AGRICULTURAL IMPACT ASSESSMENT FOR 6939 KING STREET, TOWN OF CALEDON

PREPARED FOR:

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1. INTRODUCTION

Colville Consulting was retained by Swaminarayan Mandir Vasna Sanstha (SMVS) to prepare an Agricultural Impact Assessment (AIA) for the development of a Hindu Temple on lands located at 6939 King Street, Town of Caledon in the Regional Municipality of Peel. The property is located south west of the intersection of King Street and Centreville Creek Road, and henceforth is referred to as the Subject Lands.

Colville Consulting Inc. was initially retained by the SMVS on June 9th, 2020 to assess Minimum Distance Separation (MDS) setback requirements as per Provincial, Regional and Municipal policies require for new, non-farm development. Following the completion of the initial MDS study, the AIA was completed. The purpose of the AIA is to determine whether the proposed development can comply with the Provincial agricultural policies, as well as those of the Region of Peel and the Town of Caledon. It is anticipated that the proposed development will require amendments to Regional and Local Zoning By-Laws and Official Plans.

1.1 Study Purpose

The Subject Lands are located within the Greater Golden Horseshoe (GGH) and are part of the GGH's Agricultural Land Base. These lands have been identified by the province as prime agricultural lands and they are in a prime agricultural area. As such, the Growth Plan for the GGH (August 28, 2020) requires that an agricultural impact assessment be completed to evaluate the potential impacts of the development on agricultural operations and the Agricultural System. Where avoidance is not possible, the AIA recommends ways to minimize and mitigate adverse impacts. The AIA has been prepared in accordance with the Ontario Ministry of Agriculture, Food and Rural Affairs' (OMAFRA) draft Agricultural Impact Assessment Guidance Document (March 2018).

1.2 Subject Lands

The Subject Lands are located within the Regional Municipality of Peel's and Town of Caledon's "Prime Agricultural Areas" designation which are both considered the Region and Towns prime agricultural areas (PAA). The Subject Lands are not located within a specialty crop area.

The Subject Lands consist of a small parcel, rectangular parcel located at the intersection of King Street and Centreville Creek Road. The property is 6.05 ha (14.97acs.) in size. There is a one-storey residential dwelling with a garage and shed located behind the residence located in the northwest corner of the property. The remainder of the Subject Lands are currently cultivated for agricultural crop production

1.3 Study Area

To be consistent with the draft Agricultural Impact Assessment Guidance Document, the Study Area includes all lands within approximately 1.5 kilometers (1,500 m) of the Subject Land boundaries. The Study Area is generally bounded to the north by The Gore Road, to the east by Healey Road, to the west by Castlederg Side Road and to the south by Innis Lake Road. Figure 1 shows the location of both the Study Area and the Subject Lands.



The lands within the Study Area are primarily designated Prime Agriculture Area in the Peel Region Official Plan and are considered to be part of the Regions prime agricultural area. The Town of Caledon Official Plan also primarily designates the study area as Prime Agricultural Area. A relatively large portion of the Study Area is also included within the boundaries of the Greenbelt Plan, and a small area in the northwestern portion of the Study Area is located within the Oak Ridges Moraine Conservation Plan area. No portion of the Subject Lands are located within the boundaries of the Greenbelt plan of Oak Ridges Moraine Conservation Plan. The majority of the Study Area is used for agricultural production, however, there are significant natural areas, recreational and institutional uses, and several rural residential residences.

1.4 Description of Proposed Development

The proposed Hindu Temple will include a main hall, with attached secondary structures, and associated spaces. These structures will be located in the north western portion of the Subject Lands. A permanent parking area for approximately 337 vehicles will be located in the north eastern portion of the Subject Lands. A septic bed is proposed to be located south of the parking lot along the eastern edge of the Subject Lands. A dry pond for stormwater runoff is also proposed on the south e t corner of the property. In total, the development will comprise approximately 3.64 ha.. The site plans for the proposed development are located in Appendix A of this report.

We understand that the proposed development will require amendments to Regional and Local Zoning By-Laws and Official Plans.

1.5 Scope of Study

The study scope of the agricultural impact assessment includes:

- a review of applicable agricultural policies and other background information (e.g., aerial photography);
- an assessment of the soil capability for common field crop production using the Canada Land Inventory (CLI) classification system;
- a land use survey of all lands within one kilometre of the Subject Lands and a characterization of the area;
- an assessment of the Minimum Distance Separation (MDS) requirements for the proposed development using the 2017 MDS I formula;
- an assessment of the level of fragmentation of agricultural lands in the Study Area;
- an assessment of the potential for direct and indirect impacts on agricultural resources and operations within the Study Area;
- the development of mitigation measures to minimize potential negative impacts of the proposed development; and

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• an assessment as to whether the proposed development is consistent with agricultural policies including the Places to Grow: Greater Golden Horseshoe Growth Plan and the Provincial Policy Statement (PPS).

