *Minimum Distance Separation (MDS)* requirements for the proposed *development* using the 2017 *MDS I formula*;
- the identification of agricultural resources and investments in agricultural land improvements;
- the identification of agricultural uses, agriculture-related uses, non-agricultural uses, and where possible, the identification of on-farm diversified uses;
- an assessment of the level of fragmentation of agricultural lands in the Study Area;
- an assessment of the relative agricultural priority of the lands;
- an assessment of the potential impacts of the proposed *development* on the *Agricultural System*, agricultural resources, farm operations, and the broader *agri-food network*;
- the recommendation of potential mitigation measures that can be implemented to avoid or minimize potential impacts, to the extent feasible;
- an assessment of net impacts following the implementation of recommended mitigation measures;
- an assessment of the proposed development's consistency with agricultural policies in the Provincial Planning Statement, the York Region Official Plan, and the Town of East Gwillimbury Official Plan; and
- the preparation of a report summarizing our findings.

It should be noted that this AIA does not assess alternative locations for the proposed *development*, as the Subject Lands have already been included within the settlement area of the Town of East Gwillimbury.

3. METHODOLOGY

The study methodology for the AIA was prepared in accordance with the OMAFRA's AIA Guidance Document. It includes a review of relevant provincial, regional, and local agricultural policies, other agricultural-related sources of information, and the completion of field inventories. Upon compilation and assessment of the data, the potential impacts of the proposed *development* will be considered and recommendations to avoid and/or minimize potential impacts will be made. The AIA also assesses the *development's* consistency with provincial, regional, and local agricultural policies.

3.1 Background Data Collection

Information sources reviewed for this study included:

- Provincial Planning Statement (2024);
- York Region Official Plan and Land Use Schedules (2022);
- Town of East Gwillimbury Official Plan and Land Use Schedules (2018 Office Consolidation);
- Town of East Gwillimbury Official Plan and Land Use Schedules (2022);
- Soil Survey of York County Report No. 19 of the Ontario Soil Survey (1955);
- British Columbia Ministry of Agriculture's Guide to Edge Planning: Promoting Compatibility Along Agricultural-Urban Edges (2015);
- MHBC's Edge Planning Report The Region of Peel & The Town of Caledon LEAR Study and MDS Review (2015);
- OMAFRA's digital Soil Resource Database to obtain soil series and CLI agricultural capability mapping and data;
- OMAFRA's The Minimum Distance Separation (MDS) Document: Formulae and Guidelines for Livestock Facility and Anaerobic Digester Odour Setbacks. Publication 853 (2016);
- OMAFRA's Artificial Drainage Systems mapping;
- OMAFRA's AgriSuite, AgMaps and Agri-Systems databases;
- OMAFRA's Draft Agricultural Impact Assessment (AIA) Guidance Document (2018);
- Ortho-rectified, digital aerial photography viewed using Google EarthTM.

Aerial photography covering the *Study Area* and the parcel fabric were examined to assess the presence of *non-agricultural land uses, agricultural uses, agriculture-related uses, on-farm diversified uses,* and the level of fragmentation based on the lot fabric. This review will provide a general impression of the agricultural activity and level of agricultural investments in the area surrounding the Subject Lands.

3.2 Field Inventories

3.2.1 Land Use Survey

A reconnaissance land use survey of the *Study Area* was completed on May 19, 2024. The land use survey identified the number and type of agricultural operations (both active and *retired*), *agriculture-related uses*, *on-farm diversified uses*, and the extent and type of *non-agricultural land uses* in the area. Field crops observed were identified and mapped. Visual evidence of agricultural land improvements was recorded where identified.

3.2.2 MDS Calculations

The *MDS* is a land use planning tool developed by OMAFRA to minimize land use conflicts and nuisance complaints arising from odours generated by *livestock operations*. The *MDS* calculates a recommended separation distance between a *livestock* or *manure storage* and other land use(s). The most recent version of the MDS Guidelines, *The Minimum Distance Separation (MDS) Document, Publication 853* (2016), came into effect on March 1st, 2017. The *MDS formulae* only apply to lands designated *prime agricultural area* or rural. The *MDS* does not apply to lands in non-agricultural land use designations.

The MDS uses two separate formulae depending on the type of land use proposed: MDS I and MDS II. The MDS I formula is used when a new non-agricultural development is proposed in proximity to livestock facilities. The MDS II formula is used when a new, enlarged, or remodeled livestock facility or manure storage system is proposed in proximity to existing or approved development.

The MDS formulae only apply to lands designated prime agricultural area or rural. The MDS does not apply to lands in non-agricultural land use designations. Therefore, the MDS is not required for the proposed development. However, the MDS I formula was applied to the proposed development to identify areas within the Subject Lands which may be more susceptible to nuisance complaints from odours, which may benefit from edge planning techniques and inclusion in later-stage phasing of development.

The information required to complete an *MDS I* calculation was obtained through a combination of sources. As per the MDS Guidelines, we attempted to gather information directly from the landowner/tenant. Where landowners could not be contacted or were not available, self-addressed envelopes were left in mailboxes of potential *livestock operations*.

To calculate the *MDS* setback requirements, we used OMAFRA's Agricultural Planning Tools Suite (AgriSuite). It provides the most up to date software developed by OMAFRA to calculate the *MDS I* requirements for active *livestock facilities* and *unoccupied livestock facilities* that are structurally sound and capable of housing *livestock*. To determine the *MDS I* setback requirements, specific information regarding each *livestock facility* is required. This includes:

- the type of livestock housed in the facility;
- the maximum capacity of the barn housing livestock;
- the type of manure storage facility; and
- the size of the property upon which the livestock facility is located.

This information was collected for all *livestock facilities* (active and *retired*). In cases where we were not able to collect information directly from the landowner, we used visual observations of the *livestock facility* and

determined the most likely type of *livestock* housed and the type of *manure storage* system used. These observations were supplemented with aerial photography and web mapping tools such as AgMaps and Google EarthTM. Barn capacity and lot size were determined using these online mapping tools.

3.3 Evaluation of the Agricultural System

An *Agricultural System* includes a continuous and productive land base comprised of *prime agricultural areas*, including *specialty crop areas*, and *rural lands*, as well as a complementary *agri-food network* that together enable the agri-food sector to thrive. An evaluation of the *Agricultural System* and associated features within the *Study Area* was completed through a reconnaissance-level land use survey on May 19, 2024, and online review to assist in identifying agricultural-related features.

Potential features identified include regional infrastructure and transportation networks, on-farm buildings and infrastructure, agricultural services, as well as small towns and hamlets that are supportive of agriculture and are important to the viability of the agri-food sector. The evaluation of the *Agricultural System* within the *Study Area* is used to identify the features and provide insight into the significance of those features on the overall *Agricultural System* within the Region.

3.4 Evaluation of Alternative Locations

The *PPS* directs *settlement area* boundary expansion to avoid *prime agricultural areas*, where possible. Where *prime agricultural areas* cannot be avoided, policy directs *development* to lower priority agricultural lands. As previously stated, the Subject Lands are already located within the Town of East Gwillimbury's settlement area; and therefore, this AIA will not be assessing the agricultural priority of the Subject Lands, nor will it assess alternative location for the proposed *development*.

3.5 Identification of Potential Impacts and Mitigation Measures

Potential impacts of the proposed *development* were identified following an assessment of the agricultural resources on and adjacent to the Subject Lands. Direct impacts are those that directly impact the Subject Lands and include:

- a) interim or permanent loss of agricultural land, including the quality and quantity of farmland lots;
- b) the type of agricultural, agriculture-related, or on-farm diversified uses being lost and the significance this has for supporting other agricultural production in the surrounding area;
- c) the loss of existing and future farming opportunities;
- d) the loss of infrastructure, services, or assets, important to the surrounding agricultural community and agri-food sector;
- e) the loss of agricultural investments in structures and land improvements (e.g., artificial drainage);
- f) the disruption or loss of function to artificial drainage and irrigation installations; and
- g) changes to the soil drainage regime.

Indirect impacts can negatively impact adjacent lands, farm operations, and farm practices. They include:

a) fragmentation of agricultural lands and operations;

- b) Minimum Distance Separation changes (where applicable) that will constrain future farm operations;
- c) changes to surficial drainage features which could have an effect on adjacent lands;
- d) changes to landforms, elevations, and slope, that could alter microclimatic conditions (e.g., modifications to slopes that may reduce or improve cold air drainage opportunities and changes to elevation may have an impact of diurnal temperatures);
- e) changes to hydrogeological conditions that could affect neighbouring municipalities or private wells, sources of irrigation water, and sources of water for livestock;
- disruption to surrounding farm operations, activities, and management (e.g., temporary loss of productive agricultural lands, cultivation, seeding, spraying, harvesting, field access, use of road network);
- g) the potential effects of noise, vibration, dust, traffic, and vandalism and trespassing, on agricultural operations, lands, activities, and investments;
- h) potential compatibility concerns between agricultural operations employing normal farm practices and new non-farm development (e.g., nuisance complaints); and
- i) the inability or challenges to move farm vehicles and equipment along roads due to increased traffic caused by haul routes, and changes in road design.

Mitigation measures, for both direct and indirect impacts identified, that avoid or minimize potential impacts on the *Agricultural System* will then be developed.

3.6 Assessment of Consistency with Agricultural Policies

All planning decisions must be consistent with the *PPS* and comply with applicable provincial land use plans. Municipalities also have their own agricultural policies to which the proposed *development* must adhere. The AIA has included a review of applicable provincial and municipal agricultural policies to assess the consistency of the proposed *development* with the applicable agricultural policies.

4. AGRICULTURAL POLICIES

4.1 Provincial Planning Statement (2024)

Land Use Policy and *development* in Ontario are directed by the *Provincial Planning Statement*. The *PPS* was issued under the authority of Section 3 of the Planning Act and came into effect on October 20, 2024. Section 3 of the Planning Act states that decisions affecting planning matters "shall be consistent with" policy statements issued under the Act.

4.1.1 Prime Agricultural Areas

Section 4.3 of the *Provincial Planning Statement* deals specifically with agricultural policy. Section 4.3.1.2 states that "As part of the agricultural land base, prime agricultural areas, including specialty crop areas, shall be designated and protected for long-term use for agriculture". The *Provincial Planning Statement* defines *prime agricultural areas* as areas where *prime agricultural lands* predominate. *Prime agricultural lands* include *specialty crop areas* and Canada Land Inventory (CLI) Classes 1, 2, and 3 soils, in this order of priority for protection.

Section 4.3.4.1 states that "Planning authorities may only exclude land from *prime agricultural areas* for expansions of or identification of *settlement areas* in accordance with policy 2.3.2.

4.1.2 Policies for Settlement Area Boundary Expansion

Policy 2.3.2 of the *PPS* deals specifically with *settlement area* boundary expansion. Policy 2.3.2.1 states that "In identifying a new settlement area or allowing a settlement area boundary expansion, planning authorities shall consider the following:

- a) the need to designate and plan for additional land to accommodate an appropriate range and mix of land uses:
- b) if there is sufficient capacity in existing or planned infrastructure and public service facilities;
- c) whether the applicable lands comprise specialty crop areas;
- d) the evaluation of alternative locations which avoid prime agricultural areas and, where avoidance is not possible, consider reasonable alternatives on lower priority agricultural lands in prime agricultural areas;
- e) whether the new or expanded settlement area complies with the minimum distance separation formulae;
- f) whether impacts on the agricultural system are avoided, or where avoidance is not possible, minimized and mitigated to the extent feasible as determined through an agricultural impact assessment or equivalent analysis, based on provincial guidance; and
- g) the new or expanded settlement area provides for the phased progression of urban development."

Policy 2.3.2.2 states that "Notwithstanding 2.3.2.1.b), planning authorities may identify a new settlement area only where it has been demonstrated that the infrastructure and public service facilities to support development are planned or available."

As stated previously, the Subject Lands are already located within the urban boundary in both the York Region and Town of East Gwillimbury Official Plans. As such, they are no longer part of a *prime agricultural*

area. Therefore, the proposed *development* is not required to be consistent with the agricultural policies of the *Provincial Planning Statement*.

4.2 York Regional Official Plan

Section 5.1 of the York Regional Official Plan recognizes an *Agricultural Area*, which includes lands designated as Prime Agricultural Area and Holland Marsh Specialty Crop Area. These land use designations comprise the Region's *prime agricultural area*. The *Subject Lands* are no longer located within the York Region's *Agricultural Area*. All of the SPAs are within the Urban System of the York Regional Official Plan, and are designated as either Community Area, or Employment Area. As such, the proposed *development* is not required to be consistent with the agricultural policies of the York Region Official Plan.

4.3 Town of East Gwillimbury Official Plan

Section 4.11.2 of the Town of East Gwillimbury Official Plan recognises Prime Agricultural and Holland Marsh Specialty Crop Areas, which all fall within the Greenbelt Plan Area. None of the Subject Lands are designated Prime Agricultural or Holland Marsh Specialty Crop Area in the Town of East Gwillimbury Official Plan. As such, the proposed *development* is not required to be consistent with the agricultural policies of the Town of East Gwillimbury Official Plan.

5. STUDY FINDINGS

5.1 Physiography

The Subject Lands are located within the Schomberg Clay Plains and the Simcoe Lowlands Physiographic Regions (Chapman and Putnam, 1984). In this area, drainage occurs in a northern direction as the lands gently slope towards Lake Simcoe. The Schomberg Clay Plains lie between the Simcoe Lowlands to the north and the west, and the Oak Ridges Moraine to the east and the south. The Schomberg Clay Plain is a topographic basin which contains deep deposits of stratified clay and silt. Near the Subject Lands, the surface under the clay is that of a drumlinized till plain. The smaller drumlins have been completely covered, but many of the larger drumlins were not completely buried, resulting in the area being not as flat as most other lake plains. The soils of the Schomberg Clay Plains include the well-drained Schomberg Silty Clay Loam, the imperfectly drained Smithfield Silty Clay Loam, and the poorly drained Simcoe Silty Clay and Silt Loams.

The Simcoe Lowlands are located along Georgian Bay and Lake Simcoe, with two distinct areas separated by the uplands of Simcoe County. The portion of the Simcoe Lowlands in which the Subject Lands are located is referred to as the Lake Simcoe Basin. These lowlands were flooded by Lake Algonquin and are bordered by shorecliffs, beaches, and boulder terraces. Near Holland Landing, the soils are sandy and have wet subsoils, whereas the soils near Queensville are silty and highly calcareous.

5.2 Climate

Climate data is available through Environment Canada's National Climate Data and Information Archive's online database. Climate Normals and Extremes for the Bradford Muck Research Station (1981-2010) were obtained from the online database (Appendix B).

The Bradford Muck Climate Station is the closest Environment Canada climate station to the Subject Lands. Records show that this area receives an average of 816.1 mm of precipitation annually; 691.1 mm of rainfall and 125.1 cm of snowfall. The daily average temperature in this area ranges from a high of 20.2°C to a low of -6.9°C.

The Ministry of Agriculture and Food Factsheets provide data on crop production and growing seasons across Ontario. The rate of development of crops from planting to maturity is mainly dependent upon temperature. Areas within the York Region begin to experience average temperatures greater than 10°C starting May 5th before reaching temperatures greater than 12.8°C for 3 consecutive days around May 19th. During this time and up until the season's average ending date, September 24th, the area accumulates an average of 2600 crop heat units (CHU).

On average, the last spring frost in the East Gwillimbury area occurs on May 20th. The first fall frost is expected on September 25th. This provides the surrounding area with an average frost-free period of approximately 126 days. The climate in the East Gwillimbury area provides a good overall growing period that can support a wide range of crops.

5.3 Agricultural Crop Statistics

Agricultural crop statistics are available from OMAFRA and Statistics Canada's Agriculture and Food Statistics Census of Agriculture. The Subject Lands are located within the Census Central Ontario Region, York Region. Agricultural crop statistics were obtained from the online database and are included in Appendix C. This data provides a general overview of agriculture and agri-food operations in the area but is unlikely to be inclusive of all operations present at the time of this report.

The County and Township Agricultural Profile for York includes data from the 2011, 2016, and 2021 census periods. The total number of farms in the Town of East Gwillimbury decreased from 121 in 2016 to 106 in 2021, while total cropland increased from 18,872 acres in 2016 to 19,023 acres in 2021.

Field crops grown in the Town of East Gwillimbury include winter wheat, barley for grain, mixed grains, corn for grain, corn for silage, hay, soybeans, and potatoes. According to census data, field crop production between 2016-2021 decreased for winter wheat, corn for grain, corn for silage, hay, and soybeans, whereas the production of barley for grain, mixed grains, and potatoes increased in the Town of East Gwillimbury. Census data from 2016 shows that there was no production of oats for grain, barley for grain, or mixed grains. This is unlikely to be reflective of the true crop production in the Town of East Gwillimbury in 2016.

Fruit crops grown in the Town of East Gwillimbury include apples, peaches, strawberries, and raspberries. Fruit crop acreage is relatively small and has decreased from 98 acres in 2011 to 18 acres in 2021. Vegetable crops grown in the Town of East Gwillimbury include sweet corn, tomatoes, green peas, and green or wax beans. Vegetable crop acreage increased from 3,778 acres in 2011 to 4,024 acres in 2021.

5.4 Specialty Crop Areas

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

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

There are two *specialty crop areas* recognized by the Province through the Greenbelt Plan: the Niagara Peninsula Tender Fruit and Grape Area and the Holland Marsh. The province also recognizes *specialty crop areas* identified by municipalities which have included *specialty crop areas* in their land use schedules. Neither the Subject Lands, nor any portion of the *Study Area*, are located within a *specialty crop area*. Additionally, the Subject Lands do not exhibit any of the characteristics of a *specialty crop area*.

5.5 Regional Soils

5.5.1 Soil Series

The *Soil Survey of York County – No. 19 of the Ontario Soil Survey* (Hoffman, D.W., Richards, N.R., 1955) includes a soil map that shows the distribution of the various soil series in the York Region. The digital Provincial Soil Resource database is compiled and administered by OMAFRA and includes most of the soil surveys completed in Ontario. Much of this information is accessible from the Province's Agricultural Information Atlas. The database was accessed in November 2024.

The *Soil Survey of York County* mapping shows that the soils within the Subject Lands are comprised of thirteen unique soils. The Subject Lands are comprised primarily of Bondhead Sandy Loam (26.43%), Bondhead Loam (24.64%), and Schomberg Clay Loam (14.20%) soils, with smaller areas mapped as Brighton Sandy Loam (9.89%), Schomberg Silt Loam (6.97%), Simcoe Silt Loam (5.50%), Bottom Land (4.56%), Percy Fine Sandy Loam (4.14%), Schomberg Clay Loam – Steep Phase (1.81%), Muck (1.03%), Pontypool Sandy Loam (0.59%), Urban (0.21%), and Tecumseth Sandy Loam (0.04%) soils. Regional scale soil mapping is shown in Figure 2. Descriptions of the various soils mapped within the Subject Lands are provided in Appendix D.

5.5.2 CLI Agricultural Land Classification

The Canada Land Inventory (CLI) is an interpretative system for assessing the effects of climate and soil characteristics on the limitations of land for growing common field crops. The CLI system has seven soil classes that descend in quality from Class 1, which have no significant limitations, to Class 7 soils which have no agricultural capability for common field crops. Class 2 through 7 soils have one or more significant limitations, and each of these are denoted by a capability subclass. There are thirteen subclasses described in CLI Report No. 2 (1971). Eleven of these subclasses have been adapted to Ontario soils. More information regarding the CLI Classification system is provided in Appendix E.

According to the provincial database, the majority of the Subject Lands are mapped as CLI Class 1 (56.46%) and CLI Class 2FM (15.43%) lands. The remaining lands are comprised of CLI Class 3T (10.17%), Class 4T (11.79%), Class 5I (5.56%), Class 6T (0.35%), Class O (1.31%), and Class 0 (0.21%) lands. CLI Class 1 lands have no or very minor limitations for common field crop production. CLI Class 2FM lands have moderate limitations for the production of field crops due to low soil fertility and excess soil moisture, respectively. CLI Class 3T lands have moderately severe limitations for field crop production due to adverse topography. CLI Class 4T lands are also limited by adverse topography, however the limitations are severe. CLI Class 5I lands have very severe limitations to the production of common field crops and perennial forage, due to inundation by streams or lakes. CLI Class 6T lands are only capable of producing perennial forage crops, with no feasible improvement practices feasible due to their topography. CLI Class O lands are organic soils and are not placed in an agricultural capability class. CLI Class 0 lands are urban lands and are not considered to have agricultural capability. The composition of soils mapped within the Subject Lands and their associated CLI Class are summarized in Table 1 below.

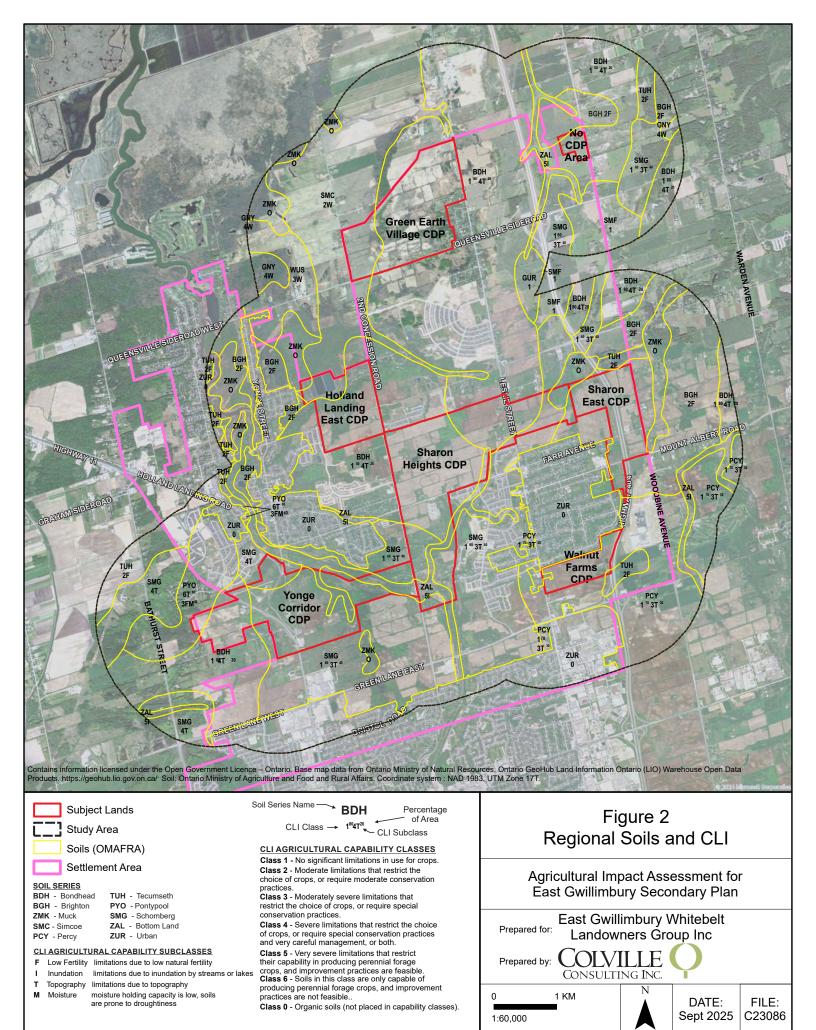
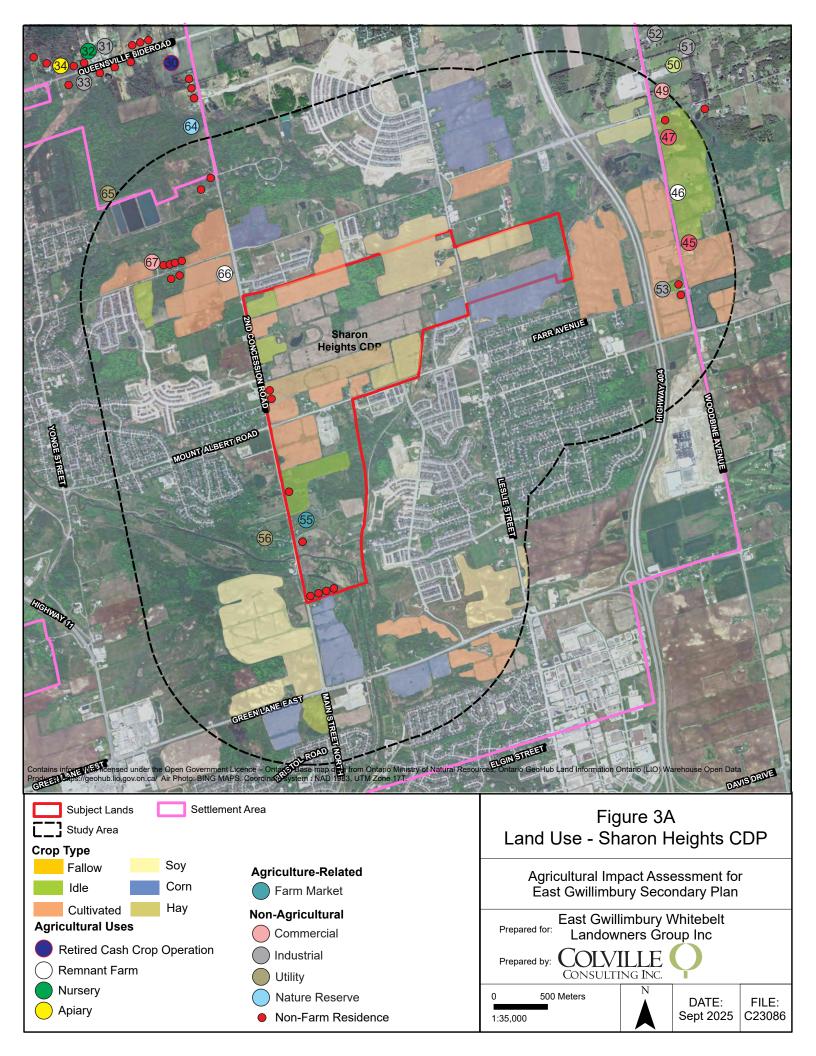


