AGRICULTURAL IMPACT ASSESSMENT
FOR
476420 3RD LINE, MELANCTHON

PREPARED FOR:

SHELDON CREEK DEVELOPMENTS

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1. INTRODUCTION

1.1 Retainer

Colville Consulting Inc. was retained by Sheldon Creek Developments to complete an Agricultural Impact Assessment (AIA) for the lands located at 476420 3rd Line, Melancthon. These lands, herein referred to as the Subject Lands, are generally located south of Dufferin 17, west of Line 3, north of Side Road 5, and east of Line 4. The Subject Lands are approximately 37.05 ha (91.57 acres) in size and are designated Prime Agricultural Area in the Dufferin County Official Plan and Rural and Environmental Protection in the Township of Melancthon Official Plan.

1.2 Development in Ontario

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."

1.2.1 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.

1.2.2 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 Rural Affairs (OMAFRA) prepared the draft Agricultural Impact Assessment Guidance Document and published it in 2018[1]. This document provides guidance on

[1] The Ontario Ministry of Agriculture, Food and Rural Affairs is now two separate ministries. They are the Ontario Ministry of Agriculture, Food and Agribusiness (OMAFA) and the Ministry of Rural Affairs (MRA).

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 Greater Golden Horseshoe (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., who 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.Env., 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

It is understood that Sheldon Creek Developments is pursuing County and Township Official Plan Amendments (OPAs) and Zoning By-Law Amendments (ZBAs) to permit the expansion and *redevelopment* of the existing *non-agricultural use* on the Subject Lands, and to remove the Subject Lands from the Prime

Agricultural Area via the creation of a New Community Settlement Area. Chipwoods Park is an existing, legal non-conforming use located on the Subject Lands. The site requires servicing upgrades, and the Ministry of Environment, Conservation and Parks (MECP) has issued a formal demand that the entire sanitary system be brought up to standards. The *redevelopment* of the Subject Lands and the establishment of a New Community Settlement Area is understood to be the most desirable path forward to bring the sanitary system up to standards.

The proposed *redevelopment* of the Subject Lands will consist of the construction of approximately 224 residential units in a year-round, affordable leasehold community. The proposed *redevelopment* will also include an amenity area, recreation area, parkettes, stormwater management ponds, an internal network of roads, and visitor parking. A copy of the Concept Plan can be found in Appendix B.

1.5 Purpose of Study

The Subject Lands are designated Prime Agricultural Area in the Dufferin County Official Plan, and Rural and Environmental Protection in the Township of Melancthon Official Plan. Section 8.7.3 of the Dufferin County Official Plan outlines the supporting studies required for a complete OPA and ZBA applications, which includes an Agricultural Impact Assessment. The completion of an AIA was also identified as a requirement through pre-consultation with the Township of Melancthon.

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 *redevelopment* on agricultural operations, the farming community, and the broader *Agricultural System*. In cases where impacts cannot be avoided, the AIA recommends ways to mitigate adverse impacts. The AIA also assesses whether the proposed *redevelopment* is consistent with provincial, regional, and municipal agricultural policies.

1.6 Study Area

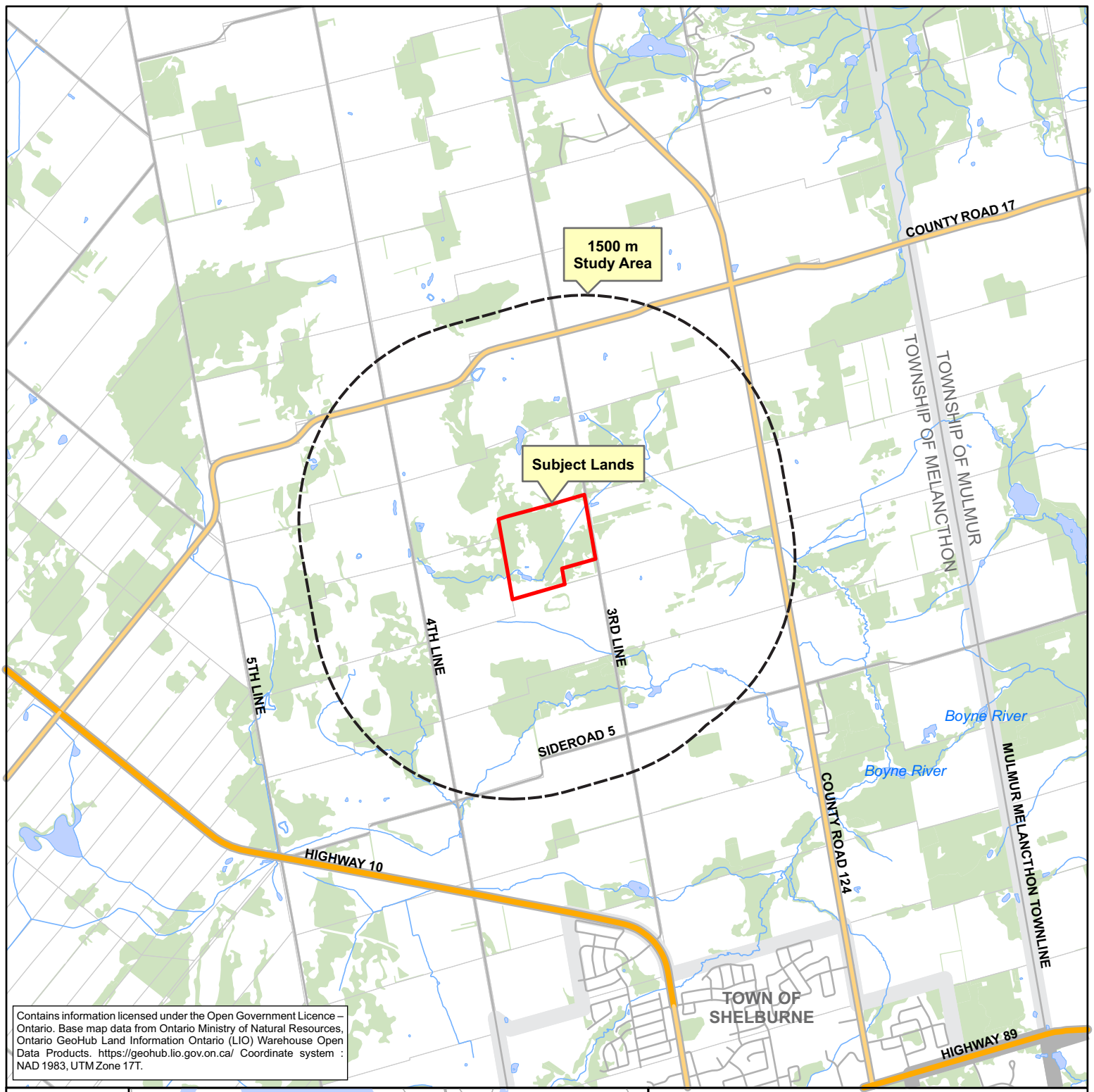
To be consistent with the draft Agricultural Impact Assessment Guidance Document (2018), the AIA must identify a Primary Study Area and a Secondary Study Area. For this AIA, the Primary Study Area (PSA) includes the Subject Lands, while all lands within 1.5 km (1,500 m) of the PSA boundaries comprise the Secondary Study Area (SSA). Figure 1 shows the location of the Primary and Secondary Study Areas.

1.6.1 Primary Study Area – Subject Lands

The Subject Lands are generally located south of Dufferin 17, west of Line 3, north of Side Road 5, and east of Line 4. The Subject Lands consist of a rectangularly shaped parcel and are approximately 37.05 ha (91.57 acres) in size. The Subject Lands are primarily occupied by natural heritage features, with small areas developed for the existing legal non-conforming use.

1.6.2 Secondary Study Area – Study Area

The Secondary Study Area, herein referred to as the *Study Area*, includes all lands within 1.5 km (1,500 m) of the Subject Lands' boundaries. The *Study Area* is generally bounded to the north by County Road 17, to the east by County Road 124, to the south by Sideroad 5, and to the west by 5 Line. The *Study Area* is designated Prime Agricultural Area in the County of Dufferin Official Plan and Agricultural, Rural, and Environmental Conservation in the Township of Melancton Official Plan.



LOCATION MAP

Figure 1
Location of Subject Lands

Agricultural Impact Assessment
Shelton Creek, 476420 3rd Line, Melancthon, ON

Prepared for: Sheldon Creek Developments

Prepared by: COLVILLE CONSULTING INC.

0 0.5 KM
1:40,000

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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 OMAFA'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 *redevelopment* using the 2017 *MDS I formula*;
- the identification of agricultural resources and investments in agricultural land improvements;
- the identification *agricultural uses*, *agriculture-related uses*, and *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 *redevelopment* 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; and,
- an assessment of the proposed *redevelopment's* consistency with agricultural policies of the *Provincial Planning Statement,* the Dufferin County Official Plan, and the Township of Melancthon Official Plan.

The findings of the above scope of work have been summarized in this report.

3. METHODOLOGY

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

3.1 Background Data Collection

Information sources reviewed for this study included:

- *Provincial Planning Statement* (2024);
- Dufferin County Official Plan and Land Use Schedules (July 2017 Consolidation);
- Township of Melancthon Official Plan and Land Use Schedules (2014);
- Soil Survey of Dufferin County – Report No. 38 of the Ontario Soil Survey (1964);
- 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);
- OMAFA'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);
- OMAFA's Artificial Drainage Systems mapping;
- OMAFA's AgriSuite, AgMaps and Agri-Systems databases;
- OMAFRA's Draft Agricultural Impact Assessment (AIA) Guidance Document (2018); and
- Ortho-rectified, digital aerial photography viewed using Google Earth™.

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 level land use survey was completed on February 27, 2025, which 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 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 OMAFA 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 facility* 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 1, 2017.

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

The *MDS I formula* is required for the proposed *redevelopment.* The information required to complete an *MDS I* calculation was obtained through a combination of sources. As per the MDS Guidelines, attempts were made 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 facilities.*

OMAFA's Agricultural Planning Tools (AgriSuite) was used to determine the *MDS* requirements. It provides the most up to date software developed by OMAFA 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* system; and
- the size of the property upon which the *livestock facility* is located.

This information was collected for all *livestock facilities* (active and *unoccupied*). In cases where landowners could not be contacted, visual observations of the *livestock facility* were used to determine 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 Earth™. 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 February 27, 2025, 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 new non-agricultural *development* and the establishment of new *settlement areas* to avoid *prime agricultural areas*, where possible. Where *prime agricultural areas* cannot be avoided, policy directs *development* to lower priority agricultural lands. The proposal involves the *redevelopment* of a legal non-conforming non-agricultural use in a *prime agricultural area* and the establishment of a new *settlement area*. The *PPS* allows for the redevelopment of brownfield sites in rural areas, which includes *prime agricultural areas*. The *PPS* also requires the evaluation of alternative locations for proposed new or expanded settlement area boundaries. However, given that the Subject Lands have already been disturbed by the prior development of Chipwoods Park, the demand to bring the sanitary system up to standards, and the *PPS* policies that allow for *redevelopment*, it is our opinion that an assessment of alternative locations is not required for the proposed *redevelopment*, as development elsewhere in the rural area would result in impacts to agricultural lands that have not been previously disturbed by non-agricultural *development.*

3.5 Evaluation of Agricultural Priority

When determining agricultural capability, the *PPS* directs *development* to "lower priority agricultural lands" when *prime agricultural areas* cannot be avoided. Although neither the *PPS,* nor other provincial planning documents specifically define "lower priority agricultural lands", there are a number of considerations used by OMAFA to determine the 'agricultural priority' of an area. These considerations include criteria such as the current land use, amount of capital investment in agricultural infrastructure, amount of land under active cultivation, existing degree of lot fragmentation to the surrounding agricultural land base, and proximity to incompatible land uses such as urban and rural *settlement areas*. This AIA considers these criteria to assess the agricultural priority of the Subject Lands.

3.6 Identification of Potential Impacts and Mitigation Measures

Potential impacts of the proposed *redevelopment* 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 lost;
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 affect 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 surface drainage features which could have an effect on adjacent lands;
d) Changes to landforms, elevations and slope that could alter microclimatic conditions (e.g. modification to slopes that may reduce or improve cold air drainage opportunities and changes to elevation may have an impact on diurnal temperatures);
e) Changes to hydrogeological conditions that could affect neighboring municipal or private wells, sources of irrigation water and sources of water for *livestock*;
f) 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, changes in road design.

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

3.7 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 *redevelopment* must adhere. A background review of all applicable provincial and municipal policies relating to agriculture was undertaken. Policies applicable to the proposed *redevelopment* were identified and assessed for consistency as part of this AIA.

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 Rural Areas in Municipalities

Section 2.5 of the *Provincial Planning Statement* specifically deals with *rural areas* in municipalities. The *PPS* defines *rural areas* as "a system of lands within municipalities that may include rural settlement areas, rural lands, prime agricultural areas, natural heritage features and areas, and resource areas." The Subject Lands are located within a *prime agricultural area* and are therefore part of the *rural area.*

Through discussions with Glen Schnarr and Associates Inc., it is understood that the *redevelopment* of the Subject Lands will be pursued through Section 2.5.1 of the *PPS*, which states in part that "Healthy, integrated and viable rural areas should be supported by:

b) Promoting regeneration, including the redevelopment of brownfield sites;
d) Using rural infrastructure and public service facilities efficiently."

The *PPS* defines *brownfield sites* as "underdeveloped or previously developed properties that may be contaminated. They are usually, but not exclusively, former industrial or commercial properties that may be underutilized, derelict or vacant." It is understood that the Subject Lands would meet the definition of a *brownfield site* as they are derelict and have been ordered by the MECP to bring the sanitary system up to standards.

4.1.2 Prime Agricultural Areas

Section 4.3 of the *Provincial Planning Statement* specifically deals 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.

While the Subject Lands are located in a *prime agricultural area* and comprised primarily of *prime agricultural lands*, the Subject Lands are not being used for agricultural purposes, nor have they been historically. Additionally, the Subject Lands have been disturbed by the existing non-agricultural use, and are considered a *brownfield site*.

4.1.3 Policies for Establishing a New Settlement Area

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

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."

This AIA will evaluate the proposal for consistency with Section 2.5.1 and Section 2.3.2.1.c),d),e), and f) of the *PPS*.

4.2 County of Dufferin Official Plan

Schedule C of the Dufferin County Official Plan (Consolidated July, 2017) designates the Subject Lands as Prime Agricultural Area. Section 4.2 of the Official Plan describes the lands within the Prime Agricultural Area designation as consisting primarily of *prime agricultural lands*.

Section 8.6.9 outlines policies for existing uses and states that "Nothing in this Plan is intended to prevent the continuation, expansion, or enlargement of legally established uses which do not conform to the designations and provisions of this Plan. At their sole discretion, Councils of the local municipalities may zone to permit the expansion or enlargement of legally existing uses provided that such uses are in accordance with conditions contained in a local municipal official plan. Where Provincial Plans include existing use and/or prohibition policies, such policies or prohibitions will take precedence over this Plan and the local municipal plan policies with respect to existing uses."

Section 3.3 of the Dufferin County Official Plan outlines policies for settlement structure. Section 3.3.1.i) states that "The establishment of new settlement areas is not permitted by this Plan"

This AIA will evaluate the proposal's consistency with Section 8.6.9 and Section 3.3.1.h) of the County of Dufferin Official Plan.

4.3 Township of Melancthon Official Plan

Schedule A-1 of the Township of Melancthon Official Plan designates the Subject Lands as Rural. Section 5.3.1 of the Official Plan outlines the policies for permitted uses in the Rural designation. Section 5.3.1.a) states that "All uses permitted in the Agricultural designation, as specified in the policies of subsection 5.2.1 and other related policies, are also permitted in the Rural designation. These included uses such as agricultural uses, agriculture-related uses, and on-farm diversified uses."

Section 5.2.1 outlines the permitted uses within the Agricultural designation. Section 5.2.1.e) states that "Existing uses not permitted in the Agricultural designation may be recognized as legal non-conforming uses under the provisions of section 7.6 of this Plan unless available documentation indicates that an existing use does not qualify for such status."

Section 7.6.c) of the Township of Melancthon Official Plan states that "Legally existing land uses at the date of the time of adoption of this Plan that are not in conformity with the Plan's policies are considered as

legal non-conforming uses and, in the long term, should cease to exist. In some instances, however, it may be desirable to permit the extension or enlargement of such a legal non-conforming use in order to avoid unnecessary hardship. Consideration of an application for such an extension or enlargement shall be based on the policies and criteria of this section."

Section 7.6.d) states that "A zoning by-law amendment to permit the extension or enlargement of a non-conforming land use, building or structure may be passed without an amendment to this Plan if Council is satisfied that there is conformity with the following criteria.

i) The proposed extension or enlargement shall not unduly aggravate the situation created by the existence of the use, particularly in regard to the policies of this Plan and the requirements of the implementing zoning by-law.
ii) The proposed extension or enlargement shall be in appropriate proportion to the size of the non-conforming use at the time of the application for such extension or enlargement.
iii) The proposed extension or enlargement shall not create or substantially increase such nuisance factors as noise, vibration, fumes, smoke, dust, odour and lighting so as to add substantially to the incompatibility of the use with the surrounding area. The proposal shall meet the requirements of all agencies having jurisdiction over such matters such as the applicable conservation authority and the Ministry of the Environment.
iv) It must be possible to adequately protect neighbouring conforming uses, where necessary, by the provision of such features as landscaping, buffering, screening, building setbacks, and other measures to reduce nuisance effects. The provision of site plan control may be utilized in this regard.
v) Traffic and parking conditions, both on-site and in the area, shall not be significantly adversely affected, with adequate provision being made for on-site parking and loading facilities and for any required improvements to area roads.
vi) Appropriate on-site services relating to such matters as water supply, sewage disposal and stormwater management can be provided and the approval of all agencies having jurisdiction over such matters has been obtained."

Section 3.1.1 of the Township of Melancthon Official Plan outlines policies for growth accommodation and intensification in communities. Section 3.1.1.h) states that "The creation of new communities or settlement areas is not permitted in the Township."

This AIA will address sections 7.6.d).iii) and 7.6.d).iv) of the Township of Melancthon Official Plan.

5. STUDY FINDINGS

5.1 Physiography

The Subject Lands are located within the Dundalk Till Plain Physiographic Region (Chapman and Putnam, 1984). This physiographic region lies between the Horseshoe Moraines physiographic region to the northeast, the Tesswater Drumlin Field to the west, and the Stanford Till Plain and Guelph Drumlin Field to the south. The Dundalk Till Plain consists mostly of gently undulating till plain. The north and west of the region are occupied by low drumlins, while the remainder of the region is comprised of a fluted till plain with shallow valleys running southeastward.

The bedrock geology of the Dundalk Till Plain consists primarily of limestone and dolostone and is overlain by deposits of glacial till. A layer of wind-blown silt is present in much of the surface soil of the region, which is generally less than 2 feet in depth, and often only a few inches. Soils in the Dundalk Till Plain are primarily loams and silt loams, including the Huron, Perth, Brookston, Harriston, Listowel, and Parkhill series, regardless of the nature of the underlying till. As a result, soils in this physiographic region are generally slow to drain, and are often wet late into the spring, with depressional areas often occupied by swamps and bogs.

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 Orangeville MOE station (1981-2010) were obtained from the online database (Appendix C).

Environment Canada's Orangeville station is located approximately 412 m from the Subject Lands. Records show that this area receives an average of 901.5 mm of precipitation annually; 750.1 mm of rainfall and 151.5 cm of snowfall. The daily average temperature ranges from a high of 19.4°C to a low of -7.5°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 Dufferin County begin to experience average temperatures greater than 10°C starting May 12th before reaching temperatures greater than 12.8°C for 3 consecutive days around May 24th. During this time and up until the season's average ending date, September 23rd, the area accumulates an average of 2380 crop heat units (CHU).

On average, the last spring frost in the Melancthon area occurs on May 30th. The first fall frost is expected on September 30th. This provides the surrounding area with a growing period of approximately 132 days. The climate in the Melancthon 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 OMAFA and Statistics Canada's Agriculture and Food Statistics Census of Agriculture. The Subject Lands are located within the Census Western Ontario Region, Dufferin County. Agricultural crop statistics were obtained from the online database and are included in

Appendix D. 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.

5.3.1 Dufferin County

The total number of farms in Dufferin County increased from 690 in 2016 to 695 in 2021, with total cropland increasing from 117,272 acres in 2016 to 122,320 acres in 2021.

Field crops grown in Dufferin County include winter wheat, oats for grain, barley for grain, mixed grains, corn for grain, corn for silage, hay, soybeans, and potatoes. According to census data, field crop production between 2016 and 2021 increased for winter wheat, oats for grain, corn for grain, hay, soybeans, and potatoes, whereas all other major field crop production in Dufferin decreased.

Fruit crops grown in Dufferin include apples, sour cherries, strawberries, and raspberries. Fruit crop acreage increased from 41 acres in 2016 to 72 acres in 2021. Vegetable crops grown in Dufferin include sweet corn, tomatoes, green beans, and green or wax beans. Vegetable crop acreage increased from 646 acres in 2016 to 768 acres in 2021.

5.3.2 Township of Melancthon

The number of farms in the Township of Melancthon increased from 124 in 2016 to 155 in 2021, while total cropland decreased slightly from 29,579 acres in 2016 to 29,291 acres in 2021.

Field crops grown in the Township of Melancthon include winter wheat, oats for grain, barley for grain, mixed grains, corn for grain, corn for silage, hay, soybeans, and potatoes. According to census data, field crop production between 2016 and 2021 increased for oats for grain, corn for grain, hay, soybeans, and potatoes, whereas all other major field crop production in the Melancthon decreased.