2. METHODOLOGY

The study methodology is consistent with the Ontario Ministry of Agriculture, Food, and Rural Affairs (OMAFRA) Draft Guidance Document for Agricultural Impact Assessments (2018). It includes a review of relevant agricultural policies, other agricultural-related sources of information, and the completion of field inventories. Upon compilation and assessment of the data, the potential impacts of the proposed development will be considered and recommendations to avoid and/or minimize potential impacts will be made. The AIA also assesses the development's conformity with the Provincial, Regional, and local agricultural policies.

2.1 Background Data Collection

The following information sources were reviewed for this study. A more detailed list of the information sources reviewed is provided in Section 10 of this report.

- Region of Peel Official Plan and Land Use Schedules (2018);
- Town of Caledon Official Plan and Land Use Schedules (2018);
- Provincial Policy Statement 2020 Under the Planning Act (2020);
- A Place to Grow: Growth Plan for the Greater Golden Horseshoe (2020);
- Soil Soils of Peel County No. 18 of the Ontario Soil Survey, 1953;
- OMAFRA's digital soil Resource Database to obtain soil series and CLI agricultural capability mapping and data;
- OMAFRA's Artificial Drainage Systems mapping;
- OMAFRA's AgriSuite, AgMaps and Agri-Systems databases;
- Draft Agricultural Impact Assessment (AIA) Guidance Document, Ontario Ministry of Agriculture and Rural Affairs. March, 2018; and
- ♦ Ortho-rectified, digital aerial photography viewed using Google Earth™

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

The AIA also relied on information provided by Weston Consulting Inc. particularly in regard to their assessment of alternative locations.

2.2 Field Inventories

The field inventories were completed on July 21st and September 15th, 2020 Field Inventories included a soil survey of the Subject Lands, reconnaissance level land use survey of the surrounding area to identify agricultural operations, relative level of investment in agricultural, the cropping pattern observed, and the mix of land uses within the Study Area.

2.2.1 Soil Survey

The Subject Lands were traversed on foot and the soil profile was exposed at three locations using a hand-held Dutch auger. The physical properties of the soil, such as the mode of deposition, soil horizons and horizon depths, soil texture, drainage, and stoniness, were described and recorded on field data sheets. The slope percentage within the soil polygons was measured using a hand-held clinometer.

The method used to describe the soil profiles was consistent with the Canadian System of Soil Classification (CSSC, Agriculture and Agri-Food Canada, 1982) and the Field Manual for Describing Soils in Ontario (Ontario Centre for Soil Resource Evaluation, 1993).

2.2.2 Land Use Survey

The reconnaissance land use survey of the Study Area was completed on July 21st, 2020. The land use survey identified the number and type of agricultural operations (both existing and retired), agricultural-related uses and secondary agricultural uses within the area, and the extent and type of non-farmland uses in the area. Field crops observed were identified and mapped. Visual evidence of agricultural land improvements was also assessed.

2.2.3 MDS Calculation

The MDS is a land use planning tool developed by OMAFRA to minimize land use conflicts and nuisance complaints arising from odours generated by livestock operations. The MDS calculates a recommended separation distance between a livestock or manure storage and other land use(s). The most recent version of the MDS guidelines, The Minimum Distance Separation (MDS) Document, Publication 853 (2016), came into effect on March 1st, 2017.

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

For the Subject Lands, the MDS I calculation is required. The information required to complete an MDS I calculation was obtained through a combination of sources. As per the MDS Guidelines, we attempted to gather information directly from the landowner/tenant. Due to the ongoing coronavirus pandemic and updated internal health and safety policies, self addressed envelopes were left in mailboxes of potential livestock operations in addition to on farm interviews. However, we were able to speak directly with the two farmers closest to the Subject Lands.

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

- the type of livestock housed in the facility;
- the maximum capacity of the barn housing livestock;
- the type of manure storage facility; and

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• the size of the property upon which the livestock facility is located.

This information was collected for all livestock facilities (active and empty). In cases where we were not able to collect information directly from the landowner, we used visual observations of the livestock facility and determined the most likely type of livestock housed and the type of manure system used. These observations were supplemented with aerial photography and web mapping tools such as Google Earth. Barn capacity and lot size was determined using these on-line mapping tools.

3. AGRICULTURAL POLICIES

3.1 Provincial Policy Statement

Land Use Policy and development in the province of Ontario is directed by the Provincial Policy Statement (PPS), which was issued under the authority of Section 3 of the Planning Act and which 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.

3.1.1 Prime Agricultural Areas

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". The PPS defines prime agricultural areas as areas where prime agricultural lands predominate. Prime agricultural lands include specialty crop areas and Canada Land Inventory (CLI) Classes 1, 2 and 3 soils, in this order of priority for protection.

Section 2.3.4.2 Lot adjustments in prime agricultural areas may be permitted for legal or technical reasons.