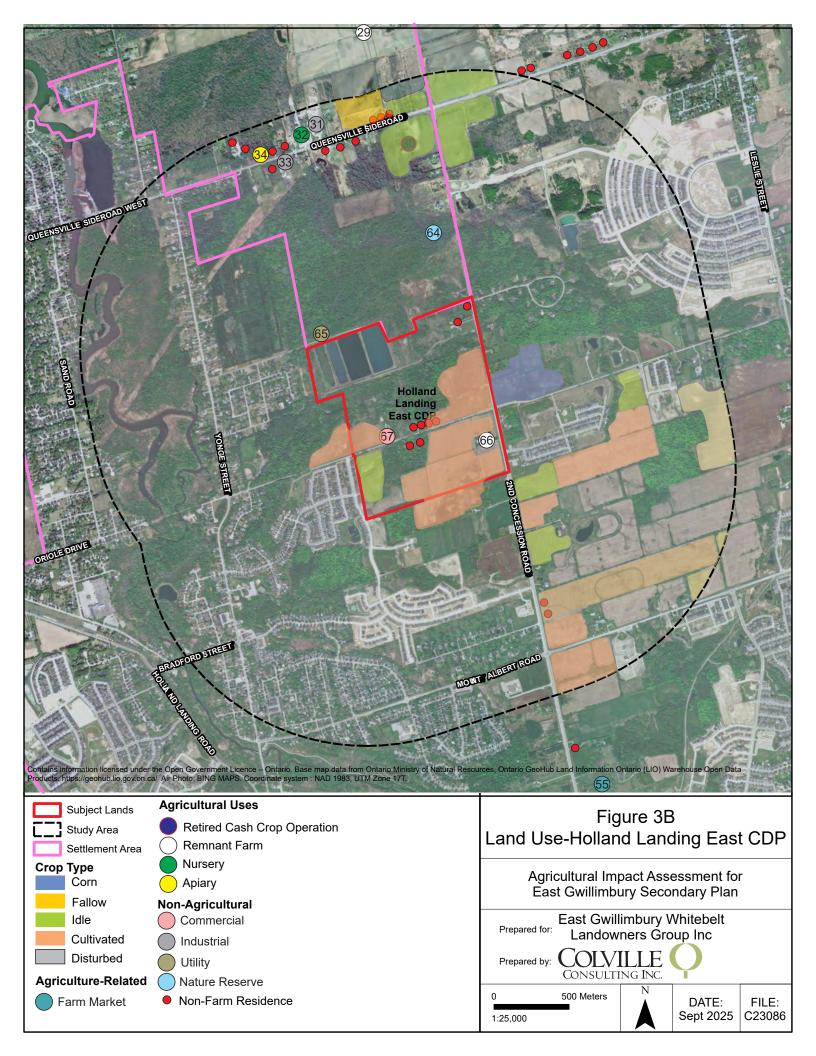
Table 1. Regional Soil Series for Subject Lands			
Soil Series	CLI Class	Area (Ha)	% of PSA
Bondhead Loam (C-Class Slopes)	1	241.53	19.71
Bondhead Loam (E-Class Slopes)	4T	60.38	4.93
Muck (A-Class Slopes)	0	12.63	1.03
Brighton Sandy Loam (D-Class Slopes)	2FM	121.15	9.89
Simcoe Silt Loam (B-Class Slopes)	2W	67.41	5.50
Bondhead Sandy Loam (C-Class Slopes)	1	259.11	21.15
Bondhead Sandy Loam (E-Class Slopes)	4T	64.78	5.29
Percy Fine Sandy Loam (C-Class Slopes)	1	35.52	2.90
Percy Fine Sandy Loam (D-Class Slopes)	3T	15.22	1.24
Schomberg Clay Loam – Steep Phase (E-Class Slopes)	4T	22.14	1.81
Schomberg Silt Loam (C-Class Slopes)	1	51.25	4.18
Schomberg Silt Loam (D-Class Slopes)	3T	34.17	2.79
Schomberg Clay Loam (C-Class Slopes)	1	104.37	8.52
Schomberg Clay Loam (D-Class Slopes)	3T	69.58	5.68
Tecumseth Sandy Loam (C-Class Slopes)	2FM	0.44	0.04
Pontypool Sandy Loam (C-Class Slopes)	3FM	2.88	0.24
Pontypool Sandy Loam (G-Class Slopes)	6T	4.32	0.35
Bottom Land	5I	55.82	4.56
Urban	0	2.57	0.21
Totals		1225.31	100.00%

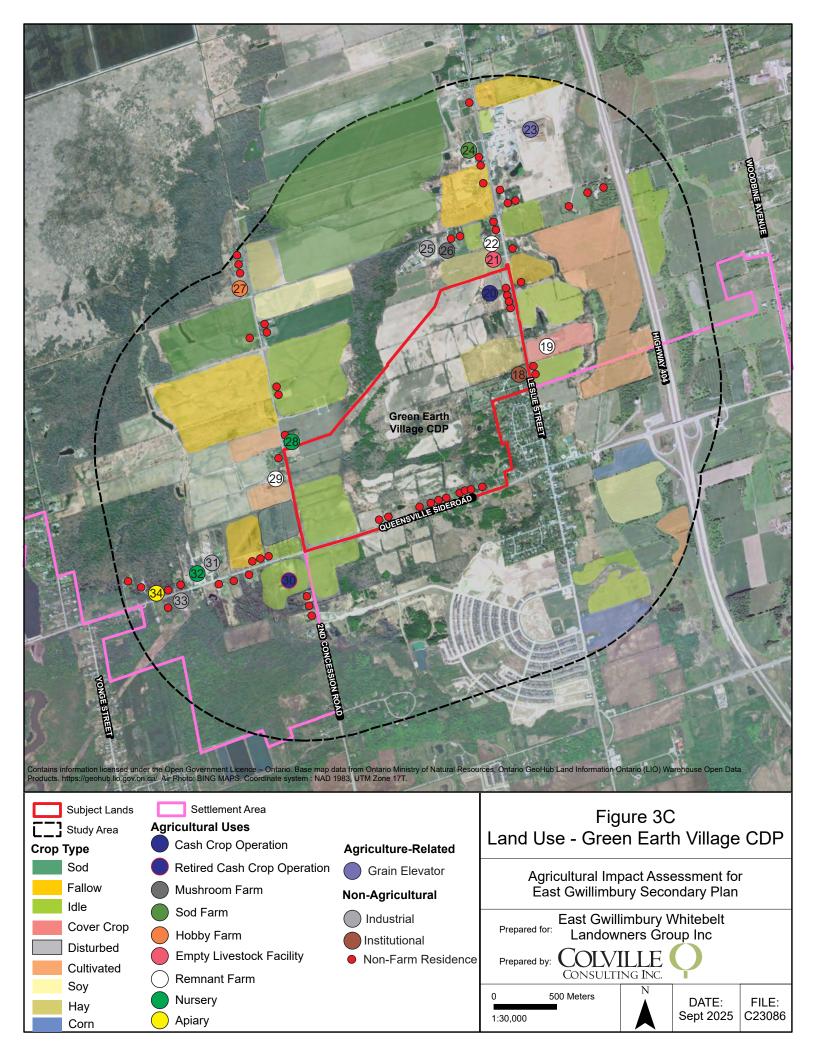
5.6 Land Use

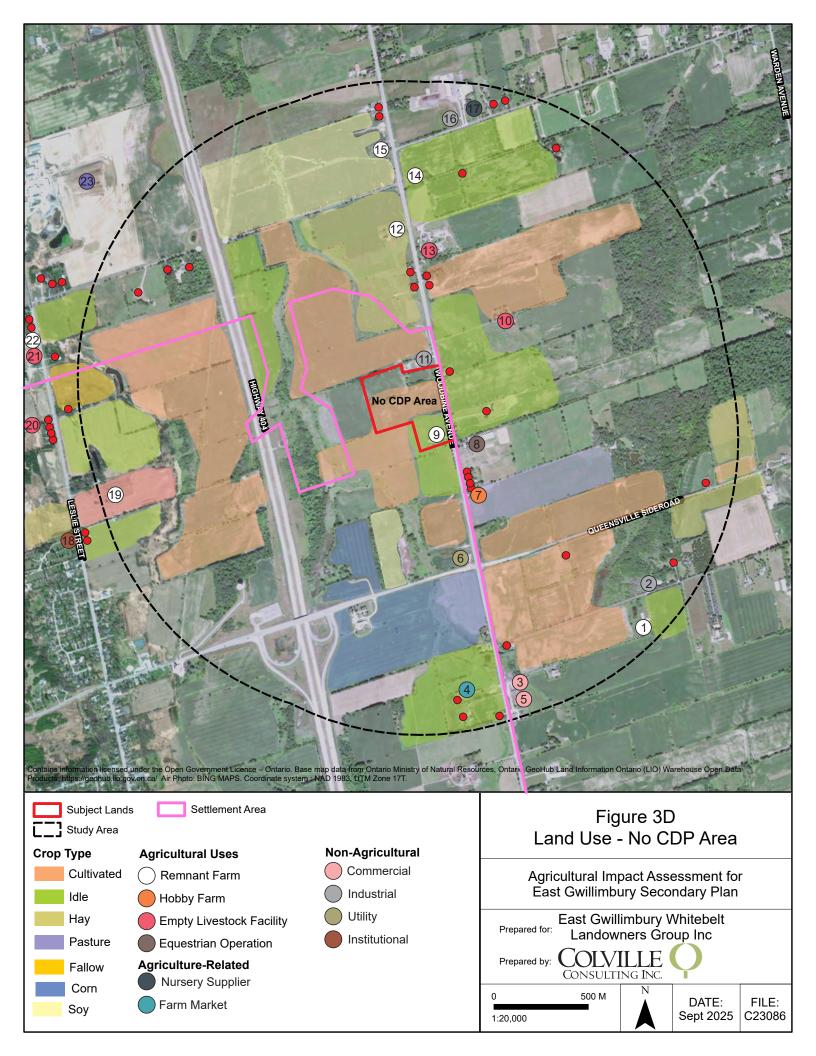
A reconnaissance level land use survey was completed on May 29th, 2024. The land use survey identified the number and type of agricultural operations (both active and inactive), agriculture-related uses, on-farm diversified uses, and the extent and type of non-agricultural land uses within the Study Area. Inactive farm operations were evaluated to determine whether they should be considered an unoccupied livestock facility or as a remnant farm. Remnant farms have no infrastructure that is suitable for housing livestock, whereas the infrastructure for an unoccupied livestock facility is still in a condition that could permit the keeping of livestock with minimal investment. The crop types observed within the Study Area were recorded and mapped.

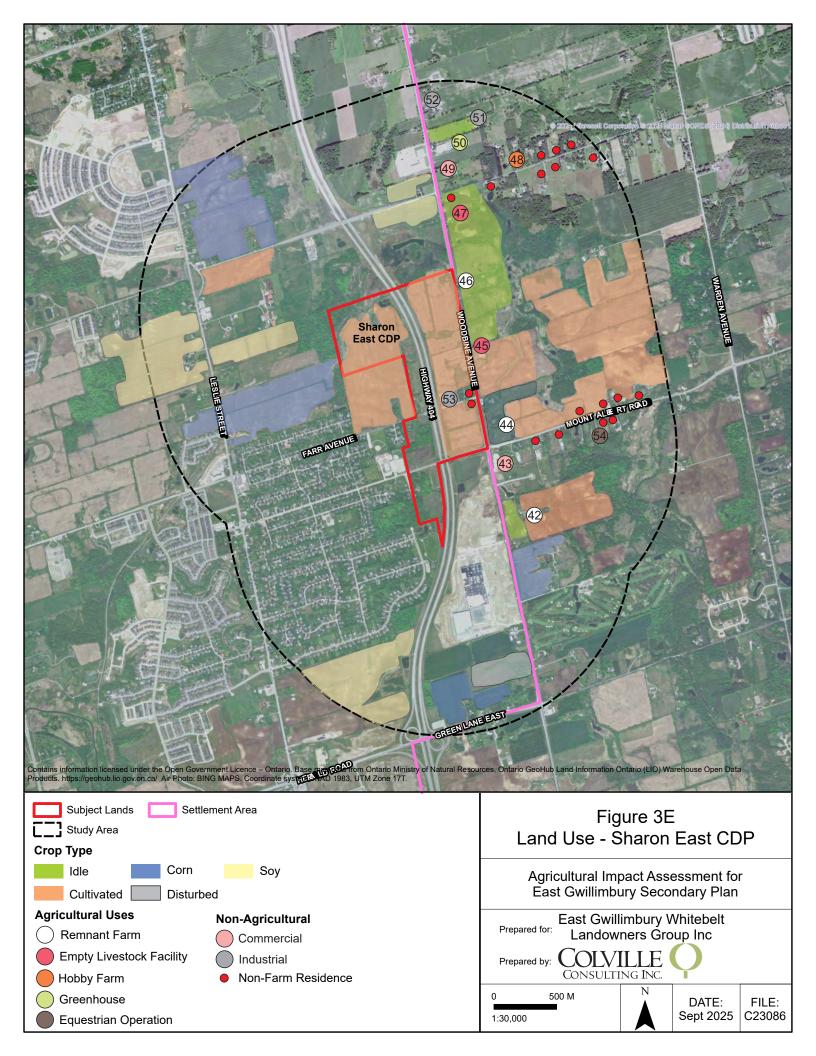
The purpose of the land use survey is to document the mix of agricultural and *non-agricultural uses* within the Subject Lands and *Study Area*; identify agricultural operations that may be sensitive to the introduction of new land uses; and identify *livestock facilities* to calculate the *MDS* setback requirements. Photographs from the land use survey can be found in Appendix F. All observed land uses are numbered, and short descriptions of these operations are included in the land use survey notes in Appendix G. The location and type of each identified land use are mapped in Figures 3A-G.

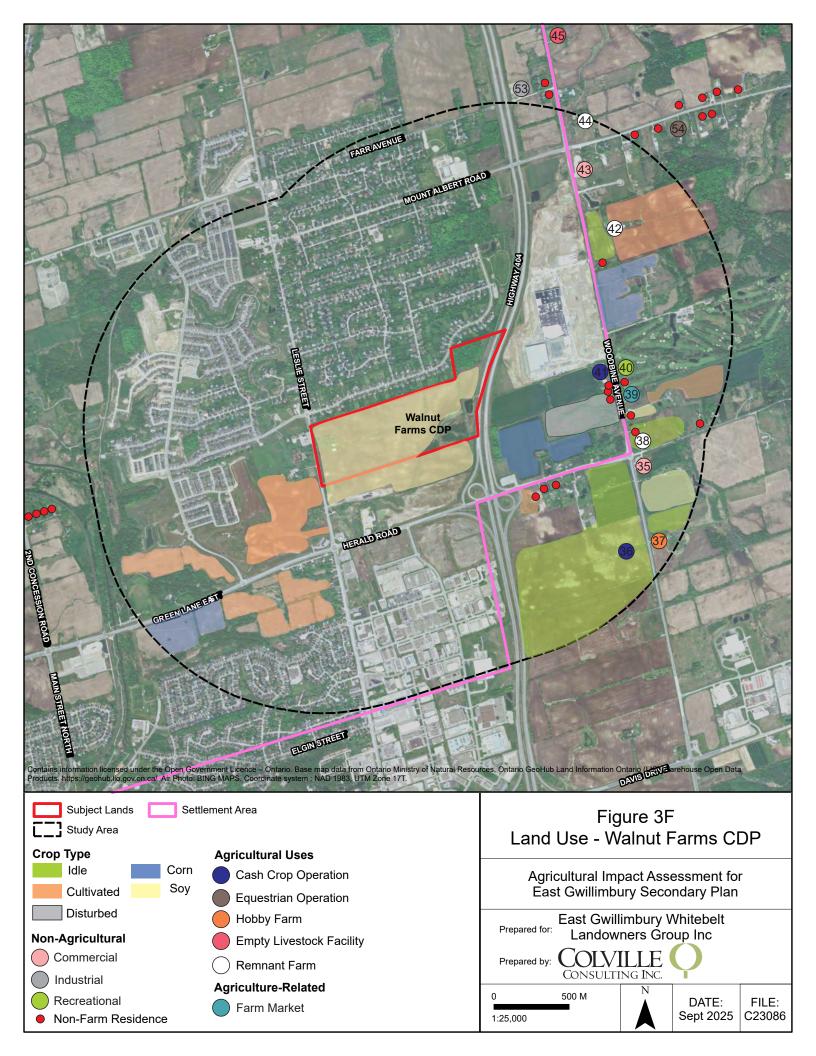


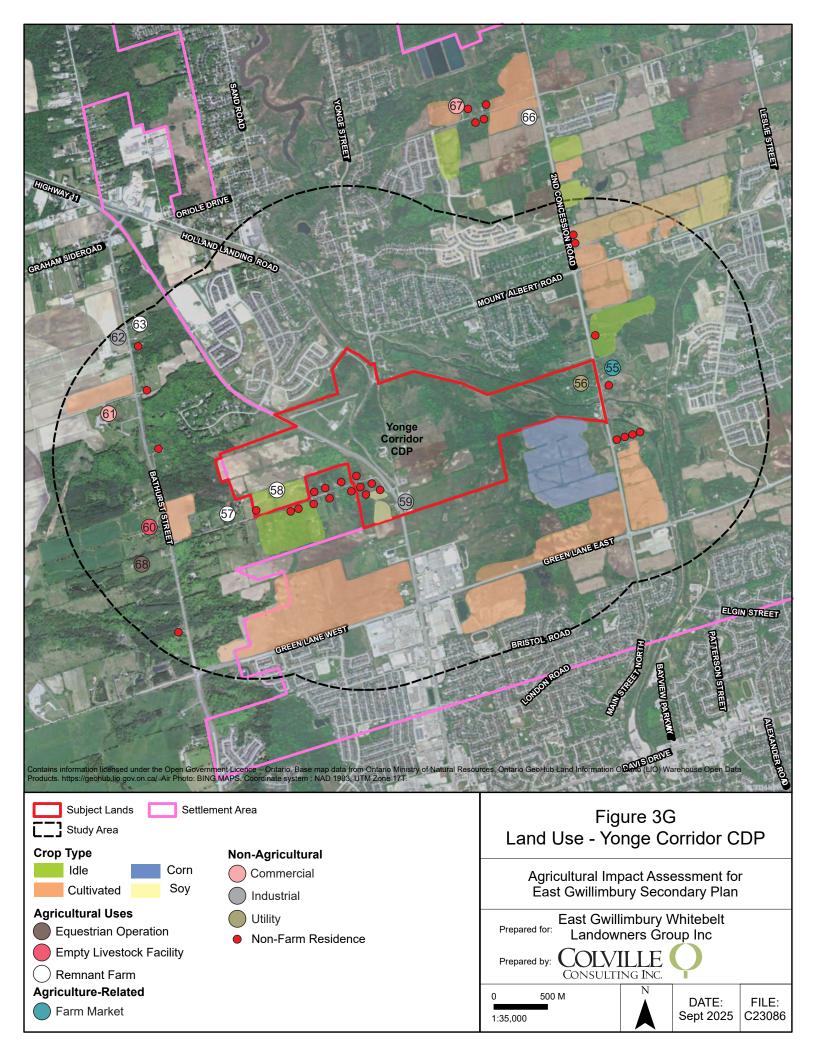












Thirty-nine *agricultural uses* were identified during the land use survey. The *agricultural uses* include four *hobby farms*, three equestrian operations, one sod farm, one greenhouse, one mushroom farm, one apiary, three *cash crop* operations, two nurseries, sixteen remnant farms, six *unoccupied livestock* facilities, and one retired *cash crop* operation.

Five agriculture-related uses were identified during the land use survey. These include one nursery supplier, one grain elevator, and three farm markets. No *on-farm diversified uses* were observed during the land use survey and desktop review.

In addition to the approximately 134 *non-farm residences* observed, twenty-four *non-agricultural uses* were identified within the *Study Area*. These uses include seven commercial uses, one recreational use, eleven industrial uses, three utility uses, one institutional use, and one nature reserve.

5.6.1 Agricultural Uses

The *PPS* defines *agricultural uses* as "the growing of crops, including nursery, biomass and horticultural crops; raising of livestock; raising of other animals for food, fur or fibre, including poultry and fish; aquaculture; apiaries; agro-forestry; maple syrup production; and associated on-farm buildings and structures, including, but not limited to livestock facilities, manure storages, value-retaining facilities and housing for farm workers, when the size and nature of the operation requires additional employment."

Subject Lands

Four *agricultural uses* were identified within the seven SPAs. These included one *remnant farm* (#66) in Holland Landing East CDP, one *cash crop operation* (#20) in Green Earth Village CDP, one *remnant farm* (#9) in No CDP Area, and one *remnant farm* (#58) in Yonge Corridor CDP. No other agricultural uses were identified within Sharon Heights CDP, Sharon East CDP, nor Walnut Farms CDP.

Study Area

Excluding land uses located within the SPAs, thirty-five agricultural uses were identified within the Study Areas. These include thirteen remnant farms, six unoccupied livestock facilities, one retired cash crop operation, two active cash crop operations, four hobby farms, three equestrian operations, one apiary, one mushroom farm, one sod farm, two nurseries, and one greenhouse.

5.6.2 Agriculture-Related Uses

Agriculture-related uses are farm-related commercial and industrial uses. As defined in the *PPS*, these are uses "that are directly related to farm operations in the area, support agriculture, benefit from being in close proximity to farm operations, and provide direct products and/or services to farm operations as a primary activity". These uses may include uses such as:

- retailing of agriculture-related products (e.g., farm supply co-ops, farmers' markets, and retailers of value-added products like wine or cider made from produce grown in the area);
- livestock assembly yards;
- farm equipment repair shops;
- industrial operations that process farm commodities from the area such as abattoirs, feed mills, grain dryers, cold/dry storage facilities and fertilizer storage facilities, which service agricultural area;

- distribution facilities;
- food and beverage processors (e.g., wineries and cheese factories); and
- agricultural biomass pelletizers.

One *agriculture-related use* was identified within the Sharon Heights CDP. This was identified as a farm market (#55), which included a barn housing chickens for the sale of eggs at the farm market. No *agriculture-related uses* were identified within the remaining six SPAs.

Four *agriculture-related land uses* were identified within the *Study Areas*. These include one grain elevator, one nursery supplier, and two farm markets.

5.6.3 On-Farm Diversified Uses

The *PPS* defines *on-farm diversified uses* as "uses that are secondary to the principal agricultural use of the property, and are limited in area. On-farm diversified uses include, but are not limited to, home occupations, home industries, agri-tourism uses, uses that produce value-added agricultural products, and electricity generation facilities and transmission systems, and energy storage systems."

Although no *on-farm diversified uses* were identified within the *Subject Lands* or the *Study Areas*, OFDUs can be difficult to identify, particularly home-based OFDUs.

5.6.4 Non-Agricultural Uses

Non-agricultural land uses include non-farm residences, residential clusters, hamlets and settlement areas, municipal utilities, commercial and industrial operations, recreational uses, and institutional uses. Approximately 134 non-farm residences were observed throughout the Study Area. In addition to the non-farm residences, five non-agricultural uses were identified within the Subject Lands and nineteen non-agricultural uses were identified within the Study Areas. The five non-agricultural uses identified within the Subject Lands include two industrial uses, one commercial use, one institutional use, and one utility. The nineteen non-agricultural uses identified with the Study Areas included six commercial uses, one recreational use, nine industrial uses, two utilities, and one nature reserve.

5.6.5 Land Use Summary

Table 2 below summarizes the types of land uses observed within the Subject Lands and Study Area.

