Volume 5: Land Evaluation and Area Review

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Attachment: Draft Norfolk County Land Evaluation and Area Review (LEAR), prepared by Colville Consulting Inc.

Executive Summary

In the summer of 2022, Colville Consulting Inc. was retained to develop a Land Evaluation and Area Review (LEAR) for Norfolk County using the methodology outlined in *A Guide to the Land Evaluation and Area Review (LEAR) System for Agriculture* (OMAFRA, 2002). This study was carried out as part of Norfolk County's Growth Management Study to identify prime agricultural areas and have these areas recognized in the County's Official Plan in order to conform to the 2020 Provincial Policy Statement (PPS).

The Provincial Policy Statement, 2020 includes specialty crop areas, Canada Land Inventory Classes 1, 2 & 3, and any associated Class 4 through 7 lands within the prime agricultural area, in this order of priority. Norfolk County contains large areas of prime agricultural lands that produce a variety of field crops and specialty crops. These areas comprise the County's prime agricultural areas. Within this area are large contiguous natural heritage features such as woodlands and wetlands.

The LEAR is based on two components: the LE which represents the soil capability and AR factors which collectively represents other land use characteristics that influence the agricultural priority of lands. The Norfolk County LEAR methodology was developed in consultation with the County's planning staff who received input from members of the Norfolk Agricultural Advisory Committee and the Ontario Ministry of Agriculture, Food and Rural Affairs land use planning staff. The Norfolk County LEAR assigned a weighting of 65% for the LE component and 35% for the AR component. The three AR factors settled upon included potential conflicting land uses (both major and minor), parcel size and the percentage of each parcel in agricultural production.

Not surprisingly, the study has identified that the majority of lands within Norfolk that are not within settlement areas and which do not have other factors such and natural heritage features are prime agricultural areas. Additionally, through the analysis it was determined that Norfolk also has areas which could be considered as specialty crop based on the definition outlined in the PPS, 2020.

The complete draft report as completed by Colville is attached to this Volume 5 Technical Paper.

Land Evaluation and Area Review Report

Background

A LEAR study is a tool developed by OMAFRA to conduct a quantitative analysis to "evaluate the relative importance of lands for agriculture based on the land's inherent characteristics and other factors affecting agricultural potential (OMAFRA, 2021).

A LEAR study is comprised of two major components:

1. Land Evaluation (LE), which assesses inherent soil and climatic conditions for agriculture. This is done by using mapping (GIS systems) to identify and compare the agricultural capability for common field crops.

2. Area Review (AR), which considers other factors important to agricultural potential such as fragmentation of the land base and how land is used."

Scores from both components are weighted and combined to provide an overall LEAR score for each evaluation unit in the study area. The highest scoring evaluation units represent areas with the greatest agricultural potential. For the Norfolk County LEAR study, a weighting of 65% for the LE component and 35% for the AR component was utilized. The three AR factors identified in collaboration with the Agricultural Advisory Committee included potential conflicting land uses (both major and minor), parcel size and the percentage of land in agricultural production. These values were calculated over a 500-meter evaluation area surrounding each parcel. The consultants have recommended a threshold value of 650 was used to identify candidate areas for inclusion within the County's prime agricultural area. All lands equal to or exceeding this threshold were considered for inclusion within the prime agricultural area. Based on the draft works completed, staff recommending consideration of a threshold of 600, of which additional context is outlined below and within the attached draft LEAR.

A LEAR study identifies prime agricultural areas and may be supplemented with additional studies and analysis prior to designating agricultural areas as prime agricultural areas (OMAFRA, 2021). A LEAR study not only identifies prime agricultural land and areas, but in turn also identifies what is not considered to be prime agricultural land, and other specialized areas. This is done through the use of GIS technology to digitally analyze the data to develop quantitative scores for land within the study area.

Policy Framework

The *Planning Act*, R.S.O. 1990, Chapter P.13 provides the fundamental land use planning framework in Ontario. Section 2 of the *Act* identifies matters which municipalities must have regard to. These matters address themes of environmental protection, cultural heritage conservation, health and safety, energy efficiency, transportation and infrastructure, accessibility, affordable housing, and meeting the needs of the community. One of the areas of interest listed is the protection of the agricultural resources of the Province. To further address this and the other matters of provincial interest and provide guidance, the Provincial Policy Statement (PPS) was also established.

The Provincial Policy Statement (PPS) was most recently updated in 2020. It is a consolidated statement of the government of Ontario's policies on land use planning. The PPS, 2020 provides policy direction on key land use planning issues such as the efficient use and management of land, environmental protection which includes farmland, housing, as well as providing direction on where development can take place.

The PPS, 2020 defines rural areas as a system of lands within municipalities that may include rural settlement areas, rural lands, prime agricultural areas, natural heritage features and areas, and resource areas. The Norfolk County Official Plan identifies rural areas to include all land outside of the Urban Areas, Hamlet Areas, and Resort Areas. The Rural Area includes lands designated for Agricultural, Major Institutional, Major Public Infrastructure, Parks and Open space, Hazard Lands, Provincially Significant Wetlands, and Industrial Influence Area. Despite this, Norfolk County does not have a Rural Lands designation, nor is it defined in the Official Plan. Additionally, Norfolk County does not have a designated specialty crop area.

Each of the following Land Use designations are currently defined within the PPS, 2020 but are not fully reflected in the Norfolk County Official Plan. They are as follows:

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

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

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

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

Rural Areas means a system of lands within municipalities that may include rural settlement areas, rural lands, prime agricultural areas, natural heritage features and areas, and resource areas.

Rural Lands means lands which are located outside settlement areas, and which are outside prime agricultural areas.

Following the completion of the LEAR, additional technical data will be available in which identification of particular areas and implementation of these terms will be possible.

Methodology

A LEAR Study is the provincial standard for the identification and refinement of prime agricultural areas by municipalities. A LEAR Study is a technical assessment which, in addition to the Canada Land Inventory(CLI) soil capability, allows other factors to be considered in identifying prime agricultural areas.

The Colville study used factors that are selected, weighed, scored, and applied to land parcels within a Study Area to identify recommended prime agricultural areas for land use planning purposes.

The current Norfolk County Official Plan land use schedules make no distinction between prime agricultural areas and rural areas. This LEAR Study will enable Norfolk County to identify its prime agricultural areas and be consistent with current Provincial policies and guidelines.

When conducting a LEAR Study, the Province provides a set of principles to ensure the Study meets certain requirements.

The LEAR methodology was developed using the following principles:
1. Alignment with provincial objectives and policies.

2. Use of the most recent and robust data available for the entire study area.
3. Factors are mutually exclusive to avoid double counting.
4. The number of factors is limited to avoid diffusing the importance of each factor.
5. Factors are well-reasoned and understandable to the public, agricultural stakeholders, and decision-makers.
6. The method addresses differences between municipalities.
7. A balanced approach is used where agriculture and natural heritage overlap.

The LEAR Study completed by Colville adheres to the principles set forth by the Province and the Guide to the LEAR System for Agriculture published by OMAFRA.

LEAR studies performed by other municipalities and the province, used the census of agriculture and the agricultural crop inventory to evaluate the methodology for Norfolk County's LEAR study. Additional work was performed by staff to inventory growing areas for specialty crops in Norfolk County. This included detailed mapping comparisons and application of layers to further verify area crops and uses, furthermore, input from the knowledge base stakeholders and staff to verify the data layers.

Study Area

The Study Area is defined by the boundaries of Norfolk County and considers all lands outside of designated urban areas, hamlets, and settlement areas (i.e., Simcoe, Port Dover, Waterford, Delhi, Courtland, Port Rowan, etc.). The lands adjacent to the County's boundaries were reviewed to determine whether it was likely that they would have any influence on the results of the LEAR evaluation. It was concluded that the adjacent lands would have a minimal influence on the LEAR calculations and therefore were not considered for the LEAR evaluation.

Overview of Analysis and Recommendations

The draft LEAR as completed by Colville and attached to this Volume 5 document provides a detailed description of the study methodology including evaluation units, components, factors, ratio, scoring, and threshold value.

It was recommended to Norfolk County that a single threshold score of 650 be used to identify candidate prime agricultural areas. This threshold value represents approximately 65% of the LEAR score and is equivalent in productivity to CLI Class 3 lands. The province defines prime agricultural lands as CLI Classes 1, 2 and 3. The Norfolk County LEAR will therefore identify the most productive lands in the County. All EUs with a value of 650 or greater will be considered for inclusion within the prime agricultural area. The threshold value aligns with other LEARs produced by municipalities in Ontario and accepted by OMAFRA.

The Land Evaluation scores were calculated using a GIS analysis. The most up to date soils and CLI data were overlaid with the LEAR evaluation units, allowing for the CLI

Classes in each evaluation unit (EU) to be identified. Most EUs contain multiple CLI Classes. To determine a single LE score for each EU, the CLI classes were weighted by the percentage of land they covered within that EU.

An Evaluation Unit (EU) refers to a chosen geographic unit used for the calculation of a LEAR score. For Norfolk County's LEAR study MPAC property parcels were utilised. The evaluation unit scores then formed the basis for determining the significance of land for agriculture.

The total LEAR score for each EU was calculated by combining LE score to the total AR score. These results are shown in Figure 5 of the Colville draft LEAR report as attached to this document, which shows that the majority of the County meets or exceeds the LEAR threshold value of 650.

The result of the draft analysis indicates that the majority of the County exceeds the threshold value of 650 indicating that the majority of the County is a candidate for identification as prime agricultural area. Some borderline areas were identified with scores between 600 to 649 and Colville has recommended that these areas be considered for inclusion within the prime agricultural area category. It was further indicated that if the majority of these borderline EUs are adjacent to lands scoring less than 600, these borderline areas should be further evaluated for consideration of possible rural land use designation. This would not preclude the sites from condition to be farmed and would include sites that were surplus farm dwelling and have already been severed away from the primary farm operation.

