



Agricultural Impact Assessment

**Part of Lots 27 & 28,
Concession 5,
Township of Lucan-Biddulph,
County of Middlesex**

File No. 2625A

PREPARED FOR:
2219260 Ontario Ltd.

July 2026

Your Vision

Designed | Planned | Realized

MHBC - MacNaughton Hermesen Britton Clarkson Planning Limited
200-540 Bingemans Centre Drive Kitchener, ON N2B 3X9

T: 519 576 3650

F: 519 576 0121

www.mhbcplan.com



PLANNING
URBAN DESIGN
& LANDSCAPE
ARCHITECTURE

Contents

1.0	Introduction.....	3
1.1	Overview	3
1.2	Planning Policy Framework.....	6
1.3	Methodology (Data Collection and Review).....	15
1.4	Consultation Process.....	17
1.5	AIA Logistics	17
2.0	Study Area.....	18
2.1	Evaluating Alternative locations	19
2.2	Primary Study Area.....	26
2.3	Secondary Study Area.....	28
3.0	Assessment of Impacts to Agriculture.....	35
3.1	Reduction/Loss of Agricultural Land and Infrastructure	35
3.2	Fragmentation of Agricultural Lands	35
3.3	Compatibility Impacts	36
3.4	Economic and Community Impacts	36
3.5	Traffic Impacts.....	36
4.0	Measures to address Potential Impacts.....	37
4.1	Hierarchy of Measures	37
4.2	Measures to Avoid Impacts	38
4.3	Measures to Minimize & Mitigate Impacts.....	38
4.4	Summary of Net Impacts	38
5.0	Recommendations.....	44
6.0	Summary.....	45

Figures

- Figure 1** Location Map
- Figure 2** High Level Concept Plan
- Figure 3** Canada Land Inventory Soils Map
- Figure 4** Middlesex County Official Plan – Schedule A
- Figure 5** Township of Lucan-Biddulph Official Plan – Schedule A
- Figure 6** Township of Lucan-Biddulph Zoning Bylaw No. 100-2003
- Figure 7** Agricultural Land Use Map
- Figure 8** Alternative Locations
- Figure 9** Crop Heat Units – Agronomy Guide for Field Crops – Publication 811
- Figure 10** Crop Heat Units – Agriculture & Agri-Food Canada

Tables

- Table 1** Assessment of Alternative Locations Outside of Prime Agricultural Areas
- Table 2** Evaluation of Lower Priority Agricultural Lands based on OMAFA criteria
- Table 3** MDS I Summary Table
- Table 4** Summary of Net Impacts

Appendices

- Appendix A** Secondary Study Area Review
- Appendix B** Authors' Curriculum Vitae
- Appendix C** References
- Appendix D** MDS Worksheets & Setback Figure
- Appendix E** MDS Worksheets & Setback Figure for Alternative Location Assessment

1.0 Introduction

1.1 Overview

MacNaughton Hermesen Britton Clarkson Planning Ltd. (MHBC) has been retained by 2219260 Ontario Ltd. (the 'Client') to complete an Agricultural Impact Assessment (AIA) for a proposed Settlement Area Boundary Expansion on lands located at Part of Lot 27, Concession 5, and Part of Lot 28, Concession 5, Township of Lucan-Biddulph, and include parts of the lands municipally known as 34190 Saintsbury Line and 34122 Saintsbury Line. (the 'subject lands').

The subject lands are approximately 45.5 hectares (112.4 acres) in size with access to Saintsbury Line through the approved Timber Ridge Subdivision. The site is located immediately east of the existing settlement area boundary for the Town of Lucan. Lands to the north of the subject lands include vacant lands, Fallon Drive, and additional agricultural lands. To the east, the subject lands are bordered by agricultural lands. Lands to the south include vacant lands designated Future Residential (FR), agricultural lands, and low-density residential development. To the west, surrounding uses consist primarily of low-density residential development with the Town of Lucan (**Figure 1**).

The purpose of the Official Plan Amendment is to change the land use designation of the lands on Schedule A – Land Use & Transportation of the Official Plan from Agricultural to Residential, reflecting the intention to develop the property as a residential subdivision through future planning approvals.

The lands subject to the proposed OPA are immediately east of the draft-approved *Timber Ridge Subdivision*. Of the total landholdings, approximately 15.7 hectares were previously included within the *Timber Ridge Subdivision*, which received draft plan approval from the County of Middlesex in 2020. A further 14.6 hectares were subsequently incorporated into the Lucan Settlement Area Boundary through Official Plan Amendment No. 10 (OPA 10). The lands subject to the proposed privately initiated SABE comprise approximately 45.5 hectares of the remaining landholding. The subject lands are in agricultural use and currently under cash crop production. The lands are vacant of buildings or structures. There is agricultural tile drainage installed on the subject lands. A conceptual plan illustrating how the lands would be developed is shown in **Figure 2**. The remaining portions of the original lots will remain within the agricultural designation.

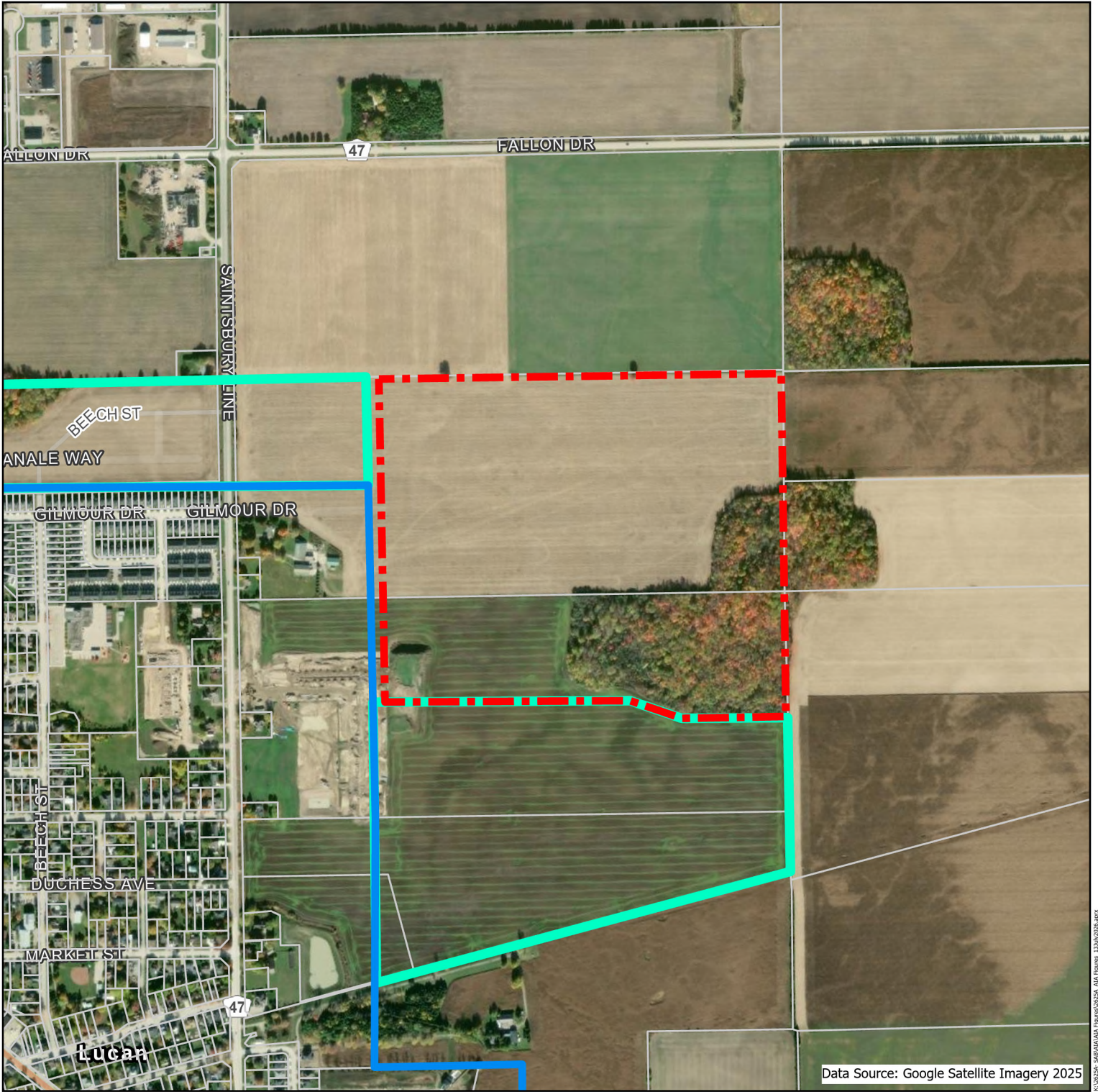


Figure 1 - Location Plan

-  Subject Lands (Primary Study Area)
-  Settlement Boundary
-  Lands Added to Settlement Boundary



PRELIMINARY CONCEPT PLAN

PROJECT SITE
Timber Ridge Expansion, Lucan ON



Land Use Breakdown		
USE	Ha.	%
Low Density Residential	22.71	49.95
Park	173	3.80
Open Space	10.72	23.58
Stormwater Management	140	3.08
Right of Way	8.91	19.59
TOTAL	45.47	100

N

Client:

Gilrad Developments

Date:

07.06.2026

Drawn By:

C. Taylor

Plan Scale:

nts

File No:

Timber Ridge Expansion

Version:

5.0

[siv-ik]

PLANNING DESIGN

Contact Us

www.siv-ik.ca

info@siv-ik.ca

905.694.6924

COPYRIGHT NOTICE
Copyright © 2026 by [siv-ik] planning and design inc. The information contained in this document is the intellectual property of [siv-ik]. Reproduction of any portion of this document or use of the intellectual ideas contained within it for any other purpose is prohibited without the written consent of [siv-ik].

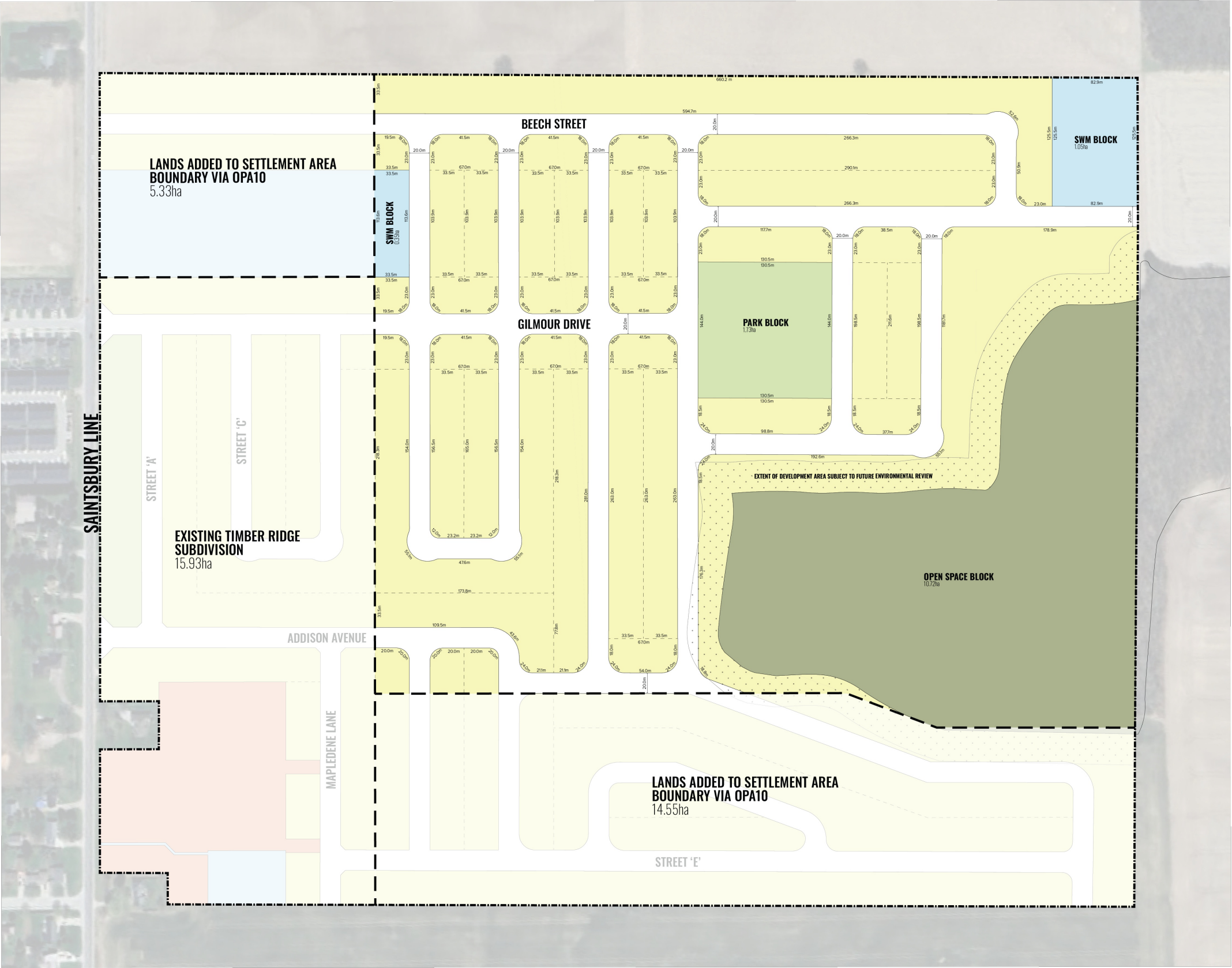


Figure 2 - High-Level Concept Plan

K:\2025-26\SARVANA\Figures\2025A_High Level Concept_30July2026.dwg



1.2 Planning Policy Framework

Several key documents were reviewed as part of this AIA to provide a comprehensive assessment of the policy framework from an agricultural perspective regarding the proposed development and Settlement Area Boundary Expansion. The following land use planning documents related to the subject lands have been reviewed:

- Provincial Planning Statement (2024);
- Middlesex County Official Plan (2023);
- Township of Lucan-Biddulph Official Plan (2003); and
- Township of Lucan-Biddulph Zoning Bylaw (2003).

1.2.1 Provincial Planning Statement, 2024

The Provincial Planning Statement (PPS) 2024 was released on August 20th, 2024, and took effect on October 20th, 2024. The new PPS integrates the 2020 Growth Plan and 2020 Provincial Policy Statement into a single planning document that applies province wide.

The PPS 2024 establishes the policy foundation for regulating the development and use of land in the province and provides policy direction on matters of provincial interest related to land use planning and development. It provides a vision for land use planning in Ontario that encourages an efficient use of land, resources and public investment in infrastructure. The PPS strongly encourages development that will provide long-term prosperity, environmental health and social wellbeing. This section provides an analysis of the PPS with respect to the request to bring the lands within a settlement area.

The PPS defines “Prime agricultural areas” as:

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

Further, the PPS defines Prime agricultural land as:

“specialty crop areas and / or Canada Land Inventory Class 1, 2 and 3 lands, as amended from time to time, in this order of priority for protection.”

Based on a review of Canada Land Inventory mapping, the subject lands contain Canada Land Inventory (CLI) Class 2 soils (60%) and Class 3 soils (40%) (see **Figure 3**). As such, the subject lands meet the PPS definition of prime agricultural lands. In accordance with Section 2.3.2 of the PPS, the Township of Lucan-Biddulph designates the subject lands as ‘Agriculture’ in the Official Plan, and thus forms part of the Prime Agricultural Area as defined by the PPS.