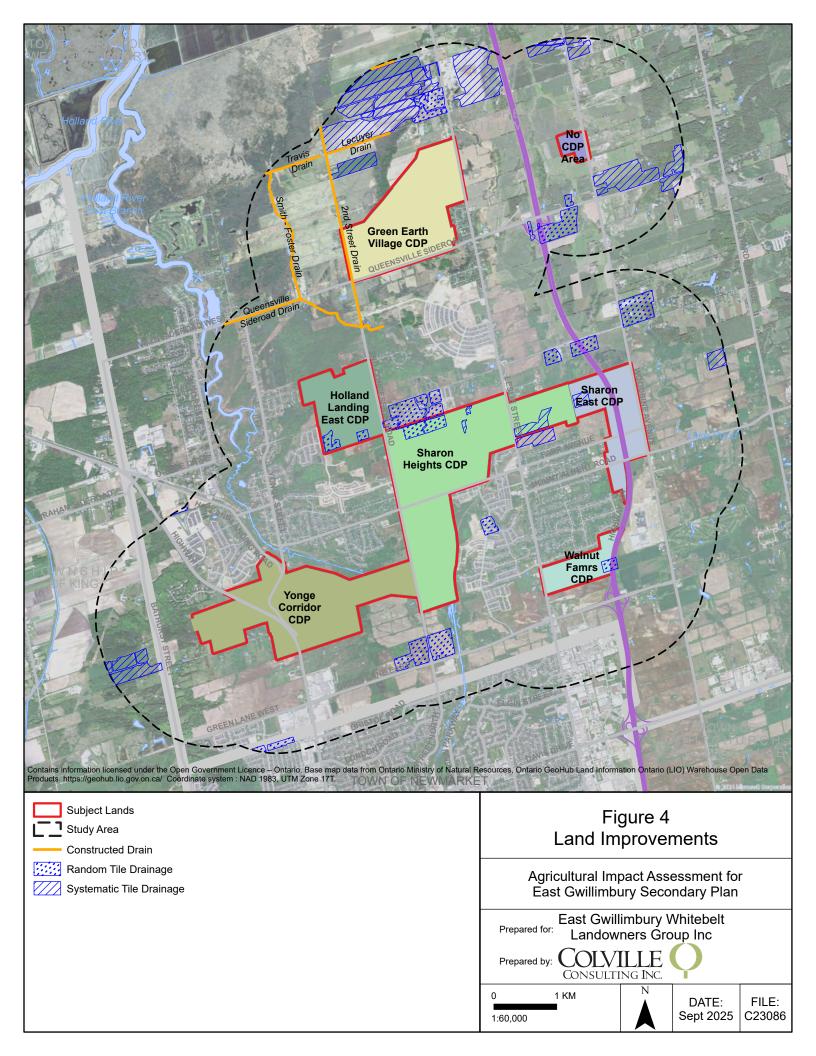
Table 2. Summary of Observed Land Uses				
	Total Number	Active	Inactive	
	39	4 – Hobby Farm		
		3 – Equestrian Operation		
		1 – Sod Farm	16 – Remnant Farm	
Agricultural		1 – Mushroom Farm	6 – Unoccupied Livestock	
Agricultulai		1 – Apiary	Facility	
		3 – Cash Crop Operation	1 – Retired Cash Crop Operation	
		1 – Greenhouse		
		2 – Nursery		
	5	2 – Nursery		
A aniquituma Palatad		1 – Nursery Supplier	0	
Agriculture-Related		1 – Grain Elevator	U	
		3 – Farm Market		
On-farm Diversified	0	0	0	
	Total Number	Type		
		7 – Commercial		
		1 – Recreational		
	158	11 – Industrial		
Non-Agricultural		3 – Utility		
		1 – Institutional		
		1 – Nature Reserve		
		134 – Nor	n-Farm Residence	

5.6.6 Cropping Pattern

The land use survey completed on May 29, 2024, identified crops based on observations of crops and crop stubble, as well as other identifying features. As shown in Figure 3, the crops grown on the Subject Lands and *Study Area* are predominantly a mix of soy, corn, hay, sod, and *cultivated* lands, where land is being used for agricultural crops, but specific crops being grown were not readily apparent. There are also areas of *pasture*, *idle* lands, scrublands, forested areas, and disturbed lands.

5.7 Land Improvements

OMAFA's Agricultural Information Atlas (AgMaps) provides artificial drainage mapping for the province. This online tool was accessed to obtain drainage mapping for the Subject Lands and *Study Area*. Figure 4 below shows the drainage improvements within the Subject Lands and *Study Area*.



5.7.1 Drainage Improvements in Subject Lands

According to OMAFRA's online mapping tool, AgMaps, both random and systemic tile drainage are present on the Subject Lands. Both systematic and random tile drainage installations are present in the Sharon Heights CDP, with the random tile drainage located in the northwest corner, and the systemic tile drainage located in the eastern corner. There is also systemic drainage present in the Sharon East CDP, and random tile drainage in the Walnut Farms CDP. There is approximately 15.97 ha of systematic tile drainage and 21.97 ha of random tile drainage across these three SPAs. No systematic or random tile drainage is mapped within the remaining four SPAs. The installation dates of the random and systematic tile drainage on the Subject Lands were not available through AgMaps.

5.7.2 Drainage Improvements in Study Area

Both random and systemic tile drainage are present in several locations throughout the *Study Area*. The random tile drainage is concentrated in the centre of the *Study Area*, with fewer installations in the southern and northern portions of the *Study Area*. The systemic tile drainage is primarily located in the norther portion of the *Study Area*, with fewer installations interspersed throughout the remaining lands of the *Study Areas*. There is approximately 143.85 ha of random tile drainage, and 297.88 ha of systemic tile drainage within the *Study Areas*.

In addition to the tile drainage, there are five constructed drains located within the *Study Area*. The Travis and Lecuyer Drains traverse the northwest corner of the *Study Area*, following Holborn Road, on either side of 2nd Concession Road. The 2nd Street Drain follows 2nd Concession Road, with Smith-Foster Drain running parallel with it until it meets the Queensville Sideroad Drain at Queensville Sideroad, before branching southeast.

The installation dates of the random and systematic tile drainage in the *Study Area* were not available through AgMaps.

5.7.3 Other Land Improvements

Irrigation systems were observed in the northeastern portion of the *Study Area*, which were being used at a sod operation (Operation #24).

No other investments in land improvements within the Subject Lands nor *Study Areas* were identified using the AgMaps Portal or during the land use survey.

5.8 Fragmentation of Agricultural Lands

Fragmentation of agricultural lands can have a negative impact on the viability of agricultural lands and its long-term preservation for agricultural purposes. Fragmentation of farmlands can diminish the economic viability of the agricultural area by reducing farming efficiency and increasing operating costs for farmers who must manage multiple small, separated parcels. Larger farm parcels can accommodate a wider range of agricultural activities and ensure long term viability of the property. In contrast, smaller farm parcels cannot offer the same flexibility and may not be viable as standalone parcels. Generally, smaller farm parcels cannot sustain a family farm without a secondary source of income (off farm) to maintain the agricultural operation.

Additionally, agricultural areas which have been fragmented often have a higher occurrence of non-agricultural land uses, which in turn can result in more frequent occurrences of conflict arising between agricultural and non-agricultural land uses. Agricultural areas with lower levels of fragmentation are considered to be more viable economically for agricultural uses and generally have fewer sources of non-agricultural land use conflicts. In most cases, these areas have a higher priority for protection. High levels of fragmentation in an agricultural area lower the areas agricultural priority.

The *PPS* planning policies recognize the impact of fragmentation on agricultural lands and try to minimize the fragmentation of agricultural lands for *non-agricultural uses*. For example, the *PPS* policies do not permit lot creation in *prime agricultural areas* for residential purposes. New permitted *development* in *prime agricultural areas* should avoid further fragmentation of the agricultural land base whenever possible.

Based on our review of the lot fabric in the *Study Area* using AgMaps and direct observation of residential lots, there is a mix of parcel sizes ranging from single residential (< 1 ha) to large agricultural parcels (>60 ha). A number of the parcels within the agricultural land base are not suitably sized for a variety of *agricultural uses*.

The Subject Lands are primarily surrounded by the existing East Gwillimbury settlement area, which has been developed for non-agricultural uses. The lands within the Study Area have a high level of fragmentation and have a high occurrence of non-agricultural uses. The eventual development of the Subject Lands for non-agricultural land uses will lead to further fragmentation of the already fragmented agricultural land base in this area. Fragmentation of the Study Area is shown in Figure 5 below.

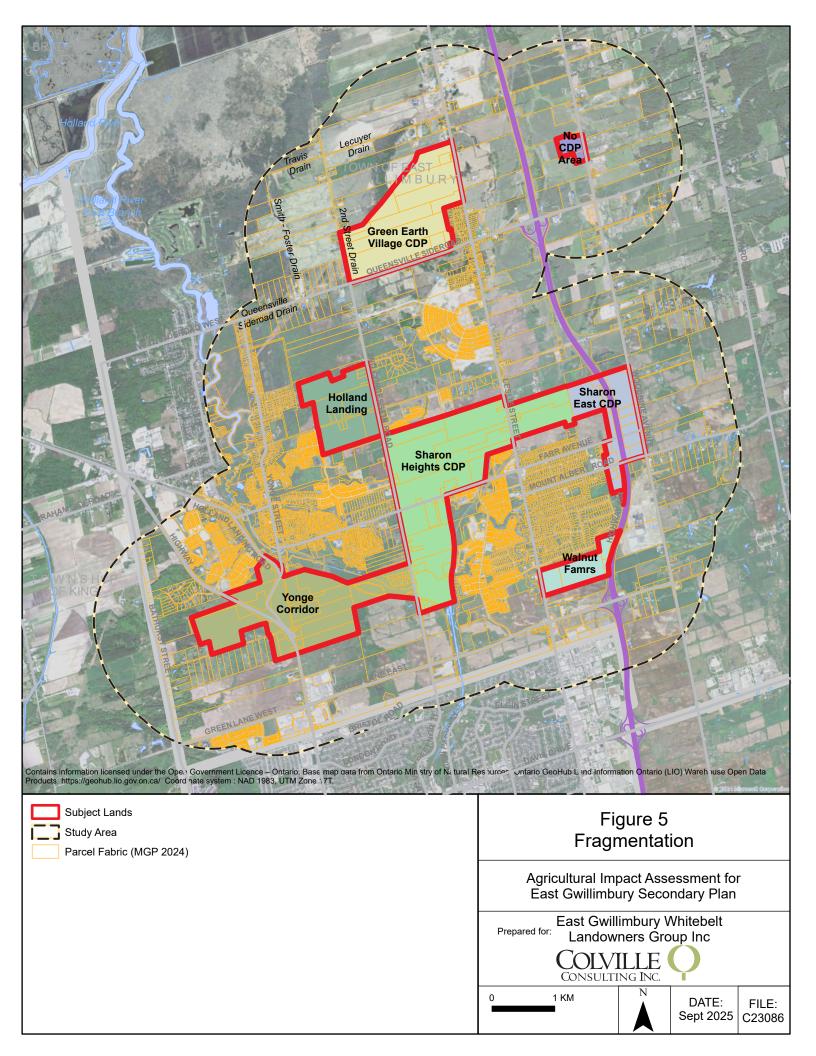
5.9 Minimum Distance Separation

5.9.1 Requirements for MDS and Settlement Area Boundary Expansion

The Minimum Distance Separation is a tool used to minimize potential impacts and conflicts between non-agricultural and agricultural land uses. In areas outside of approved settlement areas, new non-agricultural land uses are required to meet the Minimum Distance Separation I formula as contained in OMAFRA's The Minimum Distance Separation Implementation Document: Formulae and Guidelines for Livestock Facility and Anaerobic Digester Odour Setbacks, Publication 853 (2016) document. It is applied to all farm operations that have infrastructure in a condition that is capable of housing livestock and/or have an anaerobic digester on-site.

The MDS I formula provides the minimum distance separation between existing livestock facilities (including unoccupied livestock facilities) and new non-agricultural land uses proposed outside of a settlement area. It deals specifically with odour and does not account for noise, dust, or other farm-generated products. An unoccupied livestock facility is one that may be retired or no longer used to house livestock; however, it appears to be capable of housing livestock. The MDS is not applied to remnant farms with barns that are in poor condition and not suitable for housing livestock.

Section 2.3.2.1 of the *PPS* outlines the requirements for the application of *MDS* for *settlement area* boundary expansion and requires planning authorities to consider "whether the new or expanded settlement area complies with the minimum distance separation formulae."



5.9.2 MDS Guidelines

OMAFRA's The Minimum Distance Separation Implementation Document: Formulae and Guidelines for Livestock Facility and Anaerobic Digester Odour Setbacks, Publication 853 (2016) document contains a set of guidelines which outline how the *MDS I formula* is to be applied. The following are the relevant *MDS* guidelines for *settlement area* boundary expansion.

#1. Referencing MDS in Municipal Planning Documents

In accordance with the Provincial Policy Statement, 2014, this MDS Document shall apply in prime agricultural areas and on rural lands. Consequently, the appropriate parts of this MDS Document shall be referenced in municipal official plans, and detailed provisions included in municipal comprehensive zoning by-laws such that, at the very least, MDS setbacks are required in all designations and zones where livestock facilities and anaerobic digesters are permitted.

Section 4.11.3.4 of the Town of East Gwillimbury Official Plan states that "All farm and non-farm development shall comply with the Minimum Distance Separation formulae, as amended, in order to minimize odour conflicts between livestock facilities and development."

#6. Required Investigation Distances for MDS

A separate MDS I setback shall be required to be measured from all existing livestock facilities and anaerobic digesters on lots in the surrounding area that are reasonably expected by an approval authority to be impacted by the proposed application.

As part of municipal consideration of planning or building permit applications, all existing livestock facilities or anaerobic digesters within a 750 m distance of a proposed Type A land use and within a 1,500 m distance of a proposed Type B land use shall be investigated and MDS I setback calculations undertaken where warranted.

In circumstances where large livestock facilities (e.g., >1,200 Nutrient Units) exist beyond the 750 m or 1,500 m study area, MDS I setbacks from these facilities should also be calculated.

Settlement area boundary expansion is considered to be a Type B land use. Therefore, all existing *livestock facilities* or *anaerobic digesters* with 1,500 m of the Subject Lands shall be investigated and *MDS I* setback calculations completed, where warranted.

#12. Existing Uses that Do Not Conform to MDS

An MDS I setback is required for proposed development or dwellings, even though there may be existing or approved development or dwellings nearby that do not conform to MDS I requirements.

However, a reduced MDS I setback may be permitted provided there are four, or more, nonagricultural uses, residential uses and/or dwellings closer to the subject livestock facility than the proposed development or dwellings and those four or more non-agricultural uses, residential uses and/or dwellings are:

- located within the intervening area (120° field of view shown in Figure 4 in Section 7 of this MDS Document) between the closest part of the proposed development or dwelling and the nearest livestock facility or anaerobic digester;
- located on separate lots; and
- of the same or greater sensitivity (i.e., Type A or Type B in accordance with Implementation Guidelines #33 and #34) as the proposed development or dwelling.

If ALL of the above conditions are met, the MDS I setback for the proposed development or dwelling may be reduced such that it is located no closer to the livestock facility or anaerobic digester than the furthest of the four non-agricultural uses, residential uses and/or dwellings as shown in Figure 4 (See MDS Document).

Guideline #12 can be used to reduce the calculated *MDS* setbacks for Operation #21. This operation has at least four *non-agricultural uses* or *dwellings* within a 120° field of view between the closest part of the Subject Lands and the nearest *livestock facility* and/or *manure storage* system associated with the operation. Although the *MDS I* setback for this operation can be reduced, the full *MDS* setbacks have been mapped to identify areas that may be more sensitive to the introduction of non-agricultural land uses

#19. Cumulative Design Capacity of Livestock Facilities on a Lot

MDS calculations shall be based on the combined design capacity for all livestock barns on a lot, even if they are unoccupied livestock barns or separated by a substantial distance on the lot.

Where there are no livestock barns on a lot, MDS calculations shall be based on the combined design capacity for all manure storages on a lot, even if they are unused manure storages or separated by a substantial distance on the lot.

Within the *Study Area*, there are multiple farm operations with more than one barn located on the same property. Therefore, *MDS I* setback calculations have been based on the combined design capacity of all *livestock* barns on a lot, and applied to the *livestock facility* nearest to the Subject Lands.

#34. Type B Land Uses (More Sensitive)

For the purposes of MDS I, proposed Type B land uses are characterized by a higher density of human occupancy, habitation or activity including, but not limited to:

- new or expanded settlement area boundaries;
- an official plan amendment to permit development, excluding industrial uses, on land outside a settlement area;
- a zoning by-law amendment to permit development, excluding industrial uses or dwellings, on land outside a settlement area; and
- the creation of one or more lots for development on land outside a settlement area, that results in four or more lots for development, which are in immediate proximity to one another (e.g., sharing a common contiguous boundary, across the road from one another, etc.), regardless of whether any of the lots are vacant.

Because of the increased sensitivity of these uses, a new or expanding Type B land use will generate an MDS I setback that is twice the distance as the MDS I setback for a Type A land use. This is reflected in the value of Factor E which is 2.2 for Type B versus 1.1 for Type A.

The proposed *development* is considered to be a Type B land use. Therefore, *MDS I* setbacks have been calculated for a Type B land use, which generates an *MDS I* setback that is twice that of a Type A land use.

#36. Non-Application of MDS Within Settlement Areas

MDS I setbacks are NOT required for proposed land use changes (e.g., consents, rezonings, redesignations, etc.) within approved settlement areas, as it is generally understood that the long-term use of the land is intended to be for non-agricultural purposes.

The Subject Lands are located within the Region of York's and Town of East Gwillimbury's approved *settlement area*. Therefore, the *MDS formulae* are not required to be applied to proposed *development* within the Subject Lands. However, *MDS I* setbacks have been calculated to identify areas that may be more sensitive to the introduction of non-agricultural land uses.

#40. Measurement of MDS Setbacks for Development and Dwellings

For proposed development, MDS I setbacks are measured as the shortest distance between the area proposed to be rezoned or redesignated to permit development and either: the surrounding livestock occupied portions of livestock barns, manure storages or anaerobic digesters. Refer to Figure 7 in Section 7 of this MDS Document. This shall include areas proposed to be rezoned or redesignated with site-specific exceptions that add non-agricultural uses or residential uses to the list of agricultural uses already permitted on a lot.

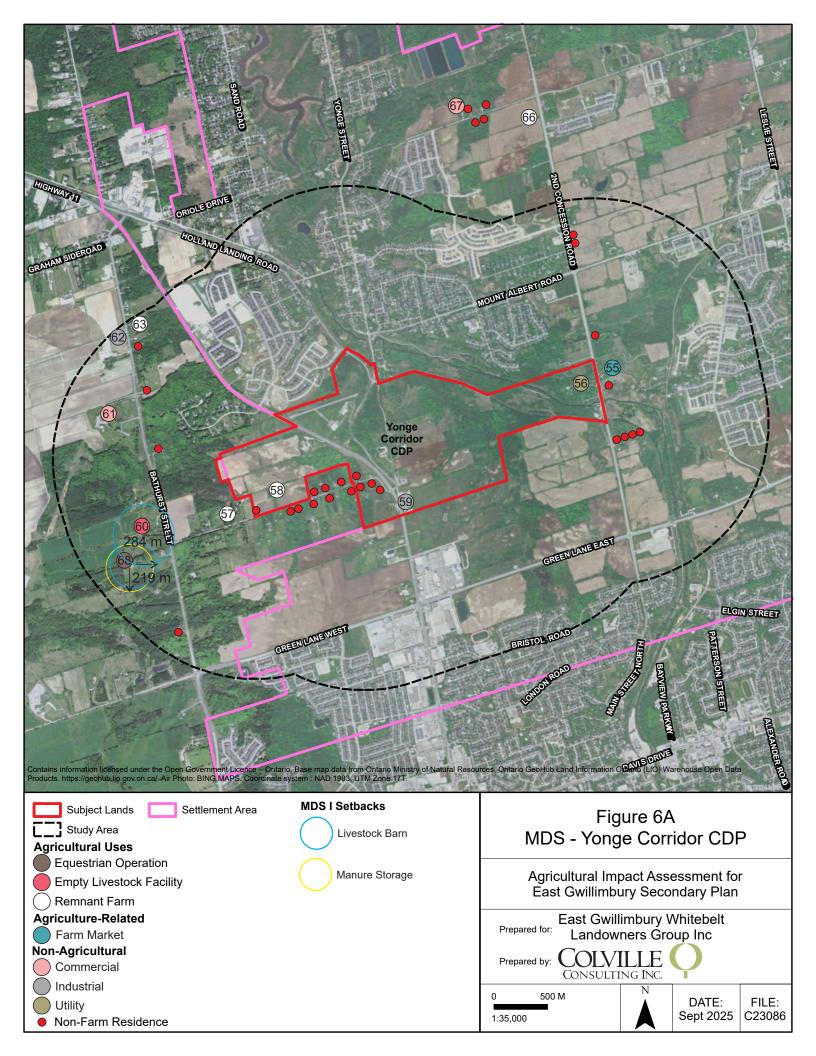
For building permit applications for proposed dwellings, where required in accordance with Implementation Guideline #7, MDS I setbacks are measured as the shortest distance between the proposed dwelling and either the surrounding manure storages, anaerobic digesters or the livestock occupied portions of the livestock barns.

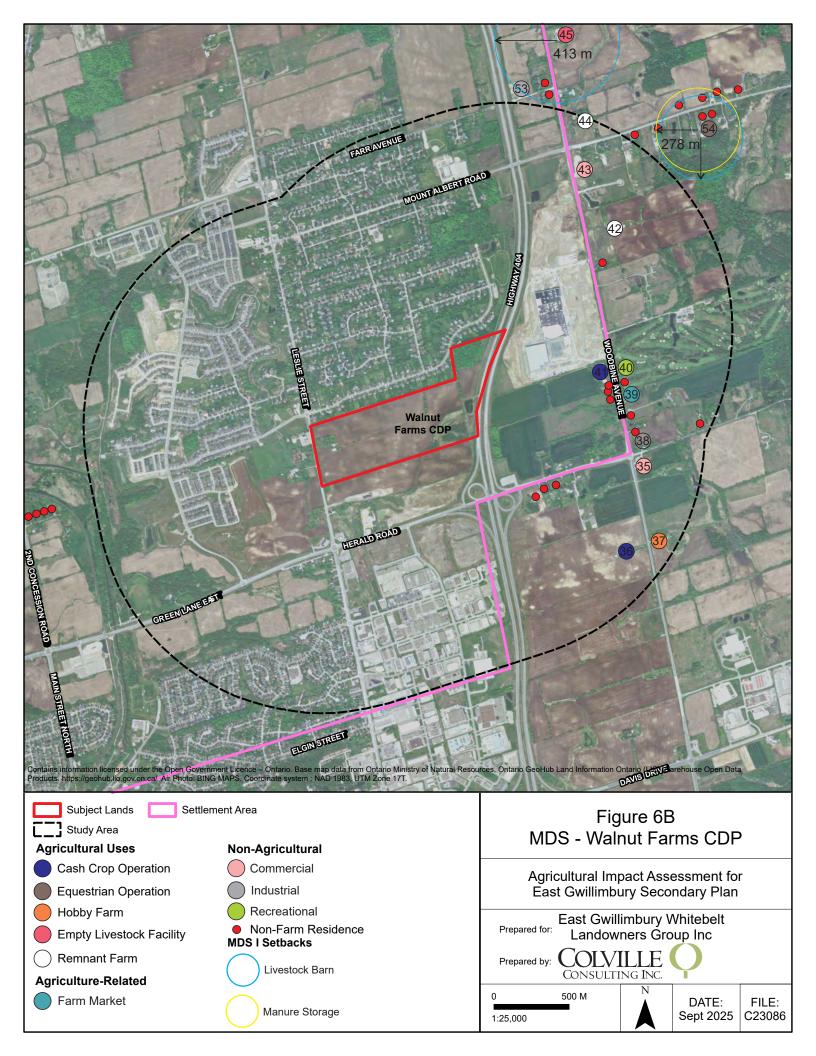
MDS I setback distances have been applied to the shortest distance between the Subject Lands and the *manure storages* or *livestock* occupied portions of the *livestock facility*.

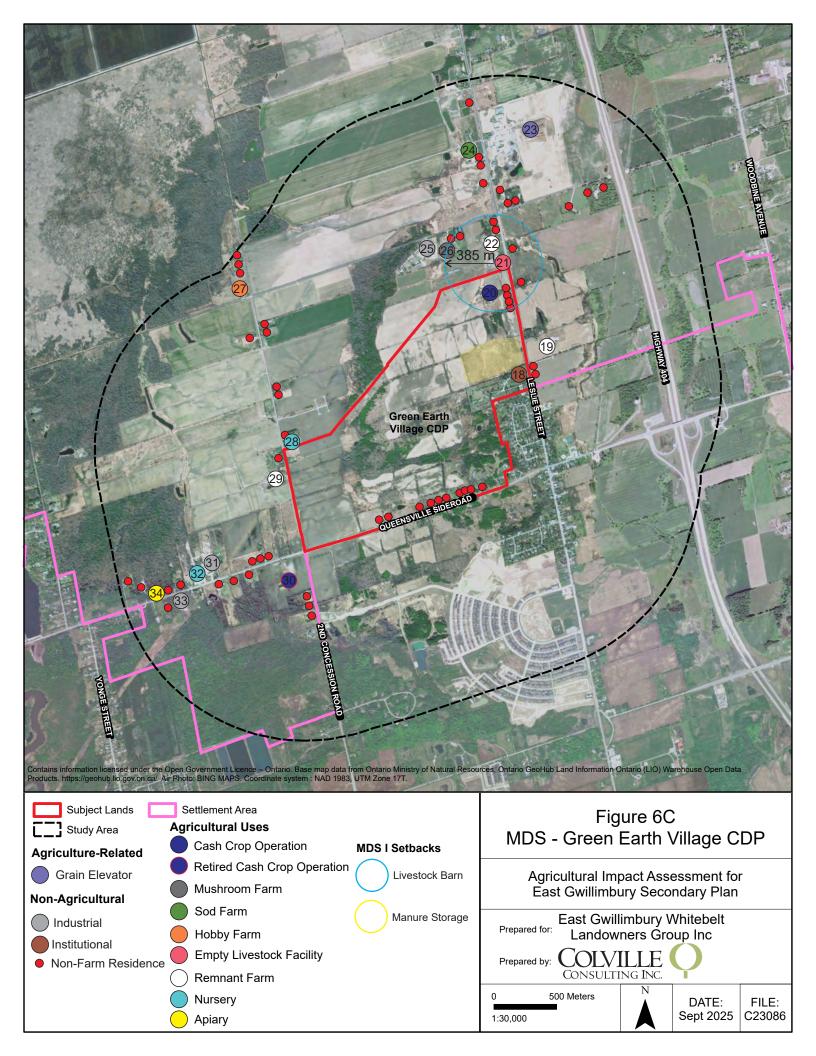
5.9.3 MDS Results

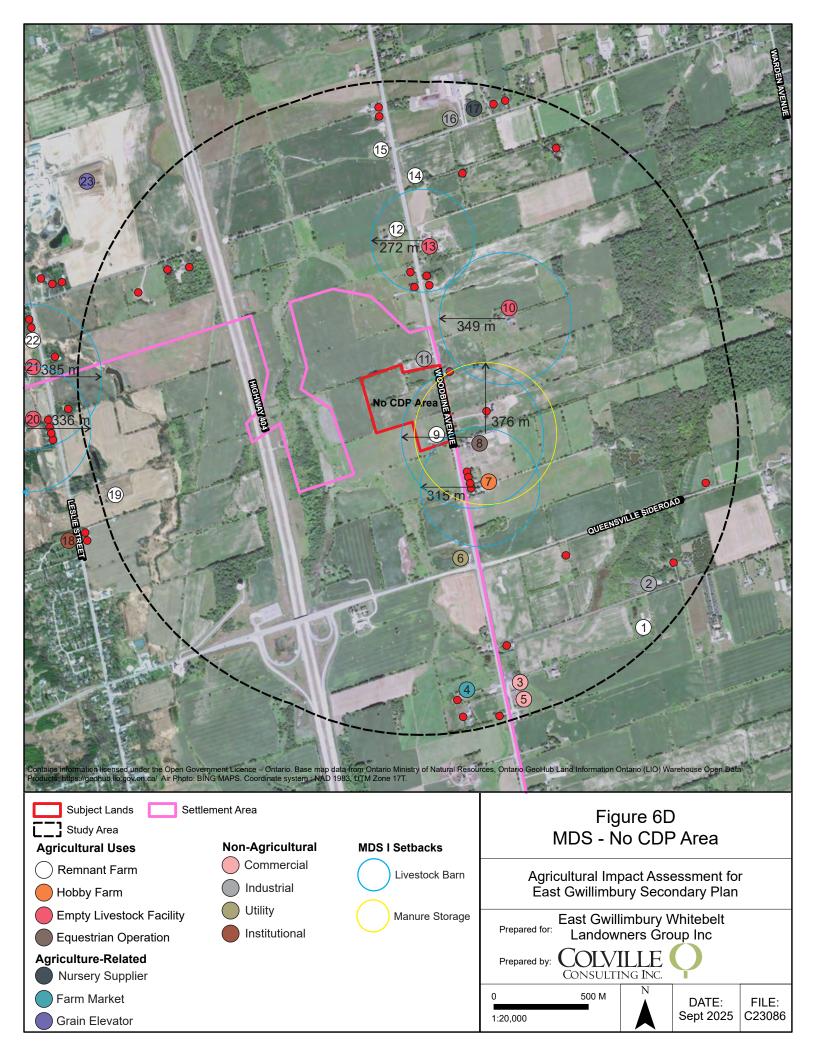
Eleven livestock facilities within 1,500 m of the Subject Lands are, or appear to be, capable of housing livestock. The MDS I formula was applied to these 11 livestock facilities. Figures 6A-6E show the MDS I setback distances these livestock operations. These figures show that five MDS I setbacks extend into the Subject Lands, including the Sharon East CDP, No CDP Area, and Green Earth Village CDP SPAs. MDS I mapping has not been provided for the Sharron Heights CDP, nor Holland Landing East CDP SPAs, as no livestock operations were identified within the Study Areas which required the calculation of MDS I setbacks. In total, approximately 74.15 ha of the Subject Lands encroach into the calculated MDS I setbacks, however, this does not create constraints to the proposed development.