Fruit crops grown in Melancthon include apples and sour cherries. Fruit crop acreage increased slightly from 11 acres in 2016 to 12 acres in 2021. Vegetable crops grown in Melancthon include sweet corn, tomatoes, and green peas. Vegetable crop acreage was not measured in Melancthon in 2016, 221 acres were utilized for vegetable crop production 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 part 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 Dufferin County - No. 38 of the Ontario Soil Survey* of the Ontario Soil Survey (Hoffman, D.W., Matthews, B.C., and Wicklund, R.E., 1962) includes a soil map that shows the distribution of the various soil series in Dufferin County. The digital Provincial Soil Resource database is compiled and administered by OMAFA 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 January 2025.

The *Soil Survey of Dufferin County* mapping shows that the soils within the Subject Lands are comprised of Caledon Fine Sandy Loam (43.97%) and Muck (56.03%) soils. Regional scale soil mapping is shown in Figure 2.

Caledon Series

Caledon Fine Sandy Loam soils are well drained soils developed on limestone and sandstone gravel, overlain by stone-free fine sand. These soils typically occur on moderately rolling topography and have rapid rates of internal drainage due to the coarse soil materials, and moderate rates of external drainage.

Caledon Fine Sandy Loam soils are good agricultural soils and are well suited for the production of most *common field crops*. Crop production on these soils are primarily limited by moisture deficiencies and low nutrient content can. Crop yields can be improved through the application of manure and fertilizers.

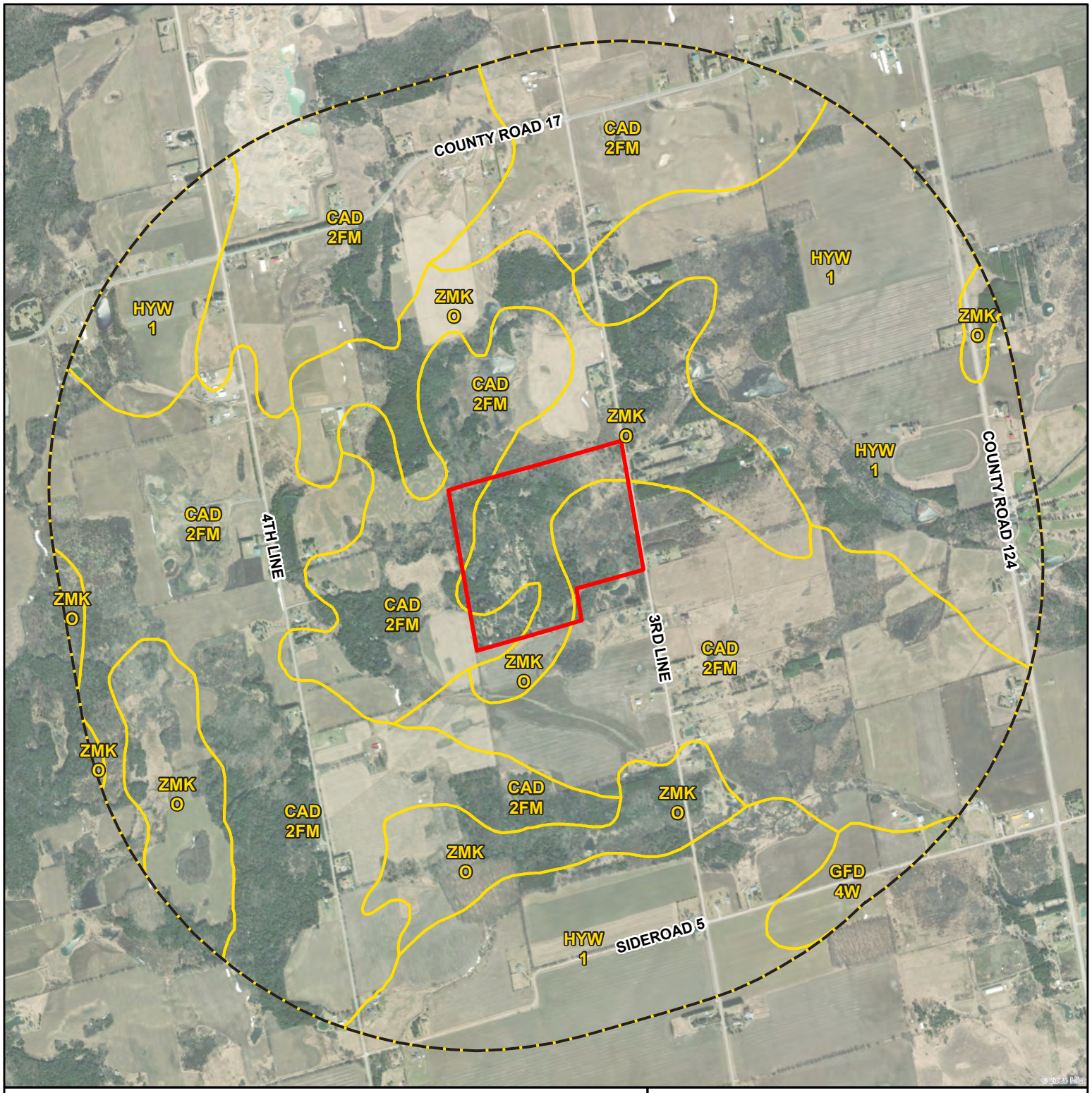
Muck

Muck soils have developed from accumulations of decomposed organic matter. Muck soils can be several metres thick or can be underlain by mineral soil or bedrock within one metre of the surface. These soils are very poorly drained and occur in depressional topography. The majority of Muck soils in this area are not suitable for agricultural production of *common field crops*.

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 has few 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 Subject Lands are mapped as CLI Class 2F (43.97%) and CLI Class O (56.03%) lands, as shown in Figure 2. CLI Class 2F soils have moderate limitations for *common field crops* due to low fertility. CLI Class O soils are organic soils, which are not placed in a capability class. The composition of soils mapped within the Subject Lands and their associated CLI Class are summarized in Table 1 below.



Legend

- Subject lands
- Study Area (1500 m)
- Soil

Soil Series Name → **CAD**

CLI Class → **2FM** ← CLI Subclass

CLI AGRICULTURAL CAPABILITY CLASSES

Class 1 - No significant limitations in use for crops.
Class 2 - Moderate limitations that restrict the choice of crops, or require moderate conservation practices.
Class 3 - Moderately severe limitations that restrict the choice of crops, or require special conservation practices.
Class 4 - Severe limitations that restrict the choice of crops, or require special conservation practices.
Class O - Organic soils, not placed in capability classes.

CLI AGRICULTURAL CAPABILITY SUBCLASSES

M Moisture – moisture holding capacity is low and soils are prone to droughtiness.
W Excess Water – presence of excess soil moisture, other than that brought about by inundation
F Low Fertility – limitations due to natural soil fertility

Soil Series

HYW - Honeywood Silt Loam
CAD - Caledon Fine Sandy Loam
GFD - Gilford Loam
ZMK - Muck

Figure 2
Soils and CLI

Agricultural Impact Assessment
Shelton Creek, 476420 3rd Line, Melancthon, ON

Prepared for: Sheldon Creek Developments

Prepared by: COLVILLE CONSULTING INC.

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Table 1. Regional Soil Series for Subject Lands			
Soil Series	**CLI Class**	**Area (Ha)**	**% of Subject Lands**
Caledon Fine Sandy Loam	2F	16.29	43.97
Muck	O	20.76	56.03
Totals		**37.05**	**100.00%**

5.6 Land Use

A reconnaissance level land use survey was completed on February 27, 2025. 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 uses* within the *Study Area*. 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* in the Subject Lands and *Study Area*; identify agricultural operations that may be sensitive to the introduction of new land uses; and identify *livestock facilities* in order to calculate the *MDS* setback requirements. Figure 3 shows the land uses and crop types observed. 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.

Sixteen *agricultural uses* were identified during the land use survey. The *agricultural uses* include one *beef operation,* one specialty crop operation, one equestrian operation, two *hobby farms*, four *cash crop* operations, four *remnant* farms, and three *unoccupied livestock facilities.*

No *agriculture-related uses* were identified during the land use survey and desktop review. One *on-farm diversifies use*, a farm stand, was observed during the land use survey.

In addition to the approximately 68 *non-farm residences* observed, six *non-agricultural uses* were identified within the *Study Area*. These uses include one recreational use, two aggregate operations, two industrial uses, and one trailer park.

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 accommodation for full-time farm labour when the size and nature of the operation requires additional employment."

Farm types were noted and identified as either active or *retired* (e.g., *unoccupied livestock facilities*) *livestock facilities, cash crop* operations, or *hobby farms*. *Retired 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* and the *MDS formulae* is not applied. The infrastructure for an *unoccupied livestock facility* is suitable for housing *livestock* and as such, the *MDS formulae* applies to these facilities.

Legend

- Subject lands
- Study Area (1500 m)

Agricultural Land Uses

- Beef Operation
- Equestrian Operation
- Hobby Farm
- Cash Crop Operation
- Remnant Farm
- Unoccupied Livestock Operation
- Specialty Crop Operation

Non-Agricultural Land Uses

- Recreational
- Industrial
- Aggregate Operation
- Trailer Park
- Non-Farm Residential

On-Farm Diversified Uses

- Farm Stand

Crop Pattern

- Hay
- Corn
- Pasture
- Cultivated
- Specialty Crop
- Idle
- Scrub
- Disturbed

Figure 3
Land Use

Agricultural Impact Assessment
Shelton Creek, 476420 3rd Line, Melancthon, ON

Prepared for: Sheldon Creek Developments

Prepared by: COLVILLE CONSULTING INC.

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Sixteen *agricultural uses* were identified within the *Study Area.* These include one *beef operation* (#12), one specialty crop operation (#22), one equestrian operation (#15), two *hobby farms* (#20 and #21), four *cash crop* operations (#2, #4, #8, and #10), four *remnant* farms (#1, #3, #5, and #6), and three *unoccupied livestock operations* (#9, #11, and #13).

No *agricultural uses* were identified within the Subject Lands during the land use survey and desktop review.

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.

No *agriculture-related uses* were identified within the Subject Lands, nor within the *Study Area*.

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."

One on-farm diversified use was identified in the *Study Area* during the land use survey. This is a farm stand, selling flowers grown on-farm (#21).

5.6.4 Non-Agricultural Uses

Non-agricultural uses include *non-farm residences,* residential clusters, hamlets and *settlement areas,* municipal utilities, commercial and industrial operations, recreational uses, and institutional uses. Approximately 68 *non-farm residences* were observed throughout the *Study Area.*

Excluding the *non-farm residences,* five *non-agricultural uses* were observed within the *Study Area.* These include one recreational use (#7), two aggregate operations (#14 and #19), and two industrial uses (#16 and #17).

One *non-agricultural* use, a trailer park (#23) was observed on the Subject Lands during the land use survey and desktop review.

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	Empty or Remnant
Agricultural	16	4 – Cash Crop Operation 1 – Beef Operation 1 – Equestrian Operation 2 – Hobby Farm 1 – Specialty Crop Operation	4 – Remnant Farm 3 – Unoccupied Livestock Operation
Agriculture-Related	0	0	0
On-farm Diversified	1	1 – Farm Stand	0
	Total Number	**Type**	
Non-Agricultural	74	1 – Recreational 2 – Aggregate Operation 2 – Industrial 1 – Trailer Park 68 – Non-farm Residences	

5.6.6 Cropping Pattern

The land use survey completed on February 27, identified crops based on observations of crop stubble and other identifying features. As shown in Figure 3, the crops grown within the Subject Lands and Study Area *common field crops*, predominantly a mix of hay and corn, as well as cultivated lands where the lands are being used for agricultural crop production, but where specific crops being grown were not readily identifiable. There are also areas of *idle agricultural lands* and *scrub land*, as well as a small area used for specialty crop production.

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*. Investments in land improvements were also noted during the land use surveys.

5.7.1 Drainage Improvements on Subject Lands

According to OMAFA's online mapping tool AgMaps, there are no investments in tile drainage on the Subject Lands. One constructed drain is present on the Subject Lands. The McKibbon Drain runs southwest from the northeast corner of the property for approximately 605 m.

Legend

- Subject lands
- Study Area (1500 m)
- Constructed Drain

Figure 4
Land Improvements

Agricultural Impact Assessment
Shelton Creek, 476420 3rd Line, Melancthon, ON

Prepared for: Sheldon Creek Developments

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5.7.2 Drainage Improvements in Study Area

According to OMAFA's online mapping tool AgMaps, there are no investments in tile drainage within the *Study Area.* Two constructed drains are present in the *Study Area.* The McKibbon Drain runs northwest before turning to run southwest through the northeast corner of the Subject Lands. A small, unnamed, constructed drain is also located in the southwest corner of the *Study Area*.

5.7.3 Other Land Improvements

No other investments in land improvements were identified within the Subject Lands or in the broader *Study Area*.

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 uses*, which in turn can result in more frequent occurrences of conflict arising between *agricultural* and *non-agricultural 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 or expanding non-agricultural *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, there is a mix of parcel sizes ranging from single residential (< 1 ha) to large agricultural sized parcels (>60 ha). The majority of parcels within the *Study Area* are suitably sized for a variety of *agricultural uses*. East of the Subject Lands, significant levels of lot creation have occurred, fragmenting this portion of the *Study Area*. Additionally, natural heritage features, such as wetlands and woodlots, fragment the agricultural land base. For these reasons, the Study Area is considered to be moderately fragmented. Fragmentation of the *Study Area* is shown in Figure 5 below.

Legend

- Subject lands
- Study Area (1500 m)
- Fragmentation

Figure 5
Fragmentation

Agricultural Impact Assessment
Shelton Creek, 476420 3rd Line, Melancthon, ON

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5.9 Minimum Distance Separation

5.9.1 Requirements for MDS and Non-Agricultural Uses

The *Minimum Distance Separation* is a tool used to minimize potential impacts and conflicts between *non-agricultural uses* and *agricultural 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 or expanding *non-agricultural land uses* proposed in a rural or agricultural land use designation. 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 are not suitable for housing *livestock.*

The *MDS I formula* was applied to all *livestock facilities* (active and unoccupied) observed within 1,500 m of the Subject Lands. The factors used to determine the *MDS I* setback requirements for these facilities include: the type of *livestock*; the maximum capacity of the barn for *livestock*; the type of *manure storage* system; and the type of land use (Type A and Type B). The proposed *redevelopment* is considered to be a Type B (more sensitive) land use. The remaining factors required to calculate the *MDS* setbacks were determined through field observations recorded during the land use survey, aerial photographic interpretation, and site-specific information provided by landowners, where possible. When a landowner could not be contacted, self-addressed envelopes and forms were left requesting information which would enable us to calculate the *MDS* setback requirements at *livestock* operations that had the potential to create *MDS* constraints for the Subject Lands.

The lot sizes were determined using the AgMaps measuring tool. In some cases, the building capacity was estimated based on the building dimensions, as measured using either the AgMaps measuring tool, or the Google Earth® measuring tool.

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 8533 (2016) document contains a set of guidelines which outline how the *MDS I formula* is to be applied. The following are the *MDS* guidelines that are relevant to the proposed *redevelopment* of the Subject Lands.

#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 4.2.3.1.v of the County of Dufferin Official Plan requires the application of the MDS Formulae for *non-agricultural uses* proposed in the *prime agricultural area*. As such, the *MDS formulae* must be applied for the proposed *redevelopment.*

#2. For What, and When is an MDS Setback Required?
The MDS I setback distances shall be met prior to the approval of: proposed lot creation in accordance with Implementation Guidelines #8 and #9; rezonings or re-designations in accordance with Implementation Guideline #10; building permits on a lot which exists prior to March 1, 2017 in accordance with Implementation Guideline #7; and as directed by municipalities for local approvals for agriculture-related uses or on-farm diversified uses in accordance with Implementation Guideline #35. The information used to carry out an MDS I calculation must reflect the circumstances at the time that the municipality deems the planning or building permit application to be complete.

The proposed redevelopment and establishment of a New Community Settlement Area will require County and Township Zoning By-law Amendments and Official Plan Amendments. Therefore, the calculation of MDS I setback distances is required.

#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.

As discussed further below, the proposal 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 were investigated and *MDS I* setback calculations completed, where warranted.

#10. MDS I Setbacks for Zoning By-Law Amendments and Official Plan Amendments
An MDS I setback is required for all proposed amendments to rezone or redesignate land to permit development in prime agricultural areas and rural lands presently zoned or designated for agricultural use. This shall include amendments to allow site-specific exceptions which add non-agricultural uses or residential uses to the list of agricultural uses already permitted on a lot, but shall exclude applications to rezone a lot for a residence surplus to a farming operation (e.g., to a rural residential zone) in accordance with Implementation Guideline #9 above. Amendments to rezone or redesignate land already zoned or designated for a non-agricultural use, shall only need to meet the MDS I setbacks if the amendment(s) will permit a more sensitive land use than existed before. In other words, if the proposal is to change an existing Type A land use (e.g., industrial use outside of a settlement area) to a Type B land use (e.g., commercial) in accordance with Implementation Guidelines #33 and #34, then an MDS I setback shall be required.

OPAs and ZBAs are required to permit the proposed *redevelopment* and establishment of a New Community Settlement Area.

#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.

County and Township OPAs and ZBAs to permit *development,* excluding industrial uses, on land outside of a *settlement area,* are considered to be a Type B land use. Additionally, the establishment of a new *settlement area* 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.

#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.

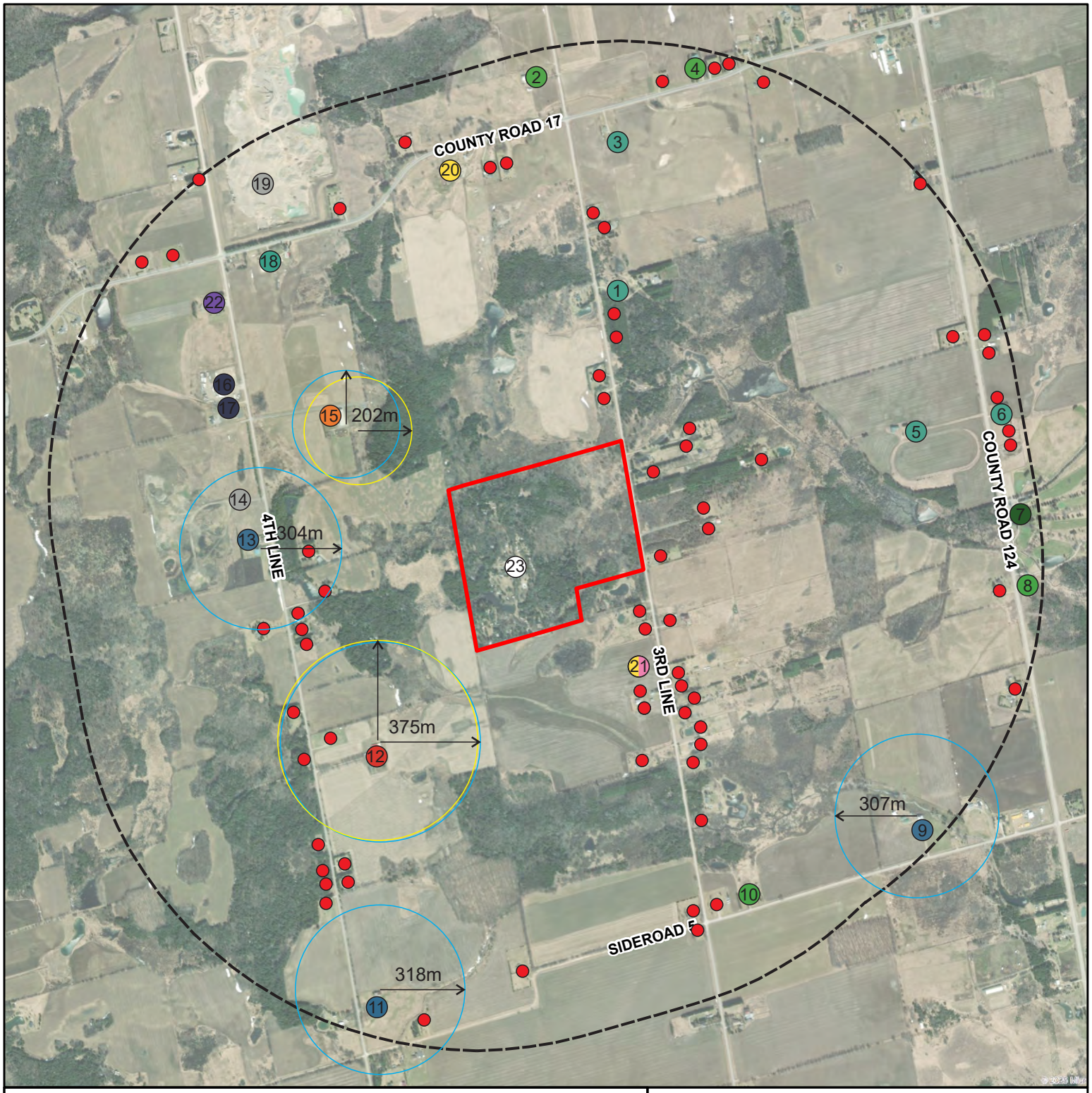
For building permit applications for proposed dwellings, where required in accordance with Implementation Guideline #7, MDS I setbacks are measured as the shortest distance between the proposed dwelling and either the surrounding manure storages, anaerobic digesters or the livestock occupied portions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

MDS I setback distances shall be 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

The *MDS I formula* was applied to five *livestock facilities* (Operations #9, #11, #12, #13, and #15) within 1,500 m of the Subject Lands. The *MDS I formula* was not applied to farm operations with barns that did not appear to be structurally sound and capable housing *livestock*, nor *livestock* operations located outside of the 1.5 km Study Area.