Further, 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 the predominantly grown, such as tender fruits (peaches, cherries, and 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."*

The lands and surrounding areas have not been identified or designated as a specialty crop area by the Province, County or Township and neither do the lands exhibit characteristics of a specialty crop production as defined by the PPS. Accordingly, the subject lands are not within a specialty crop area.

Settlement Area Boundary Expansions

Policy 4.3.4 allows planning authorities to exclude land from prime agricultural areas for expansions of or identification of settlement areas only in accordance with policy 2.3.2.

Policy 2.3.2.1 provides that in allowing a Settlement Area Boundary Expansion in prime agricultural areas, planning authorities shall consider:

- 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.*

Given that the subject lands are in a prime agricultural area, the requirement to be consistent with the above policy tests apply. As such, this AIA focuses on evaluation of alternative locations, assessing impacts of the proposed settlement boundary expansion on surrounding agricultural operations and provides mitigation measures and recommendations to manage the interface of the proposed settlement boundary expansion with surrounding agricultural uses.

1.2.2 Middlesex County Official Plan (2023)

The subject lands are designated "Agricultural Area" in the County of Middlesex Official Plan, Schedule A (see **Figure 4**). Section 2.3.9 of the Official Plan affirms that agriculture is a predominant activity in the County and that local food production is a priority. The Plan directs that non-agricultural activities be closely scrutinized and directed to Settlement Areas, unless the use is agriculturally related, qualifies as an on-farm diversified use, or requires a location in proximity to agriculture.

The Growth Management policies of the Official Plan further require that, prior to identifying a new Settlement Area or expanding the limits of an existing Settlement Area, the local municipality prepare a Comprehensive Review with appropriate background information to justify the proposed boundary change. Section 2.5.3 states that Settlement Area Boundary Expansion should be supported by studies that address:

"...

f) in prime agricultural areas:

- *the lands do not comprise specialty areas;*
- *alternative locations have been evaluated and there are no reasonable alternatives that avoid prime agricultural lands and there are no reasonable alternative locations on lower priority agricultural lands in prime agricultural areas; and*
- *the new or expanding settlement area is in compliance with the minimum distance formulae.*

g) impacts from new or expanding settlement areas on agricultural operations which are adjacent or close to settlement area are mitigated to the extent feasible."

Accordingly, this Agricultural Impact Assessment has been prepared to address the County's requirements regarding the potential impacts of the proposed Settlement Area Boundary Expansion on the surrounding agricultural area and agricultural operations within the Township. The assessment evaluates alternative locations and provides recommendations to mitigate potential impacts associated with the proposed expansion.

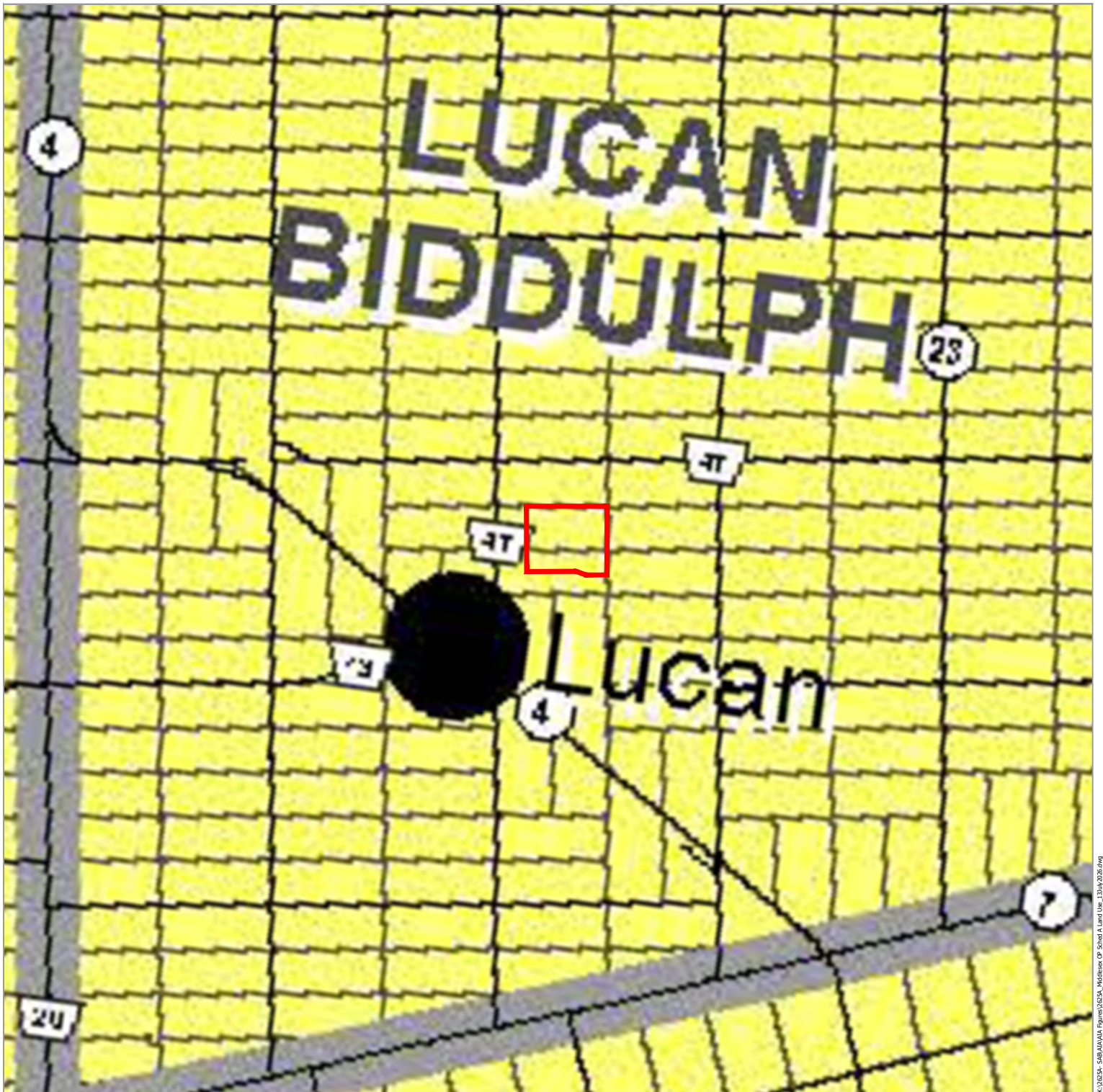


Figure 4 - County of Middlesex Official Plan (Schedule A - Land Use)

- Subject Lands
- Agricultural Areas
- Settlement Areas (Urban and Community)



1.2.3 Town of Lucan-Biddulph Official Plan (2003)

The subject lands are designated “Agricultural” in the Township of Lucan-Biddulph Official Plan, Schedule A (**Figure 5**). Policy 3.1.1.1 of the Official Plan states that within areas designated “Agricultural” on Schedule A, the primary use of land shall be for farming, together with buildings, structures, and facilities accessory to farming.

While Section 3.1 of the Township of Lucan Biddulph Official Plan states that settlement area boundary expansions can only occur through a formal Municipal Comprehensive Review (MCR), this restriction is no longer in effect under the current Provincial Planning Statement (PPS), which eliminated the MCR framework to allow for individual expansion applications at any time.

Lucan-Biddulph Official Plan Amendment No. 10 was approved with modifications by County Council in September 2023. An appeal to the Ontario Land Tribunal was filed by Landea Development Inc. on September 29, 2023, and Gilrad Developments Inc. was granted party status by the Tribunal on July 5, 2024. During the appeal process, the Province introduced the Provincial Planning Statement, 2024, which amended the applicable policy framework for the review of OPA No. 10. Of particular relevance to the appeal were the extension of the population forecast horizon from 25 years to 30 years and the requirement to rely on Ministry of Finance projections. In response to these policy changes, the parties pursued settlement discussions. A settlement hearing was held on October 20, 2024, and the Ontario Land Tribunal issued a decision approving an updated Amendment No. 10 on November 13, 2025. The subject lands are located north of the lands added to the settlement area boundary through OPA No. 10 and east of the existing Timber Ridge subdivision, as shown in **Figure 2**.

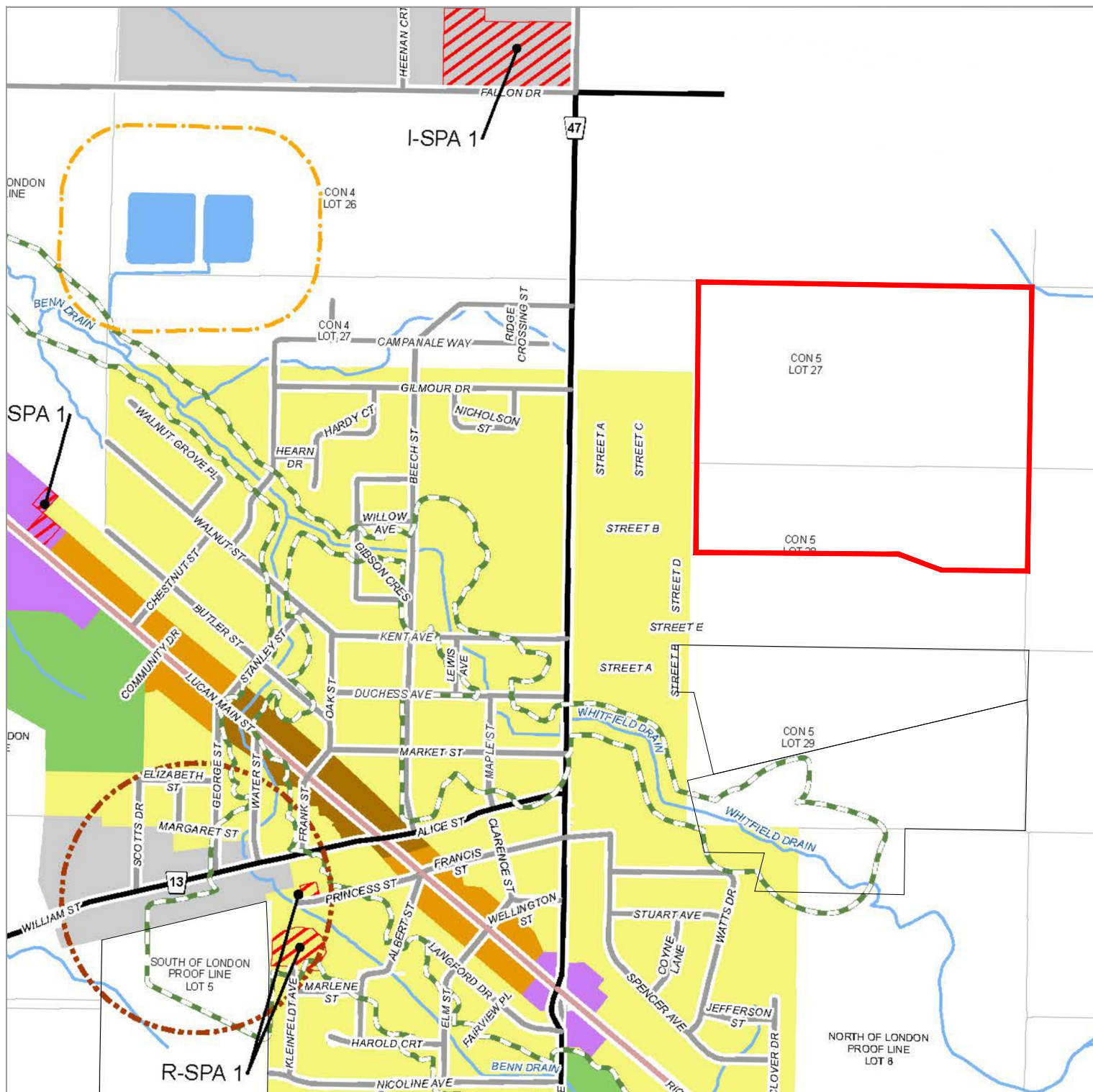
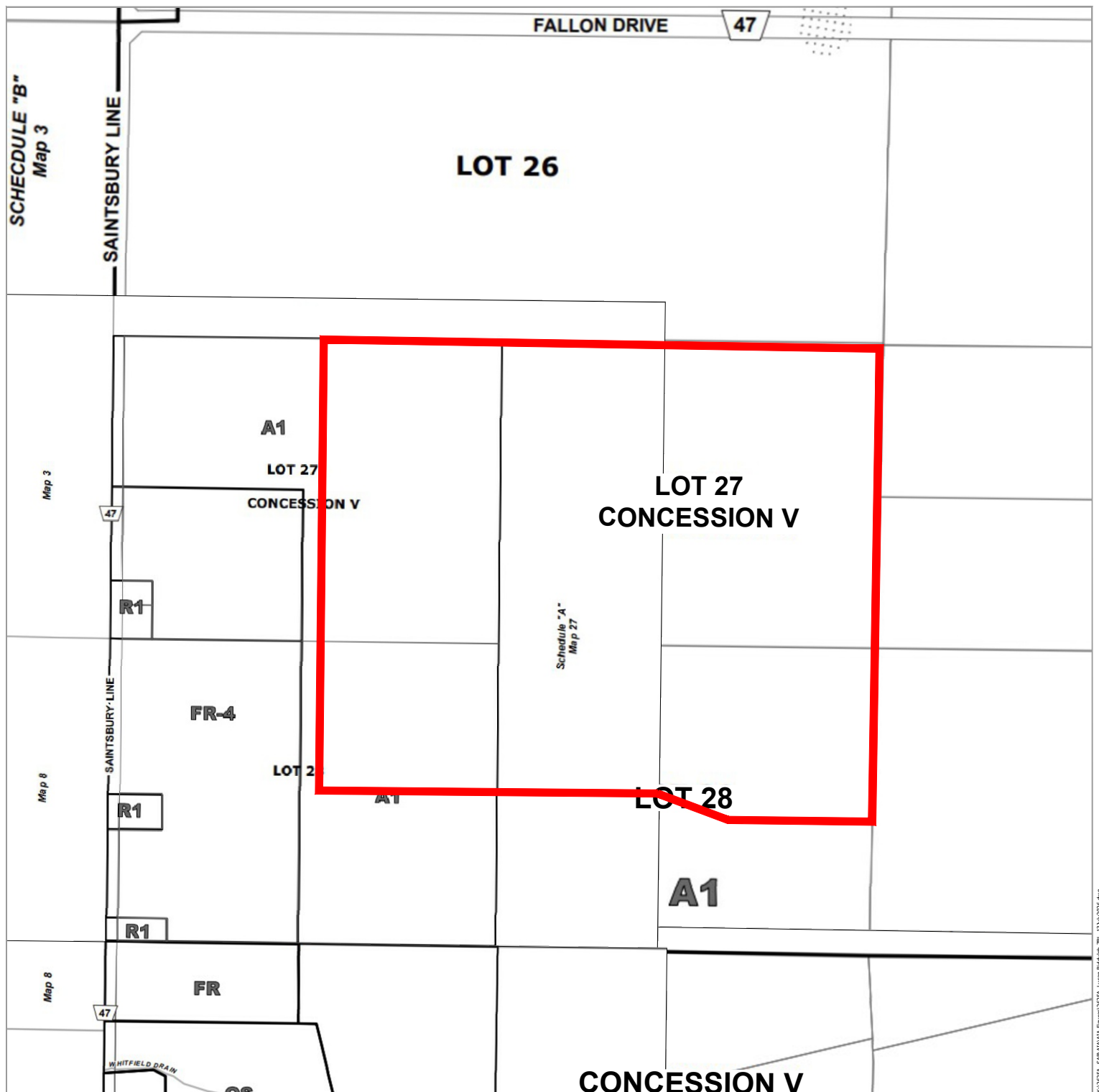


Figure 5 - Township of Lucan Biddulph Official Plan (Schedule A - Land Use & Transportation Plan)



1.2.4 Town of Lucan-Biddulph Zoning By law (2003)

The Township of Lucan-Biddulph Zoning By-law No. 100-2003 zones the subject lands as "General Agricultural Zone", as shown in **Figure 6**. Lands located west of the subject lands are zoned "Future Residential Zone" and are within the Timber Ridge subdivision.