Table 3 summarizes the level of encroachment the proposed *development* has on the *livestock operations* and the level of compliance with *MDS* setback achievable. The AgriSuite *MDS* reports for these operations are provided in Appendix H. As previously stated, the *MDS I formula* does not apply to the *development* proposed within the Subject Lands because these lands are part of an approved *settlement area*. Although portions of the Subject Lands encroach on the MDS setbacks from *livestock operations*, the proposed development complies with the *MDS I formula*. Areas where *MDS* encroachment has been identified may represent opportunities for infrastructure (e.g., stormwater management ponds) or low intensity land uses or benefit from additional mitigation measures, as discussed in Section 6.3 of this AIA.









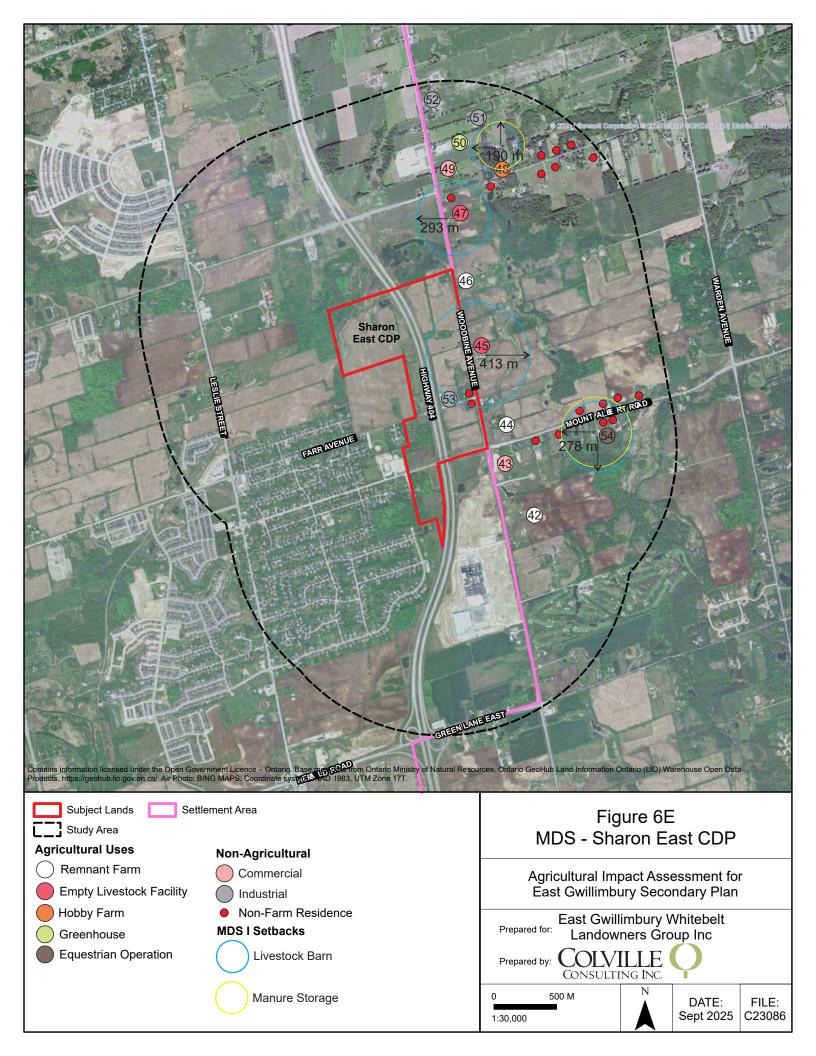


Table 3.	MDS Setback Requi	MDS Setback Requirements for Proposed Development												
Site Number	MDS I Setback Requirement – Livestock Facility	MDS I Setback Requirement – Manure Storage	Nearest Distance to Secondary Plan Area	Complies with MDS I Setback?										
7	315 m	315 m N/A 293 m												
8	376 m	376 m	120 m	Yes										
10	349 m	N/A	424 m	Yes										
13	272 m	N/A	665 m	Yes										
21	385 m	N/A	69 m	Yes										
45	413 m	N/A	68 m	Yes										
47	293 m	N/A	401 m	Yes										
48	190 m	190 m	1026 m	Yes										
54	278 m	278 m	873 m	Yes										
60	284 m	N/A	1048 m	Yes										
68	219 m	219 m	1205 m	Yes										

5.10 Economic and Community Benefits of Agriculture

Identifying the economic and community benefits associated with agriculture in the *Study Area* is an important consideration and informs the impacts associated with the proposed *development*. The agriculture and agri-food sector is one of the largest primary goods producing sectors and plays a key role in the Town of East Gwillimbury and York Region economies. According to Census of Agriculture data, the total number of farms in the York Region decreased from 828 in 2011, to 712 in 2016, to 604 farms in 2021. The Town of East Gwillimbury observed a similar trend of decreasing farm numbers, with data showing 146 farms in 2011, 121 farms in 2016, and 106 farms in 2021. These farms employ residents from the Town of East Gwillimbury and the York Region, contributing economically to the area and supporting the *agri-food network*.

As of 2021, the agriculture, forestry, fishing and hunting industry employed approximately 2,425 individuals within the York Region, which is an increase from the 2,120 individuals employed in 2016. The Town of East Gwillimbury observed a similar increase in individuals employed by the agriculture, forestry, fishing and hunting industry, with data showing the industry employed 250 individuals in 2016 and 340 individuals in 2021. Within the York Region, there were approximately 7,595 agri-food businesses in 2021, with 237 of these businesses located within the Town of East Gwillimbury. Both the York Region and the Town of East Gwillimbury have experienced a slight increase in agri-food businesses between 2016 and 2021.

As of 2021, of the 106 total farms within the Town of East Gwillimbury, two farms were valued under \$200,000, five farms were valued between \$200,000 and \$499,999, 13 farms were valued between \$500,000 and \$999,999, and 86 farms were valued \$1,000,000 and over. Over the past three census periods, the number of farms valued at \$1,000,000 and over has increased, with the number of farms valued under \$1,000,000 decreasing.

COLVILLE CONSULTING INC.

The Subject Lands are located in a fast-developing area in which the lands are being transformed from agriculture to *non-agricultural uses*, in part due to the York Region *settlement area* boundary expansion. While agriculture in this area still provides economic and community benefits, the influence of agriculture is waning in the *Study Area*.

With the implementation of mitigation measures to minimize indirect impacts on surrounding farm operations, it is expected that the proposed *development* will have a negligible impact on the *agri-food network* in the area.

6. Assessment of Impacts to Agriculture

Farm operations can be adversely impacted by new non-farm *development* on adjacent lands. Non-agricultural *development* adjacent to agricultural lands can cause disruptions to existing farm practices as a result of construction activity, an increase in non-farm traffic, incidence of trespass and vandalism, and increased levels of noise, dust, and lighting. Farmers may also experience an increase in nuisance complaints from residents and/or patrons of non-agricultural facilities. These complaints are often related to issues such as odour, light, dust, and noise generated through *normal farm practices*.

The proposed *development* will have both direct and indirect impacts. It is unlikely that the proposed *development* will have significant, long-term negative effects on the surrounding agricultural lands and community.

6.1 Direct Impacts

6.1.1 Prime Agricultural Lands

The Subject Lands incorporate an area approximately 1225.31 ha (3027.81 acres) in size, of which approximately 1005.45 ha consists of *prime agricultural lands*. *Development* of the Subject Lands will lead to the eventual loss of approximately 1005.45 ha of *prime agricultural lands*. To minimize the impact of this loss in the short-term, the lands should be kept in agricultural production until the lands are developed for non-agricultural uses.

6.1.2 Agricultural Infrastructure

There are four agricultural operations within the Subject Lands with agricultural infrastructure present. Of the four agricultural uses located within the Subject Lands, three are remnant farms with infrastructure in poor condition. The remaining agricultural use is an *unoccupied livestock facility*, which was inactive at the time of the land use survey. The *development* of the Subject Lands will result in the removal of this agricultural infrastructure. However, this is expected to have a negligible impact on the *Agricultural System*.

6.1.3 Agricultural Land Improvements

Areas of both random and systemic tile drainage are present on the Subject Lands, specifically within the Sharon Heights CDP, Sharon East CDP, and Walnut Farm CDP. Approximately 11.02 ha (2.78%) of systemic drainage and 12.64 ha (3.19%) of random tile drainage has been installed in the Sharon Heights CDP. Approximately 4.95 ha (4.26%) of systemic tile drainage has been installed in the Sharon East CDP, and 2.64 ha (5.03%) of random tile drainage in the Walnut Farms CDP.

There are no constructed drains located within the Subject Lands.

Development of the Subject Lands will result in the loss of a total of 31.25 ha of tile drainage, which represents approximately 2.55% of the total area of the SPAs. This will have a negligible impact on the *Agricultural System*.

6.1.4 Loss of Crop Land

Of the Subject Lands' 1225.31 ha, approximately 458.48 ha of land, or 37.4%, are *cultivated* primarily for common field crops. The *development* of the Subject Lands will result in the eventual loss of these

cultivatable lands. To mitigate this loss in the short-term, the lands should be kept in agricultural production until the land is needed for *development*.

6.2 Indirect Impacts

Potential impacts to adjacent farm operations and farm practices are considered to be indirect impacts. These would include changes to the surface drainage that could impact adjacent lands, disruption to farm traffic and access to adjacent agricultural fields, instances of trespass and vandalism, and conflicts arising from farm odour and other nuisance complaints often received by farmers in close proximity to *non-agricultural uses*.

6.2.1 Disruption to Surficial Drainage

The *development* of the Subject Lands has the potential to cause changes in surface runoff, which can have a potential negative impact on adjacent agricultural lands. It is recommended that a Grading Plan and Stormwater Management Plan be developed as part of the *development* process. Implementation of the recommendations provided in these studies will minimize or eliminate the potential impacts, which are expected to be negligible.

6.2.2 Disruption to Farm Operations

Most of the active agricultural operations in the *Study Area* (i.e., outside of the existing settlement area) are well removed from the Subject Lands. These farms are unlikely to experience any form of disruption to their operations. *Development* of the Subject Lands and subsequent removal of farmland may have an impact on the flexibility on some of the surrounding farm operations if they relied on the Subject Lands as an additional source of farmland to supplement their home operation. However, the adjacent lands will not be directly affected, and current farm operations will still be able to cultivate common field crops and other agricultural products without limitation.

New non-agricultural *development* may have an impact on the existing farm wells, irrigation ponds, and ponds or other waterbodies used to provide *livestock* with sources of water in the surrounding area. It is our understanding that a Hydrogeological Study is being prepared as part of the Secondary Plan process. It is anticipated that the Hydrogeological Study will provide recommendations to mitigate impacts if impacts to these water sources are anticipated.

Noise, dust, and light can have a negative impact on some farm operations. Construction may temporarily generate greater levels of noise, dust, and lighting. No sensitive farm operations were identified that would be impacted by noise, dust, and lighting. However, it is recommended that these elements be controlled and in compliance with Ministry of Environment, Conservation and Parks (MECP) guidelines. No negative indirect impacts are anticipated from construction activity.

6.2.3 Trespass and Vandalism

Some farm operations within the *Study Area* may already have to deal with the potential for trespass and vandalism due to the close proximity of the developed portions of East Gwillimbury and the abundance of *non-agricultural uses* in the surrounding area. People walking their pets in farmer's fields, crossing and damaging fences, and rutting fields with dirt bikes and all-terrain vehicles are all examples of trespass and vandalism that may occur. As a result of the potential increase in urban population and construction

activities, there is also a chance that debris (litter) can end up in farmer's fields. Establishing temporary buffers, fencing, and other short-term edge planning techniques should be considered to minimize impacts.

The proposed *development* should consider the use of permanent edge-planning techniques along the new agricultural-urban interface to reduce the potential of these impacts. Edge planning techniques are discussed in further detail in Section 8.3 of this report.

Locating medium to high density, residential development away from the edges of the urban-agricultural interface will also help minimize the potential impact of development. Development with lower density of human occupancy, habitation or activities such as agriculture-related uses best suited to urban areas, some industrial uses, open spaces and certain infrastructure (e.g., SWM ponds) will have a lower impact on adjacent agricultural operations and components of the agri-food network.

6.2.4 Minimum Distance Separation

The MDS I setback requirements have been calculated for all livestock facilities capable of housing livestock in the Study Area. MDS I constraints are present in three of the seven SPAs, including Green Earth Village CDP, No CDP Area, and Sharon East CDP. These MDS I setbacks encroach approximately 74.15 ha into the Subject Lands. As previously stated, the proposed development is not constrained by these MDS I setbacks as the Subject Lands are located within an approved settlement area. MDS I setbacks were calculated in order to identify areas where land use compatibility issues may be more likely. Areas where MDS encroachment has been identified provide opportunities for the development of Type A land uses, which have lower densities of human habitation, occupation, or activity. These lands are also good candidates for inclusion in later phases of development.

6.2.5 Transportation Impacts

Given the close proximity of the developed portions of East Gwillimbury and the existing *non-agricultural* uses within the Study Area, it is likely that the agricultural operations in the Study Area have already become accustomed to non-farm traffic and modified their practices accordingly. It is unlikely that increased traffic levels from the proposed development of the Subject Lands will significantly impact farm operations. Increased traffic levels will have no long-term impact on these farm operations.

It is understood that a Transportation Plan is being prepared as part of the Secondary Plan process. To ensure transportation impacts are minimized, recommendations outlined in the Transportation Plan should be adhered to if potential impacts are identified. Additionally, 'Share the Road' signage should be placed along the newly created agricultural/urban interface.

6.2.6 Economic and Community Impacts

Local and regional economies and agricultural communities can be adversely impacted by the introduction of new *development* on agricultural lands as a result of the loss of farmland, fragmentation, removal of agricultural investments, commodities, services, and impacts to other farming operations.

While agriculture in the Town of East Gwillimbury provides economic and community benefits, the influence of agriculture is waning in the *Study Area*. Of the 38 agricultural uses identified within the Subject Lands and Study Area, 25 were inactive (i.e., unoccupied livestock facilities, remnant farms, etc.). During

the land use survey, there were limited observations of recent investments in agricultural infrastructure or land improvements.

The proposed *development* is anticipated to be beneficial to the local and regional economies through the increase in population and job creation. The loss of input to the agricultural economy is likely to be offset by the additional inputs to the economies associated with the proposed *development*. With the anticipated increase in population, it is likely that demand for local agricultural products will also increase. Farm operations in the Town of East Gwillimbury will need to adjust or expand their operations to take advantage of the population increase.

6.3 Implementation of Edge Planning Techniques

The agricultural/urban interface (AUI) is typically the area where farm operations are negatively impacted the most. When *settlement area* boundary expansion is being proposed, some consideration should be given to minimizing the length of the AUI. Although the SPAs are already located within the Town of East Gwillimbury *settlement area*, the *development* of these lands will result in new areas where *agricultural uses* interface with *non-agricultural uses*. Edge planning techniques should be considered along the newly created agricultural-urban interface at the boundaries of the *settlement area*.

The Guide to Edge Planning: Promoting Compatibility Along Agriculture-Urban Edges (2015) developed by the British Columbia Ministry of Agriculture and Lands provides a basis for achieving compatibility where agricultural and urban uses interface. Edge Planning: Strategies for Rural and Urban Interface (2015) developed by MHBC for the Peel Agricultural Advisory Working Group provides a review of case study examples, methods and recommendation for addressing the mitigation of conflict where settlement areas and prime agricultural areas interface. These guides recognize and address the potential negative impacts that agricultural and non-agricultural uses can have on one another and presents options to prevent such impacts. Edge planning techniques to reduce potential impacts on farmers and non-farmers are discussed below.

6.3.1 Subdivision design: density, road, and lot patterns

The proposed *development* layout should be designed to maximize, to the extent possible, a setback distance from the *non-agricultural uses* and farm operations. Creating a vegetated buffer between farming operations and the *non-agricultural uses* will further enhance the effectiveness of the setback. In addition to this, the consideration of lot dimensions and density, along with road and service design can help reduce impacts to adjacent farming activities and help to reduce impacts to urban land uses. Overall, the design of the proposed *development* should be directing vehicular and pedestrian traffic away from the agricultural-urban interface (AUI) as much as possible.

6.3.2 Building design and layout

Building setbacks from the AUI can help create separation between agricultural and urban land uses. The urban-side of the AUI should consider a setback distance, rear-yard for housing, and green spaces to provide physical separation from the farmlands. Setbacks could include space for a wide, vegetated buffer. There is a range of recommended building setback distances from the AUI depending on the type of land use. The recommended setback distance from the AUI is 15 metres for commercial or industrial land uses, 30 metres for residential land uses, and 90 metres for institutional land uses.

6.3.3 Open space and landscape design

Any open space and landscape design should retain existing tree cover (where possible) in natural state in designated buffer areas. When selecting plant species for open space areas and landscape design, species which will not negatively affect adjacent farmland and provide greater benefit to residents should be given priority (i.e., use native, non-invasive species, low maintenance/drought tolerant plants, tree/shrub species that will filter dust and spray drift from agricultural area (e.g., conifers), tree/shrub species that will not carry insects/disease, etc.).

6.3.4 Urban-side buffer design

As part of the building setback, the urban-side buffer design should include a continuous vegetative buffer along the urban-side of the AUI within the building setback. Buffers can provide a visual screen of farmlands and activities, provide a deterrent to trespass onto farms, as well as capture dust, spray drift, and litter. A buffer design with a total minimum separation distance of 30 metres (including vegetative buffer) between housing and the AUI is recommended and found to be effective in reducing nuisance complaints.

The *Guide to Edge Planning: Promoting Compatibility Along Agriculture-Urban Edges* recommends a minimum vegetative buffer width of 15 metres for residential or institutional land uses, and 8 metres for commercial or industrial land uses. Crown density of the buffer should be 50-75% to provide optimal screening and air circulation. Furthermore, the vegetative buffer should include both deciduous and coniferous plantings to ensure four-season screening is provided. If there is excess soil generated as a result of *development*, the construction of topsoil berms can also be considered to provide some visual screening and potentially increase the height of the vegetative screen.

The height of the vegetative buffer should exceed 6 metres at plant maturity to create an effective vegetative screen and capture more dust and spray drift between agricultural and urban land uses. A good vegetative buffer will also reduce the intensity of winds, which will minimize the extent of obnoxious odours originating from *livestock operations*. It can also minimize sound and lighting generated by farm operations.

6.3.5 Trail System

The creation of a trail system through the Subject Lands may provide opportunities to improve vegetated buffers, separating agricultural areas from urban land uses. The trail system should be situated along the urban edge of the vegetative buffer and must not reduce the effectiveness of the vegetative buffer. Where possible, the trail width should be limited to a maximum of one-third of the total landscape buffer width. Special attention should be given to trail areas to prevent trespass onto agricultural lands.

6.4 Summary of Impacts

The potential direct and indirect impacts identified are summarized in Table 4 along with the potential degree of impact, mitigation measures to avoid or minimize the potential impact and the resulting anticipated impact.

Table 4. Summary of Imp	acts		
Potential Impact	Potential Degree of Impact	Mitigation Measure	Anticipated Net Impact
Direct Impacts			
Loss of prime agricultural land	High	Continue farming lands until needed for development	Eventual loss of 1005.45 ha of prime agricultural lands
Loss of agricultural infrastructure	Low	None required	Eventual loss of agricultural infrastructure associated with one unoccupied livestock facility
Loss of agricultural land improvements	Low	Continue farming lands until needed for development	Eventual loss of approximately 31.25 ha of tile drainage
Loss of cropland	High	Continue farming lands until needed for development	Eventual loss of approximately 458.48 ha of cultivatable land
Indirect Impacts			
Surficial Drainage	Low	 Prepare a Grading Plan and Storm Water Management Plan Implement recommendations of Grading Plan and Storm Water Management Plan if impacts identified 	No impact anticipated
Disruption to Farm Operations	Low	Ensure that access to farm operations and farm fields is maintained at all times throughout construction.	No impact anticipated
Non-farm traffic	Low	 Implement recommendations of Transportation Plan if impact identified. 	No significant impact anticipated
Trespass, Vandalism, and Stray Pets	Low	 Consider the use of edge planning techniques along the new agricultural-urban boundary. Establish low density development along the urban-agricultural interface. 	No significant impact anticipated
Noise, Dust & Light	Low	Adhere to Ministry of the Environment, Conservation and Parks (MECP) guidelines	No impact

COLVILLE CONSULTING INC.

Table 4. Summary of Imp	pacts		
Potential Impact	Potential Degree of Impact	Mitigation Measure	Anticipated Net Impact
Land Use Compatibility	Low	Consider the use of edge planning techniques along the agricultural-urban interface	No significant impacts anticipated
Fragmentation	Low	None requiredHigh degree of fragmentation already present within the Study Area	No impact anticipated
Changes to Microclimatic Conditions	Low	None required	No impact anticipated
Conflict with MDS formula	Low	 Consider including areas of encroachment in later stages of <i>development</i> Consider developing Type A land uses in areas of encroachment 	No significant impact anticipated
Economic	Low	The Town and land developers should promote local farm <i>livestock</i> and produce	No significant impact
Wells, Irrigation, water bodies	Low	 Prepare a Hydrogeological Study Implement recommendations of Hydrogeological study if impact identified. 	No impact anticipated



7. Consistency with Agricultural Policies

7.1 Provincial Planning Statement, 2024

The York Region Official Plan shows the Subject Lands within Urban System and are designated as Community Area and Employment Area. The provincial approval of the York Region Official Plan in November 2022 resulted in the Subject Lands being removed from he provincially recognized *prime agricultural area*. Therefore, the agricultural policies of the *PPS* are not applicable to the Subject Lands.

The proposed development will comply with the *MDS formula* and recommendations have been made to mitigate the potential impacts of the proposed development. The Subject Lands are not part of a specialty cop area, nor a provincially recognized *prime agricultural area*. The Subject Lands are lower priority agricultural lands, based on their inclusion in the Urban System, and represent a reasonable location for the proposed *development*. Therefore, the proposed *development* does not conflict with the agricultural policies of the *PPS*.

7.2 Region of York Official Plan

Section 5.1 of the York Regional Official Plan recognizes an Agricultural Area, which includes lands designated as Prime Agricultural Area and Holland Marsh Specialty Crop Area. The Subject Lands are no longer located within the York Region's Agricultural Area. All of the proposed SPAs are within the Urban System of the York Regional Official Plan, and are designated as either Community Area or Employment Area. As a result, the proposed *development* is not required to be consistent with the agricultural policies of the York Region Official Plan.

7.3 Town of East Gwillimbury Official Plan

Section 4.11.2 of the Town of East Gwillimbury Official Plan outlines policies for lands designated Prime Agricultural and Holland Marsh Specialty Crop Areas, which comprise the Town's *prime agricultural areas*. None of the SPAs are designated Prime Agricultural or Holland Marsh Specialty Crop Areain the Town of East Gwillimbury Official Plan. As such, the proposed *development* will be consistent with agricultural policies of the Town of East Gwillimbury Official Plan.