Figure 6 shows the *MDS I* setback requirements for the identified *livestock* operations. As shown in Figure 6, no *MDS I* setbacks encroach into the Subject Lands. Therefore, the proposed *redevelopment* and establishment of a New Community Settlement Area complies with the *MDS formulae*. The *MDS I* reports, generated by OMAFA's AgriSuite software, can be found in Appendix H. Table 3 summarizes the results of the calculations and the level of compliance with the *MDS* setback achievable.



Legend

- Subject lands
- Study Area (1500 m)

Agricultural Land Uses

- Beef Operation
- Equestrian Operation
- Hobby Farm
- Cash Crop Operation
- Remnant Farm
- Unoccupied Livestock Operation
- Specialty Crop Operation

Non-Agricultural Land Uses

- Recreational
- Industrial
- Aggregate Operation
- Trailer Park
- Non-Farm Residential

On-Farm Diversified Uses

- Farm Stand

MDS I Setbacks

- Livestock Facility
- Manure Storage

Figure 6
MDS

Agricultural Impact Assessment
Shelton Creek, 476420 3rd Line, Melancthon, ON

Prepared for: Sheldon Creek Developments

Prepared by: COLVILLE CONSULTING INC.

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Table 3. MDS Setback Requirements for Proposed Development

Site Number	MDS I Setback Requirement – Livestock Facility	MDS I Setback Requirement – Manure Storage	Nearest Distance to Subject Lands	Complies with MDS I Setback?
9	307m	N/A	3,183m	Yes
11	318m	N/A	1,320m	Yes
12	375m	375m	497m	Yes
13	304m	N/A	728m	Yes
15	202m	202m	402m	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 *redevelopment* and establishment of a New Community Settlement Area. The agriculture and agri-food sector is one of the largest primary goods producing sectors in the Township of Melancthon, and Dufferin County and plays a key role in the economies of the Township and County. According to Census of Agriculture data, the total number of farms in Dufferin County decreased from 795 farms in 2011, to 690 farms in 2016, before growing to 695 farms in 2021. The Township of Melancthon observed a similar trend in the number of farms over the same period, with data showing 201 farms in 2011, 124 farms in 2016, and 155 farms in 2021. These farms employ residents from Dufferin County and the Township of Melancthon, contributing economically to the area, and supporting the *agri-food network.*

As of 2021, the agriculture, forestry, fishing and hunting industry employed approximately 795 individuals within Dufferin County, which is a slight decrease from the 860 individuals employed in 2016. The Township of Melancthon observed a slight increase in individuals employed by the agriculture, forestry, fishing and hunting industry over the same period, with 145 individuals employed in 2016, and 220 individuals employed in 2021. Within Dufferin County there were approximately 926 agri-food businesses in 2021, with 181 of these businesses located within the Township of Melancthon. Both Dufferin County and the Township of Melancthon have experienced an increase in agri-food businesses from 2016 to 2021.

As of 2021, of the 155 total farms within the Township of Melancthon, two farms were valued under $200,000, seven farms were valued between $200,000 and $499,999, 32 farms were valued between $500,000 and $999,999, and 114 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.

The Subject Lands are not in agricultural production, and based on aerial photographs, do not appear to have been in agricultural production historically. As such, the Subject Lands do not contribute to the agricultural economies of Dufferin County or the Township of Melancton. With the implementation of mitigation measures to minimize indirect impacts on surrounding farm operations, it is expected that the proposed *redevelopment* and establishment of a New Community Settlement Area will have no impact on the area's agricultural economy.

6. ASSESSMENT OF AGRICULTURAL PRIORITY

The Subject Lands are located within the Township of Melancthon's *prime agricultural area*; therefore, an assessment of the agricultural priority of the Subject Lands is required to be consistent with OMAFRA's draft Agricultural Impact Assessment Guidance Document. This analysis involves an assessment of whether the lands are part of a *specialty crop area*, the soil capability relative to other lands within the *Study Area*, the level of investment in agricultural infrastructure and land improvements, the parcel size, presence of existing *non-agricultural uses*, ability to minimize potential conflict (e.g., meeting the *MDS I* setback requirements), and the zoning of the parcel.

We have concluded that the Subject Lands are lower priority agricultural lands for the following reasons:

1. The Subject Lands are not located within a *specialty crop area* and specialty crops are not grown on the Subject Lands;
2. The Subject Lands have been disturbed by the development of Chipwoods Park and are considered a brownfield site due to derelict of the lands;
3. The majority of the Subject Lands are comprised of Muck soils, which typically cannot be used for the cultivation of agricultural products. Based on aerial photographs, the Subject Lands do not appear to have been *cultivated* historically;
4. There are no investments in agricultural tile drainage or agricultural infrastructure within the Subject Lands;
5. They are located in a moderately fragmented area in which there is a mix of agricultural and *non-agricultural uses.* The presence and prevalence of the *non-agricultural uses* increase the potential for conflict arising between agricultural and *non-agricultural uses*, which in turn reduces the agricultural priority of the area; and
6. *MDS I* setbacks can be met for the proposed *redevelopment* on the Subject Lands.

7. 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 *redevelopment* of the existing legal non-conforming use of the Subject Lands, and the establishment of a New Community Settlement Area, will have both direct and indirect impacts. It is unlikely that the proposed *redevelopment* and New Community Settlement Area will have significant, long-term negative effects on the surrounding lands and community.

7.1 Direct Impacts

7.1.1 Prime Agricultural Lands

The Subject Lands are approximately 37.05 (91.57 acres) ha in size, of which approximately 16.29 ha are *prime agricultural lands*. The majority of the *redevelopment* is proposed to be located on the portions of the Subject Lands that are comprised of non-prime agricultural lands. Due to the existing legal non-conforming use, the developed portion of the Subject Lands are disturbed and are not capable of growing crops. They should not be considered *prime agricultural lands.* Including the disturbed area, the proposed *redevelopment* will result in the loss of approximately 4.32 ha of *prime agricultural lands*. The loss of a relatively small area of prime agricultural land is expected to have a negligible impact on the *Agricultural System.*

7.1.2 Agricultural Infrastructure

There is no agricultural infrastructure present on the Subject Lands and thus, there will be no impact associated with the loss of agricultural infrastructure.

7.1.3 Agricultural Land Improvements

No agricultural land improvements such as tile drainage have been installed on the Subject Lands. Therefore, there will be no impact associated with the loss of agricultural land improvements.

7.1.4 Loss of Crop Land

The Subject Lands are not in agricultural production, and based on aerial photographs, do not appear to have been *cultivated* historically. *Cultivation* of the Subject Lands is constrained by the presence of the existing infrastructure associated with the current legal non-conforming use, large natural heritage feature, and abundance of Muck soils. The proposed *redevelopment* of the Subject Lands will not result in the loss of lands that are cultivated.

7.2 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*.

7.2.1 Disruption to Surficial Drainage

The *redevelopment* 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 understood that a Grading Plan and Stormwater Management Plan are being developed as part of the *redevelopment* process. Implementation of the recommendations provided in these studies will minimize or eliminate the potential impacts, which are expected to be negligible.

7.2.2 Disruption to Farm Operations

Most of the active agricultural operations in the *Study Area* are well removed from the Subject Lands and are unlikely to experience any form of disruption to their operations. Access points to farm operations should be identified and construction activity should ensure that access to adjacent farmlands is maintained at all times. It is unlikely that there will be a negative impact on farm operations due to the proposed *redevelopment.*

The proposed *redevelopment* will have no impact on the flexibility of surrounding lands to accommodate changes in types of farming. The adjacent lands will not be affected and will still be able to cultivate *common field crops* and other agricultural products without limitation. As previously stated, the Subject Lands are not in agricultural production, and based on aerial photographs do not appear to have been *cultivated* historically.

The *redevelopment* of the Subject Lands 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 understood that a Hydrogeological Study is being prepared as part of the *redevelopment* 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.

7.2.3 Trespass and Vandalism

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

For longer-term mitigation of the proposed redevelopment, more permanent forms of edge-planning techniques should be considered along the 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.

7.2.4 Minimum Distance Separation

MDS I setback requirements have been calculated for all *manure storage* systems and *livestock facilities* capable of housing *livestock* in the Study Area. There are no *MDS* setbacks from *livestock facilities* which encroach into the Subject Lands. The proposed *redevelopment* will comply with the *MDS formulae* and no mitigation measures are required.

With regard to potential conflicts involving the MDS II formulae, future expansion of existing livestock operations can be restricted by the presence of sensitive, non-farm developments. However, there are no livestock operations in close proximity to the proposed redevelopment that are likely to cause a future conflict with the MDS II formula.

7.2.5 Transportation Impacts

It is anticipated that the proposed *redevelopment* will introduce more non-farm traffic to roads surrounding the Subject Lands. It is understood that a Traffic Impact Study is being prepared as part of the *redevelopment* application. To ensure transportation impacts are minimized, recommendations outlined in the Traffic Impact Study should be adhered to if potential impacts are identified.

7.2.6 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 this area still provides economic and community benefits, the influence of agriculture is waning in the *Study Area*. Given that the Subject Lands are not in agricultural production, and have never been *cultivated*, the proposed *redevelopment* will not negatively impact the agricultural economy.

7.3 Implementation of Edge Planning Techniques

Negative impacts on agriculture are most often felt along the *agricultural-urban interface* (AUI). When *non-agricultural uses* are proposed in *prime agricultural areas*, some consideration should be given to minimizing the length of the AUI. The proposed *redevelopment* creates a new agricultural-urban interface that should be given special consideration during the *development* design process.

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 and provides methods and recommendation for addressing the mitigation of conflict where *non-agricultural uses* 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 or mitigate impacts. Edge planning techniques to reduce potential impacts on farmers and non-farmers are discussed below.

7.3.1 Subdivision design: density, road, and lot patterns

The layout of the proposed *redevelopment* 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.

7.3.2 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 30 metres for residential land uses.

7.3.3 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.).

7.3.4 Urban-side buffer design

As part of the building setback, the urban-side buffer design should include a continuous vegetative buffer 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 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. 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.

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.

7.4 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 Impacts			
Potential Impact	**Potential Degree of Impact**	**Mitigation Measure**	**Anticipated Net Impact**
Direct Impacts			
Loss of *prime agricultural land*	Low	• None required	Loss of approximately 4.32 ha of *prime agricultural lands*, the majority of which are already disturbed.
Loss of agricultural infrastructure	Low	• None required • No agricultural infrastructure within Subject Lands	No impact
Loss of agricultural land improvements	Low	• None required • No land improvements within Subject Lands	No impact
Loss of cropland	Low	• None required • Lands have not been historically *cultivated*	No impact
Indirect Impacts			
Surficial Drainage	Low	• Prepare a Grading Plan and Stormwater Management Plan • Implement recommendations of Grading Plan and Stormwater Management Plan if impact 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	• Prepare a Traffic Impact Study • Implement recommendations of Traffic Impact Study if impact identified.	No significant impact anticipated
Trespass, Vandalism, and Stray Pets	Low	• Consider the use of edge planning techniques along the agricultural-urban interface	No significant impact anticipated
Noise, Dust & Light	Low	• Adhere to Ministry of the Environment, Conservation and Parks (MECP) guidelines	No impact anticipated

Table 4. Summary of Impacts

Potential Impact	Potential Degree of Impact	Mitigation Measure	Anticipated Net Impact
Land Use Compatibility	Low	• Consider the use of edge planning techniques during the design process for lands along the agricultural-urban interface	No significant impact anticipated
Fragmentation	Low	• None required	No impact
Changes to Microclimatic Conditions	Low	• None required • No changes in microclimatic conditions	No impact
Conflict with *MDS formula*	Low	• None required • Proposal complies with all MDS I setbacks • Non-conformity with the MDS II formulae not expected	No impact
Economic	Low	• None required	No impact
Wells, Irrigation, water bodies	Low	• Prepare a Hydrogeological Study for the Subject Lands • Implement recommendations of Hydrogeological Study if impact identified.	No impact anticipated

8. CONSISTENCY WITH AGRICULTURAL POLICIES

8.1 Provincial Planning Statement

The County of Dufferin and Township of Melancthon Official Plans designate the Subject Lands as Prime Agricultural Area and Rural, respectively. The *PPS* defines Rural Areas as "a system of lands within municipalities that may include rural settlement areas, rural lands, prime agricultural areas, natural heritage features and lands, and resource areas."

Section 2.5.1 of the *PPS* states in part that "Healthy, integrated and viable rural areas should be supported by:

b) Promoting regeneration, including the redevelopment of brownfield sites;
d) Using rural infrastructure and public service facilities efficiently."

The *PPS* defines *brownfield sites* as "underdeveloped or previously developed properties that may be contaminated. They are usually, but not exclusively, former industrial or commercial properties that may be underutilized, derelict or vacant." It is understood that the Subject Lands would meet the definition of a *brownfield site* as they are derelict and have been ordered by the MECP to bring the sanitary system up to standards.

Through discussions with Glen Schnarr and Associates Inc., it is understood that the *redevelopment* of the Subject Lands must be consistent with Section 2.5.1 of the *PPS and* is not required to be consistent with the policies for non-agricultural uses in a *prime agricultural area* because this is not a new *development.* Given that the proposal seeks to redevelop a brownfield site in the rural area, the proposal is consistent with the Rural Areas policies of the *PPS.*

Section 2.3.2.1 of the *PPS* states in part that "In identifying a new settlement area or allowing a settlement area boundary expansion, planning authorities shall consider the following:

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."

The Subject Lands are not located in a *specialty crop area* and the proposed *redevelopment* complies with the MDS Formulae. This AIA has identified the potential impacts of the proposal and provided recommendations to avoid, minimize, and mitigate the identified impacts. Establishing a New Community Settlement Area elsewhere in the Township would likely result in impacts to agricultural lands that have not been previously disturbed by non-agricultural *development.* Given that the Subject Lands have been previously disturbed, sanitary services a required to be brought up to standard, which would require

disturbance without the expansion of the existing use, and the majority of the lands are comprised of non-prime agricultural lands, the Subject Lands represent a reasonable choice of locations for the proposed *redevelopment* and New Community Settlement Area. Therefore, the proposal is consistent with the *PPS's* policies for establishing a new *settlement area.*

8.2 County of Dufferin Official Plan

Schedule C of the Dufferin County Official Plan designates the Subject Lands as Prime Agricultural Area. Section 8.6.9 states that "Nothing in this Plan is intended to prevent the continuation, expansion, or enlargement of legally established uses which do not conform to the designations and provisions of this Plan. At their sole discretion, Councils of the local municipalities may zone to permit the expansion or enlargement of legally existing uses provided that such uses are in accordance with conditions contained in a local municipal official plan. Where Provincial Plans include existing use and/or prohibition policies, such policies or prohibitions will take precedence over this Plan and the local municipal plan policies with respect to existing uses."

Chipwoods Park is a legal non-conforming use located on the Subject Lands. The proposed *redevelopment* is consistent with the Prime Agricultural Area policies for the expansion of a legal non-conforming use in the County of Dufferin Official Plan.

Section 3.3.1.i) of the County of Dufferin Official Plan states that "The establishment of new settlement areas is not permitted by this Plan" Therefore, an Official Plan Amendment to the County of Dufferin Official Plan will be required to establish a New Community Settlement Area.

8.3 Township of Melancthon Official Plan

Schedule A1 of the Township of Melancthon Official Plan designates the Subject Lands as Rural. Section 5.2.1.e) states that "Existing uses not permitted in the Agricultural designation may be recognized as legal non-conforming uses under the provisions of section 7.6 of this Plan unless available documentation indicates that an existing use does not qualify for such status."

Section 7.6.d) of the Official Plan states that "A zoning by-law amendment to permit the extension or enlargement of a non-conforming land use, building or structure may be passed without an amendment to this Plan if Council is satisfied that there is conformity with the following criteria.

i) The proposed extension or enlargement shall not unduly aggravate the situation created by the existence of the use, particularly in regard to the policies of this Plan and the requirements of the implementing zoning by-law.
ii) The proposed extension or enlargement shall be in appropriate proportion to the size of the non-conforming use at the time of the application for such extension or enlargement.
iii) The proposed extension or enlargement shall not create or substantially increase such nuisance factors as noise, vibration, fumes, smoke, dust, odour and lighting so as to add substantially to the incompatibility of the use with the surrounding area. The proposal shall meet the requirements of all agencies having jurisdiction over such matters such as the applicable conservation authority and the Ministry of the Environment.

iv) It must be possible to adequately protect neighbouring conforming uses, where necessary, by the provision of such features as landscaping, buffering, screening, building setbacks, and other measures to reduce nuisance effects. The provision of site plan control may be utilized in this regard.

v) Traffic and parking conditions, both on-site and in the area, shall not be significantly adversely affected, with adequate provision being made for on-site parking and loading facilities and for any required improvements to area roads.

vi) Appropriate on-site services relating to such matters as water supply, sewage disposal and stormwater management can be provided and the approval of all agencies having jurisdiction over such matters has been obtained."

This AIA has addressed sections 7.6.d)iii) and 7.6.d)iv) of the Township of Melancthon Official Plan. The proposed *redevelopment* of the Subject Lands will not substantially create or increase nuisances to surrounding lands. The proposed *redevelopment* complies with the *MDS formulae* and mitigation measures have been provided to minimize impacts on existing agricultural resources. The AIA has also recommended the use of edge planning techniques, which identify landscaping, buffering, and building setbacks as mitigation measures which would reduce the likelihood of nuisance complaints.

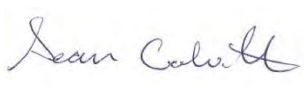
Section 3.1.1 of the Township of Melancthon Official Plan outlines policies for growth accommodation and intensification in communities. Section 3.1.1.h) states that "The creation of new communities or settlement areas is not permitted in the Township." The proposal will require an Official Plan Amendment to the Township of Melancthon Official Plan to establish a New Community Settlement Area.

9. 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 *redevelopment* and establishment of a New Community Settlement Area on the Subject Lands have been assessed and we have determined the following:

1. The Subject Lands are not located within a *specialty crop area* and specialty crops are not grown in on the Subject Lands;
2. The Subject Lands are not in agricultural production, and based on aerial photographs, do not appear to have been *cultivated* historically. There are no investments in agricultural infrastructure or agricultural land improvement on the Subject Lands, and they do not contribute to the agricultural economies of Dufferin County nor the Township of Melancton;
3. The Subject Lands have been disturbed through the development of Chipwoods Park. They are considered to be a brownfield site and are derelict, with the MECP requiring sanitary upgrades for the site to brought up to standards;
4. Impacts to the *Agricultural System* associated with the proposed *redevelopment* will be primarily limited to the loss of approximately 4.19 ha of prime agricultural lands, the majority of which have already been disturbed;
5. *MDS I* setbacks can be met for the proposed *redevelopment* and establishment of a New Community Settlement Area on the Subject Lands;
6. The location of the proposed *redevelopment* and New Community Settlement Area utilizes previously disturbed lands and will primarily be developed on non-prime agricultural lands. The Subject Lands are low priority agricultural lands and the proposal avoids lands which are used for agricultural production and lands which have not been disturbed by non-agricultural land uses; and
7. The proposed *redevelopment* of the Subject Lands is consistent with provincial rural areas policies and the policies for expansion of legal non-conforming uses in the County of Dufferin and Township of Melancthon Official Plans. The proposal is also consistent with *PPS* policies for the establishment of a new *settlement area*. It is understood that County and Township Official Plan Amendments and Zoning By-law Amendments will be required to establish a New Community Settlement Area.

Respectfully submitted by:



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10. 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 in an oxygen-limiting environment.

Beef operation: a farm operation whose predominant *livestock* is beef cattle, including cow-calf operations.

Brownfield sites:* - means undeveloped or previously-developed properties that may be contaminated. They are usually, but not exclusively, former industrial or commercial properties that may be underutilized, derelict, or vacant.

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

Common Field Crops: - Common field crops in Ontario include corn; soybeans; small grains and perennial forages (e.g., hay & pasture).

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.

Disturbed: - Lands that have been physically altered through development or non-agricultural activities that compromises or removes their agricultural capability. These disturbances typically degrade soil structure, remove topsoil, introduce contaminants, or otherwise render the land unsuitable or infeasible for the cultivation of agricultural crops without significant remediation.

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.

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.

Manure Storage*: - A permanent storage which is structurally sound and reasonable capable of storing manure and which typically contains liquid manure (<18% dry matter) or solid manure ((≥18% dry matter), and may exist in a variety of:

- Locations (under, within, nearby, or remote from barn);
- Materials (concrete, earthen, steel, wood);
- Coverings (open top, roof, tarp, or other materials);
- Configurations (rectangle, circular); and,
- Elevations (above, below, or partially above grade).

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*.

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.

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 facility 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.

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

11. 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.

County of Dufferin Official Plan, Consolidated in July, 2017. https://www.dufferincounty.ca/wp-content/uploads/2024/03/officialplanconsolidated.pdf

D.W. Hoffman, B.C. Matthews, & R.E. Wicklund. Soil Survey of Dufferin County – Report No. 38 of the Ontario Soil Survey. 1964. Soil Research Institute 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&txtStationName=orangeville&searchMethod=contains&txtCentralLatMin=0&txtCentralLatSec=0&txtCentralLongMin=0&txtCentralLongSec=0&stnID=4991&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

OMAFA/MRA, 2024. Specialty crop areas. https://www.ontario.ca/page/specialty-crop-areas

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 website, December 2022. Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for Application of the Canada Land Inventory in Ontario.

