DOCUMENT TRANSMITTAL

Document:	**FERGUS OAKS** **AGRICULTURAL IMPACT ASSESSMENT** **TOWNSHIP OF CENTRE WELLINGTON** **WELLINGTON COUNTY**		
Prepared for:	Ms. Lucy Stocco Executive V.P. Tribute Communities 1815 Ironside Manor, Unit 1 Pickering, ON L1W 3W9	Date Our Ref. No. Your Ref. No.	November 26, 2024 2025-03
Attention:	Ms. Stocco	DRAFT	FINAL ☑

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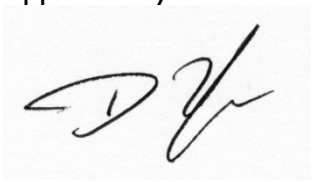

President

DBH Soil Services Inc.

FERGUS OAKS
AGRICULTURAL IMPACT ASSESSMENT
TOWNSHIP OF CENTRE WELLINGTON
WELLINGTON COUNTY

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November 26, 2024

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DBH Soil Services Inc.

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Executive Summary

DBH Soil Services Inc. was retained to complete an Agricultural Impact Assessment (AIA) for lands owned by Tribute (Fergus Oaks) Limited known municipally as 6704 Beatty Line N, 6684-6688 Beatty Line N and 7692 Sideroad 15 (Primary Study Area (PSA). A Secondary Study Area (SSA) extending 1500 m from the boundary of the PSA was evaluated to determine potential impacts to the local agricultural community.

This AIA identified potential impacts and mitigation measures to help inform the Fergus Oaks Official Plan Amendment which also includes lands outside of Tribute (Fergus Oaks) Limited ownership, known municipally as 7715 Nichol Road. The OPA by Tribute (Fergus Oaks) Limited will build northward from the OPA submitted by the registered landowners of 6586 Beatty Line N. 6586 Beatty Line N which abuts the existing Primary Urban Centre of Centre Wellington along its south boundary.

The PSA and portions of the SSA are located in Prime Agricultural Areas as defined in the Provincial Land Base Mapping and the local Official Plans. Other portions of the SSA include lands within the settlement boundaries of Elora/Salem and Fergus. The settlement areas of Elora/Salem and Fergus are surrounded by Prime Agricultural Areas and active agricultural lands and farm operations.

Neither the PSA nor the SSA are located in a Provincially or Municipally designated Specialty Crop Area.

A review of the former Ontario Ministry of Agriculture, Food, and Rural Affairs (OMAFRA) digital soils database identified that the majority of the lands in the PSA and the area surrounding the settlement boundaries of Elora/Salem and Fergus comprise high quality soils (Canada Land Inventory (CLI) class 1-3 lands). Based on the OMAFRA soils data the PSA comprised approximately 89.3 percent Canada Land Inventory (CLI) capability of Class 1 – 3, with approximately 89.3 percent as Class 1 and 5.4 percent as Class 3. Approximately 5.3 percent of the PSA was identified as Organic Soils. It was also noted that the OMAFRA digital soils database contained incorrect CLI classification on many of the soil polygons in the PSA and the SSA. As a result, it is unknown whether the soil classification as presented in the OMAFRA database is accurate and truly reflects the appropriate CLI classification.

A total of 85 agricultural buildings were identified within the PSA and SSA. There were 14 agricultural buildings within the PSA with the remaining 71 agricultural buildings observed in the SSA. The agricultural buildings located within the PSA will be removed as part of the proposed development of the PSA. A total of 19 buildings were identified in the SSA that housed livestock or had the potential to house livestock.

Minimum Distance Separation (MDS1) was assessed in the SSA for barns that housed livestock or had the capability to house livestock. Barns in the PSA will be removed as part of the future development of the PSA, and as a result, MDS1 calculations were not completed for the PSA.

The MDS1 assessment of the SSA revealed that one barn located on 7715 Nichol Road (Sideroad 15) had a calculated arc that extended onto the PSA lands. It is noted that the lands at 7715 Nichol Road are part of the OPA by Fergus Oaks. As such, the barn at that location will be removed as part of the future development of those lands. At that time the MDS1 impact on the PSA will no longer exist.

The proposed future development of the PSA will not result in the loss of any agricultural services (tractor/equipment dealerships, hydraulic hose repair, tire repair, etc) or agricultural infrastructure (cold storage, grain handling and drying, stockyards, etc).

The proposed future settlement area boundary expansion development of the PSA will increase land fragmentation within the PSA. There will be no additional fragmentation within the SSA as a result of the future development of the PSA.

The proposed future development of the PSA is a logical settlement area boundary expansion of Fergus that includes lands previously identified by the Province as lands to be included in future expansions. Potential impacts to the adjacent agricultural lands can be mitigated to the extent feasible.

1 INTRODUCTION

DBH Soil Services Inc was retained to complete an Agricultural Impact Assessment (AIA) Report for an area defined as Fergus Oaks, located north of the Elora/Fergus settlement areas in the Township of Centre Wellington, in Wellington County. This AIA will contribute to an Official Plan Amendment (OPA).

An OPA is required to designate these lands "Designated Built-Up Area" within the County of Wellington's Official Plan, in order to implement the proposed expansion of the existing settlement area of Centre Wellington. The OPA will include lands owned by Tribute (Fergus Oaks) Limited municipally known as 6704 Beatty Line N, 6684-6688 Beatty Line N and 7692 Sideroad 15. The OPA also includes lands outside of Tribute (Fergus Oaks) Limited ownership, known municipally as 7715 Nichol Road. The OPA by Tribute (Fergus Oaks) Limited will build northward from the OPA submitted by the registered landowners of 6586 Beatty Line N. 6586 Beatty Line N which abuts the existing Primary Urban Centre of Centre Wellington along its south boundary. This is important to ensure contiguous expansion of an existing settlement area and to limit the fragmentation of rural lands within the County of Wellington. Coordinated servicing, transportation and other technical designs between lands and owners will be required to ensure efficient, logical and feasible urban greenfield development.

The proposed future development of this area required the completion of an AIA. This AIA identifies and assesses agricultural impacts based on roadside reconnaissance surveys and online resources and provides avoidance or mitigative measures as necessary to offset or lessen any impacts.

For the purposes of this AIA, the Fergus Oaks area is identified as the Primary Study Area (PSA). The PSA includes Part Lots 11 – 14, Concessions 13 and 14. The PSA comprises two separate parcels identified by roll numbers:

- 23260000230500000000
- 23260000230520000000

Figure 1 illustrates the boundaries of the PSA.

In the regional/city context, the PSA is roughly bounded by Sideroad 15 on the south, an abandoned rail corridor on the west, Beatty Line on the east, and a stream and property lines on the north.

A Secondary Study Area (SSA) of 1500 m beyond the boundaries of the PSA was used for the characterization of the agricultural community and the assessment of potential impacts both on and in the immediate vicinity of the PSA. The 1500 m SSA was defined in the Ontario Ministry of Agriculture, Food, and Rural Affairs (OMAFRA) *Draft Agricultural Impact Assessment Guidance Document (March 2018)* as is required for a settlement area boundary expansion.

Figure 1 Primary Study Area

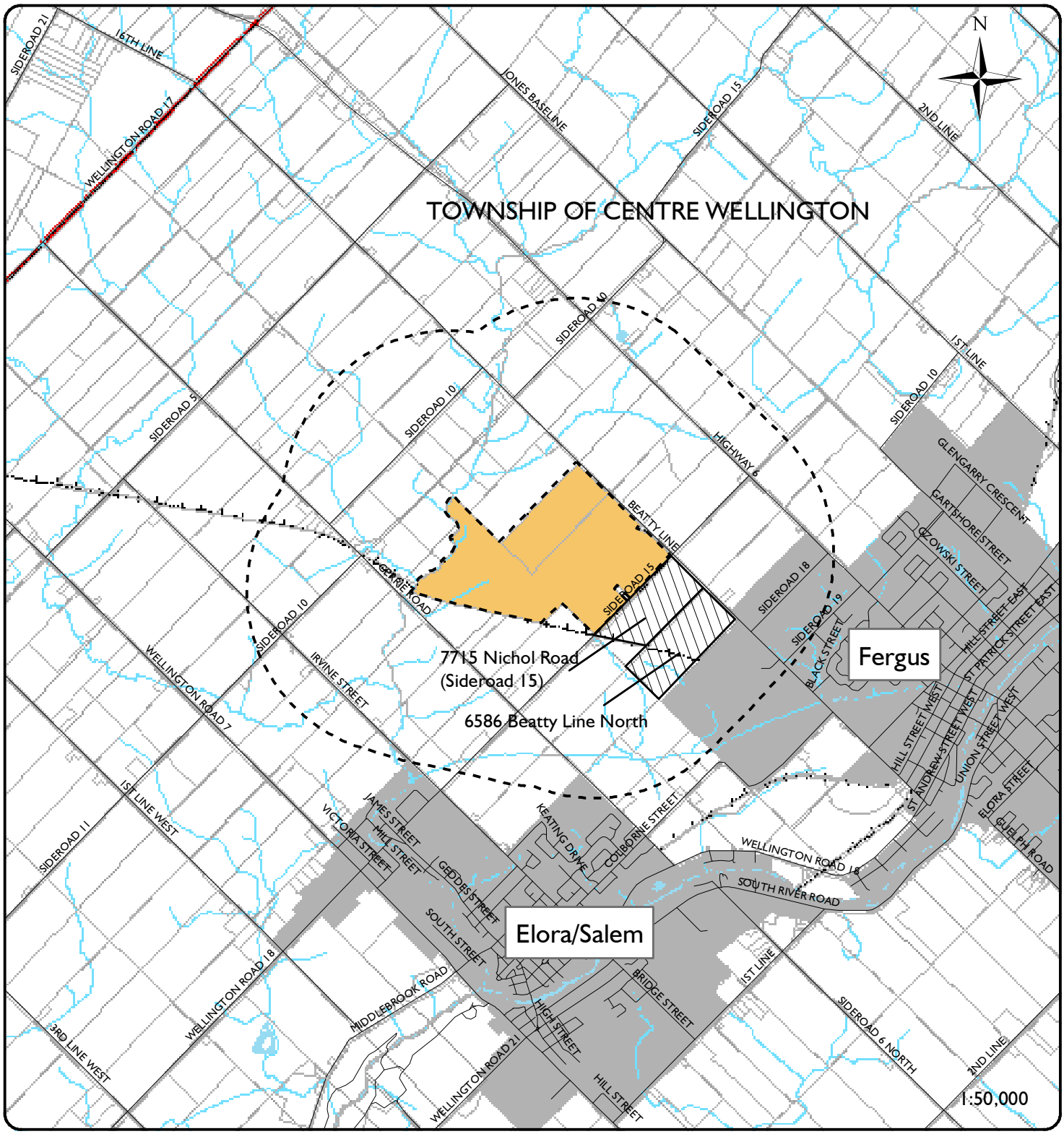
Source: DBH Soil Services Inc.

The PSA and the SSA comprise a mix of land uses including rural residential uses, agricultural lands, transportation corridors, and woodlands.

Figure 2 illustrates the relative location and shape of the PSA and SSA with respect to the above-mentioned geographical and community features. The PSA is located approximately 750 m northwest of Fergus, and approximately 1.6 km north of Salem/Elora.

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

It is noted that the Ontario Ministry of Agriculture, Food, and Rural Affairs (OMAFRA) has recently been renamed to the Ontario Ministry of Agriculture, Food, and Agribusiness (OMAFA) which has led to some confusion as to referencing documents and/or data. The references in this report relate to the particular reference identified in the respective document/data set.



Legend

- Abandoned Railway (MNR)
- Roads (MNRF)
- Watercourses (WC)
- Lot Lines (MNR)
- Lower Tier Boundary (MNR)
- Other Lands
- Parcels
- Primary Study Area (PSA)
- Secondary Study Area (SSA)
- Settlements (WC)
- Waterbodies (WC)

MNR - Ministry of Natural Resources, WC - Wellington County

Figure 2

Location

DBH Soil Services Inc.

November 2024

2 METHODOLOGY

A variety of data sources were evaluated to characterize the extent of agriculture resources and to assess any potential existing (or future) impacts to agriculture within the PSA and the surrounding SSA that may occur as a result of the proposed future development of the PSA.

In an effort to determine the requirements for completion of an AIA, a review of the *County of Wellington Official Plan (Office Consolidation July 2024)* and associated schedules was completed. The review of the *County of Wellington Official Plan (Office Consolidation July 2024*) identified the need for AIAs in Section 4.6.5. Section 4.6.5 states:

> ***4.6.5 Agricultural Impact Assessment***
> *Where development is proposed in prime or secondary agricultural areas, a Council may require an assessment of the impacts the development may have on agricultural activities in the area. An assessment may include any or all of the following:*
> *a) the opportunity to use lands of lower agricultural potential;*
> *b) compliance with the minimum distance separation formulae for livestock operations;*
> *c) the degree to which agricultural expansion may be constrained;*
> *d) potential interference with normal agricultural activities and practices;*
> *e) potential interference with the movement of agricultural machinery on roads;*
> *f) such other concerns as a Council may consider relevant.*

Further, the review of the *County of Wellington Official Plan (Office Consolidation July 2024)* identified in Section 4.8.2 – Primary Urban Centre Expansion Criteria that:

> *g) any adverse impacts on the agri-food network, including agricultural operations, from expanding settlement areas would be avoided, or if avoidance is not possible, minimized and mitigated as determined through an agricultural impact assessment;*

The *County of Wellington Official Plan (Office Consolidation July 2024)* defined an Agricultural Impact Assessment as:

> *means a study that evaluates the potential impacts of non-agricultural development on agricultural operations and the Agricultural System and recommends ways to avoid or, if avoidance is not possible, minimize and mitigate adverse impacts.*

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

The review determined that the Region of Halton has created a document titled "*Agricultural Impact Assessment Guidelines, October 1985"*, and has updated those guidelines with a newer version from June 2014. The Region of Halton has specific standards and guidelines for completing AIAs within the boundaries of the Region of Halton.

The review on the existence and use of AIA Guidelines also revealed that the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) had released draft Agricultural Impact Assessment guidelines in a document titled "*Draft Agricultural Impact Assessment (AIA) Guidance Document, March 2018*". This OMAFRA document is considered as "Draft for Discussion Purposes" and does not have status but is the basis for how OMAFRA addresses agricultural impacts and mitigation.

As a result of the review on the existence and use of AIA guidelines in Ontario, this AIA report has been completed with regard to the review/reference and requirements of the OMAFRA "*Draft Agricultural Impact Assessment (AIA) Guidance Document, March 2018*" and with regard to the requirements of the *County of Wellington Official Plan (Office Consolidation July 2024)*.

2.1 DATA COLLECTION

A variety of data sources were utilized in the assessment of agriculture in the PSA and SSA. Data was collected in a variety of formats including digital (shapefiles and imagery), paper copy, and through correspondence (telephone, meetings, email, etc), as necessary. A synopsis of the type of data and the collection of the relevant data is provided below.

2.1.1 POLICY

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

The review included an examination of Provincial and Municipal policy as is presented in the *Provincial Planning Statement (PPS, 2024), the Greenbelt Plan (2017, updated mapping 2022), the Oak Ridges Moraine Conservation Plan (2017),* and the *County of Wellington Official Plan (Office Consolidation July 2024)*.

The review also included a review of the *Township of Centre Wellington Comprehensive Zoning By-law No. 2009-045 (Office Consolidation February 2024)*.

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

An assessment of online data resources including OMAFRA, Geospatial Ontario (Ontario.ca), and the County of Wellington website. Further, this assessment included telephone, email and in person communication/correspondence to derive a list of relevant policy, by-law and guidelines. Each relevant policy, by-law and guideline was collected in digital or paper format for examination for this study.

2.1.2 PHYSIOGRAPHY

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

2.1.3 TOPOGRAPHY AND CLIMATE

Topographic information was reviewed from the 1:10000 scale Ontario Base Mapping, Ontario GeoHub (Ontario.ca) digital contour mapping and windshield surveys.

Climate data was taken from the OMAFRA document titled *Agronomy Guide for Field Crops – Publication 811 (June 2017)* and online OMAFRA data sources. The use of this climate information is consistent with the description within the *Draft OMAFRA Agricultural Impact Assessment (AIA) Guidance Document (March 2018)* where there is a requirement to provide a general description of climatic features (crop heat units, frost free days, and general climatic patterns of the area).

The *Draft OMAFRA Agricultural Impact Assessment (AIA) Guidance Document (March 2018)* indicates the need to provide greater detail on climate only in specialty crop areas.

2.1.4 AGRICULTURAL LAND USE

Agricultural land use data was collected through observations made during roadside reconnaissance surveys and field surveys conducted on September 19, 2024. Data collected included the identification of land use (both agricultural and non-agricultural), the documentation of the location and type of agricultural facilities/services, the location of non-farm residential units and the location of non-farm buildings (businesses, storage facilities, industrial, commercial, and institutional usage).

Agricultural land use designations were correlated to the *Agricultural Resource Inventory* (ARI) and the information provided in the Agricultural System Portal (OMAFRA) for the purpose of updating the OMAFRA Land Use Systems mapping for both the PSA and SSA.

2.1.5 MINIMUM DISTANCE SEPARATION

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

A review of the OMAFRA document titled *The Minimum Distance Separation (MDS) Document: Formulae and Guidelines for Livestock Facility and Anaerobic Digester Odour Setbacks* (Publication 853, Ontario Ministry of Agriculture, Food and Rural Affairs. 2016) was completed.

It is stated under guideline #1:

> *In accordance with the Provincial Planning Statement, 2014, this MDS Document shall apply in prime agricultural areas and on rural lands.*

This AIA is based on a proposed settlement area boundary expansion in an agricultural area. Therefore, an assessment of MDS1 is required.

Agricultural buildings in the PSA and SSA were assessed during a roadside reconnaissance survey and through a review of online imagery. Agricultural buildings housing livestock or having the capability to house livestock were identified and require MDS1 assessment and calculations.

2.1.6 LAND FRAGMENTATION/SEVERANCE

Land fragmentation data was collected through a review of online interactive mapping on the Agmaps (OMAFRA) website, the Agricultural System Portal (OMAFRA), and the County of Wellington websites. This data was used to determine the extent, location, relative shape of each parcel/property within both the PSA and the SSA.

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

The assessment of fragmentation looked at the size, shape and number of parcels within a given area, and provided comments on the potential effect on agriculture.

Land severance is the severing or dividing of a parcel into multiple sections. An assessment of land severance was completed to determine the extent of parcels that may be severed as a result of the proposed future development of the PSA.

2.1.7 SOIL SURVEY

Soil survey data and Canada Land Inventory (CLI) data was provided by OMAFRA in digital format through the Ontario Geohub Land Information Ontario (LIO) Warehouse Open Data website. The soils/CLI data is considered the most recent iteration of the soil information from OMAFRA.

The digital soil survey data was also correlated to the printed soil survey reports and maps (Soils of Wellington County, Report No. 35 of the Ontario Soil Survey (Hoffman, D.W., B.C. Matthews, and R.E. Wicklund, 1963)) to determine if the digital soils data have been modified from the original soil survey data.

Further, discussions with OMAFRA indicated that the Provincial soils data base has been updated to include some slope information in an effort to provide the digital data at a scale of 1:50000. The original reports and associated mapping were generally completed to a scale of 1:63360 or 1 inch to 1 mile.

2.1.8 AGRICULTURAL SYSTEM

The Ontario Ministry of Agriculture, Food and Rural Affairs online Agricultural Systems mapping was reviewed to determine the extent of agriculture in the PSA, in the SSA, and the County of Wellington in general.

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

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

The review of the Agricultural Network included a visual assessment of any agricultural services and transportation networks identified during the roadside reconnaissance survey within the PSA and the SSA, and a review of the OMAFRA Agricultural Systems Portal mapping.

2.1.9 AGRCULTURAL STATISTICS

Agricultural statistics were provided by Statistics Canada and downloaded from the OMAFRA website for the County of Wellington. The data sets provide information up to (and including) the 2021 Census.

The OMAFRA draft AIA Guidelines indicates that the background data collection and review should include:

- *Agricultural crop statistics, over several recent census periods (Statistics Canada, Census of Agriculture).*

It is understood that the Census of Agriculture data is very extensive and detailed. This AIA utilized the Census of Agriculture data to provide a review of basic crop statistics over a minimum of three census periods extending from 2006 to 2021.

It is noted that the Census of Agriculture data does not always provide the most recent or updated municipality name. For the purposes of this AIA the review and assessment of the Census of Agriculture made use of the municipality name as was stated in the Census of Agriculture data sets.

3 POLICY REVIEW

Clearly defined and organized environmental practices are necessary for the conservation of land and resources. The long-term protection of quality agricultural lands is a priority of the Province of Ontario and has been addressed in the *Provincial Planning Statement (PPS, 2024)*. Further, in an effort to protect agricultural lands, the Province of Ontario has adopted policy and guidelines to provide a framework for managing growth. These three provincial land use plans: *the Greenbelt Plan (2017 and updated mapping 2022); the Niagara Escarpment Plan (2017), and the Oak Ridges Moraine Conservation Plan (2017)* support the long-term protection of farmland. The provincial land use plans have policies that require the completion of AIA studies for changes in agricultural land use.

With this in mind, the *Provincial Planning Statement (PPS, 2024); the Greenbelt Plan (2017 and updated mapping 2022); the Niagara Escarpment Plan (2017); and the Oak Ridges Moraine Conservation Plan (2017)* were reviewed.

With respect to this AIA and the three provincial land use plans, a review of the boundaries of the Greenbelt Plan Area, the Niagara Escarpment Plan Area and the Oak Ridges Moraine Conservation Area was completed.

It was determined that the PSA and the SSA were located outside the boundaries of the *Greenbelt Plan* mapping, the Niagara Escarpment Plan mapping and the *Oak Ridges Moraine Conservation Plan* mapping, therefore those policy plans do not apply to this AIA.

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

A review of municipal policy was based on an examination of the *County of Wellington Official Plan (Office Consolidation July 2024*) and the *Municipal Official Plan of the Township of Centre Wellington (Office Consolidation February 2024)*.

The review also included a review of the *Township of Centre Wellington Comprehensive Zoning By-law No. 2009-045 (Office Consolidation February 2024)*.

It was determined through these reviews, that no portions of the PSA or the SSA were located in a Provincially or municipally designated specialty crop area.

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

3.1 PROVINCIAL AGRICULTURAL POLICY

The *Provincial Planning Statement (PPS, 2024)* was enacted to document the Ontario Provincial Governments development and land use planning strategies. The *Provincial Planning Statement (PPS, 2024)* provides the policy foundation for regulating the development and use of land. With respect to the potential future settlement area boundary expansion development of the PSA, the following policies may apply.

Agricultural policies are addressed within *Sections 4.3 (Agriculture) of the Provincial Planning Statement (PPS, 2024)*. Select agricultural policies are provided as follows:

4.3.1 General Policies for Agriculture

1. *Planning authorities are required to use an agricultural system approach, based on provincial guidance, to maintain and enhance a geographically continuous agricultural land base and support and foster the long-term economic prosperity and productive capacity of the agri-food network.*

2. *As part of the agricultural land base, prime agricultural areas, including specialty crop areas, shall be designated and protected for long-term use for agriculture.*

3. *Specialty crop areas shall be given the highest priority for protection, followed by Canada Land Inventory Class 1, 2, and 3 lands, and any associated Class 4 through 7 lands within the prime agricultural area, in this order of priority.*

4.3.2 Permitted Uses

1. *In prime agricultural areas, permitted uses and activities are: agricultural uses, agriculture-related uses and on-farm diversified uses based on provincial guidance.*

   Proposed agriculture-related uses and on-farm diversified uses shall be compatible with, and shall not hinder, surrounding agricultural operations. Criteria for these uses may be based on provincial guidance or municipal approaches, as set out in municipal planning documents, which achieve the same objectives.

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

3. *New land uses in prime agricultural areas, including the creation of lots and new or expanding livestock facilities, shall comply with the minimum distance separation formulae.*

4.3.4 Removal of Land from Prime Agricultural Areas

1. Planning authorities may only exclude land from prime agricultural areas for expansions of or identification of settlement areas in accordance with policy 2.3.2.

4.3.5 Non-Agricultural Uses in Prime Agricultural Areas

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

a) extraction of minerals, petroleum resources and mineral aggregate resources; or

b) limited non-residential uses, provided that all of the following are demonstrated:

1 the land does not comprise a specialty crop area;

2 the proposed use complies with the minimum distance separation formulae;

3 there is an identified need within the planning horizon identified in the official plan as provided for in policy 2.1.3 for additional land to accommodate the proposed use; and

4 alternative locations have been evaluated, and

i. there are no reasonable alternative locations which avoid prime agricultural areas; and

ii. there are no reasonable alternative locations in prime agricultural areas with lower priority agricultural lands.

2. Impacts from any new or expanding non-agricultural uses on the agricultural system are to be avoided, or where avoidance is not possible, minimized and mitigated as determined through an agricultural impact assessment or equivalent analysis, based on provincial guidance.

4.3.6 Supporting Local Food and the Agri-food Network

1. Planning authorities are encouraged to support local food, facilitate near-urban and urban agriculture, and foster a robust agri-food network.

Further, the PPS Policy 2.3.2 provides context for Settlement Areas and Settlement Area Boundary Expansions. Select agricultural policies are provided as follows:

2.3.2 New Settlement Areas and Settlement Area Boundary Expansions

1. In identifying a new settlement area or allowing a settlement area boundary expansion, planning authorities shall consider the following:

a) the need to designate and plan for additional land to accommodate an appropriate range and mix of land uses;

b) if there is sufficient capacity in existing or planned infrastructure and public service facilities;

c) whether the applicable lands comprise specialty crop areas;

d) the evaluation of alternative locations which avoid prime agricultural areas and, where avoidance is not possible, consider reasonable alternatives on lower priority agricultural lands in prime agricultural areas;

e) whether the new or expanded settlement area complies with the minimum distance separation formulae;

f) whether impacts on the agricultural system are avoided, or where avoidance is not possible, minimized and mitigated to the extent feasible as determined through an agricultural impact assessment or equivalent analysis, based on provincial guidance; and

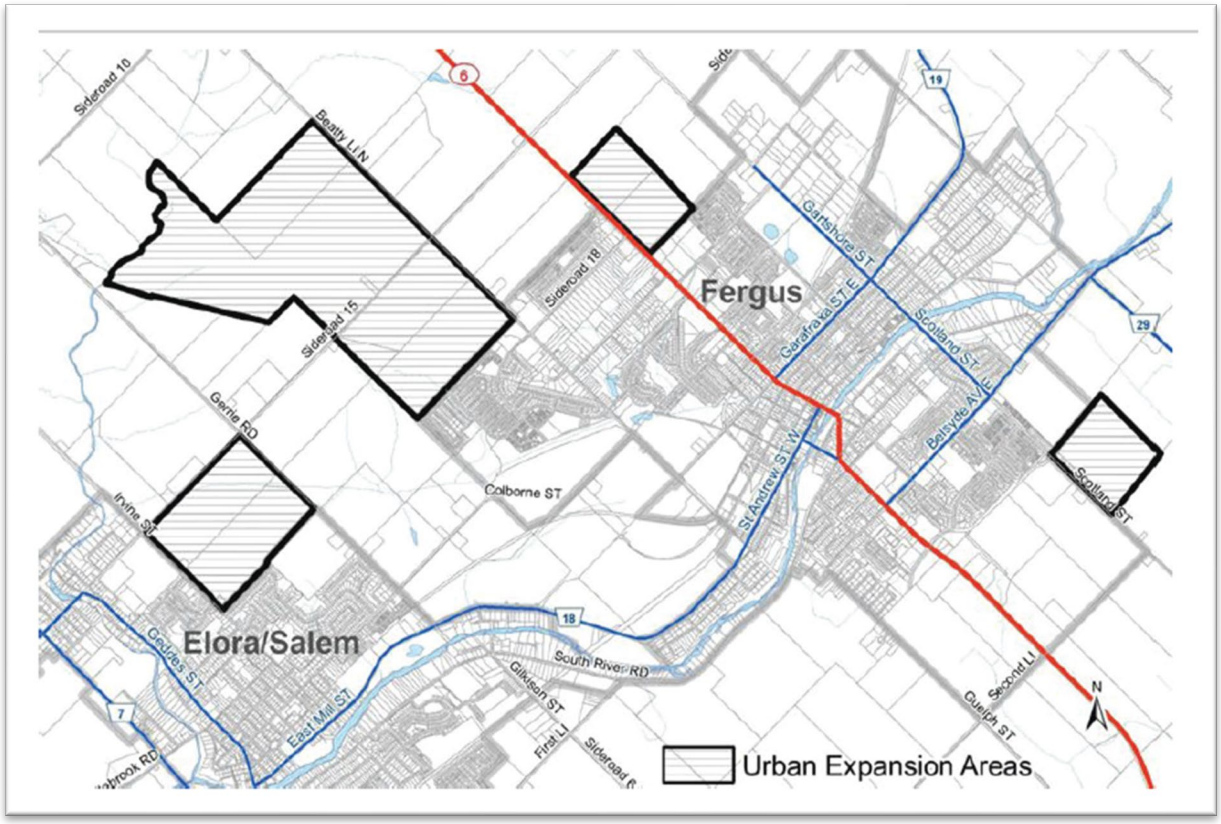
g) the new or expanded settlement area provides for the phased progression of urban development.

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

This AIA did not provide an assessment of need, or an assessment of capacity of infrastructure and public services facilities. It is assumed that the assessment of the need and capacity of infrastructure has been addressed in other planning documents. Further, it is assumed that there was an assessment of alternative locations and that this has been addressed under other planning documents.

It is noted that these lands were part of modifications directed by the Ministry of Municipal Affairs approval of Official Plan Amendment (OPA) 119 (Version 1) County Growth Structure in April 2023. In December 2023 Bill 150 reversed most Provincial modifications related to OPA 119 (Version 2). In May 2024 Bill 162 modified OPA 119 (Version 3) with some Provincial modifications with scoped Municipal input and was in force retroactively December 6, 2023. It is noted that the PSA lands were included in the Urban Expansion Areas. Figure 3 illustrates the proposed urban expansion areas under OPA 119 (Version 1).

Figure 3 Proposed Urban Expansion Areas



Source County of Wellington Image

A review was conducted of online resources to determine if there was any background information related to the reasons that these Urban Expansion Areas were chosen for OPA 119. The review failed to find any information related to these Urban Expansion Areas. It is assumed that there were some technical studies completed that determined that these were appropriate areas for settlement area boundary expansions and that these Urban Expansion Areas were based on an assessment of policy, need, and infrastructure.

The Province later reversed the decision on these Urban Expansion Areas effectively removing these lands from development. The review of online resources also failed to find any information related to why the decision was made to remove these lands.

3.2 PROVINCIAL AGRICULTURAL LAND BASE MAPPING

Provincial policy requires that prime agricultural areas be protected for long-term use for agriculture. The province identified the agricultural land base through a Land Evaluation and Area Review (LEAR) assessment for the Greater Golden Horseshoe area to assist municipalities in making informed land-use planning decisions. Municipalities were required to review the agricultural land base mapping and provide refinements to the agricultural land base as part of Official Plan updates.

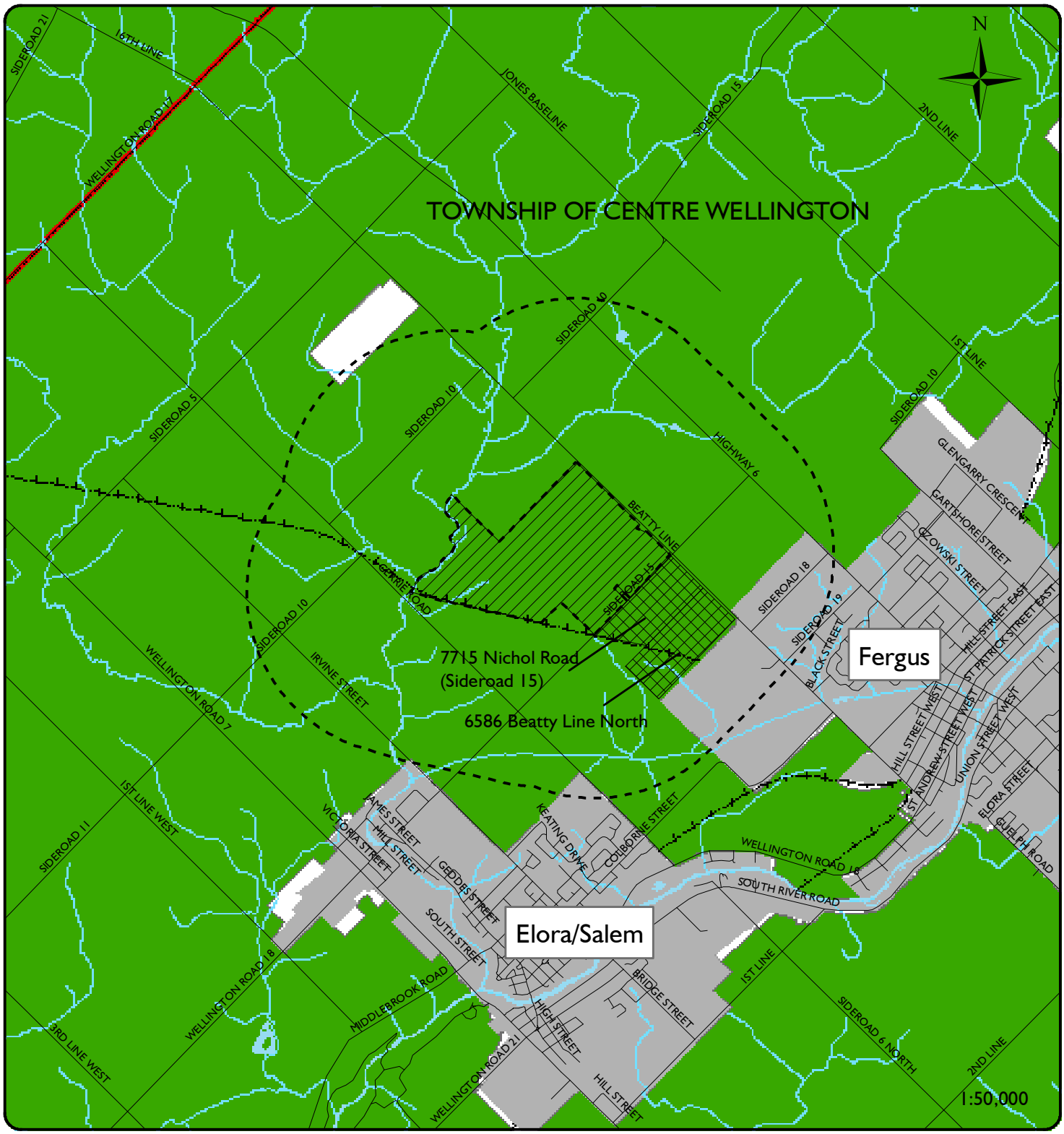
Figure 4 illustrates the relative location of the PSA and the SSA with respect to the Provincial Agricultural Land Base Mapping. It is noted that the Provincial Land Base mapping is now considered a legacy map and is not being updated by the province. Further, the province has indicated on the Agricultural Systems Portal website that "*For the most up-to-date prime agricultural area mapping, check the applicable, approved municipal official plan.*"

3.3 THE GREENBELT PLAN

A review of the Greenbelt Plan (2017 and updated mapping 2022); mapping indicated that no portions of the PSA nor the SSA are located within the boundaries of the Greenbelt Plan area. Therefore, the Greenbelt Plan policies do not apply to this AIA.

3.4 THE NIAGARA ESCARPMENT PLAN

A review of the boundaries of the Niagara Escarpment Plan (2017) (and associated digital mapping) was completed. The review indicated that no portions of the PSA or the SSA are located within the Niagara Escarpment Plan area. Therefore, the policies of the Niagara Escarpment Plan do not apply to this AIA.



Legend

- Abandoned Railway (MNR)
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- Lot Lines (MNR)
- Lower Tier Boundary (MNR)
- Other Lands
- Primary Study Area (PSA)
- Secondary Study Area (SSA)
- Settlements (WC)
- Waterbodies (WC)
- **Legacy Agricultural Land Base**
- Prime Agricultural Area

MNR - Ministry of Natural Resources, WC - Wellington County

Figure 4

Agricultural Land Base Legacy Map

DBH Soil Services Inc.

November 2024

3.5 THE OAK RIDGES MORAINE CONSERVATION PLAN

A review of the boundaries of the Oak Ridges Conservation Plan (and associated digital mapping) was completed. The review indicated that no portions of the PSA or the SSA are located within the Oak Ridges Conservation Plan (2017) area. Therefore, the policies of the Oak Ridges Moraine Conservation Plan do not apply to this project.

3.6 OFFICIAL PLAN POLICY

Official Plan policies are prepared under the Planning Act, as amended, of the Province of Ontario. Official Plans generally provide policy comments for land use planning while taking into consideration the economic, social, and environmental impacts of land use and development concerns. A review for Official Plan documents revealed that the Township of Centre Wellington is a lower tier municipality located within the County of Wellington (upper tier).

For the purpose of this AIA, the review of Official Plans included an examination of the *County of Wellington Official Plan (Office Consolidation July 2024) and the Municipal Official Plan of the Township of Centre Wellington (Office Consolidation February 2024)*.