Staff compared and contrasted the results of the provincial run LEAR study with the results of the draft analysis performed by Colville. Staff additionally overlayed the results of the draft analysis with the location of fields known to grow certain crops, CLI class mapping, the agricultural crop inventory, locations of important agricultural infrastructure (processing facilities, storage facilities, bunkhouse locations etc.), natural heritage locations and physiography.

The final recommendation for additional technical evaluation was reconnaissance level site investigations with members of the LEAR Working Group or other knowledgeable and qualified agrologists to review these borderline areas to determine whether they should be included as prime agricultural area or rural designation. Another consideration is for the technical process be peer reviewed prior to finalization of the policy recommendations that would be based on this LEAR document.

NORFOLK COUNTY

LAND EVALUATION AND AREA REVIEW (LEAR)

PREPARED FOR:

THE CORPORATION OF NORFOLK COUNTY

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The Provincial Policy Statement includes specialty crop areas, Canada Land Inventory Classes 1, 2 & 3, and any associated Class 4 through 7 lands within the prime agricultural area, in this order of priority. Norfolk County contains large areas of prime agricultural lands that produce common field crops and specialty crops. These areas comprise the County's prime agricultural areas. Within this area are large areas containing natural heritage features such as woodlands and wetlands. There are six urban growth centres and several hamlets in which development is encouraged. Opportunities for development outside of these settlement areas is limited and there is no rural designation.

In the summer of 2022, Colville Consulting Inc. was retained to develop a Land Evaluation and Area Review (LEAR) for the County using the methodology outlined in *A Guide to the Land Evaluation and Area Review (LEAR) System for Agriculture* (OMAFRA, 2002). This study was carried out as part of Norfolk County's Growth Management Study to identify candidate prime agricultural areas and have these areas recognized in the County's Official Plan in order to conform to the 2020 Provincial Policy Statement (PPS). The LEAR is based on two components; the LE which represents the soil capability and AR factors which collectively represents other land use characteristics that influence the agricultural priority of lands.

The Norfolk County LEAR methodology was developed in consultation with the County's planning staff who received input from members of the Norfolk Agricultural Advisory Committee and the Ontario Ministry of Agriculture, Food and Rural Affairs land use planning staff. The Norfolk County LEAR assigned a weighting of 65% for the LE component and 35% for the AR component. The three AR factors settled upon included potential conflicting land uses (both major and minor), parcel size and the percentage of each parcel in agricultural production. A threshold value of 650 was used to identify candidate areas for inclusion within the County's prime agricultural area. All lands equal to or exceeding this threshold were considered for inclusion within the prime agricultural area. Lands that fall below this threshold may be included within a rural designation.

1. INTRODUCTION

Colville Consulting Inc. was retained by Norfolk County to undertake a Land Evaluation and Area Review (LEAR) Study. The LEAR methodology was developed by the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) in 1997 and revised in June 2002 (A Guide to the Land Evaluation and Area Review (LEAR) System for Agriculture). The LEAR system is comprised of two main components: the land evaluation (LE) which relates to the soil's agricultural capability (i.e., the CLI Capability Classes 1-7); and the area review (AR) which relates to other factors important to agriculture (e.g., agricultural production, fragmentation, conflicting land uses, etc.). The two components are then combined to obtain a LEAR score. Those areas with scores above a pre-determined threshold value are considered for inclusion within the municipalities prime agricultural area. A significant number of acronyms are used throughout this report and are summarised in Appendix A.

1.1 Background

Norfolk County is in the process of completing a Growth Management Study (GMS), comprehensive review, and a Provincial Policy Statement (PPS) conformity exercise. Colville Consulting Inc. was retained to complete a LEAR Study, which is a component of the County's GMS. Currently, the Norfolk County Official Plan recognizes the "Rural Area" as all lands outside of Urban Areas, Hamlet Areas, and Resort Areas, and designates land uses within the Rural Area as Agricultural, Major Institutional, Major Public Infrastructure, Parks, and Open Spaces. The Rural Area also includes Hazard Lands and Provincially Significant Wetlands. Within the Agricultural land use designation, there is no distinction between prime agricultural area and rural lands.

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

As permitted by the PPS, many municipalities have used an alternative method to identify their prime agricultural areas. The two recognized methodologies for informing the designation of prime agricultural areas are the Land Evaluation and Area Review (LEAR) methodology and the Agricultural Land Evaluation System (ALES) methodology.

The LEAR methodology has been used by a number of municipalities since its development to identify Prime Agricultural Areas. As part of the GMS, Norfolk County has decided to develop its own LEAR to reflect to the agricultural nature that is specific to the area. The results of the LEAR will assist the municipality identify its prime agricultural areas.

1.2   Objectives

The objectives of this review are:

- to develop a LEAR methodology specific to Norfolk County; and

- to identify candidate Prime Agricultural Areas within Norfolk County.

The identification of candidate Prime Agricultural Areas will bring Norfolk County into compliance with Section 2.3.2 of the PPS, which states that "Planning authorities shall designate prime agricultural areas and specialty crop areas in accordance with guidelines developed by the Province, as amended from time to time."

2. POLICY CONTEXT

2.1 Provincial Policy Statement

Land Use Policy and development in Ontario is directed by the Provincial Policy Statement (2020). The PPS was issued under the authority of Section 3 of the Planning Act and the latest version came into effect on May 1, 2020. Section 3 of the Planning Act states that decisions affecting planning matters "shall be consistent with" policy statements issued under the Act.

The PPS defines prime agricultural lands as "specialty crop areas and/or Canada Land Inventory Class 1, 2, and 3 lands, as amended from time to time, in this order of priority for protection."

Section 2.3 of the PPS specifically deals with agricultural policy. Section 2.3.1 states that "Prime agricultural areas shall be protected for long-term use for agriculture". Further, Section 2.3.2 states that "Planning authorities shall designate prime agricultural areas and specialty crop areas in accordance with guidelines developed by the Province, as amended from time to time."

2.2 Norfolk County Official Plan

The Norfolk County Official Plan was adopted by Council on May 9, 2006, and most recently consolidated on January 1, 2021. Section 6.7 of the Norfolk County Official Plan introduces the "Rural Area" of the County, which includes all lands outside of the Urban Areas, Hamlet Areas, and Resort Areas. Within the Rural Area, the various land use designations include Agricultural, Major Industrial, Major Public Infrastructure, Parks, and Open Spaces. The Rural Area also includes Hazard Lands and Provincially Significant Wetlands.

Policies for the Agricultural land use designation are discussed in Section 7.2 of the Norfolk County Official Plan. One of the primary objectives of the Agricultural land use designation is to persevere and foster a thriving agricultural industry and associated rural lifestyle. Therefore, the agricultural land base must be protected by promoting agricultural-related land uses.

Norfolk County recognizes the potential influx of large numbers of incompatible land uses in agricultural areas as being the main threat to the preservation of the rural character of the Agricultural land use designation.

The Norfolk County Official Plan states that "agricultural land in the County is predominately Class 1 to 3, or prime agricultural land. These classifications of agricultural land are fundamentally important in considering possible future expansions of the Urban Areas and Hamlet Areas." This LEAR study will evaluate the lands of the County to identify prime agricultural areas and will be used to help inform Norfolk County's planning decisions regarding future growth.

3. AGRICULTURAL PROFILE FOR NORFOLK COUNTY

3.1 Soil Resources

The soils of Norfolk County have developed in soil parent materials ranging in texture from heavy clays to coarse gravels. Most soil differences are related to these textural differences, as well as variability in drainage, topography, climate, and vegetation.

The majority of the lands in Norfolk County consist of prime agricultural lands.

3.2 Climate

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

Records show that this area receives an average of 1035.8 mm of precipitation annually: 906.4 mm of rainfall and 129.5 cm of snowfall. The daily average temperature ranges from a high of 21.1°C to a low of -5.4°C.

The Ministry of Agriculture and Food Factsheets provide data on crop production and growing seasons across Ontario. The rate of development of crops from planting to maturity is mainly dependent upon temperature. Areas within Norfolk County begin to experience average temperatures greater than 10°C starting April 30th before reaching temperatures greater than 12.8°C for 3 consecutive days around May 13th. During this time and up until the season's average ending date, October 4th, the area accumulates an average of 3040 crop heat units (CHU).

On average, the last spring frost in Norfolk County occurs on May 9th. The first fall frost is expected on October 1st. This provides the surrounding area with a frost-free period of approximately 145 days. The climate in Norfolk County provides a good overall growing period that can support a wide range of crops, including specialty crops.

Norfolk County's close proximity to Lake Erie allows for Lakeshore areas to benefit from microclimatic conditions. Through a GIS review and aerial photographic interpretation, it was determined that specialty crops are not more abundantly grown in Lakeshore areas than the remainder of Norfolk County. Although this area may benefit from microclimatic conditions, the land uses observed in this area are not representative of a specialty crop area.

3.3 Agri-Food Sector

3.3.1 Agricultural Crop Statistics

Norfolk County has a diverse agricultural sector that produces a wide range of locally grown products that include both common field crops and specialty crops. Agricultural statistics are available from OMAFRA and Statistics Canada's Agriculture and Food Statistics Census of Agriculture. The Census South Ontario Region, Haldimand Norfolk data was accessed to provide a general overview of agriculture and agri-food operations in the area but is unlikely to be inclusive of all operations present at the time of this report.

The County and Township Agricultural Profile for Norfolk County includes data from the 2011, 2016, and 2021 census periods. The total number of farms in Norfolk County decreased from 1,307 in 2016 to 1,140 in 2021. Total cropland also decreased from 196,403 acres in 2016 to 180,466 acres in 2021.

For the interpretation of the Canada Land Inventory agricultural land classification, the province considers Common Field Crops to include "corn, soybeans, small grains and perennial forages". Specialty Crops include all fruit and vegetable crops, and crops such as ginseng, tobacco, and hemp. The term Field Crops in the Agriculture Census data refers to crops that include both common field crops and specialty crops.

The Field Crops commonly grown in Norfolk County include corn, soybeans, rye, winter wheat, ginseng, potatoes, and sweet potatoes. According to Statistics Canada's Census of Agriculture, a total of 157,855 acres of land in Norfolk County were used for the production of field crops and hay in 2021.