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.

Township of Melancthon Official Plan, 2014. https://melancthontownship.ca/wp-content/uploads/2018/09/Township-of-Melancthon-Official-Plan-2014.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,

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

Concept Map

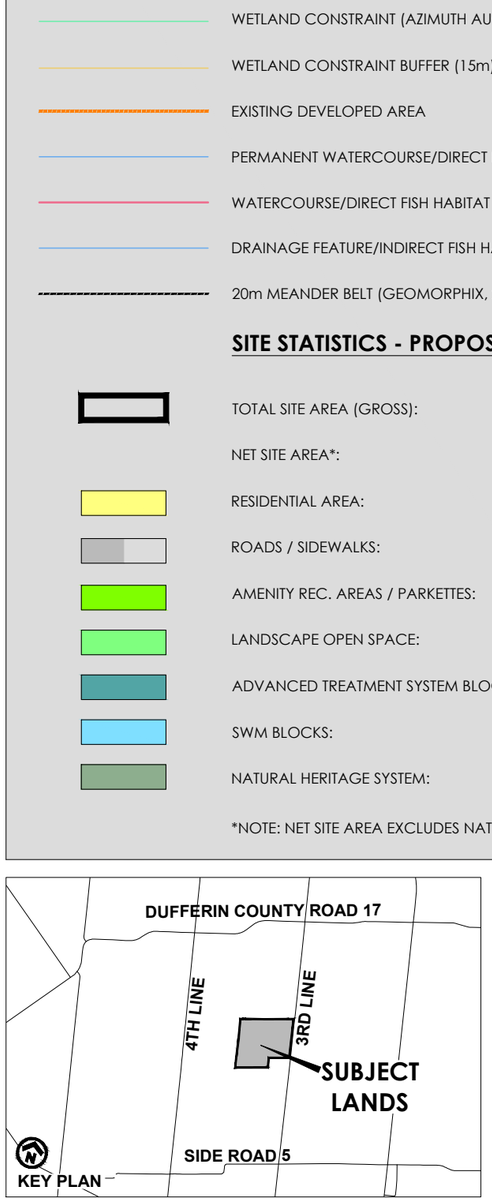
LEGEND

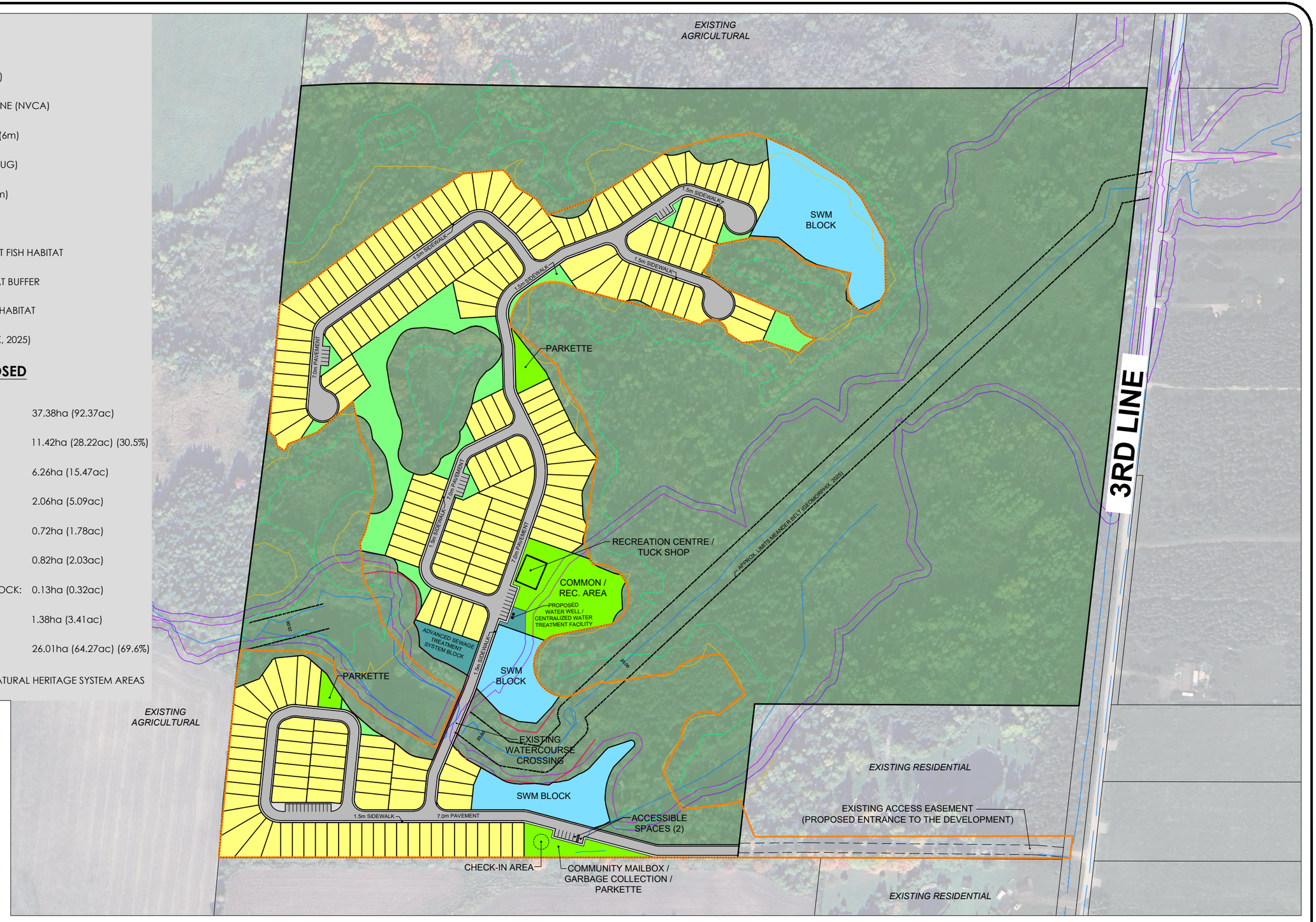
- EXISTING WATERCOURSE
- EXISTING WATER FEATURE (AZIMUTH)
- ESTIMATED EX. REGIONAL FLOOD LINE (NVCA)
- EX. REGIONAL FLOOD LINE BUFFER (6m)
- WETLAND CONSTRAINT (AZIMUTH AUG)
- WETLAND CONSTRAINT BUFFER (15m)
- EXISTING DEVELOPED AREA
- PERMANENT WATERCOURSE/DIRECT FISH HABITAT
- WATERCOURSE/DIRECT FISH HABITAT BUFFER
- DRAINAGE FEATURE/INDIRECT FISH HABITAT
- 20m MEANDER BELT (GEOMORPHIX, 2025)

SITE STATISTICS - PROPOSED

TOTAL SITE AREA (GROSS):	37.38ha (92.37ac)
NET SITE AREA*:	11.42ha (28.22ac) (30.5%)
RESIDENTIAL AREA:	6.26ha (15.47ac)
ROADS / SIDEWALKS:	2.06ha (5.09ac)
AMENITY REC. AREAS / PARKETTES:	0.72ha (1.78ac)
LANDSCAPE OPEN SPACE:	0.82ha (2.03ac)
ADVANCED TREATMENT SYSTEM BLOCK:	0.13ha (0.32ac)
SWM BLOCKS:	1.38ha (3.41ac)
NATURAL HERITAGE SYSTEM:	26.01ha (64.27ac) (69.6%)

*NOTE: NET SITE AREA EXCLUDES NATURAL HERITAGE SYSTEM AREAS





CONCEPT PLAN
CHIPWOODS

476420 3RD LINE, PART OF LOT 8, CONCESSION 3, OLD SURVEY,
TOWNSHIP OF MELANCTHON, COUNTY OF DUFFERIN

ADDITIONAL SITE STATISTICS

UNIT COUNTS:	224 UNITS (9.14m x 27.5m)
AMENITY AREA / RECREATION AREA / PARKETTES:	7,145m² (6.26% OF NET SITE AREA)
VISITOR PARKING PROVIDED:	43 SPACES (0.19 SPACES / UNIT)

SCALE 1:3000
JUNE 20, 2025

GSAI
Glen Schnarr & Associates Inc.

APPENDIX C

Climate Normal Data

Climate Normals 1981-2010 Station Data

Metadata including Station Name, Province or Territory, Latitude, Longitude, Elevation, Climate ID, WMO ID, TC ID							
STATION_NAME	PROVINCE	LATITUDE	LONGITUDE	ELEVATION	CLIMATE_ID	WMO_ID	TC_ID
ORANGEVILLE MOE	ON	43°55'06.066" N	80°05'11.064" W	411.5 m	6155790		

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
C = At least 20 years
D = At least 15 years

1981 to 2010 Canadian Climate Normals station data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Code
Temperature														
Daily Average (°C)	-7.5	-6.5	-2.1	5.3	11.7	16.9	19.4	18.4	14.3	7.8	2	-4.1	6.3	C
Standard Deviation	3	2.5	1.9	1.6	2.1	1.4	1.3	1.3	1.3	1.2	1.6	2.8	0.9	C
Daily Maximum (°C)	-3.4	-2.1	2.8	10.6	17.6	22.8	25.2	24.2	19.9	12.7	5.6	-0.6	11.3	C
Daily Minimum (°C)	-11.6	-10.9	-7	0	5.7	10.9	13.5	12.6	8.7	3	-1.7	-7.5	1.3	C
Extreme Maximum (°C)	14.5	13	22.5	28.5	32	34	35	35.5	33	28.3	22.8	18		
Date (yyyy/dd)	2005/13	2000/27	1998/30	1990/28	2006/29	1994/16	Jun-88	Mar-88	Aug-02	Feb-71	Mar-61	Mar-82		
Extreme Minimum (°C)	-36	-36.5	-34.4	-20	-6.1	-2.2	0.6	-1.1	-5.6	-10.6	-18	-33		
Date (yyyy/dd)	1999/14	1979/18	Feb-62	Jul-72	Oct-62	May-64	1968/30	1965/30	1965/27	1976/27	1995/29	1980/25		
Precipitation														
Rainfall (mm)	25.7	22.7	38.2	63.5	86.6	81.3	80.8	88.2	87	74.3	72.4	29.4	750.1	C
Snowfall (cm)	38.5	31.8	22.7	6.6	0	0	0	0	0	2.3	14.7	34.9	151.5	C
Precipitation (mm)	64.3	54.5	60.9	70.1	86.6	81.3	80.8	88.2	87	76.6	87.1	64.2	901.5	C
Extreme Daily Rainfall (mm)	31.8	33	39.1	37	59.1	59.7	66	83.8	65	45	56.6	31.2		
Date (yyyy/dd)	1974/20	Sep-65	Jan-72	1992/16	Dec-00	1967/21	2005/16	1968/22	Jul-96	May-95	Dec-92	Dec-72		
Extreme Daily Snowfall (cm)	25.4	27	18	22	15.5	0	0	0	0	18	17	30		
Date (yyyy/dd)	1966/22	Jul-86	1996/19	Feb-05	Dec-66	Jan-61	Jan-61	Jan-61	Jan-61	1981/22	2005/24	Oct-92		
Extreme Daily Precipitation (mm)	35.3	38.6	41.7	37	59.1	59.7	66	83.8	65	45	56.6	37.3		
Date (yyyy/dd)	1974/20	1976/21	Jan-72	1992/16	Dec-00	1967/21	2005/16	1968/22	Jul-96	May-95	Dec-92	Dec-72		
Extreme Snow Depth (cm)	37	48	60	22	0	0	0	0	0	14	23	41		
Date (yyyy/dd)	Nov-99	1993/28	1993/14	Apr-05	Jan-83	Jan-83	Jan-83	Jan-83	Jan-83	1997/27	Apr-99	Dec-92		
Days with Maximum Temperature														
<= 0 °C	22.8	18.2	11.4	1.4	0	0	0	0	0	0.12	5.4	17.6	76.8	C
> 0 °C	8.2	10.1	19.7	28.6	31	30	31	31	30	30.9	24.6	13.4	288.4	C
> 10 °C	0.28	0.31	4.1	14.7	27.9	29.9	31	31	29.3	19.7	6.2	0.84	195.2	C
> 20 °C	0	0	0.38	2.2	10	21.1	28.4	26.6	14.1	2.3	0	0	105.2	C
> 30 °C	0	0	0	0	0.17	1.4	2.5	1.2	0.21	0	0	0	5.6	C
> 35 °C	0	0	0	0	0	0	0	0.04	0	0	0	0	0.04	C
Days with Minimum Temperature														
> 0 °C	0.72	1.2	3.1	12.3	25.8	29.9	31	31	28.8	20.5	8.8	1.5	194.6	C
<= 2 °C	30.8	27.7	29.3	21.4	9.2	0.42	0	0.08	3.7	15.4	24.3	30.3	192.6	C
<= 0 °C	30.3	27	27.9	17.7	5.3	0.08	0	0	1.2	10.5	21.2	29.5	170.6	C
< -2 °C	27.5	24.5	22.6	10	0.88	0	0	0	0.08	3.4	12.5	23.5	125	C
< -10 °C	16.2	14.6	8.4	0.4	0	0	0	0	0	0	1.2	9.5	50.4	C
< -20 °C	4.2	2.9	0.92	0	0	0	0	0	0	0	0	0.84	8.9	C
< - 30 °C	0.16	0	0	0	0	0	0	0	0	0	0	0	0.16	C
Days with Rainfall														
>= 0.2 mm	3.6	3.3	5.6	10.7	12.9	11.9	10.5	11.9	12.2	14	10.8	4.5	112	C
>= 5 mm	1.9	1.6	2.6	4.1	5.4	4.9	4.4	4.8	4.7	5.2	4.7	2.2	46.4	C
>= 10 mm	0.92	0.85	1.5	2	2.9	2.9	2.8	3.2	2.9	2.4	2.4	1.1	25.9	C
>= 25 mm	0.12	0.04	0.12	0.23	0.69	0.46	0.69	0.58	0.73	0.23	0.42	0.09	4.4	C
Days With Snowfall														
>= 0.2 cm	11.3	8.1	6.2	1.9	0.04	0	0	0	0	0.84	4.5	10	42.8	C
>= 5 cm	2.5	2.2	1.6	0.58	0	0	0	0	0	0.08	1.1	2.4	10.5	C
>= 10 cm	0.88	0.69	0.5	0.15	0	0	0	0	0	0.08	0.23	0.74	3.3	C
>= 25 cm	0.04	0.04	0	0	0	0	0	0	0	0	0	0.04	0.12	C
Days with Precipitation														
>= 0.2 mm	14.3	10.9	11.3	12.2	12.9	11.9	10.5	11.9	12.2	14.3	14.6	14.1	151	C
>= 5 mm	4.5	3.7	4.4	4.7	5.4	4.9	4.4	4.8	4.7	5.3	5.7	4.6	57	C
>= 10 mm	1.8	1.5	2.2	2.2	2.9	2.9	2.8	3.2	2.9	2.5	2.6	1.9	29.4	C
>= 25 mm	0.16	0.12	0.12	0.23	0.69	0.46	0.69	0.58	0.73	0.24	0.42	0.18	4.6	C
Degree Days														
Above 24 °C	0	0	0	0	0.2	1.1	3.7	2.6	0.2	0	0	0	7.7	C
Above 18 °C	0	0	0	1.1	8.6	32	65.4	47.9	13.5	0.7	0	0	169.2	C
Above 15 °C	0	0	0.1	3.7	24.1	78.1	139.3	112.2	42.4	3.6	0	0	403.5	C
Above 10 °C	0	0	2.8	18.1	86.1	205.5	291.6	260.5	139.6	29	2.4	0.3	1035.8	C
Above 5 °C	0.5	0.8	13.1	64.3	207.4	353.9	446.6	415.2	280	106.4	23.8	2.5	1914.6	C
Above 0 °C	7.1	10	48.6	168.7	360.4	503.9	601.6	570.2	429.8	243.8	88.9	17.9	3050.7	C
Below 0 °C	237.9	194	111.6	10.5	0	0	0	0	0	0.4	30.7	143.4	728.5	C
Below 5 °C	386.3	326.1	231.1	56.1	2.1	0	0	0	0.2	18	115.6	283	1418.5	C
Below 10 °C	540.8	466.5	375.8	159.8	35.7	1.6	0	0.3	9.8	95.6	244.2	435.8	2365.9	C
Below 15 °C	695.8	607.7	528.1	295.5	128.7	24.2	2.8	7	62.6	225.2	391.8	590.5	3559.9	C
Below 18 °C	788.8	692.4	621	382.9	206.2	68.1	21.9	35.7	123.7	315.3	481.8	683.5	4421.3	C

1981 to 2010 Canadian Climate Normals station data (Frost-Free)		
	Frost-Free:	Code
Average Date of Last Spring Frost	20-May	D
Average Date of First Fall Frost	30-Sep	D
Average Length of Frost-Free Period	132 Days	D

Probability of last temperature in spring <= 0°C, on or after indicated date (10%)										09-Jun
Probability of last temperature in spring <= 0°C, on or after indicated date (25%)										31-May
Probability of last temperature in spring <= 0°C, on or after indicated date (33%)										28-May
Probability of last temperature in spring <= 0°C, on or after indicated date (50%)										22-May
Probability of last temperature in spring <= 0°C, on or after indicated date (66%)										17-May
Probability of last temperature in spring <= 0°C, on or after indicated date (75%)										14-May
Probability of last temperature in spring <= 0°C, on or after indicated date (90%)										09-May
Probability of first temperature in fall <= 0°C, on or before indicated date (10%)										10-Sep
Probability of first temperature in fall <= 0°C, on or before indicated date (25%)										19-Sep
Probability of first temperature in fall <= 0°C, on or before indicated date (33%)										21-Sep
Probability of first temperature in fall <= 0°C, on or before indicated date (50%)										26-Sep
Probability of first temperature in fall <= 0°C, on or before indicated date (66%)										02-Oct
Probability of first temperature in fall <= 0°C, on or before indicated date (75%)										04-Oct
Probability of first temperature in fall <= 0°C, on or before indicated date (90%)										10-Oct
Probability of frost-free period equal to or less than indicated period (Days) (10%)										100
Probability of frost-free period equal to or less than indicated period (Days) (25%)										117
Probability of frost-free period equal to or less than indicated period (Days) (33%)										121
Probability of frost-free period equal to or less than indicated period (Days) (50%)										126
Probability of frost-free period equal to or less than indicated period (Days) (66%)										133
Probability of frost-free period equal to or less than indicated period (Days) (75%)										134
Probability of frost-free period equal to or less than indicated period (Days) (90%)										142

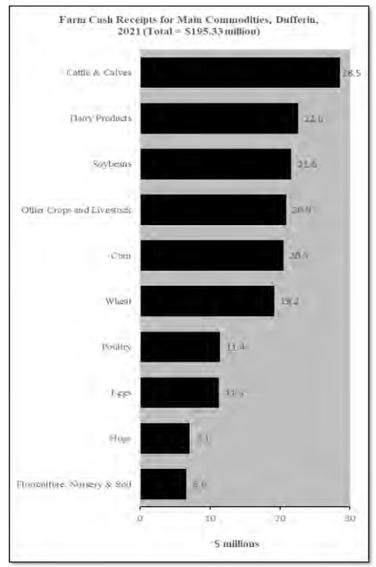
APPENDIX D

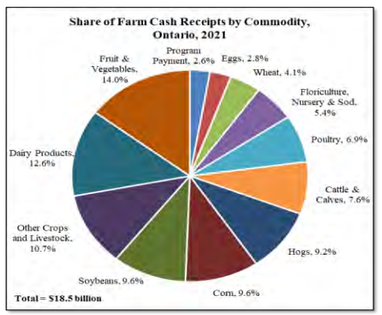
Agricultural Crop Statistics

Dufferin County at a Glance - 2021

Item	Dufferin	Province	Percent of province	Percent from 2016
Farms, 2021 Census (number)				
Total	695	48,346	1.44%	0.72%
Under 10 acres	32	3,217	0.99%	18.52%
10 to 69 acres	209	12,686	1.65%	8.85%
70 to 129 acres	201	10,924	1.84%	4.15%
130 to 179 acres	51	4,422	1.15%	13.33%
180 to 239 acres	47	3,981	1.18%	-31.88%
240 to 399 acres	69	5,396	1.28%	1.47%
400 to 559 acres	29	2,865	1.01%	-14.71%
560 to 759 acres	12	1,698	0.71%	-50.00%
760 to 1,119 acres	20	1,600	1.25%	33.33%
1,120 to 1,599 acres	8	720	1.11%	-20.00%
1,600 to 2,239 acres	10	451	2.22%	42.86%
2,240 to 2,879 acres	3	173	1.73%	50.00%
2,880 to 3,519 acres	2	95	2.11%	-33.33%
3,520 acres and over	2	118	1.69%	100.00%
Land Use, 2021 Census (acres)				
Land in crops	122,320	9,051,011	1.35%	4.30%
Summerfallow land	387	13,964	2.77%	-3.73%
Tame or seeded pasture	9,476	400,480	2.37%	-6.68%
Natural land for pasture	6,711	626,366	1.07%	-14.84%
Christmas trees, woodland & wetland	12,191	1,269,535	0.96%	-11.62%
All other land	6,303	404,714	1.56%	-11.11%
Total area of farms	157,389	11,766,071	1.34%	0.51%
Greenhouse Area, 2021 Census (square feet)				
Total area in use	32,556	201,055,888	0.02%	-72.02%
Farm Capital Value, 2021 Census (farms reporting)				
Under $200,000	15	1,212	1.24%	-21.05%
$200,000 to $499,999	33	3,223	1.02%	-37.74%
$500,000 to $999,999	100	8,699	1.15%	-51.22%
$1,000,000 and over	547	35,212	1.55%	32.45%
Total Gross Farm Receipts, 2021 Census (farms reporting)				
Under $10,000	110	7,277	1.51%	-21.99%
$10,000 to $24,999	119	7,429	1.60%	-12.50%
$25,000 to $49,999	99	6,263	1.58%	-6.60%
$50,000 to $99,999	100	6,093	1.64%	6.38%
$100,000 to $249,999	88	6,817	1.29%	-5.38%
$250,000 to $499,999	43	4,448	0.97%	-15.69%
$500,000 to $999,999	37	3,954	0.94%	0.00%
$1,000,000 to $1,999,999	32	2,452	1.31%	52.38%
$2,000,000 and over	13	1,696	0.77%	18.18%
Farms by Industry Group, 2021 Census (number of farms)				
Beef cattle ranching and farming	166	7,986	2.08%	32.80%
Dairy cattle and milk production	27	3,188	0.85%	-6.90%
Hog and pig farming	14	1,189	1.18%	-6.67%
Poultry and egg production	23	2,061	1.12%	43.75%
Sheep and goat farming	31	1,309	2.37%	-6.06%
Other animal production	111	4,556	2.44%	-25.50%
Oilseed and grain farming	165	18,194	0.91%	13.01%
Vegetable and melon farming	21	1,562	1.34%	-4.55%
Fruit and tree nut farming	13	1,211	1.07%	333.33%
Greenhouse, nursery and floriculture	17	1,672	1.02%	-52.78%
Other crop farming	107	5,418	1.97%	-7.76%