As noted on the Centre Wellington website:

> *"The Township of Centre Wellington's Official Plan only applies to the Elora and Fergus Urban Centres, including Salem and Belwood. All other areas of the Township are governed by the County of Wellington's Official Plan."*

Therefore, the review of agricultural policy for the PSA and SSA relied on the *County of Wellington Official Plan (Office Consolidation July 2024)*.

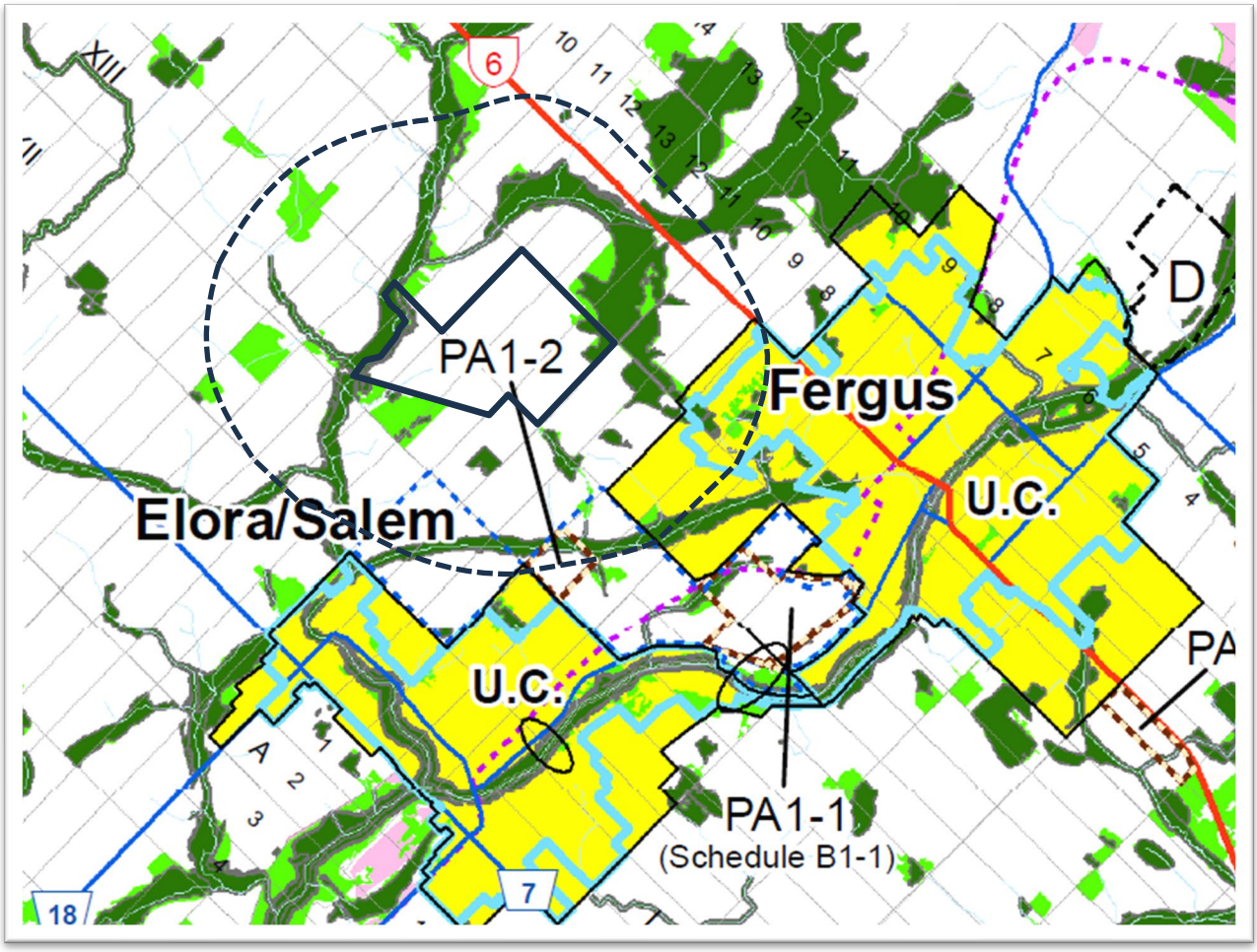
A review was also completed for the Township of Centre Wellington Comprehensive Zoning By-law No. 2009-045 (Office Consolidation February 2024).

3.6.1 COUNTY OF WELLINGTON OFFICIAL PLAN

The review of the *County of Wellington Official Plan (Office Consolidation July 2024)* Schedule B1 Land Use Centre Wellington revealed that the PSA was comprised of lands designated as Prime Agricultural, Core Greenlands, and Greenlands. The SSA was comprised of lands designated as Prime Agricultural, Core Greenlands, Greenlands, and Primary Urban Centre.

Figure 5 illustrates a select portion of Schedule B1 showing the Land Use designations for the PSA and SSA. The PSA is illustrated as a solid black line, while the SSA is illustrated as a dashed black line.

Figure 5 County of Wellington Official Plan Schedule B1



CENTRE WELLINGTON

The Greenlands System
- Core Greenlands
- Greenlands
- Earth Science ANSI

The Rural System
- Prime Agricultural
- H. Hamlet
- Recreational
- Rural Employment Area
- PA Policy Area
- Community Planning Study Area

The Urban System
- U.C. Primary Urban Centre

Other
- Trans Canada Trail
- Landfill Site
- Montrose Water Management Protection Area
- Grand River Crossing
- D Deferral
- County Roads
- Provincial Highways
- Built Boundary
- Waterbody
- Watercourse

Source: County of Wellington *Official Plan* Schedule B1

The review of the County of Wellington Official Plan (Office Consolidation July 2024) identified Farmland Protection policies in Section 4.3, and the Prime Agricultural policies in Section 4.3.1. Select Prime Agricultural Policies are provided as follows.

4.3.1 Prime Agricultural Areas

Prime Agricultural Areas will be identified and protected so that normal farming operations are not hindered by conflicting development.

4.3.3 Policy Direction

a) Class 1, 2 and 3 agricultural soils, associated Class 4 to 7 soils and additional areas where there is a local concentration of farms which exhibit the characteristics of ongoing agriculture, and specialty crop land will be designated as prime agricultural areas unless:

i) municipal scale studies demonstrate that the land would more appropriately be placed in a greenlands or secondary agricultural designation in consultation with the OMAF;

ii) studies demonstrate that limited non-residential use is appropriate.

b) Urban Centre or Hamlet expansions are subject to the municipal comprehensive review policies of Section 4.8 Expansion of Primary Urban Centres, Secondary Urban Centres and Hamlets.

c) Limited non-residential uses, other than aggregate extraction, may only take place in prime agricultural areas if the need for the use can be demonstrated and provided that there are no reasonable alternative locations which avoid prime agricultural areas with lower priority agricultural lands. In considering need and alternative locations, decision makers will be guided by the following.

i) Need

- *projected population for the local municipality and county or growth allocated by broader studies*
- *public health or safety considerations*
- *existing vacant land already designated for the proposed use*
- *potential for infilling existing areas*
- *previous rates of land consumption*
- *availability and efficiency of servicing*
- *need for a variety of opportunities to encourage economic development and satisfy housing and business demand*

ii) ***Alternative Locations***

- *impacts on agricultural land and operations*
- *location requirements of the proposed use*
- *degree of land fragmentation in the area*
- *Canada Land Inventory classification*

ii) Compliance with minimum separation distances established for livestock operations.

The County of Wellington Official Plan (Office Consolidation July 2024) contains policy for AIAs in Section 4.6.5 as stated previously in this AIA.

Further, the *County of Wellington Official Plan (Office Consolidation July 2024)* provides policy for Primary Urban Centre Expansion Criteria in Section 4.8.2. The policies related to Prime Agricultural Areas are presented as follows:

f) prime agricultural areas should be avoided where possible. To support the Agricultural System, alternative locations across the County will be evaluated, prioritized and determined based on avoiding, minimizing and mitigating the impact on the Agricultural System and in accordance with the following;

i) reasonable alternatives that avoid prime agricultural areas are evaluated; and;

ii) where prime agricultural areas cannot be avoided, lower priority agricultural lands are used;

g) any adverse impacts on the agri-food network, including agricultural operations, from expanding settlement areas would be avoided, or if avoidance is not possible, minimized and mitigated as determined through an agricultural impact assessment;

j) the settlement area to be expanded is in compliance with the minimum distance separation formulae.

3.6.2 ZONING BY-LAW

Official Plans set out a municipality's general policies for existing and future land use. Zoning bylaws specify permitted uses and standards for each municipally designated zone. The specific requirements identified within a zoning bylaw are legally enforceable. Local municipalities are the approval authority for zoning bylaws. As such, this AIA study reviewed the *Township of Centre Wellington Comprehensive Zoning By-law No. 2009-045 (Office Consolidation February 2024)*.

3.6.2.1 Township of Centre Wellington Comprehensive Zoning By-law

The review of the *Township of Centre Wellington Comprehensive Zoning By-law No. 2009-045 (Office Consolidation February 2024)* identified that the zoning for the PSA was provided on the Township of Centre Wellington Zoning By-law Schedule "A" Map 17. The respective zones in the PSA were identified as Agricultural (A) and possibly Environmental Protection (EP), and Environmental Protection Overlay.

The SSA review identified that the SSA comprised portions of Maps 11, 12, 16, 17, 18, 23, and 24. The SSA comprised areas zoned as Agricultural (A), Environmental Protection (EP), Environmental Protection Overlay, Residential (R1), Commercial (C), Institutional (IN), Open Space (OS), and Industrial (M).

Zone standards for Agriculture were provided in Part 6 – Agricultural Zones. Select Agricultural Zone permitted uses and zone standards are provided below.

6.1 Agricultural (A) Zone

No person shall use land or erect, alter or use any buildings or structures within an Agricultural (A) Zone, except in accordance with the following provisions:

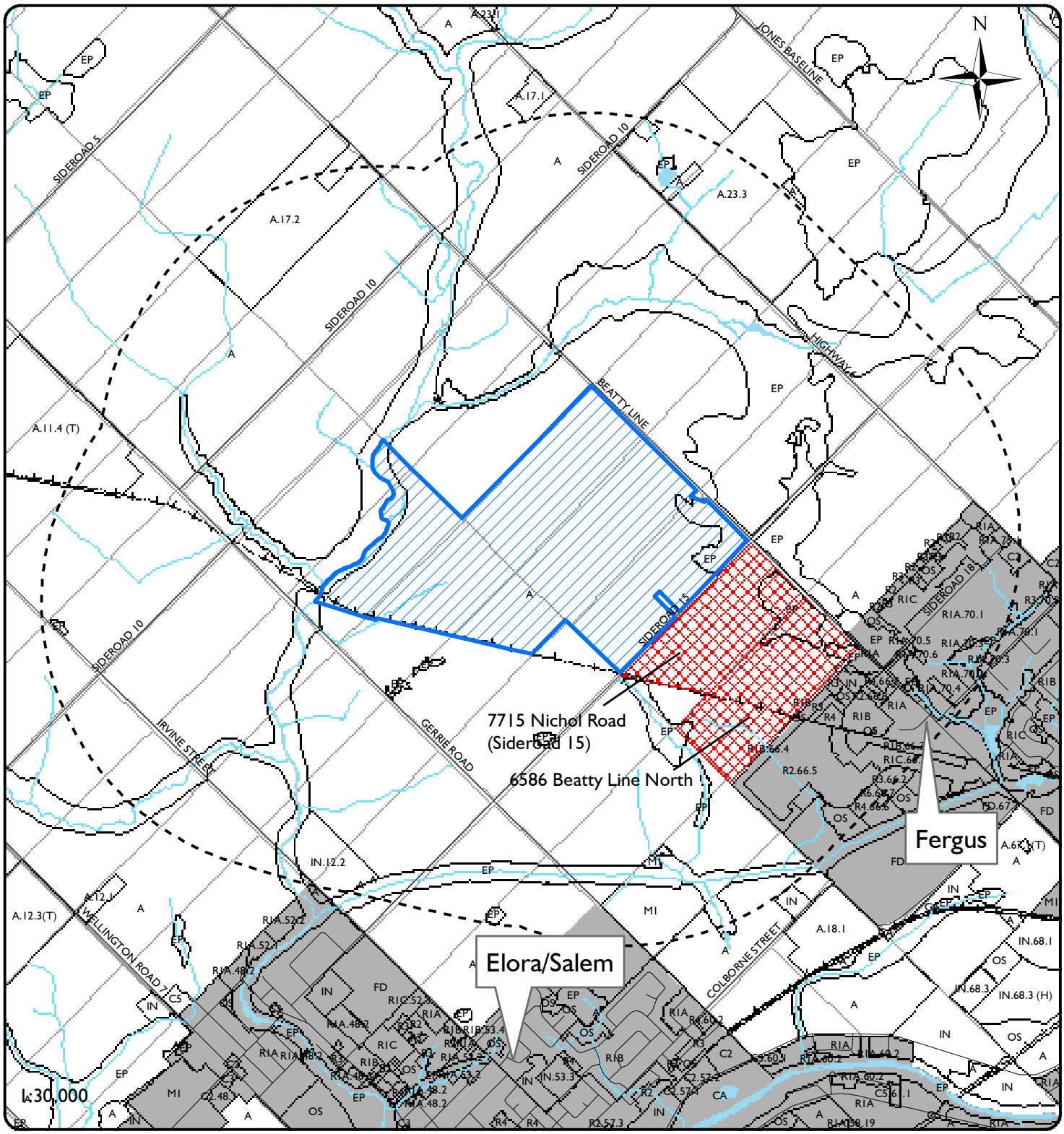
6.1.1 Permitted Uses

a) An agricultural use
b) A single detached dwelling
c) A group home in accordance with Section 4.16
d) A commercial kennel in accordance with Section 4.9
e) A lawfully existing institutional use
f) A wayside pit or quarry
g) A temporary portable asphalt plant
h) Uses accessory to the foregoing, including:
i. A bed and breakfast establishment (Class 1 or Class 2) in accordance with Section 4.6
ii. An additional residential unit in accordance with Section 6.1.4
iii. An On-Farm Diversified Use in accordance with Section 6.1.2
iv. A home occupation in accordance with Section 4.17
v. A home business-tradespersons in accordance with Section 4.18
vi. A micro wind energy system in accordance with Section 4.42 (This section has been superseded by O. Reg. 359/09 made under the Environmental Protection Act)
vii. A small wind energy system in accordance with Section 4.43 (This section has been superseded by O. Reg. 359/09 made under the Environmental Protection Act)
viii. A sales outlet for agricultural products in accordance with Section 4.33

6.1.2 Regulations

a) Minimum Lot Area 10 ha

Figure 6 illustrates the zoning for the PSA and SSA based on the available online zoning data from Centre Wellington.



Legend

- Abandoned Railway (MNR)
- Roads (MNR)
- Watercourses (WC)
- Centre Wellington Zoning
- Lot Lines (MNR)
- Lower Tier Boundary (MNR)
- Other Lands
- Primary Study Area (PSA)
- Secondary Study Area (SSA)
- Settlements (WC)
- Waterbodies (WC)

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Figure 6

Centre Wellington Zoning

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4 AGRICULTURAL RESOURCE POTENTIAL

4.1 PHYSICAL CHARACTERISTICS

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

4.1.1 PHYSIOGRAPHY

On review of the Geohub digital physiographic region data, and *The Physiography of Southern Ontario 3rd Edition*, (Ontario Geological Survey Special Volume 2, Ministry of Natural Resources, 1984), it was determined that the PSA is located in the Guelph Drumlin Field, while the SSA is located within the Guelph Drumlin Field and the Stratford Till Plain physiographic regions.

The Guelph Drumlin Field physiographic region is described as an area centered on the City of Guelph and north of the Paris moraine that contains more than 300 drumlins of all sizes. The drumlins are generally oval in shape and are not closely spaced, leaving more low ground between the drumlins.

The Stratford Till Plain physiographic region is described as an area of ground moraine (broad clay plain) extending from London to Listowel.

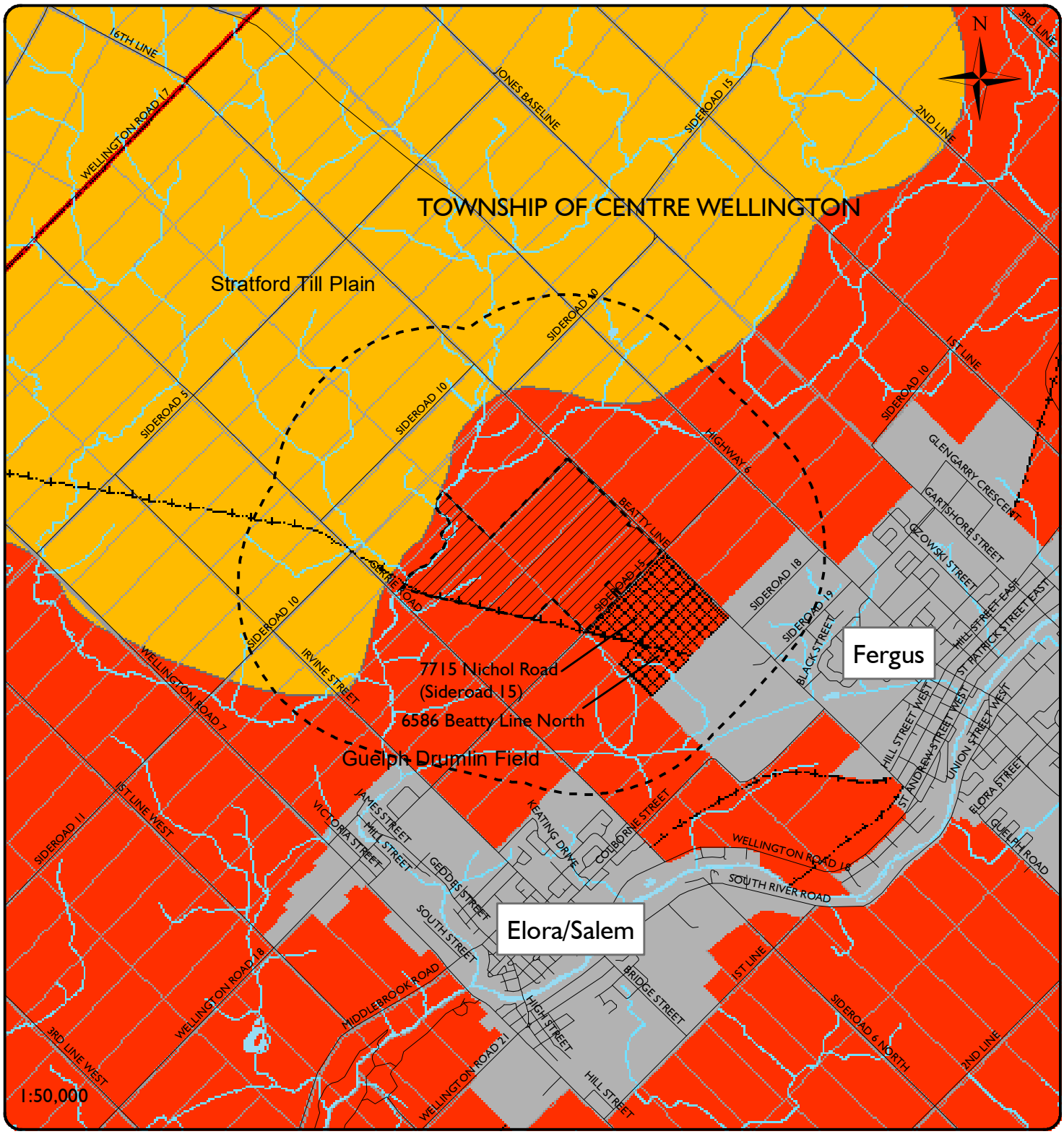
Figure 7 illustrates the geographic location and shape of the respective physiographic region as compared to the location and shape of the PSA and SSA.

4.1.2 TOPOGRAPHY AND CLIMATE

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

The PSA and the SSA are a complex mix of topography with gently undulating areas generally used for agricultural production, and steeper slopes along incised stream channels.

Climate data was taken from the OMAFRA document titled *Agronomy Guide for Field Crops – Publication 811 (June 2017)* and the *Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) Factsheet – Crop Heat Units for Corn and Other Warm Season Crops in Ontario, 1993.*



Legend

- Abandoned Railway (MNR)
- Roads (MNR)
- Watercourses (WC)
- Lot Lines (MNR)
- Lower Tier Boundary (MNR)
- Other Lands
- Primary Study Area (PSA)
- Secondary Study Area (SSA)
- Settlements (WC)
- Waterbodies (WC)

Phyisographic Region

- Guelph Drumlin Field
- Stratford Till Plain

MNR - Ministry of Natural Resources, WC - Wellington County

Figure 7

Physiography

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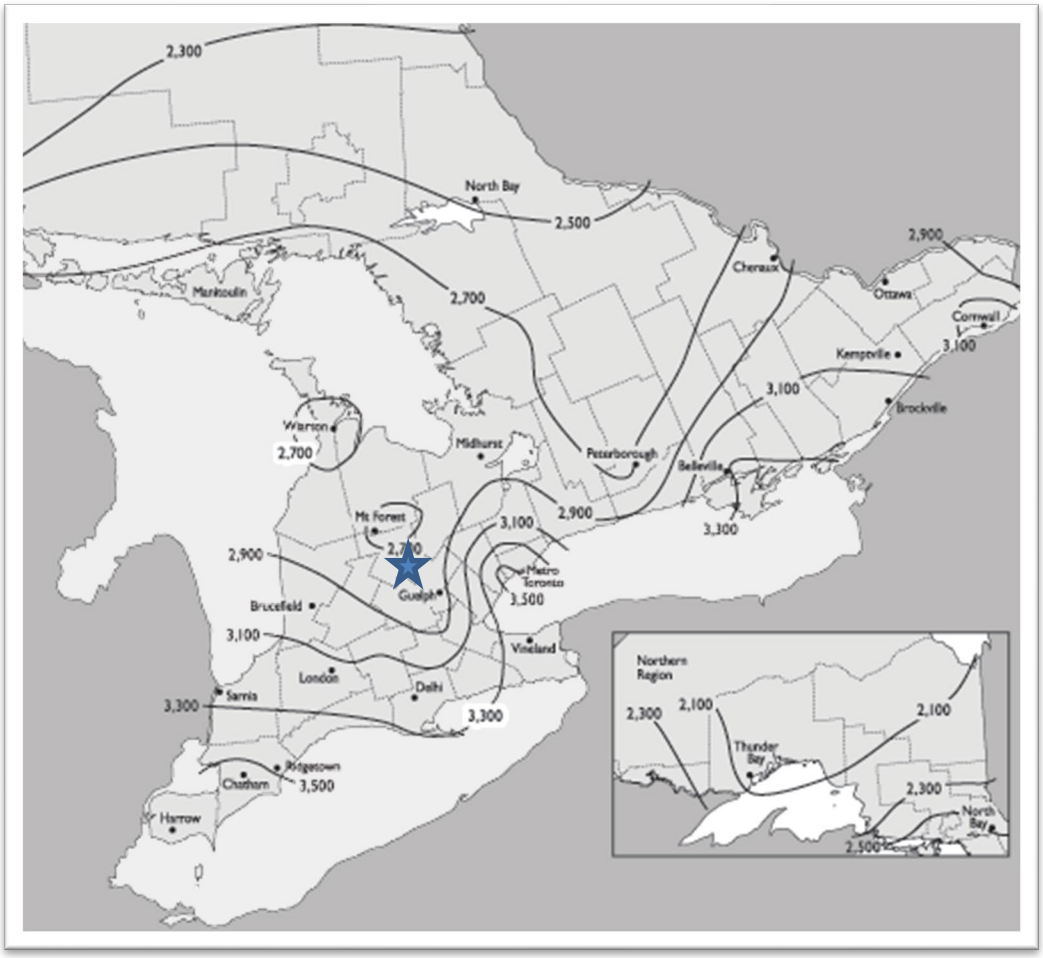
The PSA and SSA are located between the 2700 and 2900 Crop Heat Units isolines (CHU-M1) available for corn production in Ontario. The Crop Heat Units (CHU) index was originally developed for field corn and has been in use in Ontario for 30 years. The CHU ratings are based on the total accumulated crop heat units for the frost-free growing season in each area of the province. CHU averages range between 2500 near North Bay to over 3500 near Windsor. The higher the CHU value, the longer the growing season and greater are the opportunities for growing value crops.

Crop Heat Units for corn (based on 1971-2000 observed daily minimum and maximum temperature (OMAFRA, 2017)) map is illustrated on Figure 8. The approximate location of the PSA and SSA was marked with a blue star.

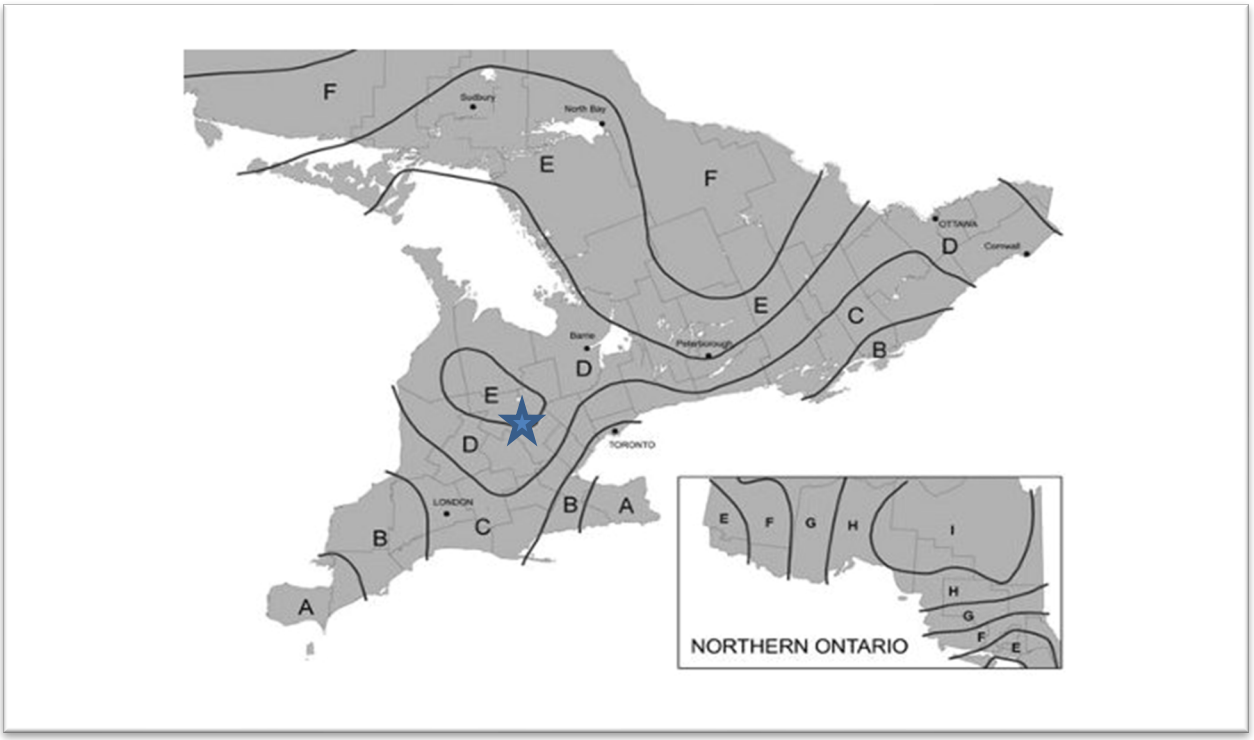
A review of OMAFRA Climate Zone Mapping revealed that the PSA and the SSA are located near the border between Zones D and E. Figure 9 from the OMAFRA website illustrates the Climate Zone Map of Ontario. The approximate location of the PSA and SSA was marked with a blue star.

Figure 8 Crop Heat Units Map



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

Figure 9 OMAFRA Climate Zone Map



Source: OMAFRA Climate Zone Mapping

Zone D has an average Frost-Free period of 130-165 days, an Average Date of Last Spring Frost of May 11, and an Average Date of First Fall Frost of October 1.

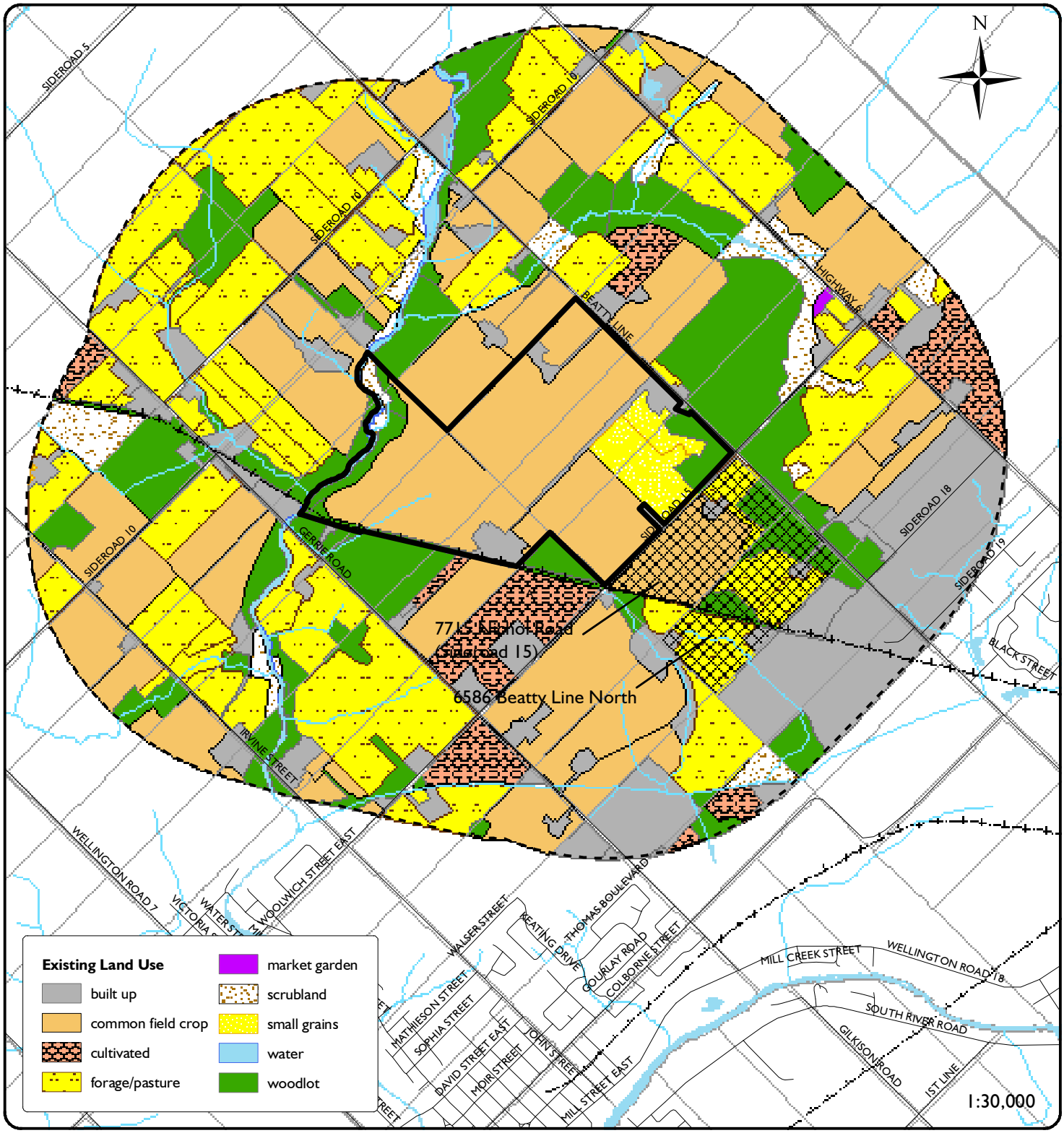
Zone E has an average Frost-Free period of 125-145, and Average Date of Last Spring Frost of May 17, and an Average Date of First Fall Frost of September 26.

4.2 LAND USE

The land use for both the PSA and the SSA was completed through a roadside reconnaissance survey (September 19, 2024), a review of recent aerial photography, Google Earth Imagery, Bing Imagery, Birdseye Imagery, the County of Wellington online imagery, and correlation to the OMAFRA Land Use Systems mapping. Agricultural and non-agricultural land uses are illustrated in Figure 10.

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

- Built up



Legend

- Abandoned Railway (MNR)
- Roads (MNR)
- Watercourses (WC)
- Lot Lines (MNR)
- Lower Tier Boundary (MNR)
- Other Lands
- Primary Study Area (PSA)
- Secondary Study Area (SSA)
- Waterbodies (WC)

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Figure 10

Existing Land Use

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

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

The roadside reconnaissance survey identified the types of land uses including farm and non-farm uses (built up areas, commercial, and roads).

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

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

Land use information was digitized in Geographic Information System (GIS – Arcmap/ARCGIS Pro) to illustrate the character and extent of the existing land use in both the PSA and the SSA. Area calculations for each land use polygon (area) were calculated within the GIS software and

exported as tabular data. The data is presented as follows. Land use designations and land use definitions are provided in Table 1.

Table 1 Typical Land Use Designations

Land Use Designation	Land Use Definitions
Built Up/Disturbed Areas	non-farm residential units, commercial, recreational, estate lots, services (utilities), industrial development, areas that have been man-modified and are unsuitable for cropping
Common Field Crop	corn, soybean
Cultivated	plowed
Forage/Pasture	mixed grasses, clovers, alfalfa, pasture, haylage, hay, paddocks, outdoor riding area
Market Garden	vegetables, garden crops
Open Field	unused field (<5 years)
Scrubland	unused field (>5 years) – woody vegetation regrowth
Small Grains	winter wheat, barley, spring wheat, oats, rye
Sod	sod production
Water	waterbodies, waterways
Woodlot	forested areas

4.2.1 EXISTING LAND USE – PSA

The PSA consisted of a variety of land uses including, but not limited to built-up/disturbed areas, common field crops, scrubland, small grains, water (waterbodies, waterways), and woodlot areas.

The PSA comprised land use of approximately 6.4 percent as built up/disturbed areas, 70.2 percent as common field crop, 1.4 percent as scrublands, 11.8 percent as small grains, 0.8 percent as water, and 9.4 percent as woodlot areas.

On review of the existing land use data it was observed that the predominant land use in the PSA included the production of common field crops.

The proposed future development of the PSA will result in the loss of these lands for agricultural production.

4.2.2 EXISTING LAND USE – SSA

The SSA consisted of a variety of land uses including, but not limited to built-up/disturbed areas, common field crops, forage/pasture lands, scrubland, small grains, water (waterbodies, waterways), and woodlot areas.

The SSA comprised land use of approximately 16.4 percent as built up/disturbed areas, 27.2 percent as common field crop, 5.0 as cultivated, 28.7 percent as forage/pasture lands, 0.1 percent as market garden, 3.8 percent as scrublands, 0.8 percent as water, and 18.0 percent as woodlot areas.

On review of the existing land use data, it was observed that the predominant land uses in the SSA include common field crops, forage/pasture lands, woodlot, and built up/disturbed areas.

Table 2 illustrates the percentage occurrence of the land uses for both the PSA and SSA.

Table 2 Land Use – PSA and SSA

Land Use Designation	PSA Percent Occurrence	SSA Percent Occurrence
Built Up/Disturbed Areas	6.4	16.4
Common Field Crop	70.2	27.2
Cultivated	-	5.0
Forage/Pasture	-	28.7
Market Garden	-	0.1
Scrubland	1.4	3.8
Small Grains	11.8	0.0
Water	0.8	0.8
Woodlot	9.4	18.0
Totals	100.0	100.0

The relatively high amount of land in non-agricultural land use in the SSA is typical of areas in close proximity to urban spaces (settlement areas of Salem/Elora and Fergus).

The proposed future development of the PSA will result in the loss of the use of the lands within the PSA for agricultural production.

There will be no loss of agricultural lands in the SSA as a result of the proposed development of the PSA.

4.3 AGRICULTURAL INVESTMENT

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

As a result, the lands and facilities that have increased capital investment are often considered as having greater affinity for preservation than similar capability lands and facilities that are undergoing degradation and decline. Investment in agriculture is often readily identifiable

through observations of the condition and type of the facilities, field observations and a review of OMAFRA artificial tile drainage mapping.

This AIA assessed the OMAFRA artificial tile drainage data and completed a review of the Ontario Ministry of the Environment, Conservation and Parks (OMECP) water well records database.

A number of water wells were noted in the PSA. The proposed development of the PSA will need to take those water wells into account. The proposed development of the PSA may impact adjacent waters in the SSA. It is recommended that an appropriate expert review the water well data and provide comment as necessary.

4.3.1 AGRICULTURAL BUILDINGS

Agricultural buildings (including buildings that may be capable of housing livestock), barns, storage and processing facilities were identified through a combination of aerial photographic interpretation, a review of online digital imagery (Google Earth Pro, Bing Mapping, Provincial and municipal online imagery, and Birds Eye Imagery), a review of Ontario Base Mapping and a roadside reconnaissance survey. The agricultural facilities or potential livestock facilities that were identified on mapping and imagery prior to conducting the roadside reconnaissance survey included buildings used for the active housing of livestock, barns that were empty and not used to house livestock, barns in poor structural condition, barns used for storage and any other large building that had the potential to house livestock.

Field investigations revealed the extent of the capability of the existing agricultural buildings and assisted in the determination of the use of buildings for livestock, cash crops, commercial or other activities. The roadside reconnaissance survey also revealed that some of the buildings identified from the preliminary mapping and imagery no longer existed (torn down), or were not agricultural, and used for other purposes (commercial/industrial) operations or activities.