Fruit crops grown in Norfolk County include apples, sour cherries, watermelons, strawberries, blueberries, raspberries, grapes, and peaches. According to Statistics Canada's Census of Agriculture, a total of 3,763 acres of land in Norfolk County were used for the production of fruits in 2021.

Vegetable crops grown in Norfolk County include pumpkins, sweet corn, asparagus, squash/zucchini, tomatoes, cabbage, cucumber, and green and wax beans. According to Statistics Canada's Census of Agriculture, a total of 18,229 acres of land in Norfolk County were used for the production of field vegetables in 2021.

According to Statistics Canada's Census of Agriculture in 2021, Norfolk County had approximately 152,207 acres of land in production of common field crops and 27,640 acres of land in production of specialty crops. This shows that the majority of lands in agricultural production in Norfolk County are used for the production of common field crops (84.6%), while the lands used for specialty crop production (15.4%) are lesser but still significant.

3.3.2   Employment

The agriculture and agri-food sector is one of the largest primary goods producing sectors and plays a key role in the Norfolk County economy. According to Census of Agriculture data from 2021, the agriculture, forestry, fishing, and hunting industry employed approximately 2,130 individuals Norfolk County, which is a decrease from the 2,485 individuals employed in 2016. Within Norfolk County, there were approximately 1,413 agri-food businesses in 2021, which is a slight increase from the 1,383 agri-food businesses recorded in 2016.

3.3.3   Farm Values

As of 2021, of the 1,140 total farms within Norfolk County, 41 farms were valued under $200,000, 60 farms were valued between $200,000 and $499,999, 214 farms were valued between $500,000 and $999,999, and 825 farms were valued $1,000,000 and over. Over the past three census periods, the number of farms valued at $1,000,000 and over has increased substantially, with the number of farms valued under $1,000,000 decreasing each year.

4. STUDY METHODOLOGY

A LEAR Study is the provincial standard for the identification and refinement of prime agricultural areas by municipalities. A LEAR Study is a technical assessment which, in addition to the Canada Land Inventory (CLI) soil capability, allows other factors to be considered in identifying prime agricultural areas.

Factors are selected, weighed, scored, and applied to land parcels within a Study Area to identify recommended prime agricultural areas for land use planning purposes.

The current Norfolk County Official Plan land use schedules make no distinction between prime agricultural areas and rural areas. This LEAR Study will enable the County to identify its prime agricultural areas and be consistent with current Provincial policies and guidelines.
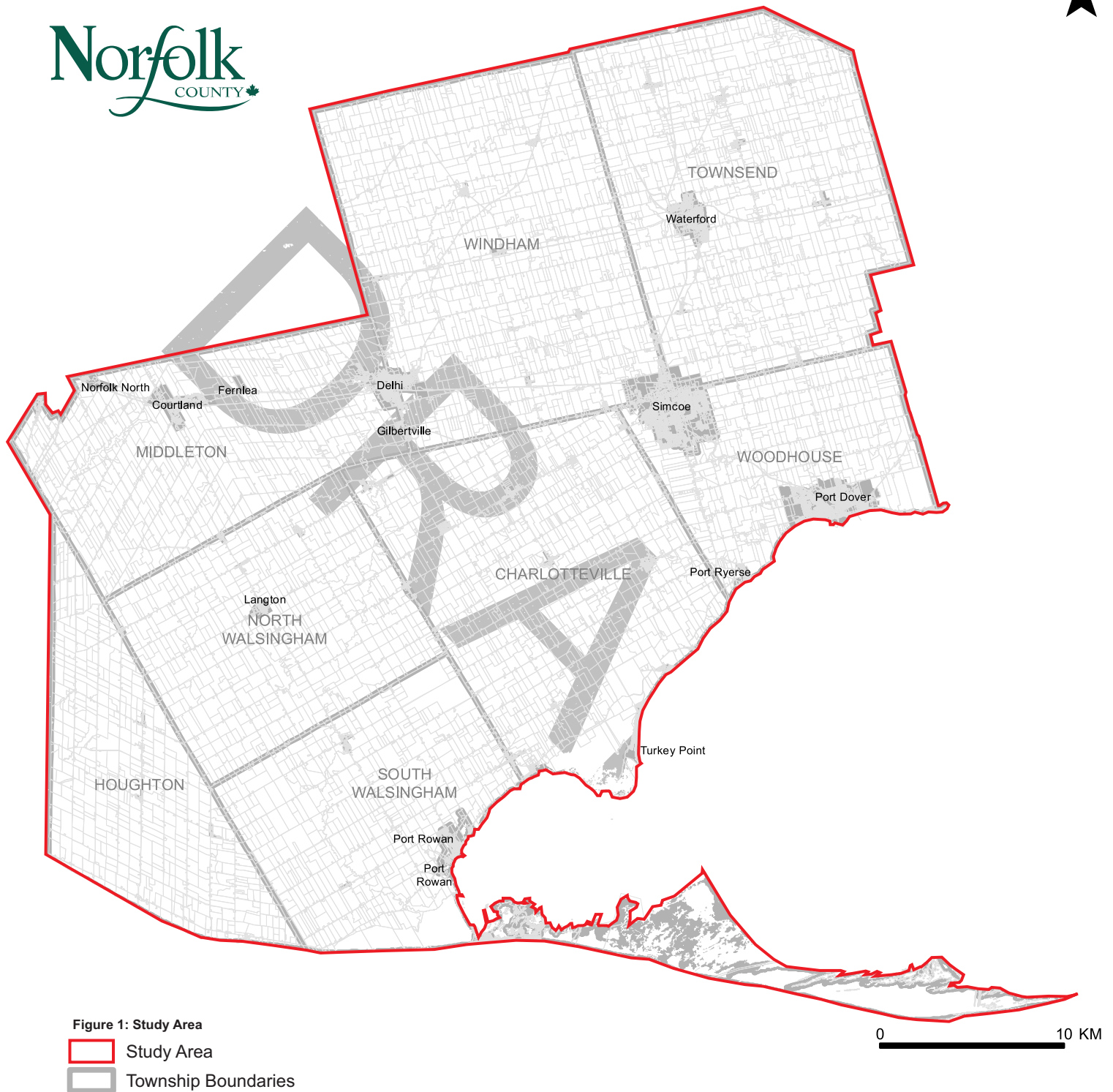
When conducting a LEAR Study, the Province provides a set of principles to ensure the Study meets certain requirements. The LEAR methodology for the Greater Golden Horseshoe was developed using the following principles:

1. Alignment with provincial objectives and policies.

2. Use of the most recent and robust data available for the entire study area.

3. Factors are mutually exclusive to avoid double counting.

4. The number of factors is limited to avoid diffusing the importance of each factor.

5. Factors are well-reasoned and understandable to the public, agricultural stakeholders, and decision-makers.

6. The method addresses differences between municipalities.

7. A balanced approach is used where agriculture and natural heritage overlap.

This LEAR Study adheres to the principles set forth by the Province and the Guide to the LEAR System for Agriculture published by OMAFRA. Examples of LEAR factors and their associated weightings used in LEAR Studies completed in other municipalities can be found in Appendix B.

4.1 Study Area

The Study Area is defined by the boundaries of Norfolk County and considers all lands outside of hamlets or urban growth centers (i.e., Simcoe, Port Dover, Waterford, Port Rowan, etc.). The lands adjacent to the County's boundaries were reviewed to determine whether it was likely that they would have any influence on the results of the LEAR evaluation. It was concluded that the adjacent lands would have a minimal influence on the LEAR calculations and therefore were not considered for the LEAR evaluation. Figure 1 illustrates the Norfolk County Study Area.

Norfolk COUNTY

N

TOWNSEND

WINDHAM

Waterford

Norfolk North   Fernlea   Delhi

Courtland

Gilbertville

Simcoe

MIDDLETON

WOODHOUSE

Port Dover

CHARLOTTEVILLE

Port Ryerse

Langton

NORTH
WALSINGHAM

Turkey Point

HOUGHTON

SOUTH
WALSINGHAM

Port Rowan

Port
Rowan

Figure 1: Study Area

Study Area

Township Boundaries

0   10 KM

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4.2   Evaluation Unit

An Evaluation Unit (EU) refers to a chosen geographic unit used for the calculation of a LEAR score. The evaluation unit scores then form the basis for determining the significance of land for agriculture. The LEAR Guidance Document allows for a number of options for determining EUs. These options can range from concession lots to individual parcels. Evaluation Unit options were presented to Norfolk County planning staff, and it was decided that the EUs for the Norfolk County LEAR will be comprised of individual parcels based on Municipal Property Assessment Code (MPAC) roll numbers. This existing dataset was accessed and resulted in LEAR scores given to 12404 discrete EUs.

The MPAC data was provided by the County of Norfolk and each EU was analyzed using Geographic Information System (GIS) software linked to the City's property information system. Each property was assigned a unique LEAR Identification Number (LIN).

Properties and land parcels less than 0.1 ha were not assigned a LEAR score as these small parcels are unlikely to be associated with an agricultural operation. These parcels were considered during the calculation of AR components of the LEAR.

4.3   LEAR Working Group

A Guide to the Land Evaluation and Area Review (LEAR) System for Agriculture (LEAR Guidance Document) requires the establishment of a LEAR working group which may include:

- County, Region, Town, City and Township representatives; municipal planners: conservation authority representatives;
- other local government officials;
- agricultural leaders;
- farmers;
- representatives of farm organizations;
- representatives from local public-interest groups;
- others with interest and knowledge of Provincial or local planning needs and goals; and
- staff from the OMAFRA Agricultural Land Use Unit.

The LEAR Working Group for this Study is comprised of Norfolk County planning staff, members of the Norfolk Agricultural Advisory Committee (NAAC), and input from the OMAFRA land use planner responsible for Norfolk County. Norfolk County planning staff have led the discussions with the members of the LEAR Working Group.