8. CONCLUSION

This AIA has identified and described the agricultural resources and farm operations within the Subject Lands and *Study Area*. The potential impacts associated with the proposed *development* have been assessed and we have determined the following:

- 1. The Subject Lands are not part of a prime agricultural area;
- 2. The Subject Lands are not part of a *specialty crop area*, and no specialty crops are grown within the Subject Lands;
- 3. The proposed *development* will comply with the *MDS I formula*;
- 4. Potential impacts associated with the *development* of the Subject Lands are primarily limited to the loss of *prime agricultural land* and cultivatable land within the existing settlement area boundary. Recommendations have been provided that will ensure potential impacts will be avoided or mitigated to the extent possible. The net indirect impacts will be negligible with the implementation of the recommended mitigation measures particularly along the urbanagricultural interface; and
- 5. The proposed *development* does not conflict with provincial, regional, nor local agricultural policies.

Respectfully submitted by:

Sean Colville, B.Sc., P.Ag. Colville Consulting Inc.

Sean Colubb

John Liotta, B.Sc.Env, P.Ag. Colville Consulting Inc.

9. GLOSSARY OF TERMS

Agricultural uses:* - the growing of crops, including nursery, biomass, and horticultural crops; raising of *livestock*; raising of other animals for food, fur or fibre, including poultry and fish; aquaculture; apiaries; agro-forestry; maple syrup production; and associated on-farm buildings and structures, including, but not limited to livestock facilities, manure storages, value-retaining facilities, and housing for farm workers, when the size and nature of the operation requires additional employment.

Agriculture-related uses:* - those farm-related commercial and farm-related industrial uses that are directly related to farm operations in the area, support agriculture, benefit from being in close proximity to farm operations, and provide direct products and/or services to farm operations as a primary activity. **Agricultural system:** - means a system comprised of a group of inter-connected elements that collectively create a viable, thriving agri-food sector. It has two components:

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

Agri-food network:* - a network within the *agricultural system* that includes elements important to the viability of the agri-food sector such as regional *infrastructure* and transportation networks; agricultural operations including on-farm buildings and primary processing; infrastructure; agricultural services, farm markets, and distributors; and vibrant, agriculture-supportive communities.

Agri-tourism uses:* - means those farm-related tourism uses, including limited accommodation such as a bed and breakfast, that promote the enjoyment, education or activities related to the farm operation.

Anaerobic digester: * - A permanent structure designed for the decomposition of organic matter by bacteria

Cash crop: - means a crop being produced for income purposes and not to supplement a livestock operation by contributing to feed requirements.

Cultivated: - means lands that have recently been under active agricultural production, however, depending on the season or growth stage of the crop during the land use survey or through aerial photographic interpretation the crop type could not be determined.

Development: - means the creation of a new lot, a change in land use, or the construction of buildings and structures, requiring approval under the Planning Act; but does not include activities that create or maintain infrastructure authorized under an environmental assessment process; or works subject to the Drainage Act.

Dwelling:* - Any permanent building that is used, or intended to be used, continuously or seasonally, as a domicile by one or more persons and usually containing cooking, eating, living, sleeping, and sanitary facilities.

Forage/Pasture: - means a crop that consists of either pastureland, including rough grazing, or hay crops including silage and haylage.

Hobby farm: - A residential dwelling, with or without accessory buildings, which may include some crop production for personal consumption or limited sale; and/or small numbers of livestock raised for

personal consumption, pleasure, or limited sale. A hobby farm normally will generate little or no income and as such may not have a Farm Business Registration Number.

Idle agricultural lands: - means lands that have not been used for agricultural production for at least five years (estimated).

Livestock:* - includes dairy, beef, swine, poultry, horses, goats, sheep, ratites, fur-bearing animals, deer & elk, game animals, birds, and other animals.

Livestock facility:* - means one or more barns or permanent structures with livestock-occupied portions, intended for keeping or housing livestock. A livestock facility also includes all manure or material storages and anaerobic digesters.

Minerals:* - means metallic *minerals* and non-metallic *minerals* as herein defined but does not include *mineral aggregate resources* or *petroleum resources*.

Minimum Distance Separation (MDS) formulae: - formulae and guidelines developed by the province, as amended rom time to time, to separate uses so as to reduce incompatibility concerns about odour from livestock facilities.

Minimum Distance Separation (MDS) I formulae: - used to determine the minimum distance separation for new development from any existing and some former livestock facilities.

Minimum Distance Separation (MDS) II formulae: - used to determine the minimum distance separation for new or expanding livestock facilities from existing non-farm land uses.

Non-agricultural uses:* - Buildings designed or intended for a purpose other than an *agricultural use*; as well as land, vacant or otherwise not yet fully developed, which is zoned or designated such that the principal or long-term use is not intended to be an *agricultural use*, including, but not limited to: commercial, future urban development, industrial, institutional, *open space uses*, *recreational uses*, *settlement area*, *urban reserve*, etc.

Non-farm residential (NFR): - means residential buildings and lots not associated with a farm operation such as farm retirement lots/severances and/or other residences in the Agricultural and Rural Area. Second farm residences for farm help would be considered a farm residence if it is on an existing farm operation.

Normal farm practices:* - means a practice, as defined in the *Farming and Food Production Protection Act*, 1998, that is conducted in a manner consistent with proper and acceptable customs and standards as established and followed by similar agricultural operations under similar circumstances; or makes use of innovative technology in a manner consistent with proper advanced farm management practices. *Normal farm practices* shall be consistent with the *Nutrient Management Act*, 2002 and regulations made under that Act.

Prime agricultural area:* - means an area where *prime agricultural land* predominates. Prime agricultural areas may also be identified through an alternative agricultural land evaluation system approved by the Province.

Prime agricultural land:* - means land that includes *specialty crop lands* and/or Canada Land Inventory Class 1, 2 and 3 soils, in this order of priority for protection.

Provincial Planning Statement, 2024: - the Provincial Planning Statement (PPS), 2024 is a streamlined province-wide land use planning policy framework that replaces both the *Provincial Policy Statement, 2020* and *A Place to Grow: Growth Plan for the Greater Golden Horseshoe, 2019* while building upon housing-

supportive policies from both documents. The PPS 2024 provides municipalities with the tools and flexibility they need to build more homes. It enables municipalities to:

- · plan for support development, and increase the housing supply across the province;
- align development with infrastructure to build a strong and competitive economy that is investment-ready;
- · foster the long-term viability of rural areas; and
- protect agricultural lands, the environment, public health and safety.

Redevelopment:* - means the creation of new units, uses or lots on previously developed land in existing communities, including *brownfield sites*.

Remnant: - means a location where one or more farm buildings once stood. All or some of the buildings have fallen, are severely structurally unsound and/or been removed. No MDS would be applied to a remnant farm operation.

Retired farm operation: - means a former farm operation whose buildings or farm related structures remain; however, it has either been converted to a non-agricultural use; would require significant upgrades and investment to modernize; or it is in poor condition and not suitable for agricultural uses. The MDS may still apply if it is a former livestock facility.

Rural areas:* - means a system of lands within municipalities that ma include *rural settlement areas, rural lands, prime agricultural areas*, natural heritage features and areas, and resource areas.

Rural lands:* - means lands which are located outside *settlement areas* and which are outside *prime agricultural areas*.

Rural residential cluster:* - means four or more, adjacent rural lots, generally one hectare or less in size, sharing a common contiguous boundary. Lots located directly across a road from one another shall be considered as having a common boundary.

Scrub land: - means lands that are no longer farmed and woody species (young trees and shrubs) have begun regenerating and/or sparsely treed areas.

Secondary uses:* - means uses secondary to the principal use of the property, including home occupations, home industries, and uses that produce value-added agricultural products from the farm operation on the property.

Settlement areas:* - means urban areas and rural settlement areas within municipalities (such as cities, towns, villages, and hamlets). Ontario's *settlement areas* vary significantly in terms of size, density, population, economic activity, diversity and intensity of land uses, service levels, and types of infrastructure available. Settlement areas are:

- a) built up areas where development is concentrated and which have a mix of land uses; and
- b) lands which have been designated in an official plan for development over the long term.

Soil horizon: - a layer of soil, approximately parallel to the land surface, that differs from adjacent layers in properties such as texture, colour, structure, etc. As an example, the surface horizon of a *mineral* soil is recorded as the "A" horizon. If the surface is ploughed then the suffix p is used (i.e., Ap) if the surface has not been ploughed, as in a forest soil, a humic layer generally develops and an eluviated light coloured soil horizon often forms immediately below. These horizons are identified with the suffix h is used (i.e., Ah)

COLVILLE CONSULTING INC.

and e (i.e., Ae), respectively. The weathered portion of the profile below the A horizons is identified as the "B" horizon and the unweathered, parent material is the "C" horizon.

Soil profile: - a vertical section of the soil through all its horizons and extending into the soil parent material.

Soil texture: - the relative portion of particle sizes in soil (i.e., sand, silt, and clay) that are used to describe the soil textural class (e.g., clay, sandy clay loam, sandy loam, loam, clay loam, sand, loamy sand, etc.).

Specialty crop area:* - means areas within the agricultural land base designated based on provincial guidance. In these areas, specialty crops are predominantly grown such as tender fruits (peaches, cherries, plums), grapes, other fruit crops, vegetable crops, greenhouse crops and crops from agriculturally developed organic soil., usually resulting from:

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

Tender fruit: - a term applied to tree fruits such as peaches, apricots, and nectarines which are particularly sensitive to low winter and/or spring temperatures.

Unoccupied livestock facility: - A livestock barn that does not currently house any livestock, but that housed livestock in the past and continues to be structurally sound and reasonably capable of housing livestock.

Wooded: - Forested areas of various age composition and size.

* Indicates that the definition is essentially derived from OMAFRA publications.

10. REFERENCES

- British Columbia Ministry of Agriculture. Guide to Edge Planning Promoting Compatibility Along Agricultural-Urban Edges, 2015. Retrieved from: https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/agricultural-land-and-environment/strengthening-farming/planning-for-agriculture/823100-3_edge_guide_2015.pdf
- Chapman, L.J. and D.F. Putnam, 1994. The Physiography of Southern Ontario, Third Edition. Government of Ontario. Ontario, Canada.
- D.W. Hoffman & N.R. Richards. Soil Survey of York County Report No. 19 of the Ontario Soil Survey. 1955. Experimental Farms Service and The Ontario Agricultural College. Guelph, Ontario.
- Environment Canada's National Climate Data and Information Archive's online database. https://climate.weather.gc.ca/climate_normals/results_1981_2010_e.html?searchType=stnName&txtS tationName=bradford+muck&searchMethod=contains&txtCentralLatMin=0&txtCentralLatSec=0&txt CentralLongMin=0&txtCentralLongSec=0&stnID=4870&dispBack=1
- MHBC, 2015. Edge Planning Report The Region of Peel & Town of Caledon LEAR Study and MDS Review: A Review of Implemented Practices to Address Planning on the Rural-Urban Fringe. Retrieved from: https://www.peelregion.ca/planning/paawg/pdf/Edge_Planning_Report.pdf
- OMAFRA. Agriculture Information Atlas. Available Online: http://www.gisapplication.lrc.gov.on.ca/AIA/Index.html?viewer=AIA.AIA&locale=en-US
- OMAFRA. Agricultural System Portal. Available Online: https://www.arcgis.com/aPPS/mapviewer/index.html?webmap=09ff270acab24673858afe480a8fac4c
- OMAFRA. Minimum Distance Separation Document & AgriSuite Software (OMAFRA, 2017)
- Ontario Ministry of Agriculture, Food and Rural Affairs 1997. Crop Heat Units for Corn and Other Warm Season Crops in Ontario. OMAFRA Factsheet 93-119., King's Printer for Ontario.
- Ontario Ministry of Agriculture, Food and Rural Affairs, 2016. Guidelines of Permitted uses in Ontario's Prime Agricultural Areas Publication 851, King's Printer for Ontario.
- Ontario Ministry of Agriculture, Food and Rural Affairs and Ministry of Environment. 2017. Minimum Distance Separation (MDS) Document *Formulae and Guidelines for Livestock and Anaerobic Digestor Odor Setbacks*. Publication 853, King's Printer for Ontario.
- Ontario Ministry of Agriculture, Food and Rural Affairs. Digital Soil Resource information provided by Guelph Geomatics Services. 2010.
- Ontario Ministry of Municipal Affairs. Provincial Planning Statement. 2024, King's Printer for Ontario.
- Region of York Official Plan, November 2022. https://www.york.ca/york-region/regional-official-plan
- Town of East Gwillimbury Official Plan, Consolidated in October, 2018.https://www.eastgwillimbury.ca/en/Planning-and-Development/Planning-Studies/Official-Plan-text.pdf.

APPENDIX A

Curriculum Vitae



SEAN M. COLVILLE, B.Sc., P.Ag.

432 Niagara St., Unit 2, St. Catharines, ON L2M 4W3 Tel: (905) 935-2161 | Email: sean@colvilleconsultinginc.com

EDUCATION

B.Sc.Geology, Acadia University, 1986 Soil Science, University of Guelph, 1984

PROFESSIONAL AFFILIATIONS

Ontario Institute of Agrology Agricultural Institute of Canada

POSITIONS HELD

2003 – Present	President - Colville Consulting Inc., St. Catharines, Ontario
2001 – 2003	Senior Project Manager - ESG International Inc., St. Catharines, Ontario
1998 – 2001	Senior Project Manager - ESG International Inc., Guelph, Ontario
1988 – 1998	Project Manager - ESG International Inc., Guelph, Ontario
1984 – 1988	Soil Scientist - MacLaren Plansearch Ltd., Halifax, Nova Scotia
1982 – 1983	Assistant Soil Scientist – Nova Scotia Department of Agriculture and Marketing

EXPERIENCE

Colville Consulting Inc. (CCI) was established in June of 2003 by Sean Colville. CCI offers agricultural and environmental consulting services to clients across Ontario, catering to both public and private sectors. Sean has over 35 years of agricultural consulting experience, which includes agricultural resource evaluation studies, soil surveys, interpretations of agricultural capability, agricultural impact assessments, alternative site assessments, and soil and microclimatic rehabilitation/restoration projects. Sean has extensive experience interpreting agricultural land use policies for a wide variety of development applications.

Sean is a Professional Agrologist (P.Ag.), and a member of both the Ontario Institute of Agrology and the Agricultural Institute of Canada. Sean has been recognized by the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) as an expert in the identification of Prime Agricultural Areas and in the interpretation of the Minimum Distance Separation requirements for livestock operations.

Sean has presented expert testimony before the Ontario Land Tribunal (formerly OMB, LPAT), Consolidated Joint Board, Assessment Review Board, Ontario Superior Court, and the Normal Farm Practices Protection Board. Sean's testimonies have involved land use planning matters as they relate to agriculture, impact assessments, resource evaluations, soil science, and normal farm practices.

Agricultural Impact Assessments and Alternative Site Studies

Colville Consulting Inc. specializes in agricultural impact assessment and alternative site studies for development applications in Prime Agricultural Areas. Sean has prepared over 200 agricultural impact assessments for a wide variety of development projects, including settlement area boundary expansions, linear facilities (Class EAs), new and expanding aggregate operations, and residential, commercial, recreational, industrial, and institutional developments. The majority of these projects required the interpretation of agricultural land use policies, an inventory and assessment of the agricultural resources,

COLVILLE CONSULTING INC.

land use, land tenure, an assessment of conflict potential including determination of minimum distance separation requirements, interpretation of the agricultural priority, and development of mitigation measures to avoid or minimize potential impacts. Justification of the location for development proposals in agricultural areas is required by the Provincial Policy Statement and can often be addressed by an alternative site study.

Recent examples of Sean Colville's agricultural work include:

- Agricultural Impact Assessment for Stubbes New Durham Precast Plant (2021)
- Agricultural Impact Assessment for New Tecumseth Community Builders Inc., County of Simcoe (2021)
- Agricultural Impact Assessment for Caledon Costco (2021)
- Agricultural Impact Assessment for Walker Industries' Redford Pit Expansion, West Grey (2022)
- Agricultural Impact Assessment for Milton Business Park (2022)
- Minimum Distance Separation for Mono Hills Corporation (2022)
- Land Evaluation and Area Review for Norfolk County (2022)

Publications

Rees, H.W.; Duff, J.P.; Colville, S.; Soley, T and Chow T.L. 1995. Soils of selected agricultural areas of Moncton Parish, Westmoreland County, New Brunswick. New Brunswick. Soil Survey Report No. 15. CLBRR Contribution No. 95-13, Research Branch, Agriculture AND Agri-Food Canada, Ottawa, Ontario

Rees, H.W.; Duff, J.P.; Colville, S.; Soley, T and Chow T.L. 1996. Soils of selected agricultural areas of Shediac and Botsford Parishes, Westmoreland County, New Brunswick. New Brunswick. Soil Survey Report No. 16. CLBRR Contribution No. 95-13, Research Branch, Agriculture and Agri-Food Canada, Ottawa, Ontario. 127 pp. with maps.



JOHN LIOTTA, B.Sc. (Env.), EMA, P.Ag.

432 Niagara St., Unit 2, St. Catharines, ON L2M 4W3 Tel: (905) 935-2161 | Email: john@colvilleconsultinginc.ca

EDUCATION

Bachelor of Science in Environmental Sciences, University of Guelph, 2018 Environmental Management and Assessment Graduate Certificate, Niagara College, 2022

PROFESSIONAL AFFILIATIONS

Eco Canada – Environmental Professional in Training Ontario Institute of Agrologists – Professional Agrologist

POSITIONS HELD

2022 - Present - Colville Consulting Inc., St. Catharines, Agrologist/Ecologist

EXPERIENCE

John Liotta, Agrologist and Ecologist at Colville Consulting Inc., has over 5 years of formal educational training and experience in Environmental and Agricultural Planning. John has completed Agricultural Impact Assessments, Minimum Distance Separation (MDS) Requirements, and Agricultural Characterization Reports in his role as at Colville Consulting Inc.

Through his education at the University of Guelph and Niagara College, John has gained a broad base knowledge of Environmental and Agricultural Planning and Management, which he has applied in his current role at Colville Consulting Inc. His work at Colville Consulting Inc. includes the interpretation of provincial, regional, and local land use policies, creation and interpretation of land use maps, regional soils mapping, and agricultural protection policies. He has participated in the completion of Agricultural Impact Assessments, Minimum Distance Separation Assessments, and Agricultural Characterization Reports. His field work activities include land use surveys and post-construction avian and bat mortality monitoring for wind turbines in the County of Haldimand, Ontario.

A selection of projects John has been involved with at Colville Consulting Inc. include:

- Post-Construction Avian and Bat Mortality Monitoring for Pattern Energy, Korea Electric Power Corporation, and Samsung Renewable Energy Inc., Grand Renewable Energy Park, County of Haldimand, Ontario
- Agricultural Impact Assessment for landowner group, City of Pickering
- Agricultural Impact Assessment for landowner, Township of North Dumfries, Ontario
- Agricultural Characterization Report for landowner, Township of Beckwith, Ontario
- Agricultural Characterization Report for landowner, Town of Carleton Place, Ontario
- Minimum Distance Separation Report for landowner, Town of Caledon, Ontario
- Agricultural and Rural Lands Discussion Paper for municipality, Town of Blue Mountain, Ontario
- Agricultural Impact Assessment for Wildfield Village, Town of Caledon
- Agricultural Impact Assessment for Redford Pit Expansion, West Grey

ADDITIONAL TRAINING AND WORKSHOPS

Standard First Aid, CPR C, AED – St. John's Ambulance (2023) Workplace Hazardous Materials Information System Natural Gas Pipeline Safety Training – TC Energy (2022) Excavation Safety Training – TC Energy (2022) Supervisor (Level 2) Ground Disturbance Training (2022)

APPENDIX B

Climate Normals Data

Climate Normals 1981-2010 Station Data

Metadata including Station Name, Pro	ovince or Territor	y, Latitude, Long	itude, Elevation,	Climate ID, WM0	D ID, TC ID		
STATION_NAME	PROVINCE	LATITUDE	LONGITUDE	ELEVATION	CLIMATE_ID	WMO_ID	TC_ID
BRADFORD MUCK RESEARCH	ON	44°02'00.000"	79°36'00.000"	221.0 m	6150863		

Legend

A = WMO "3 and 5 rule" (i.e. no more than 3 consecutive and no more than 5 total missing for either temperature or precipitation)

B = At least 25 years

D = At least 15 years

1981 to 2010 Canadian Climate Norn	nals station data													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year C	ode
Temperature														
Daily Average (°C)	-6.9	-5.9	-1.2	6.3	12.4	17.6	20.2	19	14.7	8.6	2.4	-3.4	7 D	,
Standard Deviation	3.3	2.6		1.7					1	1.4	1.3	3	0.9 D	
Daily Maximum (°C)	-3	-1.8		11.2			26.3		20.2	13.5	5.8	-0.1	11.9 D	
Daily Minimum (°C)	-10.9	-10		1.3			14		9.1	3.7	-1.1	-6.6	2.1 D	
Extreme Maximum (°C)		14.5	-5.6				36		33	27	-1.1	-0.0	2.1 0	
	13													
Date (yyyy/dd)	1995/14	1984/23	1986/30		1977/21	1988/25	Jun-88		Oct-83	Dec-95	Mar-90	Mar-82		
Extreme Minimum (°C)	-36	-33	-29	-14		-2	2.5		-6.5	-8.9	-22	-31.5		
Date (yyyy/dd)	1994/16	1979/18	Aug-84	May-82	Apr-87	Sep-77	Aug-84	1982/29	1991/30	1975/31	1977/27	1980/25		
Precipitation														
Rainfall (mm)	19.6	22.2	33	55.7	72.8	79.8	85.1	89.7	81.7	68.1	59.1	24.3	691.1 D)
Snowfall (cm)	33.3	25.7	19.2	4.2	0	0	0	0	0	1.6	13.3	27.8	125.1 D	,
Precipitation (mm)	52.9	47.9	52.3	59.9		79.8			81.7	69.7	72.4	52.1	816.1 D	
Average Snow Depth (cm)		3		0						0	0	0		
Median Snow Depth (cm)		0		0						0		0		
									_	0	0			
Snow Depth at Month-end (cm)		12		0							-	0		
Extreme Daily Rainfall (mm)	42	27.8	37	36.7						49.8	34.3	19.8	1	
Date (yyyy/dd)	1995/15	1998/17		1995/26	1996/20	Feb-95		1977/16	Oct-86		1974/20	May-82	1	
Extreme Daily Snowfall (cm)	20	20		15.2			v		0	10	18	23	1	
Date (yyyy/dd)	1982/31	Mar-82	Apr-85	Feb-75	Jun-76	Jan-74	Jan-74	Jan-74	1974/22	1981/22	1987/25	Oct-92		
Extreme Daily Precipitation (mm)	42	32.8	37	36.7	33.8		67.3			49.8	34.5	23		
Date (yyyy/dd)	1995/15	1998/17			1996/20	Feb-95		1977/16	Oct-86	May-95	Nov-95	Oct-92	1	
Extreme Snow Depth (cm)	4	12		0			100-74		0.00	0	2	2	1	
Date (yyyy/dd)		1989/26		1983/23	Jan-83				Jan-83			1988/18	†	
	ren-89	1303/20	1	1303/23	Jan-83	Jan-83	Jan-83	Jan-83	Jan-83	Jan-63	1030/14	1000/10	1	
Days with Maximum Temperature							-	-	-	-			! -	
<= 0 °C	21.4	17.1	10.7	0.78						0	4.8	15.5	70.1 D	
> 0 °C	9.7	11.1	20.3	29.2	31				30	31	25.2	15.5	295.1 D	
> 10 °C	0.18	0.22	4.4	15.6					29.4	22.1	6.1	0.94	199.8 D	
> 20 °C	0	0	0.67	3.1	11.7	23.5	29.3	27.3	14.9	3.1	0.12	0	113.7 D	
> 30 °C	0	0	0	0	0.33	2.4	4.4	2.2	0.24	0	0	0	9.7 D	
> 35 °C	0	0	0	0	0	0.06	0.22	0	0	0	0	0	0.28 D	
Days with Minimum Temperature											-		-	
>0°C	1.7	2.4	4.6	15.1	26.1	. 29.7	31	31	28.5	21.3	11	3.2	205.6 D	
<= 2 °C	30.5	27.6	28.8	18.9					3.6	14	23.9	30		
<= 0 °C	29.3	25.8	26.4	14.9					1.5	9.7	19	27.8	159.6 D	
<-2°C	26.6	22.6	19.5	6.2						3.3	10.3	20.9		
<-10 °C	15.1	13.7	6.8	0.17						0		8.4		
<-20 °C	4.3	2.9	0.83	0	0	0	0	0	0	0	0	0.76	8.9 D	1
<-30 °C	0.39	0	0	0	0	0	0	0	0	0	0	0	0.39 D	,
Days with Rainfall						•	•							
>= 0.2 mm	3.4	2.9	5.4	10.2	11.9	10.9	9.9	11.3	12.7	12.8	9.7	4.4	105.5 D	,
>= 5 mm	1.1	1.5	2.6	3.9	4.8	4.9	4.6	4.8	5.3	4.3	4.3	1.7	43.8 D	
	0.65	0.89	0.88	1.8			2.7		2.6	2.2	2.2	0.75	23.6 D	
>= 10 mm	0.05	0.89								0.22	0.28	0.73		
>= 25 mm	0.06	0.17	0.06	0.24	0.53	0.61	0.88	1.1	0.03	0.22	0.20	U	4.6 D	
Days With Snowfall	ļ .	_		1		.1			1					
>= 0.2 cm	9.3	7.3							_	0.44	2.8	6.6		
>= 5 cm	2.3	1.8		0.17						0.17	1.1	2	9 D	
>= 10 cm	0.69	0.72		0						0.06	0.29	0.87	2.9 D	
>= 25 cm	0	0	0.06	0	0	0	0	0	0	0	0	0	0.06 D	
Days with Precipitation											-			-
>= 0.2 mm	12.2	9.4	9.6	11.8	11.9	10.9	9.9	11.3	12.7	13.1	12.2	10.1	135 D	
>= 5 mm	3.3	3.3		4.2			4.6		5.3	4.4	5.4	4	53.3 D	
>= 10 mm	1.4	1.6		1.8					2.6	2.5	2.5	1.7		
	0.06									0.22	0.29			
>= 25 mm	0.06	0.28	0.13	0.24	0.53	0.61	0.89	1.1	0.65	0.22	0.29	0	5 0	
Days with Snow Depth	 			1		1			1	1			1	
>= 1 cm		10		0						0		6	1	
>= 5 cm		9		0		0	0	0	0	0		0]	
>= 10 cm		3		0	0	0	0	0	0	0		0		
>= 20 cm		0		0								0	1	
Degree Days						•	•							
Above 24 °C	0	0	0	0	0	1.9	7.4	3.1	0.4	0	0	0	12.9 D	
Above 18 °C	0	0					83.9		18.5	0.8	0	0		
											-			
Above 15 °C	0	0		5.2			162.3	130.7	50.5	6	0.2	0.1	484.7 D	
Above 10 °C	0	0		23.1			315.7		150.3	39.7	3.9	0.4	1150.6 D	
Above 5 °C	0.8	1.2		79.1	231.2		470.7	435	291.1	125.9	26.2	3.2	2060.3 D	
Above 0 °C	10.4	14.9	60.3	194.2		528.8	625.7	590	440.9	268	97.1	24.8	3240.1 D	
Below 0 °C	224.1	181.7	98.2	6.1	0	0	0	0	0	0.2	26.3	128.6	665.1 D	
Below 5 °C	369.5	309	209.8	41		n	0		0.3	13.1	105.4	262	1311.3 D	
Below 10 °C	523.7	449	352.2	135	27.8	1.4	0		9.4	82	233.1	414.2	2227.8 D	
Below 15 °C	678.7	590.1	503.7	267.1	111.3		1.6		59.7	203.3	379.3	568.8	3387.9 D	
							16.1							
Below 18 °C	771.7	674.8	595.9	353.5	183.9	53.8	16.1	28.6	117.7	291.1	469.2	661.8	4218 D	