Farms were identified as livestock or cash crop. Livestock operations were further differentiated to the type of livestock based on the livestock seen at the time of the roadside reconnaissance survey, through a review of on farm infrastructure (type of buildings, manure system, feed (bins, bales), and types of equipment) or through any signage associated with the respective agricultural operation.

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

Agricultural activities such as livestock rearing usually involve an investment in agricultural facilities. Dairy operations require extensive facilities for the production of milk. Poultry and

hog operations require facilities specific for those operations. Beef production, hobby horse and sheep operations usually require less investment capital (when compared to dairy operations or other high valve operations).

Some cash crop operations are considered as having a large investment in agriculture if they have facilities that include grain handling equipment such as storage, grain driers and mixing equipment that is used to support ongoing agricultural activities.

For the purposes of this AIA, all agricultural buildings that were identified in the PSA and the SSA were illustrated in Figure 11.

A total of 85 agricultural buildings were identified within the PSA and SSA. There were 14 agricultural buildings within the PSA with the remaining 71 agricultural buildings observed in the SSA. The agricultural buildings located within the PSA will be removed as part of the proposed development of the PSA.

A listing of the agricultural buildings is provided in Appendix A.

Photographs and/or aerial photography/satellite imagery of the respective agricultural buildings is provided in Appendix B.

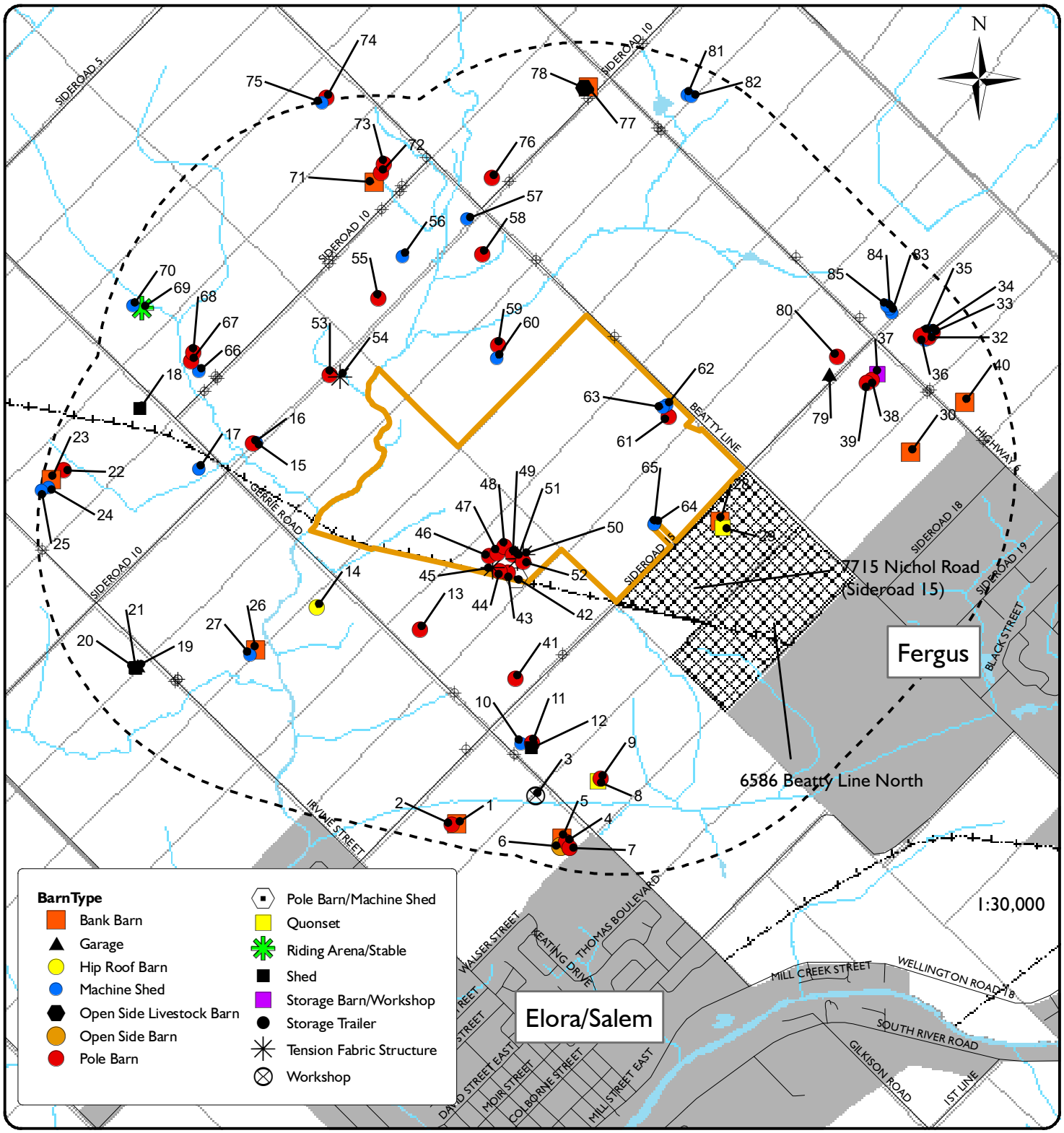
4.3.1 ARTIFICIAL DRAINAGE

An evaluation of artificial drainage in the PSA and within the SSA was completed through a review of online aerial photographic/aerial imagery interpretation and a review of the Ontario Ministry of Agriculture and Food (OMAF) Artificial Drainage System Mapping.

Visual evidence supporting the use of subsurface tile drains included observations of drain outlets to roadside ditches or surface waterways, and surface inlet structures (hickenbottom or French drain inlets).

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

OMAFRA Artificial Drainage System Maps were downloaded from the Geohub website in September 2024 and were reviewed to determine if an agricultural tile drainage system had been registered anywhere in the PSA, or in the SSA. The OMAFRA Artificial Drainage System data illustrates the location and type of tile drainage systems. The type of tile drainage system is defined as either 'random' or 'systematic'. A random tile drainage system is installed to drain only the low areas or areas of poor drainage within a field. A systematic tile drainage system



Legend

- Field Access Points
- Abandoned Railway (MNR)
- Roads (MNR)
- Watercourses (WC)
- Lot Lines (MNR)
- Lower Tier Boundary (MNR)
- Other Lands
- Primary Study Area (PSA)
- Secondary Study Area (SSA)
- Settlements (WC)
- Waterbodies (WC)

MNR - Ministry of Natural Resources, WC - Wellington County

Figure 11

Agricultural Buildings

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refers to a method of installing drain tile at specific intervals across a field, in an effort to drain the entire field area. From a cost perspective, a systematic tile drainage system would be a greater cost, or investment in agriculture when compared to a random tile drainage system.

Figure 12 illustrates the OMAFRA Artificial Drainage Systems Mapping for the PSA, SSA, and the adjacent surrounding areas.

The assessment of the OMAFRA Artificial Tile Drainage revealed that approximate 28.4 ha of systematic tile drainage is located in the PSA. Approximately 108.9 ha of random tile drainage and approximately 260.0 ha of systematic tile drainage were located in the SSA.

The proposed development of the PSA will result in the loss of the 28.4 ha of systematic tile drainage in the PSA. There will be no impact to tile drainage systems in the SSA as a result of the proposed development of the PSA.

4.3.1 WATER WELLS

A review was completed of the MECP Water Well records to determine the extent of water wells in the PSA and the SSA. The review of water well records involved a download of the latest version of the Water Well Records Ontario.ca. The Water Well locations are identified in Figure 12. As illustrated in Figure 12, numerous water wells are located within both the PSA and the SSA.

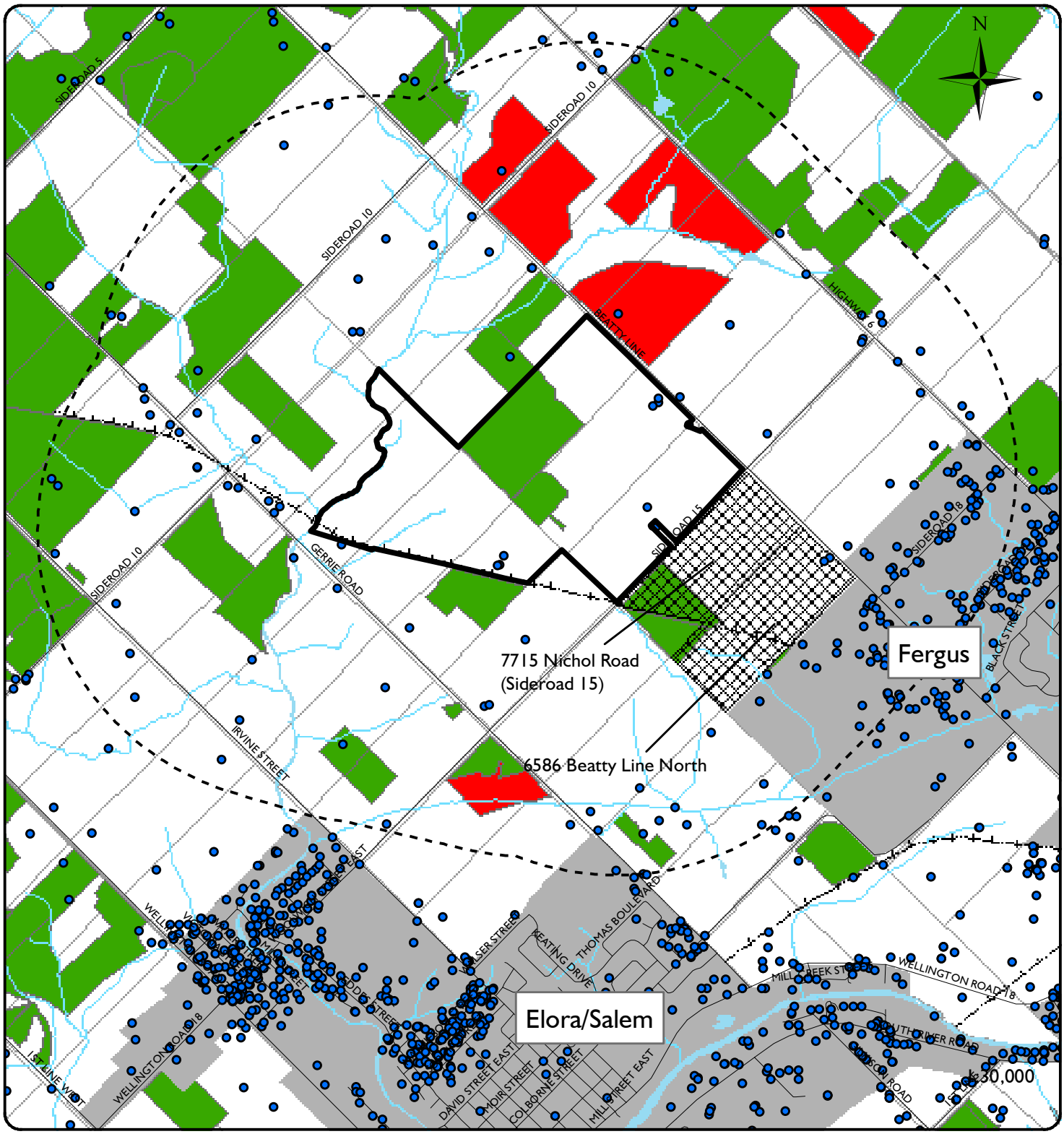
The review of water well records was completed to determine the location and extent of water wells in the area, and to identify any potential concerns or impacts that may occur as a result of the proposed future development of the PSA. Generally, many livestock operations and some crop farms (nursery stock farms) use ground water for their livestock or crops, and any disruption to the water in terms of quality and/or quantity could have a significant impact to the operation.

There appears to be capital investment in water wells in the PSA and the SSA, as based on the review of the online water well record data. It is unknown if these wells are used in livestock production, or possibly irrigation purposes.

4.3.2 IRRIGATION

A review of online data and roadside reconnaissance survey did not identify any irrigation systems within the PSA or the SSA.

Visual evidence supporting the use of irrigation equipment would include the presence of the irrigation equipment (piping, water guns, sprayers, tubing/piping, etc), the presence of a body of water (pond, lake, water course) capable of sustaining the irrigation operation and lands that are appropriate for the use of such equipment (large open and level fields).



Legend

- Water Wells (MECP)
- Abandoned Railway (MNR)
- Roads (MNR)
- Watercourses (WC)
- Lot Lines (MNR)
- Lower Tier Boundary (MNR)
- Other Lands
- Primary Study Area (PSA)
- Secondary Study Area (SSA)
- Settlements (WC)
- Waterbodies (WC)

OMAFRA Tile Drainage

- Random
- Systematic

MNR - Ministry of Natural Resources, WC - Wellington County

Figure 12

Investment

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4.3.3 LANDFORMING

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

No landforming for the purposes of enhancing an agricultural operation was noted in the review of online imagery or during the roadside reconnaissance survey for the PSA or the SSA.

4.4 MINIMUM DISTANCE SEPARATION (MDS 1)

The Minimum Distance Separation formulae and implementation guidelines are a planning tool developed by OMAFRA to prevent land use conflicts and minimize nuisance complaints related to odour and to reduce land use incompatibility. MDS1 setbacks are calculated to separate uses so as to reduce incompatibility concerns about odour from livestock facilities. The OMAFRA document titled *The Minimum Distance Separation (MDS) Document: Formulae and Guidelines for Livestock Facility and Anaerobic Digester Odour Setbacks* (Publication 853, Ontario Ministry of Agriculture, Food and Rural Affairs. 2016) was utilized for this MDS1 assessment.

Typically, the need for an MDS1 assessment is triggered by the *Provincial Planning Statement (PPS, 2024)* whereby new land uses in prime agricultural areas and on rural areas shall comply with the Minimum Distance Separation formulae. There is a requirement that the MDS1 guidelines shall be referenced in municipal official plans and zoning by-laws such that MDS1 setbacks are required in all designations and zones where livestock facilities and anaerobic digesters are permitted.

In order to confirm/establish the need for an MDS1 assessment, a review was completed of various Provincial and Municipal policies and documents. For this assessment the review included the *Provincial Planning Statement (PPS 2024),* and the *County of Wellington Official Plan (Office Consolidation June 2024)*.

A review of the OMAFRA document titled *The Minimum Distance Separation (MDS) Document: Formulae and Guidelines for Livestock Facility and Anaerobic Digester Odour Setbacks* (Publication 853, Ontario Ministry of Agriculture, Food and Rural Affairs. 2016) was completed.

It is stated under guideline #1:

> *In accordance with the Provincial Policy Statement, 2014, this MDS Document shall apply in prime agricultural areas and on rural lands.*

It is stated under guideline #2:

> *The MDS I setback distances shall be met prior to the approval of: proposed lot creation in accordance with Implementation Guidelines #8 and #9; rezonings or re-designations in accordance with Implementation Guideline#10; building permits on a lot which exists prior to March 1, 2017 in accordance with Implementation Guideline #7; and as directed by*

municipalities for local approvals for agriculture related uses or on-farm diversified uses in accordance with Implementation Guideline #35.

It is stated under guideline #34:

For the purposes of MDS I, proposed Type B land uses are characterized by a higher density of human occupancy, habitation or activity including, but not limited to:
• new or expanded settlement area boundaries;
• an official plan amendment to permit development, excluding industrial uses, on land outside a settlement area;
• a zoning by-law amendment to permit development, excluding industrial uses or dwellings, on land outside a settlement area; and
• the creation of one or more lots for development on land outside a settlement area, that results in four or more lots for development, which are in immediate proximity to one another (e.g., sharing a common contiguous boundary, across the road from one another, etc.), regardless of whether any of the lots are vacant.

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

The proposed future development of the PSA would be characterized as a higher density of human occupancy, habitation or activity and would be considered as Type B land use.

It is stated under guideline #6:

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

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

This AIA is based on the proposed future development of the PSA for a settlement area boundary expansion (higher density of human occupation); therefore, it is a Type B land use and requires an assessment of barns out to a distance of 1500 m from the PSA.

As required in the MDS1 Guidelines (MDS Guideline # 16 – Obtaining Required Information to Calculate the MDS Setbacks) every effort is to be made to contact landowners in an attempt to collect accurate and site-specific data for each of the agricultural buildings that have the potential to house livestock within the 1500 m buffer. In the instances where the landowner was not available or unwilling to participate, data was collected through alternate means including the use of online imagery (Google Earth, Bing Imagery, Birdseye Imagery), the County of Wellington

online mapping, and internet searches (including Facebook, business data sources, real-estate listings).

In instances where landowners could not be contacted, the livestock potential was based on the most appropriate livestock for that particular livestock facility (ie: based on observed signage, manure piles, feed storage, building type/style, review of online data sources including historical imagery). The respective size of each farm property was determined from Municipal Assessment data (or the OMAFRA Agricultural Information Atlas website), further, the relative size of the potential livestock buildings (in sq m) was measured from online imagery sources. The use of these data sources will provide a potentially greater MDS1 calculated distance than if the data is collected from the landowner, due to the measurement of the entire building roof area (including eaves/overhang) and that the entire area measured is considered as potential livestock space (ie. assumes that the entire building area is only used for livestock and that there is no area for feed rooms, offices, tack rooms, etc).

MDS1 data was collected through observations made during a roadside reconnaissance survey completed on September 19, 2024. Data collected in this survey assisted with the visual assessment of any buildings capable of housing livestock, identification of animal types and number (if observed on the property or noted on signage on the property), and manure storage location. It should be noted that reconnaissance surveys are often limited by 'line of sight' restrictions. Topography and vegetation (density and/or height) may preclude an accurate assessment of individual agricultural buildings. With this in mind, recent aerial photography and online digital imagery were used to assist in the identification and assessment of any partially or totally concealed agricultural building.

It should be noted that MDS1 calculations are based on a cumulative design capacity of livestock buildings on a lot. MDS Guideline #19 states:

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

MDS Guideline #19 indicates that the calculated MDS1 arc should be based on a combined design capacity of all livestock barns, even if unoccupied, on a property. The combined MDS1 calculation is then measured from the closest point of the PSA to the closest point of the livestock occupied portion of the agricultural building.

MDS1 calculations were completed for the agricultural buildings individually, or as a cumulative calculation of livestock for farms with more than one building capable of housing livestock. MDS1 calculations were completed based on the information provided by the landowner, or

through the assessment of collected data. MDS1 calculations were completed using the OMAFRA online AgriSuite software.

The AgriSuite software calculates MDS1 based on the inputs for each agricultural building. Data input includes the respective farm location information, size of farm parcel, type of manure storage, type of livestock, numbers of livestock or barn area. The AgriSuite software completes an MDS1 calculation for an agricultural operation (single agricultural building (barn), or cumulative (agricultural buildings). The Agrisuite calculation defines a distance which is to be measured from the closest point of the agricultural building (and the manure storage) toward the closest point of the PSA. Each AgriSuite software agricultural building data sheet and calculated MDS1 value are presented in Appendix C.

Table 3 provides an overview of the agricultural building number, type of building, building use, potential livestock, and the calculated MDS1 value from barn and from manure storage.

Figure 13 illustrates the location of all agricultural buildings, the calculated MDS1 arcs for individual agricultural buildings, or the calculated cumulative design capacity MDS1 arc for lots with more than one the agricultural building capable of housing livestock.

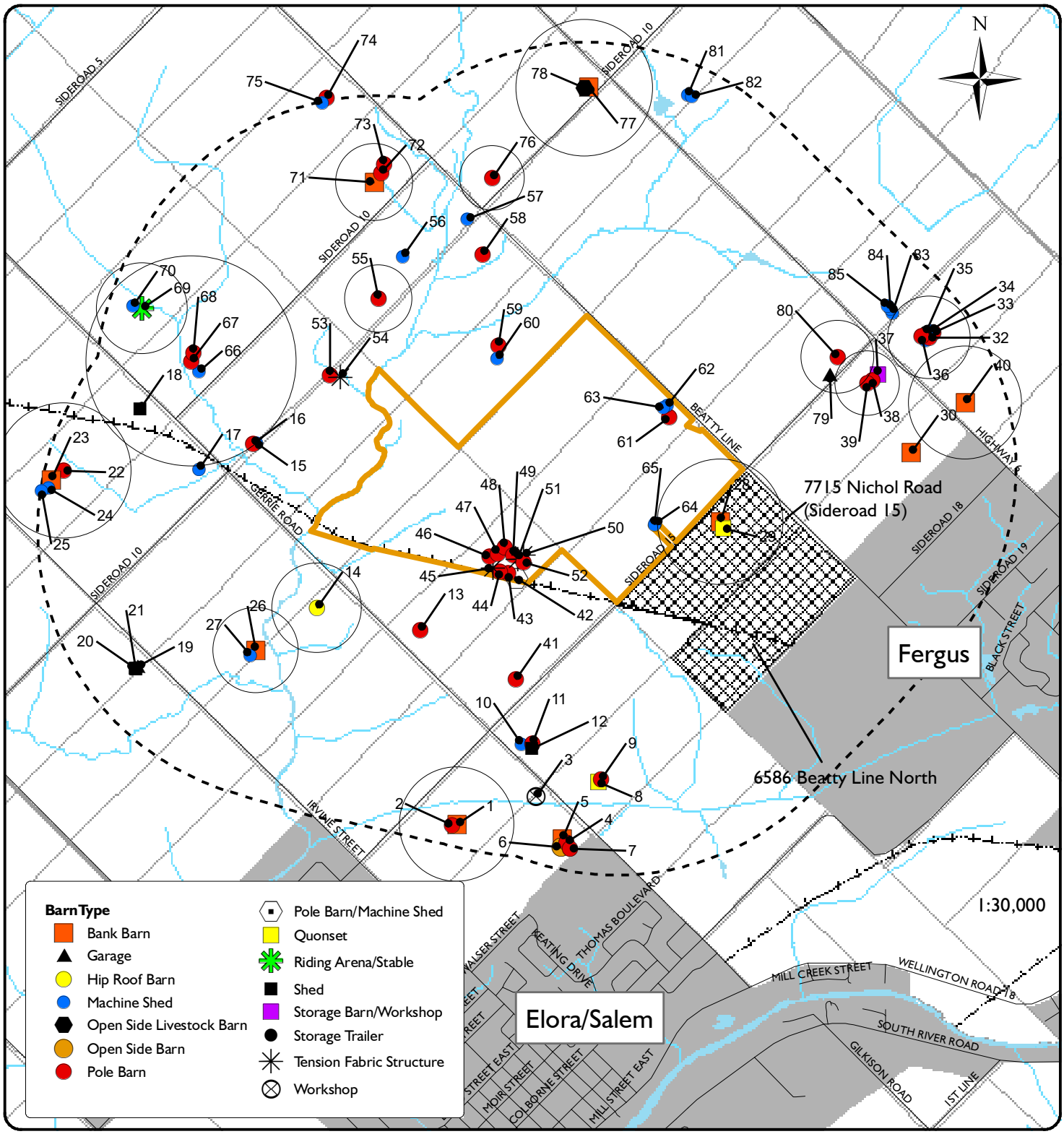
MDS1 distances from the manure storages were not illustrated on Figure 13 to avoid confusion.

The proposed development of the PSA is based on a settlement area boundary expansion. All barns within the PSA will be removed as part of the proposed development. Therefore, MDS1 calculations were not completed for agricultural buildings within the PSA. MDS1 calculations were completed for agricultural buildings within the SSA as a best practice to protect lands for agricultural use as long as possible during the development phases. A total of 19 buildings were identified in the SSA that housed livestock or had the potential to house livestock.

MDS1 calculations were completed for agricultural buildings in the SSA which housed livestock or had the potential capability to house livestock.

Table 3 provides the calculated MDS1 values for the 19 agricultural buildings. It should be noted that Table 3 also provides the cumulative calculated MDS1 values were necessary.

As observed in Figure 13, there is one MDS1 arc that impacts the PSA. The MDS1 arc from barn 28 imposes on the southeastern corner of the PSA.



Legend

- Abandoned Railway (MNR)
- Roads (MNR)
- Watercourses (WC)
- Lot Lines (MNR)
- Lower Tier Boundary (MNR)
- Minimum Distance Separation (MDS1) Buffer
- Other Lands
- Primary Study Area (PSA)
- Secondary Study Area (SSA)
- Settlements (WC)
- Waterbodies (WC)

MNR - Ministry of Natural Resources, WC - Wellington County

Figure 13

Minimum Distance Separation (MDS1)

DBH Soil Services Inc.

November 2024

Table 3 Minimum Distance Separation (MDS 1)

Agricultural Building Number	Type of Building	Use	Type of Livestock	MDS 1 Barn (m)	MDS 1 Manure Storage (m)
1	Bank Barn	Livestock	Beef	316	316
14	Hip Roof Barn	Livestock	Beef	246	246
22	Pole Barn	Livestock	Dairy	371	371
23	Bank Barn	Livestock	Dairy		
26	Bank Barn	Livestock	Dairy	236	313
28	Bank Barn	Livestock	Beef	346	346
32	Pole Barn	Livestock	Horses	227	227
33	Pole Barn	Livestock	Horses		
39	Pole Barn	Livestock	Horses	180	180
40	Bank Barn	Livestock	Beef	311	311
55	Pole Barn	Livestock	Horses	187	187
67	Pole Barn	Livestock	Beef	578	578
68	Pole Barn	Livestock	Beef		
69	Stable	Livestock	Horses	251	251
71	Bank Barn	Livestock	Horses	212	212
76	Pole Barn	Livestock	Horses	180	180
77	Pole Barn	Livestock	Beef		
78	Pole Barn	Livestock	Beef	377	377
80	Pole Barn	Livestock	Sheep	202	202

The use of MDS1 in this instance is a best management practice for the purposes of identifying areas within the PSA where the use of phasing of development (develop the MDS1 arc impact areas last), or to identify areas where passive land uses could be considered (parks, infrastructure (storm water management ponds, roads, parking areas)).

It is also worth noting that barn 28 is located in one of the Other Lands that are subject to an OPA. As those lands are developed, barn 28 will most likely be removed resulting in the MDS1 arc from that barn being removed as well.

4.5 FRAGMENTATION

Assessment data was evaluated to determine the characteristics and the degree of land fragmentation in the PSA and the SSA.

In order to evaluate land fragmentation, the most recent Assessment Roll mapping and Assessment Roll information from the County of Wellington was referenced on a property-by-

property basis (for the PSA and the SSA) to determine the approximate location, shape and size of each parcel. The assessment of fragmentation looked at the numbers of and proximity of properties within the PSA and the SSA.

While a minimum size for an agricultural property is not specified in the *Provincial Planning Statement (PPS, 2024),* the PPS does state in Section 4.3.2.2 that:

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

A review of the *County of Wellington Official Plan (Office Consolidation July 2024)* did not provide a specific minimum lot size for an agricultural property.

The review of the *Township of Centre Wellington Comprehensive Zoning By-law No. 2009-045 (Office Consolidation February 2024)* identified that the zoning for the PSA was provided on the Township of Centre Wellington Zoning By-law Schedule "A" and identified a minimum lot area of 10.0 ha (25.0 acres) for an Agricultural zoning.

Historically, Statistics Canada Census of Agriculture (2011) indicated that the average farm size in Ontario was 98.7 ha (244 acres). This average size is based on the number of Census farms divided by the acreage of those Census farms (Total Farm Area). The Total Farm Area is land owned or operated by an agricultural operation and includes cropland, summer fallow, improved and unimproved pasture, woodlands and wetlands, and all other lands (including idle land, and land on which farm buildings are located) (Statistics Canada, 2017). It should be noted that the average farm size is based on farmland holdings, which may include more than one parcel (property). Further, the Census of Agriculture (2011) information indicated that the average farm size in Wellington County is 80.5 ha (198.8 acres).

Further, the historical Census of Agriculture (2016) data indicated that the average farm size in Ontario (for Census farms) was 100.8 ha (249) acres. Again, the Census of Agriculture (2016) average farm size is based on farmland holdings, which may include more than one parcel (property). The Census of Agriculture (2016) information indicated that the average farm size in Wellington County is 80.4 ha (198.6 acres).

The more recent Census of Agriculture (2021) data indicated that the average farm size in Ontario (for Census farms) was 98.3 ha (243 acres). Again, the Census of Agriculture (2021) average farm size is based on farmland holdings, which may include more than one parcel (property). Further, the Census of Agriculture (2021) information indicates that the average farm size in Wellington County is 81.0 ha (200.2 acres).

Figure 14 illustrates the complexity of the land fragmentation within the PSA and SSA.

The Census data provides detailed information on Census farms (farms which provided census

data). Census data is provided in the unit format of acres, with the splits in the data at 0.0 – 9.9, 10.0 – 69.9, 70.0 – 129.9, 130.0 – 179.9 and greater than 180.0 acres. For the purposes of this AIA, similar splits in acre data were used for the comparison.

Statistics Canada defines a Census Farm as:

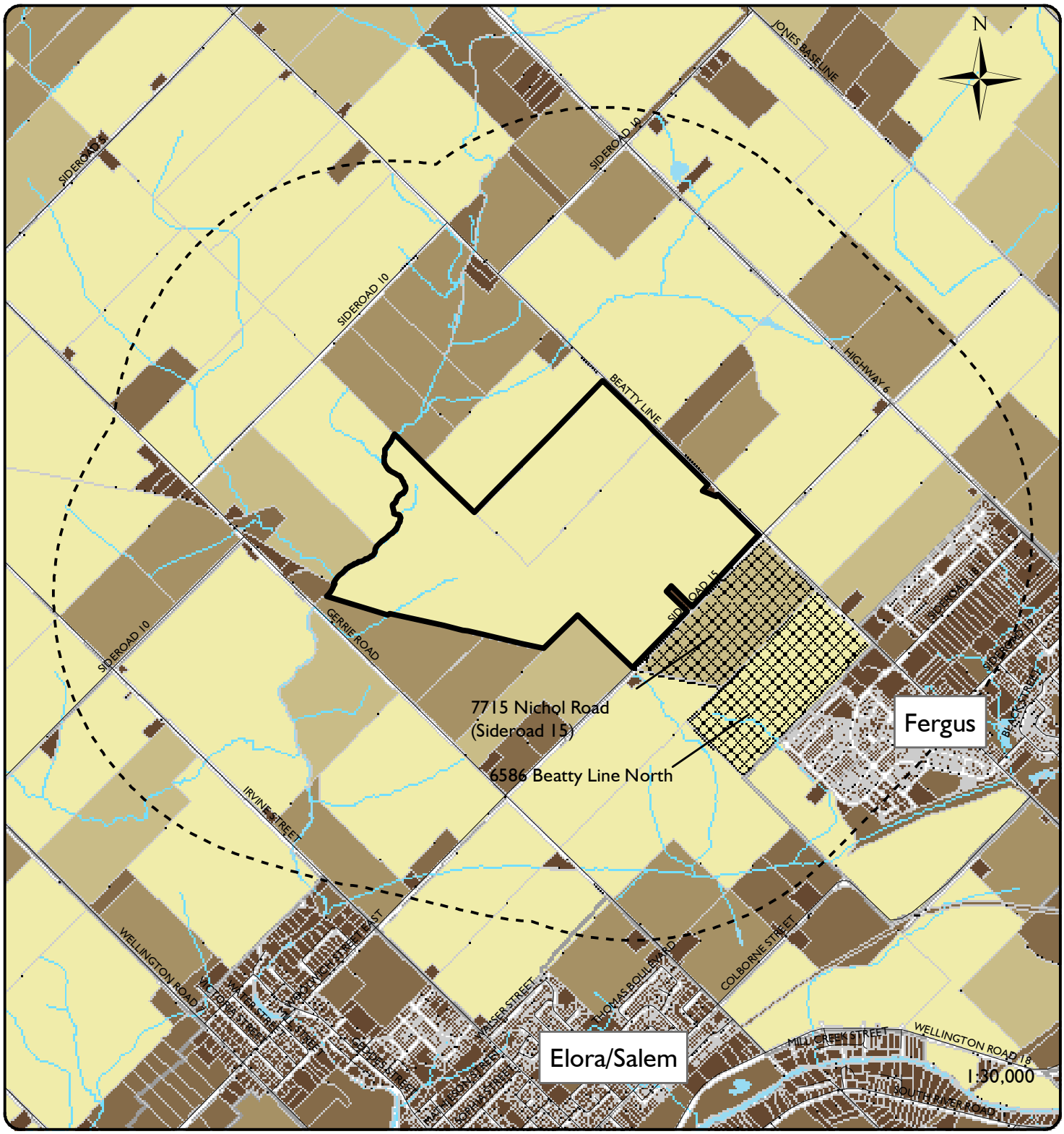
> *a unit that produces agricultural products and reports revenues or expenses for tax purposes to the Canada Revenue Agency.*
> - *Agricultural products include the following:*
>   - *crops: grains, oilseeds, leguminous crops, potatoes, vegetables, fruits, berries, greenhouse products, mushrooms, sod, nursery products, Christmas trees, maple tree taps, hay and fodder crops, hemp, and other crops*
>   - *livestock: dairy and beef cattle (including feedlots), pigs, poultry and eggs (including hatcheries), turkeys, ducks, geese, sheep, goats, horses and other equines, bison (buffalo), elk (wapiti), deer, llamas and alpacas, rabbits, mink, bees, and other animals.*
> - *Not included are forestry and logging, hunting and trapping, fishing and aquaculture, support activities for agriculture and post-harvest activities, horse boarding and riding lessons, and operations making products that are not for human consumption (e.g., genetic operations, insect farms for pet food).*

As illustrated in Figure 14, the PSA comprised two parcels both of which were identified in the County of Wellington parcel data as having areas greater than 180 acres.

The SSA comprised numerous small parcels (Salem/Elora and Fergus) and areas of fragmentation associated with the lands along the abandoned rail corridor, particularly to the west of the PSA. Smaller parcels were noted north of the PSA.

The review of parcel data as a means of determining the existing fragmentation of the PSA and the SSA revealed that the SSA comprised numerous parcels of varying sizes. Table 4 provides a comparison between the parcel count of the PSA, the SSA and the Census farm data. The parcel count for the County of Wellington reflects the Census Farms from the 2021, 2016, and 2011 census.

As illustrated in Table 4, the parcel count for the SSA indicates the presence of numerous small parcels, and fewer larger parcels. This type of fragmentation pattern is common in areas near urban boundaries. It is noted that there are large clusters of smaller parcels associated with the urban areas of the settlements of Salem/Elora and Fergus.



Legend

- Abandoned Railway (MNR)
- Roads (MNR)
- Watercourses (WC)
- Lot Lines (MNR)
- Lower Tier Boundary (MNR)
- Other Lands
- Primary Study Area (PSA)
- Secondary Study Area (SSA)
- Settlements (WC)
- Waterbodies (WC)

Area Range in Acres

- 0.0001 - 9.9
- 10.0 - 69.9
- 70.0 - 129.9
- 130.0 - 179.9
- >180.0

MNR - Ministry of Natural Resources, WC - Wellington County

Figure 14

Fragmentation

DBH Soil Services Inc.

November 2024

Table 4 Parcel Size and Parcel Count

Parcel Size Range (Acre)	PSA	SSA	County of Wellington (2021 Census)	County of Wellington (2016 Census)	County of Wellington (2011 Census)
0.0 – 9.9	0	1008	204	140	133
10.0 – 69.9	0	18	604	582	603
70.0 – 129.9	0	20	742	625	701
130.0 – 179.9	0	6	300	259	272
>180	2	34	767	742	802

The proposed development of the PSA will result in an increase in fragmentation in the PSA and will not result in the increase in fragmentation in the SSA.