4.4   LEAR Components

4.4.1   LE Component: Canada Land Inventory (CLI) Information

OMAFRA's LEAR Guidance Document requires that the LE component represents a minimum of 50% of the LEAR score. Municipalities, through an interpretive process, can select the percentage that best represents the municipality's circumstances. The LE factor is derived from the CLI Soil Capability Ratings but can also include climatic conditions that may benefit or inhibit agricultural crop production.

The Norfolk County LEAR only uses the CLI Soil Capability Ratings to derive the LE component. Climate data was reviewed and compared to crop production to determine whether the specialty crops grown in

the County rely on special climatic conditions, such as proximity to Lake Erie. No discernable areas of significant size within the County were identified that clearly demonstrated a dependence on special climatic conditions. Specialty crops are grown throughout the County and seem to be more influenced by soil conditions rather than climatic conditions. Therefore, climate was not included as one of the LE factors.

The LEAR Guidance Document recommends the following points (field crop points) based on the percentage of CLI Class lands within an EU. The LE score is derived from adding the LE products generated by multiplying the percent of each CLI Class within the EU (column 2) by the field crop points (column 3). Table 1 below shows the field crop points assigned to each CLI Class.

Table 1.	LE Component		
Soil Capability Class (CLI)	**% of EU**	**Field Crop Points**	**LE Score (Points X65)**
1		10.0	
2		8.0	
3		6.5	
4		5.5	
5		5.0	
6		4.0	
7 & Organic		0.0	
	100%		Total Score for EU =

4.4.2 AR Factors

In a LEAR system, the AR component can include a variety of factors ranging from an assessment of land use characteristics and the level of fragmentation to socio-economic factors involving aspects such as the level or presence of agricultural investments, agricultural census data, and the proximity to farm services. The selected AR factors can influence the suitability of an evaluation unit for agricultural uses. An EU which is not actively farmed and smaller in size would have a lower priority for inclusion in the prime agricultural area than an EU that is actively farmed, larger in size, and is surrounded by other actively farmed lands.

Through consultation with Norfolk County, it was determined that the following three Area Review (AR) factors would be used in the Norfolk County LEAR:

- ⬧ AR1 – Percentage of lands surrounding EU with conflicting land uses;
- ⬧ AR2 – Parcel size; and
- ⬧ AR3 – Percentage of EU in agricultural production.

AR1: Potential Conflicting Land Use

The AR1 factor measures the percentage of all potential conflicting land uses within a certain distance from the Evaluation Unit (EU). Norfolk County planning staff confirmed that a distance of 500 m from the EU would be most appropriate for the AR1 factor.

Potential conflicting land uses are commercial, industrial, institutional, recreational uses, settlement areas, and rural residential clusters. Non-conflicting land uses include agricultural, agriculture-related, and on-farm diversified uses.

Settlement areas include urban growth centres and hamlets. The urban growth centres are considered to be potential major conflicting land use. The AR evaluation includes the six urban growth centres in the County (Courtland, Delhi, Waterford, Simcoe, Port Dover, and Port Rowan) and Tillsonburg, which is located immediately adjacent to the northwestern corner of the County. Minor conflicting land uses include hamlets and residential clusters. Norfolk County provided the settlement area boundaries for the urban growth centres and hamlets. Residential clusters are defined as four or more contiguous residential lots. These were identified using GIS software and the County's digital parcel fabric layer.

The MPAC data was also used to identify the potential conflicting land uses. The MPAC Codes used:

- 100 series: Vacant land; and
- 200 series: Farm

to confirm non-conflicting land uses; and

- 300 series: Residential (340, 341, 352, 361 and 374 - Multi-Residential);
- 400 series: Commercial;
- 500 series: Industrial;
- 600 series: Institutional;
- 700 series: Special & exempt; and
- 800 series: Government

to identify conflicting land uses.

The MPAC 300 – 800 series are all considered to be minor conflicting land uses. Conflicting land uses within settlement areas were screened out to avoid double counting. A list of conflicting and non-conflicting land use examples evaluated for the Norfolk County LEAR is provided in Appendix C.

Table 2 shows the points and AR1 scores based on the percentage of the parcel within 500 m of a major conflicting land use. The weighting factor for major conflicting land uses is 5. Therefore, to obtain the AR1 Major score, the points were multiplied by 5.

Table 2.	AR1 – Potential Conflicting Land Use - Major	
% of lands Surrounding EU = Conflicting Land Use	**Points**	**AR1-Major Score (Points X5)**
85 - 100%	0	
70 - <85%	1	
55 - <70%	2	
40 - <55%	4	
25 - <40%	6	
10 - <25%	9	
0 - <10%	10	

Table 3 shows the points and AR1 scores based on the percentage of the parcel within 500 m of a minor conflicting land use. For minor conflicting land uses the weighting factor used is 10. Therefore, to obtain the AR1 Minor score, the points were multiplied by 10.

Table 3.	AR1 – Potential Conflicting Land Use - Minor	
% of lands Surrounding EU = Conflicting Land Use	**Points**	**AR1-Minor Score (Points X 10)**
85 - 100%	0	
70 - <85%	1	
55 - <70%	2	
40 - <55%	4	
25 - <40%	6	
10 - <25%	9	
0 - <10%	10	

The total AR1 score is arrived at by adding the AR1 Major and AR1 Minor scores together.

AR2: Parcel Size

Parcel size is a relatively straightforward analysis. The AR2 points are based on the parcel size as shown in Table 4. The larger the parcel, the greater the points awarded to the parcel. Parcels that are <1 ha in size were not given an AR2 score. The points were then multiplied by 5 (the weighting factor used for AR2) to obtain the AR2 score. The parcel size data used in the analysis was provided by Norfolk County.

Table 4.	Parcel Size	
Parcel Size	**Points**	**AR2 Score (Points X5)**
36.4 +ha	10	
20.2 - <36.4 ha	9	
10.1 - <20.2 ha	6	
4.5 - <10.1 ha	4	
1 - <4.5 ha	2	
<1 ha	0	

AR3: Percentage of EU in Agricultural Production

The AR3 factor represents the percentage of land within each EU that is in agricultural production. Lands in agricultural production include lands used for growing crops, fallow lands, farmsteads, hedgerows, and small treed areas. The MPAC Codes (Series 100 and 200) identified the parcels in agricultural production.

The Ministry of Natural Resources and Forestry (MNRF) data (woodland and wetland layers) was used to identify those portions of each EU that are not in agricultural production. In some cases, this data layer showed orchard lands as forested. Therefore, aerial photographic interpretation was required to confirm that the woodland layer did not include orchard lands.

Table 5 shows the points (column 2) assigned to each percent class for land in agricultural production (column 1). The points were then multiplied by 15 (the weighting factor used for AR3) to obtain the AR3 score for each EU.

Table 5.	Percentage of EU in Agricultural Production	
% of EU in Agriculture	**Points**	**AR3 Score (Points X15)**
85 - 100%	10	
70 - <85%	9	
55 - <70%	8	
40 - <55%	7	
25 - <40%	4	
10 - <25%	2	
0 - <10%	1	

4.5   LE:AR Ratio

A Guide to the Land Evaluation and Area Review System for Agriculture (OMAFRA, 2002) generally recommends a ratio of 1:1 for LE and AR scores when evaluating the LEAR score. However, each municipality can adjust the LE to AR ratio to best represent its own unique circumstances. For example, it can choose to strengthen the LE component and reduce the influence of the AR factors. The LE factor can never represent less than 50% of the total LEAR score.

Various options were presented to Norfolk County planning staff who ultimately decided that the ratio of LE to AR for the Norfolk County LEAR would be 65:35. That is, for each EU, 65 % of the LEAR score was derived from the LE score and 35% was derived from the AR scores. A ratio of 65:35 will place a greater emphasis on soil capability classes and further emphasize Norfolk County's expansive area of prime agricultural land. The maximum LEAR score that an EU can achieve using the Norfolk County LEAR methodology is 1000.

4.6   LEAR Score

The formula used to calculate the LEAR score is shown below.

LE Score + [AR1 {(AR Major Score X Weight(5)) + (AR Minor Score X Weight(10))} + (AR2 Score X Weight(5)) + (AR3 Score X Weight(15))] = Final LEAR Score

The weighting assigned to each component and factor are shown in the flowchart below (Figure 2).
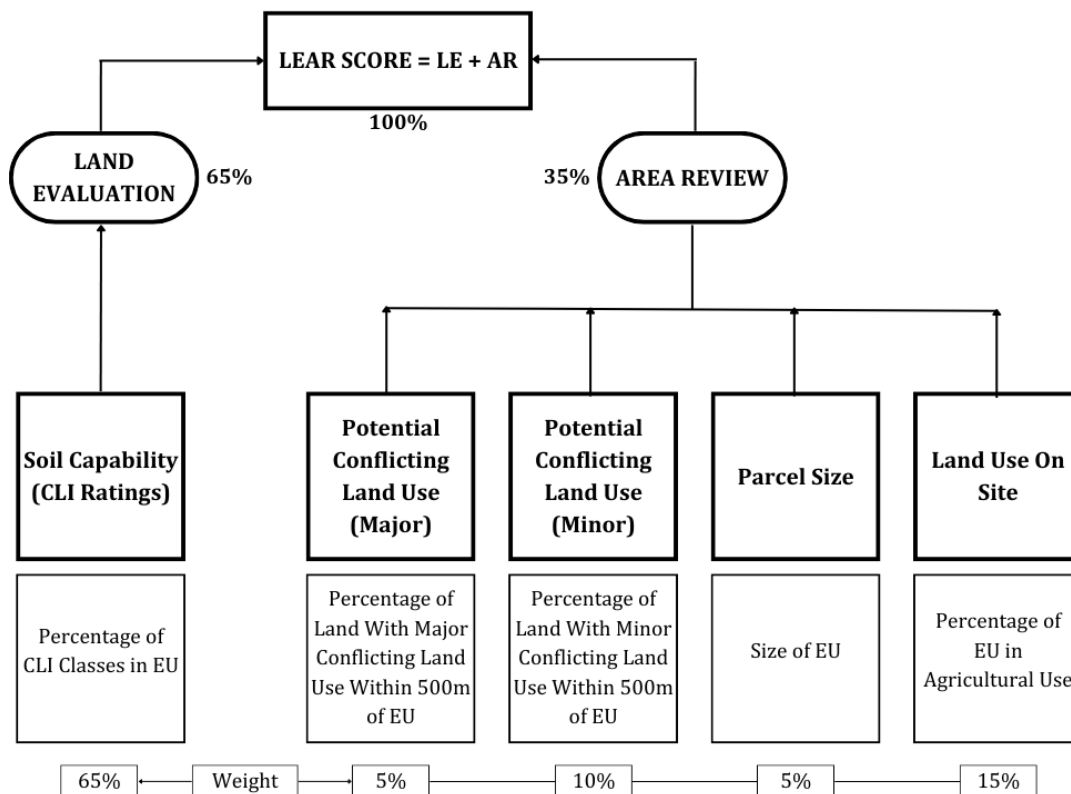

Figure 2:   **LEAR Flowchart**

Based on the ratio of 65:35, the LEAR score was calculated by adding the LE score multiplied by 65 and the total AR score to achieve a value between 0 and 1000. The AR score is obtained by adding the total scores of AR1, AR2, and AR3 factors based on their associated weighting.