1881 to 2010 Canadian Climate No Average Date of Last Spring Frost Average Date of First Fall Frost Average Length of Frost-Free Period Probability of last temperature in spring < 0°C, on or after indicated date (10%).	Frost-Free: 20-May 25-Se	Code
Average Date of First Fall Frost Average Length of Frost-Free Period Probability of last temperature in spring <= 0°C, on or after indicated date (10%) Probability of last temperature in	20-Ma	
Average Date of First Fall Frost Average Length of Frost-Free Period Probability of last temperature in spring <= 0°C, on or after indicated date (10%) Probability of last temperature in		
Probability of last temperature in spring <= 0°C, on or after indicated date (10%) Probability of last temperature in		Sep D
Probability of last temperature in spring <= 0°C, on or after indicated date (10%) Probability of last temperature in	12C Dave	D
pring <= 0°C, on or after indicated date (10%) Probability of last temperature in	126 Days	U
Probability of last temperature in		
	1	
date (25%)		
Probability of last temperature in	1	
pring <= 0°C, on or after indicated		
date (33%)		
Probability of last temperature in		
spring <= 0°C, on or after indicated		
date (50%) Probability of last temperature in	+	
pring <= 0°C, on or after indicated		
late (66%)		
robability of last temperature in		
pring <= 0°C, on or after indicated		
ate (75%)		
robability of last temperature in		
pring <= 0°C, on or after indicated late (90%)		
Probability of first temperature in fa	l	
<= 0°C, on or before indicated date		
(10%)		
Probability of first temperature in fa	i.	
<= 0°C, on or before indicated date		
(25%) Probability of first temperature in fa	+	
<= 0°C, on or before indicated date	*	
33%)		
Probability of first temperature in fa	l	
<= 0°C, on or before indicated date		
50%)		
Probability of first temperature in fa = 0°C, on or before indicated date	1	
(66%)		
Probability of first temperature in fa	l	
<= 0°C, on or before indicated date		
75%)		
Probability of first temperature in fa	i	
<= 0°C, on or before indicated date		
(90%) Probability of frost-free period equa	+	
to or less than indicated period		
(Days) (10%)		
Probability of frost-free period equa		
to or less than indicated period		
(Days) (25%)	+	
Probability of frost-free period equa to or less than indicated period		
(Days) (33%)		
Probability of frost-free period equa		
to or less than indicated period		
(Days) (50%)	4	
Probability of frost-free period equa		
to or less than indicated period		
(Days) (66%) Probability of frost-free period equa	1	
to or less than indicated period		
(Days) (75%)		
Probability of frost-free period equa		
to or less than indicated period		
(Days) (90%)		

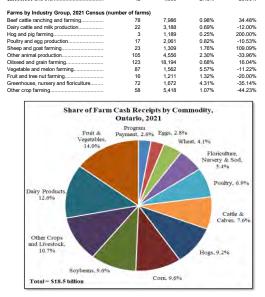
APPENDIX C

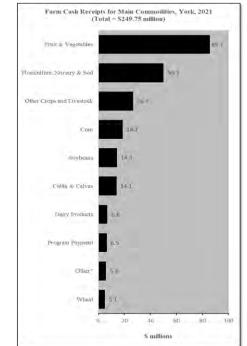
Agricultural Crop Statistics

County & Township Ag Profile - York County; Townships: Vaughan, Markham, Whitchurch-Stouffville, Newmarket, King, East Gwillimbury, Georgina

York Regional Municipality at a Glance - 2021

Item	York	Province	Percent of province	Percent from 2016	Item	York	Province	Percent of province	Percent from 2016
Farms, 2021 Census (number)					Major Field Crops, 2021 Census (acres)				
Total	604	48,346	1.25%	-15.17%	Winter wheat	10,297	1,144,406	0.90%	10.05%
Under 10 acres	81	3,217	2.52%	-5.81%	Oats for grain	126	84,320	0.15%	-61.59%
10 to 69 acres	234	12,686	1.84%	-19.86%	Barley for grain	448	68,756	0.65%	-56.04%
70 to 129 acres	105	10,924	0.96%	-17.32%	Mixed grains	945	59,961	1.58%	-22.98%
130 to 179 acres	30	4,422	0.68%	-34.78%	Corn for grain	24,889	2,202,465	1.13%	9.869
180 to 239 acres	36	3,981	0.90%	-5.26%	Corn for silage	1,333	289,678	0.46%	-33.329
240 to 399 acres	41	5,396	0.76%	0.00%	Hay	17,448	1,704,017	1.02%	-17.40%
400 to 559 acres	21	2,865	0.73%	-16.00%	Soybeans	32,741	2,806,255	1.17%	19.05%
560 to 759 acres	14	1,698	0.82%	-33.33%	Potatoes	1,645	39,193	4.20%	12.06%
760 to 1,119 acres	18	1,600	1.13%	38.46%					
1,120 to 1,599 acres	8	720	1.11%	33.33%	Major Fruit Crops, 2021 Census (acres)				
1,600 to 2,239 acres	7	451	1.55%	-12.50%	Total fruit crops	335	48,661	0.69%	-2.90%
2,240 to 2,879 acres	4	173	2.31%	-20.00%	Apples	94	16,008	0.59%	-10.48%
2,880 to 3,519 acres	2	95	2.11%	100.00%	Sour Cherries	0	1,383	0.00%	
3,520 acres and over	3	118	2.54%	0.00%	Peaches	1	4,608	0.02%	-96.97%
					Grapes	123	18,432	0.67%	112.07%
Land Use, 2021 Census (acres)					Strawberries	89	2,633	3.38%	-19.82%
and in crops	109,180	9,051,011	1.21%	1.00%	Raspberries	5	438	1.14%	-73.68%
Summerfallow land	123	13,964	0.88%	-31.28%					
Tame or seeded pasture	4,006	400,480	1.00%	-40.55%	Major Vegetable Crops, 2021 Census (acr	es)			
Natural land for pasture	3,265	626,366	0.52%	-34.82%	Total vegetables	10,418	127,893	8.15%	-3.28%
Christmas trees, woodland & wetland	9,264	1,269,535	0.73%	-38.26%	Sweet corn	1,756	20,518	8.56%	4.77%
All other land	8,578	404,714	2.12%	13.59%	Tomatoes	41	14,614	0.28%	-62.73%
Total area of farms	134,414	11,766,071	1.14%	-5.73%	Green peas	19	14,044	0.14%	
					Green or wax beans	30	8,709	0.34%	-30.23%
Greenhouse Area, 2021 Census (square f									
Total area in use	2,686,331	201,055,888	1.34%	-18.92%	Livestock Inventories, 2021 Census (num			0.000/	00 500
					Total cattle and calves	10,060	1,604,810	0.63%	-23.53% -22.58%
Farm Capital Value, 2021 Census (farms r				7.050	Steers	2,613	299,540		
Under \$200,000	11	1,212	0.91%	-71.05%	Beef cows	2,111	224,194	0.94%	-20.97%
\$200,000 to \$499,999	30	3,223	0.93%	-25.00%	Dairy cows	1,350	327,272	0.41%	-15.84%
\$500,000 to \$999,999	79 484	8,699	0.91%	-38.76%	Total pigs	7,910	4,071,902	0.19% 2.95%	58 44%
\$1,000,000 and over	484	35,212	1.37%	-4.16%	Total sheep and lambs	9,524	322,508	2.95%	58.44%
Total Gross Farm Receipts, 2021 Census	(farms report	ina)			Poultry Inventories, 2021 Census (numbe	r)			
Under \$10,000	93	7.277	1.28%	-46.24%	Total hens and chickens	166.581	53.802.772	0.31%	-31.56%
\$10,000 to \$24,999	87	7.429	1.17%	-33.59%	Total turkeys	68	2,453,126	0.00%	2007
\$25,000 to \$49,999	67	6.263	1.07%	-16.25%	·	00	2, .00, 120	0.0070	
\$50.000 to \$99.999	52	6.093	0.85%	-5.45%					
\$100,000 to \$249,999	79	6.817	1.16%	-11 24%	Farm Cash Receipt	tor Main	Commoditio	Vort. 2021	
\$250,000 to \$499,999	57	4.448	1.28%	-24.00%		tal = \$249.		o, 100m, 2021	
\$500,000 to \$999,999	41	3.954	1.04%	-16.33%	(10	IM - 5249.	/2 mm(00)		
\$1.000.000 to \$1.999.999.	31	2.452	1.26%	24 00%					
\$2.000.000 and over	42	1.696	2.48%	20.00%					
-,,		1,000	2.4070	20.0070	Fruit & Vegetables				85.7



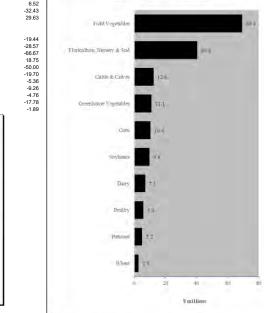


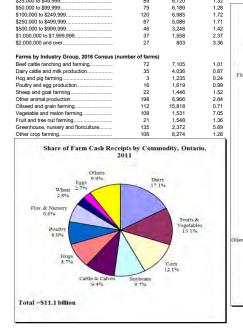
F - too unreliable to be published Sources: 2021 & 2016 Census of Agriculture, OMAFRA 2022-06-21

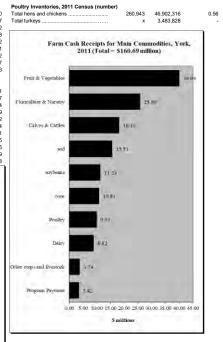
County & Township Ag Profile - York County; Townships: Vaughan, Markham, Whitchurch-Stouffville, Newmarket, King, East Gwillimbury, Georgina

York Regional Municipality at a Glance - 2016

Item	York	Province	Percent of province	Percent from 2011	Item	York	Province	Percent of province	Percent from 2011	Item	York	Province	Percent of province	Item	York	Province	Percent of province
arms, 2016 Census (number)					Major Field Crops, 2016 Census (acres)					Farms, 2011 Census (number)				Major Field Crops, 2011 Census (acres)			
otal	712	49,600	1.44	-14.01	Winter wheat	9,357	1,080,378	0.87	-17.41	Total	828	51,950	1.59	Winter wheat	11,329	1,100,003	1.
Under 10 acres	86	3,051	2.82	-5.49	Oats for grain	328	82,206	0.40	-29.61	Under 10 acres	91	2,741	3.32	Oats for grain	466	71,040	0.
10 to 69 acres	292	12,625	2.31	-12.05	Barley for grain	1,019	103,717	0.98	-31.93	10 to 69 acres	332	12,681	2.62	Barley for grain	1,497	126,881	1.
70 to 129 acres	127	10,742	1.18	-19.11	Mixed grains	1,227	92,837	1.32	-23.17	70 to 129 acres	157	11,779	1.33	Mixed grains	1,597	106,162	1.
130 to 179 acres	46	4,592	1.00	-23.33	Corn for grain	22,656	2,162,004	1.05	-9.61	130 to 179 acres	60	4,969	1.21	Corn for grain	25,064	2,032,356	1.
180 to 239 acres	38	4,282	0.89	-5.00	Corn for silage	1,999	295,660	0.68	-4.45	180 to 239 acres	40	4,801	0.83	Corn for silage	2,092	271,701	0.
240 to 399 acres	41 25	6,008 3.093	0.68 0.81	-41.43 92.31	Hay	21,124 27,501	1,721,214 2,783,443	1.23 0.99	-18.38 12.40	240 to 399 acres	70 13	6,460 3,359	1.08 0.39	Hay	25,881 24,468	2,077,911 2,464,870	1. 0.
400 to 559 acres 560 to 759 acres	25 21	1.990	1.06	5.00	Soybeans Potatoes	1,468	34,685	4.23	12.40	400 to 559 acres 560 to 759 acres	20	2,026	0.39	Soybeans	1,235	37,384	3.
	13	1,593	0.82	-40.91	rotatoes	1,400	34,000	4.23	10.07	760 to 1.119 acres	22	1,587	1.39	rotatoes	1,233	31,304	3.
760 to 1,119 acres 1,120 to 1,599 acres	13	801	0.82	-33.33	Major Fruit Crops, 2016 Census (acres)					1.120 to 1.599 acres	9	788	1.14	Major Fruit Crops, 2011 Census (acres)			
1,600 to 2,239 acres	8	457	1.75	0.00	Total fruit crops	345	51.192	0.67	-16.26	1,600 to 2,239 acres	8	436	1.83	Total fruit crops	412	52.740	0.
2,240 to 2,879 acres	5	168	2.98	150.00	Apples	105	15,893	0.66	-3.67	2,240 to 2,879 acres	2	152	1.32	Apples	109	15,830	0.
2,880 to 3,519 acres	1	88	1.14	0.00	Sour Cherries	103 X	2,121	0.00	-5.07	2,880 to 3,519 acres	1	79	1.27	Sour Cherries.	103 X	2,342	0.
3,520 acres and over	3	110	2.73	0.00	Peaches	33	5,232	0.63		3 520 acres and over	3	92	3.26	Peaches	x	6.455	
5,020 40105 414 514	Ŭ		2.70	0.00	Grapes	58	18,718	0.31	-47.27	0,020 00100 010 010	Ü	02	0.20	Grapes	110	18,383	0.
and Use, 2016 Census (acres)					Strawberries	111	2.915	3.81	-19.57	Land Use, 2011 Census (acres)				Strawberries	138	3.283	4.
and in crops	108,102	9,021,298	1.20	-7.27	Raspberries	19	680	2.79	-47.22	Land in crops	116,571	8,929,947	1.31	Raspberries	36	902	3.
Summerfallow land	179	15.885	1.13	-72.07	•					Summerfallow land	641	23.450	2.73	•			
ame or seeded pasture	6,739	514,168	1.31	-0.12	Major Vegetable Crops, 2016 Census (acres	s)				Tame or seeded pasture	6,747	648,758	1.04	Major Vegetable Crops, 2011 Census (a	cres)		
latural land for pasture	5,009	783,566	0.64	-26.82	Total vegetables	10,771	135,420	7.95	-0.88	Natural land for pasture	6,845	984,809	0.70	Total vegetables	10,867	129,595	8.
Christmas trees, woodland & wetland	15,004	1,542,637	0.97	-4.87	Sweet corn	1,676	22,910	7.32	26.87	Christmas trees, woodland & wetland	15,772	1,612,444	0.98	Sweet corn	1,321	25,540	5.
II other land	7,552	470,909	1.60	8.15	Tomatoes	110	15,744	0.70	-58.17	All other land	6,983	468,828	1.49	Tomatoes	263	16,558	1.
otal area of farms	142,585	12,348,463	1.15	-7.15	Green peas	x	16,268	-	-	Total area of farms	153,559	12,668,236	1.21	Green peas	65	15,121	0.
					Green or wax beans	43	9,732	0.44	-28.33					Green or wax beans	60	9,186	0.
Greenhouse Area, 2016 Census (square										Greenhouse Area, 2011 Census (square fee							
otal area in use	3,313,325	158,511,328	2.09	21.07	Livestock Inventories, 2016 Census (number					Total area in use	2,736,814	133,520,541	2.05	Livestock Inventories, 2011 Census (nu			
					Total cattle and calves	13,156	1,623,710	0.81	-21.85					Total cattle and calves	16,835	1,741,381	0.
arm Capital Value, 2016 Census (farm: Inder \$200.000	s reporting) 38	2.142	1.77	22.58	Steers	3,375 2,671	305,514 236,253	1.10 1.13	-36.68 7.23	Farm Capital Value, 2011 Census (farms re Under \$200.000	porting) 31	2.562	1.21	Steers	5,330 2.491	291,263 282.062	1. 0.
200,000 to \$499,999	40	7,433	0.54	-60.78	Dairy cows	1,604	311,960	0.51	-22.66	\$200.000 to \$499.999	102	12,994	0.78	Dairy cows	2,491	318,158	0.
500,000 to \$999,999	129	12,500	1.03	-41.36	Total pigs	1,004 X	3,534,104	0.51	-22.00	\$500,000 to \$999,999	220	15,276	1.44	Total pigs	4,958	3,088,646	0.
1,000,000 to \$999,999	505	27,525	1.83	6.32	Total sheep and lambs	6,011	321,495	1.87	-28.04	\$1,000,000 to \$999,999	475	21,118	2.25	Total sheep and lambs	8,353	352,807	2.
1,000,000 and over	303	21,020	1.00	0.32	Total streep and laritus	0,011	321,400	1.07	-20.04	\$1,000,000 and 0461	475	21,110	2.23	Total streep and lattice	0,000	332,007	2.
otal Gross Farm Receipts, 2016 Censu	is (farms report		1.81	-17.22	Poultry Inventories, 2016 Census (number)		50,759,994	0.48	0.70	Total Gross Farm Receipts, 2011 Census (1	farms reporti 209	ing) 12,263	1.70	Poultry Inventories, 2011 Census (numb		46,902,316	0.
Inder \$10,000 10.000 to \$24.999	173	9,536 8.376	1.56	-17.22	Total hens and chickens	243,406 x		0.46	-6.72	Under \$10,000 \$10,000 to \$24,999	134	9.098	1.70	Total hens and chickens Total turkeys	260,943 x	3,483,828	U.
25,000 to \$49,999	80	6.755	1.18	-10.11	Total turkeys		3,772,140	-	-	\$25,000 to \$49,999	89	6,720	1.32	Total turkeys	,	3,403,020	
50,000 to \$99,999	55	6,263	0.88	-30.38					_	\$50,000 to \$99,999	79	6,189	1.28				
100.000 to \$249.999.	89	7.022	1.27	-25.83	Farm Cash Receipts	for Main	Commodities,			\$100.000 to \$249.999	120	6.985	1.72	E			
	75		1.59	-13.79	York, 2018 (Tot					\$250,000 to \$499,999	87	5,086	1.71	Farm Cash Receipts f			K,
250 000 to \$499 999	49		1.33	6.52	1014, 1010 (101	Mr. Depoli	ro minion)			\$500,000 to \$999,999	46	3,248	1.42	2011 (Total	= \$160.69 mil	tion)	
250,000 to \$499,999 500,000 to \$999,999	25	2.019	1.24	-32.43				_		\$1,000,000 to \$1,999,999	37	1.558	2.37				
500,000 to \$999,999		1,233	2.84	29.63						\$2,000,000 and over	27	803	3.36			-	
500,000 to \$999,999 1,000,000 to \$1,999,999	35				Fulld Vegetables			69.4						Fruit & Vegetables		- 1	39.94
500,000 to \$999,999	35									Farms by Industry Group, 2016 Census (nu	umber of farr	ns)		1.37.53.78.37.			
500,000 to \$999,999		ms)								Beef cattle ranching and farming	72	7,105	1.01				
500,000 to \$999,999 1,000,000 to \$1,999,999		ms) 6,786	0.85	-19.44													
500,000 to \$999,999. 1,000,000 to \$1,999,999. 2,000,000 and over. arms by Industry Group, 2016 Census eef cattle ranching and farming. lairy cattle and milk production.	(number of far	6,786 3,439	0.73	-28.57	Electricition, Number & Sec.				- 1	Dairy cattle and milk production	35	4,036	0.87	Elementhum & Numarry		100	
500,000 to \$999,999. 1,000,000 to \$1,999,999. 2,000,000 and over. arms by Industry Group, 2016 Census eef cattle ranching and farming airy cattle and milk production. log and pig farming.	(number of far 58 25 1	6,786 3,439 1,229	0.73 0.08	-28.57 -66.67	Floriculture, Nursery & Sad					Dairy cattle and milk production Hog and pig farming	3	1,235	0.24	Florsculture & Nursery	2	1.60	
500,000 to \$999,999. 1,000,000 to \$1,999,999. 2,000,000 and over arms by Industry Group, 2016 Census seef cattle ranching and farming, alary cattle and milk production. log and pig farming. outly and egg production.	(number of far 58 25 1 19	6,786 3,439 1,229 1,816	0.73 0.08 1.05	-28.57 -66.67 18.75	Floriculture, Nursery & Sod		in			Dairy cattle and milk production Hog and pig farming Poultry and egg production	3 16	1,235 1,619	0.24 0.99	Florsesiture & Nursery	2	1.60	
500.001 to \$989.999 .1,000.000 to \$1,999.999 .2,000.000 and over sams by Industry Group, 2016 Census seed cattle ranching and faming, naive cattle and milk production, log and pig farming, outlity and egg production, the	(number of far 58 25 1 19	6,786 3,439 1,229 1,816 1,097	0.73 0.08 1.05 1.00	-28.57 -66.67 18.75 -50.00	Floriculture, Nursery & Sod	8				Dairy cattle and milk production	3 16 22	1,235 1,619 1,446	0.24 0.99 1.52			1.60	
500,000 to \$999,999 1,000,000 and over arms by Industry Group, 2016 Census eef cuttle ranching and farming, anay cattle and milk production, tog and pig farming, outly and ang production, theep and goat farming, theep and goat farming,	(number of far 58 25 1 19 11 159	6,786 3,439 1,229 1,816 1,097 5,902	0.73 0.08 1.05 1.00 2.69	-28.57 -66.67 18.75 -50.00 -19.70	Florkulture, Nursery & Sad Cattle & Calves	136.	j=1			Dairy cattle and milk production	3 16 22 198	1,235 1,619 1,446 6,966	0.24 0.99 1.52 2.84	Florscillure & Nursery Calves & Cattles	18 (%	1.60	
500,000 to \$989,999 1,000,000 and over arms by Industry Group, 2016 Census seed cattle ranching and farming, analy cattle and milk production. tog and pig farming. coultry and egg production. theep and goat farming. Wher animal production. Steed and grant farming.	(number of far 58 25 1 19 11 159 106	6,786 3,439 1,229 1,816 1,097 5,902 16,876	0.73 0.08 1.05 1.00 2.69 0.63	-28.57 -66.67 18.75 -50.00 -19.70 -5.36		136.				Dairy cattle and milk production. Hog and pig farming. Poultry and egg production. Sheep and goat farming. Other animal production. Oilseed and grain farming.	3 16 22 198 112	1,235 1,619 1,446 6,966 15,818	0.24 0.99 1.52 2.84 0.71			1.60"	
500.000 to \$999.999 1,000.000 to \$1999.999 2,000,000 and over arms by Industry Group, 2016 Census eede cattle ranching and farming, alary cattle and milk production, tog and pig farming, cutty and agg production, theep and goat farming, there animal production, bleep and graft farming, bliseed and grain farming,	(number of far 58 25 1 19 11 159 106 98	6,786 3,439 1,229 1,816 1,097 5,902 16,876 1,856	0.73 0.08 1.05 1.00 2.69 0.63 5.28	-28.57 -66.67 18.75 -50.00 -19.70 -5.36 -9.26		136.				Dairy cattle and milk production	3 16 22 198 112 108	1,235 1,619 1,446 6,966 15,818 1,531	0.24 0.99 1.52 2.84 0.71 7.05	Calves & Cattles	18 (%	1.60"	
500,000 to \$999,999 1,000,000 to \$1999,999 2,000,000 and over arms by Industry Group, 2016 Census eef cattle ranching and farming. airy cattled and milk production. og and pig farming. outly and eag production. heep and goat farming. there animal production. siseed and grain farming. egetable and melon farming. uit and tree nut farming.	(number of far 58 25 1 19 11 159 106 98	6,786 3,439 1,229 1,816 1,097 5,902 16,876 1,856 1,362	0.73 0.08 1.05 1.00 2.69 0.63 5.28 1.47	-28.57 -66.67 18.75 -50.00 -19.70 -5.36 -9.26 -4.76	Cattle At Calvins		j=1			Dairy cattle and milk production. Hog and pig farming. Poultry and egg production. Sheep and gost farming. Other animal production. Oilseed and grain farming. Vegetable and melon farming. Fruit and tree nut farming.	3 16 22 198 112 108 21	1,235 1,619 1,446 6,966 15,818 1,531 1,548	0.24 0.99 1.52 2.84 0.71 7.05 1.36			1.60	
00.000 to \$999,999 .000,000 to \$1,999,999 .000,000 and over .ms by Industry Group, 2016 Census ef cattle ranching and farming .ily cattle and milk production. .g and pig farming .ulty and egg production. .eep and goat farming. .her aimal production. .seed and grain farming.	(number of far 58 25 1 19 11 159 106 98	6,786 3,439 1,229 1,816 1,097 5,902 16,876 1,856 1,362	0.73 0.08 1.05 1.00 2.69 0.63 5.28	-28.57 -66.67 18.75 -50.00 -19.70 -5.36 -9.26	Cattle At Calves	136.	j=1			Dairy cattle and milk production	3 16 22 198 112 108	1,235 1,619 1,446 6,966 15,818 1,531	0.24 0.99 1.52 2.84 0.71 7.05	Calves & Cattles	18 (%	1.60	