Item	Dufferin	Province	Percent of province	Percent from 2016
Major Field Crops, 2021 Census (acres)				
Winter wheat	18,969	1,144,406	1.66%	15.84%
Oats for grain	2,231	84,320	2.65%	87.64%
Barley for grain	3,778	68,756	5.49%	-39.40%
Mixed grains	900	59,961	1.50%	-53.96%
Corn for grain	17,677	2,202,465	0.80%	15.88%
Corn for silage	3,215	289,678	1.11%	-12.71%
Hay	33,633	1,704,017	1.97%	3.62%
Soybeans	27,880	2,806,255	0.99%	5.51%
Potatoes	6,705	39,193	17.11%	104.55%
Major Fruit Crops, 2021 Census (acres)				
Total fruit crops	72	48,661	0.15%	75.61%
Apples	19	16,008	0.12%	171.43%
Sour Cherries	1	1,383	0.07%	-
Peaches	0	4,608	0.00%	-
Grapes	0	18,432	0.00%	-
Strawberries	23	2,633	0.87%	-11.54%
Raspberries	4	438	0.91%	33.33%
Major Vegetable Crops, 2021 Census (acres)				
Total vegetables	768	127,893	0.60%	18.89%
Sweet corn	48	20,518	0.23%	20.00%
Tomatoes	15	14,614	0.10%	50.00%
Green peas	60	14,044	0.43%	-
Green or wax beans	7	8,709	0.08%	-
Livestock Inventories, 2021 Census (number)				
Total cattle and calves	21,449	1,604,810	1.34%	-9.51%
Steers	4,318	299,540	1.44%	-36.03%
Beef cows	4,331	224,194	1.93%	5.81%
Dairy cows	3,098	327,272	0.95%	20.64%
Total pigs	45,179	4,071,902	1.11%	67.29%
Total sheep and lambs	9,363	322,508	2.90%	-24.67%
Poultry Inventories, 2021 Census (number)				
Total hens and chickens	682,588	53,802,772	1.27%	174.41%
Total turkeys	36,149	2,453,126	1.47%	514.47%





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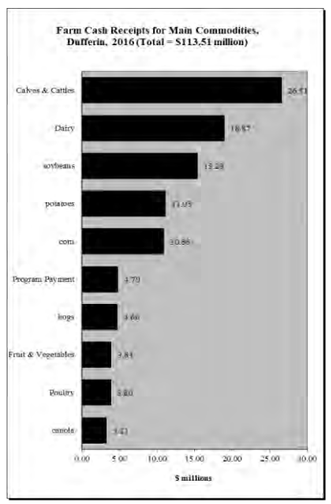
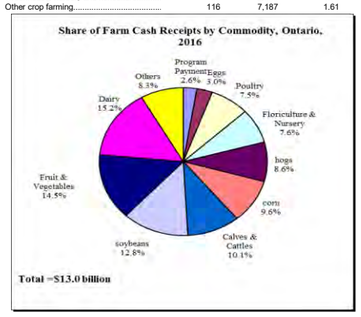
Sources: 2021 & 2016 Census of Agriculture, OMAFRA
2022-06-21

Dufferin County at a Glance - 2016

Item	Dufferin	Province	Percent of province	Percent from 2011
Farms, 2016 Census (number)				
Total	690	49,600	1.39	-13.21
Under 10 acres	27	3,051	0.88	-3.57
10 to 69 acres	192	12,625	1.52	-9.86
70 to 129 acres	193	10,742	1.80	-16.09
130 to 179 acres	45	4,592	0.98	-25.00
180 to 239 acres	69	4,282	1.61	-12.66
240 to 399 acres	68	6,008	1.13	-16.05
400 to 559 acres	34	3,093	1.10	-29.17
560 to 759 acres	24	1,990	1.21	0.00
760 to 1,119 acres	15	1,593	0.94	25.00
1,120 to 1,599 acres	10	801	1.25	42.86
1,600 to 2,239 acres	7	457	1.53	-30.00
2,240 to 2,879 acres	2	168	1.19	100.00
2,880 to 3,519 acres	3	88	3.41	-
3,520 acres and over	1	110	0.91	-50.00
Land Use, 2016 Census (acres)				
Land in crops	117,272	9,021,298	1.30	-3.05
Summerfallow land	402	15,885	2.53	-16.60
Tame or seeded pasture	10,154	514,168	1.97	-17.40
Natural land for pasture	7,880	783,566	1.01	-37.86
Christmas trees, woodland & wetland	13,794	1,542,637	0.89	-28.00
All other land	7,091	470,909	1.51	4.68
Total area of farms	156,593	12,348,463	1.27	-9.14
Greenhouse Area, 2016 Census (square feet)				
Total area in use	116,344	158,511,328	0.07	97.76
Farm Capital Value, 2016 Census (farms reporting)				
Under $200,000	19	2,142	0.89	5.56
$200,000 to $499,999	53	7,433	0.71	-65.58
$500,000 to $999,999	205	12,500	1.64	-36.92
$1,000,000 and over	413	27,525	1.50	38.59
Total Gross Farm Receipts, 2016 Census (farms reporting)				
Under $10,000	141	9,536	1.48	-39.48
$10,000 to $24,999	136	8,376	1.62	-17.58
$25,000 to $49,999	106	6,755	1.57	-10.17
$50,000 to $99,999	94	6,263	1.50	6.82
$100,000 to $249,999	93	7,022	1.32	25.68
$250,000 to $499,999	51	4,707	1.08	-7.27
$500,000 to $999,999	37	3,689	1.00	2.78
$1,000,000 to $1,999,999	21	2,019	1.04	16.67
$2,000,000 and over	11	1,233	0.89	37.50
Farms by Industry Group, 2016 Census (number of farms)				
Beef cattle ranching and farming	125	6,786	1.84	-24.24
Dairy cattle and milk production	29	3,439	0.84	-23.68
Hog and pig farming	15	1,229	1.22	15.38
Poultry and egg production	16	1,816	0.88	60.00
Sheep and goat farming	33	1,097	3.01	-21.43
Other animal production	149	5,902	2.52	-21.58
Oilseed and grain farming	146	16,876	0.87	25.86
Vegetable and melon farming	22	1,856	1.19	4.76
Fruit and tree nut farming	3	1,362	0.22	-50.00
Greenhouse, nursery and floriculture	36	2,050	1.76	16.13
Other crop farming	116	7,187	1.61	-28.83

Item	Dufferin	Province	Percent of province	Percent from 2011
Major Field Crops, 2016 Census (acres)				
Winter wheat	16,375	1,080,378	1.52	35.08
Oats for grain	1,189	82,206	1.45	59.17
Barley for grain	6,234	103,717	6.01	-37.69
Mixed grains	1,955	92,837	2.11	-38.03
Corn for grain	15,254	2,162,004	0.71	29.18
Corn for silage	3,683	295,660	1.25	18.27
Hay	32,459	1,721,214	1.89	-26.55
Soybeans	26,424	2,783,443	0.95	64.66
Potatoes	3,278	34,685	9.45	-47.40
Major Fruit Crops, 2016 Census (acres)				
Total fruit crops	41	51,192	0.08	-29.31
Apples	7	15,893	0.04	-81.08
Sour Cherries	x	2,121	-	-
Peaches	0	5,232	0.00	-
Grapes	0	18,718	0.00	-
Strawberries	26	2,915	0.89	100.00
Raspberries	3	680	0.44	0.00
Major Vegetable Crops, 2016 Census (acres)				
Total vegetables	646	135,420	0.48	16.40
Sweet corn	40	22,910	0.17	-66.10
Tomatoes	10	15,744	0.06	150.00
Green peas	x	16,268	-	-
Green or wax beans	x	9,732	-	-
Livestock Inventories, 2016 Census (number)				
Total cattle and calves	23,704	1,623,710	1.46	-28.15
Steers	6,750	305,514	2.21	-15.98
Beef cows	4,093	236,253	1.73	-37.87
Dairy cows	2,568	311,960	0.82	-22.18
Total pigs	27,007	3,534,104	0.76	-3.08
Total sheep and lambs	12,429	321,495	3.87	-14.05
Poultry Inventories, 2016 Census (number)				
Total hens and chickens	248,750	50,759,994	0.49	-34.95
Total turkeys	5,883	3,772,146	0.16	14.37



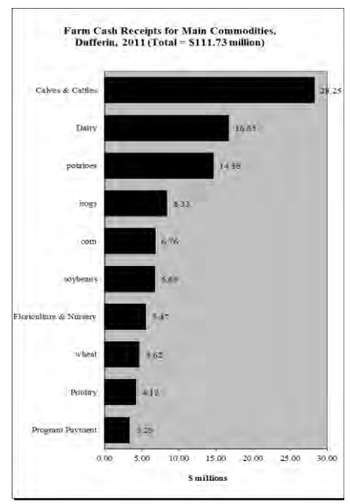


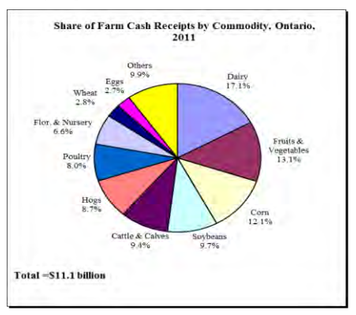
x Suppressed data
Sources: 2016 & 2011 Census of Agriculture and Strategic Policy Branch, OMAFRA
2017-06-02

Dufferin County at a Glance - 2011

Item	Dufferin	Province	Percent of province
Farms, 2011 Census (number)			
Total	795	51,950	1.53
Under 10 acres	28	2,741	1.02
10 to 69 acres	213	12,681	1.68
70 to 129 acres	230	11,779	1.95
130 to 179 acres	60	4,969	1.21
180 to 239 acres	79	4,801	1.65
240 to 399 acres	81	6,460	1.25
400 to 559 acres	48	3,359	1.43
560 to 759 acres	24	2,026	1.18
760 to 1,119 acres	12	1,587	0.76
1,120 to 1,599 acres	7	788	0.89
1,600 to 2,239 acres	10	436	2.29
2,240 to 2,879 acres	1	152	0.66
2,880 to 3,519 acres	0	79	0.00
3,520 acres and over	2	92	2.17
Land Use, 2011 Census (acres)			
Land in crops	120,956	8,929,947	1.35
Summerfallow land	482	23,450	2.06
Tame or seeded pasture	12,293	648,758	1.89
Natural land for pasture	12,681	984,809	1.29
Christmas trees, woodland & wetland	19,158	1,612,444	1.19
All other land	6,774	468,828	1.44
Total area of farms	172,344	12,668,236	1.36
Greenhouse Area, 2011 Census (square feet)			
Total area in use	58,830	133,520,541	0.04
Farm Capital Value, 2011 Census (farms reporting)			
Under $200,000	18	2,562	0.70
$200,000 to $499,999	154	12,994	1.19
$500,000 to $999,999	325	15,276	2.13
$1,000,000 and over	298	21,118	1.41
Total Gross Farm Receipts, 2011 Census (farms reporting)			
Under $10,000	233	12,263	1.90
$10,000 to $24,999	165	9,098	1.81
$25,000 to $49,999	118	6,720	1.76
$50,000 to $99,999	88	6,189	1.42
$100,000 to $249,999	74	6,985	1.06
$250,000 to $499,999	55	5,086	1.08
$500,000 to $999,999	36	3,248	1.11
$1,000,000 to $1,999,999	18	1,558	1.16
$2,000,000 and over	8	803	1.00
Farms by Industry Group, 2016 Census (number of farms)			
Beef cattle ranching and farming	165	7,105	2.32
Dairy cattle and milk production	38	4,036	0.94
Hog and pig farming	13	1,235	1.05
Poultry and egg production	10	1,619	0.62
Sheep and goat farming	42	1,446	2.90
Other animal production	190	6,966	2.73
Oilseed and grain farming	116	15,818	0.73
Vegetable and melon farming	21	1,531	1.37
Fruit and tree nut farming	6	1,548	0.39
Greenhouse, nursery and floriculture	31	2,372	1.31
Other crop farming	163	8,274	1.97

Item	Dufferin	Province	Percent of province
Major Field Crops, 2011 Census (acres)			
Winter wheat	12,122	1,100,003	1.10
Oats for grain	747	71,040	1.05
Barley for grain	10,005	126,881	7.89
Mixed grains	3,155	106,162	2.97
Corn for grain	11,808	2,032,356	0.58
Corn for silage	3,114	271,701	1.15
Hay	44,189	2,077,911	2.13
Soybeans	16,048	2,464,870	0.65
Potatoes	6,232	37,384	16.67
Major Fruit Crops, 2011 Census (acres)			
Total fruit crops	58	52,740	0.11
Apples	37	15,830	0.23
Sour Cherries	x	2,342	-
Peaches	x	6,455	-
Grapes	0	18,383	0.00
Strawberries	13	3,283	0.40
Raspberries	3	902	0.33
Major Vegetable Crops, 2011 Census (acres)			
Total vegetables	555	129,595	0.43
Sweet corn	118	25,540	0.46
Tomatoes	4	16,558	0.02
Green peas	x	15,121	-
Green or wax beans	9	9,186	0.10
Livestock Inventories, 2011 Census (number)			
Total cattle and calves	32,989	1,741,381	1.89
Steers	8,034	291,263	2.76
Beef cows	6,588	282,062	2.34
Dairy cows	3,300	318,158	1.04
Total pigs	27,865	3,088,646	0.90
Total sheep and lambs	14,460	352,807	4.10
Poultry Inventories, 2011 Census (number)			
Total hens and chickens	382,377	46,902,316	0.82
Total turkeys	5,144	3,483,828	0.15





Melancthon Township at a Glance - 2021

Item	Melancthon	Province	Percent of province	Percent from 2016
Farms, 2021 Census (number)				
Total	155	48,346	0.32%	25.00%
Under 10 acres	3	3,217	0.09%	0.00%
10 to 69 acres	49	12,686	0.39%	68.97%
70 to 129 acres	41	10,924	0.38%	24.24%
130 to 179 acres	12	4,422	0.27%	33.33%
180 to 239 acres	13	3,981	0.33%	-23.53%
240 to 399 acres	16	5,396	0.30%	60.00%
400 to 559 acres	8	2,865	0.28%	14.29%
560 to 759 acres	3	1,698	0.18%	-40.00%
760 to 1,119 acres	3	1,600	0.19%	-25.00%
1,120 to 1,599 acres	2	720	0.28%	0.00%
1,600 to 2,239 acres	2	451	0.44%	100.00%
2,240 to 2,879 acres	2	173	1.16%	0.00%
2,880 to 3,519 acres	1	95	1.05%	0.00%
3,520 acres and over	0	118	0.00%	-100.00%
Land Use, 2021 Census (acres)				
Land in crops	29,291	9,051,011	0.32%	-0.97%
Summerfallow land	46	13,964	0.33%	-42.50%
Tame or seeded pasture	2,200	400,480	0.55%	-7.37%
Natural land for pasture	1,356	626,366	0.22%	8.39%
Christmas trees, woodland & wetland	3,615	1,269,535	0.28%	1.69%
All other land	1,052	404,714	0.26%	-24.10%
Total area of farms	37,560	11,768,071	0.32%	-1.74%
Greenhouse Area, 2021 Census (square feet)				
Total area in use	13,400	201,055,888	0.01%	-
Farm Capital Value, 2021 Census (farms reporting)				
Under $200,000	2	1,212	0.17%	-50.00%
$200,000 to $499,999	7	3,223	0.22%	-30.00%
$500,000 to $999,999	32	8,699	0.37%	-11.11%
$1,000,000 and over	114	35,212	0.32%	54.05%
Total Gross Farm Receipts, 2021 Census (farms reporting)				
Under $10,000	20	7,277	0.27%	0.00%
$10,000 to $24,999	20	7,429	0.27%	-13.04%
$25,000 to $49,999	25	6,263	0.40%	38.89%
$50,000 to $99,999	19	6,093	0.31%	18.75%
$100,000 to $249,999	22	6,817	0.32%	15.79%
$250,000 to $499,999	9	4,448	0.20%	-30.77%
$500,000 to $999,999	10	3,954	0.25%	25.00%
$1,000,000 to $1,999,999	9	2,452	0.37%	125.00%
$2,000,000 and over	5	1,696	0.29%	66.67%
Farms by Industry Group, 2021 Census (number of farms)				
Beef cattle ranching and farming	43	7,986	0.54%	38.71%
Dairy cattle and milk production	2	3,188	0.06%	-33.33%
Hog and pig farming	5	1,189	0.42%	0.00%
Poultry and egg production	5	2,061	0.24%	400.00%
Sheep and goat farming	6	1,309	0.46%	-14.29%
Other animal production	27	4,556	0.59%	22.73%
Oilseed and grain farming	30	18,194	0.16%	30.43%
Vegetable and melon farming	11	1,562	0.70%	57.14%
Greenhouse, nursery and floriculture	1	1,672	0.06%	-50.00%
Other crop farming	22	5,418	0.41%	-4.35%
Fruit and tree nut farming	3	1,211	0.25%	-

Item	Melancthon	Province	Percent of province	Percent from 2016
Major Field Crops, 2021 Census (acres)				
Winter wheat	3,957	1,144,406	0.35%	-14.98%
Oats for grain	1,059	84,320	1.26%	145.14%
Barley for grain	1,355	68,756	1.97%	-52.39%
Mixed grains	297	59,961	0.50%	-58.11%
Corn for grain	3,294	2,202,465	0.15%	41.07%
Corn for silage	377	289,678	0.13%	-72.70%
Hay	6,834	1,704,017	0.40%	2.58%
Soybeans	4,748	2,806,255	0.17%	25.81%
Potatoes	5,001	39,193	12.76%	58.36%
Major Fruit Crops, 2021 Census (acres)				
Total fruit crops	12	48,661	0.02%	9.09%
Apples	2	16,008	0.01%	-
Sour Cherries	0	1,383	0.00%	-
Peaches	0	4,608	0.00%	-
Grapes	0	18,432	0.00%	-
Strawberries	0	2,633	0.00%	-
Raspberries	0	438	0.00%	-
Major Vegetable Crops, 2021 Census (acres)				
Total vegetables	221	127,893	0.17%	-
Sweet corn	21	20,518	0.10%	50.00%
Tomatoes	2	14,614	0.01%	-
Green peas	55	14,044	0.39%	-
Green or wax beans	0	8,709	0.00%	-
Livestock Inventories, 2021 Census (number)				
Total cattle and calves	4,548	1,604,810	0.28%	1.09%
Steers	1,260	299,540	0.42%	-30.04%
Beef cows	923	224,194	0.41%	-
Dairy cows	104	327,272	0.03%	-
Total pigs	4,339	4,071,902	0.11%	42.03%
Total sheep and lambs	1,547	322,508	0.48%	-29.59%
Poultry Inventories, 2021 Census (number)				
Total hens and chickens	18,576	53,802,772	0.03%	-
Total turkeys	25,931	2,453,126	1.06%	-