3.1.2 Policies for New Non-farm Land Uses in Prime Agricultural Areas

Section 2.3.6.1 of the PPS states that under certain conditions planning authorities may permit limited, non-agricultural uses in prime agricultural areas. Policy 2.3.6.1 b) that "limited non-residential uses, provided that all of the following can be 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 provided for in policy 1.1.2 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."

In addition, Section 2.3.6.2 states that "Impacts from any new or expanding non-agricultural uses on surrounding agricultural operations and lands are to be mitigated to the extent feasible".

According to the Provincial Soil database, the Subject Lands are located in an area that is comprised entirely of prime agricultural land (CLI Class 1). The Peel Region Official Plan and Town of Caledon Official Plan both designate the Subject Lands as "Prime Agricultural Area". The Subject Lands are not located within a specialty crop area. The proposed use is a non-residential use and as such may be permitted if it the application can meet the tests listed in Section 2.3.6.1 of the PPS.

3.2 Growth Plan for the Greater Golden Horseshoe

In May 2019 the updated Growth Plan for the Greater Golden Horseshoe (GPGGH) came into effect and was most recently updated in August 2020. The objective of the plan is to provide a long-term plan that works to manage growth, build complete communities, curb urban sprawl and protect the natural environment.

The Province has identified an Agricultural System for the GGH which is discussed in Section 4.2.6 of the Growth Plan. Section 4.2.6.3 states:

Where agricultural uses and non-agricultural uses interface outside of settlement areas, land use compatibility will be achieved by avoiding or where avoidance is not possible, minimizing and mitigating adverse impacts on the Agricultural System. Where mitigation is required, measures should be incorporated as part of the non-agricultural uses, as appropriate, within the area being developed. Where appropriate, this should be based on an agricultural impact assessment.

A definition of an agricultural impact assessment is provided in the GPGGH.

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. (Greenbelt Plan)

The Agricultural System includes a continuous and productive land base, comprised of prime agricultural areas, including specialty crop areas, and rural lands, as well as a complementary agri-food network that together enable the agri-food sector to thrive. The agri-food network includes many agricultural related features such as regional infrastructure and transportation networks, on-farm buildings and infrastructure, agricultural services, farm markets, distributors and primary processing, as well as small towns and hamlets that are supportive of agriculture and are important to the viability of the agri-food sector. To ensure the long-term viability of a healthy agricultural system, land use planners must ensure that there are opportunities within the agricultural land base for key infrastructure, services and assets which support the agricultural industry. This includes agri-food network (AFN) features such as cold storage facilities, abattoirs, food processors, grain dryers, distribution centres, and food hubs/coops.

The Implementation Procedures for the Agricultural System for the Greater Golden Horseshoe (GGH) were prepared by the Province to guide municipalities identify prime agricultural areas and implement policies for the agricultural system. Mapping has been completed for the GGH and is shown on-line using the Agricultural System Portal. The Agricultural Systems Portal and the Implementation Procedures for the Agricultural System for the GGH were reviewed to assess impacts the proposed development may have on the Agricultural System.

The Agricultural Systems mapping for the GGH shows that these lands are part of the agricultural land base and considered to be within a prime agricultural area.

3.3 Region of Peel Official Plan

TOWN OF CALEDON PLANNING RECEIVED Dec 24, 2020

The Region of Peel used a Land Evaluation and Area Review (LEAR) process to identify its prime agricultural areas. The Region of Peel & Town of Caledon Land Evaluation & Area Review (LEAR) was completed in 2016. The LEAR results are generally consistent with the Province's Agricultural Systems mapping which also used a LEAR system to identify the agricultural land base in the GGH. Both confirmed that the Subject Lands and the surrounding Study Area are part of the Region's prime agricultural area.

The Subject Lands are designated *Agricultural Area* in Schedule B of the Regional Municipality of Peel Official Plan (2018) and located outside of the Greenbelt Plan and Oak Ridge's Moraine Plan Area. Constraints to development relating to Agricultural policies are discussed in Chapter 3 of the Official Plan (OP). These policies apply to lands designated Prime Agricultural Areas.

Section 3.2.1.2 of the Official Plan states that it is the Objective of Peel Region to:

"To protect agricultural uses in the Prime Agricultural Area from incompatible activities and land uses which would limit agricultural productivity or efficiency or result in the loss and fragmentation of the agricultural land base"

Section 3.2.2.11 states that it is the policy of Regional Council to;

"Direct the Town of Caledon, in the Prime Agricultural Area, only to permit a non-residential use, subject to an area municipal official plan amendment that:

a) there are no reasonable alternative locations which avoid the Prime Agricultural Area;

b) There are no reasonable alternative locations in the Prime Agricultural Area with lower priority lands;

c) there is a demonstrated need for the use, which has been justified in the context of applicable growth management policies; and

d) impacts from any new non-residential use on surrounding agricultural operations and lands are minimal or will be satisfactory mitigated.