4.6 SOILS AND CANADA LAND INVENTORY (CLI)

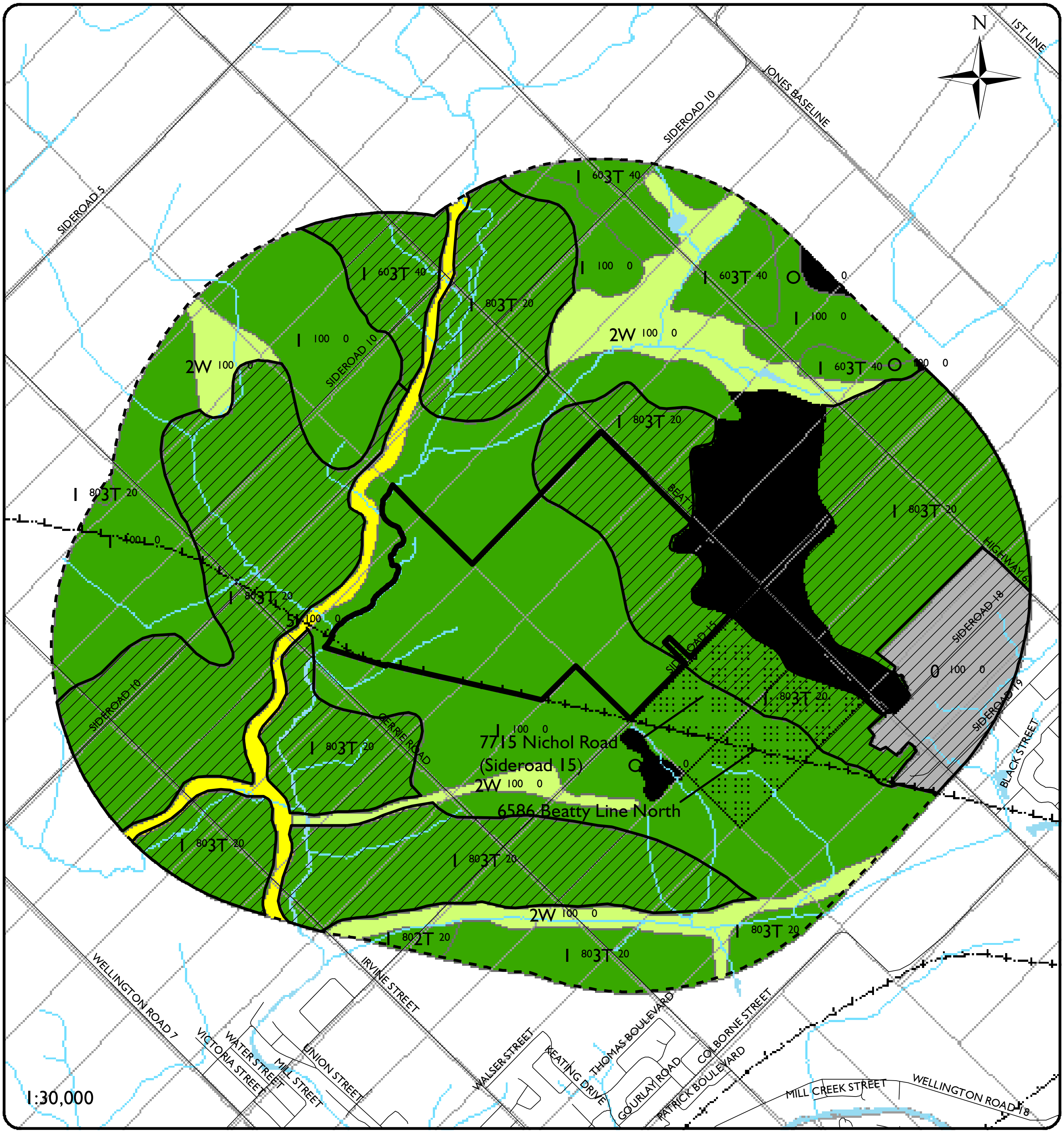
A review was completed of the soils and Canada Land Inventory (CLI) data base for the PSA and the SSA. The review was completed to determine the extent and location of the high capability soils. Digital soils data was retrieved from Ontario Geohub in September 2024.

The review included a download of the latest version of the soils data from the Ontario Geohub website and discussions with OMAFRA staff to determine if the downloaded data set is the latest iteration of the soils data.

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

The County of Wellington soil data was used to create a unique symbols list (based on the SYMBOL1, SLOPE1, CLASS1, RANGE1, CLI1, CLI_1 and CLI_2 columns). The unique symbols list is provided in Appendix D. It was noted in the unique symbols list that there were many soil polygons with incorrectly classified Canada Land Inventory (CLI) classifications.

For the purposes of this AIA, the soil and CLI data presented on Figure 15 are based on the County of Wellington soils data. OMAFRA is aware of the limitations of the soil data. Figure 15 also illustrates the soil polygons with incorrectly classified CLI as a crosshatch overlay. The incorrectly classified soil polygons are rated as a CLI class 1 but are identified as being on slopes of 9-15 percent. A review of the OMAFRA document *Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for the Application of the Canada Land Inventory in Ontario* identified that loamy soils on 9-15 percent slopes should be classified as CLI class 4T. Image 1



Legend

Abandoned Railway (MNR)	Primary Study Area (PSA)
Roads (MNR)	Secondary Study Area (SSA)
Watercourses (WC)	Waterbodies (WC)
Incorrectly classified OMAFRA soils data	**Canada Land Inventory (CLI)**
Lot Lines (MNR)	Not Mapped
Lower Tier Boundary (MNR)	Class 1
Other Lands	Class 2
	Class 5
	Organic Soil

MNR - Ministry of Natural Resources, WC - Wellington County

Figure 15

Canada Land Inventory (CLI)

DBH Soil Services Inc.

November 2024

(below) illustrates a table from the OMAFRA document that documents the percent slope and CLI classifications.

Image 1

Table 9. Determination of Subclass T for Very Gravelly and Sandy Soils

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

Table 10. Determination of Subclass T for Loamy, Clayey and Very Fine Clayey Soils

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

S = Simple Slopes >50 m in length
C =Complex Slopes <50 m in length

Source OMAFRA Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for Application of the Canada Land Inventory in Ontario

This review of the CLI for the PSA and SSA would suggest that based on the incorrectly classified soils data, the PSA and SSA lands should be classified as poorer quality soils than what the OMAFRA data is suggesting.

4.6.1 SOIL CAPABILITY FOR AGRICULTURE

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

Organic (O) or Muck (M) soils are not classified under this system. Disturbed Soil Areas are not rated under this system.

4.6.1.1 Canada Land Inventory (CLI) Class

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

> *"Class 1 - Soils in this class have no significant limitations in use for crops. Soils in Class 1 are level to nearly level, deep, well to imperfectly drained and have good nutrient and*

water holding capacity. They can be managed and cropped without difficulty. Under good management they are moderately high to high in productivity for the full range of common field crops

Class 2 - Soils in this class have moderate limitations that reduce the choice of crops, or require moderate conservation practices. These soils are deep and may not hold moisture and nutrients as well as Class 1 soils. The limitations are moderate and the soils can be managed and cropped with little difficulty. Under good management they are moderately high to high in productivity for a wide range of common field crops.

Class 3 - Soils in this class have moderately severe limitations that reduce the choice of crops or require special conservation practices. The limitations are more severe than for Class 2 soils. They affect one or more of the following practices: timing and ease of tillage; planting and harvesting; choice of crops; and methods of conservation. Under good management these soils are fair to moderately high in productivity for a wide range of common field crops.

Class 4 - Soils in this class have severe limitations that restrict the choice of crops, or require special conservation practices and very careful management, or both. The severe limitations seriously affect one or more of the following practices: timing and ease of tillage; planting and harvesting; choice of crops; and methods of conservation. These soils are low to medium in productivity for a narrow to wide range of common field crops, but may have higher productivity for a specially adapted crop.

Class 5 - Soils in this class have very severe limitations that restrict their capability to producing perennial forage crops, and improvement practices are feasible. The limitations are so severe that the soils are not capable of use for sustained production of annual field crops. The soils are capable of producing native or tame species of perennial forage plants and may be improved through the use of farm machinery. Feasible improvement practices may include clearing of bush, cultivation, seeding, fertilizing or water control.

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

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

4.6.1.2 Canada Land Inventory (CLI) Subclass

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

Subclass T - Topography

The steepness of the surface slope and the pattern or frequency of slopes in different directions are considered topographic limitations if they: 1) increase the cost of

farming the land over that of level or less sloping land; 2) decrease the uniformity of growth and maturity of crops; and 3) increase the potential of water and tillage erosion.

Subclass W – Excess Water

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

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

Figure 15 – Canada Land Inventory (CLI) illustrated the OMAFRA digital soils data for the PSA and the SSA. The OMAFRA soils data base has not removed or discounted soils from roads, railways, urban or developed areas.

Table 5 illustrates the soils data as derived by percent occurrence within the respective polygons and summarizes the relative percent area occupied by each capability class for the PSA and SSA.

Table 5 Canada Land Inventory – Percent Occurrence

Canada Land Inventory Class (CLI)	PSA Percent Occurrence	SSA Percent Occurrence
Class 1	89.3	69.2
Class 2	-	7.6
Class 3	5.4	11.0
Class 4	-	-
Class 5	-	2.3
Class 6	-	-
Class 7	-	-
Not Rated	-	4.1
Organic Soil	5.3	5.8
Totals	100.0	100.0

Based on the OMAFRA soils data the PSA comprised approximately 89.3 percent Canada Land Inventory (CLI) capability of Class 1 – 3, with approximately 89.3 percent as Class 1 and 5.4 percent as Class 3. Approximately 5.3 percent of the PSA was identified as Organic Soils.

Again, based on the OMAFRA soils data the SSA comprised approximately 87.8 percent Canada Land Inventory (CLI) capability of Class 1 – 3, with approximately 69.2 percent as Class 1, 7.6 percent as Class 2, 11.0 percent as Class 3, 2.3 percent as Class 5, 4.1 percent as Not Rated, and 5.8 percent as Organic Soils.

It is important to note that this assessment of soil capability and CLI is based on incorrect OMAFRA soils data. The actual soil capability may include poorer capability/quality soils.

The proposed development will result in the loss of the use of the PSA for agricultural production. The proposed development will not alter the soils or soil capability in the SSA.

4.7 AGRICULTURAL SYSTEMS PORTAL

A review of the OMAFRA Agricultural System Portal online resource for agricultural services/agricultural network (markets, abattoirs, renderers, livestock auctions, investment, warehousing and storage, wineries and breweries) noted that all of the PSA and much of the SSA were located in the Prime Agricultural Area of the provincial Agricultural Land Base Legacy Mapping as has been illustrated in Figure 4 of this AIA.

A review of the online Agricultural System Portal (OMAFRA) indicated that there were no registered farmers markets, pick your own operations, nurseries, frozen food manufacturing, refrigerated warehousing/storage, livestock assets, abattoirs, or other agricultural services in the PSA.

Figure 16 provides an illustration of the agricultural resources (OMAFRA Livestock, Fish and Poultry) for the PSA and the SSA. Figure 17 provides an illustration of the agricultural resources (OMAFRA Field Crop). Figure 18 provides an illustration of the Food and Beverage Manufacturing for the PSA and SSA.

The review of agricultural services and agricultural operations from the Agricultural Systems Portal for the PSA and the SSA revealed that the Bauman Agri Services was located north of the PSA in the SSA. The review of Food and Beverage Manufacturing identified that Highland Lassies Cookies was located in the SSA, in Fergus. No agricultural services were identified in the PSA.

The closest transportation network (major roadway) is Highway 6 which is located to the east of the PSA.

As noted in Figures 16, 17 and 18, there were no agricultural services or food manufactures identified in the PSA based on the OMAFRA Agricultural Systems Portal mapping and online data.

4.8 AGRICULTURAL SYSTEM AND AGRICULTURAL NETWORK

The PPS (2024) required the implementation of an agricultural system. The Agricultural System comprises two parts: Agricultural Land Base; and the Agri-Food Network. The Agricultural Land Base was evaluated through a review of Canada Land Inventory (CLI) in Section 4.7 of this AIA.

This AIA has determined that both the PSA and the SSA comprised portions of Prime Agricultural Area and were comprised of a portions of high capability soil resources as based on the OMAFRA digital soils data.

The Agricultural Network includes the services and infrastructure that are important components of the agricultural industry. Section 4.7 of this AIA provided comments on the agricultural services and infrastructure in the surrounding area. It was noted that there are no services or infrastructure in the PSA.

4.9 AGRICULTURAL CENSUS DATA

A review of the Census of Agriculture data (Census 2021 including 2016, 2011 and 2006 data) was completed to determine the agricultural characteristics of Centre Wellington and Wellington County, and to allow comparison to the agricultural characteristics in the PSA and SSA.

4.9.1 CENTRE WELLINGTON

Table 6 provided Census 2021 data for agricultural land use in Centre Wellington and provided a comparison from the Provincial Census 2021 agricultural data to the 2016, 2011 and 2006 agricultural data. As indicated in the Census data, Centre Wellington comprised approximately 0.55 percent of the total area of farms in Ontario (Census 2021).

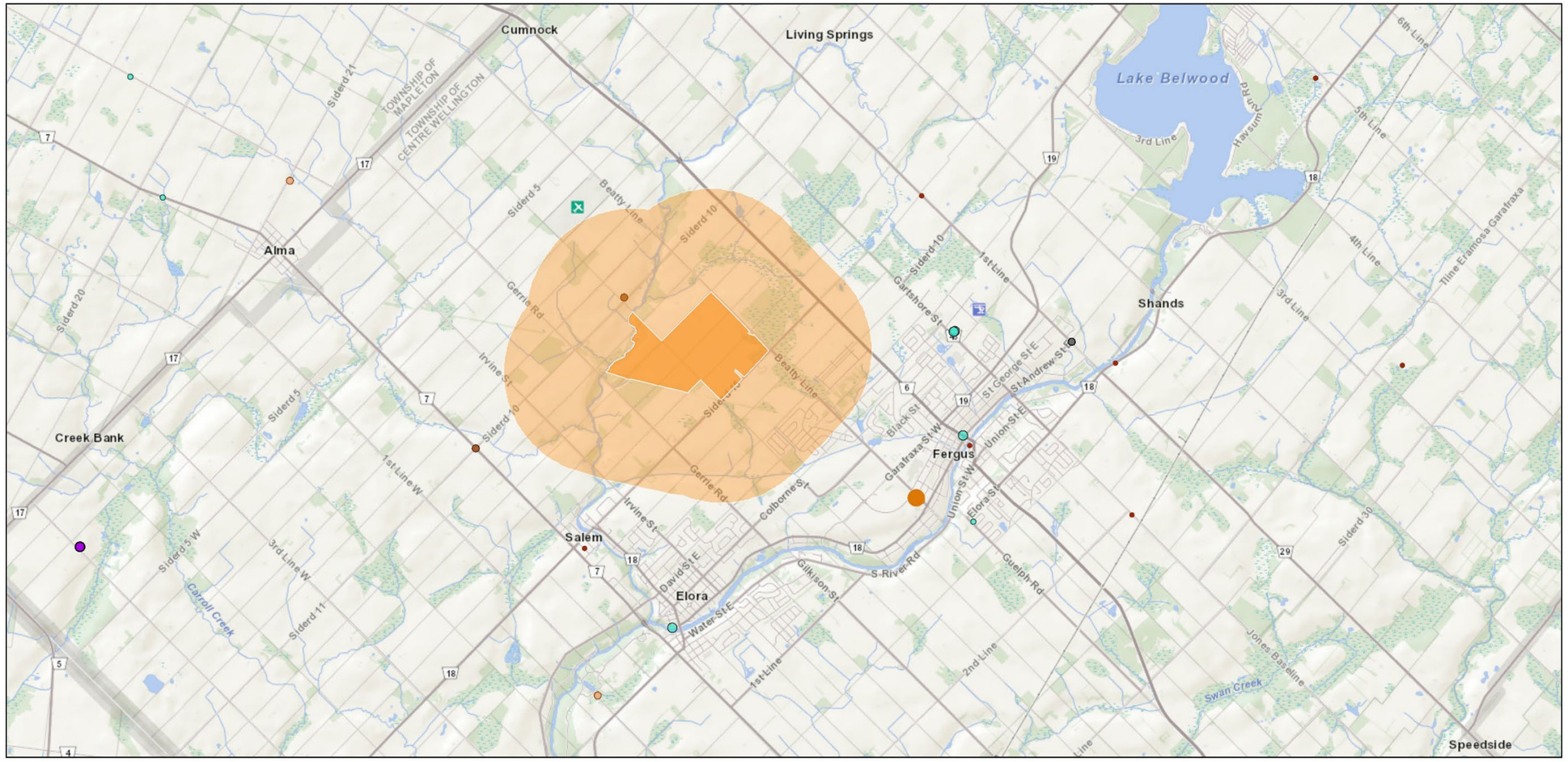
A review of Census 2021 data for Centre Wellington revealed that the total area in farms was 64,226 acres (Census Farms). Much of the farmed land was in crops with a total of 53,881 acres. The remaining lands were listed as summerfallow land, tame or seeded pasture, natural land for pasture, Christmas trees, woodland and wetland and all other land.

Table 6 Centre Wellington Census 2021 Data – Land Use

Item	Centre Wellington	Province	Percent of Province 2021	Percent of Province 2016	Percent of Province 2011	Percent of Province 2006
Land Use, 2021 Census (acres)						
Land in crops	53,881	9,051,011	0.60	0.61	0.71	0.65
Summerfallow land	24	13,964	0.17	0.19	0.44	0.27
Tame or seeded pasture	2,002	400,480	0.50	0.32	0.33	0.48
Natural land for pasture	1,006	626,366	0.16	0.13	0.22	0.18
Christmas trees, woodland & wetland	4,577	1,269,535	0.36	0.36	0.37	0.34
All other land	2,736	404,714	0.68	0.57	0.78	0.50
Total area of farms	64,226	11,766,071	0.55	0.53	0.61	0.55

Table 6 illustrated that fluctuations in acreage were noted in all land uses in Centre Wellington over the last 15 years with the general trend being an increase in acreage over the last 5 years (based on Census 2021 farm data).

Figure 16 OMAFRA Agricultural Systems Mapping Livestock, Fish and Poultry



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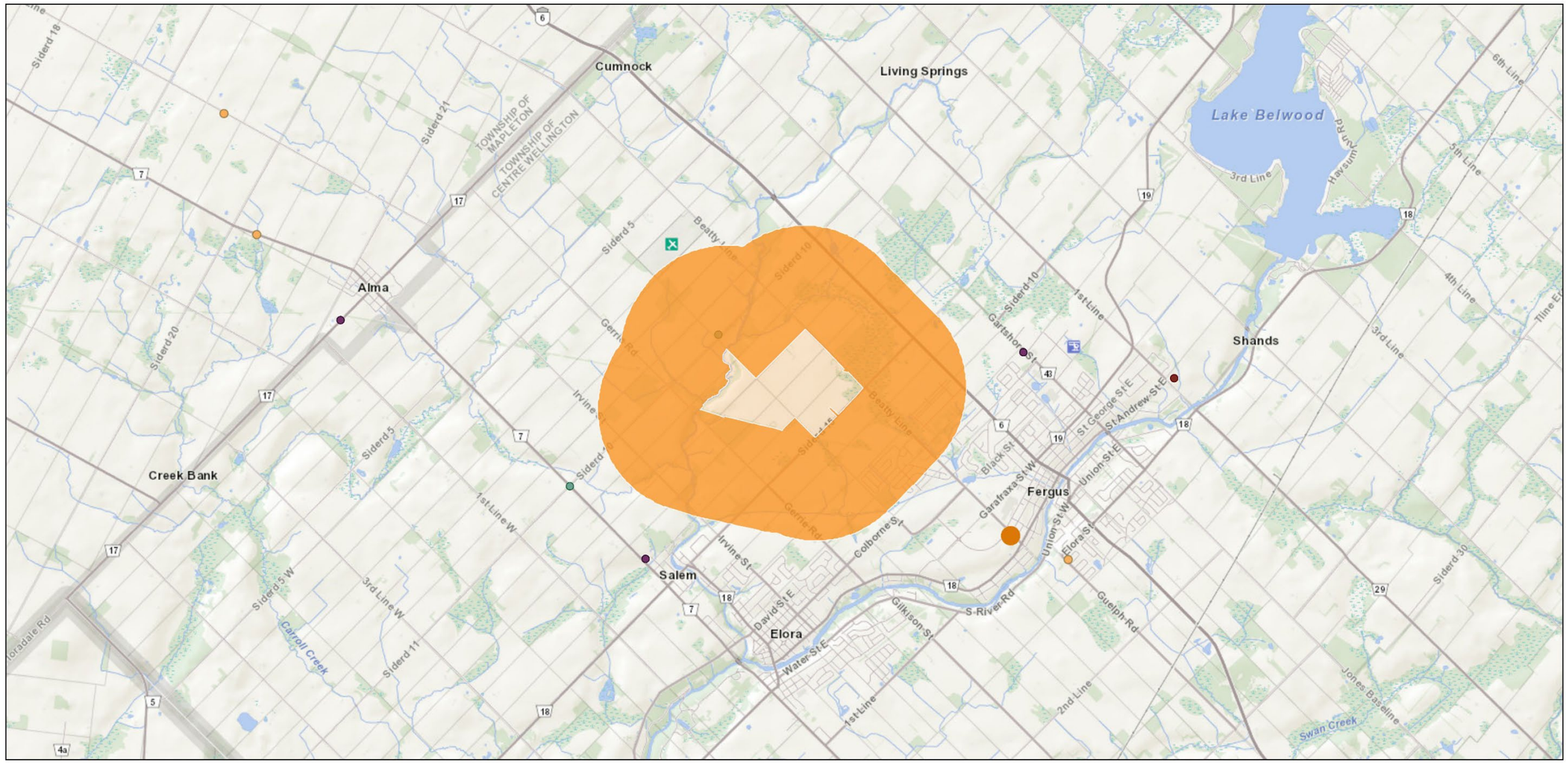
0 0.5 1 2 mi

0 1 2 4 km

- Secondary Study Area (SSA)
- Primary Study Area (PSA)
- Aquaculture Operations 2022 (OMAFRA)
- Farm Product Merchant Wholesalers NAICS 4111 (ConnectON)
- Feed Mills 2023
- Dairy Product Manufacturing NAICS 3115 (ConnectON)
- Support Activities for Agriculture and Forestry NAICS 115110 (ConnectON)
- Support Activities for Animal Production NAICS 115210 (ConnectON)
- Agricultural Feed Merchant Wholesalers NAICS 41831 (ConnectON)
- Farm Product Warehousing and Storage NAICS 493130 (ConnectON)

Figure 17 Agricultural Systems Field Crops



2024-10-17, 1:05:29 p.m.

- Secondary Study Area (SSA)
- Primary Study Area (PSA)
- Agricultural Implement Manufacturing NAICS 333110 (ConnectON)
- Oilseed and Grain Merchant Wholesalers NAICS 411120 (ConnectON)
- Seed Merchant Wholesalers NAICS 41832 (ConnectON)
- Support Activities for Crop Production NAICS 11511 (ConnectON)
- Feed Mills 2023 (OMAFRA)

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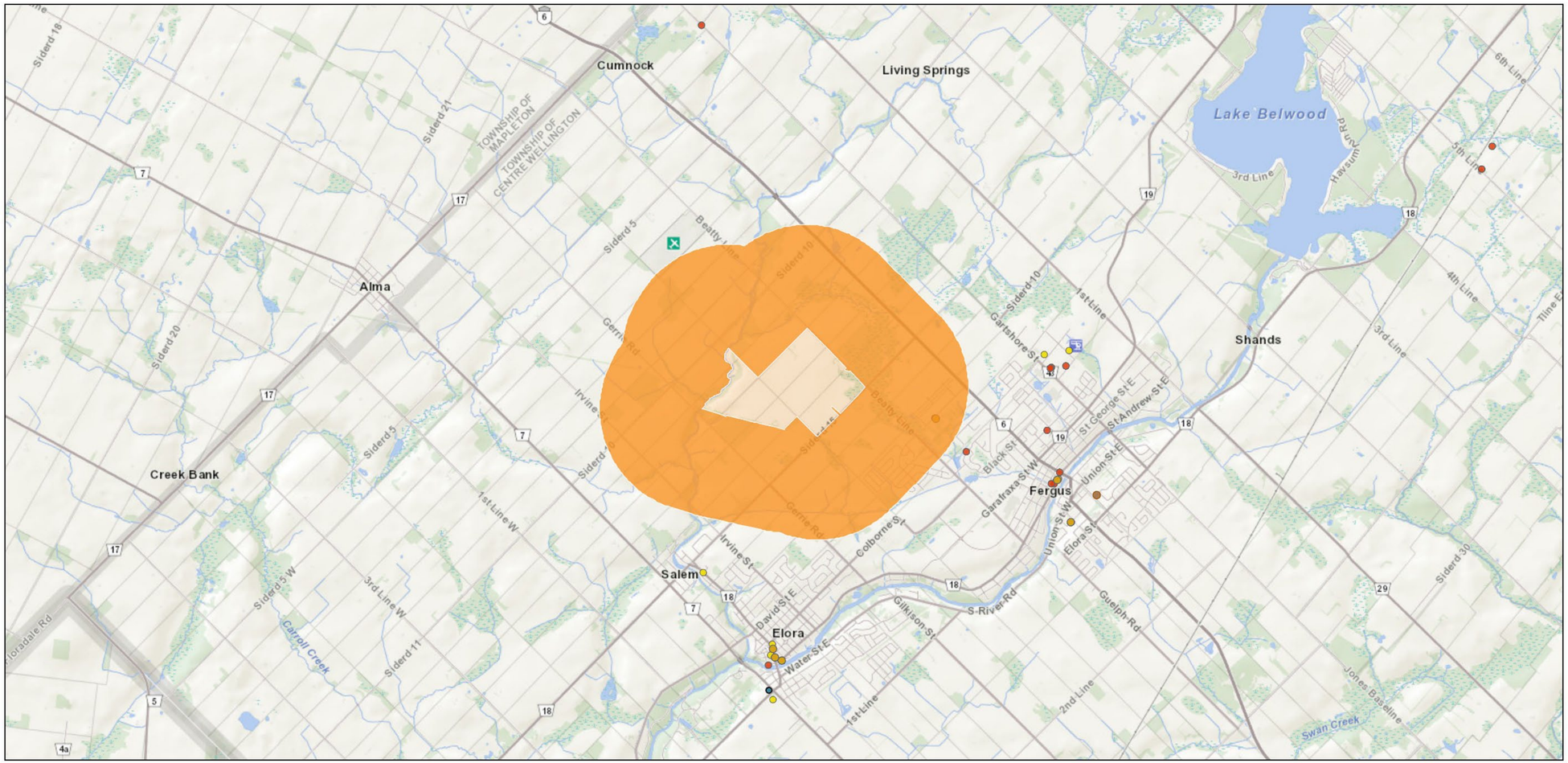
Figure 18 Agricultural Systems Food and Beverage Manufacturing



2024-10-17, 1:10:34 p.m.

1:77,201

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0 1 2 4 km

- Primary Study Area (PSA)
- Secondary Study Area (SSA)
- Animal Food Manufacturing NAICS 3111 (ConnectON)
- Bakeries and Tortilla Manufacturing NAICS 3118 (ConnectON)
- Beverage and Tobacco Manufacturing NAICS 312 (ConnectON)
- Food Manufacturing NAICS 311 (ConnectON)
- Frozen Food Manufacturing NAICS 3114 (ConnectON)
- Maple Syrup and Products Production NAICS 111994 (ConnectON)

Table 7 provided a more detailed inventory of agricultural lands, and it was evident from this data that Centre Wellington contributed a limited amount to the Provincial totals for production in major field crops (As based on Census farm data).

Table 7 Centre Wellington Census 2021 Data – Crops

Item	Centre Wellington	Province	Percent of Province 2021	Percent of Province 2016	Percent of Province 2011	Percent of Province 2006
Major Field Crops, 2021 Census (acres)						
Winter wheat	9,199	1,144,406	0.80	0.80	0.97	0.70
Oats for grain	697	84,320	0.83	0.32	0.66	0.27
Barley for grain	549	68,756	0.80	0.97	1.36	1.21
Mixed grains	343	59,961	0.57	0.82	1.00	0.87
Corn for grain	13,481	2,202,465	0.61	0.61	0.72	0.85
Corn for silage	3,320	289,678	1.15	1.39	1.44	1.29
Hay	10,434	1,704,017	0.61	0.62	0.63	0.57
Soybeans	14,569	2,806,255	0.52	0.53	0.60	0.58
Potatoes	76	39,193	0.19	0.13	0.13	0.07
Major Fruit Crops, 2021 Census (acres)						
Total fruit crops	25	48,661	0.05	0.07	0.07	0.08
Apples	12	16,008	0.07	0.10	0.06	0.05
Sour Cherries	0	1,383	0.00	-	0.00	-
Peaches	1	4,608	0.02	0.00	-	-
Strawberries	9	2,633	0.34	-	0.52	-
Raspberries	1	438	0.23	0.44	0.44	-
Major Vegetable Crops, 2021 Census (acres)						
Total vegetables	60	127,893	0.05	0.05	0.11	0.08
Sweet corn	27	20,518	0.13	0.10	0.19	0.11
Tomatoes	3	14,614	0.02	0.02	0.11	0.03
Green peas	1	14,044	0.01	-	0.01	0.00
Green or wax beans	2	8,709	0.02	0.01	0.01	0.01

Table 7 also illustrated a percent of Province in Centre Wellington and provided a comparison from Provincial Census 2021 to the Provincial Census 2016, 2011 and 2006.

Table 7 illustrated an increase in acreage for potatoes since 2006. Table B also illustrated a decrease in acreage for corn for grain since 2006. Fluctuations were noted (as a percent of the Provincial totals) in winter wheat, oats and barley for grain, mixed grains, corn for silage, hay, and soybeans contributions since 2006.

With respect to fruit crops, Centre Wellington was a limited contributor to the Provincial totals for major fruit crops. Decreases were noted in acreage (as a percent of the Provincial totals) for total fruit crops. Centre Wellington produced 12 acres of apples, 9 acres of strawberries, and 1 acre each of pears, plums, peaches and raspberries.

Centre Wellington was not a significant contributor to the Provincial totals for production of vegetables. The Census data indicated fluctuations in Centre Wellington's contribution (as a percent of the Provincial totals) in all major vegetable crop production since 2006. Centre Wellington contributed 60 acres of total vegetables to the provincial totals in 2021.

Table 8 illustrated the Census 2021 data for livestock. Centre Wellington was a small contributor to the Provincial totals for livestock. In 2021, Centre Wellington's contribution to the Provincial totals included 2.01 percent for steers, 1.11 percent for total sheep and lambs, 1.10 percent for total cattle and calves, 0.97 for dairy cows, 0.55 for beef cows and 0.36 percent for total pigs. When compared to the Census 2016, 2011 and 2006 data, fluctuations were noted in all livestock inventories, with the exception of total cattle and calves and steers where there has been a slight increase over the last 15 years.

Centre Wellington was a small contributor of total hens and chickens and total turkeys to the Province in 2021. Fluctuations have been noted in total hens and chickens' inventories and total turkeys over the last 15 years.

Table 8 Centre Wellington Census 2021 Data – Livestock

Item	Centre Wellington	Province	Percent of Province 2021	Percent of Province 2016	Percent of Province 2011	Percent of Province 2006
Livestock Inventories, 2021 Census (number)						
Total cattle and calves	17,691	1,604,810	1.10	1.07	1.04	0.95
Steers	6,022	299,540	2.01	1.86	1.71	1.68
Beef Cows	1,230	224,194	0.55	0.47	0.62	0.61
Dairy Cows	3,168	327,272	0.97	1.21	1.15	1.02
Total Pigs	14,771	4,071,902	0.36	0.79	0.63	1.33
Total sheep and lambs	3,572	322,508	1.11	0.80	1.03	0.83
Poultry Inventories, 2021 Census (number)						
Total hens and chickens	1,518,260	53,802,772	2.82	2.96	1.09	1.61
Total turkeys	24,056	2,453,126	0.98	1.08	1.31	1.01

4.9.2 WELLINGTON COUNTY

A review of Census 2021 data for Wellington County revealed that the total area in farms is 523,903 acres (Census Farms). Much of the farmed land was in crops with a total of 436,390 acres. The remaining lands were listed as summerfallow land, tame or seeded pasture, natural land for pasture, Christmas trees, woodland, and wetland and all other land.

Table 9 provided Census 2021 data for agricultural land use in Wellington County and provided a percent comparison from the Provincial Census 2021 agricultural data to Census 2016, 2011 and 2006 agricultural data. As indicated in the Census data, Wellington County comprises approximately 4.82 percent of the land in crops for Census farms in Ontario (Census 2021).

In comparison to the Census 2016, 2011 and 2006 data, there were fluctuations in acreage of land in crops, summerfallow land, tame or seeded pasture, natural land for

pasture and all other land since 2006. Increases in acreage were noted for Christmas trees, woodland and wetland acreage over the last 15 years.

Table 9 Wellington County Census 2021 Data – Land Use

Item	Wellington County	Province	Percent of Province 2021	Percent of Province 2016	Percent of Province 2011	Percent of Province 2006
Land Use, 2021 Census (acres)						
Land in crops	436,390	9,051,011	4.82	4.22	4.51	4.27
Summerfallow land	375	13,964	2.69	3.38	3.33	2.26
Tame or seeded pasture	14,319	400,480	3.58	2.68	2.67	2.77
Natural land for pasture	10,844	626,366	1.73	1.11	1.28	1.39
Christmas trees, woodland & wetland	44,694	1,269,535	3.52	2.94	2.99	2.50
All other land	17,281	404,714	4.27	3.68	3.71	3.13
Total area of farms	523,903	11,766,071	4.45	3.78	3.94	3.65

Table 10 provided a more detailed inventory of the major field crops in Wellington County and illustrated a percent of Province comparison from 2021 to 2016, 2011 and 2006. Wellington County contributed a significant amount to the Provincial totals for major field crops. Fluctuations were noted in all major field crops except for winter wheat, oats for grain and hay over the last 15 years. Overall, there has been a general increase in acreage of major field crops over the last 5 years.

Table 10 also provided Census data for major fruit crops and major vegetable crops. Wellington County contributed 62 acres of apples, 55 acres of strawberries and 5 acres of raspberries to the Provincial totals in 2021. (Census 2021).

Wellington County's contribution to the Provincial totals for major vegetable crops was limited. As illustrated in Table 10, Wellington County contributed 629 acres of total vegetables to the provincial totals 2021.

Table 10 Wellington County Census 2021 Data – Crops

Item	Wellington County	Province	Percent of Province 2021	Percent of Province 2016	Percent of Province 2011	Percent of Province 2006
Major Field Crops, 2021 Census (acres)						
Winter wheat	80,307	1,144,406	7.02	5.99	5.79	4.65
Oats for grain	4,365	84,320	5.18	4.76	3.60	2.02
Barley for grain	5,710	68,756	8.30	7.12	8.85	7.97
Mixed grains	5,633	59,961	9.39	9.86	11.27	8.92
Corn for grain	92,169	2,202,465	4.18	3.63	3.95	4.11
Corn for silage	29,650	289,678	10.24	9.54	10.31	9.28
Hay	83,411	1,704,017	4.89	4.31	4.31	3.90
Soybeans	116,923	2,806,255	4.17	3.50	3.74	3.79
Potatoes	128	39,193	0.33	0.26	0.32	0.81
Major Fruit Crops, 2021 Census (acres)						
Total fruit crops	166	48,661	0.34	0.32	0.32	0.51
Apples	62	16,008	0.39	0.47	0.40	0.76
Sour Cherries	2	1,383	0.14	-	0.13	-
Peaches	1	4,608	0.02	-	-	-
Grapes	1	18,432	0.01	-	-	-

Strawberries	55	2,633	2.09	0.99	1.89	2.24
Raspberries	5	438	1.14	1.76	1.22	1.56
Major Vegetable Crops, 2021 Census (acres)						
Total vegetables	629	127,893	0.49	0.39	0.70	0.72
Sweet corn	128	20,518	0.62	0.56	0.59	0.53
Tomatoes	14	14,614	0.10	0.11	0.27	0.09
Green peas	5	14,044	0.04	0.31	0.27	0.24
Green or wax beans	7	8,709	0.08	-	-	0.51

Table 11 provided the Census 2021 data for livestock for Wellington County. As indicated below, Wellington County had a significant contribution to the provincial totals for livestock inventories in 2021. Fluctuations in contributions to Provincial totals have occurred for all livestock inventories except dairy cows since 2006. In 2021, Wellington County contributions to Provincial totals included 15.27 percent in steers, 9.39 percent in dairy cows, 9.35 percent in total cattle and calves and 8.95 percent in total sheep and lambs. Overall, there has been a general increase in contributions to livestock inventories over the last 5 years.

With respect to Wellington County's poultry inventories, Wellington County contributed 6,953,181 total hens and chickens and 176,261 turkeys to the provincial totals in 2021.

Table 11 Wellington County Census 2021 Data – Livestock

Item	Wellington County	Province	Percent of Province 2021	Percent of Province 2016	Percent of Province 2011	Percent of Province 2006
Livestock Inventories, 2021 Census (number)						
Total cattle and calves	150,093	1,604,810	9.35	8.07	8.17	6.84
Steers	45,748	299,540	15.27	12.59	14.50	0.96
Beef cows	9,398	224,194	4.19	3.34	3.67	3.65
Dairy cows	30,716	327,272	9.39	8.53	8.10	7.22
Total pigs	255,297	4,071,902	6.27	6.58	7.65	7.56
Total sheep and lambs	28,879	322,508	8.95	6.02	7.81	3.92
Poultry Inventories, 2021 Census (number)						
Total hens and chickens	6,953,181	53,802,772	12.92	13.43	12.17	9.90
Total turkeys	176,261	2,453,126	7.19	4.65	7.14	5.83

Table 12 provided a side-by-side comparison of Centre Wellington and Wellington County Census 2021 data for crops. Table G also provided this comparison as a percent calculation of the contribution from Centre Wellington to Wellington County (2021, 2016, 2011 and 2006).

As illustrated in Table 12, Centre Wellington made a significant contribution to the major field crops totals in Wellington County. There have been fluctuations in the percent contribution from Centre Wellington to Wellington County totals for all major field crops over the last 15 years with the exception of mixed grains, corn for grain and hay where there have been decreases in contribution. There have been increases in potato contributions since 2006.

With respect to major fruit crops, Centre Wellington's contribution to Wellington County's major fruit totals is significant with 100 percent contribution to peaches, a 20 percent contribution to raspberries, a 19.35 percent contribution to apples and a 16.36 contribution to strawberries in 2021.

As illustrated in Table 12, Centre Wellington's contribution to major vegetable crops in Wellington County includes 28.57 percent contribution of green or wax beans, 21.43 percent contribution to tomatoes, 21.09 percent contribution to sweet corn, and 20.00 percent contribution to green peas in 2021.