K:\2024 - SARAWAD - Figures\2024 - Lucan Biddulph - 201_1314\2024.dwg

1.3 Methodology (Data Collection and Review)

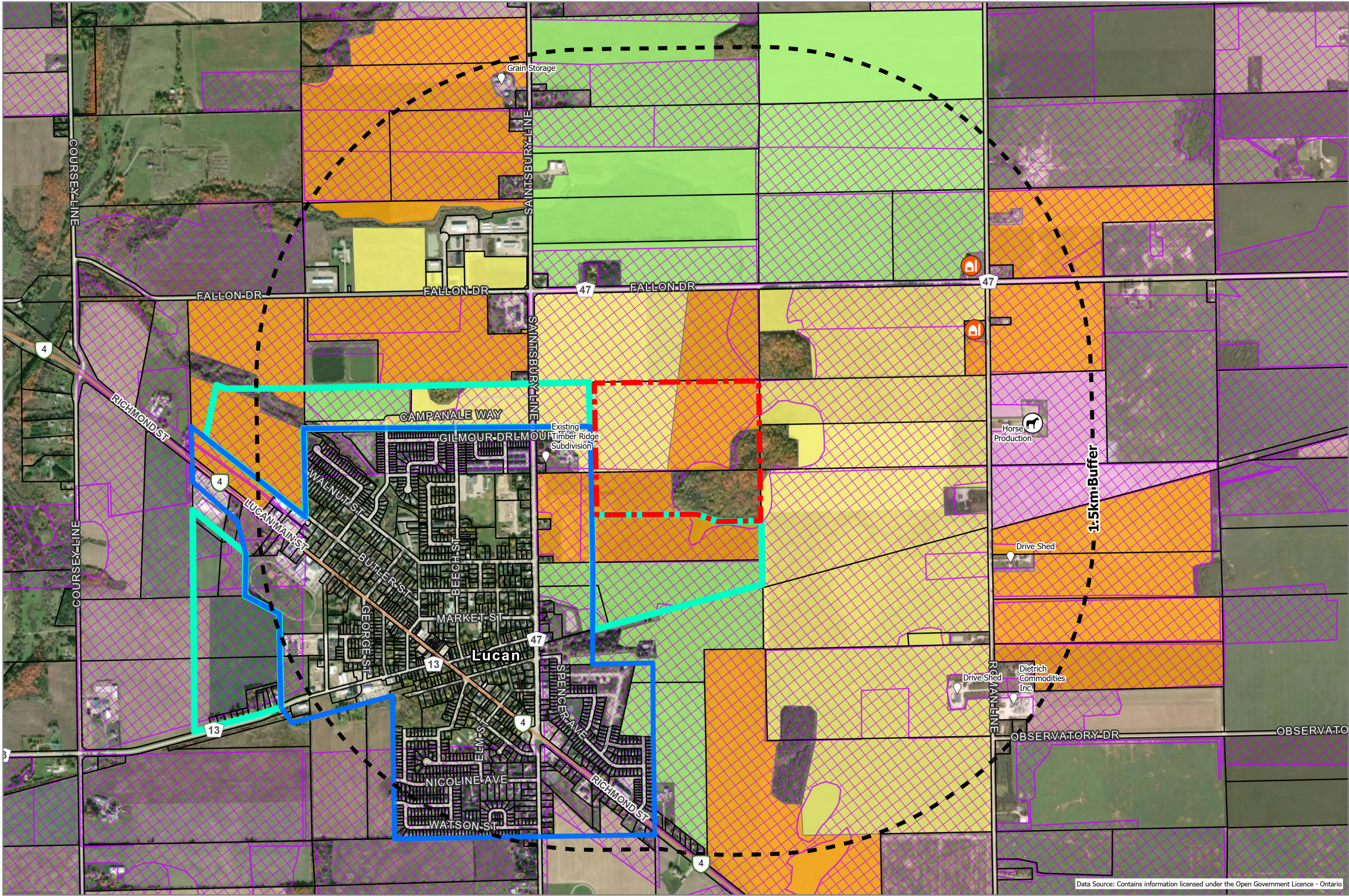
In preparing this report, the following background materials were reviewed:

- Agricultural Impacts Assessment (AIA) Guidance Document (Publication 861);
- Guidelines for Permitted Uses in Ontario's Prime Agricultural Areas, Publication 851; and,
- British Columbia Ministry of Agriculture's Guide to Edge Planning (2015).

In addition to the plans and reports that were specifically prepared in support of the application, the following materials were also reviewed:

- 2021, 2016, and 2011 Census of Agriculture for Township of Lucan-Biddulph;
- Soil data resource information including Ontario Soil Survey reports and mapping, the provincial digital soil resource database, Canada Land Inventory Agricultural Capability mapping, Soil Suitability information and mapping (for specialty crops), and information from on-site investigations;
- Aerial photography (historic and recent) with effective user scale of 1:10,000 or smaller;
- The soils of Middlesex County (Vol. 1, Report No. 56). Ontario Ministry of Agriculture and Food;
- Crop Heat Units data from Agronomy Guide for Field Crops – Publication 811 (June 2009);
- Crop Heat Units data from Agroclimatic database of Agriculture and AgriFood Canada (2026);
- Agriculture and Agri-Foods Canada (AAFC) Annual Crop Inventory (2023);
- [AgMaps](#) – OMAFA;
- [Agricultural Systems Portal](#) – OMAFA;
- [Make a Map: Natural Heritage Areas Application](#) (Ministry of Natural Resources); and
- Minimum Distance Separation (MDS) Document Publication 853 (OMAFA).

A land use survey was also conducted on April 21st, 2025, with additional information gathered from Google Satellite Imagery and AAFC's 2024 Annual Crop Inventory to gain a better understanding of the agricultural operations and activities in both the Primary and Secondary Study Areas. A summary of the land use survey is illustrated on **Figure 7** and described in **Appendix A** of this report. The potential for impacts will vary and mitigation is dependent on the type and sensitivity of the agricultural activities identified in the primary and Secondary Study Areas.



**Figure 7 -
Agricultural Land Use**

-  Subject Lands (Primary Study Area)
-  1.5km Buffer (Secondary Study Area)
-  Settlement Boundary
-  Lands Added to Settlement Boundary
-  Horse Production
-  Unoccupied Livestock
-  Corn
-  Hay
-  Soybean
-  Wheat
-  Agricultural Tile Drainage Area

Data Source: Contains information licensed under the Open Government Licence - Ontario



1.4 Consultation Process

The consultation process for the proposed Settlement Area Boundary Expansion will occur through the Planning Act process and involve comprehensive engagement with a broad range of stakeholders, including local agricultural communities, source protection authorities and committees, Indigenous communities, and neighbouring residents and businesses. In accordance with the Planning Act Regulations, neighbouring property owners will receive direct notification outlining the nature and scope of the expansion. Engagement with the agricultural community should be carefully scheduled to avoid conflicts with key farming periods—such as planting, harvesting, and livestock management cycles—to ensure their meaningful participation. Through early outreach, transparent communication, and inclusive engagement opportunities, the consultation process aims to identify potential concerns, incorporate local knowledge, and support a well-informed review of the proposed expansion.

1.5 AIA Logistics

This AIA has been prepared to support the Client's application for an Official Plan Amendment to the Township of Lucan-Biddulph Official Plan to expand the Lucan-Biddulph Settlement Area Boundary, to identify potential impacts on surrounding agricultural activities and required mitigation measures to abate these impacts to the extent feasible.

The report has been completed by qualified professionals, including a Registered Professional Planner (RPP) certified by the Ontario Professional Planners Institute (OPPI) and an Articling Agrologist (A.Ag) designated by the Ontario Institutes of Agrologists (OIA). Full curriculum vitae for both contributing authors is provided in **Appendix B**.

A windshield survey for this study was conducted on April 21st, 2025. During this site visit, all visible farm operations within a 1.5-kilometre radius of the subject lands have been documented to assess the potential impact from the proposed development on the surrounding agricultural uses/operations and determine the extent of mitigation that may be required. Observed cropping was also cross-referenced against the Agriculture and Agri-Foods Canada (AAFC) Annual Crop Inventory (2024) to confirm our observations and assumptions given the time of year of our survey.

2.0 Study Area

A focused agricultural land assessment was carried out based on a study area comprised of a 'Primary Study Area' and 'Secondary Study Area'. The Primary Study Area is comprised of the subject lands. The Secondary Study Area encompasses a radius of 1.5 kilometers from the subject lands that has the potential to be directly and indirectly impacted by the proposed settlement area expansion.

A plan identifying the adjacent properties, existing crops, and existing barns within the study area is included as **Figure 7** of this report. The inventory of existing agricultural land uses, cropping practices and structures is based on observations made during a site visit completed on April 21st, 2025, review of air photography and AAFC's 2024 Annual Crop Inventory. A review of 2021, 2016, and 2011 Census of Agriculture data was also undertaken to confirm if the Study Areas are representative of agricultural production patterns and livestock types in the broader region.

2.1 Evaluating Alternative locations

To permit non-agricultural uses in prime agricultural areas, the PPS requires an evaluation of alternative locations that demonstrates:

- (i) *there are no **reasonable** alternative locations which avoid prime agricultural areas; and, there are no **reasonable** alternative locations in prime agricultural areas with lower priority agricultural lands.*

OMAF's 'Evaluating Alternative Locations for Non-Agricultural Uses' guidance in Publication 851, outlines the following hierarchy to direct non-agricultural uses in rural areas:

- 1) Avoid specialty crop areas
- 2) If possible, avoid other prime agricultural areas
- 3) If 2) is not achievable, evaluate Lower Priority Agricultural Lands

This section reviews alternative locations within this hierarchy.

2.1.1 Avoid Specialty Crop Areas

The Middlesex County and Township of Lucan-Biddulph Official Plans and the Province's Agricultural System Portal do not designate the subject lands or the surrounding area as Specialty Crop Areas.

2.1.2 Avoid other Prime Agricultural Areas (if possible)

The Township of Lucan-Biddulph Official Plan designates the subject lands as 'Agricultural'. Lands immediately west and southwest of the subject lands are within the Township's settlement area, while lands to the southeast consist of an open space woodland area. Lands to the north and east are also designated 'Agricultural' and contain CLI soil Classes 1, 2, and 3.

In accordance with the PPS 2024, Prime Agricultural Areas are defined as areas containing CLI Classes 1, 2, and 3 soils. Accordingly, the assessment of reasonable alternatives focuses on potential sites located within Prime Agricultural Areas. The following section identifies and evaluates alternative locations.

2.1.3 Identification of Alternative Agricultural Lands

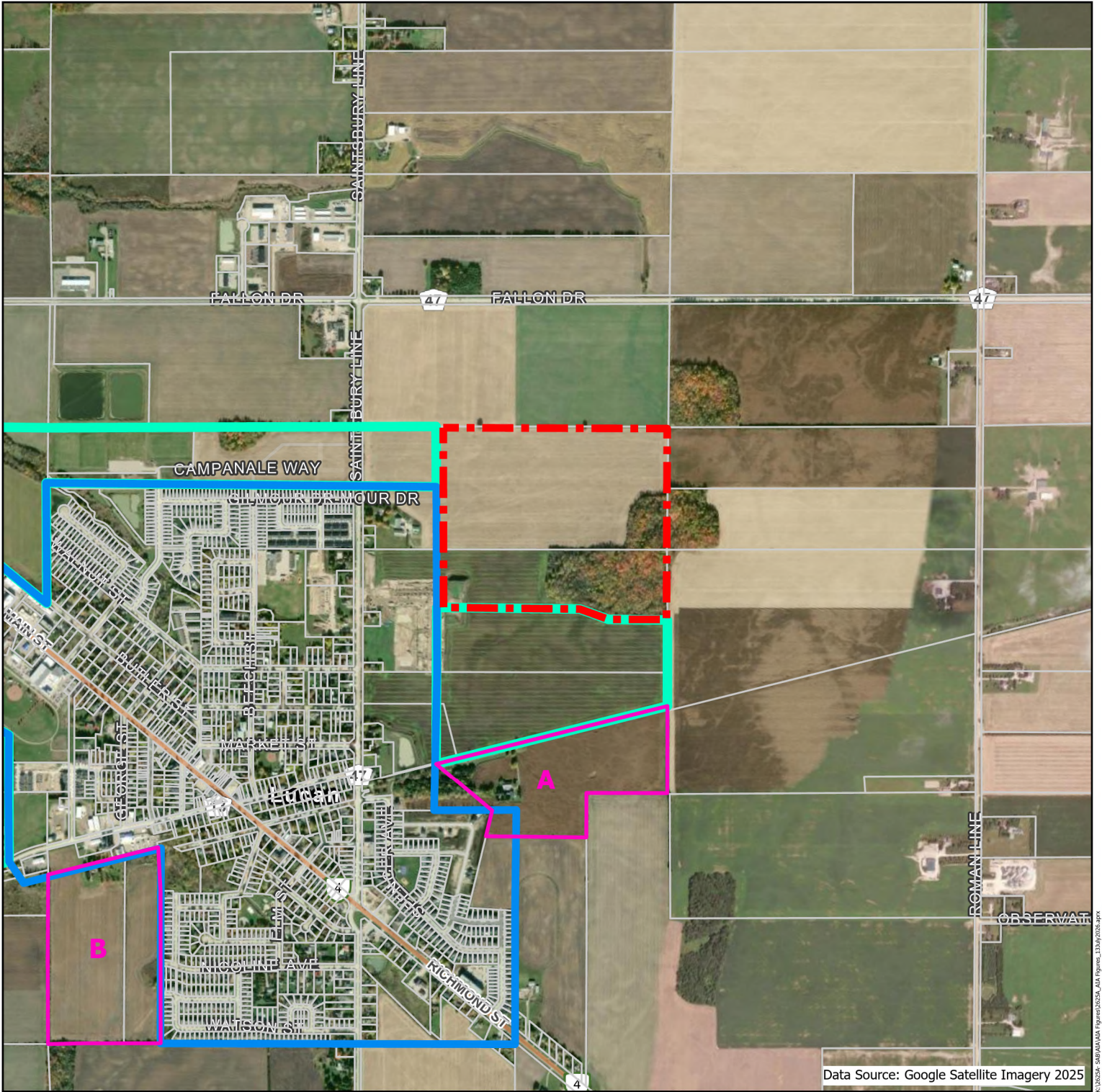
OMAF's '[Evaluating Alternative Locations for Non-Agricultural Uses](#)' together with the AIA guidelines and site suitability evaluation criteria, identifies the following considerations for determining lower-priority agricultural lands within Prime Agricultural Areas:

- **Avoidance of Prime Agricultural Lands:** Prime agricultural lands should be avoided wherever possible to protect and preserve the agricultural system. Where avoidance is not feasible, development should minimize disruption to existing agricultural operations and activities.
- **Existing Agricultural Uses:** Consideration should be given to existing agricultural uses that may be incompatible with the proposed development, including livestock operations and specialty crop areas where non-agricultural uses are generally prohibited.
- **Agricultural Investments:** Lands containing significant agricultural infrastructure or investments, such as greenhouses, irrigation systems, tile drainage, farmers' markets, or agri-tourism facilities, should be avoided where possible.
- **Soil Capability for Agriculture:** Lands with lower CLI soil capability classifications are generally preferred in order to minimize the loss of high-quality agricultural soils.
- **Site Access:** Direct road access is an important consideration for the proposed development, particularly during construction, to facilitate the transportation of equipment and materials.
- **Zoning Permissions and Land Use Designations:** Existing Official Plan designations and zoning by-law permissions may influence the suitability of lands and assist in minimizing the conversion of Prime Agricultural Areas.