The Region of Peel OP does not recognize a place of worship as a permitted use in the Prime Agricultural Area designation. Therefore, an area municipal official plan amendment will be required for the development proposed on the Subject Lands.

Any new permitted land uses, or consents are subject to the provincial Minimum Distance Separation Formulae requirements. Section 3.2.2.3 states that it is the policy of Regional Council to:

"Require compliance with minimum distance separation formula in the Prime Agricultural Area."

3.4 Town of Caledon Official Plan

The Subject Lands are designated Prime Agricultural Area in Schedule A – Town of Caledon Land Use Plan of the City's Official Plan (2018). Section 4.1.3 of the Official Plan identifies Prime Agricultural Areas and General Agricultural Areas as lands that "generally coincide with a relatively large area of high capability agricultural lands recognized as Class 1, 2, and 3 agricultural lands according to the Canada Land Inventory of the Soil Capability for Agriculture though the Region of Peel Official Plan."

As stated in section 5.1.1.1, the objective of the land use policies for lands designated as Prime Agricultural Area is "To protect Prime Agricultural Areas by encouraging the business of agriculture, by providing for innovation and diversification within agriculture, by providing additional economic opportunities through On-farm Diversified Uses, and by limiting non-agricultural uses and non-agricultural severances."

The requirement to complete an Agricultural Impact Assessment is outlined in Section 5.1.1.17.1 that states:

"Proposals in the Prime Agricultural Area that have the potential to negatively impact agricultural uses will require an Agricultural Impact Assessment"

The proposed religious institution is proposed on lands currently designated Prime Agricultural Area and must meet the requirements outlined in section 5.1.1.17.2 that state:

"The Agricultural Impact Assessment must be conducted by a qualified agricultural expert such as a Professional Agrologist or Agronomist, must describe the proposed development including the need for the proposed development in the Town, the on-site and surrounding land uses and agricultural capabilities, the physical and socio-economic components of the agricultural resource base, the land use compatibility of the proposed use with surrounding agricultural uses and agricultural community, must identify the direct and indirect impacts of the proposed development on existing agricultural uses, and on the flexibility of the area to support different types of agriculture, must provide an alternative location analysis, and must identify possible mitigative measures or methods of reducing any adverse impacts to the agricultural resource base and agricultural community."

The Town of Caledon requires that the proposed non-agricultural uses meet the Minimum Distance Separation Formula as outlined in Section 5.1.1.16.1 of the Official Plan which states:

"The Town will use the Provincial Minimum Distance Separation Formulae I and II to ensure adequate separation distance between agricultural uses and non-agricultural uses."

3.3 Minimum Distance Separation

Each of the planning documents listed in this section require that the proposed new non-farm land use meet the minimum distance separation formulae. According to the Ontario Ministry of Agriculture, Food and Rural Affairs, (OMAFRA) FactSheet *Farmer and Neighbour Relations Preventing and Resolving Local Conflicts* (January 2005), neighbour complaints relating to odours generated by farm operations are the number one complaint received by farmers.

The concept of applying separation distances between livestock facilities and non-farm land uses in order to minimize land use conflicts with the growing non-agricultural rural population first originated in the early 1970's with the *Suggested Code of Practice* where a one size fits all solution was first applied to new or expanding livestock operations. The *Suggested Code of Practice* "rationalized that the effect of objectionable odours in a neighbourhood could be reduced if livestock and poultry facilities were located as far as

practically possible from nearby dwellings" (Minimum Distance Separation Implementation Guidelines, Publication 707, 2006).

In 1976 the *Agricultural Code of Practice* was developed and introduced MDS formulas which would calculate the separation distances based on a range of factors specific to each livestock facility and the perceived sensitivity of the non-farm land uses. This document further reiterated that "Objectionable odours can be reduced if livestock buildings and rural residences are constructed at reasonable distances from each other." It goes on to say that "The MDS Formulas have been developed to provide a consistent and fair technique to determine separation distances between non-compatible land uses".

The 1978 *Food Land Guidelines,* the agricultural planning policy of the day, directed municipalities to indicate in relevant policies of their official plan that the MDS formula be applied to new or expanding livestock facilities and to new non-farm land uses.

The Agricultural Code of Practice was replaced by the Minimum Distance Separation I and Minimum Distance Separation II in 1995. In 2006, the OMAFRA updated the MDS formulae and the Minimum Distance Separation Implementation Guidelines, Publication 707 came into effect on January 1, 2007.

The MDS was once again updated in 2016 and came into effect on March 1st, 2017. The MDS guidelines are provided in "Minimum Distance Separation (MDS) Document", Publication 853 OMAFRA (2017). As with its predecessors, the MDS only addresses odour-related concerns.