Table 12 Comparison of Township and County Census 2021 Data - Crops

Item	Centre Wellington	Wellington County	Percent of Wellington County 2021	Percent of Wellington County 2016	Percent of Wellington County 2011	Percent of Wellington County 2006
Major Field Crops, 2021 Census (acres)						
Winter wheat	9,199	80,307	11.45	13.40	16.73	10.88
Oats for grain	697	4,365	15.97	6.72	18.29	13.55
Barley for grain	549	5,710	9.61	13.56	15.39	15.20
Mixed grains	343	5,633	6.09	8.28	8.89	9.79
Corn for grain	13,481	92,169	14.63	16.69	18.11	20.69
Corn for silage	3,320	29,650	11.20	14.52	14.02	13.86
Hay	10,434	83,411	12.51	14.36	14.55	14.76
Soybeans	14,569	116,923	12.46	15.22	16.12	15.36
Potatoes	76	128	59.38	49.45	39.50	8.77
Major Fruit Crops, 2021 Census (acres)						
Total fruit crops	25	166	15.06	20.86	21.18	14.59
Apples	12	62	19.35	21.62	15.87	7.19
Sour Cherries	0	2	-	-	-	-
Peaches	1	1	100.00	-	-	-
Grapes	0	1	-	-	-	-
Strawberries	9	55	16.36	-	27.42	-
Raspberries	1	5	20.00	25.00	36.36	-
Major Vegetable Crops, 2021Census (acres)						
Total vegetables	60	629	9.54	12.43	15.95	11.07
Sweet corn	27	128	21.09	18.75	32.00	20.39
Tomatoes	3	14	21.43	17.65	43.18	31.58
Green peas	1	5	20.00	-	2.44	1.92
Green or wax beans	2	7	28.57	-	-	1.64

Table 13 provided a comparison of Centre Wellington and Wellington County Census (2021) data for livestock inventories. A review of the Census data indicates that there have been fluctuations in Centre Wellington's contribution to all of Wellington County's livestock totals with the exception of total sheep and lambs where there have been decreases since 2006.

Centre Wellington contributed 1,518,260 chickens and 24,056 turkeys to Wellington County's total poultry inventories in 2021.

Table 13 Comparison of Township and County Census 2021Data – Livestock

Item	Centre Wellington	Wellington County	Percent of Wellington County 2021	Percent of Wellington County 2016	Percent of Wellington County 2011	Percent of Wellington County 2006
Livestock Inventories, 2021 Census (number)						
Total cattle and calves	17,691	150,093	11.79	13.26	12.75	13.86
Steers	6,022	45,748	13.16	14.77	11.78	15.33
Beef cows	1,230	9,398	13.09	14.08	16.82	16.61
Dairy cows	3,168	30,716	10.31	14.18	14.15	14.06
Total pigs	14.771	255,297	5.79	12.02	8.19	17.64
Total sheep and lambs	3,572	28,879	12.37	13.22	13.23	21.09
Poultry Inventories, 2021 Census (number)						
Total hens and chickens	1,518,260	53,802,772	2.82	22.06	8.93	16.29
Total turkeys	24,056	2,453,126	0.98	23.20	18.29	17.34

The proposed development of the PSA will have minimal impact on the overall agricultural production in the Township of Centre Wellington of in Wellington County.

5 RESOURCE ALLOCATION AND CONFLICT POTENTIAL

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

5.1 IMPACTS, ASSESSMENT AND COMPATABILITY WITH SURROUNDING LAND USES

The identification and assessment of potential impacts is paramount to determining potential mitigation measures to either eliminate or offset the impact to the extent feasible. The following list includes potential impacts to agriculture that were identified in the OMAFRA 2018 draft AIA Guidance Document, and includes other impacts identified by farmers and landowners. This list is a basis for documenting potential impacts within AIAs and can be modified as necessary to suit the local agricultural community, operations, and services. The determination of impacts due to the proposed future development of the PSA related to this list of potential impacts to infrastructure development projects on agricultural lands may include the following:

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

It should be noted that this AIA report should be read in conjunction with any and all other discipline reports in an effort to provide an adequate evaluation of the above-mentioned potential impacts.

The agricultural character of both the PSA and the SSA has been documented in this AIA. It has been determined that the PSA comprised portions of active agricultural land uses (including livestock, and cash crop operations), rural residential use, recreational uses, and woodlands. It was also determined that the SSA comprised portions of active agricultural land uses (including livestock, and cash crop operations), built areas (urban land uses), commercial enterprises, rural residential use, recreational uses, woodlands, and scrublands.

It has been documented in this AIA that the SSA included portions of the built areas of Salem/Elora and Fergus.

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

With respect to the potential impacts as listed on the previous page of this report, and the proposed future development of the PSA lands, Table 14 provides some context as to the extent of the potential impacts.

Table 14 Potential Impacts

Potential Impact	Impacts Associated with the Proposed Future Development of the PSA Lands Before Mitigation
Interim or permanent loss of agricultural lands	There will be a permanent loss of the use of agricultural lands within the PSA. There will be no loss of agricultural lands in the SSA. The impact is applicable for both the construction and the future use of the PSA.
Fragmentation, severing or land locking of agricultural lands and operations	This project is a proposed future development of the PSA lands which will fragment the land base. The impact is applicable for both the construction and the future use of the PSA. There will be no severing of landlocking of agricultural lands or operations.

Potential Impact	Impacts Associated with the Proposed Future Development of the PSA Lands Before Mitigation
The loss of existing and future farming opportunities	There will be a loss of existing and future farming opportunities on the portions of the PSA lands which were utilized for agricultural production. The impact is applicable for both the construction and the future use of the PSA.
The loss of infrastructure, services or assets	There will be no loss of infrastructure or services as a result of the project.
The loss of investments in structures and land improvements	There is a net loss of investment in agricultural buildings in the PSA. There will be a net loss of tile drainage. The impact is applicable for both the construction and the future use of the PSA.
The loss of use of ground water wells	There exists the potential for impact from the loss of the use of ground water wells due to lack of quantity and/or quality of water. The impact is applicable for the construction and future use of the project.
Disruption or loss of functional drainage systems	There will be a net loss of artificial tile drainage on the PSA, and there is no net loss or disruption to artificial tile drainage systems in the SSA. The impact is applicable for the construction and future use of the PSA.
Disruption or loss of irrigation systems	There does not appear to be a loss of irrigation systems in the PSA.
Changes to soil drainage	There will be no net change in soil drainage in the SSA as a result of future development of the PSA lands.
Changes to surface drainage	There will be no net change in surface drainage within the SSA as a result of future development of the PSA lands.
Changes to landforms	There will be no changes to landforms (with respect to agriculture) in the SSA as a result of future development of the PSA lands.

Potential Impact	Impacts Associated with the Proposed Future Development of the PSA Lands Before Mitigation
Changes to hydrogeological conditions	Any potential changes in hydrogeological conditions would need to be addressed under separate cover in future stages of the project.
Disruption to surrounding farm operations	There will be limited disruption for surrounding/adjacent farms. The impact is applicable for both the construction and the future use of the PSA.
Effects of noise, vibration, dust	There should be limited potential for additional vibration and dust during the construction of the future development of the PSA lands. The impact is applicable for both the construction and the future use of the PSA.
Potential compatibility concerns	There should be limited potential for compatibility concerns with the proposed future development of the PSA and the adjacent agricultural lands in the SSA as the PSA will be an expansion of an urban area.
Traffic concerns	It is noted that this project is the future development of the PSA lands which will result in an increase in human occupancy. Increased traffic will occur as a result of an increase in human occupancy. A traffic study will address those concerns.
Changes to adjacent cropping due to light pollution	There is potential for changes in cropping due to light pollution, as it is assumed that the proposed future development of the PSA will include lighting. Any use of lighting should take into consideration the impact on adjacent agricultural lands. The impact is applicable for both the construction and the future use of the PSA.

5.2 TRAFFIC, TRESPASS AND VANDALISM

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

It may be necessary to reduce conflicts by designing roads and traffic controls to accommodate the heavy, wide, slow-moving farm equipment (e.g. wide shoulders, no curbs, reduced speed limits, and if traffic circles (roundabouts) are to be used, then they need to accommodate large slow moving farm equipment. Discussions with farm groups in various parts of Ontario have indicated that roundabouts in agricultural areas are a poor consideration due to difficulties maneuvering large tractors pulling multiple trailers through tight turns. Further, due to the slow speed of farm equipment, roundabouts do not allow adequate time for the equipment to move with the flow of traffic. Comments from the farm groups suggest that traffic lights or stop signs (hard stops) would better serve the farm community and farm traffic by forcing traffic to stop and allowing controlled access to the local road system.

Trespassing and vandalism are more often a concern with specialty crop operations and livestock operations. The location of the proposed future development of the PSA is not located in a Provincially designated specialty crop area. The Minimum Distance Separation (MDS1) assessment identified the location of potential livestock facilities in the SSA. A review of the MDS1 data indicated that most of the livestock operations are fairly removed from the PSA and are located across roads, woodlots, streams, or other separation features.

Therefore, the proposed development of the PSA lands will have limited impact with respect to trespassing and vandalism on adjacent agricultural operations.

5.3 AGRICULTURAL INFRASTRUCTURE

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

The proposed development of the PSA will not impact any registered agricultural assets and services (renderers, meat plants, abattoirs), refrigerated warehousing and storage, frozen food manufacturing, farm markets, wineries, or cideries.

5.4 MITIGATION MEASURES

The PPS 2024 defines an Agricultural Impact Assessment as:

> *Agricultural impact assessment: means the evaluation of potential impacts of non-agricultural uses on the agricultural system. An assessment recommends ways to avoid or if avoidance is not possible, minimize and mitigate adverse impacts.*

With respect to this AIA, the following sections provide comments with regard to the avoidance, minimization, and mitigation of any potential adverse impacts.

5.4.1 AVOIDANCE

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

The first method of addressing potential impacts is to avoid the potential impact. The proposed future development of the PSA will be a permanent use in an agricultural area. As a result, there will be agricultural lands lost. This cannot be avoided.

5.4.2 MINIMIZING IMPACTS

When avoidance is not possible, the next priority would be to minimize impacts to the extent feasible. Mitigation measures should be developed to lessen the potential impacts. The minimization of impacts can often be achieved during the design process and through proactive planning measures that provide for the separation of incompatible land uses.

5.4.3 MITIGATING IMPACTS

Potential mitigation measures may include:

- The use of berms, vegetated features, or fencing, where feasible, between the different types and intensities of land uses to reduce the potential for trespassing and potential vandalism. These types of buffers reduce impacts by preventing trespassing and associated problems such as litter and vandalism.
- The use of buffers between agriculture and transportation/urban uses may combine a separation of uses, vegetation/plantings, windbreaks, and berms. Vegetated buffers should include the use of deciduous and coniferous plants, with foliage from base to crown to mitigate against dust, light trespass, and litter.
- The use of salt management plans to reduce the amount of salt required for de-icing (liquid de-icers, broad casting and selective broad casting).
- The use of plantings/vegetation as screens and buffers to reduce visual impacts. Consideration of plantings/vegetation barriers within the PSA as visual screening where appropriate.
- Design new structures and side road improvements to be compatible with farm equipment.
- Further assessment of potential impacts to existing groundwater and surface water monitoring and providing new well or water

access to those potentially impacted by groundwater disruption in future stages of the Project.

- Restore tile drainage systems in the SSA that may be impacted by the proposed future development of the PSA (if necessary).
- Restore impacts to irrigation systems (if necessary).
- Create a traffic plan that identifies closures and open routes to minimize impacts to local traffic during construction.
- Maintain local roads to allow access for the movement of oversized agricultural equipment.
- Due to the locations and numbers of water wells in the PSA and the SSA, it will be important to either preserve the existing wells, or properly engineer the closing/capping of any water well, where necessary, to prevent potential groundwater contamination.
- Field entrances and farm accesses that may be impacted by the proposed future development of the PSA will be relocated and/or accommodated to the extent possible.
- Phased development may be utilized to allow for agricultural production to continue in undeveloped areas of the PSA while other areas are built out in a comprehensive method.
- Edge planning principles to be incorporated during the secondary planning phase along the interface of the proposed development and the adjacent agricultural lands and operations.
- Place lower impact development (low occupancy uses) adjacent to farmland and operations.
- Design principles which accommodate agriculture to reduce negative impacts can minimize conflicts, noise, dust and odours through consideration of barriers, setbacks, buffers, road design and reduced speed limits.
- Road design to direct traffic away from farming areas.
- Increase depth of lots along the urban-agricultural boundary to create greater separation distances.

5.4.4 EDGE PLANNING

The implementation of edge planning may be considered to support the mitigation of a future development of a settlement area boundary expansion. Edge planning considers land uses at the urban-agricultural interface to determine potential conflicts and identify practical means to improve land use compatibility. Edge planning requirements can be tailored to the local context through a secondary planning process.

6 SUMMARY AND CONCLUSIONS

DBH Soil Services Inc was retained to complete an Agricultural Impact Assessment (AIA) Report for an area defined as Fergus Oaks, located north of the Elora/Fergus settlement areas in the Township of Centre Wellington, in Wellington County. This AIA identified and assessed agricultural impacts based on roadside reconnaissance surveys and online resources and provides avoidance or mitigative measures as necessary to offset or lessen any impacts.

This AIA report identified the Fergus Oaks lands area as the Prime Study Area (PSA) with a Secondary Study Area (SSA) identified as a 1500 m buffer beyond the boundaries of the PSA. The 1500 m (1.5 km) area of potential impact outside the PSA was used for the characterization of the agricultural community and the assessment of potential impacts both on and in the immediate vicinity of the PSA.

In the regional/city context, the PSA is roughly bounded by Sideroad 15 on the south, an abandoned rail corridor on the west, Beatty Line on the east, and a stream and property lines on the north.

The PSA is located approximately 750 m northwest of Fergus, and approximately 1.6 km north of Salem/Elora.

A summary of the results of this AIA are presented below:

- **Geographical Limits**

  The PSA is located in the Guelph Drumlin Field, while the SSA is located within the Guelph Drumlin Field and the Stratford Till Plain physiographic regions.

  The Guelph Drumlin Field physiographic region is described as an area centered on the City of Guelph and north of the Paris moraine that contains more than 300 drumlins of all sizes. The drumlins are generally oval in shape and are not closely spaced, leaving more low ground between the drumlins.

  The Stratford Till Plain physiographic region is described as an area of ground moraine (broad clay plain) extending from London to Listowel.

  The PSA and the SSA are a complex mix of topography with gently undulating areas generally used for agricultural production, and steeper slopes along incised stream channels.

  The PSA and SSA are located between the 2700 and 2900 Crop Heat Units isolines (CHU-M1) available for corn production in Ontario.

A review of OMAFRA Climate Zone Mapping revealed that the PSA and the SSA are located near the border between Zones D and E. Zone D has an average Frost-Free period of 130-165 days, an Average Date of Last Spring Frost of May 11, and an Average Date of First Fall Frost of October 1. Zone E has an average Frost-Free period of 125-145, and Average Date of Last Spring Frost of May 17, and an Average Date of First Fall Frost of September 26.

Based on the OMAFRA soils data the PSA comprised approximately 89.3 percent Canada Land Inventory (CLI) capability of Class 1 – 3, with approximately 89.3 percent as Class 1 and 5.4 percent as Class 3. Approximately 5.3 percent of the PSA was identified as Organic Soils.

Based on the OMAFRA soils data the SSA comprised approximately 87.8 percent Canada Land Inventory (CLI) capability of Class 1 – 3, with approximately 69.2 percent as Class 1, 7.6 percent as Class 2, percent as Class 3, 2.3 percent as Class 5, 4.1 percent as Not Mapped, and 5.8 percent as Organic Soils.

It is important to note that this assessment of soil capability and CLI is based on incorrect OMAFRA soils data. The actual soil capability may include poorer capability/quality soils.

- **Agricultural Policy**

A review of the boundaries of the Provincial Land Base Mapping determined that all of the PSA and much of the SSA lands comprise Prime Agricultural Areas. Non-agricultural lands (settlements) were identified in the SSA and included portions of Elora/Salem and Fergus.

No areas of provincially designated specialty crop lands were identified in either the PSA or the SSA.

A review of the Greenbelt Plan (2017) mapping indicated that no portions of the PSA or the SSA were located in the Greenbelt Plan Area. No portions of the PSA or the SSA were located in the Oak Ridges Moraine Conservation Plan area or the Niagara Escarpment Plan area.

A review of the *County of Wellington Official Plan (Office Consolidation July 2024)* Schedule B1 Land Use Centre Wellington revealed that the PSA was comprised of lands designated as Prime Agricultural, Core Greenlands, and Greenlands. The SSA was comprised of lands designated as Prime Agricultural, Core Greenlands, Greenlands, and Primary Urban Centre.

A review of the *Township of Centre Wellington Comprehensive Zoning By-law No. 2009-045 (Office Consolidation February 2024)* identified that the zoning for the PSA

were identified as Agricultural (A) and possibly Environmental Protection (EP), and Environmental Protection Overlay.

The SSA review identified that the SSA comprised areas zoned as Agricultural (A), Environmental Protection (EP), Environmental Protection Overlay, Residential (R1), Commercial (C), Institutional (IN), Open Space (OS), and Industrial (M).

No portions of the PSA or the SSA were within any provincially or municipally designated specialty crop area.

- **Agricultural Land Use**

The PSA comprised land use of approximately 6.4 percent as built up/disturbed areas, 70.2 percent as common field crop (soybean, corn), 1.4 percent as scrublands, 11.8 percent as small grains, 0.8 percent as water, and 9.4 percent as woodlot areas.

The SSA comprised land use of approximately 16.4 percent as built up/disturbed areas, 27.2 percent as common field crop (soybean, corn), 5.0 as cultivated, 28.7 percent as forage/pasture lands, 0.1 percent as market garden, 3.8 percent as scrublands, 0.8 percent as water, and 18.0 percent as woodlot areas.

The predominant land use in the PSA was the production of common field crops.

- **Agricultural Investment**

A total of 85 agricultural buildings were identified within the PSA and SSA. There were 14 agricultural buildings within the PSA with the remaining 71 agricultural buildings observed in the SSA. The agricultural buildings located within the PSA will be removed as part of the proposed development of the PSA.

There is investment in systematic artificial tile drainage in the PSA.

Systematic and random tile drainage were noted on various lands within the SSA.

There is no investment in landforming for agricultural purposes in either the PSA or the SSA.

Minimum Distance Separation 1 (MDS1) calculations were completed for this AIA, MDS1 calculations were completed as a best practice to protect lands for agricultural use as long as possible during the development phases. There is one MDS1 arc impinging on the southeast portion of the PSA.

A review of the online Agricultural System Portal (OMAFRA) indicated that there were no registered nurseries, specialty farms (crop or livestock), frozen food

manufacturing, refrigerated warehousing/storage, livestock assets or abattoirs in the PSA.

There are no registered agricultural services within the PSA.

The closest transportation network (major roadway) is Highway 6 located to the east of the PSA.

- **Land Fragmentation**

  A review of parcel data for property size within the PSA revealed two parcels with areas greater than 180 acres.

  The SSA comprised numerous small parcels (Salem/Elora and Fergus) and areas of fragmentation associated with the lands along the abandoned rail corridor, particularly to the west of the PSA. Smaller parcels were noted north of the PSA.

The foregoing represents a comprehensive AIA with the purpose of evaluating the PSA and SSA to document the existing agricultural character and to determine any potential impacts to agriculture as a result of the proposed future development of the PSA.

This AIA has documented that the PSA was part of an area of land that had been deemed appropriate for a Settlement Area Boundary Expansion under OPA 119 (Version 1, April 2023) which included Provincial modifications without local input. In December 2023 Bill 150 reversed most of those Provincial modifications (OPA 119 Version 2), while Bill 162 included some Provincial modifications with scoped municipal input (OPA 119 Version 3). The third and final version of the OPA 119 (May 26, 2024) does not include any modifications to expand the urban boundaries of Fergus or Elora/Salem.

This AIA has identified that the PSA is located in a Prime Agricultural Area, as are most lands within Centre Wellington. Any Settlement Area Boundary Expansion of Fergus or Salem/Elora will result in the loss of Prime Agricultural land. Similarly, the lands adjacent to Fergus and Salem/Elora comprise numerous agricultural operations including livestock rearing and cash cropping. A review of MDS identified that the PSA is impacted by one MDS1 arc, from a barn that is located on a parcel that is located on 7715 Nichol Road which is part of the Fergus Oaks OPA.

This AIA helps inform the OPA by Tribute (Fergus Oaks) Limited municipally known as 6704 Beatty Line N, 6684-6688 Beatty Line N and 7692 Sideroad 15. The OPA also includes lands outside of Tribute (Fergus Oaks) Limited ownership, known municipally as 7715 Nichol Road. The OPA by Tribute (Fergus Oaks) Limited will build northward from the OPA submitted by the registered landowners of 6586 Beatty Line N. 6586 Beatty Line N which abuts the existing Primary Urban Centre of Centre Wellington along its south boundary. This is important to ensure contiguous expansion of an existing settlement area and to limit the fragmentation of rural lands within the County of

Wellington. Coordinated servicing, transportation and other technical designs between lands and owners will be required to ensure efficient, logical and feasible urban greenfield development.

Centre Wellington is characterised by its large agricultural community and amount of prime agricultural land. The expansion of the urban boundaries will have an impact on prime agricultural lands. As has been demonstrated in the preceding sections of this report, this cannot be avoided. A potential impact for the proposed Settlement Area Boundary Expansion lands is the interface between urban development and abutting farms. Consideration needs to be taken to ensure that urban development does not impact the operations of abutting farms particularly where MDS setbacks have been identified.

The Secondary Planning process and subsequent planning process will be a key mechanism to ensure impacts on the agricultural community are minimized and mitigated. The phasing of development will also be key to minimizing and mitigating the impact on the agricultural community and land base.

Given the geographical location of the PSA lands and the close proximity to the settlements of Salem/Elora and Fergus, and that these lands were previously designated as settlement area boundary expansion lands, it is the conclusion of this study that the proposed future development of the PSA would have minimal impact on the surrounding agricultural activities within the SSA.

Sincerely
DBH Soil Services Inc.

Dave Hodgson, P. Ag
President

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APPENDIX A

Agricultural Building List

Property Information			Online Imagery Survey								Roadside Reconnaissance Survey					
Agricultural Building Number	Address	Roll Number	Residential Unit	Type of Building	"Line of Sight" Restriction	Additional Details	Evidence of Livestock	Type of Livestock	Evidence of Feed Storage	Evidence of Manure Storage	Findings	Visual Evidence of Livestock	Type of Livestock	Visual Evidence of Feed Storage	Visual Evidence of Manure Storage	Additional Details
1	7581 15 Sideroad, Centre Wellington, ON, N0B 1S0	23260000210020	Yes	Bank Barn	No	Centrewellington.ca/media/3r3dpsze/clayton-subdivision-functional-servicing-report.pdf **This link used during the reconnaissance survey may no longer be available	No		No	No		No			No	"Owned by Cachet Developments, known as Elora Sands -plans for residential subdivision MDS measurement of building
2	7581 15 Sideroad, Centre Wellington, ON, N0B 1S0	23260000210020	Yes	Pole Barn	Yes		No		No	No		No		No	No	See blding 1 No MDS calculation required
3	6596 Gerrie Rd, Centre Wellington, ON, N0B 1S0	23260000210025	Yes	Workshop	No		No		No	No		No		No	No	P & S Electric, No MDS calculation required
4	6574 Irvine St, Centre Wellington, ON, N0B 1S0	23260000210030		Pole Barn	Yes	grain bin/bins, capped silo/silos	No		No	No		No		No	No	Appears to be retired Dairy No MDS calculation required
5	6574 Irvine St, Elora, ON, N0B 1S0	23260000210030	Yes	Bank Barn	No	with extension/extensions	No		No	No		No		No	No	Appears to be retired Dairy No MDS calculation required
6	6574 Irvine St, Elora, ON, N0B 1S0	23260000210030	Yes	Open Sided Barn	Yes		No		No	No	Open sided building	No		No	No	Appears to be retired Dairy No MDS calculation required
7	6574 Irvine St, Elora,	23260000210030	Yes	Pole Barn	Yes	with extension/extensions	No		No	No		No		No	No	Appears to be retired Dairy

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Agricultural Building Number	Address	Roll Number	Residential Unit	Type of Building	"Line of Sight" Restriction	Additional Details	Evidence of Livestock	Type of Livestock	Evidence of Feed Storage	Evidence of Manure Storage	Findings	Visual Evidence of Livestock	Type of Livestock	Visual Evidence of Feed Storage	Visual Evidence of Manure Storage	Additional Details
	ON, N0B 1S0															No MDS calculation required
8	6583 Gerrie Rd, Centre Wellington, ON, N0B 1S0	23260000210440	Yes	Quonset	No	overgrown vegetation	No		No	No		No		No	No	No MDS calculation required
9	6574 Gerrie Rd, Centre Wellington, ON, N0B 1S0	23260000210440	Yes	Pole Barn	Yes	overgrown vegetation	No		No	No	Assumed removed	No		No	No	No MDS calculation required
10	6611 Gerrie Rd, Centre Wellington, ON, N0B 1S0	23260000210450	Yes	Machine Shed	Yes	capped silo/silos, grain bin/bins, feed tower	No		No	No	Last name on mailbox "Walter" Farm equipment stored in tension	No		No	No	Gerber Landscaping, several tension fabric/greenhouses behind buildings, No MDS calculation required
11	6611 Gerrie Rd, Centre Wellington, ON, N0B 1S0	23260000210450	Yes	Pole Barn	Yes		No		No	No	Line of sight restriction	No		No	No	Assumed retired No MDS calculation required
12	6611 Gerrie Rd, Centre Wellington, ON, N0B 1S0	23260000210450	Yes	Shed	Yes		No		No	No	Line of sight restriction	No		No	No	Main barn removed 2006 – 2009 No MDS calculation required
13	6683 Gerrie Rd, Centre Wellington, ON, N0B 1S0	23260000230800	Yes	Pole Barn,	No	grain bin/bins	No		No	No	5 bays, assumed not used for livestock	No		No	No	Four Boys Flower Farm No MDS calculation required

Property Information			Online Imagery Survey								Roadside Reconnaissance Survey					
Agricultural Building Number	Address	Roll Number	Residential Unit	Type of Building	"Line of Sight" Restriction	Additional Details	Evidence of Livestock	Type of Livestock	Evidence of Feed Storage	Evidence of Manure Storage	Findings	Visual Evidence of Livestock	Type of Livestock	Visual Evidence of Feed Storage	Visual Evidence of Manure Storage	Additional Details
14	6718 Gerrie Rd, Centre Wellington, ON, N0B 1S0	23260000230850	Yes	Hip Roof Barn	Yes	grain bin/bins	Yes	Beef	Yes	Yes		No		Yes	Yes	MDS use measurement of building
15	6783 Gerrie Rd, Centre Wellington, ON, N0B 1S0	23260000230770	Yes	Machine Shed	Yes	used for storage, Www.tripadvisor.ca/irvinesidefarm **This link used during the reconnaissance survey may no longer be available	No		No	No	For sale Edge Realty	No		No	No	Irvineside Farm 28 x 38 Barn currently converted to host weddings 24 x 38 drive shed used for storage No MDS calculation due to conversion
16	6783 Gerrie Rd, Centre Wellington, ON, N0B 1S0	23260000230770	Yes	Pole Barn	Yes		No		No	No	For sale Edge Realty	No		No	No	See 15 This building has been converted to be a wedding venue No MDS calculation due to conversion
17	7620 Sideroad 10, Centre Wellington, ON, N0B 1S0	23260000023086	Yes	Machine Shed	Yes		No		No	No		No		No	No	No MDS calculation required
18	6800 Gerrie Rd, Centre Wellington, ON, N0B 1S0	23260000230860	Yes	Shed	No		No		No	No		No		No	No	No MDS calculation required
19	6742 Irvine St, Centre Wellington, ON, N0B 1S0	23260000222187	Yes	Garage	No		No		No	No		No		No	No	No MDS calculation required
20	6742 Irvine St, Centre Wellington,	23260000222187	Yes	Shed	Yes		No		No	No		No		No	No	No MDS calculation required

Property Information			Online Imagery Survey								Roadside Reconnaissance Survey					
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	ON, N0B 1S0															
21	6742 Irvine St, Centre Wellington, ON, N0B 1S0	23260000222187	Yes	Shed	Yes		No		No	No	Shipping Container	No		No	No	No MDS calculation required
22	6805 Irvine St, Centre Wellington, ON, N0B 1S0	23260000230880	Yes	Pole Barn	Yes	capped silo/silos, feed tower, fencing designed for livestock, grain bin/bins	No		No	No	Last name on mailbox "Weber"	No		No	No	Cutting Edge Woodcraft MDS use Dairy, liquid manure
23	6805 Irvine St, Centre Wellington, ON, N0B 1S0	23260000230880	Yes	Bank Barn	Yes		Yes	Beef	No	No		No		No	No	Name on mailbox "Weber" MDS use Dairy, packed bed
24	6805 Irvine St, Centre Wellington, ON, N0B 1S0	23260002308800	Yes	Machine Shed	Yes		No		No	No		No		No	No	No MDS calculation required
25	6805 Irvine St, Centre Wellington, ON, N0B 1S0	23260000230840	Yes	Machine Shed	Yes		No		Yes	No		No		No	No	No MDS calculation required
26	6707 Irvine St, Centre Wellington, ON, N0B 1S0	23260000230840	Yes	Bank Barn	Yes	with extension/extensions, capped silo/silos	No		Yes	No		No		No	Yes	Dutcholm Full disperal Sept 6/24 67 Holstein 31 Jersey 4 Brown Swiss 11 Semen Lots MDS – based on dispersal numbers
27	6707 Irvine St, Centre Wellington,	23260000230840	Yes	Machine Shed	Yes		No		Yes	No		No		No	No	No MDS calculation required

Property Information			Online Imagery Survey								Roadside Reconnaissance Survey					
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	ON, N0B 1S0															
28	7715 Sideroad 15, Centre Wellington, ON, N1M 2W3	23260002104600	Yes	Bank Barn	No	with extension/extensions, uncapped silo/silos, run-in shed/sheds, fencing designed for livestock	No		No	No		Yes	Beef	No	No	MDS measure building use Beef
29	7715 Sideroad 15, Centre Wellington, ON, N1M 2W3	23260000210460	Yes	Quonset	Yes		No		No	No		No		No	No	No MDS calculation required
30	6585 Hwy 6, Centre Wellington, ON, N1M 2W3	23260000210980	Yes	Bank Barn	Yes	with extension/extensions, uncapped silo/silos, fencing designed for livestock	No		Yes	No		No		No	No	Ted and Marlene Buczek Got the Besta Farm Hay for sale No MDS calculation required – too close to urban
31	6611 Hwy 6, Centre Wellington, ON, N1M 2W3	23260000230060	Yes	Machine Shed	Yes	with extension/extensions, run-in shed/sheds, fencing designed for livestock, paddock/paddocks	Yes		No	Yes		Yes		No	No	No MDS calculation required
32	6611 Hwy 6, Centre Wellington, ON, N1M 2W3	23260000230060	Yes	Pole Barn	Yes	with extension/extensions	Yes	Horses	No	Yes		No		No	No	MDS measure building- horses
33	6611 Hwy 6, Centre Wellington, ON, N1M 2W3	23260000230060	Yes	Pole Barn	Yes		Yes	Horses	No	Yes		No		No	No	MDS measure building- horses
34	6611 Hwy 6, Centre Wellington,	23260000230060	Yes	Machine Shed	Yes		No		No	Yes		No		No	No	No MDS calculation required

Property Information			Online Imagery Survey								Roadside Reconnaissance Survey					
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	ON, N1M 2W3															
35	6611 Hwy 6, Centre Wellington, ON, N1M 2W3	23260000230060	Yes	Assumed Storage Trailers	Yes		No		No	Yes		No		No	No	No MDS calculation required
36	6611 Hwy 6, Centre Wellington, ON, N1M 2W3	23260000230060	Yes	Pole Barn	Yes		Yes		No	Yes		No		No	No	No MDS calculation required
37	6602 Hwy 6, Centre Wellington, ON, N1M 2W3	23260000210970	Yes	Workshop/ Storage Barn	Yes	run-in shed/sheds, fencing designed for livestock	No		No	No	Private property signs Beware of dogs signs	No		No	No	No MDS calculation required
38	6602 Hwy 6, Centre Wellington, ON, N1M 2W3	23260000210970	Yes	Pole Barn	Yes		No		No	No	Big door on side					No MDS calculation required
39	6602 Hwy 6, Centre Wellington, ON, N1M 2W3	23260000210970	Yes	Pole Barn	Yes	paddock/paddocks	Yes	Horses, Sheep	No	Yes		Yes	Horses	No	No	MDS measure - horses
40	6581 Hwy 6, Centre Wellington, ON, N1M 2W3	23260000230050	Yes	Bank Barn	No	grain bin/bins	No		No	No	Shed in the trees - no MDS Horse trailer	No		No	No	MDS – measure building assumed beef
41	7660 Sideroad 15, Fergus, ON, N1M 2W3	23260000230811		Pole Barn	Yes	with extension/extensions, fencing designed for livestock	No		No	No	line of sight restriction	No		No	No	No MDS calculation required
42	6684 Beatty Line N, Centre	23260000230500	Yes	Pole Barn, Machine Shed, Feed Storage	Yes		No		Yes	Yes	line of sight restriction					Drost Cattle Inc DBH to confirm MDS with planner

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	Wellington, ON, N1M 2W3															
43	6684 Beatty Line N, Centre Wellington, ON, N1M 2W3	23260000230500	Yes	Pole Barn	Yes	with extension/extensions	No		Yes	Yes						DBH to confirm MDS with planner
44	6684 Beatty Line N, Centre Wellington, ON, N1M 2W3	23260000230500	Yes	Pole Barn	Yes	with extension/extensions	No		Yes	Yes						DBH to confirm MDS with planner
45	6684 Beatty Line N, Centre Wellington, ON, N1M 2W3	23260000230500	Yes	Quonset	Yes		No		Yes	Yes						DBH to confirm MDS with planner
46	6684 Beatty Line N, Centre Wellington, ON, N1M 2W3	23260000230500	Yes	Pole Barn	Yes		No		Yes	Yes						DBH to confirm MDS with planner
47	6684 Beatty Line N, Centre Wellington, ON, N1M 2W3	23260000230500	Yes	Pole Barn	Yes		No		Yes	Yes						DBH to confirm MDS with planner
48	6684 Beatty Line N, Centre Wellington, ON, N1M 2W3	23260000230500	Yes	Pole Barn	Yes		No		Yes	Yes						DBH to confirm MDS with planner

Property Information			Online Imagery Survey								Roadside Reconnaissance Survey					
Agricultural Building Number	Address	Roll Number	Residential Unit	Type of Building	"Line of Sight" Restriction	Additional Details	Evidence of Livestock	Type of Livestock	Evidence of Feed Storage	Evidence of Manure Storage	Findings	Visual Evidence of Livestock	Type of Livestock	Visual Evidence of Feed Storage	Visual Evidence of Manure Storage	Additional Details
49	6684 Beatty Line N, Centre Wellington, ON, N1M 2W3	23260000230500	Yes	Pole Barn	Yes	with extension/extensions	No		Yes	Yes						DBH to confirm MDS with planner
50	6684 Beatty Line N, Centre Wellington, ON, N1M 2W3	23260000230500	Yes	Quonset	Yes		No		Yes	Yes						DBH to confirm MDS with planner
51	6684 Beatty Line N, Centre Wellington, ON, N1M 2W3	23260000230500	Yes	Quonset	Yes		No		Yes	Yes						DBH to confirm MDS with planner
52	6684 Beatty Line N, Centre Wellington, ON, N1M 2W3	23260000230500	Yes	Pole Barn	Yes		No		Yes	Yes						DBH to confirm MDS with planner
53	7677 Sideroad 10, Fergus, ON, 6581 hwy 6, fergus N1M 2W3	23260000230760	Yes	Pole Barn	Yes	grain bin/bins, stored equipment around building	No		No	No		No		No	No	Bauman Agri Services Grain elevator 519 787-1240 Lowel@baumanagri.com No MDS calculation required
54	7677 Sideroad 10, Fergus, ON, N1M 2W3	23260000230760	Yes	Tension Fabric Structure	Yes		No		No	No		No		No	No	No MDS calculation required
55	7691 10 Sideroad, Fergus,	23260000230550	Yes	Pole Barn	Yes	with extension/extensions, fencing designed for	Yes	Horses	No	Yes	line of sight restriction	No		No	No	MDS measure building – use horses

Property Information			Online Imagery Survey								Roadside Reconnaissance Survey					
Agricultural Building Number	Address	Roll Number	Residential Unit	Type of Building	"Line of Sight" Restriction	Additional Details	Evidence of Livestock	Type of Livestock	Evidence of Feed Storage	Evidence of Manure Storage	Findings	Visual Evidence of Livestock	Type of Livestock	Visual Evidence of Feed Storage	Visual Evidence of Manure Storage	Additional Details
	ON, N1M 2W3					livestock, paddock/paddocks										
56	7707 Sideroad 10, Centre Wellington, ON, N1M 2W3	23260000230550	Yes	Machine Shed	Yes	run-in shed/sheds, fencing designed for livestock, paddock/paddocks	Yes	Horses	No	No	set up for livestock	No		Yes	No	Youtube 7707 sideroad 10 fergus No MDS calculation required – assumed horses remain in field using run-ins for shelter **This link used during the reconnaissance survey may no longer be available
57	6770 Beatty Line N, Centre Wellington, ON, N1M 2W3	23260000230534	Yes	Machine Shed	No		No		No	No		No		No	No	Fergus Glass and Mirror No MDS calculation required
58	6750 Beatty Line N, Centre Wellington, ON, N1M 2W3	23260000230533	Yes	Pole Barn	Yes	run-in shed/sheds, fencing designed for livestock, paddock/paddocks	Yes	Horses	No	Yes	Multiple sheds	Yes	Horses, Donkeys	No	No	Building measurements fall under 10 m^2 therefore no MDS calculation required
59	6732 Beatty Line N, Centre Wellington, ON, N1M 2W3	23260000230530	Yes	Pole Barn	No	with extension/extensions, grain bin/bins, feed tower	No		No	No		No		No	No	Alpine Construction Name on mailbox "Freeman" Assumed retired – No MDS calculation required
60	6732 Beatty Line N, Centre Wellington, ON, N1M 2W3	23260000230530	Yes	Machine Shed	No		No		No	No		No		No	No	Assumed Retired No MDS calculation required