4.7   Threshold Value

It was recommended to Norfolk County that a single threshold score of 650 be used to identify candidate prime agricultural areas. This threshold value represents approximately 65% of the LEAR score and is equivalent in productivity to CLI Class 3 lands. The province defines prime agricultural lands as CLI Classes 1, 2 and 3. The Norfolk County LEAR will therefore identify the most productive lands in the County. All EUs with a value of 650 or greater will be considered for inclusion within the prime agricultural area. The threshold value aligns with other LEARs produced by municipalities in Ontario and accepted by OMAFRA.

4.8   Land Use Designation

4.8.1   Candidate Prime Agricultural Areas

As per PPS Policy 2.3.2, municipal planning authorities are responsible for identifying and designating prime agricultural areas and specialty crop areas in accordance with guidelines developed by the Province, such as a LEAR. The Norfolk County LEAR has identified large areas of land that qualifies as candidate areas for inclusion within the County's prime agricultural area. The candidate areas include areas in which the majority of EUs have LEAR scores that are contiguous and exceed 650 points.

To be consistent with provincial practices, the minimum size of these candidate areas should be approximately 250 ha in size or greater. In some cases, such as when identifying specialty crop areas, prime agricultural areas can be smaller if the municipality feels there is a need to protect the types of agricultural operations and activities.

4.8.2   Candidate Rural Lands

Similar to the process used to identify prime agricultural areas, the LEAR can be used to identify candidate areas suitable for inclusion within a rural designation. Lands that are 250 ha or larger and below the LEAR Threshold value (650) are suitable candidate areas for inclusion within a rural designation.

4.8.3   Borderline Candidate Areas

The LEAR identified EU's that scored between 600 and 649. These areas are considered to be borderline candidate areas. They can be considered for possible inclusion within the prime agricultural area depending on the proximity to higher scoring lands.
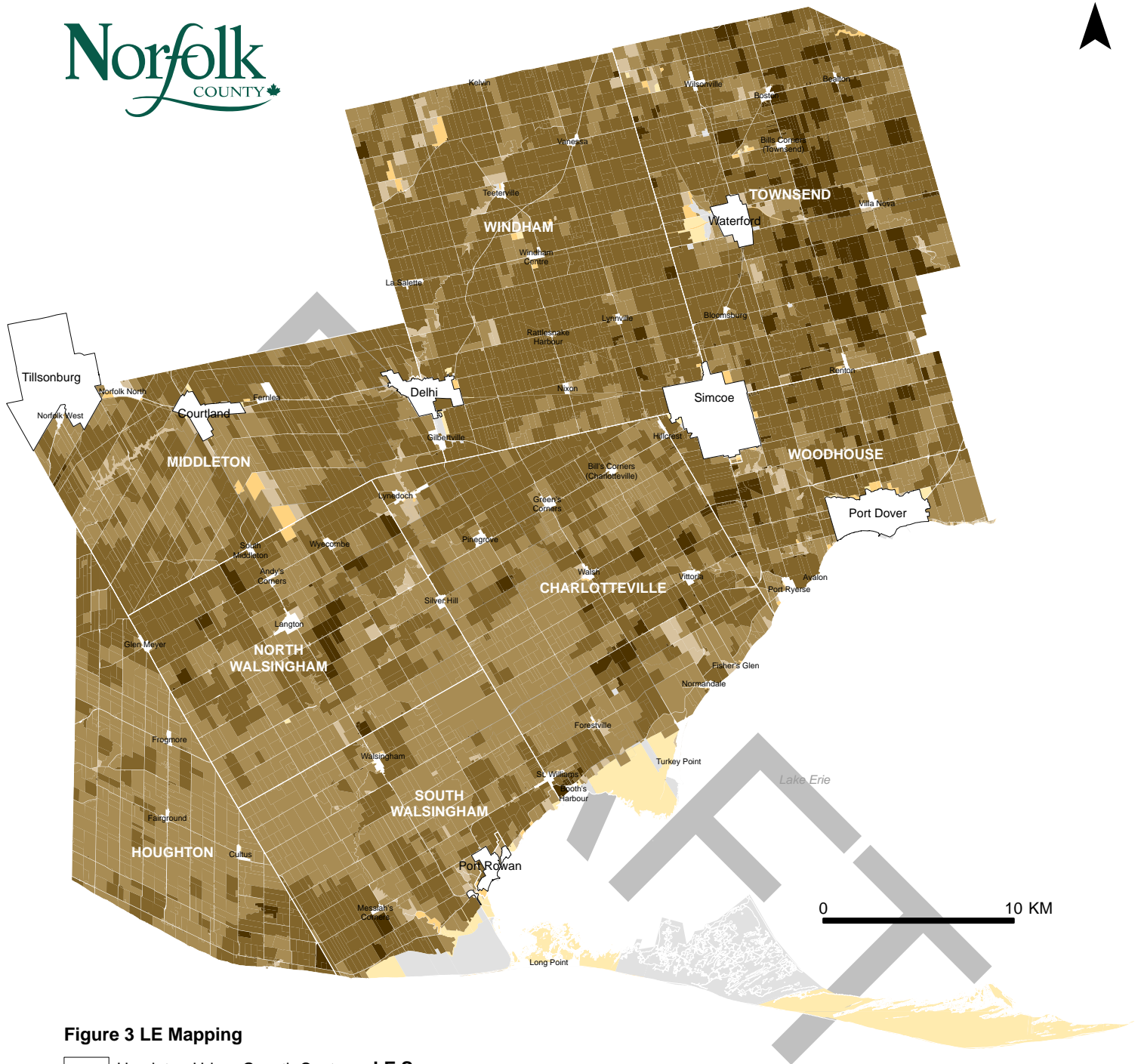
5. RESULTS

5.1 LE Component

The Land Evaluation scores were calculated using a GIS analysis. The most up to date soils and CLI data were overlaid with the LEAR evaluation units, allowing for the CLI Classes in each EU to be identified. Several EUs encompassed multiple CLI Classes. To determine a single LE score for each EU, further data manipulation was completed by exporting the data to a spreadsheet.

Within this spreadsheet, the percentage occurrence of each CLI Class within the EU was calculated. As explained in the previous section, the percentage of each CLI Class was multiplied by the Provincial points system for the associated CLI Class. These points were summed and then multiplied by 65 to determine the final LE score for each EU. An example of LE score calculations for individual EUs is shown in Table 6 below.

Table 6.	LE Factor Sample Calculation			
Soil Capability Class (CLI)	**% of EU**	**Field Crop Points**	**EU Points (%EU X Points)**	**LE Score (EU Points X65)**
1	0.6	10.0	6	390
2	0.0	8.0	0	
3	0.0	6.5	0	
4	0.0	5.5	0	
5	0.4	5.0	2	130
6	0.0	4.0	0	
7 & Organic	0.0	0.0	0	
Total	**1.0**		**8**	**520**

The Land Evaluation scores generated by the GIS analysis are shown in Figure 3 below. This figure shows that the majority of EUs have an LE score greater than 350. This is indicative of the presence of prime agricultural lands common throughout the County.

Notably, EUs around Long Point and portions of the Lakeshore area had lower LE scores which reflect the presence of the wetlands and other non-agricultural lands.

Norfolk COUNTY

N

WINDHAM

Kelvin

Wilsonville

Foster

Beaton

Vanessa

Bills Corners
(Townsend)

TOWNSEND

Villa Nova

Teeterville

Waterford

Windham
Centre

Lynnville

Bloomsburg

Lasalette

Rattlesnake
Harbour

Renton

Tillsonburg

Norfolk North

Delhi

Nixon

Simcoe

Ferniea

Courtland

Gilbertville

Hillcrest

WOODHOUSE

Norfolk West

Bill's Corners
(Charlotteville)

MIDDLETON

Lynedoch

Green's
Corners

Port Dover

South
Middleton

Wyecombe

Pinegrove

Walsh

Vittoria

Andy's
Corners

Silver Hill

CHARLOTTEVILLE

Avalon

Port Ryerse

Langton

Fisher's Glen

Glen Meyer

NORTH
WALSINGHAM

Normandale

Frogmore

Forestville

Walsingham

Turkey Point

Lake Erie

St. Williams

SOUTH
WALSINGHAM

Booth's
Harbour

Fairground

Cultus

HOUGHTON

Port Rowan

Messiah's
Corners

0   10 KM

Long Point

Figure 3 LE Mapping

☐ Hamlet or Urban Growth Centre

LE Score

☐	0 - 49
☐	50 - 149
☐	150 - 249
☐	250 - 349
☐	350 - 449
☐	450 - 549
☐	550 - 650

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5.2   AR Component

The Area Review component represents 35% of the overall LEAR score. There are three AR factors that comprise the AR component. These are:

- ◆ AR1 – Percentage of lands surrounding EU with potential conflicting land uses;
- ◆ AR2 – Parcel size; and
- ◆ AR3 – Percentage of EU in agricultural production.