The MDS only applies to Agricultural or Rural designated lands and is not applied to lands within existing settlement area boundaries unless specific wording is provided in a municipality's official plan stating that the MDS is to be applied within other land use designations.

Two different formulae have been developed by the Province; the MDS I formula and the MDS II formula. The MDS I formula calculates the minimum distance separation requirements between existing livestock facilities and proposed new non-agricultural uses or lot creation and is the applicable formula to be used for settlement area expansion. The MDS II calculates minimum distance separation requirements for new or expanding livestock facilities from existing or approved non-farm development. For the proposed development, the MDS I formula is applicable.

4. **STUDY FINDINGS**

4.1 Physiography

The Subject Lands are located within the South Slope physiographic region (Chapman and Putnam, 1984). This physiographic region lies between the Oak Ridges Moraine to the north and the Peel Plain to the south. It has been classified as a drumlinized till plain that often includes an overlying thin veneer (up to 1 m thick) of aeolian sand deposits.

Typical farm operations on the South Slope include small livestock operations, equestrian operations, and hobby farms. There appears to have been a decline in the number of livestock operations in this area and an increase in field crop production. Crops are predominantly common field crops such as hay, pasture, wheat, corn, and soybean.

4.2 Climate

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

Environment Canada's Woodbridge station is closest to the Subject Lands. Records show that this area receives an average of 799.8 mm of precipitation annually (Environment Canada website); 697.0 mm of rainfall and 102.8 cm of snowfall. The daily average temperature ranges from a high of 20.8°C to a low of -6.6°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. Regions within the Bolton area begin to experience average temperatures greater than 10°C starting May 4^{tst} before reaching temperatures greater than 12.8°C for 3 consecutive days around May 16th. During this time and up until the season's average ending date, October 3rd, the area accumulates an average of between 2700 and 2900 crop heat units (CHU).

On average, the last spring frost in the Woodbridge area occurs on May 1st. The first fall frost is expected on October 13th. This provides the surrounding with a growing period of between 145 and 165 days. The climate in the Woodbridge area provides a good overall growing period that can support a wide range of crops.

4.3 Specialty Crop Areas

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

- a) soils that have suitability to produce specialty crops, or lands that are subject to special climatic conditions, or a combination of both;
- b) farmers skilled in the production of specialty crops; and

c) a long-term investment of capital in areas such as crops, drainage, infrastructure and related facilities and services to produce, store, or process specialty crops.

There are two specialty crop areas recognized by the province, the Niagara Fruit Belt and the Holland Marsh. The Subject Lands are located within neither of these specialty crop areas. The Subject Lands do not exhibit any of the characteristics of a specialty crop area. They are not part of a specialty crop area.

4.4 Regional Soils

4.4.1 Soil Series

The *Soil Survey of Peel County - No. 18* of the Ontario Soil Survey (Hoffman, D.W., Richards, N.R., 1953) includes a soil map that shows the distribution of the various soil series in the Region of Peel. The regional level survey mapped the soils at a scale of 1:63,360 which is appropriate for regional level planning decisions. However, for site specific development applications, larger scale and more detailed soil mapping is required.

The digital Provincial Soil Resource database is compiled and administered by OMAFRA. It includes most of the data provided by the soil surveys completed throughout Ontario. Much of this information is accessible from the Province's Agricultural Information Atlas. This is an interactive online application that enables users to obtain agricultural information for Ontario such as soils and drainage, as well as data layers from other Government of Ontario ministries (e.g., lot boundaries). The database was accessed in September 2020.

Chinguacousy Clay Loam Soils

The *Soil Survey of Peel County* mapping shows that the soils on the Subject Lands are comprised entirely of Chinguacousy Clay Loam soils. The regional soil survey mapping is shown in Figure 2.

The Chinguacousy soil series is the imperfectly drained member of the Oneida Catena. Oneida soils are well drained and have developed from a calcareous, silty clay to silty clay loam textured till, common throughout the South Slope physiographic region.

The imperfectly drained Chinguacousy soil series has developed from the same calcareous, silty clay to silty clay loam till, parent material. The friable, silty clay loam surface (Ap) is 20 to 25 cm deep and contains few stones. It overlies a firm, clay loam to silty clay loam subsoil (Bmgj and Btgj horizons) and typically, the firm, parent material (Ckgj) is found at a depth between 60 and 80 cm.

Chinguacousy soils are imperfectly drained soils and mottles are present in the upper 50 cm of the soil profile. Mottles are described as few to common and distinct. These soils have a relatively high waterholding capacity. They are moderately to slowly permeable and surface runoff is moderate. Excess soil water is often found in the upper soil horizons as a result of high groundwater or perched conditions during the growing season, most commonly in the spring and fall which corresponds to sowing and harvest periods. The high-water content in the soils during the spring may delay seeding.