Melancthon Township at a Glance - 2016

Item	Melancthon	Province	Percent of province	Percent from 2011
Farms, 2016 Census (number)				
Total	124	49,600	0.25	-38.31
Under 10 acres	3	3,051	0.10	-57.14
10 to 69 acres	29	12,625	0.23	-29.27
70 to 129 acres	33	10,742	0.31	-41.07
130 to 179 acres	9	4,592	0.20	-52.63
180 to 239 acres	17	4,282	0.40	-46.88
240 to 399 acres	10	6,008	0.17	-62.96
400 to 559 acres	7	3,093	0.23	75.00
560 to 759 acres	5	1,990	0.25	-28.57
760 to 1,119 acres	4	1,593	0.25	300.00
1,120 to 1,599 acres	2	801	0.25	-33.33
1,600 to 2,239 acres	1	457	0.22	-50.00
2,240 to 2,879 acres	2	168	1.19	-
2,880 to 3,519 acres	1	88	1.14	-
3,520 acres and over	1	110	0.91	-50.00
Land Use, 2016 Census (acres)				
Land in crops	29,579	9,021,298	0.33	-12.20
Summerfallow land	80	15,885	0.50	-23.81
Tame or seeded pasture	2,375	514,168	0.46	-40.70
Natural land for pasture	1,251	783,566	0.16	-71.14
Christmas trees, woodland & wetland	3,555	1,542,637	0.23	-51.26
All other land	1,386	470,909	0.29	-33.72
Total area of farms	38,226	12,348,463	0.31	-25.80
Greenhouse Area, 2016 Census (square feet)				
Total area in use	x	158,511,328	-	-
Farm Capital Value, 2016 Census (farms reporting)				
Under $200,000	4	2,142	0.19	0.00
$200,000 to $499,999	10	7,433	0.13	-83.61
$500,000 to $999,999	36	12,500	0.29	-52.63
$1,000,000 and over	74	27,525	0.27	23.33
Total Gross Farm Receipts, 2016 Census (farms reporting)				
Under $10,000	20	9,536	0.21	-66.10
$10,000 to $24,999	23	8,376	0.27	-45.24
$25,000 to $49,999	18	6,755	0.27	-55.00
$50,000 to $99,999	16	6,263	0.26	-30.43
$100,000 to $249,999	19	7,022	0.27	72.73
$250,000 to $499,999	13	4,707	0.28	0.00
$500,000 to $999,999	8	3,689	0.22	-20.00
$1,000,000 to $1,999,999	4	2,019	0.20	-
$2,000,000 and over	3	1,233	0.24	0.00
Farms by Industry Group, 2016 Census (number of farms)				
Beef cattle ranching and farming	31	6,786	0.46	-49.18
Dairy cattle and milk production	3	3,439	0.09	-66.67
Hog and pig farming	5	1,229	0.41	66.67
Poultry and egg production	1	1,816	0.06	0.00
Sheep and goat farming	7	1,097	0.64	-46.15
Other animal production	22	5,902	0.37	-45.00
Oilseed and grain farming	23	16,876	0.14	43.75
Vegetable and melon farming	7	1,856	0.38	0.00
Greenhouse, nursery and floriculture	2	2,050	0.10	-33.33
Other crop farming	23	7,187	0.32	-51.06
Fruit and tree nut farming	0	1,362	0.00	-100.00

Item	Melancthon	Province	Percent of province	Percent from 2011
Major Field Crops, 2016 Census (acres)				
Winter wheat	4,654	1,080,378	0.43	89.80
Oats for grain	432	82,206	0.53	227.27
Barley for grain	2,846	103,717	2.74	-40.27
Mixed grains	709	92,837	0.76	-45.17
Corn for grain	2,335	2,162,004	0.11	59.49
Corn for silage	1,381	295,660	0.47	105.51
Hay	6,662	1,721,214	0.39	-47.98
Soybeans	3,774	2,783,443	0.14	156.39
Potatoes	3,158	34,685	9.10	-38.31
Major Fruit Crops, 2016 Census (acres)				
Total fruit crops	11	51,192	0.02	22.22
Apples	x	15,893	-	-
Sour Cherries	0	2,121	0.00	-
Peaches	0	5,232	0.00	-
Grapes	0	18,718	0.00	-
Strawberries	x	2,915	-	-
Raspberries	x	680	-	-
Major Vegetable Crops, 2016 Census (acres)				
Total vegetables	x	135,420	-	-
Sweet corn	14	22,910	0.06	-
Tomatoes	x	15,744	-	-
Green peas	x	16,268	-	-
Green or wax beans	x	9,732	-	-
Livestock Inventories, 2016 Census (number)				
Total cattle and calves	4,499	1,623,710	0.28	-50.84
Steers	1,801	305,514	0.59	-24.01
Beef cows	x	236,253	-	-
Dairy cows	x	311,960	-	-
Total pigs	3,055	3,534,104	0.09	23.24
Total sheep and lambs	2,197	321,495	0.68	-20.17
Poultry Inventories, 2016 Census (number)				
Total hens and chickens	x	50,759,994	-	-
Total turkeys	x	3,772,146	-	-

Melancthon Township at a Glance - 2011

Item	Melancthon	Province	Percent of province
Farms, 2011 Census (number)			
Total	201	51,950	0.39
Under 10 acres	7	2,741	0.26
10 to 69 acres	41	12,681	0.32
70 to 129 acres	56	11,779	0.48
130 to 179 acres	19	4,969	0.38
180 to 239 acres	32	4,801	0.67
240 to 399 acres	27	6,460	0.42
400 to 559 acres	4	3,359	0.12
560 to 759 acres	7	2,026	0.35
760 to 1,119 acres	1	1,587	0.06
1,120 to 1,599 acres	3	788	0.38
1,600 to 2,239 acres	2	436	0.46
2,240 to 2,879 acres	0	152	0.00
2,880 to 3,519 acres	0	79	0.00
3,520 acres and over	2	92	2.17
Land Use, 2011 Census (acres)			
Land in crops	33,690	8,929,947	0.38
Summerfallow land	105	23,450	0.45
Tame or seeded pasture	4,005	648,758	0.62
Natural land for pasture	4,334	984,809	0.44
Christmas trees, woodland & wetland	7,294	1,612,444	0.45
All other land	2,091	468,828	0.45
Total area of farms	51,519	12,668,236	0.41
Greenhouse Area, 2011 Census (square feet)			
Total area in use	0	133,520,541	0.00
Farm Capital Value, 2011 Census (farms reporting)			
Under $200,000	4	2,562	0.16
$200,000 to $499,999	61	12,994	0.47
$500,000 to $999,999	76	15,276	0.50
$1,000,000 and over	60	21,118	0.28
Total Gross Farm Receipts, 2011 Census (farms reporting)			
Under $10,000	59	12,263	0.48
$10,000 to $24,999	42	9,098	0.46
$25,000 to $49,999	40	6,720	0.60
$50,000 to $99,999	23	6,189	0.37
$100,000 to $249,999	11	6,985	0.16
$250,000 to $499,999	13	5,086	0.26
$500,000 to $999,999	10	3,248	0.31
$1,000,000 to $1,999,999	0	1,558	0.00
$2,000,000 and over	3	803	0.37
Farms by Industry Group, 2011 Census (number of farms)			
Beef cattle ranching and farming	61	7,105	0.86
Dairy cattle and milk production	9	4,036	0.22
Hog and pig farming	3	1,235	0.24
Poultry and egg production	1	1,619	0.06
Sheep and goat farming	13	1,446	0.90
Other animal production	40	6,966	0.57
Oilseed and grain farming	16	15,818	0.10
Vegetable and melon farming	7	1,531	0.46
Greenhouse, nursery and floriculture	3	2,372	0.13
Other crop farming	47	8,274	0.57
Fruit and tree nut farming	1	1,548	0.06

Item	Melancthon	Province	Percent of province
Major Field Crops, 2011 Census (acres)			
Winter wheat	2,452	1,100,003	0.22
Oats for grain	132	71,040	0.19
Barley for grain	4,765	126,881	3.76
Mixed grains	1,293	106,162	1.22
Corn for grain	1,464	2,032,356	0.07
Corn for silage	672	271,701	0.25
Hay	12,806	2,077,911	0.62
Soybeans	1,472	2,464,870	0.06
Potatoes	5,119	37,384	13.69
Major Fruit Crops, 2011 Census (acres)			
Total fruit crops	9	52,740	0.02
Apples	2	15,830	0.01
Sour Cherries	x	2,342	-
Peaches	x	6,455	-
Grapes	0	18,383	0.00
Strawberries	x	3,283	-
Raspberries	x	902	-
Major Vegetable Crops, 2011 Census (acres)			
Total vegetables	x	129,595	-
Sweet corn	x	25,540	-
Tomatoes	x	16,558	-
Green peas	x	15,121	-
Green or wax beans	x	9,186	-
Livestock Inventories, 2011 Census (number)			
Total cattle and calves	9,151	1,741,381	0.53
Steers	2,370	291,263	0.81
Beef cows	2,158	282,062	0.77
Dairy cows	512	318,158	0.16
Total pigs	2,479	3,088,646	0.08
Total sheep and lambs	2,752	352,807	0.78
Poultry Inventories, 2011 Census (number)			
Total hens and chickens	x	46,902,316	-
Total turkeys	x	3,483,828	-

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.

Definitions of the Prime and Non-prime Agricultural Lands

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 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 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
2P	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.
3P	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 m^2), 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.
4P	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		2-5		5-9		9-15		15-30		30-60		>60	
Slope type	S	C	S	C	S	C	S	C	S	C	S	C	S	C
Class				2T	2T	3T	3T	4T	5T	5T	6T	6T	7T	7T

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

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

APPENDIX F

Site Photographs

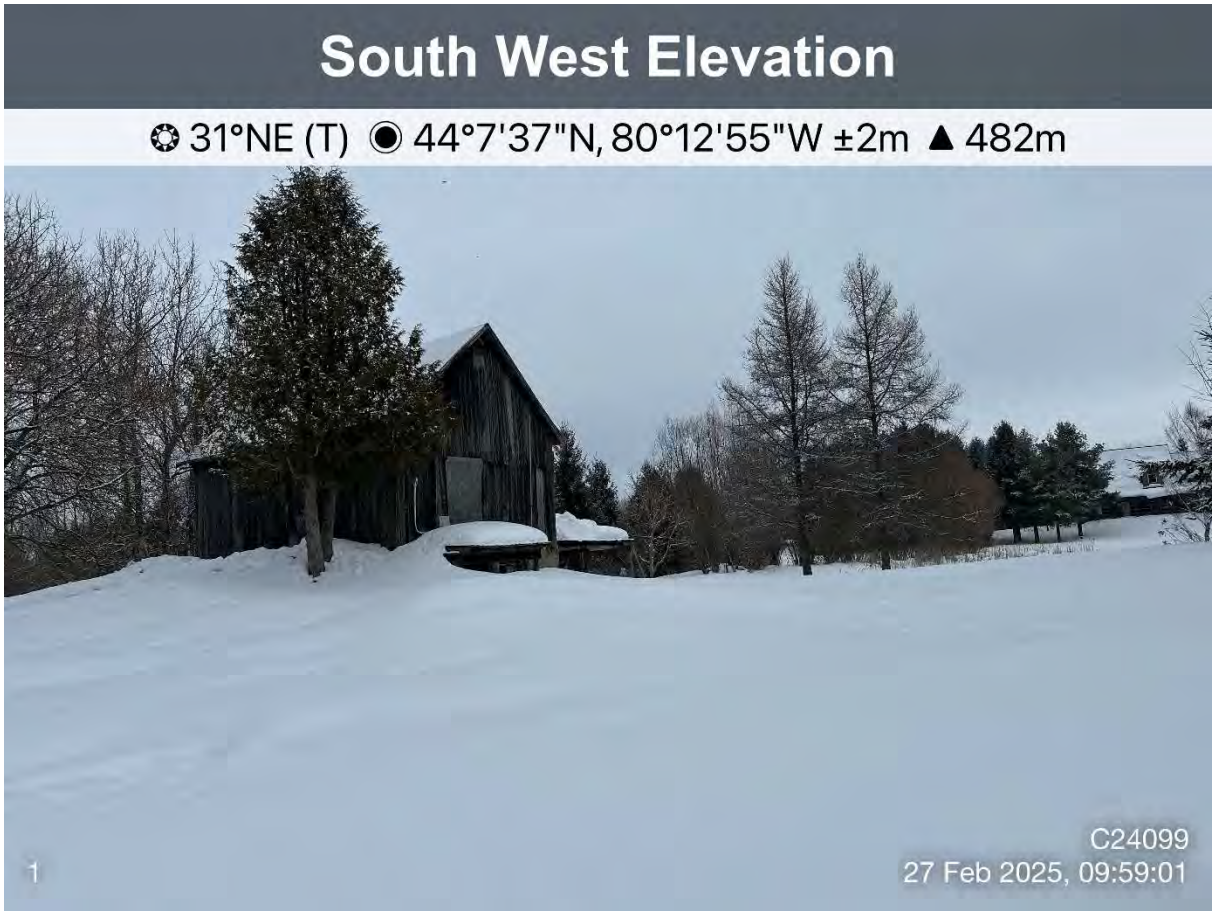


Photo 1: Operation 1 – Small wooden bank barn in poor condition.

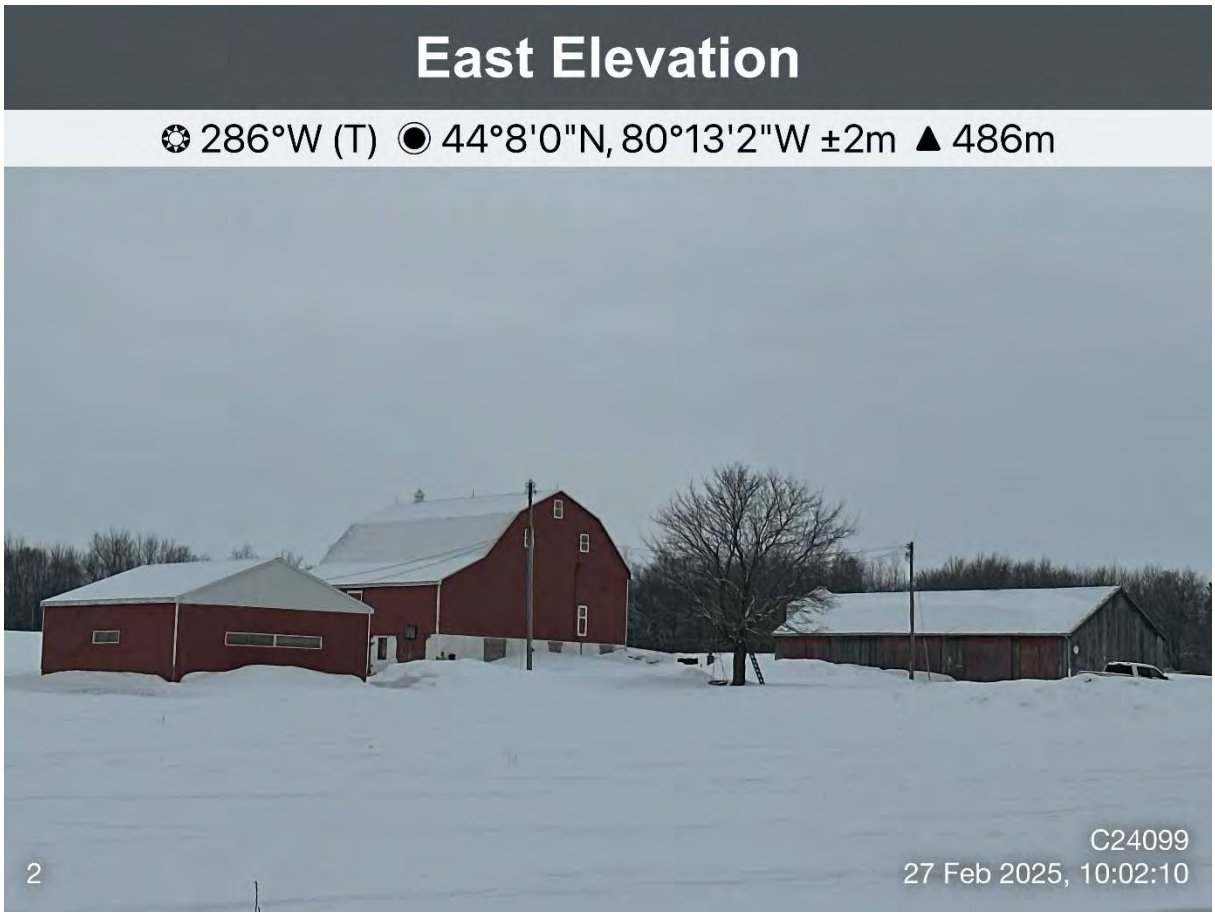


Photo 2: Operation 2 – 2 implement sheds, 1 barn, in good condition.

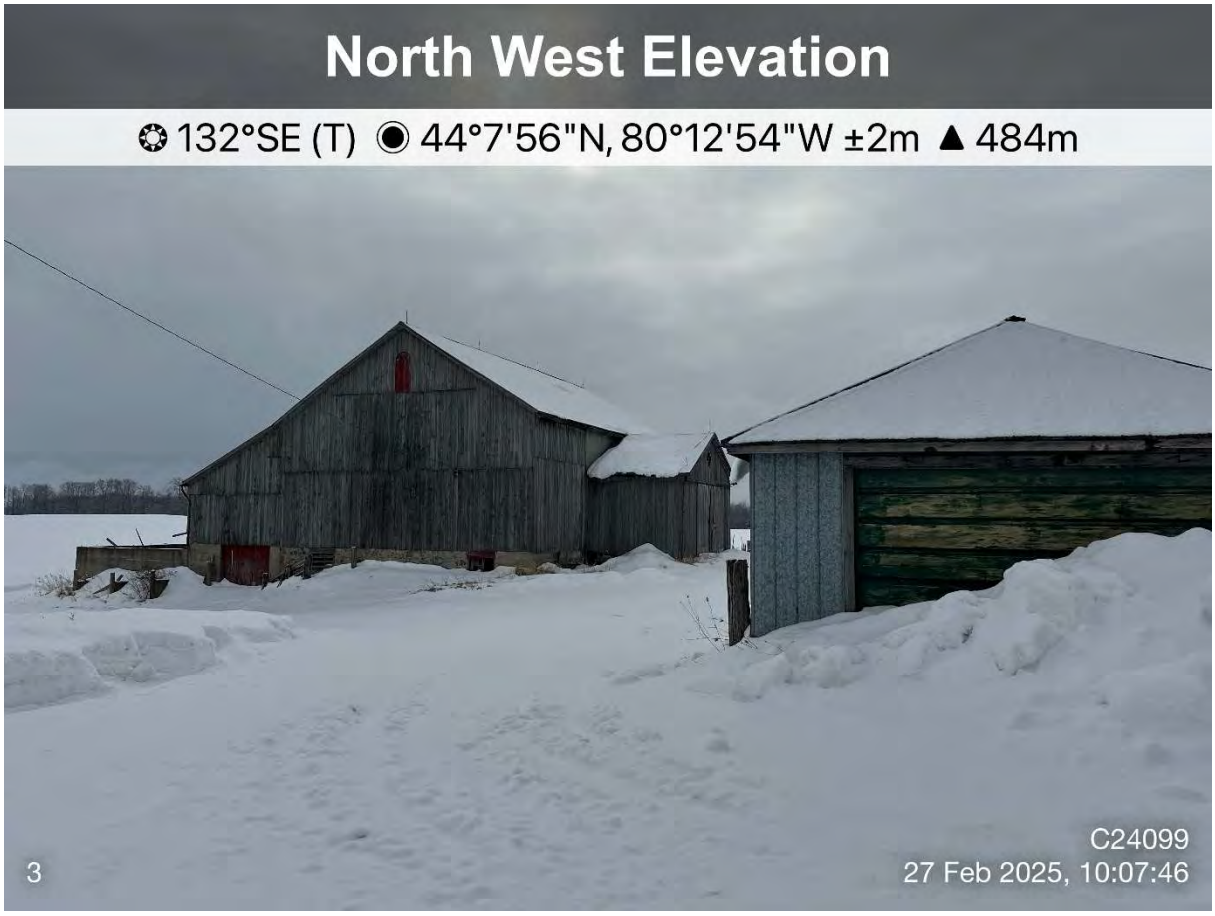


Photo 3: Operation 3 – Wooden bank barn in fair condition, interior in disrepair according to landowner.

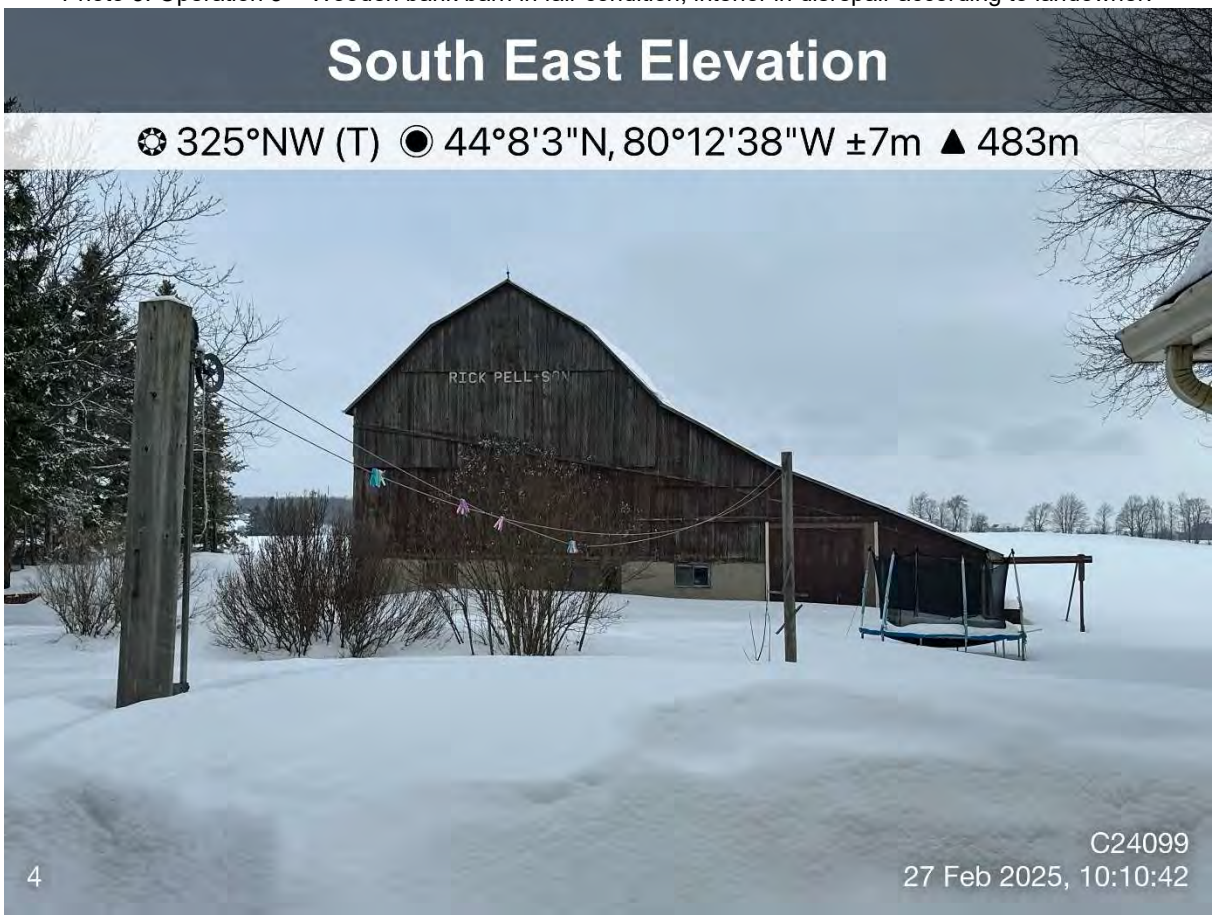


Photo 4: Operation 4 – Wooden bank barn in fair condition.