Property Information			Online Imagery Survey								Roadside Reconnaissance Survey					
Agricultural Building Number	Address	Roll Number	Residential Unit	Type of Building	"Line of Sight" Restriction	Additional Details	Evidence of Livestock	Type of Livestock	Evidence of Feed Storage	Evidence of Manure Storage	Findings	Visual Evidence of Livestock	Type of Livestock	Visual Evidence of Feed Storage	Visual Evidence of Manure Storage	Additional Details
61	6688 Beatty Line N, Centre Wellington, ON, N1M 2W3	23260000230500	Yes	Pole Barn	No	with extension/extensions, capped silo/silos	No	Dairy	No	Yes		Yes		Yes	No	Drost Cattle MDS measure -dairy
63	6688 Beatty Line N, Centre Wellington, ON, N1M 2W3	23260000230500	Yes	Machine Shed	No		No		No	Yes		No		No	No	No MDS calculation required
64	7708 Sideroad 15, Centre Wellington, ON, N1M 2W3	23260000230480	Yes	Machine Shed	Yes		No		No	No		No		No	No	Line of sight restriction No MDS calculation required
65	7708 15 Sideroad, Centre Wellington, ON, N1M 2W3	23260000230480	Yes	Machine Shed	Yes		No		No	No		No		No	No	Line of sight restriction No MDS calculation required
66	7646 10 Sideroad, Centre Wellington, ON, N1M 2W3	23260000230750	Yes	Machine Shed	No	capped silo/silos, grain bin/bins, fencing designed for livestock	No		No	No		No		No	No	No MDS calculation required
67	7646 10 Sideroad, Centre Wellington, ON, N1M 2W3	23260000230750	Yes	Pole Barn	No	with extension/extensions	Yes	Beef	Yes	Yes		Yes	Beef	Yes	No	MDS measure building
68	7646 10 Sideroad, Centre Wellington,	23260000230750	Yes	Pole Barn	Yes		Yes	Beef	Yes	Yes		No		No	No	MDS measure building

Property Information			Online Imagery Survey								Roadside Reconnaissance Survey					
Agricultural Building Number	Address	Roll Number	Residential Unit	Type of Building	"Line of Sight" Restriction	Additional Details	Evidence of Livestock	Type of Livestock	Evidence of Feed Storage	Evidence of Manure Storage	Findings	Visual Evidence of Livestock	Type of Livestock	Visual Evidence of Feed Storage	Visual Evidence of Manure Storage	Additional Details
	ON, N1M 2W3															
69	6823 Gerrie Rd, Centre Wellington, ON, N0B 1S0	23260000230740	Yes	Riding Arena Indoor, Stable	No	run-in shed/sheds, fencing designed for livestock, paddock/paddocks outdoor riding arena	Yes	Horses	No	Yes		Yes	Horses	No	No	MDS measure on stable
70	6823 Gerrie Rd, Centre Wellington, ON, N0B 1S0	23260000230740	Yes	Machine Shed	No		No		No	No		No		No	No	No MDS calculation required
71	7710 Sideroad 10, Centre Wellington, ON, N1M 2W3	23260000230570	Yes	Bank Barn	No	capped silo/silos, run-in shed/sheds, fencing designed for livestock, paddock/paddocks	Yes	Horses	No	Yes	house boarded up	Yes	Horses	Yes	Yes	MDS measure building
72	7710 10 Sideroad, Centre Wellington, ON, N1M 2W3	23260000230570	Yes	Pole Barn	Yes	with extension/extensions	No		No	No		No		No	No	No MDS calculation required
73	7710 Sideroad 10, Centre Wellington, ON, N1M 2W3	23260000230570	Yes	Pole Barn	Yes		No		No	No	looks like remnant poultry, missing roof panels	No		No	No	No MDS calculation required
74	6822 Beatty Line N, Centre Wellington, ON, N1M 2W3	23260000230580	Yes	Pole Barn	Yes		No		No	No		No		No	No	No MDS calculation required
75	6822 Beatty Line N,	23260000230580	Yes	Machine Shed	Yes		No		No	No		No		No	No	No MDS calculation required

Property Information			Online Imagery Survey								Roadside Reconnaissance Survey					
Agricultural Building Number	Address	Roll Number	Residential Unit	Type of Building	"Line of Sight" Restriction	Additional Details	Evidence of Livestock	Type of Livestock	Evidence of Feed Storage	Evidence of Manure Storage	Findings	Visual Evidence of Livestock	Type of Livestock	Visual Evidence of Feed Storage	Visual Evidence of Manure Storage	Additional Details
	Centre Wellington, ON, N1M 2W3															
76	7740 Sideroad 10, Centre Wellington, ON, N1M 2W3	23260000230430	Yes	Pole Barn	No		Yes	Horses	No	No		No		Yes	No	MDS measure building
77	7780 Sideroad 10, Fergus, ON, N1M 2W3	23260000230420	No	Bank Barn	No	fencing designed for livestock, paddock/paddocks	No	Beef	No	No	Serenity Farms horse trailer	Yes	Assumed Beef	No	No	MDS measure – assumed beef
78	7780 Sideroad 10, Fergus, ON, N1M 2W3	23260000230420	Yes	Open-sided Barn	No		No		No	No		Yes	Assumed Beef	No	No	MDS measure – assumed beef
79	7784 Sideroad 15, Centre Wellington, ON, N1M 2W3	23260000230470	Yes	Garage	Yes	paddock/paddocks, fencing designed for livestock, www.hoppyfields.com **This link used during the reconnaissance survey may no longer be available	No		No	No	Hoppy Fields Farms					No MDS calculation required
80	7784 Sideroad 15, Centre Wellington, ON, N1M 2W3	23260000230470	Yes	Pole Barn	Yes	run-in shed/sheds	Yes	Sheep, Goats, Chickens, Turkeys, Ducks	No	No			Horses ,Sheep	No	No	MDS measure building – use sheep
81	6741 Hwy 6, Centre Wellington, ON, N1M 2W3	23260000230100	Yes	Machine Shed	Yes		No		No	No	Possible bank barn removed, cement pad and footings visible from aerial photography	No		No	No	No MDS calculation required

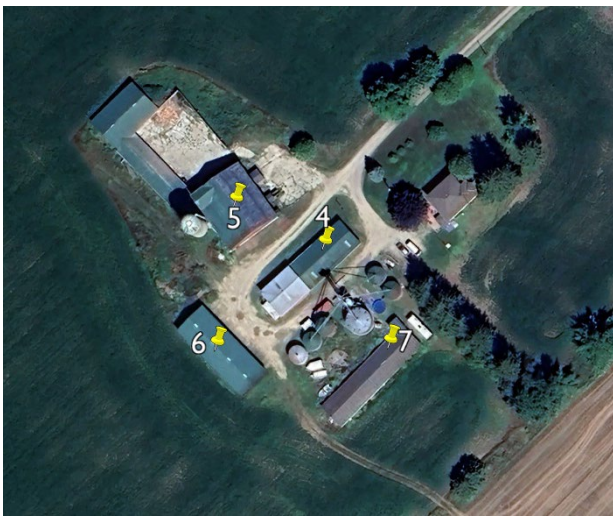
Property Information			Online Imagery Survey								Roadside Reconnaissance Survey					
Agricultural Building Number	Address	Roll Number	Residential Unit	Type of Building	"Line of Sight" Restriction	Additional Details	Evidence of Livestock	Type of Livestock	Evidence of Feed Storage	Evidence of Manure Storage	Findings	Visual Evidence of Livestock	Type of Livestock	Visual Evidence of Feed Storage	Visual Evidence of Manure Storage	Additional Details
											Jamie Montgomery Fencing Ltd					
82	6741 Hwy 6, Centre Wellington, ON, N1M 2W3	23260000230100	Yes	Machine Shed	Yes		No		No	No		No		No	No	No MDS calculation required
83	6631 Hwy 6, Centre Wellington, ON, N1M 2W3	23260000230070	Yes	Machine Shed	Yes		No		No	No		No		No	No	No MDS calculation required
84	6631 Hwy 6, Centre Wellington, ON, N1M 2W3	23260000230070	Yes	Machine Shed	Yes		No		No	No		No		No	No	No MDS calculation required
85	6631 Hwy 6, Centre Wellington, ON, N1M 2W3	23260000230070	Yes	Machine Shed	Yes		No		No	No		No		No	No	No MDS calculation required

APPENDIX B

Agricultural Building Photographs

Agricultural Buildings 1 and 2

Agricultural Building 3



Agricultural Buildings 4, 5, 6 and 7

Agricultural Buildings 8 and 9

Agricultural Buildings 10, 11 and 12

Agricultural Building 13

Agricultural Building 14

Agricultural Buildings 15 and 16

Agricultural Building 17

Agricultural Building 18

Agricultural Buildings 19, 20 and 21

Agricultural Buildings 22, 23, 24 and 25

Agricultural Buildings 26 and 27

Agricultural Buildings 28 and 29

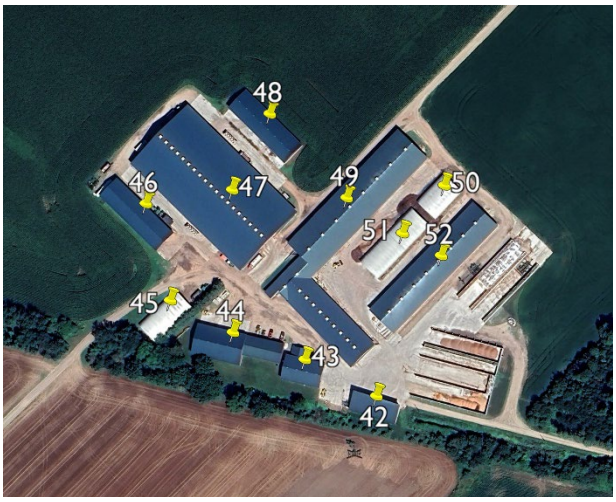
Agricultural Building 30

Agricultural Buildings 31, 32, 33, 34, 35 and 36

Agricultural Buildings 37, 38 and 39

Agricultural Building 40

Agricultural Building 41



Agricultural Buildings 42 - 52

Agricultural Buildings 53 and 54

Agricultural Building 55

Agricultural Building 56

Agricultural Building 57

Agricultural Building 58

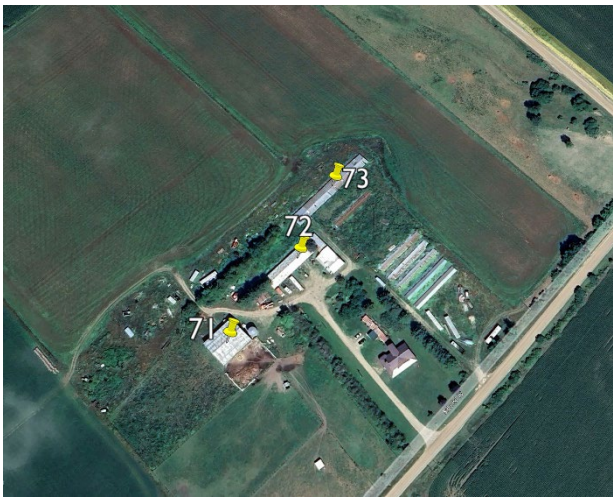
Agricultural Buildings 59 and 60

Agricultural Buildings 61 and 63

Agricultural Buildings 64 and 65

Agricultural Buildings 66, 67 and 68

Agricultural Buildings 69 and 70



Agricultural Buildings 71, 72 and 73

Agricultural Buildings 74 and 75

Agricultural Building 76

Agricultural Buildings 77 and 78

Agricultural Buildings 79 and 80

Agricultural Buildings 81 and 82

Agricultural Buildings 83, 84 and 85

APPENDIX C

Minimum Distance Separation (MDS 1) Agrisuite Sheets

Ontario

AgriSuite

MDS I

General information

Application date
Sep 26, 2024

Municipal file number

Proposed application
New or expanding settlement area boundary

Applicant contact information
Lucy Stocoo
Tribute Communities
1815 Ironstone Manor
Unit 1
Pickering, ON
L1W 3W9

Location of subject lands
County of Wellington
Township of Centre Wellington
NICHOL
Concession 13, 14 , Lot 11-15
Roll number: 23260000230500

Calculations

Building 1

Farm contact information

Cachet Developments (Elora Sands)
7581 15 Sideroad
Centre Wellington, ON
N0B 1S0

Location of existing livestock facility or anaerobic digestor

County of Wellington
Township of Centre Wellington
NICHOL
Concession 13,14 , Lot 11-15
Roll number: 2326000023050000

Total lot size

38.63 ha

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), Yard/Barn	74	74 NU	344 m²

Confirm Livestock/Manure Information (Building 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	**74 NU**
Potential design capacity	**74 NU**

Factor A (odour potential) **0.7**
Factor D (manure type) **0.7**
Factor B (design capacity) **292.51**
Factor E (encroaching land use) **2.2**

Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn)	**316 m (1037 ft)**
Actual distance from livestock barn	**NA**
Storage base distance 'S' (minimum distance from manure storage)	**316 m (1037 ft)**
Actual distance from manure storage	**NA**

Building 14

Farm contact information

6718 Gerrie Road
Centre Wellington, ON
N0B 1S0

Location of existing livestock facility or anaerobic digestor
County of Wellington
Township of Centre Wellington
NICHOL
Concession 12 , Lot 13
Roll number: 2326000023085000

Total lot size
28.44 ha

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), Yard/Barn	34	34 NU	158 m²

Confirm Livestock/Manure Information (Building 14)
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	**34 NU**
Potential design capacity	**34 NU**

Factor A (odour potential) **0.7**
Factor B (design capacity) **228**
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)	**246 m (807 ft)**
Actual distance from livestock barn	**NA**
Storage base distance 'S' (minimum distance from manure storage)	**246 m (807 ft)**
Actual distance from manure storage	**NA**

Building 26

Farm contact information

Dutcholm
6707 Irvine Street
Centre Wellington , ON
N0B 1S0

Location of existing livestock facility or anaerobic digestor
County of Wellington
Township of Centre Wellington
NICHOL
Concession 12 , Lot 11, 12
Roll number: 2326000023084000

Total lot size
89.19 ha

Notes
Full herd dispersal Sept 6, 2024
67 Holstein
31 Jersey
4 Brown Swiss
11 Semen Lots

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Liquid	Dairy, Calves Large Frame (45 - 182 kg) (eg. Holsteins)	11	1.8 NU	36 m²
Liquid	Dairy, Calves Small Frame (30 - 125 kg) (eg. Jerseys)	31	3.6 NU	81 m²
Liquid	Dairy, Calves Large Frame (45 - 182 kg) (eg. Holsteins)	71	11.8 NU	231 m²

Confirm Livestock/Manure Information (Building 26)
The livestock/manure information has not been confirmed with the property owner and/or farm operator.

Setback summary

Existing manure storage	**M1. Liquid, outside, no cover, straight-walled storage**
Design capacity	**17.3 NU**
Potential design capacity	**17.3 NU**

Factor A (odour potential) **0.7**
Factor B (design capacity) **191.03**
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)	**236 m (774 ft)**
Actual distance from livestock barn	**NA**
Storage base distance 'S' (minimum distance from manure storage)	**313 m (1027 ft)**
Actual distance from manure storage	**NA**

Building 28

Farm contact information

7715 Sideroad 15
Centre Wellington, ON
N1M 2W3

Location of existing livestock facility or anaerobic digestor
County of Wellington
Township of Centre Wellington
NICHOL
Concession 14 , Lot 16
Roll number: 2326000021046000

Total lot size
34.81 ha

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), Yard/Barn	104	104 NU	483 m²

Confirm Livestock/Manure Information (Building 28)
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	**104 NU**
Potential design capacity	**104 NU**

Factor A (odour potential) **0.7**
Factor D (manure type) **0.7**
Factor B (design capacity) **320.11**
Factor E (encroaching land use) **2.2**

Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn)	**346 m (1135 ft)**
Actual distance from livestock barn	**NA**
Storage base distance 'S' (minimum distance from manure storage)	**346 m (1135 ft)**
Actual distance from manure storage	**NA**

Building 32 and 33

Farm contact information

6611 Hwy 6
Centre Wellington, ON
N1M 2W3

Location of existing livestock facility or anaerobic digestor
County of Wellington
Township of Centre Wellington
NICHOL
Concession 16 , Lot 16
Roll number: 23260000230060

Total lot size
38.51 ha

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Horses, Medium-framed, mature; 227 - 680 kg (including unweaned offspring)	15	15 NU	348 m²
Solid	Horses, Medium-framed, mature; 227 - 680 kg (including unweaned offspring)	10	10 NU	232 m²

Confirm Livestock/Manure Information (Building 32 and 33)
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 **25 NU**

Potential design capacity **25 NU**

Factor A (odour potential) **0.7**
Factor D (manure type) **0.7**
Factor B (design capacity) **210**
Factor E (encroaching land use) **2.2**

Building base distance 'F' (A x B x D x E)
(minimum distance from livestock barn) **227 m (745 ft)**

Actual distance from livestock barn **NA**

Storage base distance 'S'
(minimum distance from manure storage) **227 m (745 ft)**

Actual distance from manure storage **NA**

Building 39

Farm contact information

6602 Hwy 6
Centre Wellington, ON
N1M 2W3

Location of existing livestock facility or anaerobic digestor
County of Wellington
Township of Centre Wellington
NICHOL
Concession 15 , Lot 16
Roll number: 23260000210970

Total lot size
40.03 ha

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Horses, Medium-framed, mature; 227 - 680 kg (including unweaned offspring)	10	10 NU	232 m²

Confirm Livestock/Manure Information (Building 39)
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	**10 NU**
Potential design capacity	**10 NU**

Factor A (odour potential) **0.7**
Factor D (manure type) **0.7**
Factor B (design capacity) **166.66**
Factor E (encroaching land use) **2.2**

Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn)	**180 m (591 ft)**
Actual distance from livestock barn	**NA**
Storage base distance 'S' (minimum distance from manure storage)	**180 m (591 ft)**
Actual distance from manure storage	**NA**

Building 40

Farm contact information

6581 Hwy 6
Centre Wellington, ON
N1M2W3

Location of existing livestock facility or anaerobic digestor
County of Wellington
Township of Centre Wellington
NICHOL
Concession 16 , Lot 17
Roll number: 23260000230050

Total lot size
19.7 ha

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), Yard/Barn	69	69 NU	321 m²

Confirm Livestock/Manure Information (Building 40)
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	**69 NU**
Potential design capacity	**69 NU**

Factor A (odour potential) **0.7**
Factor D (manure type) **0.7**
Factor B (design capacity) **288.04**
Factor E (encroaching land use) **2.2**

Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn)	**311 m (1020 ft)**
Actual distance from livestock barn	**NA**
Storage base distance 'S' (minimum distance from manure storage)	**311 m (1020 ft)**
Actual distance from manure storage	**NA**

Building 55

Farm contact information

7691 10 Sideroad
Centre Wellington, ON
N1M 2W3

Location of existing livestock facility or anaerobic digestor
County of Wellington
Township of Centre Wellington
NICHOL
Concession 14 , Lot 10
Roll number: 23260000230550

Total lot size
20.27 ha

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Horses, Medium-framed, mature; 227 - 680 kg (including unweaned offspring)	12	12 NU	279 m²

Confirm Livestock/Manure Information (Building 55)
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	**12 NU**
Potential design capacity	**12 NU**

Factor A (odour potential) **0.7**
Factor D (manure type) **0.7**
Factor B (design capacity) **173.33**
Factor E (encroaching land use) **2.2**

Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn)	**187 m (614 ft)**
Actual distance from livestock barn	**NA**
Storage base distance 'S' (minimum distance from manure storage)	**187 m (614 ft)**
Actual distance from manure storage	**NA**

Building 61

Farm contact information

Drost Cattle
6684 Beatty Line N
Centre Wellington, ON
N1M 2W3

Location of existing livestock facility or anaerobic digestor

County of Wellington
Township of Centre Wellington
NICHOL
Roll number: 23260000230500

Total lot size
149.96 ha

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Liquid	Dairy, Calves Large Frame (45 - 182 kg) (eg. Holsteins)	889	148.2 NU	2891 m²

Confirm Livestock/Manure Information (Building 61)
The livestock/manure information has not been confirmed with the property owner and/or farm operator.

Setback summary

Existing manure storage	**V5. Liquid, inside, underneath slatted floor**
Design capacity	**148.2 NU**
Potential design capacity	**148.2 NU**

Factor A (odour potential) **0.7**
Factor B (design capacity) **362.33**
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)	**447 m (1467 ft)**
Actual distance from livestock barn	**NA**
Storage base distance 'S' (minimum distance from manure storage)	**447 m (1467 ft)**
Actual distance from manure storage	**NA**

Building 67 and 68

Farm contact information

7646 10 Sideroad
ON
N1M 2W3

Location of existing livestock facility or anaerobic digestor
County of Wellington
Township of Centre Wellington
NICHOL
Concession 13 , Lot 9
Roll number: 23260000230750

Total lot size
39.57 ha

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), Yard/Barn	125	125 NU	581 m²
Solid	Beef, Cows, including calves to weaning (all breeds), Yard/Barn	327	327 NU	1519 m²

Confirm Livestock/Manure Information (Building 67 and 68)
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	**452 NU**
Potential design capacity	**452 NU**

Factor A (odour potential) **0.7**
Factor D (manure type) **0.7**
Factor B (design capacity) **535.35**
Factor E (encroaching land use) **2.2**

Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn)	**578 m (1896 ft)**
Actual distance from livestock barn	**NA**
Storage base distance 'S' (minimum distance from manure storage)	**578 m (1896 ft)**
Actual distance from manure storage	**NA**

Building 69

Farm contact information

6823 Gerrie Road
Centre Wellington, ON
N0B 1S0

Location of existing livestock facility or anaerobic digestor
County of Wellington
Township of Centre Wellington
NICHOL
Concession 13 , Lot 8
Roll number: 23260000230740

Total lot size
10.19 ha

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Horses, Medium-framed, mature; 227 - 680 kg (including unweaned offspring)	36	36 NU	836 m²

Confirm Livestock/Manure Information (Building 69)
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	**36 NU**
Potential design capacity	**36 NU**

Factor A (odour potential) **0.7**
Factor D (manure type) **0.7**
Factor B (design capacity) **232**
Factor E (encroaching land use) **2.2**

Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn)	**251 m (823 ft)**
Actual distance from livestock barn	**NA**
Storage base distance 'S' (minimum distance from manure storage)	**251 m (823 ft)**
Actual distance from manure storage	**NA**

Building 71

Farm contact information

7710 Sideroad 10
Centre Wellington, ON
N1M 2W3

Location of existing livestock facility or anaerobic digestor
County of Wellington
Township of Centre Wellington
NICHOL
Concession 14 , Lot 9
Roll number: 23260000230570

Total lot size
41.82 ha

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Horses, Medium-framed, mature; 227 - 680 kg (including unweaned offspring)	19	19 NU	441 m²

Confirm Livestock/Manure Information (Building 71)
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	**19 NU**
Potential design capacity	**19 NU**

Factor A (odour potential) **0.7**
Factor D (manure type) **0.7**
Factor B (design capacity) **196.66**
Factor E (encroaching land use) **2.2**

Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn)	**212 m (696 ft)**
Actual distance from livestock barn	**NA**
Storage base distance 'S' (minimum distance from manure storage)	**212 m (696 ft)**
Actual distance from manure storage	**NA**

Building 76

Farm contact information

7740 10th Sideroad
Centre Wellington, ON
N1M 2W3

Location of existing livestock facility or anaerobic digestor
County of Wellington
Township of Centre Wellington
NICHOL
Concession 15 , Lot 10
Roll number: 23260000230430

Total lot size
17.6 ha

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Horses, Medium-framed, mature; 227 - 680 kg (including unweaned offspring)	10	10 NU	232 m²

Confirm Livestock/Manure Information (Building 76)
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	**10 NU**
Potential design capacity	**10 NU**

Factor A (odour potential) **0.7**
Factor D (manure type) **0.7**
Factor B (design capacity) **166.66**
Factor E (encroaching land use) **2.2**

Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn)	**180 m (591 ft)**
Actual distance from livestock barn	**NA**
Storage base distance 'S' (minimum distance from manure storage)	**180 m (591 ft)**
Actual distance from manure storage	**NA**

Buildings 22 and 23

Farm contact information

Weber
6805 Irvine St
Centre Wellington, ON
N0B 1S0

Location of existing livestock facility or anaerobic digestor
County of Wellington
Township of Centre Wellington
NICHOL
Concession 12 , Lot 9
Roll number: 2326000023085000

Total lot size
50.74 ha

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Liquid	Dairy, Calves Medium Frame (39 - 148 kg) (eg. Guernseys)	480	68.6 NU	1427 m²
Solid	Dairy, Calves Medium Frame (39 - 148 kg) (eg. Guernseys)	195	27.9 NU	580 m²

Confirm Livestock/Manure Information (Buildings 22 and 23)
The livestock/manure information has not been confirmed with the property owner and/or farm operator.

Setback summary

Existing manure storage	**V5. Liquid, inside, underneath slatted floor**
Design capacity	**96.4 NU**
Potential design capacity	**96.4 NU**

Factor A (odour potential) **0.7**
Factor B (design capacity) **312.56**
Factor D (manure type) **0.77**
Factor E (encroaching land use) **2.2**

Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn)	**371 m (1217 ft)**
Actual distance from livestock barn	**NA**
Storage base distance 'S' (minimum distance from manure storage)	**371 m (1217 ft)**
Actual distance from manure storage	**NA**

Buildings 77 and 78

Farm contact information

Serenity Farms
7780 Sideroad 10
Fergus, ON
N1M 2W3

Location of existing livestock facility or anaerobic digestor
County of Wellington
Township of Centre Wellington
NICHOL
Concession 15 , Lot 10
Roll number: 23260000230470

Total lot size
18.46 ha

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), Yard/Barn	91	91 NU	423 m²
Solid	Beef, Cows, including calves to weaning (all breeds), Yard/Barn	42	42 NU	195 m²

Confirm Livestock/Manure Information (Buildings 77 and 78)
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	**133 NU**
Potential design capacity	**133 NU**

Factor A (odour potential) **0.7**
Factor D (manure type) **0.7**
Factor B (design capacity) **348.89**
Factor E (encroaching land use) **2.2**

Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn)	**377 m (1237 ft)**
Actual distance from livestock barn	**NA**
Storage base distance 'S' (minimum distance from manure storage)	**377 m (1237 ft)**
Actual distance from manure storage	**NA**

Building 80

Farm contact information

Hoppy Fields Farms
7784 Sideroad 15
Centre Wellington, ON
N1M 2W3

Location of existing livestock facility or anaerobic digestor

County of Wellington
Township of Centre Wellington
NICHOL
Concession 15 , Lot 15
Roll number: 23260000230470

Total lot size

55.57 ha

Livestock/manure summary

Manure Form	Type of livestock/manure	Existing maximum number	Existing maximum number (NU)	Estimated livestock barn area
Solid	Sheep, Ewes & rams (for meat lambs; includes unweaned offspring & replacements), Outside Access	128	16 NU	178 m²

Confirm Livestock/Manure Information (Building 80)

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	**16 NU**
Potential design capacity	**16 NU**

Factor A (odour potential) **0.7**
Factor D (manure type) **0.7**
Factor B (design capacity) **186.66**
Factor E (encroaching land use) **2.2**

Building base distance 'F' (A x B x D x E) (minimum distance from livestock barn)	**202 m (663 ft)**
Actual distance from livestock barn	**NA**
Storage base distance 'S' (minimum distance from manure storage)	**202 m (663 ft)**
Actual distance from manure storage	**NA**

Preparer signoff & disclaimer

Preparer contact information

David Hodgson
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Signature of preparer

David Hodgson , President

Date (mmm-dd-yyyy)

Note to the user

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APPENDIX D

Unique Soil Symbols and Canada Land Inventory (CLI) List

SOIL_NAME1	SYMBOL1	SLOPE1	CLASS1	RANGE1	STONINES	CLI1	CLI1_1	CLI1_2
BOTTOM LAND	B.L.	3.50	C	2 - 5	1	1		
BOTTOM LAND	B.L.	1.20	B	0.5 - 2	0	O		
BOTTOM LAND	B.L.	7.00	D	5 - 9	4	6	R	
BOTTOM LAND	B.L.	7.00	D	5 - 9	0	2	F	M
BOTTOM LAND	B.L.	1.20	B	0.5 - 2	1	2	W	
BOTTOM LAND	B.L.	3.50	C	2 - 5	1	2	F	M
BOTTOM LAND	B.L.	1.20	B	0.5 - 2	1	4	W	
BOTTOM LAND	B.L.	3.50	C	2 - 5	2	2	F	M
BOTTOM LAND	B.L.	7.00	D	5 - 9	0	1		
BRADY SANDY LOAM	Bs	1.20	B	0.5 - 2	1	2	W	
BRADY SANDY LOAM	Bs	1.20	B	0.5 - 2	1	4	W	
BRADY SANDY LOAM	Bs	1.20	B	0.5 - 2	0	O		
BRADY SANDY LOAM	Bs	12.00	E	9 - 15	1	1		
BRADY SANDY LOAM	Bs	1.20	B	0.5 - 2	0	2	W	
BRADY SANDY LOAM	Bs	7.00	D	5 - 9	0	1		
BRADY SANDY LOAM	Bs	3.50	C	2 - 5	1	2	F	M
BRADY SANDY LOAM	Bs	1.20	B	0.5 - 2	0	5	W	
BRADY SANDY LOAM	Bs	22.50	F	15 - 30	2	6	S	T
BRADY SANDY LOAM	Bs	3.50	C	2 - 5	0	2	F	M
BRADY SANDY LOAM	Bs	3.50	C	2 - 5	1	1		
BRADY SANDY LOAM	Bs	12.00	E	9 - 15	3	6	S	T
BRADY SANDY LOAM	Bs	12.00	E	9 - 15	3	3	F	M
BRADY SANDY LOAM	Bs	22.50	F	15 - 30	3	3	F	M
BRADY SANDY LOAM	Bs	7.00	D	5 - 9	1	1		
BRADY SANDY LOAM	Bs	1.20	B	0.5 - 2	1	2	F	
BRADY SANDY LOAM	Bs	7.00	D	5 - 9	0	2	F	M
BRADY SANDY LOAM	Bs	22.50	F	15 - 30	3	6	S	T
BRANT FINE SANDY	Btf	1.20	B	0.5 - 2	0	O		
BRANT FINE SANDY	Btf	3.50	C	2 - 5	1	2	F	M
BRANT FINE SANDY	Btf	12.00	E	9 - 15	3	6	S	T
BRANT FINE SANDY	Btf	3.50	C	2 - 5	0	1		
BRANT FINE SANDY	Btf	1.20	B	0.5 - 2	0	4	W	
BRANT FINE SANDY	Btf	7.00	D	5 - 9	1	1		
BRANT FINE SANDY	Btf	12.00	E	9 - 15	2	6	S	T
BRANT FINE SANDY	Btf	1.20	B	0.5 - 2	1	2	W	
BRISBANE LOAM	Bl	1.20	B	0.5 - 2	0	O		
BRISBANE LOAM	Bl	7.00	D	5 - 9	1	1		
BRISBANE LOAM	Bl	3.50	C	2 - 5	1	2	F	M
BRISBANE LOAM	Bl	1.20	B	0.5 - 2	1	2	W	
BRISBANE LOAM	Bl	7.00	D	5 - 9	0	1		

BRISBANE LOAM	Bl	3.50	C	2 - 5	1	1		
BRISBANE LOAM	Bl	1.20	B	0.5 - 2	3	5	P	
BRISBANE LOAM	Bl	12.00	E	9 - 15	3	3	F	M
BRISBANE LOAM	Bl	3.50	C	2 - 5	2	2	F	M
BRISBANE LOAM	Bl	12.00	E	9 - 15	3	6	S	T
BRISBANE LOAM	Bl	3.50	C	2 - 5	0	2	F	M
BRISBANE LOAM	Bl	-9.00	N	N	N	W		
BRISBANE LOAM	Bl	1.20	B	0.5 - 2	0	5	W	
BRISBANE LOAM	Bl	12.00	E	9 - 15	3	4	S	T
BRISBANE LOAM	Bl	22.50	F	15 - 30	3	6	S	T
BRISBANE LOAM	Bl	1.20	B	0.5 - 2	0	2	W	
BRISBANE LOAM	Bl	-9.00	N	N	0	5	I	
BROOKSTON LOAM	Bnl	12.00	E	9 - 15	1	6	S	T
BROOKSTON LOAM	Bnl	1.20	B	0.5 - 2	1	2	F	
BROOKSTON LOAM	Bnl	12.00	E	9 - 15	1	1		
BROOKSTON LOAM	Bnl	3.50	C	2 - 5	1	1		
BROOKSTON LOAM	Bnl	12.00	E	9 - 15	0	1		
BROOKSTON LOAM	Bnl	3.50	C	2 - 5	0	1		
BROOKSTON LOAM	Bnl	7.00	D	5 - 9	1	1		
BROOKSTON LOAM	Bnl	12.00	E	9 - 15	2	3	F	M
BROOKSTON LOAM	Bnl	7.00	D	5 - 9	4	6	R	
BROOKSTON LOAM	Bnl	1.20	B	0.5 - 2	3	5	P	
BROOKSTON LOAM	Bnl	1.20	B	0.5 - 2	1	2	W	
BROOKSTON LOAM	Bnl	12.00	E	9 - 15	3	6	S	T
BROOKSTON LOAM	Bnl	3.50	C	2 - 5	1	2	F	M
BROOKSTON LOAM	Bnl	1.20	B	0.5 - 2	1	4	W	
BROOKSTON LOAM	Bnl	1.20	B	0.5 - 2	0	O		
BROOKSTON LOAM	Bnl	12.00	E	9 - 15	2	6	S	T
BROOKSTON LOAM	Bnl	7.00	D	5 - 9	1	2	F	M
BROOKSTON LOAM	Bnl	12.00	E	9 - 15	1	3	F	M
BROOKSTON LOAM	Bnl	22.50	F	15 - 30	3	6	S	T
BROOKSTON LOAM	Bnl	-9.00	N	N	N	W		
BROOKSTON LOAM	Bnl	7.00	D	5 - 9	0	1		
BROOKSTON LOAM	Bnl	-9.00	N	N	0	5	I	
BROOKSTON LOAM	Bnl	1.20	B	0.5 - 2	2	6	P	W
BROOKSTON LOAM	Bnl	22.50	F	15 - 30	2	6	S	T
BROOKSTON LOAM	Bnl	12.00	E	9 - 15	1	2	F	M
BROOKSTON LOAM	Bnl	22.50	F	15 - 30	2	3	F	M
BROOKSTON LOAM	Bnl	37.50	G	30 - 45	3	6	S	T
BROOKSTON LOAM	Bnl	3.50	C	2 - 5	2	2	F	M
BROOKSTON LOAM	Bnl	1.20	B	0.5 - 2	0	5	W	
BROOKSTON LOAM	Bnl	1.20	B	0.5 - 2	0	1		
BROOKSTON LOAM	Bnl	7.00	D	5 - 9	0	2	F	M
BROOKSTON LOAM	Bnl	3.50	C	2 - 5	1	2	F	
BROOKSTON LOAM	Bnl	7.00	D	5 - 9	2	3	T	