4.4.2 CLI Agricultural Land Classification

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

The regional mapping shows that the Chinguacousy soils on nearly level slopes are rated CLI Class 1 soil. Chinguacousy soils on very gentle slopes are rated CLI Class 2D. These soils have moderate limitations for common field crops due to the soil's relatively high bulk density. The soil is easily compacted by machinery when soil moisture conditions are high. Tile drainage is often necessary to improve crop yields particularly where soil compaction has occurred. Erosion control measures may need to be implemented for lands under row crop production as Chinguacousy soils are also easily erodible.

The regional mapping shows all of the Subject Lands within an area rated CLI Class 1 (Figure 2). Class 1 lands are high priority Prime Agricultural Lands.

4.5 Refined Soil Resources

4.5.1 Detailed Soil Survey

A field visit to the Subject Lands was completed on September 15th, 2020. The purpose of the soil survey is to refine the regional scale mapping as per the OMAFRA Guidelines for Detailed Soil Surveys for Agricultural Land Use Planning. Typically for site specific soil surveys, lands are mapped at a scale of 1:10,000. This equates to an inspection location density of approximately one per two hectares. Since the is site is just over six hectares in size, the soil profile was examined at three locations within the Subject Lands.

As described in the methodologies section of this report, the Subject Lands were traversed on foot and the soil profile was exposed at three locations using a hand-held Dutch auger. The physical properties of the soil, such as the mode of deposition, soil horizons and horizon depths, depth to bedrock, soil texture, drainage, and stoniness, were described and recorded on field data sheets. The slope percentage within the soil polygons was measured using a hand-held clinometer.

The soil survey confirmed the presence of the Chinguacousy Clay Loam as well as a relatively small, unclassified area (the existing residential dwelling and yard) in the north west corner of the Subject lands. Figure 3 shows the refined soil mapping for the Subject Lands. Approximately 70% of the Chinguacousy soils are on simple, B-Class slopes (0.5 - 2.0%) and 30% are on simple C-Class slopes (2.0-5%). The location of the residential dwelling and yard are shown as Not Mapped.



Table 1 shows the area and percentage of the Chinguacousy soil on the Subject Lands. Photographs taken during the soil survey show the current condition of the Subject Lands and are provided in Appendix D. Soil Data sheets completed during the soil survey are provided in Appendix E.

Soil Series	Area (Ha)	% of Subject Lands
Chinguacousy Clay Loam	5.24	86.61%
Not Mapped	0.81	13.39%
Totals	6.05	100.00%

Table 1: Refined Soils for Subject Lands

4.5.2 Agricultural Capability/Productivity

The results of the detailed soil survey were used to refine the CLI capability ratings for the Subject Lands. The agricultural capability for common field crops was interpreted using OMAFRA's *Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for the Application of the Canada Land Inventory in Ontario.*

The detailed soil survey confirmed that the Subject Lands have a mix of prime and non-agricultural lands with CLI capability ratings of CLI Class 2 and Not Mapped.

The refined CLI capability rating for the Subject Lands is shown Figure 3. The CLI ratings for the soils mapped are shown in Table 2. Approximately 5.24 ha (86.61%) of the Subject Lands are considered to be prime agricultural lands. The remaining 0.81 ha (13.39%) of the Subject Lands are not cultivatable and have no CLI rating. They are Unclassified.

Table 2: Refined CLI Capability Ratings for Subject Lands				
CLI Rating	Area (Ha)	% of Subject Lands		
CLI 2D	3.67	60.66		
CLI 2DT	1.57	25.95		
Unclassified	0.81	13.39		
CLI Totals	6.05	100.00%		

4.6 Land Use

A reconnaissance level, land use survey was completed on July 21st, 2020. The land use survey identified the number and type of agricultural operations (both existing and retired), agricultural-related uses and on-farm diversified uses on the Subject Lands and within the Study Area. The land use survey also identified the extent and type of non-farm land uses in the Study Area. The crop types observed within the Study Area were recorded and mapped.

The purpose of the land use survey is to document the mix of agricultural and non-agricultural uses in the Study Area, identify agricultural operations that may be sensitive to the introduction of new land uses, and identify livestock facilities for MDS purposes. Figure 4 shows the land uses observed. All of the farms, retired farms and hobby farms are numbered, and short descriptions of these operations are contained in the land use survey notes in Appendix F.

4.6.1 Subject Lands

There is a one storey residence and garage with a manicured lawn on the Subject Lands. The remainder and majority of the Subject Lands are currently under agricultural production. The land was planted in wheat when observed in July, which was then subsequently harvested and planted in alfalfa when observed again in September.

There are no farm related structures or land improvements on the Subject Lands.

4.6.2 Study Area

Agricultural Uses

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

Farm types were noted and identified as either active or retired (i.e., inactive), livestock, cash crop or hobby farms. Livestock operations include poultry, dairy, beef, cow-calf and equestrian operations. Those inactive or retired farm operations were evaluated to determine whether they should be considered as either an empty livestock operation or as a remnant farm. Remnant farms have no infrastructure that is suitable for housing livestock whereas the infrastructure for an empty livestock facility is still in a condition that could permit the keeping of livestock with minimal investment.