x Suppressed data Sources: 2016 & 2011 Census of Agriculture and Strategic Policy Branch, OMAFRA 2017-06-02

soybeans 12.8%

Total =\$13.0 billion

Share of Farm Cash Receipts by Commodity, Outario, 2016

Others Program
Payment ggs
8.3% 2.6% 3.0%

East Gwillimbury Township at a Glance - 2021

East Gwillimbury Township at a Glance - 2016

East Gwillimbury Township at a Glance - 2011

Item	East Gwillimbu	ry Province	Percent of province	Percent from 2016	Item	East Gwillimbury	Province	Percent of province	Percent from 2016	ltem	East Gwillimbury	Province	Percent of province	Percent from 2011	Item	East Gwillimbury	Province	Percent of province	Percent from 2011	ltem	East Gwillimbury	Province	Percent of province	ltem	East Gwillimbury	Province	Percent of province
arms, 2021 Census (number)					Major Field Crops, 2021 Census (acres					Farms, 2016 Census (number)					Major Field Crops, 2016 Census (acres)					Farms, 2011 Census (number)				Major Field Crops, 2011 Census (acres)	,		
otal		106 48,346 18 3,217	0.22% 0.56%	-12.40% 28.57%		793		0.07%	-17.22%	Total Under 10 acres	121	49,600 3,051	0.24 0.46	-17.12 55.56	Winter wheat Oats for grain	958	1,080,378 82.206	0.09	-100.00	Total	146	51,950 2,741		Winter wheat	102	1,100,000	
10 to 69 acres		38 12.686	0.30%	-25.49%		105		0.00%	-	10 to 69 acres	14	12,625	0.46		Barley for grain	0	103.717	0.00	-100.00	10 to 69 acres	9 56	12.681		Barley for grain	102		
70 to 129 acres		22 10,924	0.20%	-18.52%		70		0.12%	-	70 to 129 acres	27	10.742	0.25		Mixed grains	0		0.00	-100.00	70 to 129 acres	35			Mixed grains	250		
130 to 179 acres		1 4,422		-66.67%		4,164		0.19%	-10.68%	130 to 179 acres	3	4,592	0.07		Corn for grain	4,662		0.22	-25.14	130 to 179 acres	10			Corn for grain	6,228		
180 to 239 acres		9 3,981	0.23%	50.00%	Corn for silage	65	289,678	0.02%	-45.83%	180 to 239 acres	6	4,282	0.14	-14.29	Corn for silage	120	295,660	0.04	-65.52	180 to 239 acres	7	4,801	0.15	Corn for silage	348	271,70	0.13
240 to 399 acres		6 5,396	0.11%	20.00%	Hay	2,454		0.14%	-26.33%	240 to 399 acres	5	6,008	0.08	-54.55	Hay	3,331		0.19	-36.14	240 to 399 acres	11	6,460	0.17	Hay	5,216	2,077,91	
400 to 559 acres		1 2,865	0.03%	-80.00%		3,702		0.13%	-6.96%	400 to 559 acres	5	3,093	0.16	66.67	Soybeans	3,979		0.14	-6.97	400 to 559 acres	3	3,359		Soybeans	4,277		
560 to 759 acres		3 1,698	0.18%	0.00%	Potatoes	1,448	39,193	3.69%	12.86%	560 to 759 acres	3	1,990	0.15		Potatoes	1,283	34,685	3.70	32.13	560 to 759 acres	5	2,026		Potatoes	971	37,38	84 2.60
760 to 1,119 acres		4 1,600		300.00%						760 to 1,119 acres	1	1,593	0.06	-75.00						760 to 1,119 acres	4	1,587	0.25				
1,120 to 1,599 acres 1,600 to 2,239 acres		0 720 0 451	0.00%	-100.00% -100.00%		1	48.661	0.04%	5.88%	1,120 to 1,599 acres 1,600 to 2,239 acres	2	801 457	0.25		Major Fruit Crops, 2016 Census (acres) Total fruit crops	47	51.192	0.03	-82.65	1,120 to 1,599 acres 1,600 to 2,239 acres	0	788 436		Major Fruit Crops, 2011 Census (acres) Total fruit crops	00	52 74	40 0.19
2,240 to 2,239 acres		4 173		300.00%		. 16	16.008	0.04%	-20.00%	2.240 to 2.879 acres	1	168	0.44	-60.00	Annies	17	15.893	0.03	-82.05 -82.14	2.240 to 2.879 acres	5	152		Apples	. 28		
2,880 to 3,519 acres		0 95		-100.00%		0		0.00%	-20.0070	2,880 to 3,519 acres	1	88	1.14		Sour Cherries	×		0.03	-02.14	2,880 to 3,519 acres	0	79		Sour Cherries	X		
3.520 acres and over		0 118		100.0070	Peaches	1	4.608	0.02%	_	3.520 acres and over		110	0.00	-100 00	Peaches	×	5.232	_	_	3.520 acres and over	1	92		Peaches	×		
-,			2.2070		Grapes	. 0	18,432	0.00%	-	.,.	·				Grapes	×	18,718	-	-	-,		02		Grapes	×		
and Use, 2021 Census (acres)					Strawberries	0	2,633	0.00%	-100.00%	Land Use, 2016 Census (acres)					Strawberries	4	2,915	0.14	-	Land Use, 2011 Census (acres)				Strawberries	x	3,28	33 -
and in crops	19,	023 9,051,011	0.21%	0.80%	Raspberries	1	438	0.23%	-	Land in crops	18,872	9,021,298	0.21	-26.20	Raspberries	0	680	0.00	-100.00	Land in crops	25,571	8,929,947	0.29	Raspberries	6	90	02 0.67
Summerfallow land		11 13,964	0.08%	-						Summerfallow land	x		-	-						Summerfallow land	163		0.70				
ame or seeded pasture		429 400,480		-	Major Vegetable Crops, 2021 Census (a					Tame or seeded pasture	х		-	-	Major Vegetable Crops, 2016 Census (a					Tame or seeded pasture	1,275			Major Vegetable Crops, 2011 Census (a			
latural land for pasture		260 626,366	0.04%	-58.00%		4,024		3.15%	46.81%	Natural land for pasture	619		0.08	-53.63	Total vegetables	2,741	135,420	2.02	-27.45	Natural land for pasture	1,335			Total vegetables	3,778		
Christmas trees, woodland & wetland		247 1,269,535		-26.97%		47		0.23%	-	Christmas trees, woodland & wetland		1,542,637	0.20	-12.21	Sweet corn	×	22,910	-	-	Christmas trees, woodland & wetland	3,505			Sweet corn	. 90		
All other land otal area of farms		080 404,714 050 11,766,071		-20.47% -6.57%		. 4		0.03%	-20.00% -100.00%	All other land	1,358		0.29 0.20	-14.38 -26.22	Tomatoes	5	15,744 16,268	0.03 0.01	-16.67 -50.00	All other land	1,586			Tomatoes	. 6	16,550	
otal area or rarms	23,1	050 11,766,071	0.20%	-0.57%	Green or wax beans	. 0	8.709		-100.00%	i otal area of farms	24,070	12,348,403	0.20	-20.22	Green or wax beans	1	9,732	0.01	-50.00	rotal area or farms	33,435	12,008,230	0.20	Green or wax beans	. 2 x		
Greenhouse Area, 2021 Census (squa	are feet)				Green or wax beans	. 4	0,709	0.0276		Greenhouse Area, 2016 Census (squ	re feet)				Green or wax bearis		9,732	-	-	Greenhouse Area, 2011 Census (squ	are feet)			Green or wax bears	*	9,10	
otal area in use		248 201,055,888	0.09%	-66.13%	Livestock Inventories, 2021 Census (nu	ımber)				Total area in use		158,511,328	0.35	7.11	Livestock Inventories, 2016 Census (nu	ımber)				Total area in use		133,520,541	0.39	Livestock Inventories, 2011 Census (nu	mber)		
					Total cattle and calves	995	1,604,810	0.06%	-21.65%			,,			Total cattle and calves	1,270	1,623,710	0.08	-45.96			,		Total cattle and calves	2,350	1,741,38	81 0.13
arm Capital Value, 2021 Census (far	rms reporting)				Steers	. 46	299,540	0.02%	-88.73%	Farm Capital Value, 2016 Census (far	ns reporting)				Steers	408	305,514	0.13	185.31	Farm Capital Value, 2011 Census (far	rms reporting)			Steers	143	291,26	63 0.05
Jnder \$200,000		2 1,212		-66.67%	Beef cows	331		0.15%	-	Under \$200,000	6	2,142	0.28	100.00	Beef cows	x	236,253	-	-	Under \$200,000	3	2,562	0.12	Beef cows	519		
200,000 to \$499,999		5 3,223		-44.44%		. 114		0.03%	-	\$200,000 to \$499,999	9	7,433	0.12	-47.06	Dairy cows	x		-	-	\$200,000 to \$499,999	17	12,994		Dairy cows	312		
500,000 to \$999,999		13 8,699		-50.00%		0			-	\$500,000 to \$999,999	26	12,500	0.21	-42.22	Total pigs	x		-	-	\$500,000 to \$999,999	45			Total pigs	x		
1,000,000 and over	****	86 35,212	0.24%	7.50%	Total sheep and lambs	830	322,508	0.26%	-14.96%	\$1,000,000 and over	80	27,525	0.29	-1.23	Total sheep and lambs	976	321,495	0.30	-44.98	\$1,000,000 and over	81	21,118	0.38	Total sheep and lambs	1,774	352,80	0.50
otal Gross Farm Receipts, 2021 Cen		porting) 15 7.277	0.21%	-55.88%	Poultry Inventories, 2021 Census (num Total hens and chickens	ber) 24,706	53,802,772	0.05%		Total Gross Farm Receipts, 2016 Cer Under \$10.000	sus (farms report	ing) 9,536	0.36	-27.66	Poultry Inventories, 2016 Census (numl Total hens and chickens		50,759,994			Total Gross Farm Receipts, 2011 Cer Under \$10,000	nsus (farms report		0.38	Poultry Inventories, 2011 Census (numb Total hens and chickens	ber) 170,100	46,902,310	16 0.36
10.000 to \$24.999		21 7,429		-8.70%		. 24,700				\$10.000 to \$24.999	23	8.376	0.30	0.00	Total turkevs		3,772,146			\$10.000 to \$24.999	23	9.098	0.25	Total turkevs		3,483,82	
25.000 to \$49.999		10 6.263		-16.67%	Total tarreys		2,100,120	0.0070		\$25,000 to \$49,999.	12	6.755	0.18	0.00	Total talloys	^	0,112,140			\$25.000 to \$49.999	12	6.720	0.18	Total talloys	^	0,100,02	
50,000 to \$99,999		15 6,093	0.25%	7.14%						\$50,000 to \$99,999	14	6,263	0.22	27.27						\$50,000 to \$99,999	11	6,189	0.18				
100,000 to \$249,999		13 6,817		30.00%						\$100,000 to \$249,999	10	7,022	0.14	-44.44						\$100,000 to \$249,999	18		0.26				
250,000 to \$499,999		4 4,448		-42.86%						\$250,000 to \$499,999	7	4,707	0.15	-50.00						\$250,000 to \$499,999	14		0.28				
500,000 to \$999,999		3 3,954		0.00%						\$500,000 to \$999,999	3	3,689	0.08	-50.00						\$500,000 to \$999,999	6	3,248					
1,000,000 to \$1,999,999		9 2,452		12.50%						\$1,000,000 to \$1,999,999	8	2,019	0.40	-11.11						\$1,000,000 to \$1,999,999	9	1,558					
2,000,000 and over		12 1,696	0.71%	20.00%						\$2,000,000 and over	10	1,233	0.81	66.67						\$2,000,000 and over	6	803	0.75				
arms by Industry Group, 2021 Cens	sus (number of									Farms by Industry Group, 2016 Cens										Farms by Industry Group, 2011 Cens							
Beef cattle ranching and farming		9 7,986	0.11%	-18.18%						Beef cattle ranching and farming	11	6,786	0.16	-35.29						Beef cattle ranching and farming	17		0.24				
Dairy cattle and milk production		2 3,188		0.00%						Dairy cattle and milk production	2	3,439 1,229	0.06	-71.43						Dairy cattle and milk production	/	4,036 1,235					
log and pig farming Poultry and egg production		0 1,189 4 2.061	0.00%	-20.00%						Hog and pig farming Poultry and egg production	0	1,229	0.00	25.00						Hog and pig farming Poultry and egg production	0	1,235					
Sheep and goat farming		3 1.309		0.00%						Sheep and goat farming	3	1.097	0.27	-25.00						Sheep and goat farming	4	1,446	0.28				
Other animal production		14 4,556		-56.25%						Other animal production	32	5,902	0.54	-11.11						Other animal production	36	6.966	0.52				
Dilseed and grain farming		22 18,194		29.41%						Oilseed and grain farming	17	16,876	0.10	-10.53						Oilseed and grain farming	19						
egetable and melon farming		24 1,562		84.62%						Vegetable and melon farming	13	1,856	0.70	-13.33						Vegetable and melon farming	15		0.98				
ruit and tree nut farming		2 1,211		-33.33%						Fruit and tree nut farming	3	1,362	0.22	50.00						Fruit and tree nut farming	2	1,548	0.13				
			0.0001	40.000																							
Greenhouse, nursery and floriculture Other crop farming		15 1,672	0.90% 0.20%	-16.67% -35.29%						Greenhouse, nursery and floriculture Other crop farming	18	2,050 7.187	0.88 0.24	-10.00 -22.73						Greenhouse, nursery and floriculture Other crop farming	20	2,372 8,274					

APPENDIX D

Soil Series Descriptions

Bondhead Series

Bondhead Loam and Bondhead Sandy Loam are well drained soils found primarily in the East Gwillimbury Township. These soils have developed from limestone till and occur on moderately sloping topography. They are susceptible to both sheet and gully erosion when located on steeper slopes.

Bondhead Loam soils are good agricultural soils and are well suited for the production of common field crops such as corn, soybeans, cereal grains, and perennial crops such as hay and pasture. The main limitations to crop production for these soils are low natural fertility and erosion. These limitations range often require special management practices such as cover cropping and the addition of fertilizers/manure to ensure adequate yields are sustainable.

Schomberg Series

The Schomberg soils are well drained soils formed from lacustrine deposits consisting of layers of calcareous silt and clay. These soils occur on smooth, moderately sloping topography and are susceptible to gully and sheet erosion. Internal drainage for these soils is slow, while external drainage is high.

Schomberg soils are good agricultural soils and are well suited for the production of common field crops and perennial crops. Crop yields are primarily limited by low natural fertility and erosion, however, Schomberg Clay Loam soils have a slightly higher level of natural fertility than Schomberg Silt Loam soils. Keeping the land under plant cover for as long as possible, along with the application of manure can improve crop yields in these soils.

Simcoe Silt Loam

The Simcoe series is the poorly drained member of the Schomberg catena and is often mapped in association with the Schomberg soils. Simcoe Silt Loam soils occur on very gently sloping topography, and have slow external drainage and very slow internal drainage.

Simcoe Silt Loam soils are fair agricultural soils and can be successfully cultivated for the production of common field crops and perennial crops when artificial drainage has been installed. These soils are primarily limited by excess soil moisture. Artificial drainage is required for these soils to produce adequate crop yields and also require the application of manure to maintain soil structure once drainage has been improved.

Brighton Sandy Loam

Brighton Sandy Loam soils are well drained soils which have developed on coarse sandy outwash found in East Gwillimbury Township. Although these soils occur on gently sloping topography, the soils are well drained because the porosity of the materials facilitate rapid percolation of moisture. Additionally, these soils have low organic matter content, resulting in low moisture holding capacity

Brighton Sandy Loam soils are fair agricultural soils and can be successfully cultivated for the production of common field crops and perennial crops. Crop yields are primarily limited by low natural fertility and moisture deficiencies in these soils. However, adequate crop yields can be produced when manure and fertilizers are applied.

Tecumseth Sandy Loam

Tecumseth Sandy Loam soils are the imperfectly drained member of the Brighton *catena* and have developed on smooth, very gently sloping topography. Internal drainage is fair, however surface runoff is low. Erosion in these soils is minimal, except for in areas where inadequate cover allows for wind erosion.

Tecumseth Sandy Loam soils are fair agricultural soils and are mostly used for the production of common field crops, with some fruit and vegetable crops grown where climatic conditions allow. Natural fertility in these soils in low. As a result, the addition of manure and fertilizers are required in order to improve and maintain crop yields. To prevent wind erosion, the lands should be kept under plant cover for as long as possible.

Pontypool Sandy Loam

The Pontypool series is the only member of the Pontypool *catena* and has formed on poorly sorted sands. Pontypool Sandy Loam soils occur on irregular, steeply sloping topography and are well drained to excessively drained.

Pontypool Sandy Loam soils are early soils and are low in organic matter. These soils often experience wind erosion and droughtiness due to the coarse texture of the soil and associated internal drainage. Most common field crops can be successfully grown on these soils, however, they are primarily used for pasture. Additions of manure and organic material are necessary to improve and maintain soil productivity and the lands should be kept under plant cover for as long as possible to minimize erosion.

Bottom Land

Bottom Land soils are low lying soils which occur along stream courses and are often subject to flooding. These soils are immature and show little horizon differentiation. The soil profile usually consists of variable textures and the drainage also often varies but is usually poor.

Bottom Land soils are not good agricultural soils and are typically used for pasture or are not farmed In areas where large amounts of Bottom Land soils are mapped, other agricultural crops can be grown, but are dependant on the timing and extent of flooding in the area.

APPENDIX E

Canada Land Inventory Information

Canada Land Inventory Soil Capability Classification for Agriculture

The Canada Land Inventory (CLI) classification system was developed to classifying soil capability for agricultural use for use across Canada. CLI is an interpretative system which assesses the effects of climate and soil characteristics on the limitations of land for growing common field crops. It classifies soils into one of seven capability classes based on the severity of their inherent limitations to field crop production. Soils descend in quality from Class 1, which is highest, to Class 7 soils which have no agricultural capability for the common field crops. Class 1 soils have no significant limitations. Class 2 through 7 soils have one or more significant limitations, and each of these are denoted by a capability subclass.

In Ontario the document, "Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for Application of the Canada Land Inventory in Ontario" (OMAFRA, 2008) provides a Provincial interpretation of the CLI classification system. These guidelines are based on the "Canada Land Inventory, Soil Capability Classification for Agriculture" (ARDA Report No. 2, 1965) and have been modified for use in Ontario. In Ontario, CLI Classes 1 to 4 lands are generally considered to be arable lands and Classes 1 to 3 soils and specialty crop lands are considered to be prime agricultural lands.

The following definitions were taken from Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for Application of the Canada Land Inventory in Ontario (2008).

Definitions of the Capability Classes

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.

<u>Definitions of the Prime and Non-prime Agricultural Lands</u>

In Ontario, CLI Classes 1, 2 and 3 and specialty crop lands are considered prime agricultural lands. Non-prime agricultural lands are comprised of CLI Class 4-7 lands.

Organic soils (Muck) are not classified under the CLI system but are mapped and identified as O in the provincial mapping.

Definitions of the Capability Subclasses

Capability Subclasses indicate the kinds of limitations present for agricultural use. Thirteen Subclasses were described in CLI Report No. 2. Eleven of these Subclasses have been adapted to Ontario soils.

Subclass Definitions:

Subclass C - Adverse climate: This subclass denotes a significant adverse climate for crop production as compared to the "median" climate which is defined as one with sufficiently high growing-season temperatures to bring common field crops to maturity, and with sufficient precipitation to permit crops to be grown each year on the same land without a serious risk of partial or total crop failures. In Ontario this subclass is applied to land averaging less than 2300 Crop Heat Units.

Class	Crop Heat Units
1	>2300
2C	1900-2300
3C	1700-1900
4C	<1700

Subclass D - Undesirable soil structure and/or low permeability: This subclass is used for 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.

Class	Soil Characteristics
2D	The top of a clayey horizon >15 cm thick occurs within 40 cm of the soil surface. Clayey
	materials in this case must have >35% clay content.
3D	The top of a very fine clayey (clay content >60%) horizon >15 cm thick occurs within 40 cm of
	the soil surface

Subclass E - Erosion: Loss of topsoil and subsoil by erosion has reduced productivity and may in some cases cause difficulties in farming the land e.g. land with gullies.

Class	Soil Characteristics
2E	Loss of the original plough layer, incorporation of original B horizon material into the present
	plough layer, and general organic matter losses have resulted in moderate losses to soil
	productivity.
3E	Loss of original solum (A and B horizons) has resulted in a plough layer consisting mostly of

	Loamy or Clayey parent material. Organic matter content of the cultivated surface is less than
	2%.
4E	Loss of original solum (A and B horizons) has resulted in a cultivated layer consisting mainly
	of Sandy parent material with an organic matter content of less than 2%; shallow gullies and
	occasionally deep gullies which cannot be crossed by machinery may also be present.
5E	The original solum (A and B horizons) has been removed exposing very gravelly material
	and/or frequent deep gullies are present which cannot be crossed by machinery.

Subclass F - Low natural fertility: This subclass is made up of soils having low fertility that is either correctable with careful management in the use of fertilizers and soil amendments or is difficult to correct in a feasible way. The limitation may be due to a lack of available plant nutrients, high acidity, low exchange capacity, or presence of toxic compounds.

Class	Upper Texture Group (>40 and <100 cm from surface)	Lower Texture Group (remaining materials to 100 cm depth)	Drainage Class	Additional Soil Characteristics ¹
2F	Sandy	Sandy or very gravelly	Rapid to imperfect	Neutral or alkaline parent material with a Bt horizon within 100 cm of the surface
3F	Sandy	Sandy or very gravelly	Any drainage class	Neutral or alkaline parent material with no Bt horizon present within 100 cm of surface
3F	Sandy	Loamy or Clayey	Any drainage class	Acid parent material
3F	Loamy or clayey	Any Texture Group	Any drainage class	Acid parent material
4F	Sandy Sandy or very gravelly		Any drainage class	Acid parent material
4F	Very gravelly	Any texture	Rapid to imperfect	Neutral to alkaline parent material
5F	Very Gravelly	Any texture	All drainage classes	Acid parent material

¹ "Acid" means pH<5.5; "Neutral" pH 5.5 to 7.4; "Alkaline" pH>7.4 as measured in 0.01 M CaCl2 (CSSC, 1998). PH 's measured in distilled water tend to be slightly higher (up to 0.5 units).

Bt horizon should be fairly continuous and average more than 10cm thickness

Subclass I - Inundation by streams or lakes: Flooding by streams and lakes causes crop damage or restricts agricultural use.

Class	Soil Characteristics
3I	Frequent inundation with some crop damage; estimated frequency of flooding is less than
31	once every 5 years (Floodplain); includes higher floodplain-terraces on which cultivated field
	crops can be grown.
5I	Very frequent inundation with some crop damage; estimated frequency of flooding is at least
31	once every 5 years (Floodplain); includes active floodplain areas on which forage crops can be
	grown primarily for pasture.
7I	Land is inundated for most of the growing season; often permanently flooded (Marsh)

Subclass M – Moisture deficiency: Soils in this subclass have lower moisture holding capacities and are more prone to droughtiness.

Class	Soil Texture	Groups	Drainage	Additional Soil Characteristics
	Upper materials1	Lower materials2		
2M	15 to 40 cm of loamy or finer materials	Sandy to Very Gravelly	Well	
2M	40 to < 100 cm of sandy to very gravelly material.	Loamy to Very Fine Clayey	Well	
2M	Sandy		Rapid to well	Well developed Bt3 horizon occurs within 100 cm of surface
3M	Sandy material to > 100cm		Rapid	Bt horizon absent within 100 cm of surface
4M	Very Gravelly to > 100 cm		Rapid	Bt horizon present within 100 cm of surface
5M	Very gravelly to > 100cm		Very rapid	Bt horizon absent within 100cm

Subclass P - Stoniness: This subclass indicates soils sufficiently stony to hinder tillage, planting, and harvesting operations.

Class	Soil Characteristics
	Surface stones cause some interference with tillage, planting and harvesting; stones are 15-60 cm in diameter, and occur in a range of 1-20 m apart, and occupy <3% of the surface area. Some stone removal is required to bring the land into production.
	Surface stones are a serious handicap to tillage, planting, and harvesting; stones are 15-60 cm in diameter, occur 0.5-1m apart (20-75 stones/100 m²), and occupy 3-15% of the surface area. The occasional boulder >60 cm in diameter may also occur. Considerable stone removal is required to bring the land into production. Some annual removal is also required.
	Surface stones and many boulders occupy 3-15% of the surface. Considerable stone and boulder removal is needed to bring the land into tillable production. Considerable annual removal is also required for tillage and planting to take place.
5P	Surface stones 15-60 cm in diameter and/or boulders >60 cm in diameter occupy 15-50% of the surface area (>75 stones and/or boulders/100 m2).
6P	Surface stones 15-60 cm in diameter and/or boulders >60 cm in diameter occupy >50% of the surface area.