A review of County and Township Official Plan mapping within the Study Area indicates that the lands are designated "Agricultural". The Township does not contain a "Rural" designation; therefore, locating the proposed development outside of a Prime Agricultural Area is not feasible within this context. Lands surrounding the Lucan settlement area boundary are generally characterized by CLI Class 2 and 3 soils or by natural heritage features, such as woodlands.

Another important consideration in identifying reasonable alternative locations is the potential impact on existing livestock operations, including whether a site would limit or constrain opportunities for future expansion.

Within the Study Area, no lands were identified that are located outside of the Prime Agricultural Area. Accordingly, two alternative areas within the Prime Agricultural Area were identified and assessed for comparison purposes, as shown on **Figure 8**.



The alternative areas reviewed for potential settlement area inclusion are located primarily to the east and southwest of the existing settlement area. These areas are described below.

Alternative Area A – 192 Francis Street

Alternative Area A is municipally addressed as 192 Francis Street and is located east of the Lucan-Biddulph settlement area, south of the subject lands. The area comprises approximately 20 hectares (49.5 acres).

The western portion of Alternative Area A is already located within the existing settlement area. The area is relatively fragmented by existing residential development and streets. It is not affected by MDS setbacks from livestock barns located east of the settlement area.

Alternative Area A consists of a smaller agricultural landholding and was not included in the draft OPA No. 10 settlement area expansion proposal. This may be due, in part, to the presence of existing natural heritage constraints or the landowner's preference to maintain the lands in agricultural use rather than pursue their inclusion within the settlement area.

Alternative Area B – 6245 William Street

Alternative Area B is municipally addressed as 6245 William Street and is located southwest of the Lucan-Biddulph settlement area. The lands were identified for evaluation due to their proximity to existing residential development and their location south of William Street.

This area is not expected to be affected by MDS setbacks from livestock operations, which are located farther west of the lands. If selected, Alternative Area B would be entirely included within the settlement area.

Alternative Area B was considered in the draft OPA No. 10 review but was not ultimately confirmed for inclusion. The northern portion of the area contains the grain elevator development constraints, and the overall size of the area is smaller than the subject lands. These factors may limit future development design options and the overall development potential of the lands.

Subject Lands

The subject lands comprise approximately 45.5 hectares (112.4 acres) and are located adjacent to the Lucan-Biddulph settlement area. The lands include areas identified as open space or development constraints.

The subject lands are located north of lands added to the settlement area through OPA No. 10. Timber Ridge Subdivision is located to the west of the subject lands. Three livestock barns are located east of the subject lands; however, these livestock facilities do not generate an MDS I setback that extends into the subject lands.

Compared with the alternative areas reviewed, the subject lands provide a larger and more contiguous landholding, with direct adjacency to existing and planned settlement area development and were also identified by Municipal Planning Staff as a favourable location for future settlement area expansion through the OPA 10 review, providing greater flexibility for comprehensive planning, subdivision design, and the logical extension of the settlement area.

<i>Table 1. Assessment of Alternative Locations Outside of Prime Agricultural Areas</i>			
Criteria	Alternative Area A	Alternative Area B	Subject Lands
Avoid Prime Agricultural Areas	No	No	No
Existing Agricultural Use	Yes	Yes	Yes
Agricultural Investment	Yes Tile drainage	Yes Tile drainage	Yes Tile drainage
Soil Capability for Agriculture – CLI class	2 & 3	2 & 3	2 & 3
Site Access	Local Road	Local Road	Local Road
Zoning Permissions & Land Use Designation	Agricultural	Agricultural	Agricultural
Natural Features Constraints	Yes	Yes	No
Site Area (ha)	20	22.3	45.5

An additional factor in evaluating alternative locations is land ownership and the willingness of landowners outside the Prime Agricultural Area to have their properties included within the settlement area boundary. Accordingly, landowner interest and land availability are key considerations in assessing the overall suitability and feasibility of potential locations for the proposed SABE. The MDS calculation for the potential setback of surrounding livestock to alternative locations has been analyzed and included in **Appendix E** of this report.

2.1.4 Assessment of Alternative Locations on Lower Priority Agricultural Land

The assessment of alternative locations on lower-priority agricultural lands represents the next step in the evaluation process. A range of site characteristics and land use considerations were reviewed to assess the relative suitability and priority of potential locations for the proposed SABE. Table 2 has been prepared as an evaluation matrix based on OMAFA's *Evaluating Alternative Locations for Non-Agricultural Uses* guidance.

The evaluation criteria include the following:

- Soil Capability for Agriculture (CLI Soils Map)
- Areas along transportation corridors where disturbances to agriculture would be minor.
- Areas adjacent to other non-agricultural uses
- Areas zoned for non-agricultural uses.
- Land not used, or underutilized, for agriculture, such as:
 - Lower quality land based on CLI ratings (e.g., non-prime agricultural land classes 4 to 7, or, where all land is prime agricultural land, relatively lower quality land in the area)
 - Disturbed land (e.g., former abandoned aggregate sites or brownfield sites)
 - Highly fragmented areas (e.g. small parcels, non-agricultural uses present)
 - Relatively small area in active agricultural use
- areas where major investments have been made into agriculture, such as:
 - elements of the agri-food network including infrastructure, services and assets important to the viability of the agri-food sector (e.g., grain handling facilities, food processors, greenhouses, distribution centres, areas with drainage tile [priority for protection is systematic, random, no tiles])
 - concentrations of livestock facilities
 - areas with perennial crops having long establishment times

Table 2. Evaluation of Lower Priority Agricultural Lands based on OMAFA criteria

	Adjacent to other non-agricultural uses	Areas zoned for non-agricultural use	CLI Soil Class & Soil Type	Highly fragmented area	Disturbed land	Livestock operations or infrastructures present on site	Perennial crops	Contains elements of agri-food network/ agricultural infrastructure	Availability of Sufficient Site Area
Subject Lands	Y	N	2DT ⁶ 3W ⁴	Y	N	N	N	Y Tile Drainage	Y
Alternative Area A	Y	N	2DT ⁶ 3W ⁴	Y	N	N	N	Y Tile Drainage	N
Alternative Area B	Y	N	2DT ⁶ 3W ⁴ 3W ⁶ 2D ⁴	Y	N	N	N	Y Grain Elevator Tile Drainage	N Grain Elevator Buffer

Although the subject lands do not represent the lowest-priority agricultural lands among the alternative locations evaluated, several site-specific characteristics support their suitability for the proposed development. These characteristics include sufficient site area, and the willingness of the landowner to proceed with the SABE.

In other words, the subject lands and Alternative Areas A and B are all located adjacent to the existing Lucan Biddulph settlement area and are similarly fragmented as a result of this proximity. All three areas are zoned Agricultural and have comparable soil quality. In addition, neither the subject lands nor the alternative areas contain livestock barns or perennial crops. These factors indicate that the subject lands do not represent lower-priority agricultural lands relative to the alternative locations.

However, differences arise when considering the availability of land for development. Alternative Area A has the smallest site area, while Alternative Area B is constrained by the Grain Elevator influence area, which reduces the amount of land available for development. The subject lands provide a larger and more suitable development area. The sufficiency of developable land, together with the willingness of the landowner to proceed, are the primary factors that make the subject lands the preferred location for settlement area boundary expansion.

2.2 Primary Study Area

Based on the Ontario Ministry of Agriculture, Food, and Rural Affairs (OMAFRA) 'Agricultural Impact Assessment (AIA) Guidance Document' (herein referred to as 'OMAFRA AIA Guidelines'), the primary study area when conducting an AIA for a Settlement Area Boundary Expansion is the area where expansion is being considered (i.e. the subject lands).

2.2.1 Canada Land Inventory (CLI) Soil Capability for Agriculture

The CLI system is the recognized system in Ontario for classifying areas with mineral soils according to their inherent capability for growing common field crops (corn, wheat, soybeans, oats, barely, perennial forest crops). CLI emphasizes the inherent capability of an area for field crops and is an interpretive classification system.

The 7 different capability classes indicate the general capability of the soil for growing common field crops (ex. 3FM). A description of these classes is provided below (those in bold are most relevant to this report):

- 1 – Soils in this class have no significant limitations in use for crops.
- **2 – Soils in this class have moderate limitations that restrict the range of crops or require moderate conservation practices.**
- **3 – Soils in this class have moderately severe limitations that restrict the range of crops or require special conservation practices.**
- 4 – Soils in this class have severe limitations that restrict the range of crops or require special conservation practices
- 5 – Soils in this class have very severe limitations that restrict their capability in producing perennial forage crops, and improvement practices are feasible.
- 6 – Soils in this class are capable only of producing perennial forage crops, and improvement practices are not feasible.
- 7 – Soils in this class have no capacity for arable culture or permanent pasture.
- O – Organic Soils (not placed in capability classes).

The 13 different capability subclasses indicate the primary type of limitation or hazard for growing common field crops (ex. 3FM). A description of these subclasses is provided below (those in bold are most relevant to this report):

- C – Adverse climate
- **D – Undesirable soils structure and/or low permeability**
- E – Erosion
- F – Low fertility
- I – Inundation by streams or lakes
- M – Moisture limitations
- N – Salinity
- P – Stoniness

- R – Consolidated bedrock
- S – Combination of subclasses
- **T – Topography**
- **W – Excess Water**
- X – This Subclass is comprised of soils having a limitation resulting from the cumulative effect of two or more adverse characteristics

When 2 soil types occur in an area shown on the map, a complex capability rating is shown which includes separate ratings for each soil (ex. 1⁸4T²). The numeric superscripts denote the proportion of the area out of a total of 10.

Provincial mapping identifies the subject lands as consisting predominantly of Canada Land Inventory (CLI) Class 2DT⁶3W⁴ soils. Approximately 60% of the soils are classified as Class 2DT, indicating **moderate limitations** that restrict the range of crops due to **undesirable soil structure and/or low permeability**, as well as **topographic** constraints. The remaining 40% of the soils are classified as Class 3W, which indicates **moderately severe limitations** that restrict the range of crops due to **excess water** conditions (see **Figure 3**).

According to *The Soils of Middlesex County* (1992), the soils on the subject lands are comprised of the Perth soil series, a moderately well-drained soil developed on calcareous till derived from red shale. Perth soils typically occur on nearly level to gently sloping landscapes and are characterized by a silt loam, loam, or silty clay loam surface horizon overlying clay-rich subsoil horizons. These soils generally have moderate to high moisture-holding capacity, are moderately to slowly permeable, and are typically neutral to mildly alkaline. Perth soils exhibit well-developed soil structure and have good agricultural capability which are suitable for common field crops, provided that appropriate management practices are used to minimize soil compaction and address seasonal wetness where present.

2.2.2 Specialty Crop Areas

Specialty crops are fruit, vegetables, and other crops grown commercially in Ontario that cannot be grouped with common field crops (such as corn). CLI does not provide a soils capability rating for specialty crop production. There is no specialty crop area designated by the Province nor the County of Middlesex, nor is there evidence of specialty crop production within the primary study area.

2.2.3 Improvements for Agriculture

Agricultural uses within the primary study area consist of typical cash crop production. There are random and systematic tile drainage installation on the subject land. No other specialty cropping practices, agricultural buildings or equipment were observed or are documented within the Primary Study Area.

2.3 Secondary Study Area

According to the OMAFA AIA Guidelines, the Secondary Study Area should include those lands within a 1.5 km radius of the area of the expansion. As shown on **Figure 7**, the predominant land use within the Secondary Study Area consists of a mix of urban area (residential, commercial, industrial, and institutional) and agriculture (cash crops and livestock). Lands directly to the north, south and east are agricultural uses and lands to the west are within the Township settlement area and developed predominantly with low density residential dwellings. Surrounding crops include corn, soybean, and winter wheat. A detailed review of livestock and farming operations within the Secondary Study Area is included as **Appendix A – Secondary Study Area Review**.

Based on the site visit, the agricultural lands within the Primary and Secondary Study Areas reflect typical agricultural cropping practices that are predominant throughout southern and central Ontario (soybean/corn rotation, hay production, and wheat production). No specialized cropping practices were observed or are documented within the Secondary Study Area. A large-scale grain storage operation that supports the overall agricultural system was observed approximately 1400 metres to the east from the subject lands.

There are 3 livestock operations in the Secondary Study Area. These operations are described in more detail in **Appendix A** and consist of two unoccupied livestock barns, and an equestrian and horse operation. MDS calculations are discussed in Subsection 2.3.3 of this Report.

Overall, the Secondary Study Area is representative of normal livestock and cropping practices for this area.

2.3.1 Census of Agriculture & Ontario Business, Agri-Food and Farm Data Profile for Lucan-Biddulph

The 2021, 2016, and 2011 Census of Agriculture and OMAFA's Ontario business, agri-food, and farm data profile for Lucan-Biddulph were reviewed to provide an overview of agricultural production patterns and parcel size in the Township. Additionally, North American Industry Classification System (NAICS) data for 2011, 2016, and 2021 were utilized to determine trends in agricultural industry classification (farm types) within the Township.

In terms of parcel size, in 2021 most farms (21.9%) were within the 28-52 hectare (70–129 acre) farm size, followed by 19.4% of farms falling in the 4–28 hectare (10–69 acre) range¹. The amount of land in crop production has increased since 2011² from 13,080 hectares to 18,207 hectares in 2021³, representing an increase in cropland of 28.2%.

The most common type of crop production in Township of Lucan- Biddulph is 'oilseed and grain farming' (65.3%), predominantly consisting of soybean, corn, and other grain farming⁴. This industry has grown

¹ [Table 32-10-0232-01-Farms classified by total farm area, Census of Agriculture, 2021](#)

² [Table 32-10-0406-01 \(formerly CANSIM 004-0203\)- Archived - Land use, Census of Agriculture, 2011 and 2016, inactive](#)

³ [Table 32-10-0249-01-Land Use, Census of Agriculture, 2021](#)

⁴ [Table 32-10-0231-01-Farms classified by farm type, Census of Agriculture, 2021](#)

over the last 10 years with a 33.6% increase in the number of oilseed and grain farms from 2011 to 2021⁵. The next most common farm type in the Township is 'other crop farming', which constituted 4.6% of total farms in 2021. Other crop farming has experienced an increase from 2011 but a decrease from 2016. Overall, the large amount of oilseed and grain farming including soybeans, corn, and wheat farming within the primary and Secondary Study Area is reflective of agricultural patterns throughout the Township of Lucan-Biddulph.

In terms of livestock, 'cattle ranching and farming' comprised 12.2% of farms (of which 62% of farms were beef cattle, 37.5% dairy cattle) in the Township of Lucan-Biddulph⁴. Using these metrics, 'cattle ranching and farming' has exhibited a 41.7% increase over the last 10 years⁵. Two unoccupied livestock operations and one equestrian/horse production operation were observed within the Secondary Study Area. 'Other animal production' comprised 6.6% of farms within the Township, primarily horse and other equine production (76.9%) followed by animal combination farming (23.1%)⁴.

Based on the site visits, the agricultural activities within the Primary and Secondary Study Areas appear to be indicative of broader agricultural trends in the Township of Lucan-Biddulph. The surrounding crops include typical cash crops such as soybean, corn, and wheat. Surrounding livestock includes beef cattle and horses. Both the Primary and Secondary Study Areas are representative of normal agricultural production for this area and do not consist of specialized farming practices or specialty crops.