5.2.1   AR1

The 300 Series – 800 Series MPAC Codes represent non-agricultural uses and were used to identify potential conflicting land uses. The major urban growth centres and hamlets were also identified as potential confliction areas and were screened out of the analysis to avoid double counting.

Potential conflicting land uses were separated into major and minor potential conflicting land uses. Major urban growth centres (i.e., Tillsonburg, Courtland, Delhi, Waterford, Simcoe, Port Dover, and Port Rowan) were considered to be major potential conflicting land uses. Hamlets and residential clusters were considered to be minor potential conflicting land uses.

The results of the AR1 analysis are shown in Appendix D. It shows that those EUs in close proximity to the urban growth centres (a potential major conflicting land use) are most influence on the AR1 score. Whereas the minor potential conflicting land uses have a smaller influence on the AR1 score, as anticipated.

5.2.2   AR2

Parcel size data provided by Norfolk County was utilized to determine AR2 scores. Each EU is represented by an individual parcel, which allowed for a relatively straightforward analysis and points to be calculated for each EU as described in the methodology section above. The AR2 results are shown in Appendix E.
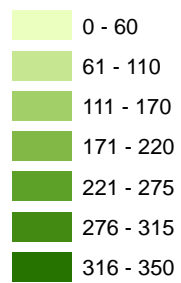
5.2.3   AR3

The AR3 factor represents the percentage of each EU in agricultural production. The result of this analysis is located in Appendix F. The majority of EUs have more than 55% of land in agricultural production and were calculated to have an AR3 score of >160.

5.2.4   Combined AR

After the three AR factors were weighted, the scores were combined to determine the total AR score for each EU. The Area Review scores were then grouped as shown in Figure 4. This figure shows that the majority of EUs have AR scores that exceed 220. The methodology used to generate the AR component resulted in EUs with lower AR scores where adjacent to Major Urban Centres and those surrounding significant natural heritage features such as Long Point, Turkey Point, and portions of the Lakeshore area. Although the methodology did have an influence on the EUs adjacent to hamlets and residential clusters, the degree of influence was not as great and ultimately does not appear to have reduced the overall LEAR score below the LEAR threshold value (650).

Figure 4 AR Mapping

☐ Hamlet or Urban Growth Centre

AR - Conflicting Land Use (Major and Minor)

- 0 - 60
- 61 - 110
- 111 - 170
- 171 - 220
- 221 - 275
- 276 - 315
- 316 - 350

5.3 LEAR Score

The total LEAR score for each EU was calculated by combining LE score to the total AR score. These results are shown in Figure 5 which shows that the majority of the County meets or exceeds the LEAR threshold value of 650.

5.4 Identifying Candidate Prime Agricultural Areas

The LEAR study identified candidate prime agricultural areas within Norfolk County using the LE component and the AR factors and weightings previously described. The threshold value for consideration of prime agricultural areas was decided to be 650. Those EUs that have LEAR scores greater than 650 qualify as candidates for inclusion within the prime agricultural area. The prime agricultural areas should be greater than 250 ha and predominantly consist of EUs with LEAR scores 650 or greater.

5.4.1 Prime Agricultural Areas

A range of LEAR scores are shown in Figure 6. It shows that the LEAR scores generated for the majority of the County exceed the 650-threshold value indicating that the majority of the County is a candidate for inclusion with the prime agricultural area..

5.4.2 Borderline Area

Those borderline areas that have LEAR scores between 600 and 649 should be considered for inclusion into prime agricultural areas where they are in close proximity to areas that have LEAR scores of 650 or more. If the majority of these borderline EUs are adjacent lands with less than 600, these borderline areas can be considered for a rural land use designation. For both options, the total area should be at least 250 ha in size.

It is recommended that the County consider reconnaissance level site investigations with members of the LEAR Working Group or other knowledgeable and qualified agrologists to review these borderline areas to determine whether they should be included in the prime agricultural area or rural designation.
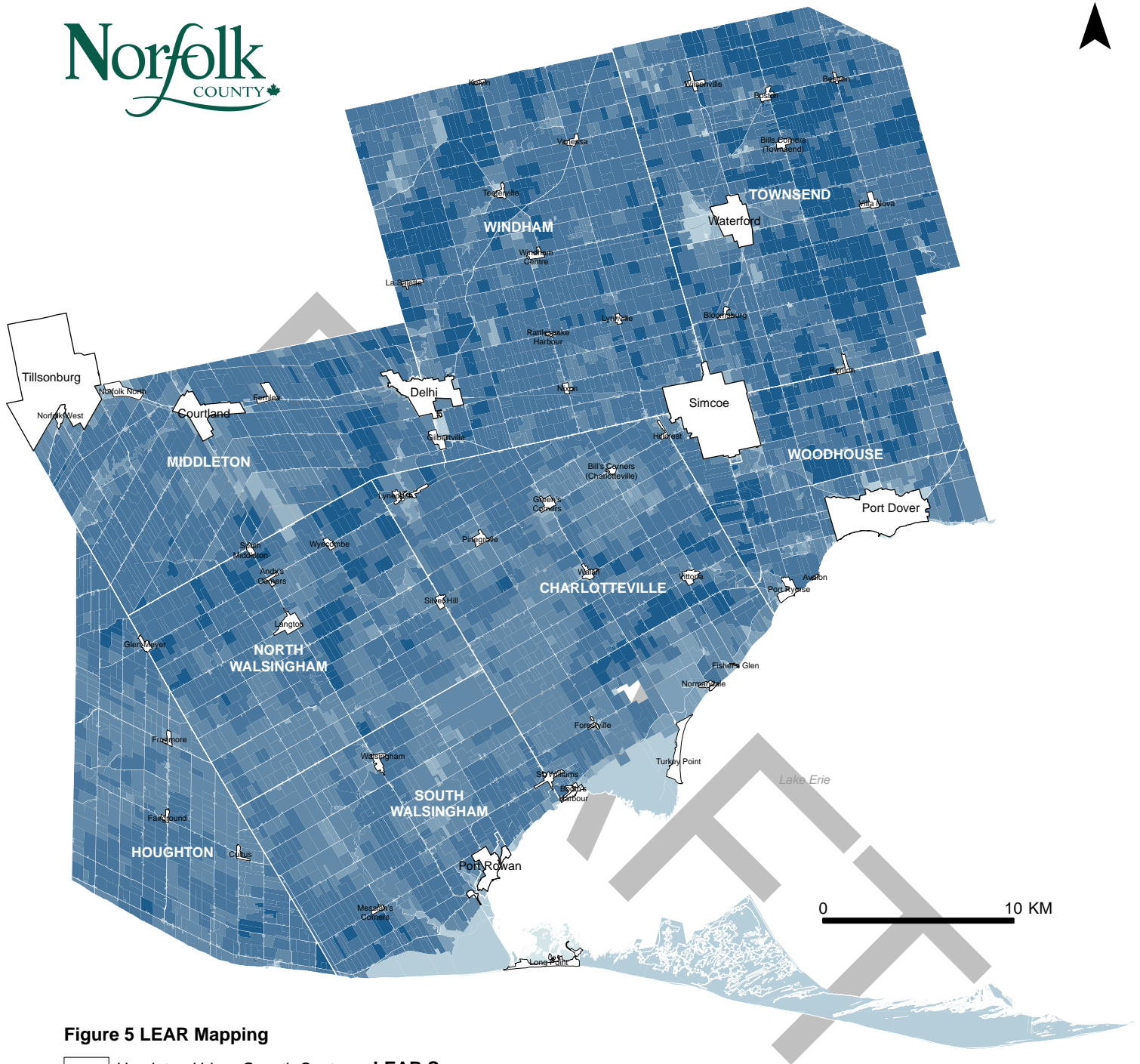
Figure 5 LEAR Mapping