There are 14 Agricultural Uses of which only eight are active, while the other six farm operations, of various sizes, appear to be remnant or retired farm operations. The eight active agricultural uses include two livestock operations (#16 & #19), and six hobby farms (#4, #5, #14, #17, #18 and #22).

Three of the retired farm operations (#2, #9, & #11) have infrastructure that could house livestock. These farms are classified as empty livestock operations. Three other retired farm operations (#7, #20, & #21) are in poor condition; they appear unsound and not suitable for housing livestock. The lands associated with



many of these retired farm operations are still cultivated and used for growing common field crops (i.e., cash crop operations).

Agriculture-Related Uses

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

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

One agricultural-related land use was identified within the Study Area (#12). The commercial operation, Tuttle's small engine repair, is located along King St north of Innis Lake Road.

On-Farm Diversified Uses

The PPS defines On-farm diversified uses as "uses that are secondary to the principal agricultural use of the property and are limited in area. On-farm diversified uses include, but are not limited to, home occupations, home industries, agri-tourism uses, and uses that produce value-added agricultural products". No on-farm diversified uses were observed within the Study Area.

Non-Agricultural Uses

Non-farm land uses include single lot, non-farm residences, existing and approved rural residential subdivisions, residential clusters, settlement areas, municipal and commercial utilities, recreational, institutional, commercial, industrial, and aggregate extraction operations

During the land use survey there were seven (7) non-farm land uses identified in the Study Area. This does not include most rural residential dwellings. Six commercial uses (#3, #8, #9, #10, #13, & #15), were observed, many of which appear to be small home-based business and/or construction related uses.

There is one institutional use north east of the Subject Lands, the Macville Public School (#6), and one recreational use to the west, Johnston Sports Park (#1).

4.7 Cropping Pattern

As shown in Figure 4, the majority of the tillable area within the Study Area is mapped as either 'Cultivated', 'Soy', 'Winter Wheat', or 'Corn'. The land use survey was completed on July 21st, 2020 at which time many of the crops typically grown had been planted and were in the midst of the growing season. Smaller areas within the Study Area consist of pasture/forage, fallow, scrub, and idle lands.

Idle lands are lands which have not been cultivated or harvested for several years and appear to be left fallow. Scrublands have also not been cultivated for several years and have transformed to a combination of cultural meadows and may include early successional woody species.

4.8 Land Improvements

OMAFRA's Agricultural Information Atlas provides artificial drainage mapping for the Province. This online tool was accessed to obtain drainage mapping for the lands within the Study Area.

The mapping shows that some farmers in the Study Area have invested in both random and systematic tile drainage. The majority of this investment is located to the west of the Subject Lands as shown in Figure 5.

OMAFRA's mapping shows that there is no investment in tile drainage on the Subject Lands.

4.9 Fragmentation of Agricultural Lands

Fragmentation of agricultural lands can have a negative impact on the viability of agricultural lands and its long-term preservation for agricultural purposes. Fragmentation of farmlands can lead to a reduction in the economic viability of the agricultural area. Fragmentation can reduce the efficiency of which lands are farmed and may increase the operating costs for farmers who must rely on several small and separated parcels. Larger farm parcels can accommodate a wider range of agricultural activities and ensure long term viability of the property. Whereas smaller farm parcels cannot offer the same flexibility and may not be viable as standalone parcels. They generally cannot support a family farm without there being a secondary source of income (off farm) that is required to maintain the agricultural operation.

Agricultural areas which have been fragmented also often have a higher occurrence of non-farm land uses which in turn means that there is a greater potential for conflict arising between farm and non-farm land uses.

Agricultural areas with relatively low levels of fragmentation are considered to be more viable economically for agriculture uses and generally have fewer sources of non-farm land use conflicts. In most cases, these areas have a higher priority for protection. High levels of fragmentation in an agricultural area lower the area's agricultural priority.

Based on our review of the lot fabric, as observed on-line through the Agricultural Information Atlas, there is already a significant amount of land fragmentation within the Study Area. There are numerous non-farm residences located on small lots south east and west of the Subject Lands. Land division as a result of severance has also resulted in the creation of several smaller lots in the 2 - 10 ha size range. As an example, Figure 6 shows the lands in close proximity to the Subject Lands.