2.3.2 Microclimate for Specialty Crop Production

Two sources were reviewed as part of this assessment to evaluate Crop Heat Units (CHU) for the subject lands. CHU is a key climatic indicator used to assess whether a location is suitable for the production of specialty crops, including vegetables and orchards. The CHU index was originally developed for field corn and has been applied in Ontario for over 30 years. It is based on the total accumulated crop heat units during the frost-free growing season, with higher CHU values indicating longer growing seasons and greater potential for producing a wider range of crops.

It is important to note that while CHU analysis provides insight into the climatic potential for specialty crop production, the identification and protection of specialty crop areas is ultimately determined through provincial, regional, and municipal planning designations. As such, climatic suitability alone does not establish a specialty crop area under policy.

The first source reviewed was the OMAFRA Agronomy Guide for Field Crops – Publication 811 (June 2009). Based on this source, the subject lands are located within an area characterized by approximately 3,100 to 3,300 average accumulated CHU, indicating typical climatic conditions with opportunities for specialty crop production. Contrary to this assessment, the lands have not been identified as a specialty crop area in applicable planning documents (see **Figure 9**).

The second source reviewed was the Agriculture and Agri-Food Canada (AAFC) Science and Technology Branch Crop (Corn) Heat Unit mapping, which provides more recent and dynamically updated data. Based on this source, the subject lands are located within an area with approximately 3,455 to 3,703

⁵ [Table 32-10-0403-01 \(formerly CANSIM 004-0200\)- Archived - Farms classified by farm type, Census of Agriculture, 2011 and 2016, inactive](#)

average accumulated CHU, indicating a climate that is well suited for specialty crop production, including vegetables and orchards such as apples, plums, and peaches (see **Figure 10**).

The discrepancy between the two sources is largely attributable to the age of the first dataset and the effects of climate change over time. The OMAFRA publication dates from 2009, whereas the AAFC CHU data are updated annually, with current information available through 2025. Observed trends in agricultural production, including the expansion of wineries, vegetable operations, and orchards into higher latitudes, support the reliability of the more recent AAFC data.

In conclusion, while current CHU data from Agriculture and Agri-Food Canada indicate that the subject lands are climatically capable of supporting specialty crop production, it is important to emphasize that the lands are not designated as Specialty Crop Areas under provincial, regional, or municipal planning policies. Accordingly, although specialty crop production may be technically feasible based on updated CHU information, the subject lands do not function as specialty crop lands from a policy perspective, nor do the surrounding agricultural practices exhibit characteristics of specialty cropping or infrastructure.

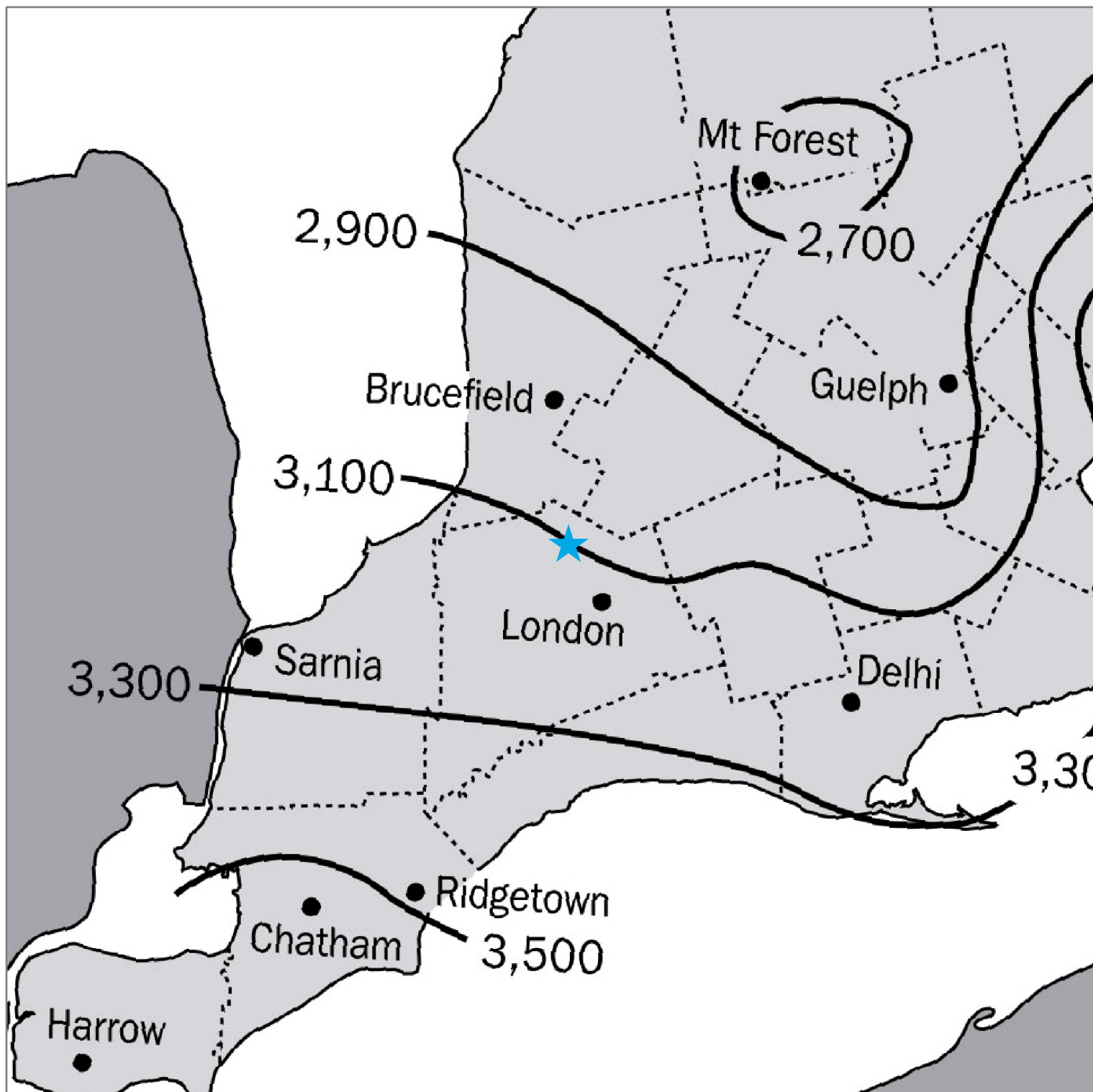


Figure 9 - Crop Heat Units - Agronomy Guide for Field Crops – Publication 811

★ Subject Lands





Figure 10 - Crop Heat Units - Agriculture & Agri-Food Canada



2.3.3 Minimum Distance Separation Formula

The Provincial Planning Statement 2024 requires that expanded settlement area boundaries comply with minimum distance separation (MDS) formula.

Within Rural and Prime Agricultural Areas, new non-agricultural uses are required to meet the Minimum Distance Separation I ("MDS I") formula as provided in "The Minimum Distance Separation Implementation Document: Formulae and Guidelines for Livestock Facility and Anaerobic Digester Odour Setbacks, Publication 853 of the Ontario Ministry of Agriculture, Food and Rural Affairs, 2016" ("MDS Guidelines"). The MDS I formulae applies to all existing livestock facilities and empty livestock facilities. An empty livestock facility means a facility that is no longer used to house livestock but appears to be reasonably capable of housing livestock. The MDS I formulae was not applied to facilities that are in poor or deteriorating conditions and determined to not be suitable for housing livestock.

As part of municipal consideration of planning or building permit applications, all existing livestock facilities or anaerobic digesters within a 1500 metre distance of a proposed Type B land use shall be investigated and MDS 1 setback calculations undertaken where warranted. In accordance with the MDS Guidelines, settlement area expansions are considered a Type B land use (more sensitive) as settlement areas have a higher density of human occupancy, habitation, or activity which coincides with a higher potential for nuisance complaints.

A roadside site visit was conducted on April 21st, 2025, to identify cropping patterns and livestock operations within 1.5 kilometres of the subject lands; the required investigation distance for a Type B land use is 1.5 kilometres (MDS Guidelines). During this site visit, three livestock barns (two unoccupied and a horse production) were identified within 1.5 kilometres of the subject lands, as outlined in **Table 1**. Operations which are located within the proposed Settlement Area Boundary Expansion (i.e. those located on the subject lands) are not included in the MDS calculations as the MDS setbacks of these operations will no longer apply if the lands are brought into the settlement area (see MDS Guideline #36). There are no existing livestock operations on 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 system and the type of land use. These factors were determined through field observations undertaken during roadside visits, aerial imagery review, and property searches in business directories and local news sources. The livestock facility operators were not contacted for the purposes of this study. Where information from farmers was not available, the MDS calculation was completed by estimating the barn size using OMAFA AgMaps and applying the resulting area in the OMAFA AgriSuite platform to determine the maximum Nutrient Unit capacity for the unoccupied barn. In our experience, applying this approach yields a more 'conservative' approach, meaning calculated setbacks are often larger than if the livestock information is obtained by the operator.

OMAFA's AgMaps mapping application was used to calculate property size and barn size, where required, and the AgriSuite program was used to prepare the calculations. The MDS calculations worksheets generated in AgriSuite for the subject lands are included in **Appendix D** of this report.

The following table summarizes the MDS calculations and compliance to same.

Table 3. MDS I Summary Table

Address	Livestock Operation Type	Actual Distance	MDS I Setback	MDS met
6782 Fallon Dr	Livestock Operation – Unoccupied	805 m	265 m	Y
34297 Roman Line	Livestock Operation – Unoccupied	587 m	295 m	Y
34208 Roman Line	Livestock Operation – Equestrian and Horse Production	846 m	344 m	Y
*Where only one MDS measurement is listed, that measurement applies to both the barn and manure storage (or barn only where there is no manure storage)				

The MDS I setback calculations completed for the livestock operations indicate that the proposed Settlement Area Boundary Expansion meets the setback requirements, and as such, complies with the minimum distance separation formulae. It would be difficult to establish a new livestock facility on the subject lands due to the proximity of the existing settlement area boundary and non-agricultural uses; the lands are already constrained. There would be clear land use conflicts if a new barn or livestock facility were proposed in this area, as MDS II requirements would restrict such development and likely prevent it from being permitted.

3.0 Assessment of Impacts to Agriculture

3.1 Reduction/Loss of Agricultural Land and Infrastructure

The Settlement Area Boundary Expansion is proposed on approximately 45.5 hectares (112.4 acres) of land currently in agricultural production (corn and wheat) with CLI Class 2DT⁶3W⁴ soil capability. The inclusion of the lands within the settlement area boundary and the eventual development of the lands will result in the removal of existing prime agricultural lands. The type and nature of the agricultural uses on the subject lands are typical of Township of Lucan-Biddulph, as confirmed through a review of Census of Agriculture data and OMAFA's Ontario business, agri-food, and farm data profile for the Township of Lucan-Biddulph. There are no agricultural buildings or structures on the property, but it is already installed with Random (installed in 2009) and Systematic (installed in 2013) tile drainage.

3.2 Fragmentation of Agricultural Lands

Agriculture uses and activities benefit from being adjacent to other agricultural operations and if lands are fragmented, there is potential to negatively impact farming practices on the isolated farm parcels and the economic viability of the agricultural area. Large farm parcels make use of economies of scale to lower costs of production whereas standalone small farm parcels have limited economic viability. As well, fragmented agricultural areas have a higher potential for conflict with non-farm uses relative to agricultural areas with lower levels of fragmentation which generally have fewer potential sources of non-agricultural use conflicts.

The proposed Settlement Area Boundary Expansion and residential development is surrounded by agricultural use to the east, north and south, open space woodland area to the southeast and the Lucan settlement area abutting to the west and south. Outside of the settlement area, there are agricultural lots that are more suitably sized for a range of agricultural uses, mixed with a few smaller rural residential properties. Although the proposed SABE will not, by its nature, create an isolated agricultural land parcel, the removal of this land is expected to negatively affect surrounding agricultural areas. This impact would occur primarily through the loss of farmland and the potential for increased fragmentation of agricultural use. Following development, lands to the east may face constraints, particularly regarding the expansion or establishment of livestock barns, due to MDS II requirements.

3.3 Compatibility Impacts

The proposed Settlement Area Boundary Expansion and residential development do not pose significant compatibility concerns to surrounding normal farm practices. The MDS I review identified no compatibility issues related to odour from nearby livestock operations. Additionally, the lands are adjacent to the Lucan-Biddulph settlement area boundary to the south and west. As such, the study area already consists of a high degree of non-farm uses which suggests an existing level of interaction between farm and non-farm property owners in the area. With the implementation of mitigation measures outlined in Section 4 below (including edge planning techniques, and awareness and education strategies), compatibility impacts are not anticipated.

3.4 Economic and Community Impacts

The subject lands do not contain supportive agricultural infrastructure or services (ex. farmers market, grain elevator, agri-tourism). There is a grain elevator within Secondary Study Area that is integral to the surrounding agricultural community. The subject lands produce commodities that are typical of the surrounding agricultural system, with grain farming being common throughout the study area and the broader County. While consistent with existing agricultural practices, the proposed development may limit opportunities for neighbouring farms to expand into livestock operations in the future. If possible, a phased development approach is recommended to keep as much land as possible in agricultural production until it is needed for development, to provide for a progressive transition of the lands. Overall, given that the subject lands are located adjacent to the existing settlement area and include lands incorporated into the Township through Official Plan Amendment No. 10, no significant economic or community impacts are anticipated as a result of the proposed expansion of the settlement area into rural lands.

3.5 Traffic Impacts

Interactions between non-farm and agricultural traffic have the potential to create safety concerns on shared rural roads. A Traffic Impact Study should be prepared and submitted as part of the Draft Plan of Subdivision application to assess the transportation implications of the proposed development. The study will consider the potential and probable traffic-related effects on surrounding agricultural operations, including:

- Increased traffic volumes on shared rural roads, particularly during the harvest season;
- Potential conflicts with agricultural vehicle movements; and
- Road safety and access considerations.

Appropriate mitigation measures to address these potential impacts will be identified and discussed in the following section.

4.0 Measures to address Potential Impacts

The PPS 2024 (Policy 2.3.2.1) requires that when considering a Settlement Area Boundary Expansion in prime agricultural areas, planning authorities consider “*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 section of the AIA provides an evaluation of impacts and any associated mitigation measures.

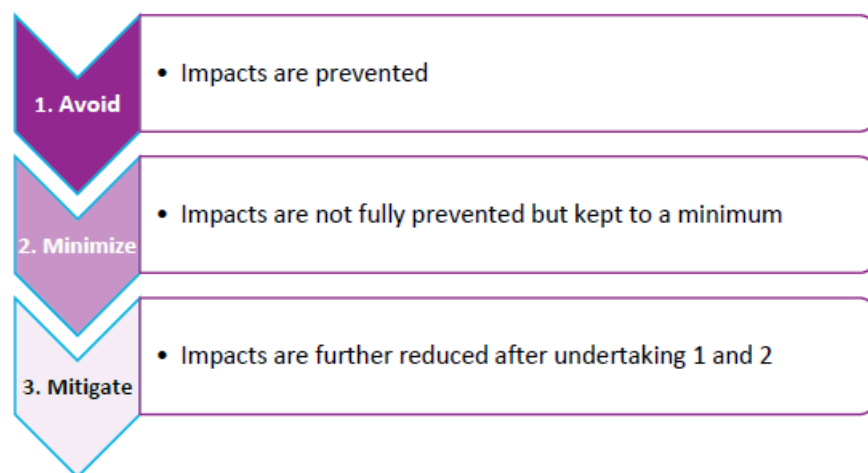
4.1 Hierarchy of Measures

The following chart illustrates the hierarchy of measures used to address potential impacts to the agricultural system. This hierarchy is consistent with provincial policy direction, and prioritizes the avoidance of impacts, followed by minimization and mitigation.