Hamlet or Urban Growth Centre

LEAR Score

	0 - 199
	200 - 399
	400 - 599
	600 - 649
	650 - 749
	750 - 849
	850 - 1000

Below LEAR Threshold Value

Above LEAR Threshold Value

0   10 KM

Figure 6 Candidate Prime Agricultural Areas

☐ Hamlet or Urban Growth Centre

LEAR Score

<600 Non-prime Agricultural Areas
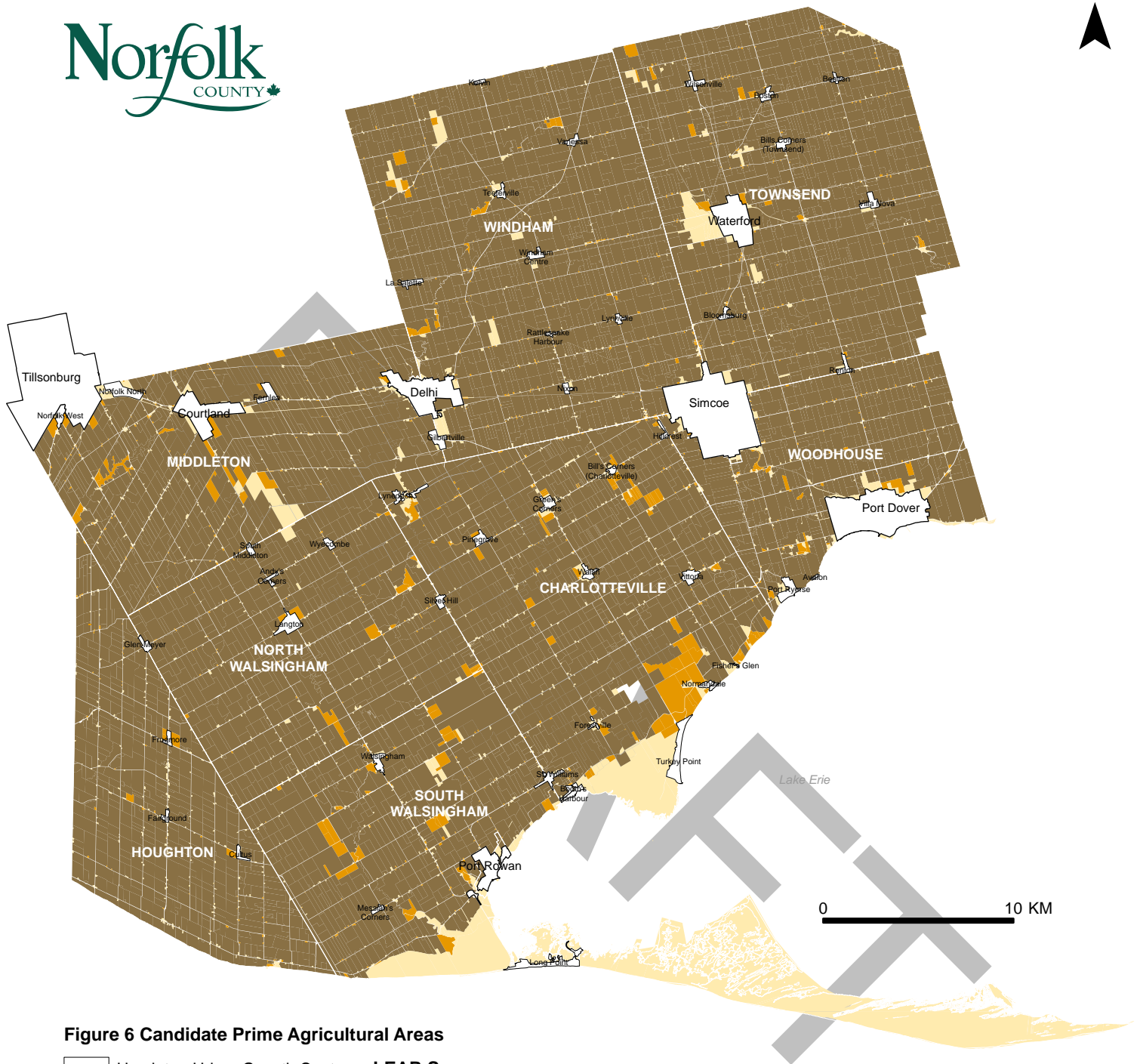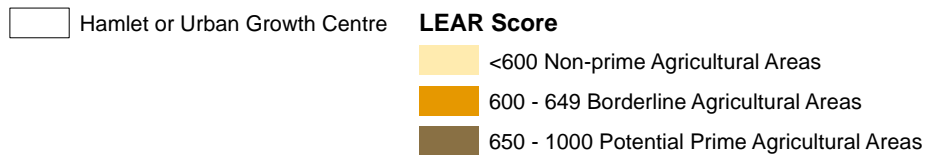
600 - 649 Borderline Agricultural Areas

650 - 1000 Potential Prime Agricultural Areas

6.   CONCLUSIONS

This LEAR study was carried out as part of Norfolk County's Growth Management Study to identify candidate prime agricultural areas and have these areas recognized in the County's Official Plan in order to conform to the 2020 Provincial Policy Statement (PPS).

The LEAR methodology was designed specifically for Norfolk County and recognizes the high potential for agricultural production in the County. The LEAR methodology developed for Norfolk County, with input and guidance provided by the Norfolk County planning staff, the LEAR Working Group and OMAFRA land use planners, determined that the majority of Norfolk County qualifies as candidate prime agricultural areas.

This report was prepared by:

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Colville Consulting Inc.

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APPENDIX A

List of Acronyms

ALES   -   Agricultural Land Evaluation System

AR   -   Area Review

CHU   -   Crop Heat Units

CLI   -   Canada Land Inventory

EU   -   Evaluation Unit

GIS   -   Geographical Information System

GMS   -   Growth Management Study

ha   -   hectare

LE   -   Land Evaluation

LEAR   -   Land Evaluation and Area Review

m   -   meter

MNRF   -   Ministry of Natural Resources and Forestry

MPAC   -   Municipal Property Assessment Code

OMAFRA   -   Ontario Ministry of Agriculture, Food and Rural Affairs

PAA   -   Prime Agricultural Areas

PAL   -   Prime Agricultural Lands

PPS   -   Provincial Policy Statement

APPENDIX B

Previously Completed LEARs – Factors and Weighting

DRAFT

Table 1: EU Factor Criteria

LEAR Study	Provincial	Greenbelt	Hamilton	Ottawa-Carleton	Stormont-Dundas & Glengarry	Halton	Town of Mono	Region of Peel & Town of Caledon	York Region
Evaluation Unit	Ownership Parcels	Survey Lots and Concessions	Ownership Parcels	Ownership Parcels	Ownership Parcels	Survey Lots and Concessions	Survey Lots and Concessions	Ownership Parcels	Survey Lots and Concessions

Table 2: Criteria for each LEAR

Criteria	Provincial (50:50)	Greenbelt (65:35)	Hamilton (60:40)	Ottawa-Carleton (70:30)	Stormont-Dundas & Glengarry (50:50)	Halton (65:35)	Town of Mono (70:30)	Region of Peel & Town of Caledon (50:50)	York Region (65:35)

CLI Classification	LE = 100
	AR = 100
		LE = 2 factors:
		-Soil Class 80%
		-Climate 20%
		    -CHU Zones
		    -Niagara Grape
			LE =
			-Soil Class
				LE =
				-Field Crop Points
					LE =
					-CLI Class
						LE =
						-CLI Class
							LE =
							-CLI Class
							-HPI
								LE =
								-CLI Class
									LE =
									-CLI Class

Conflicting Land Use	Percentage of Surrounding Lands in Agricultural Use 85-100% gets perfect score	Number of parcels within 300 m of the evaluation unit 0 to 1 parcels gets perfect score	Proportion of agricultural land within 1 km of each agricultural property	Percentage of Property within 500 m of Non-Conflicting Land Use 0% gets perfect score	Proportion of Surrounding Area (1 km) in Agricultural Land Use 75-100% gets perfect score.	Percentage of Conflicting Land Use (within 2 km of the EU).	Percentage of Evaluation Unit in Agricultural Use.	Percentage of Evaluation Unit in Agricultural Use. Conflicting Land Uses	Conflicting uses were defined based on assessment codes and classification of uses in the Guideline to Agricultural Land Uses.
Parcel in Ag Use or Farm Infrastructure	Percentage of Evaluation Unit in Agricultural Use 85-100% gets perfect score	Number of parcels in the evaluation unit 1 or 2 parcels gets perfect score	Number of residential properties within 1 km of each agricultural property	Percentage of Property in Agricultural Land Use 85-100% gets perfect score	Proportion of Parcel in Agricultural Land Use 75-100% of property in agricultural use gets perfect score	Amount of farm infrastructure within the EU. If EU has infrastructure it receives a higher score. If farm infrastructure does not exist, the EU receives a lower score.	Percentage of Lands Surrounding EU in Agricultural Production	Percentage of agricultural lands in production within 1 km of the evaluation unit.	Percentage of agricultural lands in production within 1 km of the evaluation unit.

Criteria	Provincial (50:50)	Greenbelt (65:35)	Hamilton (60:40)	Ottawa-Carleton (70:30)	Stormont-Dundas & Glengarry (50:50)	Halton (65:35)	Town of Mono (70:30)	Region of Peel & Town of Caledon (50:50)	York Region (65:35)
Parcel Size or Fragmentation	Parcel Size Greater than 36.4 ha gets perfect score	Investment in tile drainage within evaluation unit Tile drainage gets perfect score	Number of properties within 1 km of each agricultural property (exclude residential)	Parcel Size Greater than 36.4 ha gets perfect score	Parcel Size Greater than 36.4 ha gets perfect score	Fragmentation of EU	Lot Fragmentation/ Parcel Size	Fragmentation based on 40 hectare (100 acre) lots. The presence of 8 or fewer abutting lots represents a perfect fragmentation score. *Road widths did not constitute a break in the contiguous area boundary;*	Fragmentation of EU: the extent that land in each Evaluation Unit has been fragmented.
Economic Characteristics		Economic Structure: Gross farm receipts per cropped acre >$2500 gets perfect score			Investment in Tile Drainage Has tile drainage gets perfect score		The number of non-farm residences within 300 m of EU.		
Surrounding Land Use					Proximity to Conflicting Land Uses Parcels greater than 400m get perfect score		The percentage of surrounding lands within 300 m with conflicting land uses.		

APPENDIX C

Land Use Examples

Conflicting Land Use Examples	
• Village or hamlet.	• Rural residential clusters.
• Major urban centers (i.e., Simcoe).	• Commercial Light Industrial.
• Other health care facilities.	• Major institutional.
• Industrial land use.	• Special Resort.
• Suburban and Special Suburban.	• Recreational land use.
• Restaurants.	• Nursing home.
• Motel.	• Single-family detached/semi-detached residential.
• Multi-residential housing.	

| Non-Conflicting Land Use Examples	
• Farm property without any buildings/structures.	• Large scale operation (swine, poultry, cattle, etc.).
• Farm with residence or without residence.	• Farm with a winery.
• Parkland (Provincial Park, Federal Park, or Municipal Park).	• Farm with campground/mobile home park.
• Conservation authority land.	• Tobacco farm.
• Farm with gravel pit.	• Grain/seed and feed operation.
• Large-scale greenhouse operations.	• Ginseng farm.
• Intensive farm operations.	• Nut orchard.
• Vacant residential/commercial/industrial land owned by a non-farmer with a portion being farmed.	• Exotic farms e.g., emu, ostrich, pheasant, bison, elk, deer.