Subclass R - Shallowness to Consolidated Bedrock: This subclass is applied to soils where the depth of the rooting zone is restricted by consolidated bedrock. Consolidated bedrock, if it occurs within 100 cm of the surface, reduces available water holding capacity and rooting depth. Where physical soil data were available, the water retention model of McBride and Mackintosh was used to assist in developing the subclass criteria.

Class	Soil Characteristics
3R	Consolidated bedrock occurs at a depth of 50-100 cm from the surface causing moderately severe restriction of moisture holding capacity and/or rooting depth.
4R	Consolidated bedrock occurs at a depth of 20-50 cm from the surface causing severe restriction of moisture holding capacity and/or rooting depth.
5R	Consolidated bedrock occurs at a depth of 10 to 20 cm from the surface causing very severe restrictions for tillage, rooting depth and moisture holding capacity. Improvements such as tree removal, shallow tillage, and the seeding down and fertilizing of perennial forages for hay and grazing may be feasible.

6R	Consolidated bedrock occurs at a depth of 10-20 cm from the surface but improvements as in
	5R are unfeasible. Open meadows may support grazing.
7R	Consolidated bedrock occurs at < 10cm from the surface.

Subclass S - Adverse soil characteristics: This subclass denotes a combination of limitations of equal severity. In Ontario it has often been used to denote a combination of F and M when these are present with a third limitation such as T, E or P.

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.

Determination of Subclass T for Very Gravelly and Sandy Soils

Slope %			2-5		5-9		9-15		15-30)	30-60		>60	
Slope type	Slope type S C		S	С	S	С	S	С	S	С	S	С	S	С
Class				2T	2T	3T	3T	4T	5T	5T	6T	6T	<i>7</i> T	7T

Slope %	<2		2-5		5-9		9-15		15-30		30-60)	>60	
Slope type	S	С	S	С	S	С	S	С	S	С	S	С	S	С
Class				2T	3T	3T	4T	4T	5T	5T	6T	6T	7T	<i>7</i> T

S = Simple Slopes >50 m in length

C = Complex Slopes < 50 m in length

Subclass W - Excess water:

The presence of excess soil moisture, other than that brought about by inundation, 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.

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

APPENDIX F

Site Photographs



Photo 1: Operation #4 – Agriculture-related use: Farm market (Blossom Acres Marketplace).



Photo 2: Operation #7 – Hobby farm showing donkey in pasture and field shelter.



Photo 3: Operation #12 – Remnant farm showing bank barn in poor condition.



Photo 4: Operation #13 – Unoccupied livestock facility showing bank barn in fair condition.



Photo 5: Operation #18 – Institutional use: Queensville Cemetery.



Photo 6: Operation #21 – Unoccupied livestock facility showing barn in fair condition and grain bins.



Photo 7: Operation #23 – Grain elevator operation showing grain elevator and implement sheds.



Photo 8: Operation #24 – Sod farm showing implement sheds with sod being grown behind structures.



Photo 9: Operation #26 – Mushroom farm showing farm sign and plastic Quonset hut.



Photo 10: Operation #32 -Holland Valley Nursery and Garden Centre showing greenhouse and soil bags.



Photo 11: Operation #38 - Remnant farm showing wooden bank barn in fair to poor condition.



Photo 12: Operation #39 – Agriculture-related use: Sharon Orchards Farm Market showing farm stand and sign.



Photo 13: Operation #41 – Cash crop operation showing grain drier, plastic Quonset hut and barn in poor condition.



Photo 14: Operation #50 – Greenhouse operation showing nine greenhouses.

South Elevation

© 347°N (T) ● 44°5'30"N, 79°27'49"W ±4m ▲ 244m



Photo 15: Operation #55 - Agriculture-related use: Sharon Creek Farm showing business sign.

South Elevation

♦ 18°N (T) ● 44°4'45"N, 79°30'30"W ±4m ▲ 282m



Photo 16: Operation #57 – Remnant farm showing bank barn in poor condition and paddocks.

East Elevation

© 250°W (T) ● 44°5'43"N, 79°31'4"W ±4m ▲ 226m



Photo 17: Operation #62 - Industrial operation showing building associated with Imperial Cut Alloy Inc.

North Elevation

② 193°S (T) **③** 44°6′53″N, 79°28′14″W ±4m ▲ 279m



Photo 18: Operation #66 – Remnant farm showing bank barn in poor condition, uncapped silo, and implement shed.

APPENDIX G

Land Use Notes

Land Use Survey Notes – AIA for East Gwillimbury Whitebelt Landowners Group Inc				
Weather Sunny Date (s) May 29, 2024				
Temperature	19°C	File	C23086	

Site No.	Type of Use	Type of Operation	MDS Calculation Required?	Description of Operation
1	Agricultural	Remnant Farm	No	Implement shed in poor condition, old barn in poor condition missing part of roof, gated entry, no trespassing, property appears abandoned
2	Non- Agricultural	Industrial	No	Trucking and construction equipment parked on gravel parking lot, shop in back, no trespassing, no sign associated with business
3	Non- Agricultural	Commercial	No	Brice's Quality Hand Crafted Furniture
4	Agriculture- Related	Farm Market	No	Blossom Acres Marketplace. Sells flowers and farm products (e.g., honey jam, etc.)
5	Non- Agricultural	Commercial	No	Loyal Alfred's Bar and Grill
6	Non- Agricultural	Utility	No	Sewage pumping station
7	Agricultural	Hobby Farm	Yes	Spoke with landowner, has two donkeys, used to have 30 beef cows, two donkeys observed in pasture, OFA member, barn still capable of housing livestock (located at back of property). Also runs Ross Wilkinson Building Contractors from the same property
8	Agricultural	Equestrian Operation	Yes	Glendon Stables – Training Showing, Sales, and Riding School. Four horses observed in paddocks, horse trailer observed, large barn in good condition, landowner did not want to provide information on the operation

				Bank barn in poor condition,
9	Agricultural	Remnant Farm	No	uncapped cement silo, residence has been abandoned, no structures
				capable of housing livestock
				Spring Bank Farm. Wooden bank barn in fair condition, capped cement silo,
		Unoccupied		grain bin, spoke with landowner who
10	Agricultural	Livestock Facility	Yes	said there is no livestock in the barn
		,		but would still be capable of housing
				livestock
11	Non-	Industrial	No	Large shop, excavators observed
	Agricultural	Industrial	110	outside, private property no entry
				Wooden bank barn in poor condition
12	Agricultural	Remnant Farm	No	and missing sideboards, overgrown
				pastures, no sign of livestock, not
				capable of housing livestock The Wiltshires. Spoke with landowner
				who said they used to have beef cattle
13	13 Agricultural	Unoccupied Livestock Facility	Yes	and sheep. Lands are now tenant
10				farmed and no livestock in barn. Barn
				still capable of housing livestock
				Barn and multiple implement sheds in
				poor condition, one implement shed
1.4	A:1(1	D 4 E	NT-	observed with hay inside in fair
14	Agricultural	Remnant Farm	No	condition, no sign of livestock, no
				structures capable of housing
				livestock
				Barn demolished, barn foundation
15	Agricultural	Remnant Farm	No	remains, no structures capable of
				housing livestock
				J. Lipani and Son Ltd. Sod Farms.
16	Non-	Industrial	No	Aggregate and mulch storage, two
10	Agricultural	maustriai	No	plastic Quonset huts for storage, and an office building. No sod observed at
				location
				Aggregate storage in back of property,
a =-	Agriculture-		3.7	landscape supplies, and nursery
17	Related	Nursery Supplier	No	supplies. Flowers, trees, and shrubs
				observed outside
18	Non-	Institutional	No	Queensville Cemetery
10	Agricultural	nistitutional	110	

19	Agricultural	Remnant Farm	No	Property has been abandoned, all buildings in poor condition, hole in roof of barn, no structures capable of housing livestock
20	Agricultural	Cash Crop Operation	No	Implement shed in good condition, no structures capable of housing livestock
21	Agricultural	Unoccupied Livestock Facility	Yes	Spoke with landowner who said barn is currently empty, used to have 600 pigs until approximately 2014, stopped operation due to complaints, liquid manure storage pit decommissioned, filled in, and can no longer be used, currently has 15 chickens for personal use
22	Agricultural	Remnant Farm	No	Barn demolished, foundation remains, uncapped cement silo, no structures capable of housing livestock
23	Agriculture- Related	Grain Elevator	No	Don Chapman Farms. Large grain elevator and distribution facility, multiple large shops for trucks/farm equipment, all buildings in good condition, farm equipment observed outside, OFA member
24	Agricultural	Sod Farm	No	Queensville Sod Farm Ltd. Soil stockpiles, plastic Quonset hut, two implement sheds
25	Non- Agricultural	Industrial	No	Dump trucks/construction equipment observed outside, plastic Quonset hut, no sign associated with business
26	Agricultural	Mushroom Farm	No	Holburne Mushroom Farm. OFA member, plastic Quonset hut, multiple buildings assumed for production/processing of mushrooms, no structures capable of housing livestock
27	Agricultural	Hobby Farm	No	Five cows observed in pasture, small barn under construction, no structures currently capable of housing livestock, small out buildings observed
28	Agricultural	Nursery	No	Crystal Star Nursery. Nine Quonset huts/greenhouses observed

29	Agricultural	Remnant Farm	No	No trespassing, private property, no structures capable of housing livestock, miscellaneous outdoor storage and boat storage
30	Agricultural	Retired Cash Crop Operation	No	Implement shed in fair condition, Quonset hut missing plastic cover, overgrown, no structures capable of housing livestock
31	Non- Agricultural	Industrial	No	Beaver Valley Stone Ltd. Aggregate storage and dump trucks observed outside
32	Agricultural	Nursery	No	Holland Valley Nursery and Garden Centre. Likely associated with #31, sells/produces trees, shrubs, flowers, soil and mulch
33	Non- Agricultural	Industrial	No	CAN-CRO Installations. Seamless eves troughing business
34	Agricultural	Apiary	No	Approximately 15 bee boxes observed, no buildings associated with the use
35	Non- Agricultural	Commercial	No	The Royal Wood Shop
36	Agricultural	Cash Crop Operation	No	Capped cement silo, implement shed, grain bin, access to property restricted by road construction
37	Agricultural	Hobby Farm	No	Barn in poor condition and not capable of housing livestock, two horses observed in pasture, small out building for horses, no structures capable of housing livestock
38	Agricultural	Remnant Farm	No	Old bank barn in poor condition, no signs of livestock, barn does not appear capable of housing livestock
39	Agriculture- Related	Farm Market	No	Sharon Orchards Farm Market. OFA member
40	Non- Agricultural	Recreational	No	Shawneeki Golf Club
41	Agricultural	Cash Crop Operation	No	Grain drier, farm equipment observed outside, implement shed, barn in poor condition

42	Agricultural	Remnant Farm	No	Uncapped cement silo, plastic Quonset hut, no sign of livestock, no structures capable of housing livestock
43	Non- Agricultural	Commercial	No	Lions and Sun Bar and Lounge
44	Agricultural	Remnant Farm	No	Barn in poor condition and not capable of housing livestock, property has been abandoned, no trespassing
45	Agricultural	Unoccupied Livestock Facility	Yes	Old bank barn in fair condition, currently unoccupied, no sign of livestock, appears capable of housing livestock
46	Agricultural	Remnant Farm	No	Uncapped cement silo, barn in poor condition, overgrown around barn, no structures capable of housing livestock
47	Agricultural	Unoccupied Livestock Facility	Yes	Old bank barn in fair condition, no sign of livestock, no trespassing, barn appears capable of housing livestock
48	Agricultural	Hobby Farm	Yes	Likely a small hobby farm with horses, nobody home during land use, small barn at back of property in good condition, outdoor manure storage observed
49	Non- Agricultural	Commercial	No	YMR Design
50	Agricultural	Greenhouse	No	Seven Lord Farm Inc. Greenhouse operation with seven glass greenhouses and four plastic Quonset huts/greenhouses
51	Non- Agricultural	Industrial	No	Old McDonald's Furniture and Appliances. Barn converted for shop and no longer capable of housing livestock, no signs of livestock
52	Non- Agricultural	Industrial	No	Baker Vault. Excavating contractors, barn converted for industrial operation and no longer capable of housing livestock, large trucks observed outside
53	Non- Agricultural	Industrial	No	Shop, plastic Quonset hut, trailers observed, no sing associated with business

	1	T		1
54	Agricultural	Equestrian Operation	Yes	Hanohill Farm. Multiple paddocks, barn in good condition, plastic Quonset hut, outdoor manure storage
55	Agriculture- Related	Farm Market	No	Sharon Creek Farm. OFA member, farm market selling various farm products including eggs. Gated entry. Small scale permaculture operation, chickens likely free range. No structures capable of housing livestock.
56	Non- Agricultural	Utility	No	2 nd Concession Road SPS. Pumping station
57	Agricultural	Remnant Farm	No	Bank barn in poor condition, not capable of housing livestock, likely a former equestrian operation
58	Agricultural	Remnant Farm	No	Bank barn in poor condition, no longer capable of housing livestock
59	Non- Agricultural	Industrial	No	404 Stone. Landscaping supplier, aggregate storage outside
60	Agricultural	Unoccupied Livestock Facility	Yes	Broccoli Hill Farm. Small barn at back of property, paddocks overgrown, likely a former equestrian operation, no sign of livestock, barn appears capable of housing livestock
61	Non- Agricultural	Commercial	No	Camp Tails-A-Waggin'. Dog groomers and boarding
62	Non- Agricultural	Industrial	No	Imperial Cut Alloy Inc. and SHP Wraps Inc. Large shop
63	Agricultural	Remnant Farm	No	Cericola Farms. Property appears abandoned, barn partially collapsed, no structures capable of housing livestock
64	Non- Agricultural	Nature Reserve	No	Holland Landing Prairie Provincial Nature Reserve
65	Non- Agricultural	Utility	No	Wastewater treatment ponds
66	Agricultural	Remnant Farm	No	Uncapped silo, bank barn in poor condition, house has been demolished, property appears abandoned
67	Non- Agricultural	Commercial	No	Armking Bulk Water Delivery & Armking Contracting Limited

68	Agricultural	Equestrian Operation	Yes	Private property, no trespassing, barn and paddocks observed from aerial photos, appears to be an active equestrian operation
----	--------------	-------------------------	-----	---

	Total Number	Active	Retired or Remnant	
Agricultural	39	4 – Hobby Farm 3 – Equestrian Operation 1 – Sod Farm 1 – Mushroom Farm 1 – Apiary 3 – Cash Crop Operation 1 – Greenhouse 2 – Nursery	16 – Remnant Farm 6 – Unoccupied Livestock Facility 1 – Retired Cash Crop Operation	
Agriculture-related	5	1 – Nursery Supplier 1 – Grain Elevator 3 – Farm Market	0	
On-farm Diversified	0	0	0	
	Total Number	Туре		
Non-Agricultural	24	7 – Commercial 1 – Recreational 11 – Industrial 3 – Utility 1 – Institutional 1 – Nature Reserve		

APPENDIX H

AgriSuite MDS Report

11/25/24, 10:55 AM AgriSuite



AgriSuite

C23086

General information

Application date Nov 19, 2024 Municipal file number

Proposed application
New or expanding settlement area boundary

Applicant contact information (!)



Location of subject lands



Regional Municipality of York Town of East Gwillimbury EAST GWILLIMBURY Roll number: 1954

ON

Farm contact information (!)



Location of existing livestock facility or

anaerobic digestor (!)

Total lot size 40.45 ha

Regional Municipality of York Town of East Gwillimbury EAST GWILLIMBURY Roll number: 1954

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Unoccupied Livestock Barn	664 m²	33.2 NU	664 m²

Unoccupied Barn or Unused Storage (Operation 10)

1

The calculated setback is based on assumptions for an unoccupied barn or unused storage that may not reflect the actual design capacity.

Setback summary

Existing manure storage

- Not Specified -

Design capacity

33.2 NU

Potential design capacity

33.2 NU

Factor A (odour potential) Factor D (manure type) 0.7 Factor B (design capacity) 226.4

Factor E (encroaching land use)

349 m (1145 ft)

Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn)

Actual distance from livestock barn

NA

Storage base distance 'S'

No existing manure storage (minimum distance from manure storage)

Actual distance from manure storage NA Farm contact information (!)



Location of existing livestock facility or

anaerobic digestor (!)

Total lot size 40.13 ha

ON

Regional Municipality of York Town of East Gwillimbury EAST GWILLIMBURY Roll number: 1954

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Unoccupied Livestock Barn	258 m²	12.9 NU	258 m²

Unoccupied Barn or Unused Storage (Operation 13)

The calculated setback is based on assumptions for an unoccupied barn or unused storage that may not reflect the actual design capacity.

Setback summary

Existing manure storage

- Not Specified -

Design capacity

12.9 NU

Potential design capacity

12.9 NU

Factor A (odour potential)

Factor D (manure type) 0.7 Factor B (design capacity) 176.33 Factor E (encroaching land use) 2.2

Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn) 272 m (892 ft)

Actual distance from livestock barn

NA

Storage base distance 'S'

(minimum distance from manure storage)

No existing manure storage

Actual distance from manure storage

NA

Farm contact information (!)

Location of existing livestock facility or

anaerobic digestor (!)

Total lot size 19.39 ha

ON

Regional Municipality of York Town of East Gwillimbury

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Unoccupied Livestock Barn	899 m²	45 NU	899 m²

Unoccupied Barn or Unused Storage (Operation 21)

The calculated setback is based on assumptions for an unoccupied barn or unused storage that may not reflect the actual design capacity.

Setback summary

V3. Solid, outside, no cover, >= 30% DM Existing manure storage

Design capacity 45 NU Potential design capacity 45 NU

249.9 Factor A (odour potential) Factor B (design capacity) Factor D (manure type) 0.7 Factor E (encroaching land use)

Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn)

Actual distance from livestock barn NA

Storage base distance 'S' (minimum distance from manure storage)

Actual distance from manure storage NA

385 m (1263 ft)

No existing manure storage

ON

Farm contact information (!)



Location of existing livestock facility or

anaerobic digestor (!)

Total lot size 69.94 ha

Regional Municipality of York Town of East Gwillimbury EAST GWILLIMBURY Roll number: 1954

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Unoccupied Livestock Barn	1078 m²	53.9 NU	1078 m²

Unoccupied Barn or Unused Storage (Operation 45)

The calculated setback is based on assumptions for an unoccupied barn or unused storage that may not reflect the actual design capacity.

Setback summary

Existing manure storage

- Not Specified -

Design capacity

53.9 NU

Potential design capacity

53.9 NU

Factor A (odour potential)

Factor D (manure type) 0.7 Factor B (design capacity) 267.8

Factor E (encroaching land use) 2.2

Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn) 413 m (1355 ft)

Actual distance from livestock barn

NA

Storage base distance 'S'

(minimum distance from manure storage)

No existing manure storage

Actual distance from manure storage

NA

Farm contact information (!)

Location of existing livestock facility or anaerobic digestor (!)

Total lot size 9.17 ha

ON

Regional Municipality of York Town of East Gwillimbury EAST GWILLIMBURY Roll number: 1954

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Unoccupied Livestock Barn	341 m²	17.1 NU	341 m²

Unoccupied Barn or Unused Storage (Operation 47)

The calculated setback is based on assumptions for an unoccupied barn or unused storage that may not reflect the actual design capacity.

Setback summary

Existing manure storage

- Not Specified -

Design capacity

17.1 NU

Potential design capacity

17.1 NU

Factor A (odour potential) Factor D (manure type)

Factor B (design capacity)

190.16

Factor E (encroaching land use)

2.2

Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn)

Actual distance from livestock barn

293 m (961 ft)

NA

NA

Storage base distance 'S'

(minimum distance from manure storage)

Actual distance from manure storage

No existing manure storage

ON

Farm contact information (!)

Location of existing livestock facility or

anaerobic digestor (!)

Total lot size 4.13 ha

Regional Municipality of York Town of East Gwillimbury EAST GWILLIMBURY Roll number: 1954

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Horses, Large-framed, mature; > 680 kg (including unweaned offspring)	9	12.9 NU	272 m²

Setback summary

Existing manure storage V3. Solid, outside, no cover, >= 30% DM

12.9 NU Design capacity Potential design capacity 12.9 NU

Factor A (odour potential) 0.7 Factor B (design capacity) 176.2 Factor D (manure type) 0.7 Factor E (encroaching land use)

Building base distance 'F' (A \times B \times D \times E) 190 m (623 ft)

(minimum distance from livestock barn)

Actual distance from livestock barn NA

Storage base distance 'S' 190 m (623 ft)

(minimum distance from manure storage)

Actual distance from manure storage NA

ON

Farm contact information (!)

Location of existing livestock facility or

anaerobic digestor (!)

Total lot size 4.07 ha

Regional Municipality of York Town of East Gwillimbury EAST GWILLIMBURY Roll number: 1954

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Horses, Large-framed, mature; > 680 kg (including unweaned offspring)	34	48.6 NU	1027 m²

Setback summary

Existing manure storage V3. Solid, outside, no cover, >= 30% DM

48.6 NU Design capacity Potential design capacity 48.6 NU

Factor A (odour potential) 0.7 Factor B (design capacity) 257.14 Factor D (manure type) 0.7 Factor E (encroaching land use)

Building base distance 'F' (A \times B \times D \times E) 278 m (912 ft)

(minimum distance from livestock barn)

Actual distance from livestock barn NA

Storage base distance 'S' 278 m (912 ft)

(minimum distance from manure storage)

Actual distance from manure storage NA

ON

Farm contact information (!)

Location of existing livestock facility or

anaerobic digestor (!)



Total lot size 8.37 ha

Regional Municipality of York Town of East Gwillimbury EAST GWILLIMBURY Roll number: 1954

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Unoccupied Livestock Barn	306 m²	15.3 NU	306 m²



Unoccupied Barn or Unused Storage (Operation 60)

The calculated setback is based on assumptions for an unoccupied barn or unused storage that may not reflect the actual design capacity.

Setback summary

Existing manure storage V3. Solid, outside, no cover, >= 30% DM

Design capacity 15.3 NU Potential design capacity 15.3 NU

Factor A (odour potential) Factor D (manure type) 0.7 Factor B (design capacity) 184.33 Factor E (encroaching land use) 2.2

Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn)

Actual distance from livestock barn NA

Storage base distance 'S' (minimum distance from manure storage)

Actual distance from manure storage NA

284 m (932 ft)

No existing manure storage

ON

Farm contact information (!)

Location of existing livestock facility or

anaerobic digestor (!)

Regional Municipality of York Town of East Gwillimbury EAST GWILLIMBURY Roll number: 1954

Total lot size 20.07 ha

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Horses, Large-framed, mature; > 680 kg (including unweaned offspring)	15	21.4 NU	453 m²

Setback summary

Existing manure storage V3. Solid, outside, no cover, >= 30% DM

21.4 NU Design capacity Potential design capacity 21.4 NU

Factor A (odour potential) 0.7 Factor B (design capacity) 202.86 Factor D (manure type) 0.7 Factor E (encroaching land use)

Building base distance 'F' (A \times B \times D \times E) 219 m (718 ft)

(minimum distance from livestock barn)

Actual distance from livestock barn NA

Storage base distance 'S' 219 m (718 ft)

(minimum distance from manure storage)

Actual distance from manure storage NA

Farm contact information (!)



Location of existing livestock facility or

anaerobic digestor (!)



Total lot size 31.15 ha

Regional Municipality of York Town of East Gwillimbury EAST GWILLIMBURY Roll number: 1954

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Unoccupied Livestock Barn	445 m²	22.3 NU	445 m²
Solid	Donkeys, Jacks, jennies, mules, hinnies (includes unweaned foals)	2	1 NU	NA



Unoccupied Barn or Unused Storage (Operation 7)

The calculated setback is based on assumptions for an unoccupied barn or unused storage that may not reflect the actual design capacity.

Setback summary

Existing manure storage V3. Solid, outside, no cover, >= 30% DM

Design capacity 23.3 NU Potential design capacity 23.3 NU

Factor A (odour potential) 0.99 Factor D (manure type) 0.7

Factor B (design capacity) 206.5 Factor E (encroaching land use) 2.2

Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn)

Actual distance from livestock barn

315 m (1033 ft)

Storage base distance 'S' (minimum distance from manure storage) No existing manure storage

Actual distance from manure storage

NA

NA

ON

Farm contact information (!)



Location of existing livestock facility or



Total lot size 35.8 ha

Regional Municipality of York Town of East Gwillimbury EAST GWILLIMBURY Roll number: 1954

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Horses, Large-framed, mature; > 680 kg (including unweaned offspring)	93	132.9 NU	2808 m²

Setback summary

Existing manure storage V3. Solid, outside, no cover, >= 30% DM

132.9 NU Design capacity Potential design capacity 132.9 NU

Factor A (odour potential) 0.7 Factor D (manure type) 0.7

Factor B (design capacity) 348.76 Factor E (encroaching land use)

Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn)

Actual distance from livestock barn

376 m (1234 ft)

Storage base distance 'S' (minimum distance from manure storage) 376 m (1234 ft)

Actual distance from manure storage

NA

NA

Preparer signoff & disclaimer

Preparer contact information ON

Signature of preparer



07-16-2025

Date (mmm-dd-yyyy)

Note to the user

The Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) has developed this software program for distribution and use with the Minimum Distance Separation (MDS) Formulae as a public service to assist farmers, consultants, and the general public. This version of the software distributed by OMAFRA will be considered to be the official version for purposes of calculating MDS. OMAFRA is not responsible for errors due to inaccurate or incorrect data or information; mistakes in calculation; errors arising out of modification of the software, or errors arising out of incorrect inputting of data. All data and calculations should be verified before acting on them.