Avoidance of impacts is the highest priority and involves preventing impacts entirely. Although the subject lands are designated as ‘Agricultural’ in the Township of Lucan-Biddulph Official Plan, the proposed development would result in the removal of lands from the prime agricultural land base.

Where impacts cannot be fully avoided, efforts are made to minimize impacts by limiting their extent or severity. The selection of lower-priority agricultural lands for the proposed development reflects this approach.

Mitigation measures are implemented where residual impacts remain following avoidance and minimization efforts. These measures further reduce the severity or extent of impacts on the agricultural system.



Hierarchy of measures to address potential impacts to the *agricultural system*

4.2 Measures to Avoid Impacts

Measures to avoid impacts on the agricultural system are documented in this AIA. The subject lands are designated 'Agricultural' in the Township of Lucan-Biddulph Official Plan. Provincial policy encourages the expansion of settlement area boundaries into rural lands rather than prime agricultural areas. Direct impacts to prime agricultural areas are not and can not be avoided by a proposed settlement boundary expansion in this area. All lands surrounding the Lucan-Biddulph settlement area are prime agricultural.

4.3 Measures to Minimize & Mitigate Impacts

Measures taken to minimize impacts to the surrounding agricultural system are documented as part of this AIA (see Table 2) These measures focus on reducing potential impacts to surrounding agricultural land uses, the agricultural system, and the nearby prime agricultural area through the implementation of appropriate management and design controls.

Mitigation measures are intended to reduce the severity of impacts associated with the proposed Settlement Area Boundary Expansion and may include edge planning treatments between the expansion and adjacent agricultural lands use compatibility.

4.4 Summary of Net Impacts

Once measures to avoid, minimize, and mitigate impacts have been identified, the remaining net impacts to the agricultural system are documented. Net impacts represent those effects that persist following the implementation of all proposed measures. A summary of net impacts is provided below.

The following table is consistent with Table 2 (*Avoid, Minimize and Mitigate Impacts*) found in section 3.4 of the Province's *Agricultural Impact Assessment Guidance Document*. The purpose of this table is to provide a summary of how the expansion of settlement area boundary minimizes or mitigates impacts on surrounding agricultural uses.

Table 4: Summary of Net Impacts

Objective	Minimization/ mitigation Measure	Description
Minimize the loss of agricultural land	Select areas with less agricultural land and lower priority agricultural lands	The subject lands are located within a prime agricultural area. The lands are primarily comprised of Class 2 and 3 soils. The location of the subject lands, adjacent to the existing Lucan-Biddulph settlement boundary, suggests that the agricultural area to the south and west is already fragmented and exhibits limited continuity. Lands to the east and north remain in agricultural use and include associated infrastructure. Development of the subject lands would result in the permanent loss of prime agricultural land. As noted, any expansion of the Lucan-Biddulph settlement boundary would result in the loss of prime agricultural land as the settlement area is located within a prime agricultural area.
Minimize the fragmentation of agricultural land	Maintain farm parcels	The proposed settlement boundary expansion is adjacent to the existing settlement area, follows existing farm property lines/road patterns, and does not create isolated farm parcels. Surrounding lands to the west and south are already highly fragmented by other non-agricultural uses (ex. lands within Lucan settlement area and rural residential properties). The proposed settlement expansion does not create isolated farm parcels.
Minimize impacts on farmland and agricultural operations	Edge Planning ⁶	It is recommended that edge planning along the interface of the proposed development and agricultural lands in the surrounding area be implemented as much as possible. Design elements such as window streets, vegetative and fencing buffers, setback

⁶ Edge Planning is comprised of design and management tools to create compatibility between agricultural and urban/non-agricultural land uses.

		provisions and increased lot depths can allow for the necessary separation of uses from surrounding agricultural uses.
	Minimum Distance Separation	This Settlement Area Boundary Expansion complies with MDS setbacks.
	Select compatible land uses; put lower impact development adjacent to farmland and operations	Generally, the portions of the site directly adjacent to agricultural lands are planned at residential densities comparable to the areas located along the existing settlement area boundary. This approach helps ensure that lower-impact residential uses are situated next to active farmland. Southeast of the subject lands, an open space area will function as a natural buffer for portions of the site adjacent to neighbouring farmland. Compared to alternative locations west of the Lucan settlement area, the subject lands present no potential setback conflicts. The proposed development also offers opportunities for appropriate buffering, consistent with edge planning principles noted above.
	Design to support agriculture (e.g. help farms to continue to operate; help prevent and reduce trespassing and vandalism)	If possible due to cut and fill balance for area grading, the development should be phased to maximize lands remaining in agricultural production as development progresses. Conflicts between the proposed Settlement Area Boundary Expansion and the surrounding agricultural land uses should be minimized through the implementation of physical and visual barriers (vegetation and fencing) at the interface of the farm and non-farm parcel. Access points from the development to roadways should also be planned away from farm entrances on surrounding farm properties to minimize potential for conflicts and congestion.
	Implement a groundwater monitoring program	The proposed development is planned to be on full municipal services and as such no groundwater taking is proposed. Therefore,

Minimize and mitigate changes in water quality or quantity		no impacts on surrounding wells are anticipated.
	Control post-development run-off and enhance water quality control	A preliminary stormwater management shall be prepared to ensure necessary water controls will be in place.
Mitigating impacts during construction or operations (e.g. noise)	Adjust operational procedures to accommodate agriculture in the area	Consideration can be given to modifying construction operating hours and methods to reduce impacts on agricultural operations in proximity to the expansion areas. During construction of the development, agricultural education should be provided to all construction personnel to encourage respectful behaviour towards the agricultural community and treatment of agricultural land. Consideration should also be given to the use of equipment on methods to suppress dust created during construction.
	Vegetative berms	Consider creating a vegetative berm for dust control during construction to reduce impacts on surrounding livestock or crops.
	Maintain, restore or construct farm infrastructure	If the grading program permits, consideration should be given to the systematic removal to help maintain effective tile drainage on agricultural lands for as long as possible.
Mitigate ongoing impacts from new development	Implement measures that can be in place post development to support compatibility with agriculture	It is recommended that the use of best salt management practices for roads, sidewalks and other paved surfaces in the subdivision be used to avoid adverse impacts on neighbouring farms and natural heritage areas. In addition, the use of non-invasive plant species for landscaping should be used as much as possible. A disclosure statement should be provided to notify a potential purchaser of a property that interfaces with agricultural lands that they are buying land that is in proximity to existing farm operations and may experience periods of dust, noise and odour and other

		impacts associated with nearby farms during certain times of the year. Consider signage throughout the subdivision to inform residents they are in proximity to agricultural operations and highlight possible associated activities.
Education to achieve greater compatibility between agricultural and non-agricultural uses	Education and awareness	Warning clauses should be included into conditions of approval and Purchase and Sale agreements that advise future homeowners of the surrounding agricultural operations and potential noise and odour that could result from these operations. In order to avoid trespassing, vandalism, and other concerns, consideration should be given to distributing education and awareness brochures about normal farm practices and the potential financial, resource and biosecurity impacts that could result from trespassing and vandalism. During construction of the facility, agricultural education should be provided to all construction personnel to encourage respectful behaviour towards the agricultural community and treatment of agricultural land.

The following provides some commentary on the design and feasible mitigation factors. These recommendations are based on the British Columbia Ministry of Agriculture's 2015 Guide to Edge Planning ('Guide to Edge Planning') and edge planning techniques newly incorporated in OMAFA's AIA Guidelines.

The lands to the west and south of the subject property abut the settlement area, such that future residential lots in these directions will not directly interface with agricultural lands. Along the eastern boundary, where the subject lands abut active farmland, it is recommended that appropriate edge planning measures be implemented. These measures may include green buffers and naturalized barriers to establish a clear and compatible transition between agricultural operations and future residential development.

The use of edge planning techniques should be incorporated into the detailed design of the development to ensure that surrounding farm operations are protected and that the future expansion and potential shifts in agricultural production can proceed. We encourage where possible the maintenance of a 20-metre separation distance between farmland and a dwelling unit. Incorporation of longer and deeper

lots where low-density residential uses are adjacent to farmland can also help achieve this separation. Additionally, buffers should be incorporated to prevent trespassing and the associated problems of litter and crop damage and mitigate the effects of noise, light, and dust and spray drift. We recommend incorporating fencing and edge plantings along property lines where dwellings abut roadways adjacent to farmland to provide for visual separation. The Guide to Edge Planning recommends a vegetative buffer width of 15-metres for residential uses, with a recommended crown density of 50-75% of mixed deciduous and coniferous species to optimize year-round screening. Edge plantings should employ low-maintenance, drought-tolerant plants and avoid invasive plant species, and should exceed 6-metres in height at plant maturity. This buffer area could provide opportunity for a trail network at the perimeter of the site.

Enhancing agricultural awareness can help enhance compatibility between farm and non-farm uses. Warning clauses should be incorporated into future approval conditions and purchase and sale agreements to ensure that those who choose to live and work on the subject lands are aware of the agricultural operations in the surrounding area, normal farm practices, and the importance of protecting the agricultural lands/operations. In consultation with the municipality, consideration should also be given to erecting signage along the urban-agriculture boundary that informs residents of the adjacent active farming area and of possible activities associated with farm operations.

Finally, to protect surrounding agricultural operations, best management practices for the use of salt should be incorporated to help mitigate potential adverse impacts on surrounding lands, and the use of non-invasive plant species should be implemented in all landscaping.

5.0 Recommendations

Based on our analysis, the following recommendations are made to reduce the impacts of the proposed Settlement Area Boundary Expansion on the surrounding agricultural uses and operations within surrounding area:

1. All the recommendations of the technical reports should be implemented to minimize and prevent impacts to adjacent and surrounding agricultural uses and operations.
2. For future construction within the subject lands, agricultural education should be provided to all construction personnel to encourage respectful behaviour towards the agricultural community and treatment of agricultural land. For example, encourage consideration of farm equipment on roadways and request that vehicles and equipment be kept off adjacent cropland.
3. A Traffic Impact Study should be prepared in advance of future development in support of this application with consideration of impacts to agricultural traffic, specifically during April through to November when farm equipment is more active on roadways, and mitigation measures to be implemented on the site.
4. The use of edge planning techniques such as setbacks and landscape buffers should be considered to ensure that surrounding farm operations are protected and that the future expansion and potential shifts in production associated with the operations are permitted to proceed. Adequate separation and buffering should be incorporated into the future site design where proposed uses abut the urban-agriculture boundary.
5. If possible and/or applicable, warning clauses should be incorporated into future approval conditions and purchase and sale agreements to ensure that those who choose to live and work on the subject lands are aware of the agricultural operations in the surrounding area and of the importance of protecting the agricultural lands/operations.
6. In consultation with the Township, consideration should be given to erecting signage along the urban-agriculture boundary that informs residents of the adjacent active farming area and of possible activities associated with farm operations and normal farm practices.
7. Any topsoil and subsoil stripped during construction should be used for final landscaping, edge buffering and green infrastructure.
8. Best management practices for the use of salt should be incorporated to help mitigate potential adverse impacts on surrounding lands, and the use of non-invasive plant species should be implemented in all landscaping.

6.0 Summary

The proposed Settlement Area Boundary Expansion will result in the loss of prime agricultural land but is not anticipated to have a negative impact on the long-term viability of surrounding agricultural operations within the Township. This opinion recognizes the following:

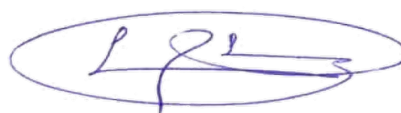
- The proposed Settlement Area Boundary Expansion is proposed on approximately 45.5 hectares (112.4 acres) of land currently in agricultural production (cash crops) with predominantly CLI Class 2 and 3 soil capability. These lands are designated as part of the Township's 'Agricultural' area.
- The surrounding agricultural area is already fragmented by nature of proximity to existing settlement areas and non-agricultural uses. The level of fragmentation within the surrounding area decreases the agricultural priority of the lands for agriculture. Removal of these lands will not result in the creation of any isolated agricultural parcels.
- The subject lands are not within a specialty crop area.
- The proposed expanded settlement area complies with the Minimum Distance Separation formulae, and the proximity and predominance of non-agricultural uses in the area considerably constrains the ability to establish a livestock facility on the subject lands.
- The subject lands exhibit characteristics of lower-priority agricultural lands due to existing fragmentation in the area, proximity to non-agricultural uses, and their location adjacent to an established settlement area. In addition, the proposed development is not anticipated to constrain potential livestock expansion on neighbouring lands to the east in accordance with MDS II requirements, and there are limited agricultural improvements present on the subject lands
- Impacts on surrounding agricultural operations can be mitigated based on the recommended mitigation measures included in this report.

Respectfully submitted,

MHBC



Pierre Chauvin, BSc (Agr.) MA, MCIP, RPP
Partner



Danial Salari MSc(Agr), MSc(PI), A.Ag.
Planner

A

Appendix A: Secondary Study Area Review

SECONDARY STUDY AREA – LIVESTOCK FACILITY/MANURE STORAGE SUMMARY TABLE

Site	Address	Facility Type	MDS Required	Notes
1	6782 Fallon Dr	Livestock Operation – Unoccupied Barn	Yes – 265 MDS setback; compliant and acceptable.	The subject property comprises approximately 41 acres of agricultural land improved with a residential dwelling, a shop, and a small unoccupied barn. The majority of the property consists of farmland, which was actively cultivated and planted in soybeans during the 2025 growing season. 

2	34297 Roman Line	Livestock Operation – Unoccupied Barn	Yes – 295 MDS setback; compliant and acceptable.	The subject property comprises approximately 95 acres of agricultural land and does not contain any residential dwellings. Improvements on the property include a barn, a liquid manure storage facility, and two associated grain bins that support the agricultural operation. The majority of the property consists of productive farmland, which was actively cultivated and planted in corn during the 2025 growing season. 
---	------------------	---------------------------------------	--	--

3	34208 Roman Line	Livestock Operation – Equestrian and Horse Production	Yes – 344 MDS setback; compliant and acceptable.	The subject property comprises approximately 54 acres and is improved with a residential dwelling and three horse barns with associated paddocks. Horses were observed on the property during the site visit, indicating active equestrian use. 
4	33956 Roman Line	Grain Dryer & Storage – Dietrich Commodities Inc	No	This large-scale grain drying and storage facility is located in the Township of Lucan and serves an important role in supporting the surrounding agricultural community. The facility supports the local farming operations, which are predominantly focused on grain production, including corn and wheat. 

Note: Livestock barn/manure storage identification and capability of buildings/structures for housing livestock or storing manure were determined in part based off the considerations outlined in Section 8 of the Province's MDS Document.

B

Appendix B: Authors' Curriculum Vitae

Education

University of Waterloo

Master of Arts, Regional Planning and
Resource Development
1997

University of Guelph

Bachelor of Science in Agriculture
1993

Professional Associations

Registered Professional Planner (RPP)

Member, Canadian Institute of Planners
(CIP)

Full member, Ontario Professional
Planners Institute (OPPI)

Member of Parks & Recreation Ontario

Contact

200-540 Bingeman's Centre Drive
Kitchener, ON
N2B 3X9

T: 519 576 3650 x701
C: 519 580 4912
pchauvin@mhbcplan.com
www.mhbcplan.com

Pierre Chauvin

BSc(Agr), MA, MCIP, RPP

Pierre Chauvin joined the firm as a Planner in 1998. Mr. Chauvin provides urban and rural planning analysis and research services for public and private sector projects across Ontario.