BROOKSTON LOAM	Bnl	1.20	B	0.5 - 2	1	1		
BROOKSTON LOAM	Bnl	1.20	B	0.5 - 2	0	4	W	
BROOKSTON LOAM	Bnl	1.20	B	0.5 - 2	0	2	W	
BROOKSTON LOAM	Bnl	3.50	C	2 - 5	3	5	P	
BROOKSTON LOAM	Bnl	22.50	F	15 - 30	1	3	F	M
BROOKSTON SILT	Bns	7.00	D	5 - 9	1	1		
BROOKSTON SILT	Bns	3.50	C	2 - 5	1	1		
BROOKSTON SILT	Bns	3.50	C	2 - 5	2	2	F	M
BROOKSTON SILT	Bns	12.00	E	9 - 15	3	6	S	T
BROOKSTON SILT	Bns	-9.00	N	N	N	0		
BROOKSTON SILT	Bns	1.20	B	0.5 - 2	0	O		
BROOKSTON SILT	Bns	1.20	B	0.5 - 2	1	2	F	
BROOKSTON SILT	Bns	7.00	D	5 - 9	0	1		
BROOKSTON SILT	Bns	3.50	C	2 - 5	0	1		
BROOKSTON SILT	Bns	1.20	B	0.5 - 2	2	5	P	
BROOKSTON SILT	Bns	1.20	B	0.5 - 2	1	2	W	
BROOKSTON SILT	Bns	12.00	E	9 - 15	2	1		
BROOKSTON SILT	Bns	22.50	F	15 - 30	3	3	F	M
BROOKSTON SILT	Bns	12.00	E	9 - 15	4	6	R	
BROOKSTON SILT	Bns	1.20	B	0.5 - 2	0	2	W	
BROOKSTON SILT	Bns	12.00	E	9 - 15	1	1		
BROOKSTON SILT	Bns	12.00	E	9 - 15	0	1		
BROOKSTON SILT	Bns	1.20	B	0.5 - 2	0	2	F	
BROOKSTON SILT	Bns	1.20	B	0.5 - 2	0	5	W	
BROOKSTON SILT	Bns	-9.00	N	N	0	5	I	
BUILT UP AREA	BU	3.50	C	2 - 5	0	1		
BUILT UP AREA	BU	1.20	B	0.5 - 2	1	4	W	
BUILT UP AREA	BU	7.00	D	5 - 9	1	1		
BUILT UP AREA	BU	1.20	B	0.5 - 2	1	2	W	
BUILT UP AREA	BU	3.50	C	2 - 5	1	2	F	M
BUILT UP AREA	BU	12.00	E	9 - 15	1	1		
BUILT UP AREA	BU	3.50	C	2 - 5	1	1		
BUILT UP AREA	BU	1.20	B	0.5 - 2	0	5	W	
BUILT UP AREA	BU	22.50	F	15 - 30	2	3	F	M
BUILT UP AREA	BU	1.20	B	0.5 - 2	0	2	W	
BUILT UP AREA	BU	7.00	D	5 - 9	1	2	F	M
BURFORD LOAM	Bg	37.50	G	30 - 45	2	6	S	T
BURFORD LOAM	Bg	12.00	E	9 - 15	1	1		

BURFORD LOAM	Bg	1.20	B	0.5 - 2	2	5	P	
BURFORD LOAM	Bg	3.50	C	2 - 5	1	1		
BURFORD LOAM	Bg	7.00	D	5 - 9	1	1		
BURFORD LOAM	Bg	1.20	B	0.5 - 2	0	O		
BURFORD LOAM	Bg	1.20	B	0.5 - 2	1	2	W	
BURFORD LOAM	Bg	22.50	F	15 - 30	2	3	F	M
BURFORD LOAM	Bg	-9.00	N	N	0	5	1	
BURFORD LOAM	Bg	3.50	C	2 - 5	1	2	F	M
BURFORD LOAM	Bu	1.20	B	0.5 - 2	1	2	W	
BURFORD LOAM	Bg	12.00	E	9 - 15	0	1		
BURFORD LOAM	Bg	7.00	D	5 - 9	0	1		
BURFORD LOAM	Bg	1.20	B	0.5 - 2	1	4	W	
BURFORD LOAM	Bg	3.50	C	2 - 5	0	2	F	M
BURFORD LOAM	Bg	3.50	C	2 - 5	0	1		
BURFORD LOAM	Bg	3.50	C	2 - 5	2	2	F	M
BURFORD LOAM	Bg	12.00	E	9 - 15	3	6	S	T
BURFORD LOAM	Bg	1.20	B	0.5 - 2	0	2	W	
BURFORD LOAM	Bg	22.50	F	15 - 30	3	6	S	T
BURFORD LOAM	Bg	1.20	B	0.5 - 2	0	5	W	
BURFORD LOAM	Bg	-9.00	N	N	N	0		
BURFORD LOAM	Bg	37.50	G	30 - 45	3	6	S	T
BURFORD LOAM	Bg	1.20	B	0.5 - 2	0	4	W	
BURFORD LOAM	Bg	3.50	C	2 - 5	3	5	P	
BURFORD LOAM	Bg	12.00	E	9 - 15	2	3	F	M
BURFORD LOAM	Bg	7.00	D	5 - 9	3	3	F	M
BURFORD LOAM	Bg	7.00	D	5 - 9	2	6	S	T
BURFORD LOAM	Bg	12.00	E	9 - 15	2	1		
BURFORD LOAM	Bg	22.50	F	15 - 30	1	3	F	M
BURFORD LOAM	Bg	7.00	D	5 - 9	3	6	S	T
BURFORD LOAM	Bg	1.20	B	0.5 - 2	1	1		
BURFORD LOAM	Bg	7.00	D	5 - 9	2	2	F	M
CALEDON FINE	Cg	7.00	D	5 - 9	1	1		
CALEDON FINE	Cg	1.20	B	0.5 - 2	1	2	W	
CALEDON FINE	Cg	1.20	B	0.5 - 2	0	O		
CALEDON FINE	Cg	7.00	D	5 - 9	2	2	F	M
CALEDON FINE	Cg	-9.00	N	N	0	5	1	
CALEDON FINE	Cg	3.50	C	2 - 5	1	2	F	M
CALEDON FINE	Cg	1.20	B	0.5 - 2	0	5	W	
CALEDON FINE	Cg	7.00	D	5 - 9	0	1		
CALEDON FINE	Cg	37.50	G	30 - 45	3	6	S	T
CALEDON FINE	Cg	12.00	E	9 - 15	3	6	S	T

CALEDON FINE	Cg	1.20	B	0.5 - 2	0	2	W	
CALEDON FINE	Cg	3.50	C	2 - 5	1	1		
CALEDON FINE	Cg	12.00	E	9 - 15	1	1		
CALEDON FINE	Cg	3.50	C	2 - 5	0	2	F	M
CALEDON FINE	Cg	1.20	B	0.5 - 2	1	2	F	
COLWOOD FINE	Cof	1.20	B	0.5 - 2	1	2	W	
COLWOOD FINE	Cof	7.00	D	5 - 9	4	3	F	M
COLWOOD FINE	Cof	1.20	B	0.5 - 2	2	4	W	
COLWOOD FINE	Cof	7.00	D	5 - 9	3	6	S	T
COLWOOD FINE	Cof	12.00	E	9 - 15	2	1		
COLWOOD FINE	Cof	3.50	C	2 - 5	1	1		
COLWOOD FINE	Cof	3.50	C	2 - 5	1	2	F	M
COLWOOD FINE	Cof	7.00	D	5 - 9	1	1		
COLWOOD SILT	Cos	7.00	D	5 - 9	1	1		
COLWOOD SILT	Cos	1.20	B	0.5 - 2	1	2	W	
COLWOOD SILT	Cos	1.20	B	0.5 - 2	0	O		
COLWOOD SILT	Cos	1.20	B	0.5 - 2	0	5	W	
COLWOOD SILT	Cos	3.50	C	2 - 5	0	4	W	
COLWOOD SILT	Cos	1.20	B	0.5 - 2	0	2	W	
COLWOOD SILT	Cos	3.50	C	2 - 5	0	2	F	
COLWOOD SILT	Cos	7.00	D	5 - 9	0	1		
COLWOOD SILT	Cos	-9.00	N	N	0	5	I	
DONNYBROOK	Dk	3.50	C	2 - 5	1	2	F	M
DONNYBROOK	Db	3.50	C	2 - 5	1	1		
DONNYBROOK	Db	12.00	E	9 - 15	3	6	S	T
DONNYBROOK	Db	12.00	E	9 - 15	1	1		
DONNYBROOK	Db	1.20	B	0.5 - 2	1	2	W	
DONNYBROOK	Db	-9.00	N	N	N	0		
DONNYBROOK	Db	7.00	D	5 - 9	1	2	F	M
DONNYBROOK	Db	1.20	B	0.5 - 2	0	O		
DONNYBROOK	Db	-9.00	N	N	N	W		
DONNYBROOK	Db	7.00	D	5 - 9	2	1		
DONNYBROOK	Db	1.20	B	0.5 - 2	1	2	F	

DONNYBROOK	Db	-9.00	N	N	0	5	I	
DONNYBROOK	Db	7.00	D	5 - 9	I	I		
DONNYBROOK	Db	1.20	B	0.5 - 2	I	I		
DONNYBROOK	Db	3.50	C	2 - 5	0	I		
DONNYBROOK	Db	1.20	B	0.5 - 2	3	6	P	W
DONNYBROOK	Db	3.50	C	2 - 5	I	2	F	M
DONNYBROOK	Db	1.20	B	0.5 - 2	0	2	W	
DONNYBROOK	Db	22.50	F	15 - 30	3	6	S	T
DONNYBROOK	Db	3.50	C	2 - 5	4	6	R	
DONNYBROOK	Db	22.50	F	15 - 30	2	3	F	M
DONNYBROOK	Db	7.00	D	5 - 9	0	I		
DONNYBROOK	Db	12.00	E	9 - 15	0	I		
DONNYBROOK	Db	1.20	B	0.5 - 2	I	6	R	
DONNYBROOK	Db	3.50	C	2 - 5	2	2	F	M
DONNYBROOK	Db	1.20	B	0.5 - 2	2	4	W	
DONNYBROOK	Db	12.00	E	9 - 15	I	3	F	M
DONNYBROOK	Db	12.00	E	9 - 15	I	2	W	
DONNYBROOK	Db	1.20	B	0.5 - 2	3	5	P	
DONNYBROOK	Db	1.20	B	0.5 - 2	I	4	W	
DONNYBROOK	Db	12.00	E	9 - 15	0	6	S	T
DONNYBROOK	Db	12.00	E	9 - 15	I	6	S	T
DONNYBROOK	Db	1.20	B	0.5 - 2	0	5	W	
DONNYBROOK	Db	1.20	B	0.5 - 2	0	6	R	
DUMFRIES LOAM	Dl	1.20	B	0.5 - 2	I	2	W	
DUMFRIES LOAM	Dl	1.20	B	0.5 - 2	0	O		
DUMFRIES SANDY	Dl	37.50	G	30 - 45	3	6	S	T
DUMFRIES SANDY	Dl	7.00	D	5 - 9	0	I		
DUMFRIES SANDY	Dl	22.50	F	15 - 30	2	3	F	M
DUMFRIES SANDY	Dl	7.00	D	5 - 9	I	I		
DUMFRIES SANDY	Dl	1.20	B	0.5 - 2	I	2	W	
DUMFRIES SANDY	Dl	-9.00	N	N	0	5	I	
DUMFRIES SANDY	Dl	12.00	E	9 - 15	0	I		
DUMFRIES SANDY	Dl	3.50	C	2 - 5	0	I		
DUMFRIES SANDY	Dl	1.20	B	0.5 - 2	I	4	W	

DUMFRIES SANDY	DI	1.20	B	0.5 - 2	0	O			
DUMFRIES SANDY	DI	-9.00	N	N	N	W			
DUMFRIES SANDY	DI	1.20	B	0.5 - 2	3	5	P		
DUMFRIES SANDY	DI	1.20	B	0.5 - 2	0	4	W		
DUMFRIES SANDY	DI	1.20	B	0.5 - 2	0	2	F		
DUMFRIES SANDY	DI	3.50	C	2 - 5	1	1			
DUMFRIES SANDY	DI	1.20	B	0.5 - 2	3	6	P	W	
DUMFRIES SANDY	DI	12.00	E	9 - 15	3	6	S	T	
DUMFRIES SANDY	DI	1.20	B	0.5 - 2	0	2	W		
DUMFRIES SANDY	DI	7.00	D	5 - 9	2	2	F	M	
DUMFRIES SANDY	DI	3.50	C	2 - 5	1	2	F	M	
DUMFRIES SANDY	DI	1.20	B	0.5 - 2	1	1			
DUMFRIES SANDY	DI	12.00	E	9 - 15	1	1			
FARMINGTON LOAM	Fl	7.00	D	5 - 9	0	2	F	M	
FARMINGTON LOAM	Fl	3.50	C	2 - 5	0	1			
FARMINGTON LOAM	Fl	12.00	E	9 - 15	1	1			
FARMINGTON LOAM	Fl	1.20	B	0.5 - 2	1	2	W		
FARMINGTON LOAM	Fl	7.00	D	5 - 9	0	1			
FARMINGTON LOAM	Fl	-9.00	N	N	0	5	1		
FARMINGTON LOAM	Fl	1.20	B	0.5 - 2	0	O			
FARMINGTON LOAM	Fl	1.20	B	0.5 - 2	0	2	W		
FARMINGTON LOAM	Fl	1.20	B	0.5 - 2	1	4	W		
FARMINGTON LOAM	Fl	7.00	D	5 - 9	1	1			
FARMINGTON LOAM	Fl	3.50	C	2 - 5	1	1			
FARMINGTON LOAM	Fl	12.00	E	9 - 15	3	6	S	T	
FOX SANDY LOAM	Fs	3.50	C	2 - 5	1	1			
FOX SANDY LOAM	Fs	1.20	B	0.5 - 2	1	2	W		
FOX SANDY LOAM	Fs	7.00	D	5 - 9	1	1			
FOX SANDY LOAM	Fs	22.50	F	15 - 30	3	6	S	T	
FOX SANDY LOAM	Fs	1.20	B	0.5 - 2	3	1			
FOX SANDY LOAM	Fs	-9.00	N	N	N	0			
FOX SANDY LOAM	Fs	-9.00	N	N	0	5	1		
FOX SANDY LOAM	Fs	1.20	B	0.5 - 2	3	6	P	W	
FOX SANDY LOAM	Fs	1.20	B	0.5 - 2	0	O			
FOX SANDY LOAM	Fs	1.20	B	0.5 - 2	1	4	W		
FOX SANDY LOAM	Fs	12.00	E	9 - 15	1	1			
FOX SANDY LOAM	Fs	1.20	B	0.5 - 2	0	5	W		
FOX SANDY LOAM	Fs	1.20	B	0.5 - 2	0	2	W		
FOX SANDY LOAM	Fs	3.50	C	2 - 5	0	1			
FOX SANDY LOAM	Fs	1.20	B	0.5 - 2	1	2	F		

FOX SANDY LOAM	Fs	1.20	B	0.5 - 2	0	4	W	
FOX SANDY LOAM	Fs	1.20	B	0.5 - 2	0	2	F	M
FOX SANDY LOAM	Fs	12.00	E	9 - 15	2	1		
FOX SANDY LOAM	Fs	22.50	F	15 - 30	3	3	F	M
FOX SANDY LOAM	Fs	1.20	B	0.5 - 2	2	2	W	
FOX SANDY LOAM	Fs	7.00	D	5 - 9	4	6	R	
GILFORD LOAM	Gil	1.20	B	0.5 - 2	0	2	W	
GILFORD LOAM	Gil	1.20	B	0.5 - 2	0	O		
GILFORD LOAM	Gil	7.00	D	5 - 9	1	1		
GILFORD LOAM	Gil	1.20	B	0.5 - 2	1	2	F	
GILFORD LOAM	Gil	3.50	C	2 - 5	0	1		
GILFORD LOAM	Gil	3.50	C	2 - 5	1	1		
GILFORD LOAM	Gil	12.00	E	9 - 15	2	6	S	T
GILFORD LOAM	Gil	7.00	D	5 - 9	0	1		
GILFORD LOAM	Gil	1.20	B	0.5 - 2	1	2	W	
GILFORD LOAM	Gil	12.00	E	9 - 15	1	1		
GILFORD LOAM	Gil	-9.00	N	N	0	5	I	
GILFORD LOAM	Gil	22.50	F	15 - 30	3	6	S	T
GILFORD LOAM	Gil	1.20	B	0.5 - 2	0	5	W	
GILFORD LOAM	Gil	1.20	B	0.5 - 2	3	5	P	
GILFORD LOAM	Gil	12.00	E	9 - 15	3	6	S	T
GILFORD LOAM	Gil	3.50	C	2 - 5	2	2	F	M
GILFORD LOAM	Gil	1.20	B	0.5 - 2	1	4	W	
GILFORD LOAM	Gil	3.50	C	2 - 5	1	4	W	
GILFORD LOAM	Gil	22.50	F	15 - 30	3	3	F	M
GILFORD LOAM	Gil	12.00	E	9 - 15	0	1		
GILFORD LOAM	Gil	12.00	E	9 - 15	3	3	F	M
GILFORD LOAM	Gil	3.50	C	2 - 5	1	2	F	M
GILFORD LOAM	Gil	3.50	C	2 - 5	1	2	F	
GILFORD LOAM	Gil	22.50	F	15 - 30	2	3	F	M
GILFORD LOAM	Gil	12.00	E	9 - 15	3	5	S	T
GRANBY SANDY	Grs	7.00	D	5 - 9	1	1		
GRANBY SANDY	Grs	3.50	C	2 - 5	1	1		
GRANBY SANDY	Grs	1.20	B	0.5 - 2	0	O		
GRANBY SANDY	Grs	3.50	C	2 - 5	1	2	F	M
GRANBY SANDY	Grs	1.20	B	0.5 - 2	1	2	W	
GRANBY SANDY	Grs	37.50	G	30 - 45	4	6	S	T
GRANBY SANDY	Grs	-9.00	N	N	N	0		
GRANBY SANDY	Grs	12.00	E	9 - 15	1	3	F	M
GRANBY SANDY	Grs	3.50	C	2 - 5	0	2	F	M
GRANBY SANDY	Grs	1.20	B	0.5 - 2	1	4	W	

GRANBY SANDY	Grs	1.20	B	0.5 - 2	0	5	W	
GRANBY SANDY	Grs	1.20	B	0.5 - 2	1	1		
GRANBY SANDY	Grs	3.50	C	2 - 5	2	2	F	M
GRANBY SANDY	Grs	12.00	E	9 - 15	3	6	S	T
GRANBY SANDY	Grs	3.50	C	2 - 5	0	1		
GRANBY SANDY	Grs	12.00	E	9 - 15	2	6	S	T
GRANBY SANDY	Grs	12.00	E	9 - 15	2	3	F	M
GRANBY SANDY	Grs	12.00	E	9 - 15	1	1		
GRANBY SANDY	Grs	-9.00	N	N	0	5	I	
GRANBY SANDY	Grs	7.00	D	5 - 9	4	6	R	
GRANBY SANDY	Grs	1.20	B	0.5 - 2	0	2	W	
GRANBY SANDY	Grs	22.50	F	15 - 30	1	4	T	
GRANBY SANDY	Grs	7.00	D	5 - 9	0	1		
GRANBY SANDY	Grs	1.20	B	0.5 - 2	1	2	F	
GUELPH LOAM	Gl	7.00	D	5 - 9	1	1		
GUELPH LOAM	Gl	3.50	C	2 - 5	1	2	W	
GUELPH LOAM	Gl	3.50	C	2 - 5	0	2	F	M
GUELPH LOAM	Gl	1.20	B	0.5 - 2	0	O		
GUELPH LOAM	Gl	-9.00	N	N	0	5	I	
GUELPH LOAM	Gl	3.50	C	2 - 5	0	5	I	
GUELPH LOAM	Gl	3.50	C	2 - 5	0	1		
GUELPH LOAM	Gl	3.50	C	2 - 5	1	1		
GUELPH LOAM	Gl	3.50	C	2 - 5	0	2	F	
GUELPH LOAM	Gl	1.20	B	0.5 - 2	0	5	W	
GUELPH LOAM	Gl	12.00	E	9 - 15	1	1		
GUELPH LOAM	Gl	1.20	B	0.5 - 2	1	2	W	
GUELPH LOAM	Gl	7.00	D	5 - 9	2	5	P	
GUELPH LOAM	Gl	7.00	D	5 - 9	4	6	R	
GUELPH LOAM	Gl	12.00	E	9 - 15	3	6	S	T
GUELPH LOAM	Gl	7.00	D	5 - 9	0	1		
GUELPH LOAM	Gl	1.20	B	0.5 - 2	3	5	P	
GUELPH LOAM	Gl	3.50	C	2 - 5	1	2	F	M
GUELPH LOAM	Gl	12.00	E	9 - 15	2	3	F	M
GUELPH LOAM	Gl	1.20	B	0.5 - 2	1	4	W	
GUELPH LOAM	Gl	1.20	B	0.5 - 2	1	2	F	
GUELPH LOAM	Gl	1.20	B	0.5 - 2	0	2	W	
GUELPH LOAM	Gl	22.50	F	15 - 30	3	6	S	T
GUELPH LOAM	Gl	7.00	D	5 - 9	3	6	S	T
GUELPH LOAM	Gl	1.20	B	0.5 - 2	0	4	W	
GUELPH LOAM	Gl	-9.00	N	N	N	W		

GUELPH LOAM	Gl	-9.00	N	N	N	0		
GUELPH LOAM	Gl	12.00	E	9 - 15	2	1		
GUELPH LOAM	Gl	1.20	B	0.5 - 2	1	3	F	M
GUELPH LOAM	Gl	1.20	B	0.5 - 2	1	1		
GUELPH LOAM	Gl	22.50	F	15 - 30	3	3	F	M
GUELPH LOAM	Gl	7.00	D	5 - 9	1	3	F	M
GUELPH LOAM	Gl	7.00	D	5 - 9	2	6	S	T
GUELPH LOAM	Gl	1.20	B	0.5 - 2	0	2	F	
GUELPH LOAM	Gl	1.20	B	0.5 - 2	2	4	W	
GUELPH LOAM	Gl	22.50	F	15 - 30	1	4	T	
GUELPH LOAM	Gl	22.50	F	15 - 30	3	1		
GUELPH LOAM	Gl	22.50	F	15 - 30	2	3	F	M
GUELPH SANDY	Gsl	3.50	C	2 - 5	1	2	F	M
GUELPH SANDY	Gsl	7.00	D	5 - 9	1	1		
GUELPH SANDY	Gsl	12.00	E	9 - 15	3	6	S	T
HARRISTON LOAM	Hl	1.20	B	0.5 - 2	0	5	W	
HARRISTON LOAM	Hl	1.20	B	0.5 - 2	0	2	W	
HARRISTON LOAM	Hl	3.50	C	2 - 5	0	1		
HARRISTON LOAM	Hl	1.20	B	0.5 - 2	0	O		
HARRISTON LOAM	Hl	12.00	E	9 - 15	3	6	S	T
HARRISTON LOAM	Hl	1.20	B	0.5 - 2	1	1		
HARRISTON LOAM	Hl	7.00	D	5 - 9	1	1		
HARRISTON LOAM	Hl	1.20	B	0.5 - 2	2	5	P	
HARRISTON LOAM	Hl	12.00	E	9 - 15	1	1		
HARRISTON LOAM	Hl	3.50	C	2 - 5	1	1		
HARRISTON LOAM	Hl	3.50	C	2 - 5	1	2	F	M
HARRISTON LOAM	Hl	1.20	B	0.5 - 2	1	4	W	
HARRISTON LOAM	Hl	1.20	B	0.5 - 2	2	4	W	
HARRISTON LOAM	Hl	22.50	F	15 - 30	3	3	F	M
HARRISTON LOAM	Hl	1.20	B	0.5 - 2	3	5	P	W
HARRISTON LOAM	Hl	1.20	B	0.5 - 2	1	2	W	
HARRISTON LOAM	Hl	7.00	D	5 - 9	0	1		
HARRISTON LOAM	Hl	3.50	C	2 - 5	0	2	F	M
HARRISTON LOAM	Hl	3.50	C	2 - 5	2	2	F	M
HARRISTON LOAM	Hl	-9.00	N	N	0	5	I	
HARRISTON LOAM	Hl	12.00	E	9 - 15	2	3	F	M
HARRISTON LOAM	Hl	1.20	B	0.5 - 2	1	2	F	M
HARRISTON LOAM	Hl	12.00	E	9 - 15	1	4	W	
HARRISTON LOAM	Hl	1.20	B	0.5 - 2	0	2	F	
HARRISTON LOAM	Hl	1.20	B	0.5 - 2	2	2	F	
HARRISTON LOAM	Hl	3.50	C	2 - 5	2	1		
HARRISTON SILT	Hs	-9.00	N	N	0	5	I	
HARRISTON SILT	Hs	3.50	C	2 - 5	1	1		

HARRISTON SILT	Hs	1.20	B	0.5 - 2	0	O		
HARRISTON SILT	Hs	12.00	E	9 - 15	1	1		
HARRISTON SILT	Hs	7.00	D	5 - 9	1	1		
HARRISTON SILT	Hs	3.50	C	2 - 5	1	2	F	M
HARRISTON SILT	Hs	12.00	E	9 - 15	2	1		
HARRISTON SILT	Hs	1.20	B	0.5 - 2	0	2	F	
HARRISTON SILT	Hs	1.20	B	0.5 - 2	1	2	W	
HARRISTON SILT	Hs	-9.00	N	N	N	0		
HARRISTON SILT	Hs	1.20	B	0.5 - 2	1	1		
HARRISTON SILT	Hs	1.20	B	0.5 - 2	0	2	W	
HARRISTON SILT	Hs	1.20	B	0.5 - 2	0	5	W	
HARRISTON SILT	Hs	7.00	D	5 - 9	4	6	R	
HARRISTON SILT	Hs	-9.00	N	N	N	W		
HARRISTON SILT	Hs	12.00	E	9 - 15	2	6	S	T
HARRISTON SILT	Hs	22.50	F	15 - 30	3	3	F	M
HARRISTON SILT	Hs	1.20	B	0.5 - 2	1	4	W	
HARRISTON SILT	Hs	7.00	D	5 - 9	0	1		
HARRISTON SILT	Hs	3.50	C	2 - 5	0	1		
HARRISTON SILT	Hs	3.50	C	2 - 5	0	4	W	
HARRISTON SILT	Hs	12.00	E	9 - 15	1	2	F	M
HARRISTON SILT	Hs	22.50	F	15 - 30	2	3	F	M
HARRISTON SILT	Hs	1.20	B	0.5 - 2	1	6	P	W
HARRISTON SILT	Hs	7.00	D	5 - 9	3	3	F	M
HARRISTON SILT	Hs	3.50	C	2 - 5	0	2	F	M
HARRISTON SILT	Hs	12.00	E	9 - 15	3	6	S	T
HARRISTON SILT	Hs	3.50	C	2 - 5	2	2	F	M
HARRISTON SILT	Hs	1.20	B	0.5 - 2	1	2	F	
HARRISTON SILT	Hs	1.20	B	0.5 - 2	2	4	W	
HARRISTON SILT	Hs	12.00	E	9 - 15	1	6	S	T
HARRISTON SILT	Hs	1.20	B	0.5 - 2	2	2	W	
HARRISTON SILT	Hs	1.20	B	0.5 - 2	0	1		
HILLSBURGH FINE	Hif	3.50	C	2 - 5	0	2	F	M
HILLSBURGH FINE	Hif	22.50	F	15 - 30	3	6	S	T

HILLSBURGH FINE	Hif	12.00	E	9 - 15	0	1		
HILLSBURGH FINE	Hif	1.20	B	0.5 - 2	0	2	F	
HILLSBURGH FINE	Hif	12.00	E	9 - 15	3	1		
HILLSBURGH FINE	Hif	1.20	B	0.5 - 2	1	2	W	
HILLSBURGH FINE	Hif	7.00	D	5 - 9	3	6	S	T
HILLSBURGH FINE	Hif	7.00	D	5 - 9	1	1		
HILLSBURGH FINE	Hif	1.20	B	0.5 - 2	1	4	W	
HILLSBURGH FINE	Hif	3.50	C	2 - 5	1	1		
HILLSBURGH FINE	Hif	1.20	B	0.5 - 2	0	O		
HILLSBURGH FINE	Hif	7.00	D	5 - 9	0	1		
HILLSBURGH FINE	Hif	22.50	F	15 - 30	2	3	F	M
HILLSBURGH FINE	Hif	12.00	E	9 - 15	4	6	R	
HILLSBURGH FINE	Hif	3.50	C	2 - 5	0	1		
HILLSBURGH FINE	Hif	12.00	E	9 - 15	0	6	S	T
HILLSBURGH FINE	Hif	22.50	F	15 - 30	1	4	T	
HILLSBURGH FINE	Hif	1.20	B	0.5 - 2	0	2	W	
HILLSBURGH FINE	Hif	12.00	E	9 - 15	3	6	S	T
HILLSBURGH FINE	Hif	1.20	B	0.5 - 2	0	5	W	
HILLSBURGH SANDY	His	1.20	B	0.5 - 2	0	2	W	
HILLSBURGH SANDY	His	1.20	B	0.5 - 2	1	4	W	
HILLSBURGH SANDY	His	3.50	C	2 - 5	1	2	F	M
HILLSBURGH SANDY	His	1.20	B	0.5 - 2	1	2	W	
HURON CLAY LOAM	Huc	3.50	C	2 - 5	1	1		
HURON LOAM	Hul	7.00	D	5 - 9	1	1		
HURON LOAM	Hul	12.00	E	9 - 15	1	1		
HURON LOAM	Hul	1.20	B	0.5 - 2	1	2	W	
HURON LOAM	Hul	1.20	B	0.5 - 2	0	O		
HURON LOAM	Hul	22.50	F	15 - 30	1	3	F	M
HURON LOAM	Hul	3.50	C	2 - 5	0	1		
HURON LOAM	Hul	12.00	E	9 - 15	2	6	S	T
HURON LOAM	Hul	3.50	C	2 - 5	1	1		
HURON LOAM	Hul	1.20	B	0.5 - 2	0	2	W	
HURON LOAM	Hul	37.50	G	30 - 45	3	6	S	T
HURON LOAM	Hul	1.20	B	0.5 - 2	2	2	W	
HURON LOAM	Hul	3.50	C	2 - 5	1	2	F	M
HURON LOAM	Hul	1.20	B	0.5 - 2	0	5	W	
HURON LOAM	Hul	3.50	C	2 - 5	0	2	F	M

HURON LOAM	Hul	3.50	C	2 - 5	2	2	F	M
HURON LOAM	Hul	7.00	D	5 - 9	3	6	S	T
HURON LOAM	Hul	22.50	F	15 - 30	2	3	F	M
HURON LOAM	Hul	22.50	F	15 - 30	2	6	S	T
HURON LOAM	Hul	-9.00	N	N	N	W		
HURON LOAM	Hul	1.20	B	0.5 - 2	1	4	W	
HURON LOAM	Hul	12.00	E	9 - 15	2	3	F	M
HURON LOAM	Hul	1.20	B	0.5 - 2	0	2	F	
HURON LOAM	Hul	7.00	D	5 - 9	0	1		
HURON LOAM	Hul	12.00	E	9 - 15	3	6	S	T
HURON LOAM	Hul	3.50	C	2 - 5	1	2	W	
HURON LOAM	Hul	12.00	E	9 - 15	1	6	S	T
HURON LOAM	Hul	22.50	F	15 - 30	3	3	F	M
HURON LOAM	Hul	12.00	E	9 - 15	3	3	F	M
HURON LOAM	Hul	37.50	G	30 - 45	2	6	S	T
HURON LOAM	Hul	1.20	B	0.5 - 2	2	5	P	
HURON LOAM	Hul	1.20	B	0.5 - 2	1	1		
HURON LOAM	Hul	1.20	B	0.5 - 2	2	6	P	W
HURON LOAM	Hul	1.20	B	0.5 - 2	1	5	P	
HURON SILT LOAM	Hus	22.50	F	15 - 30	3	3	F	M
HURON SILT LOAM	Hus	7.00	D	5 - 9	1	1		
HURON SILT LOAM	Hus	12.00	E	9 - 15	1	3	F	M
HURON SILT LOAM	Hus	1.20	B	0.5 - 2	0	O		
HURON SILT LOAM	Hus	12.00	E	9 - 15	3	6	S	T
HURON SILT LOAM	Hus	7.00	D	5 - 9	0	1		
HURON SILT LOAM	Hus	1.20	B	0.5 - 2	1	2	F	
HURON SILT LOAM	Hus	7.00	D	5 - 9	2	6	S	T
HURON SILT LOAM	Hus	-9.00	N	N	0	5	I	
HURON SILT LOAM	Hus	1.20	B	0.5 - 2	1	2	W	
HURON SILT LOAM	Hus	22.50	F	15 - 30	2	3	F	M
HURON SILT LOAM	Hus	1.20	B	0.5 - 2	0	2	W	
HURON SILT LOAM	Hus	3.50	C	2 - 5	2	2	F	M
HURON SILT LOAM	Hus	3.50	C	2 - 5	0	1		
HURON SILT LOAM	Hus	12.00	E	9 - 15	1	1		
HURON SILT LOAM	Hus	22.50	F	15 - 30	2	6	S	T
HURON SILT LOAM	Hus	7.00	D	5 - 9	3	6	S	T
HURON SILT LOAM	Hus	12.00	E	9 - 15	0	1		
HURON SILT LOAM	Hus	1.20	B	0.5 - 2	0	4	W	
HURON SILT LOAM	Hus	3.50	C	2 - 5	0	2	F	
HURON SILT LOAM	Hus	7.00	D	5 - 9	0	2	F	M
HURON SILT LOAM	Hus	3.50	C	2 - 5	1	1		
HURON SILT LOAM	Hus	7.00	D	5 - 9	1	2	F	M
HURON SILT LOAM	Hus	-9.00	N	N	N	W		
KILLEAN LOAM	Kl	1.20	B	0.5 - 2	1	2	W	
KILLEAN LOAM	Kl	12.00	E	9 - 15	1	1		

KILLEAN LOAM	Kl	1.20	B	0.5 - 2	3	1		
KILLEAN LOAM	Kl	3.50	C	2 - 5	0	1		
KILLEAN LOAM	Kl	1.20	B	0.5 - 2	1	2	F	
KILLEAN LOAM	Kl	1.20	B	0.5 - 2	0	O		
KILLEAN LOAM	Kl	7.00	D	5 - 9	0	1		
KILLEAN LOAM	Kl	1.20	B	0.5 - 2	1	4	W	
KILLEAN LOAM	Kl	22.50	F	15 - 30	2	6	S	T
KILLEAN LOAM	Kl	7.00	D	5 - 9	1	1		
KILLEAN LOAM	Kl	-9.00	N	N	0	5	I	
LILY LOAM	Lyl	3.50	C	2 - 5	1	1		
LILY LOAM	Lyl	1.20	B	0.5 - 2	0	O		
LILY LOAM	Lyl	7.00	D	5 - 9	1	1		
LILY LOAM	Li	3.50	C	2 - 5	1	1		
LILY LOAM	Lyl	12.00	E	9 - 15	1	3	F	M
LILY LOAM	Lyl	12.00	E	9 - 15	1	1		
LILY LOAM	Lyl	22.50	F	15 - 30	3	6	S	T
LILY LOAM	Lyl	-9.00	N	N	0	5	I	
LILY LOAM	Lyl	1.20	B	0.5 - 2	0	2	F	
LILY LOAM	Lyl	7.00	D	5 - 9	0	1		
LILY LOAM	Lyl	1.20	B	0.5 - 2	1	2	W	
LILY LOAM	Lyl	3.50	C	2 - 5	0	2	F	M
LISTOWEL LOAM	Lil	1.20	B	0.5 - 2	0	O		
LISTOWEL LOAM	Lil	1.20	B	0.5 - 2	1	2	W	
LISTOWEL LOAM	Lil	3.50	C	2 - 5	0	2	F	M
LISTOWEL LOAM	Lil	12.00	E	9 - 15	1	1		
LISTOWEL LOAM	Lil	1.20	B	0.5 - 2	0	2	W	
LISTOWEL LOAM	Lil	7.00	D	5 - 9	1	1		
LISTOWEL LOAM	Lil	12.00	E	9 - 15	1	3	F	M
LISTOWEL LOAM	Lil	3.50	C	2 - 5	1	1		
LISTOWEL LOAM	Lil	22.50	F	15 - 30	2	6	S	T
LISTOWEL LOAM	Lil	37.50	G	30 - 45	3	6	S	T
LISTOWEL LOAM	Lil	1.20	B	0.5 - 2	0	5	W	
LISTOWEL LOAM	Lil	1.20	B	0.5 - 2	1	2	F	
LISTOWEL LOAM	Lil	22.50	F	15 - 30	3	6	S	T
LISTOWEL LOAM	Lil	7.00	D	5 - 9	0	1		
LISTOWEL LOAM	Lil	3.50	C	2 - 5	0	1		
LISTOWEL LOAM	Lil	12.00	E	9 - 15	2	1		
LISTOWEL LOAM	Lil	1.20	B	0.5 - 2	2	5	P	
LISTOWEL LOAM	Lil	3.50	C	2 - 5	1	2	F	M
LISTOWEL LOAM	Lil	1.20	B	0.5 - 2	1	6	R	
LISTOWEL LOAM	Lil	12.00	E	9 - 15	3	6	S	T
LISTOWEL LOAM	Lil	1.20	B	0.5 - 2	1	4	W	
LISTOWEL LOAM	Lil	-9.00	N	N	N	W		
LISTOWEL LOAM	Lil	1.20	B	0.5 - 2	1	1		
LISTOWEL LOAM	Lil	3.50	C	2 - 5	3	6	R	