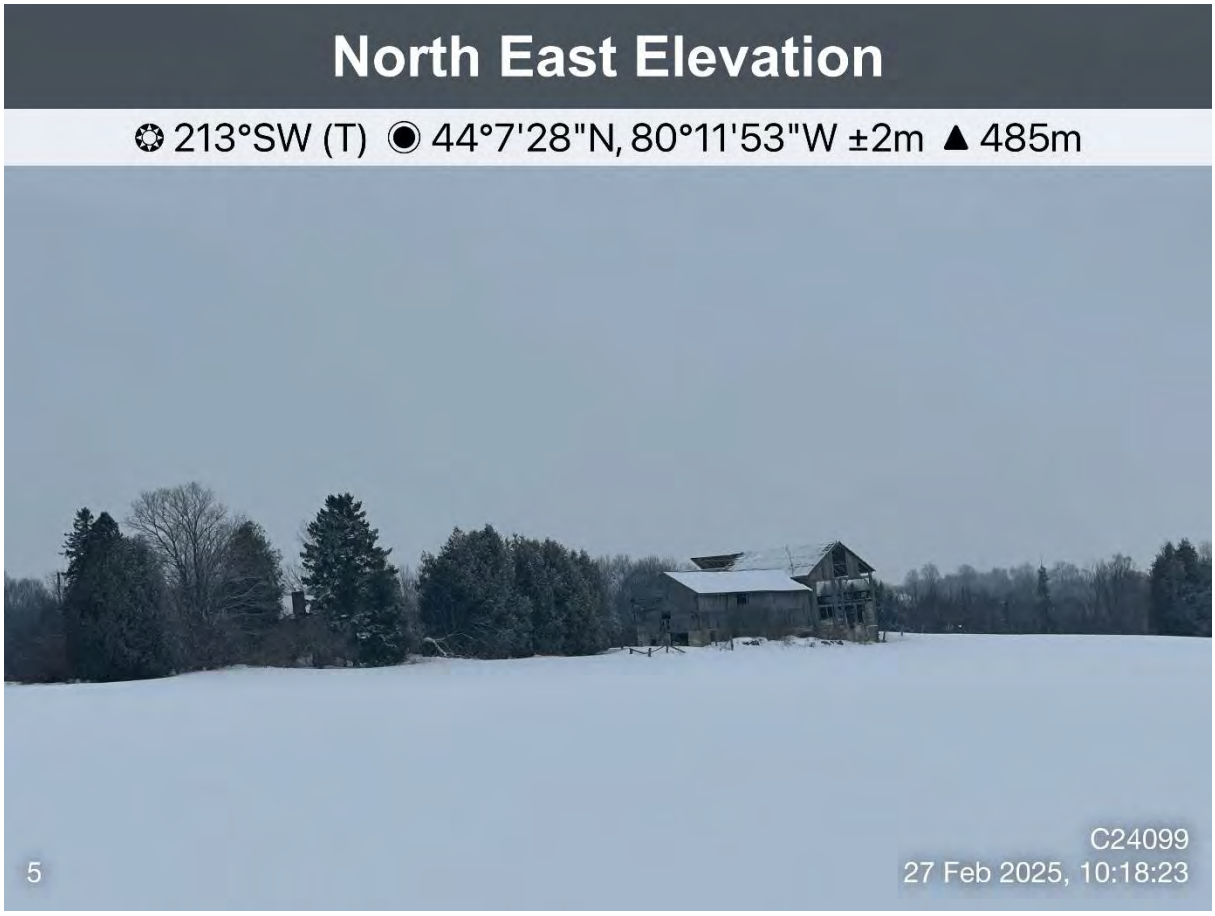


Photo 5: Operation 5 – 2 wooden bank barns in poor condition, partially collapsed.

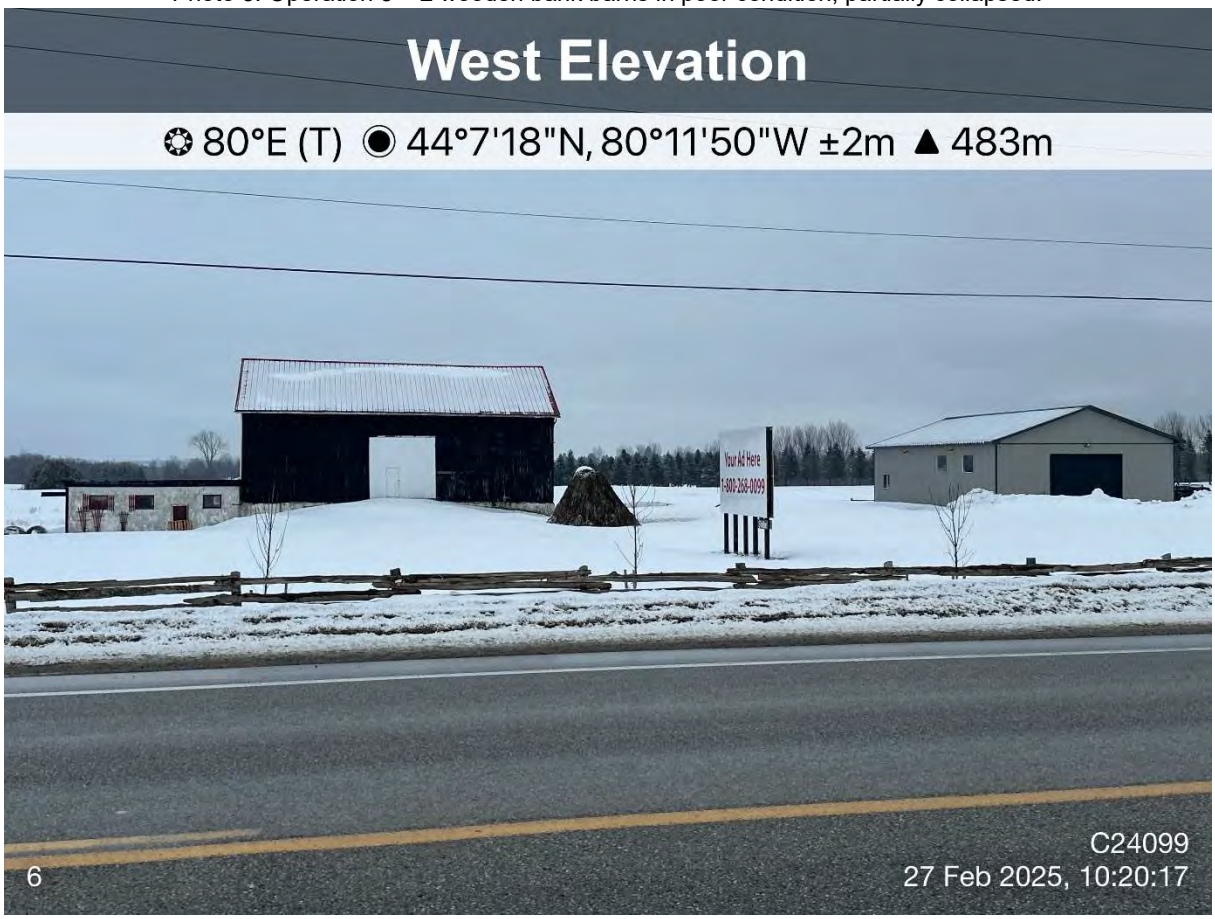


Photo 6: Operation 6 – Wooden bank barn in fair to poor condition, new construction billboard at roadside.

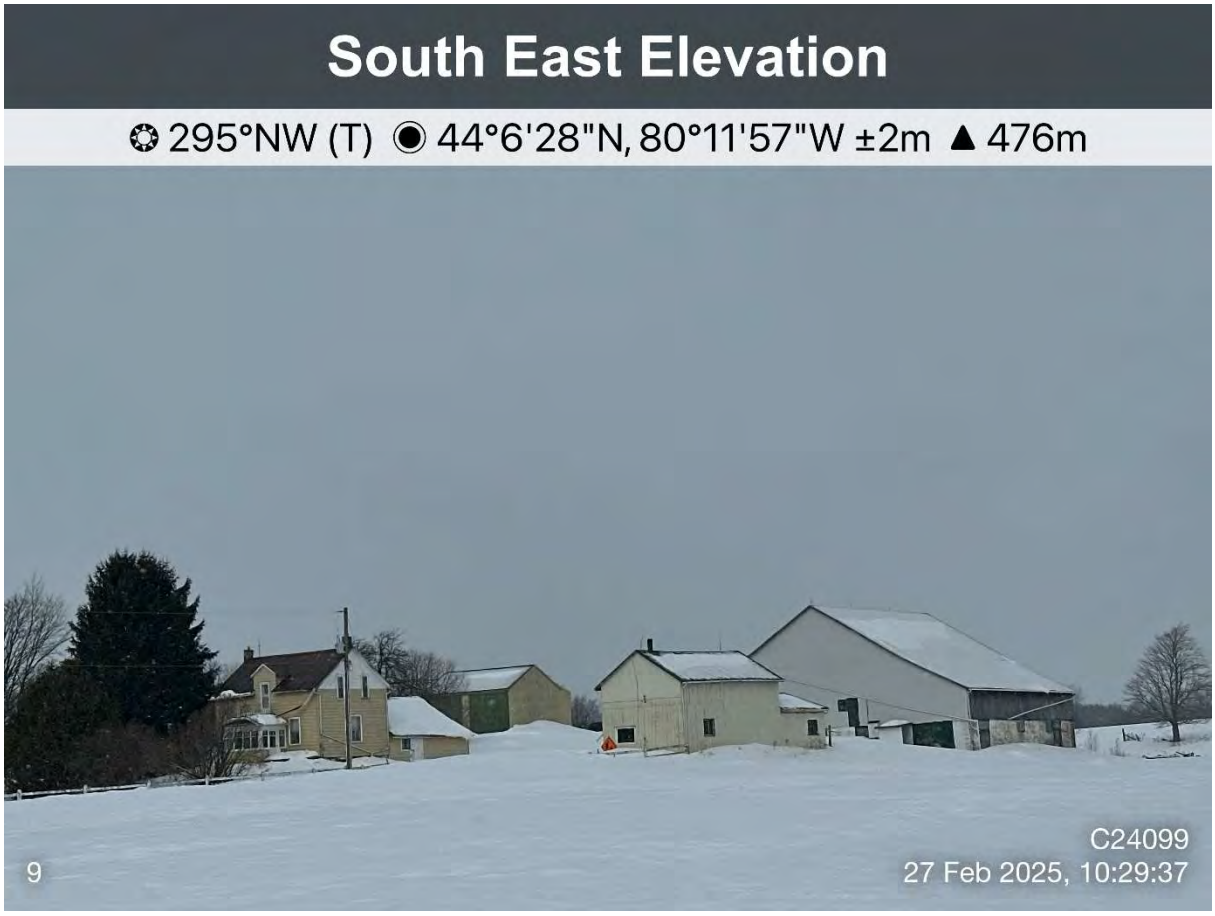


Photo 7: Operation #9 – Barn in fair condition, 2 implement sheds.

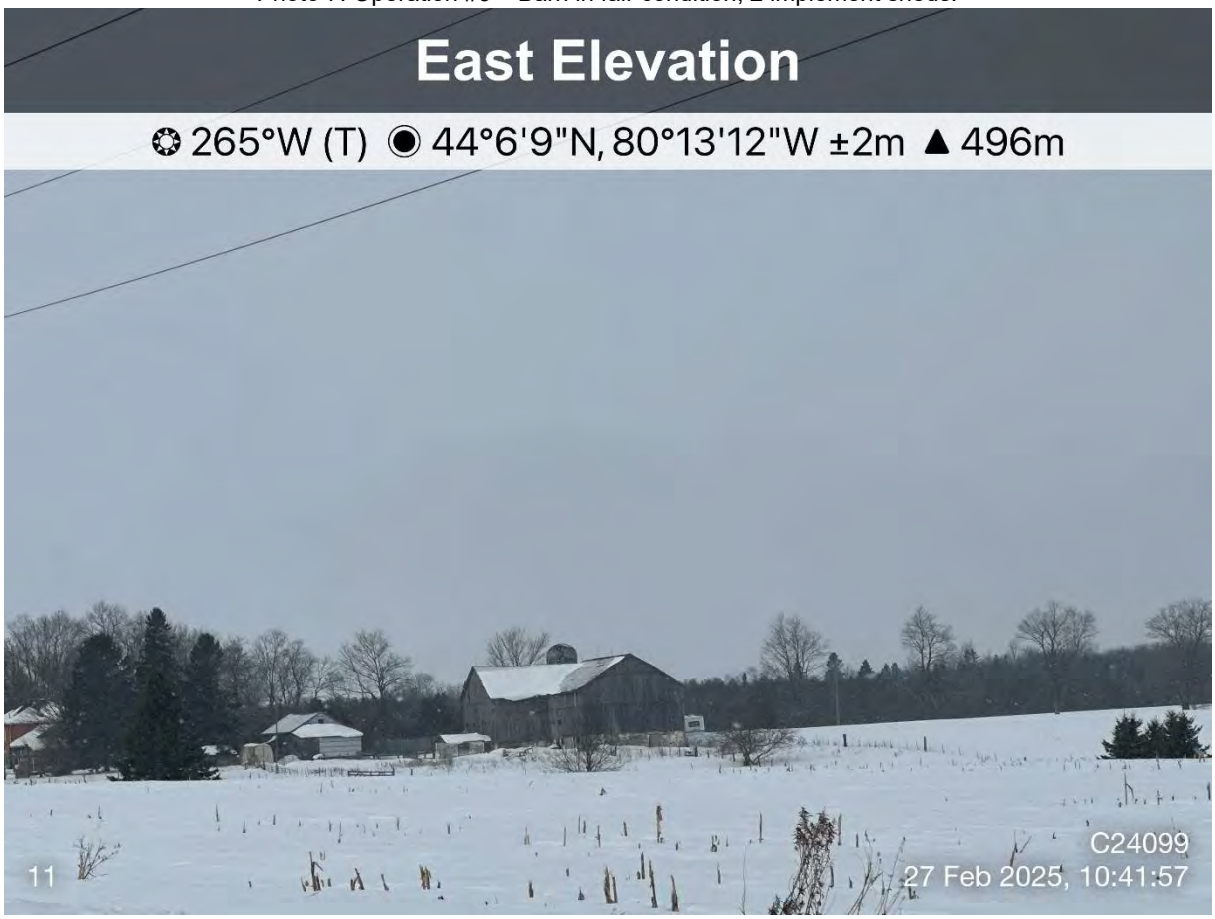


Photo 8: Operation #11 – Wooden bank barn in fair condition, capped silo.

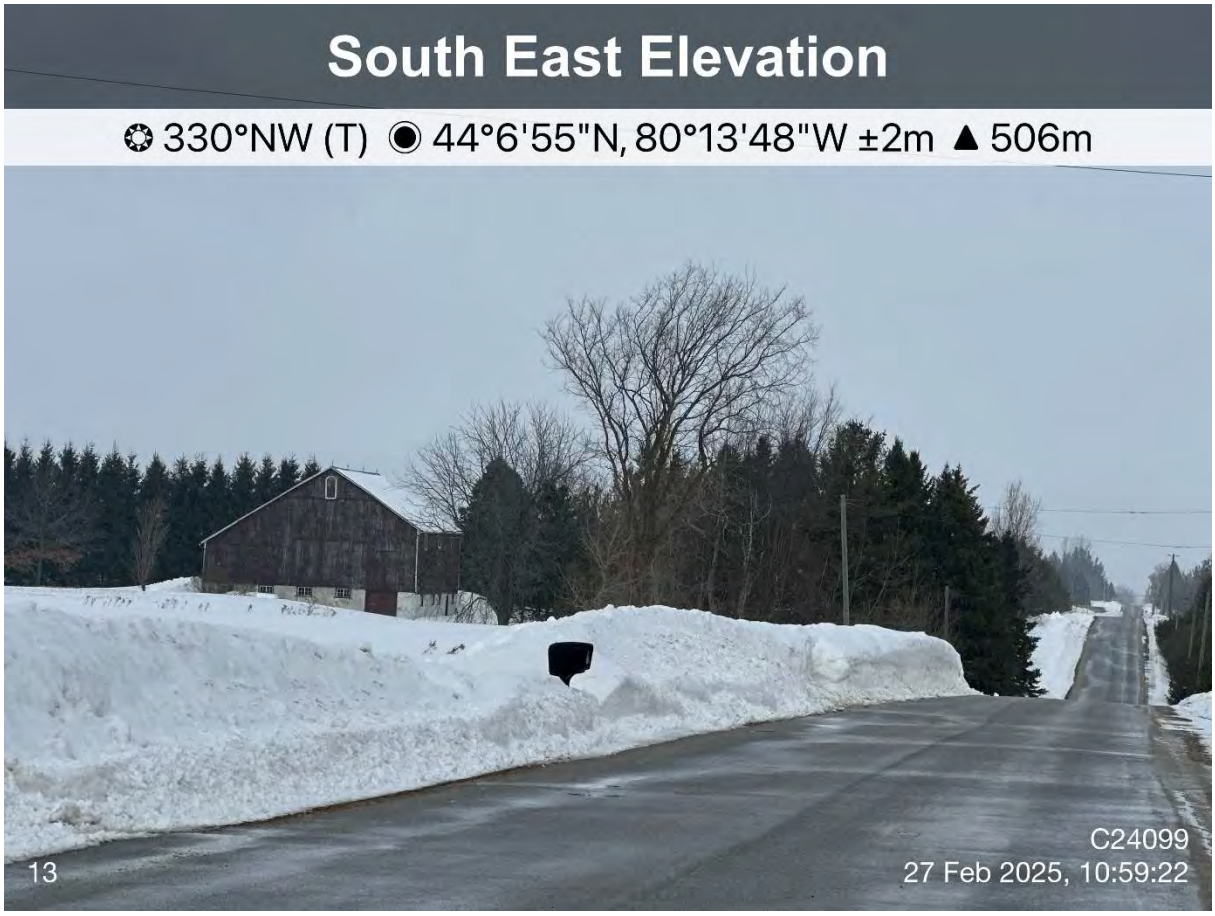


Photo 9: Operation #13 – Wooden bank barn in fair condition.