APPENDIX D

AR1 Mapping

Norfolk
COUNTY

N

WINDHAM

TOWNSEND

Waterford

MIDDLETON

Tillsonburg

Delhi

Courtland

Simcoe

WOODHOUSE

Port Dover

CHARLOTTEVILLE

NORTH
WALSINGHAM

SOUTH
WALSINGHAM

HOUGHTON

Port Rowan

Turkey Point

Lake Erie

Long Point

0   10 KM
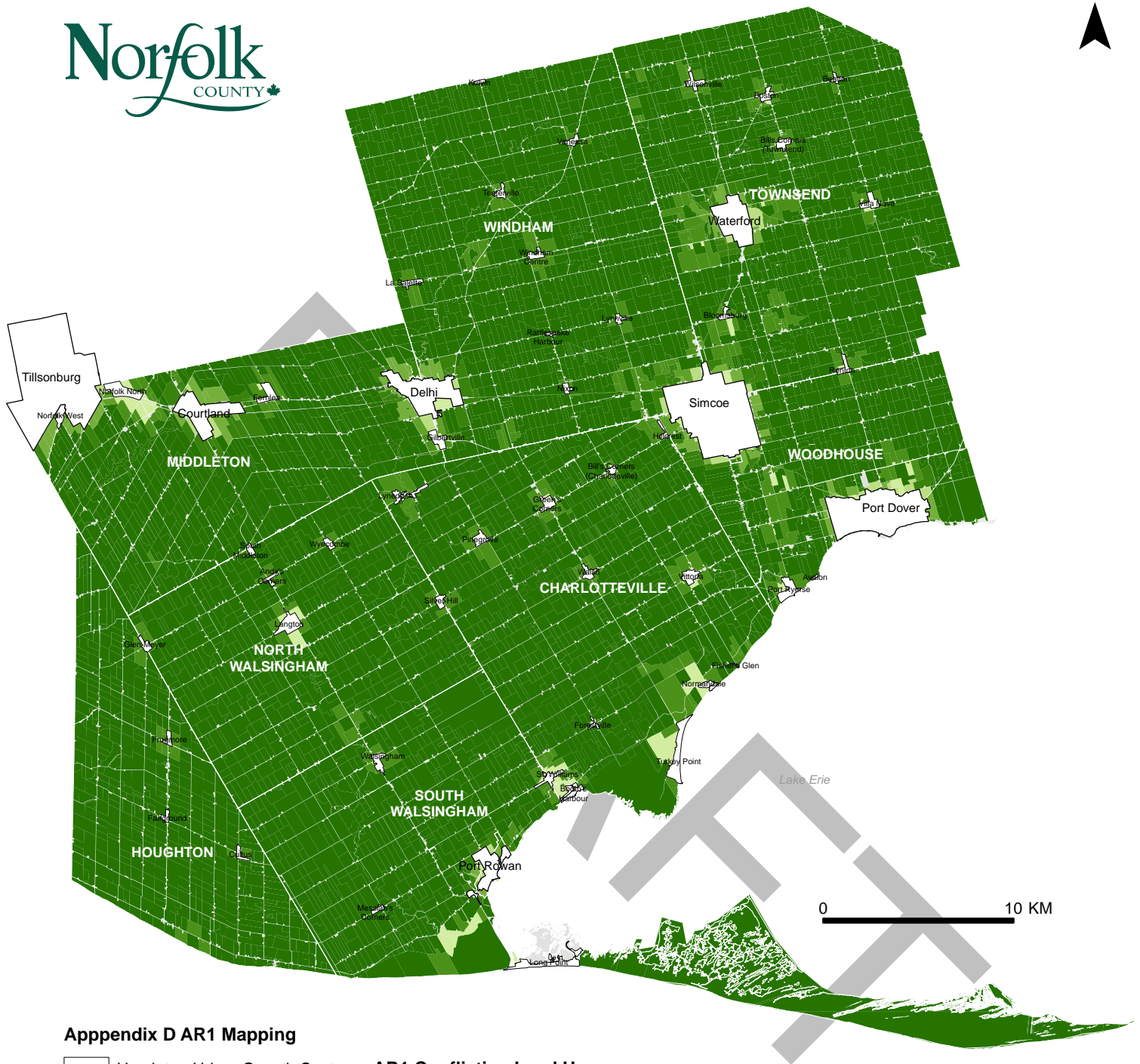
Apppendix D AR1 Mapping

☐ Hamlet or Urban Growth Centre

AR1 Conflicting Land Use

0
1 - 110
111 - 120
121 - 120
121 - 125
126 - 130
131 - 135
136 - 140
141 - 145
146 - 150

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APPENDIX E

AR2 Mapping

Norfolk COUNTY

N

TOWNSEND

WINDHAM

Waterford

Tillsonburg

Norfolk North

Delhi

Simcoe

Courtland

MIDDLETON

WOODHOUSE

Norfolk West

Port Dover

CHARLOTTEVILLE

Port Ryerse

NORTH
WALSINGHAM

Forestville

Turkey Point

Lake Erie

SOUTH
WALSINGHAM

HOUGHTON

Port Rowan

Long Point

0   10 KM

Apppendix E AR2 Mapping

☐ Hamlet or Urban Growth Centre

AR2 Parcel Size

	0
	5
	20
	30
	45
	50

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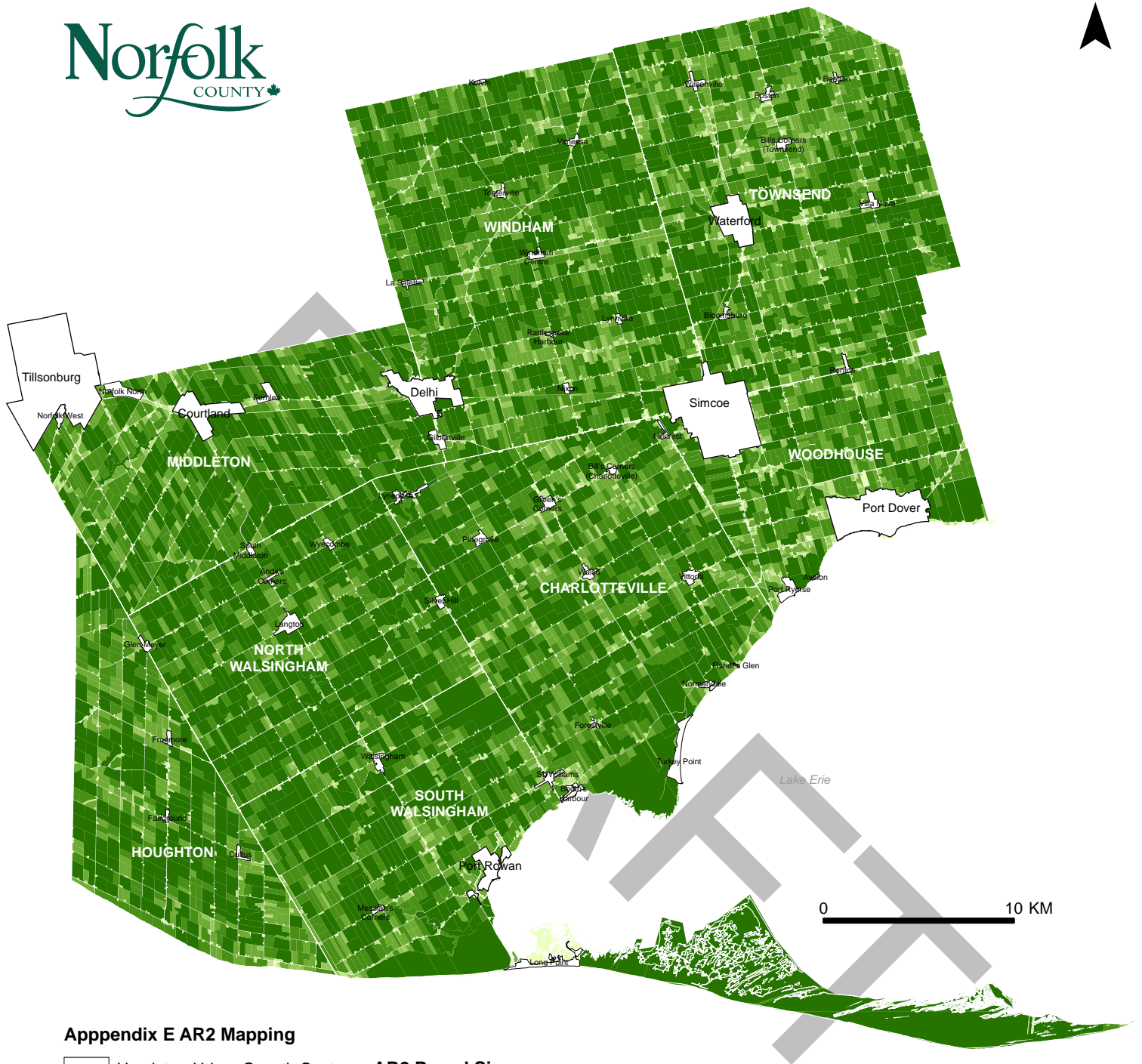
APPENDIX F

AR3 Mapping

DRAFT

Norfolk
COUNTY

N

WINDHAM

Kelvin

Vanessa

Teeterville

Windham
Centre

LaSalette

Rattlesnake
Harbour

Nixon

TOWNSEND

Wilsonville

Boston

Bealton

Bills Corners
(Townsend)

Waterford

Villa Nova

Bloomsburg

Lynnedoch

WOODHOUSE

Lynn Valley

Simcoe

Hartford

Tillsonburg

Norfolk North

Courtland

Ferris

Delhi

Silverville

Norfolk West

MIDDLETON

Wyecombe

Pinegrove

Bill's Corners
(Charlotteville)

Green's
Corners

Walsh

Port Dover

Avaton

Port Ryerse

South
Middleton

Hawtrey
Corners

**NORTH
WALSINGHAM**

Langton

Glen Meyer

Silver Hill

CHARLOTTEVILLE

Vittoria

Fishers Glen

Normandale

Forestville

Walsingham

**SOUTH
WALSINGHAM**

St. Williams

Booth's
Harbour

Turkey Point

Lake Erie

Fernmore

Fairground

Clear Creek

HOUGHTON

Port Rowan

Macomb's
Corners

Long Point

0   10 KM

Apppendix F AR3 Mapping

☐ Hamlet or Urban Growth Centre

AR3 Percentage of Land in Agricultural Production

	15
	30
	60
	105
	120
	150

COLVILLE
CONSULTING INC.