His professional activities include project management, community planning, and land development. Pierre's experience ranges from residential and commercial development, environmental and recreational planning and resource management.

Pierre also has specific expertise in rural and agricultural planning. He has prepared agricultural impact assessments as part of settlement area expansions and development proposals. He also has experience with MDS and the Nutrient Management Act, and has provided expert agricultural and planning evidence at the Ontario Land Tribunal and other similar boards/tribunals.

Pierre holds a Masters degree in Regional Planning and Resource Development and a Bachelor of Science in Agriculture degree with a major in Natural Resources Management. Pierre is also a full member of the Canadian Institute of Planners and Ontario Professional Planners Institute.

Professional History

Partner, MacNaughton Hermsen Britton Clarkson Planning Limited
(2013 – Present)

Associate, MacNaughton Hermsen Britton Clarkson Planning Limited
(2004– 2013)

Planner/Senior Planner, MacNaughton Hermsen Britton Clarkson
Planning Limited (1998 – 2004)

Assistant Planning Officer, Upper Grand District School Board
(1997 – 1998)

Research Assistant (Nutrient Management), Land Resource
Science Department, University of Guelph (1993 – 1995)



PLANNING
URBAN DESIGN
& LANDSCAPE
ARCHITECTURE

Professional Associations

Member of the Waterloo Region Homebuilder's Association and City of Kitchener Liaison Group

Member of the Waterloo Region Homebuilder's Association and Waterloo Region Liaison Group

Member of the Waterloo Region Homebuilder's Association Liaison Group with the Townships of Woolwich and Wilmot

Past Chair of the Homebuilders' Association Liaison Committee with the Grand River Conservation Authority

Past Chair and member of the Industry Luncheon Committee, Guelph & District Homebuilders' Association

Past Member of Board of Directors, Guelph & District Homebuilders' Association

Past Member, Committee of Adjustment for the Township of Centre Wellington

Past Member, Heritage Centre Wellington Committee (LACAC)

Past Vice-Chair, Village of Elora Planning Advisory Committee

Selected Project Experience

Agricultural/Rural Planning

- Project lead to undertake a LEAR Study for the Township of Amaranth, County of Dufferin
- Project planner to undertake a review of the Minimum Distance Separation formulae for the Region of Peel and Town of Caledon as part of their LEAR Study.
- Review and provided opinion to the Township of Guelph-Eramosa regarding the revised Minimum Distance Separation Formulae.
- Project planner for the preparation of an agricultural assessment of potential growth areas as part of the City of Brantford Growth Strategy/Official Plan Review.
- Preparation of agricultural impact statements/assessments including MDS I & II assessments on behalf of various private sector clients in support of development and aggregate applications.
- Preparation of an agricultural assessment on behalf of the Township of Guelph/Eramosa to explore the feasibility and potential of a dual Agricultural/Rural designation approach in the Official Plan.

Parks & Recreation

- Project lead and consultant to the City of Port Colborne to complete a Parks and Recreation Master Plan.
- Project lead and consultant to the Town of Collingwood to complete a Parks and Recreation Master Plan.
- Project lead and consultant to the Town of Grimsby to complete a Parks and Recreation Master Plan.
- Project lead and consultant to the City of Kitchener to undertake a Business Case for the Doon Pioneer Park Community Centre Expansion.
- Project lead and consultant to the Town of Cobourg for the Cobourg Community Centre and YMCA Northumberland Joint Facility Needs Assessment.
- Project lead and consultant to the Town of Cobourg for the preparation a Recreation Strategy and Implementation Plan.
- Project Lead and Consultant to the Town of Caledon in the preparation of a Parks and Recreation Visioning Plan.
- Consultant to the Township of West Lincoln in the preparation of a Parks and Recreation Master Plan.

- Project planner, Township of Guelph-Eramosa Parks, Recreation and Culture Master Plan.

Source Water Protection

- Prepared Official Plan Amendment and policies as well as implementing Zoning By-law to implement the Source Water Protection Plan policies for the Counties of Norfolk, Elgin and Middlesex.
- Prepared Official Plan Amendment and policies to implement the Source Water Protection Plan policies for the County of Wellington.
- Consultant to Grand River Conservation Authority, County of Wellington and County of Perth in the development of Source Water Protection water quality policies for the Lake Erie Region Source Protection Plan.
- Prepared Official Plan Amendment and policies to implement the Groundwater Protection Strategy for the County of Wellington.

Official Plan/Zoning By-laws

- Project lead and consultant for the preparation of an Official Plan Update for the Township of Amaranth (on-going)
- Project lead and consultant for the preparation of an Official Plan Update for the Municipality of Kincardine.
- Project lead and consultant to the Municipality of Kincardine for the preparation of a Comprehensive Zoning By-law Review (on-going).
- Project lead and consultant to the Township of Huron-Kinloss for the preparation of a Comprehensive Zoning By-law Review.
- Project lead and consultant for the preparation of an Official Plan Update for the Township of Huron-Kinloss.
- Project lead and consultant to the County of Norfolk to prepare an Issues and Report for the Hastings Drive Zoning By-law Study.
- Project planner for preparation of a Consolidated Zoning By-law for the City of Kawartha Lakes (involved consolidating 17 By-laws).

Special Studies & Other

- Consulting planner for the City of Stratford to review and process select development applications.
- Consulting planner for the County of Perth to review and process planning applications.
- Consulting planner for the County of Bruce to review Consent and Minor Variance applications for the Lakeshore and Peninsula Hubs.
- Project planner for the Municipality of North Perth to complete a Secondary Plan and Master Servicing Plan for North-East Listowel (on-going).
- Project Lead and planner for the Upper Grand District School Board for the approval of new secondary school in the City of Guelph.
- Consultant to the Upper Grand District School Board regarding the justification and approval of a new secondary school in the Township of Centre Wellington, including a settlement area expansion.
- Consultant to the Huron-Perth Catholic District School Board regarding the justification and approval of a new elementary school in the Town of North Perth, including an agricultural impact assessment for a proposed expansion of the settlement boundary to accommodate the school.
- Justification of an urban expansion in the former Town of Listowel (Municipality of North Perth) and preparation of a Plan of Subdivision for a 50 acre property. The justification included an assessment of agricultural impacts and servicing considerations.

- Consultant to the City of Woodstock regarding the justification and approval of the East Woodstock Secondary Plan & Design Study. Prepared Official Plan Amendment and policies to implement the Secondary Plan.
- Consultant to the Town of North Perth on the Southeast Listowel Community Plan.
- Project planner providing planning services to the Township of Guelph-Eramosa. Review of applications, and preparation and presentation of planning reports to Council.
- Review and/or preparation of numerous planning approvals relating to draft plan of subdivisions, draft plan of condominiums, site plans, Official Plan amendments, Zoning By-law amendments, consents and minor variances throughout the Region of Waterloo, the Counties of Wellington, Perth, Bruce, Oxford, Huron and surrounding areas.
- Advisor to various aggregate producers regarding the review of new Official Plan policies in the Region of Durham and County of Oxford.
- Project Planner to the Aggregate Producers' Association of Ontario on the review of the Oak Ridges Moraine Conservation Plan.
- Coordinating the design and preparation of site plans under the Aggregate Resources Act. Research and preparation of Planning Reports and Aggregate Resources Act Reports for license and permit applications, including work for companies such as Lafarge Canada, Dufferin Aggregates, Federal White Cement and Beachville Lime Limited.

Awards / Publications / Presentations

2025	OPPI PlanON Award – Education Category – Empowering the Future: Activa Partners with Groh Public School for a Unique Community Project, September 18, 2025
2017	Designing Public Spaces to Support Vibrant Communities – Presentation on Park Land Dedication and Implications of Bill 73, September 15, 2017
2012	OPPI – Southwest District – Presentation on Source Water Protection Planning and Implementation, October 25, 2012
2012	Ontario Sand and Gravel Association – Presentation on Implications of Source Water Protection on Aggregate Operations, November 8, 2012.
2004	B. Hermsen and P. Chauvin, 2004. Elementary Schools and Residential Absorption Rates in New Neighbourhoods. Spring 2004 Ontario Expropriation Association Newsletter.
2003	Nutrient Management Act - Presentation to the Municipal Law Seminar Series, in co-operation with Kearns McKinnon LLP, February 26, 2003.
1997	Planning and Development of Recreational Trails on Private Lands: A Case Study of the Grand Valley Trails Association. Unpublished M.A. Thesis, School of Urban and Resource Development Planning, Faculty of Environmental Studies, University of Waterloo, Ontario

Education

University of Guelph

Master of Science in Rural Planning
and Development
2024

University of Shahid Beheshti

Master of Science in Ecologic
Agriculture
2018

Ferdowsi University of Mashhad

Bachelor of Science in Agronomy
2010

Professional Associations

Articling Agrologist (A.Ag.)

Member, Ontario Professional
Planners Institute (OPPI)

Member, Ontario Institute of
Agrologists (OIA)

Member, Agriculture and natural
Resources Engineering Organization
of Iran

Trained in the UNEP for Sustainable
Development

Contact

540 Bingemans Centre Drive, Suit
200
Kitchener, ON
N2B 3X9

T: 519-576-3650
F: 519-576-0121
dsalari@mhbcplan.com
www.mhbcplan.com

Danial Salari

MSc(Agr), MSc(PI), A.Ag.

Danial Salari joined MHBC in January 2025. He provides a range of planning support and consulting services to both public and private sector clients mainly in related to rural planning initiatives. This support includes conducting policy reviews and analyses and preparing due diligence reports and assessments.

Danial regularly assists with obtaining various development approvals including Plan of Subdivisions, Site Plans, Official Plan Amendments, Zoning By-law Amendments, Consents and Minor Variances. He also regularly provides support to senior staff in a range of projects including supporting the development of Consent applications, Aggregate Resource extraction, and Battery Energy Storage System (BESS) applications.

Danial received his Master of Science in Rural Planning from the University of Guelph in 2024. He also received a Master of Science in Ecologic Agriculture in 2018 and a Bachelor of Science in Agricultural Engineering in 2010.

Professional History

Planner, MacNaughton Hermesen Britton Clarkson Planning Limited
(2025 – present)

Student Planner, Region of Peel (2024)

Farm Inspector, Ecocert Canada (2023)

Project Planner & Data Analyst, Rural Ontario Institute (2023)

Production Committee Chair & Board Member, Khorasan Organic
Association (2014-2019)

Sustainability Consultant, Sadaf rah Abrisham (2011-2014)



PLANNING
URBAN DESIGN
& LANDSCAPE
ARCHITECTURE

Professional Experience

Agriculture / Rural

- Agricultural Impact Assessments for aggregate licence applications, settlement area boundary expansions, and non-agricultural uses in prime agricultural areas
- Minimum Distance Separation (MDS) review and analysis
- Research, preparation and co-ordination of reports and approvals for agricultural uses, agriculture-related uses, and On-Farm Diversified Uses (OFDUs)

Aggregate / Industrial

- Property investigations and planning assessments for due diligence reviews for mineral aggregate and concrete and asphalt plant projects
- Preparation of Planning and Land Use Considerations reports for aggregate projects

Policy Research and Analysis

- Provincial and local Municipal Policy Review and Analysis
 - Provincial Planning Statement, 2024
 - Agricultural Impact Assessment (AIA) Guidance Document
- Undertake extensive research of land use policy and housing market data to support Regional Housing Affordability analysis.
- Review planning applications in support of Regional Housing comments
- Preparation of due diligence reports to identify applicable policies and regulations for proposed developments in municipalities across Ontario.

Residential / Mixed-use / Retail

- Preparation of planning assessments and due diligence reviews to identify development potential of properties for a range of clients
- Research, preparation and co-ordination of reports / applications under the *Planning Act* (Zoning By-law Amendment, Official Plan Amendment)

Project Coordination

- Consent and land severance applications
- Coordination of technical requirements with various internal and external subcontractors.

Public Engagement

- Facilitation of the Indigenous Seed Selection Knowledge sharing workshop with Biinjitiwaabik Zaaging Anishinaabek (Rockey Bay First nation) and Netmizaaggamig Nishnaabeg (Pic Mobert First Nation)

Special Initiatives and Accomplishments

- Received the Highly Qualified Personnel (HQP) Scholarship from OMAFA

C

Appendix C: References

- Agriculture and Agri-Food Canada. (2019). Canada Land Inventory (CLI) [Database]. Canadian Soil Information Service (CanSIS). <https://sis.agr.gc.ca/cansis/nsdb/cli/index.html>
- Agriculture and Agri-Food Canada. (2024). *Annual Crop Inventory & Agricultural Data Resources (includes Census of Agriculture references)*. Government of Canada Open Data. <https://open.canada.ca/data/en/dataset/5489d54a-9925-44e3-a1a8-b26c1f64e811>
- British Columbia Ministry of Agriculture. (2015). *Guide to edge planning: Promoting compatibility along agricultural–urban edges*. Government of British Columbia. 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
- Hagerty, T. P., & Kingston, M. S. (1992). The soils of Middlesex County (Vol. 1, Report No. 56). Ontario Ministry of Agriculture and Food; Ontario Centre for Soil Resource Evaluation; Agriculture Canada. Available at: <https://sis.agr.gc.ca/cansis/publications/surveys/on/on56/index.html>
- Ontario Ministry of Agriculture, Food and Rural Affairs. (2016). *Guidelines for permitted uses in Ontario's prime agricultural areas* (Publication 851). Queen's Printer for Ontario. <https://www.ontario.ca/page/publication-851-guidelines-permitted-uses-ontarios-prime-agricultural-areas>
- Ontario Ministry of Agriculture, Food and Agribusiness & Agriculture and Agri-Food Canada. (n.d.). *Soil and Land Resource Data*. Accessible through AgMaps and Ontario GeoHub: <https://ontario-soils-geohub-ontarioca11.hub.arcgis.com/>
- Ontario Ministry of Agriculture, Food and Agribusiness. (2026). *Publication 861: Agricultural Impact Assessment (AIA) Guidance Document*. Ontario.ca. <https://www.ontario.ca/page/publication-861-agricultural-impact-assessment-aia-guidance-document>
- Ontario Ministry of Agriculture, Food and Agribusiness. (n.d.). *Agricultural Systems Portal*. <https://agriculture-systems-portal-ontarioca11.hub.arcgis.com/>
- Ontario Ministry of Agriculture, Food and Agribusiness. (n.d.). *AgMaps Interactive Mapping Application*. <https://www.ontario.ca/page/how-use-agmaps>
- Ontario Ministry of Agriculture, Food and Rural Affairs. (2016). *The Minimum Distance Separation (MDS) Document: Formulae and Guidelines for Livestock Facility and Anaerobic Digester Odour Setbacks* (Publication 853). <https://www.ontario.ca/files/2023-07/omafra-minimum-distance-separation-document-en-2023-07-26.pdf>
- Ontario Ministry of Agriculture, Food and Rural Affairs. (2024). *Publication 811: Agronomy Guide for Field Crops*. Ontario.ca. <https://www.ontario.ca/page/publication-811-agronomy-guide-field-crops>
- Ontario Ministry of Municipal Affairs and Housing. (2024). *Provincial Planning Statement, 2024*. Ontario.ca. <https://www.ontario.ca/page/provincial-planning-statement-2024>