LISTOWEL LOAM	Lil	3.50	C	2 - 5	4	6	R	
LISTOWEL LOAM	Lil	-9.00	N	N	0	5	I	
LISTOWEL LOAM	Lil	7.00	D	5 - 9	2	I		
LISTOWEL LOAM	Lil	12.00	E	9 - 15	3	3	F	M
LISTOWEL SILT	Lis	12.00	E	9 - 15	3	6	S	T
LISTOWEL SILT	Lis	1.20	B	0.5 - 2	0	O		
LISTOWEL SILT	Lis	-9.00	N	N	0	5	I	
LISTOWEL SILT	Lis	12.00	E	9 - 15	I	I		
LISTOWEL SILT	Lis	1.20	B	0.5 - 2	2	5	P	
LISTOWEL SILT	Lis	3.50	C	2 - 5	I	I		
LISTOWEL SILT	Lis	3.50	C	2 - 5	0	I		
LISTOWEL SILT	Lis	1.20	B	0.5 - 2	I	2	W	
LISTOWEL SILT	Lis	7.00	D	5 - 9	I	I		
LISTOWEL SILT	Lis	-9.00	N	N	N	0		
LISTOWEL SILT	Lis	1.20	B	0.5 - 2	I	2	F	
LISTOWEL SILT	Lis	1.20	B	0.5 - 2	0	2	W	
LISTOWEL SILT	Ls	3.50	C	2 - 5	2	4	F	M
LISTOWEL SILT	Lis	1.20	B	0.5 - 2	0	5	W	
LISTOWEL SILT	Lis	12.00	E	9 - 15	3	3	F	M
LISTOWEL SILT	Lis	37.50	G	30 - 45	3	6	S	T
LISTOWEL SILT	Lis	3.50	C	2 - 5	0	2	F	M
LISTOWEL SILT	Lis	7.00	D	5 - 9	3	3	F	M
LISTOWEL SILT	Lis	7.00	D	5 - 9	0	I		
LISTOWEL SILT	Lis	12.00	E	9 - 15	2	6	S	T
LISTOWEL SILT	Lis	1.20	B	0.5 - 2	3	5	P	
LISTOWEL SILT	Lis	3.50	C	2 - 5	I	2	F	M
LISTOWEL SILT	Lis	22.50	F	15 - 30	3	6	S	T
LONDON LOAM	Ll	7.00	D	5 - 9	I	I		
LONDON LOAM	Ll	1.20	B	0.5 - 2	0	2	W	
LONDON LOAM	Ll	1.20	B	0.5 - 2	0	O		
LONDON LOAM	Ll	12.00	E	9 - 15	0	I		
LONDON LOAM	Ll	-9.00	N	N	N	W		
LONDON LOAM	Ll	1.20	B	0.5 - 2	I	2	W	
LONDON LOAM	Ll	12.00	E	9 - 15	3	6	S	T
LONDON LOAM	Ll	3.50	C	2 - 5	0	I		
LONDON LOAM	Ll	-9.00	N	N	0	5	I	
LONDON LOAM	Ll	3.50	C	2 - 5	I	4	W	

LONDON LOAM	LI	3.50	C	2 - 5	1	1		
LONDON LOAM	LI	1.20	B	0.5 - 2	2	6	P	W
LONDON LOAM	LI	7.00	D	5 - 9	4	6	R	
LONDON LOAM	LI	1.20	B	0.5 - 2	1	1		
LONDON LOAM	LI	22.50	F	15 - 30	2	3	F	M
LONDON LOAM	LI	12.00	E	9 - 15	1	1		
LONDON LOAM	LI	3.50	C	2 - 5	1	2	F	M
LONDON LOAM	LI	12.00	E	9 - 15	1	3	F	M
LONDON LOAM	LI	1.20	B	0.5 - 2	1	4	W	
LONDON LOAM	LI	1.20	B	0.5 - 2	3	5	P	
LONDON LOAM	LI	1.20	B	0.5 - 2	1	2	F	
LONDON LOAM	LI	7.00	D	5 - 9	0	2	F	M
LONDON LOAM	LI	1.20	B	0.5 - 2	3	6	P	W
LONDON LOAM	LI	1.20	B	0.5 - 2	0	5	W	
LONDON LOAM	LI	22.50	F	15 - 30	3	6	S	T
LONDON LOAM	LI	1.20	B	0.5 - 2	0	2	F	
LONDON LOAM	LI	7.00	D	5 - 9	0	3	F	M
LONDON LOAM	LI	1.20	B	0.5 - 2	1	2	F	M
LONDON LOAM	LI	1.20	B	0.5 - 2	3	6	S	T
LONDON LOAM	LI	7.00	D	5 - 9	0	1		
LONDON LOAM	LI	22.50	F	15 - 30	1	3	F	M
LONDON LOAM	LI	22.50	F	15 - 30	1	4	T	
MUCK	M	7.00	D	5 - 9	1	1		
MUCK	M	1.20	B	0.5 - 2	1	2	W	
MUCK	M	1.20	B	0.5 - 2	0	O		
MUCK	M	1.20	B	0.5 - 2	0	2	W	
MUCK	M	3.50	C	2 - 5	1	1		
MUCK	M	22.50	F	15 - 30	3	6	S	T
MUCK	M	3.50	C	2 - 5	1	2	F	M
MUCK	M	12.00	E	9 - 15	3	6	S	T
MUCK	M	12.00	E	9 - 15	3	3	F	M
MUCK	M	1.20	B	0.5 - 2	1	4	W	
MUCK	M	22.50	F	15 - 30	3	3	F	M
MUCK	M	-9.00	N	N	0	5	I	
MUCK	M	12.00	E	9 - 15	1	1		
MUCK	M	12.00	E	9 - 15	0	1		
MUCK	M	1.20	B	0.5 - 2	0	2	F	M
MUCK	M	1.20	B	0.5 - 2	0	5	W	
MUCK	M	1.20	B	0.5 - 2	3	5	P	
MUCK	M	12.00	E	9 - 15	2	3	F	M
MUCK	M	3.50	C	2 - 5	0	1		
MUCK	M	-9.00	N	N	N	0		
MUCK	M	7.00	D	5 - 9	0	1		
MUCK	M	1.20	B	0.5 - 2	0	2	F	
MUCK	M	7.00	D	5 - 9	1	2	F	M

MUCK	M	22.50	F	15 - 30	2	3	F	M
MUCK	M	3.50	C	2 - 5	2	2	F	M
MUCK	M	3.50	C	2 - 5	0	5	I	
MUCK	M	12.00	E	9 - 15	2	I		
MUCK	M	37.50	G	30 - 45	3	6	S	T
MUCK	M	-9.00	N	N	N	W		
MUCK	M	12.00	E	9 - 15	I	3	F	M
MUCK	M	1.20	B	0.5 - 2	I	2	F	
MUCK	M	22.50	F	15 - 30	I	3	F	M
MUCK	M	3.50	C	2 - 5	4	6	R	
MUCK	M	1.20	B	0.5 - 2	I	I		
MUCK	M	1.20	B	0.5 - 2	I	6	S	T
MUCK	M	7.00	D	5 - 9	2	6	S	T
MUCK	M	7.00	D	5 - 9	2	I		
MUCK	M	22.50	F	15 - 30	2	6	S	T
MUCK	M	3.50	C	2 - 5	3	2	F	M
MUCK	M	1.20	B	0.5 - 2	2	4	W	
MUCK	M	1.20	B	0.5 - 2	3	6	P	W
MUCK	M	1.20	B	0.5 - 2	0	I		
MUCK	M	7.00	D	5 - 9	3	6	S	T
MUCK	M	7.00	D	5 - 9	0	2	F	M
MUCK	M	3.50	C	2 - 5	0	2	F	M
MUCK	M	22.50	F	15 - 30	I	4	T	
MUCK	M	7.00	D	5 - 9	4	6	R	
PARKHILL LOAM	Pal	1.20	B	0.5 - 2	2	4	W	
PARKHILL LOAM	Pal	3.50	C	2 - 5	2	I		
PARKHILL LOAM	Pal	12.00	E	9 - 15	I	I		
PARKHILL LOAM	Pal	3.50	C	2 - 5	2	2	F	M
PARKHILL LOAM	Pal	3.50	C	2 - 5	I	I		
PARKHILL LOAM	Pal	1.20	B	0.5 - 2	0	2	W	
PARKHILL LOAM	Pal	1.20	B	0.5 - 2	I	2	W	
PARKHILL LOAM	Pal	-9.00	N	N	N	0		
PARKHILL LOAM	Pal	7.00	D	5 - 9	I	I		
PARKHILL LOAM	Pal	1.20	B	0.5 - 2	0	O		
PARKHILL LOAM	Pal	3.50	C	2 - 5	I	2	F	M
PARKHILL LOAM	Pal	-9.00	N	N	0	5	I	
PARKHILL LOAM	Pal	1.20	B	0.5 - 2	I	4	W	
PARKHILL LOAM	Pal	3.50	C	2 - 5	0	I		
PARKHILL LOAM	Pal	7.00	D	5 - 9	2	2	F	M
PARKHILL LOAM	Pal	12.00	E	9 - 15	I	3	F	M
PARKHILL LOAM	Pal	1.20	B	0.5 - 2	0	2	F	
PARKHILL LOAM	Pal	7.00	D	5 - 9	2	6	S	T
PARKHILL LOAM	Pal	1.20	B	0.5 - 2	I	2	F	
PARKHILL LOAM	Pal	12.00	E	9 - 15	3	6	S	T
PARKHILL LOAM	Pal	1.20	B	0.5 - 2	I	I		

PARKHILL LOAM	Pal	22.50	F	15 - 30	1	4	T	
PARKHILL LOAM	Pal	-9.00	N	N	N	W		
PARKHILL LOAM	Pal	7.00	D	5 - 9	0	2	F	M
PARKHILL LOAM	Pal	7.00	D	5 - 9	0	1		
PARKHILL LOAM	Pal	3.50	C	2 - 5	1	2	F	
PARKHILL LOAM	Pal	3.50	C	2 - 5	0	2	F	M
PARKHILL LOAM	Pal	22.50	F	15 - 30	3	6	S	T
PARKHILL LOAM	Pal	7.00	D	5 - 9	4	6	R	
PARKHILL LOAM	Pal	7.00	D	5 - 9	1	2	F	M
PARKHILL LOAM	Pal	1.20	B	0.5 - 2	3	6	P	W
PARKHILL LOAM	Pal	1.20	B	0.5 - 2	0	5	W	
PARKHILL LOAM	Pal	7.00	D	5 - 9	1	3	F	M
PARKHILL LOAM	Pal	22.50	F	15 - 30	1	3	F	M
PARKHILL LOAM	Pal	22.50	F	15 - 30	2	3	F	M
PARKHILL LOAM	Pal	1.20	B	0.5 - 2	3	5	P	
PARKHILL LOAM	Pal	3.50	C	2 - 5	0	2	F	
PARKHILL LOAM	Pal	1.20	B	0.5 - 2	2	5	P	
PARKHILL LOAM	Pal	12.00	E	9 - 15	2	3	F	M
PARKHILL LOAM	Pal	7.00	D	5 - 9	3	6	S	T
PARKHILL SILT LOAM	Pas	-9.00	N	N	0	5	I	
PARKHILL SILT LOAM	Pas	3.50	C	2 - 5	0	1		
PARKHILL SILT LOAM	Pas	12.00	E	9 - 15	1	1		
PARKHILL SILT LOAM	Pas	3.50	C	2 - 5	1	1		
PARKHILL SILT LOAM	Pas	1.20	B	0.5 - 2	0	2	F	
PARKHILL SILT LOAM	Pas	1.20	B	0.5 - 2	1	2	W	
PARKHILL SILT LOAM	Pas	7.00	D	5 - 9	1	6	S	T
PARKHILL SILT LOAM	Pas	7.00	D	5 - 9	1	1		
PARKHILL SILT LOAM	Pas	1.20	B	0.5 - 2	0	O		
PARKHILL SILT LOAM	Pas	7.00	D	5 - 9	3	6	S	T
PARKHILL SILT LOAM	Pas	1.20	B	0.5 - 2	3	5	P	
PARKHILL SILT LOAM	Pas	12.00	E	9 - 15	1	3	F	M
PARKHILL SILT LOAM	Pas	12.00	E	9 - 15	0	1		
PARKHILL SILT LOAM	Pas	1.20	B	0.5 - 2	1	1		
PEAT	P	12.00	E	9 - 15	3	6	S	T
PEAT	P	22.50	F	15 - 30	3	3	F	M
PEAT	P	1.20	B	0.5 - 2	1	2	W	
PEAT	P	7.00	D	5 - 9	1	1		
PEAT	P	1.20	B	0.5 - 2	0	5	W	
PEAT	P	12.00	E	9 - 15	1	1		
PEAT	P	12.00	E	9 - 15	3	3	F	M
PERTH LOAM	PI	7.00	D	5 - 9	1	1		
PERTH LOAM	PI	1.20	B	0.5 - 2	1	2	W	
PERTH LOAM	PI	12.00	E	9 - 15	3	6	S	T
PERTH LOAM	PI	3.50	C	2 - 5	1	1		
PERTH LOAM	PI	12.00	E	9 - 15	1	1		

PERTH LOAM	Pl	-9.00	N	N	0	5	I	
PERTH LOAM	Pl	-9.00	N	N	N	W		
PERTH LOAM	Pl	1.20	B	0.5 - 2	0	O		
PERTH LOAM	Pl	22.50	F	15 - 30	2	3	F	M
PERTH LOAM	Pl	3.50	C	2 - 5	0	2	F	M
PERTH LOAM	Pl	3.50	C	2 - 5	2	2	F	M
PERTH LOAM	Pl	1.20	B	0.5 - 2	3	5	P	
PERTH LOAM	Pl	7.00	D	5 - 9	0	I		
PERTH LOAM	Pl	22.50	F	15 - 30	3	3	F	M
PERTH LOAM	Pl	1.20	B	0.5 - 2	0	2	W	
PERTH LOAM	Pl	7.00	D	5 - 9	2	6	S	T
PERTH LOAM	Pl	3.50	C	2 - 5	0	I		
PERTH LOAM	Pl	22.50	F	15 - 30	3	6	S	T
PERTH LOAM	Pl	3.50	C	2 - 5	I	2	F	M
PERTH LOAM	Pl	-9.00	N	N	N	0		
PERTH LOAM	Pl	12.00	E	9 - 15	3	3	F	M
PERTH LOAM	Pl	1.20	B	0.5 - 2	I	I		
PERTH LOAM	Pl	1.20	B	0.5 - 2	0	5	W	
PERTH LOAM	Pl	22.50	F	15 - 30	2	I		
PERTH LOAM	Pl	7.00	D	5 - 9	0	2	F	M
PERTH LOAM	Pl	12.00	E	9 - 15	3	2	F	
PERTH LOAM	Pl	22.50	F	15 - 30	4	5	T	
PERTH LOAM	Pl	3.50	C	2 - 5	4	2	F	M
PERTH SILT LOAM	Ps	1.20	B	0.5 - 2	0	5	W	
PERTH SILT LOAM	Ps	12.00	E	9 - 15	0	2	F	M
PERTH SILT LOAM	Ps	3.50	C	2 - 5	2	2	F	M
PERTH SILT LOAM	Ps	1.20	B	0.5 - 2	I	2	W	
PERTH SILT LOAM	Ps	1.20	B	0.5 - 2	0	2	W	
PERTH SILT LOAM	Ps	3.50	C	2 - 5	0	I		
PERTH SILT LOAM	Ps	-9.00	N	N	0	5	I	
PERTH SILT LOAM	Ps	7.00	D	5 - 9	I	I		
PERTH SILT LOAM	Ps	1.20	B	0.5 - 2	0	O		
PERTH SILT LOAM	Ps	3.50	C	2 - 5	0	2	F	M
PERTH SILT LOAM	Ps	12.00	E	9 - 15	I	I		
PERTH SILT LOAM	Ps	1.20	B	0.5 - 2	0	2	F	
PERTH SILT LOAM	Ps	3.50	C	2 - 5	I	I		
STREAM COURSE	SC	7.00	D	5 - 9	I	I		
STREAM COURSE	SC	12.00	E	9 - 15	2	3	F	M
STREAM COURSE	SC	37.50	G	30 - 45	3	6	S	T
STREAM COURSE	SC	1.20	B	0.5 - 2	0	O		
STREAM COURSE	SC	1.20	B	0.5 - 2	I	2	W	
STREAM COURSE	SC	3.50	C	2 - 5	0	2	F	M
STREAM COURSE	SC	3.50	C	2 - 5	I	I		
STREAM COURSE	SC	12.00	E	9 - 15	3	6	S	T
STREAM COURSE	SC	3.50	C	2 - 5	0	I		

STREAM COURSE	SC	22.50	F	15 - 30	3	6	S	T
STREAM COURSE	SC	7.00	D	5 - 9	0	1		
STREAM COURSE	SC	3.50	C	2 - 5	1	2	F	M
STREAM COURSE	SC	1.20	B	0.5 - 2	0	2	W	
STREAM COURSE	SC	1.20	B	0.5 - 2	1	1		
STREAM COURSE	SC	1.20	B	0.5 - 2	1	2	F	
STREAM COURSE	SC	1.20	B	0.5 - 2	0	2	F	
STREAM COURSE	SC	7.00	D	5 - 9	0	3	F	M
STREAM COURSE	SC	-9.00	N	N	0	5	I	
STREAM COURSE	SC	12.00	E	9 - 15	2	6	S	T
STREAM COURSE	SC	-9.00	N	N	N	W		
STREAM COURSE	SC	12.00	E	9 - 15	1	1		
STREAM COURSE	SC	7.00	D	5 - 9	4	6	R	
TEESWATER SILT	Tes	1.20	B	0.5 - 2	0	2	W	
TEESWATER SILT	Tes	1.20	B	0.5 - 2	1	2	W	
TEESWATER SILT	Tes	1.20	B	0.5 - 2	0	5	W	
TEESWATER SILT	Tes	12.00	E	9 - 15	1	1		
TEESWATER SILT	Tes	1.20	B	0.5 - 2	2	6	P	W
TEESWATER SILT	Tes	1.20	B	0.5 - 2	0	O		
TEESWATER SILT	Tes	7.00	D	5 - 9	1	1		
TEESWATER SILT	Tes	3.50	C	2 - 5	1	1		
TEESWATER SILT	Tes	3.50	C	2 - 5	0	1		
TEESWATER SILT	Tes	7.00	D	5 - 9	0	1		
TEESWATER SILT	Tes	-9.00	N	N	0	5	I	
TOLEDO CLAY	Tc	7.00	D	5 - 9	0	1		
TOLEDO CLAY	Tc	3.50	C	2 - 5	1	1		
TOLEDO CLAY	Tc	1.20	B	0.5 - 2	1	2	W	
TOLEDO CLAY	Tc	3.50	C	2 - 5	1	2	F	M
TOLEDO CLAY	Tc	12.00	E	9 - 15	1	3	F	M
TOLEDO CLAY	Tc	-9.00	N	N	0	5	I	
TOLEDO CLAY	Tc	12.00	E	9 - 15	1	1		
TUSCOLA SILT LOAM	Tus	7.00	D	5 - 9	3	6	S	T
TUSCOLA SILT LOAM	Tus	1.20	B	0.5 - 2	1	2	W	
WATER	ZZ	1.20	B	0.5 - 2	0	O		
WATER	ZZ	1.20	B	0.5 - 2	0	2	W	
WATER	ZZ	22.50	F	15 - 30	3	3	F	M
WATER	ZZ	3.50	C	2 - 5	1	2	F	M
WATER	ZZ	3.50	C	2 - 5	1	1		
WATER	ZZ	7.00	D	5 - 9	1	1		

WATER	ZZ	12.00	E	9 - 15	1	1		
WATER	ZZ	12.00	E	9 - 15	3	6	S	T
WATER	ZZ	1.20	B	0.5 - 2	1	2	W	
WATER	ZZ	22.50	F	15 - 30	3	6	S	T
WATER	ZZ	1.20	B	0.5 - 2	0	5	W	
WATER	ZZ	-9.00	N	N	N	W		

APPENDIX E

DAVE HODGSON CURRICULUM VITAE

DBH Soil Services Inc
217 Highgate Court
Kitchener Ontario N2N 3N9

phone: (519) 578-9226
email: dhodgson@dbhsoilservices.ca

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

EDUCATION

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

AREAS OF PROFESSIONAL EXPERIENCE

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

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

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

SELECT PROJECT EXPERIENCE

Environmental Assessment Studies

- Agricultural Component of the Highway 401 Widening Milton to Wellington County Boundary, 2023 – ongoing.
- Agricultural Component of the Highway 6 Widening Hamilton 2022 – ongoing.
- Agricultural Component of the Bradford Bypass (Highway 400 to 404 link) 2021 – ongoing.
- Agricultural Component of the Green for Life (GFL) Environmental, Moose Creek, Eastern Ontario Waste Handling Facility (EOWHF) Expansion, 2020 – 2023.
- Agricultural Component of the Greater Toronto Area West (GTAW) Highway 413 Corridor Assessment, 2019 – ongoing.
- Peer Review of the Walker Environmental Group (WEG) Inc. Southwestern Landfill Proposal, Ingersoll, 2013 – 2021.
- Agricultural Component for the High-Speed Rail Kitchener to London –Terms of Reference, 2018,
- Agricultural Component of the Mount Nemo Heritage District Conservation Study – City of Burlington, 2014 – 2015.
- Agricultural Component of the Greater Toronto Area West (GTAW) Highway Corridor Assessment – Phase 2, 2014 – 2016.

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- Peer Review of the Agricultural Component of the Walker Group Landfill – Ingersoll, 2013 – 2015.
- Agricultural Component of the Highway 407 East Extension Design and Build Phase, 2012 – 2013.
- Agricultural Component of the Beechwood Road Environmental Centre (Landfill/Recycling) – Napanee, 2012 – 2013.
- Agricultural Component of the Clean Harbors Hazardous Waste Landfill Lambton County 2009 – 2015.
- Agricultural Component of the Highway 401 widening Cambridge to Halton Region 2009 – 2012.
- Agricultural Component of the Upper York Sanitary Sewer Study, York Region, 2009 – 2013.
- Agricultural Component of the Greater Toronto Area West Corridor Environmental Assessment Study 2007 – 2013 (Phase 1).
- Agricultural Component of the Niagara to GTA Planning and Environmental Assessment Study, 2007 – 2013.
- Agricultural Component of the Highway 401 widening, Chatham, 2006 - 2007.
- Agricultural Component of the Trafalgar Road study, Halton Region, 2005.
- Agricultural Component of the Highway 404 Extension North, 2004.
- Agricultural Component of the Highway 404 – 400 Bradford Bypass, 2004.
- Agricultural Component of the Highway 407 East Extension, 2002 – 2010.

Agricultural Impact Assessment/Minimum Distance Separation Studies

- Cambridge South AIA, 2024.
- AECOM Peel Sewer AIA, 2024.
- Port Hope North Settlement Area Boundary Expansion AIA, 2024
- Fergus Oaks, Fergus Settlement Area Boundary Expansion AIA, 2024.
- Jordan Settlement Area Boundary Expansion AIA, 2024.
- Town of New Tecumseth AIA Assistance, 2024
- Whistle Bare Road, North Dumfries Minimum Distance Separation (MDS1 Assessment), 2024.
- Balsam Road, Pickering Minimum Distances Separation (MDS1) Assessment, 2024.
- Port Hope West Urban Boundary Expansion Scoped Agricultural Impact Assessment (including MDS1), 2023.
- Port Hope East Urban Boundary Expansion Scoped Agricultural Impact Assessment (including MDS1), 2023.
- Town of King Battery Energy Storage System (BESS) Agricultural Impact Assessment, 2023.
- City of London Agricultural Impact Assessment (including MDS1), 2023.
- Caledonia Secondary Plan Scoped Agricultural Impact Assessment (including MDS), 2023.
- Inglewood Well Agricultural Impact Assessment, 2023.
- Orangeville Battery Energy Storage System (BESS) Agricultural Impact Assessment, 2023.
- County Road 109 Realignment Agricultural Impact Assessment, 2023.
- Thornbury Acres Agricultural Impact Assessment (including MDS1), 2022 – 2023.
- Highway 6 Widening Hamilton Agricultural Impact Assessment, 2022 – ongoing.
- Whistle Bare Pit Agricultural Impact Assessment, 2022.
- Middletown Road Agricultural Impact Assessment (including MDS1), 2022.
- Claremont, Durham Region Minimum Distance Separation (MDS1), 2022.
- Grand Valley Settlement Area Boundary Expansion 2022 - ongoing.
- Hagersville Minimum Distance Separation (MDS1), 2022.
- East River Road Minimum Distance Separation (MDS1), County of Brant, 2022.
- Brampton Brick Norval Quarry, Agricultural Impact Assessment, 2022 – ongoing.
- Northfield Drive Minimum Distance Separation (MDS1), Waterloo Region, 2021
- Bradford Bypass Highway 400- 404 Link, Agricultural Impact Assessment, 2021 – ongoing.
- Wilfrid Laurier Milton Campus, Agricultural Impact Assessment (including MDS1), 2021 – 2023.
- Town of Lincoln Road Realignment, Agricultural Impact Assessment, 2021 – 2023.
- Britannia Secondary Plan, Agricultural Impact Assessment (including MDS1), Milton, 2021 – 2023.
- Reesor Road Minimum Distance Separation (MDS1), Markham, 2021.
- Maclean School Road Minimum Distance Separation (MDS1), County of Brant, 2021.
- Petersburgh Sand Pit, Agricultural Impact Assessment, 2021 – 2022.

- Milton, CRH Quarry Expansion, Agricultural Impact Assessment, 2020 – 2022.
- Grimsby, Specialty Crop Area Redesignation, Agricultural Impact Assessment, 2020 - 2022.
- Halton Hills, Premier Gateway Phase 2 Employment Lands Secondary Plan, Agricultural Impact Assessment (including MDS1), 2020 - 2021.
- Milton Education Village Secondary Plan, Agricultural Impact Assessment (including MDS1), 2020 - 2021.
- Woodstock, Pattullo Avenue Realignment, Agricultural Impact Assessment, 2020 - 2021.
- Smithville, West Lincoln Master Community Plan, Agricultural Impact Assessment (including MDS1), AECOM, 2019 – 2022.
- Kirby Road Agricultural Impact Assessment, HDR, Vaughan, 2019 – 2021.
- Elfrida Lands, City of Hamilton, Agricultural Impact Assessment Update, WSP, 2019 – 2021.
- Dorsay Development – Durham Region High Level Agricultural Assessment, 2019.
- Stoney Creek Landfill AIA Update – GHD, 2019.
- Town of Wilmot, Agricultural Impact Assessment (AIA) Aggregate Pit Study (Hallman Pit), 2018, on-going.
- Courtice Area Southeast Secondary Plan (Clarington) Agricultural Impact Assessment (AIA) (including MDS1), 2019,
- Town of Halton Hills, Minimum Distance Separation (MDS 1), August 2018,
- Cedar Creek Pit/Alps Pit (North Dumfries), Agricultural Impact Assessment (AIA), 2018 – 2021,
- Belle Aire Road (Simcoe County) Agricultural Impact Assessment (AIA) Study (including MDS1), 2019,
- Vinemount Quarry Extension (Niagara) Agricultural Impact Assessment (AIA) Study, December 2017.
- Grimsby – Agricultural Impact Assessment Opinion, November 2017.
- City of Hamilton, Urban Core Developments – Agricultural Capability Assessment, February 2017.
- Township of North Dumfries – Minimum Distance Separation (MDS 1), February 2017.
- Township of Erin, County of Wellington – Minimum Distance Separation 1(MDS1 Study), 2016.
- Halton Hills Employment Area Secondary Plan, Halton, 2015 - 2016.
- Peer Review of Agricultural Impact Assessment, Oro-Medonte Township, 2015.
- Greenwood Construction Aggregate Pit, Mono Township, 2014 - 2015.
- Innisfil Mapleview Developments, Town of Innisfil – Minimum Distance Separation (MDS 1), 2014.
- Loyalist Township – Minimum Distance Separation (MDS 1 & 2), 2014.
- Rivera Fine Homes, Caledon – Minimum Distance Separation (MDS 1), 2014.
- Town of Milton PanAm Velodrome – Minimum Distance Separation (MDS) 2012 – 2013.

Soil Surveys/Soil Evaluations

- Soil Survey and Canada Land Inventory Evaluation, Peterborough, 2024.
- Soil Survey and Canada Land Inventory Evaluation, Essex, 2024.
- Mississippi Mills Soil Survey Peer Reviews (4 parcels), 2024.
- Ontario Stone, Sand & Gravel Association Case Study Rehabilitated Pits, 2023 – ongoing.
- Soil Survey and Canada Land Inventory Evaluation, Neubauer Pit, 2023.
- Soil Survey and Canada Land Inventory Evaluation, David Pit, 2023.
- Soil Survey and Canada Land Inventory Evaluation, Pinehurst Road, 2023.
- Soil Survey and Canada Land Inventory Evaluation, Paris Plains Church Road Site, 2022.
- Soil Survey and Canada Land Inventory Evaluation, Mulmur Site, 2022.
- Soil Survey and Canada Land Inventory Evaluation, Port Colborne Site, 2022.
- Soil Survey and Canada Land Inventory Evaluation, Pike Site, 2022.
- Soil Survey and Canada Land Inventory Evaluation, New Dundee Road Site, 2022.
- Soil Survey and Canada Land Inventory Evaluation, Gehl Farm, 2022
- Soil Sampling, City of Kitchener, 2021 – 2022.
- Soybean Cyst Nematode Soil Sampling, Enbridge, 2021.
- Soil Survey and Canada Land Inventory Evaluation, Max Becker Enterprises, City of Kitchener, 2021
- Soil Survey and Canada Land Inventory Evaluation, Max Beck Enterprises, City of Kitchener, 2021 – 2022.
- Soil Survey and Canada Land Inventory Evaluation, Burlington, Nelson Quarry, 2020-2021.

- City of Kitchener, City Wide Soil Studies, 2020-ongoing.
- Soil Survey, Fallowfield Drive, City of Kitchener Development Manual Study, 2020 - ongoing.
- Soil Survey, Williamsburg Estates, City of Kitchener Development Manual Study, 2020 - 2021.
- Soil Survey, South Estates, City of Kitchener Development Manual Study, 2020 - 2021.
- Soil Survey and Canada Land Inventory Evaluation, Burlington, Nelson Quarry, 2019.
- Soil Survey and Canada Land Inventory Evaluation, Maryhill Pit, 2019.
- Soil Survey and Canada Land Inventory Evaluation, Glen Morris Pit, Lafarge Canada, 2018,
- Soil Survey and Canada Land Inventory Evaluation, Brantford Pit Extension, Lafarge Canada, 2018,
- Soil Survey and Canada Land Inventory Evaluation, Pinkney Pit Extension, Lafarge Canada, May 2018,
- Soil evaluation and opinion, King-Vaughan Road, March 2018,
- Soil Sampling, Upper Medway Watershed, Agriculture and Agri-Food Canada. December 2017 – June 2018.
- Soil Survey and Canada Land Inventory Evaluation, Hillsburgh Pit Extension, SBM St Marys, December 2017.
- Soil Survey and Canada Land Inventory Evaluation, Erin South Pit Extension, Halton Crushed Stone, December 2017.
- City of Kitchener, City Wide Urban Soil Assessments, 2016 – On-going.
- Soil Survey and Canada Land Inventory Evaluation, Solar Feed-In Tariff (FIT) Program Study, 2016.
    - Bruce County (15 sites)
    - Grey County (4 sites)
- Soil Survey and Canada Land Inventory Evaluation, Wasaga Beach area, County of Simcoe, 2016.
- Soil Survey and Canada Land Inventory Evaluation Study, MHBC Bradford, Simcoe County, 2016.
- Soil Survey and Canada Land Inventory Evaluation, Solar Feed-In Tariff (FIT Program Study), Carbon Foot Print Offsetters, Durham Region, 2015.
- Soil Survey and Canada Land Inventory Evaluation, Solar Feed-In Tariff (FIT Program Study), Abundant Solar Energy (12 Sites – Peterborough, Madoc, Havelock, Belleville), 2015.
- Soil Survey and Canada Land Inventory Evaluation, Solar Feed-In Tariff (FIT Program Study), City of Hamilton, 2015.

Municipal Comprehensive Review and Mapping Studies (MCR)

- Bruce County 2022 – 2023.
- Simcoe County, 2020 - ongoing.
- Northumberland County, 2020 - ongoing.
- Halton Region, 2019 - 2022.

Land Evaluation and Area Review Studies (LEAR)

- Land Evaluation and Area Review (LEAR) presentation for Lanark County Council, 2024.
- Land Evaluation and Area Review (LEAR) Town of Amaranth, 2023 – ongoing.
- Mapping Audit Bruce County. Assessment of Prime and Non-Prime Agricultural Lands, 2022.
- Mapping Audit Northumberland County. Comparison of Regional and Provincial Prime Agricultural Area Mapping – 2021 - ongoing.
- Mapping Audit Simcoe County. Comparison of Regional and Provincial Prime Agricultural Area Mapping – 2021 - ongoing.
- Mapping Audit Halton Region. Comparison of Regional and Provincial Prime Agricultural Area Mapping – 2019 - 2022.
- Land Evaluation and Area Review (LEAR) – Soils Component, in Association with AgPlan Ltd, Kanata/Munster. December 2017 – July 2018.
- Land Evaluation and Area Review (LEAR) – Soils Component, Prince Edward County, 2016 – 2017.
- Land Evaluation and Area Review (LEAR) – Soils Component, Peel Region, 2013 - 2014.
- Land Evaluation and Area Review (LEAR), Minto Communities, Ottawa, 2012 – 2013.
- GIS and LE component of Land Evaluation and Area Review (LEAR), York Region 2008 – 2009.
- Land Evaluation and Area Review (LEAR), Mattamy Homes, City of Ottawa – Orleans, 2008 – 2009.
- GIS for Manitoba Environmental Goods and Services (EG&S) Study. 2007 – 2008.
- GIS and LE component of Land Evaluation and Area Review (LEAR), Halton Region 2007 - 2008.

- GIS and LE component of Land Evaluation and Area Review (LEAR), City of Hamilton, 2003 – 2005.

Expert Witness

- Ontario Land Tribunal (OLT) Hearing/mediation, Thornbury Estates, 2024.
- Ontario Land Tribunal (OLT) Hearing, Haldimand County, 2024.
- Ontario Land Tribunal (OLT) Hearing preparation, Burlington Quarry, 2024.
- Ontario Land Tribunal (OLT) Hearing preparation, Cemetery Lands Bradford, 2024.
- Local Planning Appeal Tribunal (LPAT) Hearing, Greenwood Aggregates Limited, Violet Hill Pit Application, 2020.
- Ontario Municipal Board (OMB) Hearing, Burl's Creek Event Grounds 2018-2019.
- Town of Mono Council Meeting, Greenwood Aggregates Violet Hill Pit, January 2018.
- Ontario Municipal Board (OMB) Hearing, Burl's Creek Event Grounds, Simcoe County, 2015 – 2016.
- Ontario Municipal Board (OMB) Hearing, Town of Woolwich, Gravel Pit, 2012 – 2013.
- Ontario Municipal Board (OMB) Hearing, Mattamy Homes – City of Ottawa, 2011 – 2012.
- Ontario Municipal Board (OMB) Hearing, Town of Colgan, Simcoe County, 2010.
- Presentation to Planning Staff on behalf of Mr. MacLaren, City of Ottawa, 2005.
- Ontario Municipal Board (OMB) Hearing, Flamborough Severance, 2002.
- Preparation for an Ontario Municipal Board Hearing, Flamborough Golf Course, 2001.
- Ontario Municipal Board (OMB) Hearing, Stratford RV Resort and Campground – Wetland Delineation Assessment, 2000.
- Ontario Municipal Board (OMB) Hearing, Watcha Farms, Grey County, Agricultural Impact Assessment – Land Use Zoning Change, 1999-2000.
- Ontario Municipal Board (OMB) Hearing, Town of St. Vincent Agricultural Impact Assessment – Land Use Zoning Change, 1999 – 2000.
- Halton Agricultural Advisory Committee (HAAC), Halton Joint Venture Golf Course Proposal - Agricultural Impact Assessment for Zoning Change, 1999-2000
- Halton Agricultural Advisory Committee (HAAC), Sixteen Mile Creek Golf Course Proposal – Agricultural Impact Assessment for Zoning Change, 1999.
- Ontario Municipal Board (OMB) Hearing, Town of Flamborough, Environs Agricultural Impact Assessment for Zoning Change – Golf Course Proposal, 1999.
- Ontario Municipal Board (OMB) Hearing, Stratford RV Resort and Campground – Agricultural Impact Assessment, 1998.

Monitoring Studies

- Ontario Stone, Sand, and Gravel Association (OSSGA) Rehabilitation Study, 2023 – ongoing.
- Enbridge Soil Sampling for Soybean Cyst Nematode, various sites Lambton County, 2022
- Union Gas/Enbridge Gas 20" Gas Pipeline Construction Monitoring – Kingsville – 2019 - 2020.
- Union Gas/Enbridge Gas – Gas Pipeline Construction Monitoring for Tree Clearing. Kingsville Project. February/March 2019.
- CAEPLA – Union Gas 36" Gas Pipeline Construction Monitoring and Post Construction Clean Up – Agricultural Monitoring Panhandle Project. 2017 – 2018.
- CAEPLA – Union Gas 36" Gas Pipeline Construction Clearing Panhandle Project (Dawn Station to Dover Station) – Agricultural Monitoring, 2017 (Feb-March).
- City of Kitchener, Soil Sampling and data set analysis, 2017 – On-going.
- GAPLO – Union Gas 48" Gas Pipeline (Hamilton Station to Milton) Construction Soil and Agricultural Monitoring, 2016 – 2017.
- GAPLO – Union Gas 48" Gas Pipeline (Hamilton –Milton) Clearing – Agricultural Monitoring, 2016.

Publications

D.E. Stephenson and D.B. Hodgson, 1996. Root Zone Moisture Gradients Adjacent to a Cedar Swamp in Southern Ontario. In Malamoottil, G., B.G. Warner and E.A. McBean., *Wetlands Environmental Gradients, Boundaries, and Buffers*, Wetlands Research Centre, University of Waterloo. Pp. 298.