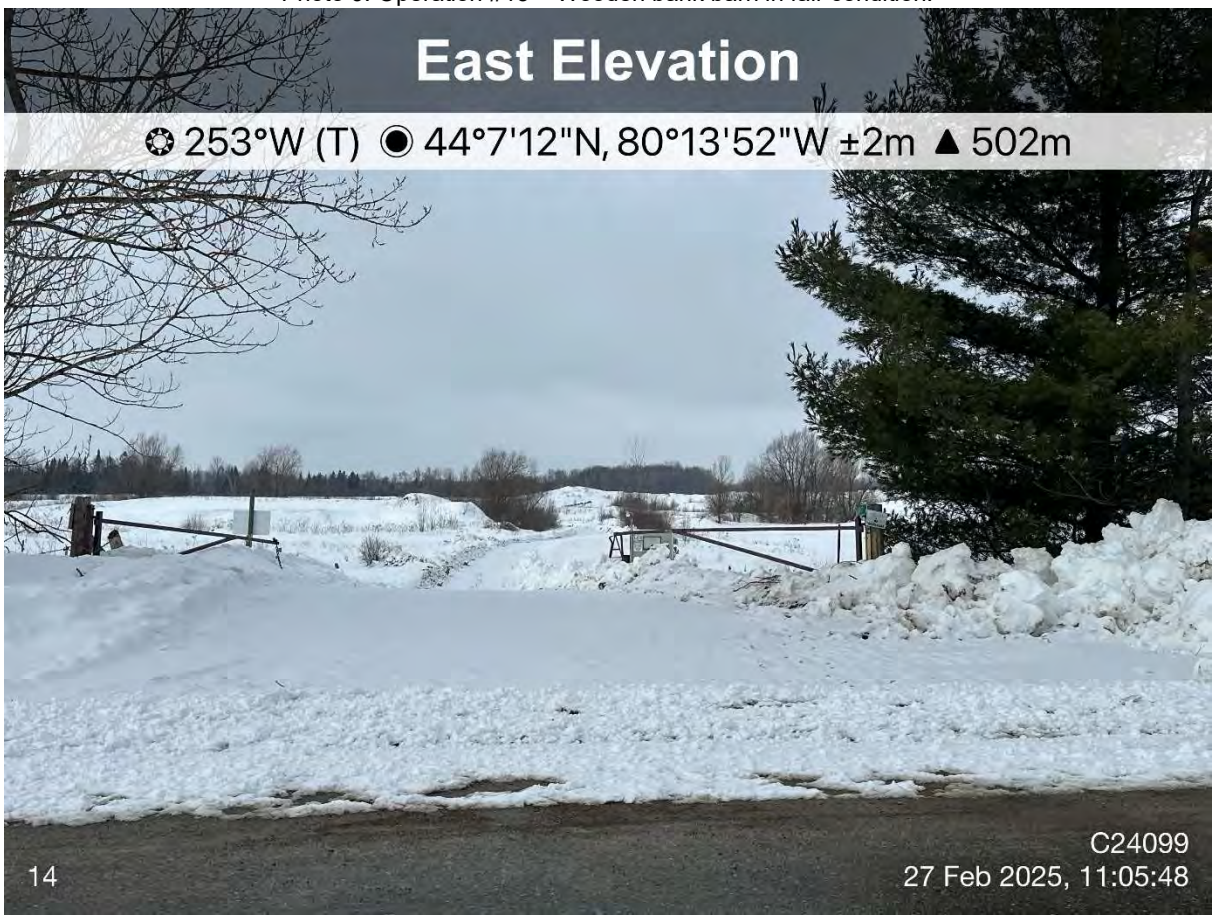


Photo 10: Operation #14 – Active aggregate extraction operation, gated entry, area disturbed with several mounds of overburden.

Photo 11: Operation #15 – Indoor riding area, barn with 22 stalls.

Photo 12: Operation #17 – 2 large workships, no signage associated with business.

Photo 13: Operation #16 – Hunt Trucking Ltd. Transport trucks parked outside workship.

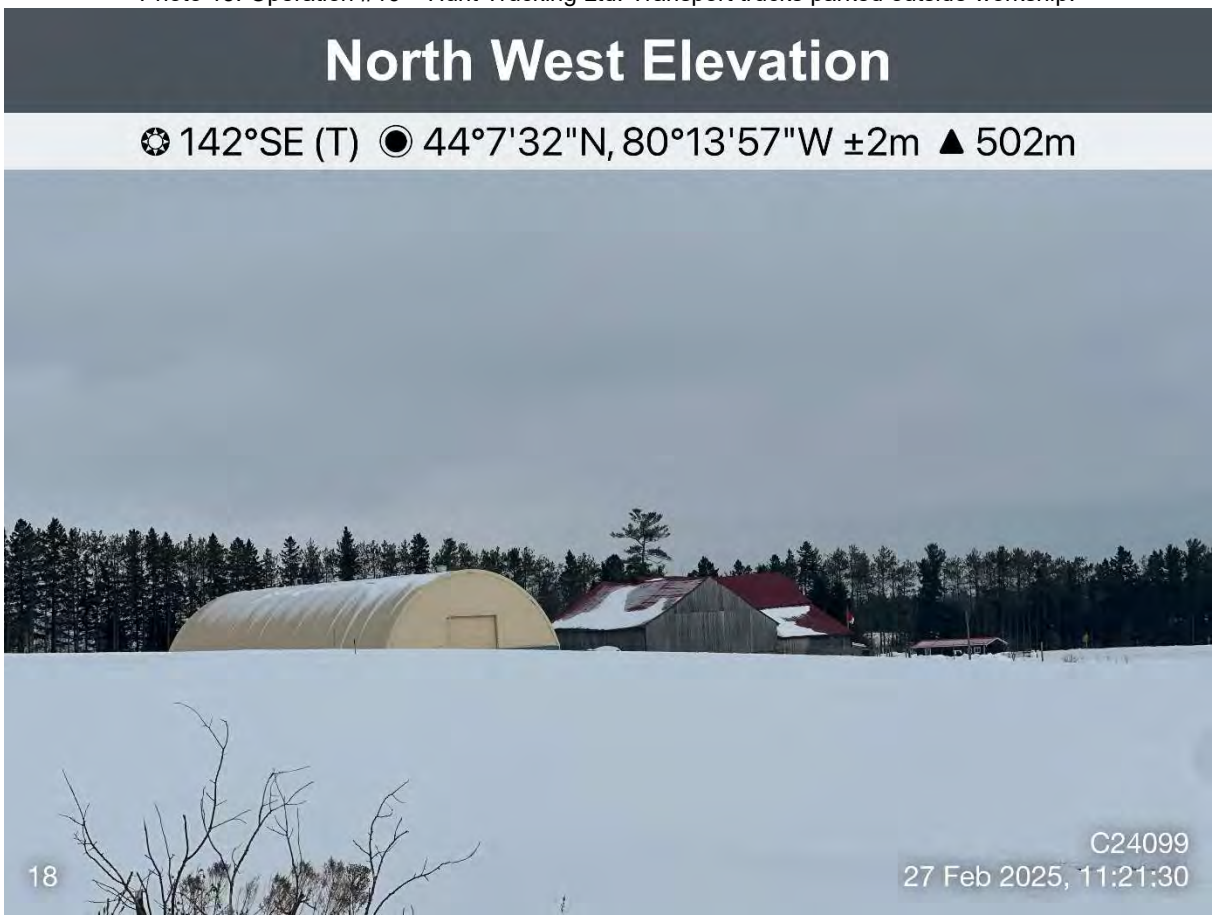


Photo 14: Operation #18 – Large plastic Quonset hut in good contion, wooden bank barn in poor condition with roof partially collapsed.

Photo 15: Operation #19 – Strada Aggregates, gatehouse with paved access roads.

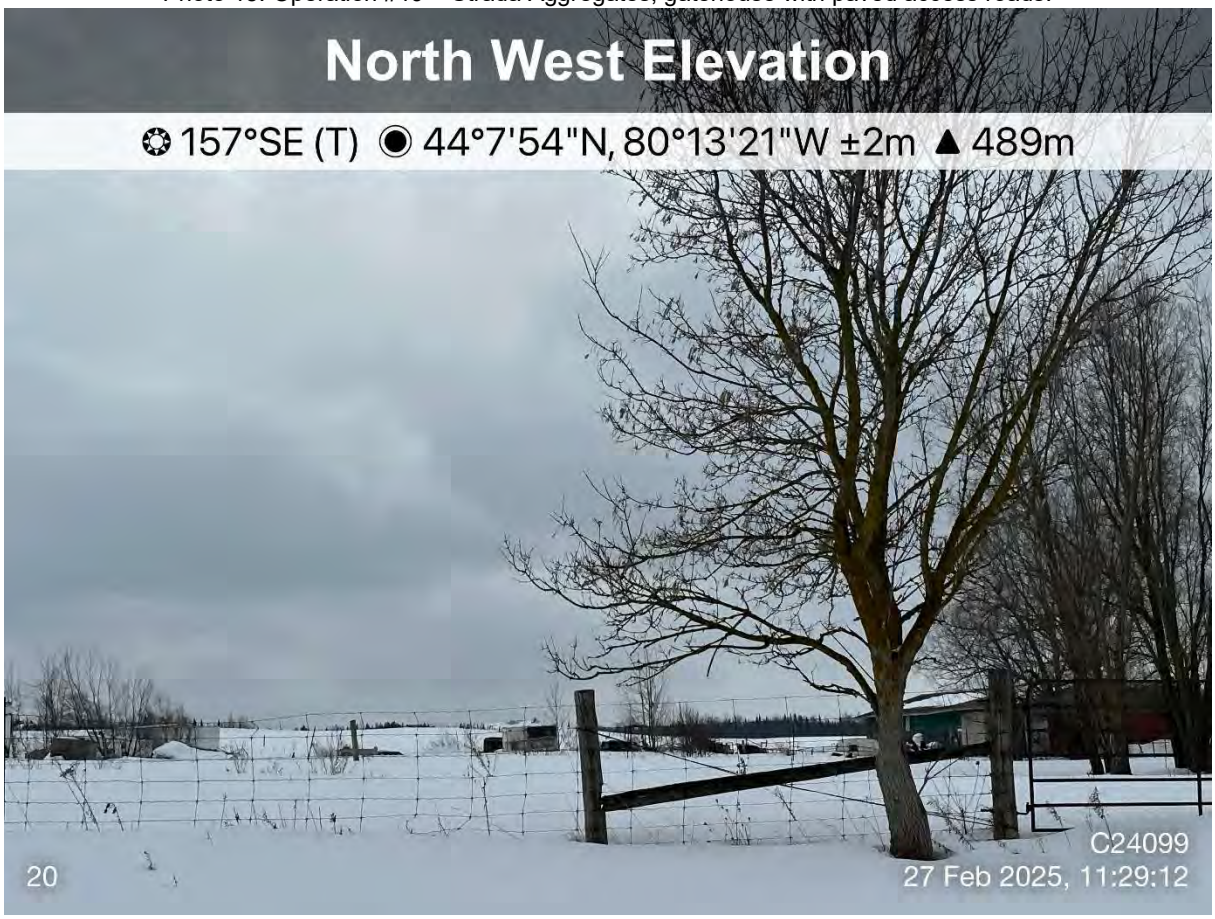


Photo 16: Operation #20 – Barn in fair condition, fenced pasture.

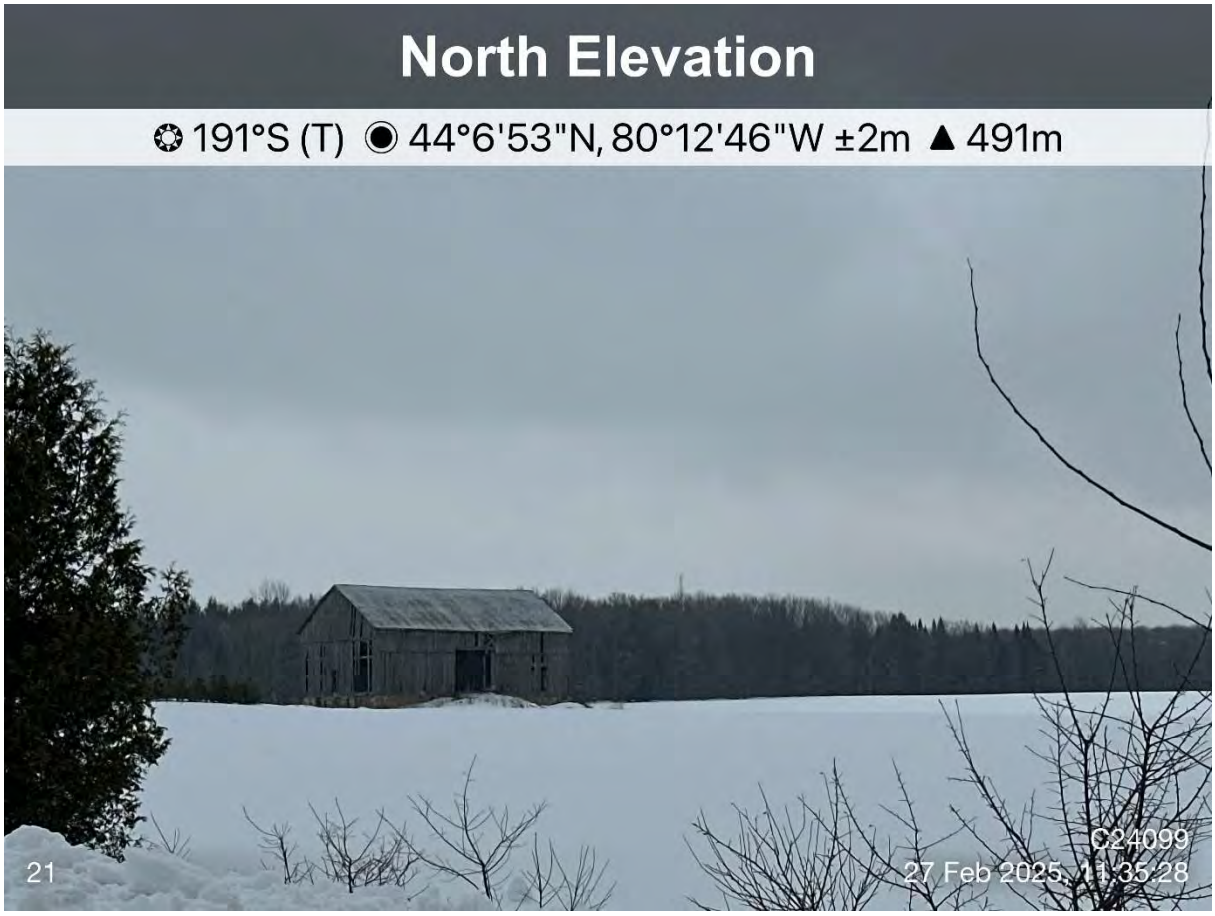


Photo 17: Operation #21 – Wooden bank barn in poor condition, missing more than half of siding.

Photo 18: Operation #21 – Covered roadside stand advertising flowers.

APPENDIX G

Land Use Notes

Land Use Survey Notes – AIA for Sheldon Creek, 476420 3RD Line, Melancthon			
Weather	Sunny	**Date (s)**	February 27, 2025
Temperature	0°C	**File**	C24099

Site No.	Type of Use	Type of Operation	MDS Calculation Required?	Description of Operation
1	Agricultural	Remnant Farm	No	Small wooden bank barn in poor condition. No structures capable of housing livestock.
2	Agricultural	Cash Crop Operation	No	2 implement sheds and barn in good condition, grain bin. OFA member. Spoke with landowner, barn converted for storage.
3	Agricultural	Remnant Farm	No	Wooden bank barn in fair condition, 2 grain bins. Spoke to landowner, barn in state of disrepair, would take significant investment to house livestock.
4	Agricultural	Cash Crop Operation	No	KV Singh Farms. Wooden bank barn at rear of property in fair condition. Does not appear capable of housing livestock.
5	Agricultural	Remnant Farm	No	2 wooden bank barns in poor condition, partially collapsed.
6	Agricultural	Remnant Farm	No	Wooden bank barn in fair to poor condition, house associated with property appears unoccupied.
7	Non-Agricultural	Recreational	No	Shelburn Golf and Country Club.
8	Agricultural	Cash Crop Operation	No	Implement shed and workshop in good condition, appears retired. No structures capable of housing livestock.
9	Agricultural	Unoccupied Livestock Operation	Yes	Plastic Quonset hut in good condition, storing hay. 4 grain bins, barn in fair to good condition, 2 implement sheds. No signs of livestock. Likely former dairy operation. MDS letter left in mailbox. Farm equipment observed outside of implement shed.

10	Agricultural	Cash Crop Operation	No	Implement shed in fair condition. No structures capable of housing livestock.
11	Agricultural	Unoccupied Livestock Operation	Yes	Wooden bank barn in fair condition, capped silo. Spoke to tenant, former beef operation, barn still capable of housing livestock. 4 goats, 10 chickens, for personal use.
12	Agricultural	Beef Operation	Yes	2 wooden bank barns, 1 in fair to poor condition, 1 in poor condition. 4 cows observed, cows have outdoor access. Pasture fencing in good condition. Left MDS letter.
13	Agricultural	Unoccupied Livestock Facility	Yes	Wooden bank barn in fair condition. Spoke with landowner, currently no electrical to barn but in process of updating.
14	Non-Agricultural	Aggregate Operation	No	Disturbed area, several mounds of overburden. Gated entry. Active aggregate pit. 2006044 Ontario Inc. Maximum tonnage of 100,000, licenced area of 23.61 ha. ALPS ID: 3589.
15	Agricultural	Equestrian Operation	Yes	Indoor riding ring, several paddocks in good condition. 10 horses observed. Spoke with landowner, 22 stalls, outdoor manure storage.
16	Non-Agricultural	Industrial	No	Hunt Trucking Ltd.
17	Non-Agricultural	Industrial	No	2 large workshops, 3 long trailers parked outside. No signage associated with business.
18	Agricultural	Remnant Farm	No	Large plastic Quonset hut in good condition, wooden bank barn in poor condition with roof partially collapsed. Spoke to landowner, no structures capable of housing livestock.
19	Non-Agricultural	Aggregate Operation	No	Strada Aggregates – Shelburn Pit. Maximum tonnage od 1,250,000, licenced area of 47.6 ha. ALPS ID: 625155.

20	Agricultural	Hobby Farm	No	Barn in fair condition, 3 horses, 5 cows observed.
21	Agricultural/ On-Farm Diversified	Hobby Farm/Farm Stand	No	Wooden bank barn in poor condition, missing more than half of siding. Roadside stand advertising flowers.
22	Agricultural	Specialty Crop Operation	No	Cultivating blueberries, barn demolished in 2019. No structures capable of housing livestock.
23	Non-Agricultural	Trailer Park	No	Chipwoods Park. Private trailer park located on the Subject Lands.

	Total Number	**Active**	**Retired or Remnant**
Agricultural	16	4 – Cash Crop Operation 1 – Beef Operation 1 – Equestrian Operation 2 – Hobby Farm 1 – Specialty Crop Operation	4 – Remnant Farm 3 – Unoccupied Livestock Operation
Agriculture-related	0	0	0
On-farm Diversified	1	1 – Farm Stand	0
	Total Number	**Type**	
Non-Agricultural	6	1 – Recreational 2 – Aggregate Operation 2 – Industrial 1 – Trailer Park	

Appendix H

AgriSuite MDS Report

Ontario

AgriSuite

C24099

General information

Application date
Mar 7, 2025

Municipal file number

Proposed application
New or expanding settlement area boundary

Applicant contact information

ON

Location of subject lands

County of Dufferin
Township of Melancthon

Calculations

Operation 11

Farm contact information

ON

Location of existing livestock facility or anaerobic digestor

County of Dufferin
Township of Melancthon
Roll number 2219

Total lot size
37.8 ha

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Unoccupied Livestock Barn	460 m²	23 NU	460 m²

Unoccupied Barn or Unused Storage (Operation 11)
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	23 NU
Potential design capacity	23 NU

Factor A (odour potential) 1
Factor B (design capacity) 206
Factor D (manure type) 0.7
Factor E (encroaching land use) 2.2

Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn)	318 m (1043 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

Operation 12

Farm contact information

ON

Location of existing livestock facility or anaerobic digestor

County of Dufferin
Township of Melancthon
Roll number 2219

Total lot size
38.06 ha

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Beef, Backgrounders (7 - 12.5 months), Yard/Barn	260	86.7 NU	966 m²

Confirm Livestock/Manure Information (Operation 12)
The livestock/manure information has not been confirmed with the property owner and/or farm operator.

Setback summary

Existing manure storage	V3. Solid, outside, no cover, >= 30% DM
Design capacity	86.7 NU
Potential design capacity	86.7 NU

Factor A (odour potential) 0.8
Factor B (design capacity) 303.83
Factor D (manure type) 0.7
Factor E (encroaching land use) 2.2

Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn)	375 m (1230 ft)
Actual distance from livestock barn	NA
Storage base distance 'S' (minimum distance from manure storage)	375 m (1230 ft)
Actual distance from manure storage	NA

Operation 13

Farm contact information

ON

Location of existing livestock facility or anaerobic digestor

County of Dufferin
Township of Melancthon
Roll number 2219

Total lot size

2.7 ha

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Unoccupied Livestock Barn	382 m²	19.1 NU	382 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	19.1 NU
Potential design capacity	19.1 NU

Factor A (odour potential)	1	Factor B (design capacity)	196.99
Factor D (manure type)	0.7	Factor E (encroaching land use)	2.2

Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn)	304 m (997 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

Operation 15

Farm contact information

ON

Location of existing livestock facility or anaerobic digestor

County of Dufferin
Township of Melancthon
Roll number 2219

Total lot size
37.74 ha

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Horses, Medium-framed, mature; 227 - 680 kg (including unweaned offspring)	22	22 NU	511 m²

Setback summary

Existing manure storage	**V3. Solid, outside, no cover, >= 30% DM**
Design capacity	**22 NU**
Potential design capacity	**22 NU**

Factor A (odour potential) **0.7**
Factor B (design capacity) **204**
Factor D (manure type) **0.7**
Factor E (encroaching land use) **2.2**

Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn)	**220 m (722 ft)**
Actual distance from livestock barn	**NA**
Storage base distance 'S' (minimum distance from manure storage)	**220 m (722 ft)**
Actual distance from manure storage	**NA**

Operation 9

Farm contact information

ON

Location of existing livestock facility or anaerobic digestor

County of Dufferin
Township of Melancthon
Roll number 2219

Total lot size
20.03 ha

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Unoccupied Livestock Barn	393 m²	19.6 NU	393 m²

Confirm Livestock/Manure Information (Operation 9)
The livestock/manure information has not been confirmed with the property owner and/or farm operator.

Unoccupied Barn or Unused Storage (Operation 9)
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	19.6 NU
Potential design capacity	19.6 NU

Factor A (odour potential)	1	Factor B (design capacity)	198.83
Factor D (manure type)	0.7	Factor E (encroaching land use)	2.2

Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn)	307 m (1007 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

Preparer signoff & disclaimer

Preparer contact information
ON

Signature of preparer

05-30-2025

Date (mmm-dd-yyyy)

Note to the user

The Ontario Ministry of Agriculture, Food and Agribusiness (OMAFA) 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 OMAFA will be considered to be the official version for purposes of calculating MDS. OMAFA 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.