- Ontario Ministry of Natural Resources and Forestry. (n.d.). *Make a Natural Heritage Area Map*. <https://www.ontario.ca/page/make-natural-heritage-area-map>
- Statistics Canada. (2017). *Farms classified by farm type, Census of Agriculture, 2011 and 2016 (inactive)* (Table 32-10-0403-01). <https://doi.org/10.25318/3210040301-eng>
- Statistics Canada. (2017). *Land use, Census of Agriculture, 2011 and 2016 (inactive)* (Table 32-10-0406-01). <https://doi.org/10.25318/3210040601-eng>
- Statistics Canada. (2021). *Farms classified by farm type, Census of Agriculture, 2021* (Table 32-10-0231-01). <https://doi.org/10.25318/3210023101-eng>
- Statistics Canada. (2021). *Farms classified by total farm area, Census of Agriculture, 2021* (Table 32-10-0232-01). <https://doi.org/10.25318/3210023201-eng>
- Statistics Canada. (2021). *Land use, Census of Agriculture, 2021* (Table 32-10-0249-01). <https://doi.org/10.25318/3210024901-eng>
- The Corporation of the Township of Lucan Biddulph. (2003, June 10). *Township of Lucan Biddulph official plan* [Consolidated version, October 2024]. <https://www.lucanbiddulph.on.ca/sites/default/files/2024-10/LB%20OP%20Text%20Consolidation%20October%202024.pdf>
- The Corporation of the Township of Lucan Biddulph. (2003, October 7). Zoning by-law no. 100-2003, as amended [Consolidated version, November 20, 2024]. <https://www.lucanbiddulph.on.ca/sites/default/files/2024-12/LB%20ZBL%20CONS%20November%202024.pdf>
- The County of Middlesex. (2023, July 7). *Middlesex County official plan* [Consolidated version]. <https://www.middlesex.ca/sites/default/files/documents/Middlesex%20County%20Official%20Plan%20July%2007%202023%20consolidated%20FINAL.pdf>

D

Appendix D: MDS Worksheets Setback Figure

Lucan SABE

General information

Application date May 28, 2026	Municipal file number	Proposed application New or expanding settlement area boundary
Applicant contact information Gilrad Developments 159 Main Street Lucan, ON	Location of subject lands County of Middlesex Township of Lucan Biddulph BIDDULPH Concession 5 , Lot 27	

Calculations

Farm 1

Farm contact information 6782 Fallon Dr Lucan, ON	Location of existing livestock facility or anaerobic digester County of Middlesex Township of Lucan Biddulph BIDDULPH Concession 6 , Lot 25 Roll number: 3958	Total lot size 41 ac
---	--	-------------------------

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Unoccupied Livestock Barn	2500 ft²	11.6 NU	2500 ft²

Confirm Livestock/Manure Information (Farm 1)

The livestock/manure information has not been confirmed with the property owner and/or farm operator.

Unoccupied Barn or Unused Storage (Farm 1)

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

Setback summary

Existing manure storage	- Not Specified -		
Design capacity	11.6 NU		
Potential design capacity	11.6 NU		
Factor A (odour potential)	1	Factor B (design capacity)	172.03
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)			265 m (869 ft)
Actual distance from livestock barn			NA
Storage base distance 'S' (minimum distance from manure storage)			No existing manure storage
Actual distance from manure storage			NA

Farm 2

Farm contact information 34297 Roman Line Lucan, ON	Location of existing livestock facility or anaerobic digester County of Middlesex Township of Lucan Biddulph BIDDULPH Concession 6 , Lot 26	Total lot size 95 ac
--	--	--------------------------------

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Liquid	Unoccupied Livestock Barn	2200 ft²	10.2 NU	2200 ft²

Confirm Livestock/Manure Information (Farm 2)

The livestock/manure information has not been confirmed with the property owner and/or farm operator.

Unoccupied Barn or Unused Storage (Farm 2)

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	10.2 NU			
Potential design capacity	10.2 NU			
Factor A (odour potential)	1	Factor B (design capacity)	167.4	
Factor D (manure type)	0.8	Factor E (encroaching land use)	2.2	
Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn)			295 m (968 ft)	
Actual distance from livestock barn			NA	
Storage base distance 'S' (minimum distance from manure storage)			No existing manure storage	
Actual distance from manure storage			NA	

Farm 3

Farm contact information 34208 Roman Line Lucan, ON	Location of existing livestock facility or anaerobic digester County of Middlesex Township of Lucan Biddulph BIDDULPH Concession 7 , Lot 27 Roll number: 3958	Total lot size 54 ac
--	---	--------------------------------

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Horses, Large-framed, mature; > 680 kg (including unweaned offspring)	72	102.9 NU	23400 ft²

Confirm Livestock/Manure Information (Farm 3)

The livestock/manure information has not been confirmed with the property owner and/or farm operator.

Setback summary

Existing manure storage	- Not Specified -		
Design capacity	102.9 NU		
Potential design capacity	102.9 NU		
Factor A (odour potential)	0.7	Factor B (design capacity)	318.88
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)			344 m (1129 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

Danial Salari
MHBC Planning
200 - 504 Bingemans Centre Drive
Kitchener, ON
N2B 3X9
dsalari@mhbcplan.com

Signature of preparer

07-14-2026

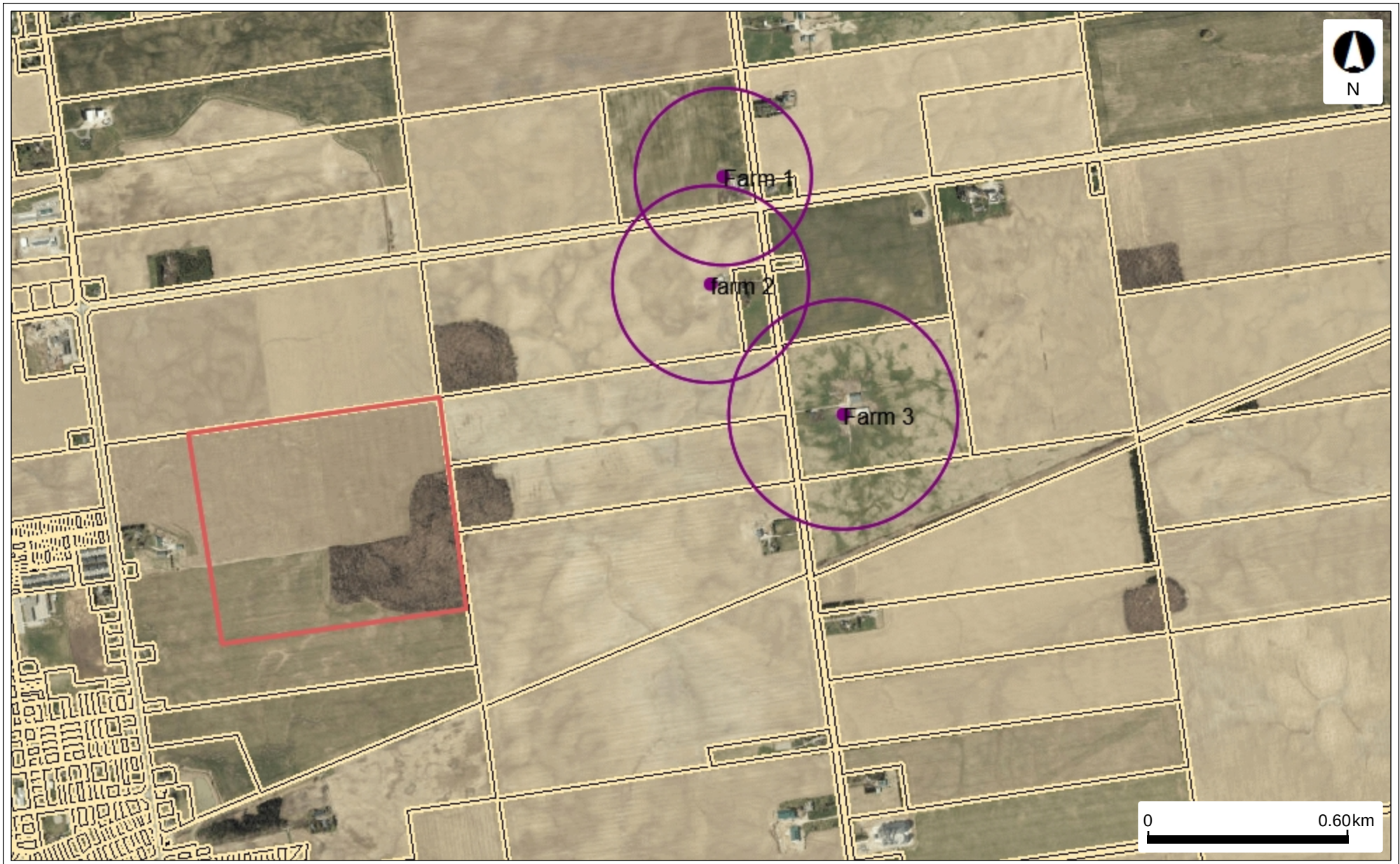
Danial Salari , Rural Planner

Date (Month-Day-Year)

Note to the user

The Ontario Ministry of Agriculture, Food and Agribusiness (OMAFRA) has developed this software program for distribution and use with the Minimum Distance Separation (MDS) Formulae as a public service to assist farmers, consultants, and the general public. This version of the software distributed by 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.

MDS I Setback



Prepared By:

Danial Salari

Notes:

E

Appendix E: MDS Worksheets Setback Figure for Alternative Location Assessment

Lucan SABE - Alternative Locat

General information

Application date Jun 2, 2026	Municipal file number	Proposed application New or expanding settlement area boundary
Applicant contact information Gilard Developments 159 Main Street Lucan, ON	Location of subject lands County of Middlesex Township of Lucan Biddulph BIDDULPH Concession SOUTH OF LONDON PROOF LINE , Lot 5 Roll number: 3958	

Calculations

Farm 1

Farm contact information 6024 William Street ON	Location of existing livestock facility or anaerobic digester County of Middlesex Township of Lucan Biddulph BIDDULPH Concession 3 , Lot 30 Roll number: 3958	Total lot size 130 ac
--	---	---------------------------------

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Horses, Large-framed, mature; > 680 kg (including unweaned offspring)	37	52.9 NU	12025 ft²

Confirm Livestock/Manure Information (Farm 1)

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	52.9 NU			
Potential design capacity	52.9 NU			
Factor A (odour potential)	0.7	Factor B (design capacity)	265.72	
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)			287 m (942 ft)	
Actual distance from livestock barn				NA
Storage base distance 'S' (minimum distance from manure storage)			287 m (942 ft)	
Actual distance from manure storage				NA

Farm 2

Farm contact information 33874 Coursey Line ON	Location of existing livestock facility or anaerobic digester County of Middlesex Township of Lucan Biddulph BIDDULPH Concession 3 , Lot 31 Roll number: 3958	Total lot size 100 ac
---	---	---------------------------------

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Beef, Cows, including calves to weaning (all breeds), Confinement	95	95 NU	9500 ft²

Confirm Livestock/Manure Information (Farm 2)

The livestock/manure information has not been confirmed with the property owner and/or farm operator.

Setback summary

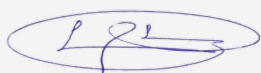
Existing manure storage	- Not Specified -		
Design capacity	95 NU		
Potential design capacity	95 NU		
Factor A (odour potential)	0.7	Factor B (design capacity)	311.28
Factor D (manure type)	0.7	Factor E (encroaching land use)	2.2
Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn)			336 m (1102 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

Danial Salari
MHBC Planning
200 - 504 Bingemans Centre Drive
Kitchener, ON
N2B 3X9
dsalari@mhbcplan.com

Signature of preparer



Danial Salari , Rural Planner

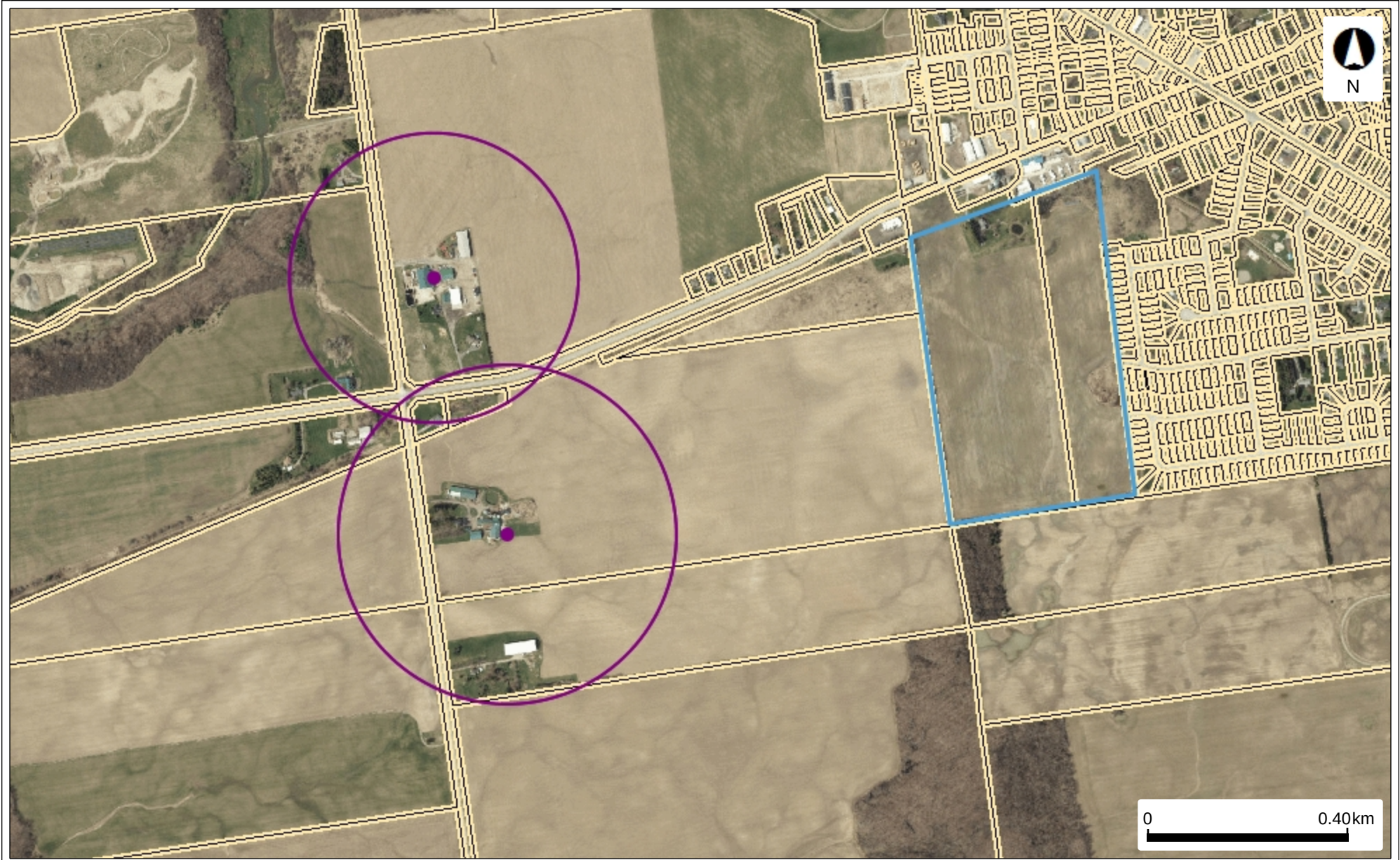
07-14-2026

Date (Month-Day-Year)

Note to the user

The Ontario Ministry of Agriculture, Food and Agribusiness (OMAFRA) has developed this software program for distribution and use with the Minimum Distance Separation (MDS) Formulae as a public service to assist farmers, consultants, and the general public. This version of the software distributed by 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.

MDS I Setback



Prepared By:

Danial Salari

Notes:

This MDS setback map has been prepared to illustrate the required setbacks affecting Alternative Area C.