Legend

Study Area (1500m) Agricultural Tile Drainage

Systematic



Figure 5 Tile Drainage Mapping

Agricultural Impact Assessment for 6939 King Street

Prepared for:

Swaminarayan Mandir Vasna Sanstha (SMVS)

Prepared by:



DATE: November 2020

FILE: 20007

TOWNERS PROVIDE THE STANDARD IN THE STANDARD INTERS INTO S			
Legend Subject Lands	Figure 6 Fragmentation in Study Area		
1500m Study Area	Agricultural Impact Assessment for 6939 King Street		
	Prepared for: Swaminarayan Mandir Vasna Sanstha (SMVS) Prepared by: CONSULTING INC. DATE: December 2020 FILE: C20007		

The proposed development is already located on a small lot that is unlikely able to support a traditional family farm which further reduces its agricultural priority. The development application will not require a severance; therefore; the development will not further contribute to the fragmentation of the agricultural land agricultural base in the Study Area.

4.10 Minimum Distance Separation

The Minimum Distance Separation is a tool used to minimize potential impacts and conflicts between non-farm and farm land uses. In Rural and Agricultural designated areas, new non-farm land uses are required to meet the Minimum Distance Separation I formula as contained in The Minimum Distance Separation Implementation Document: Formulae and Guidelines for Livestock Facility and Anaerobic Digester Odour Setbacks, Publication 853 of the Ontario Ministry of Agriculture, Food and Rural Affairs, 2016.

Section 2.3.3.3 of the PPS states that "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." The MDS is a tool used to determine the separation distance between livestock facilities and non-compatible land uses. It deals specifically with odour and does not account for noise, dust or other farm generated products. It is applied to all farm operations that have infrastructure reasonably capable of housing livestock. The MDS I formulae provides the minimum distance separation between existing livestock facilities (and empty livestock facilities) and new non-agricultural use including urban boundary expansion.

The MDS I formulae applies to all existing livestock facilities and empty livestock facilities within 1,500 m of the Subject Lands. An empty livestock facility is one that may be retired or no longer used to house livestock. However, these facilities are reasonably capable of housing livestock. The MDS is not applied to barns that are in poor condition and not suitable for housing livestock.

The factors used to determine the MDS I setback requirements include:

- lot size;
- the type of livestock;
- the maximum capacity of the barn for livestock;
- type of manure system; and
- the type of land use (Type A or Type B).

Type A land uses are characterized by a <u>lower density</u> of human occupancy, habitation or activity. Type B land uses are characterized by a <u>higher density</u> of human occupancy, habitation or activity. For the proposed development, both land use types apply. The parking area would qualify as a Type A land use and the Hindu Temple is a Type B land use.

To obtain the other factors we relied on our field observations recorded during the land use survey, discussions with landowners where possible, and aerial photographic interpretation. The lot sizes were determined using the Ag_Maps measuring tool. In some cases, the building capacity was estimated based on the building dimensions as measured using either the Ag_Maps measuring tool or the Google Earth® measuring tool.

Due to the ongoing COVID-19 pandemic we tried to limited face to face interviews by leaving self addressed envelopes with questionnaires in the mailboxes where livestock operations were observed. We did not have a good response with this method of data collection. We made subsequent site visits and were able to collect information directly from three of the landowners. These included the agricultural operations #5, #19, & #21. The MDS I setback requirements for the other livestock facilities are based on a reasonable, although conservative, interpretation of the factors used.

The MDS I formula was applied to six active livestock facilities and empty livestock facilities capable of housing livestock. The MDS I factors for these livestock facilities were entered using OMAFRA's MDS I AgriSuite software. The MDS reports generated by the MDS software are provided in Appendix G and the MDS I setback requirements are shown in Figures 7 and 8.

As shown in Figure 7, only one livestock facility has an MDS I setback requirement that encroaches into the Subject Lands for a Type B land use. The MDS I setback requirement for this barn (#5) encroaches within the Subject Lands restricting development opportunities for Type B land uses. The Hindu Temple cannot be situated within the MDS setback for Type B land uses. Infrastructure on site, including the proposed septic bed and dry pond, does not require an MDS setback and therefor meets MDS requirements.

To comply with the MDS I setback requirements, the site plans for the proposed development, as shown in Figure 8, situate the Hindu Temple beyond the MDS I setback. This figure also shows the MDS I setback requirements for Type A land uses which in this case is the parking area proposed for the Temple. The MDS I setback from livestock operation #5 does not encroach into the Subject Lands for Type A land uses. Therefore, the proposed development can meet the MDS I setback requirements for both the Type A and B land uses.

Table 3 below summarizes the level of encroachment the proposed development has on the livestock operations and the level of compliance with MDS setback achievable.

Site Number	MDS I Setback Requirement – Livestock Facility	MDS I Setback Requirement – Manure Storage	Distance Between Livestock Facility & Subject Lands	Distance Between Manure Storage & Subject Lands	Able to comply with MDS Livestock Setback?	Able to comply with MDS Manure Storage Setback?
#2 Type B	372m	No Storage Present	402m	N/A	Yes	Yes
#5 Type B	185m	185m	186m	208m	Yes	Yes
#5 Type A	92 m	92 m	122m	143m	Yes	Yes
#11 Type B	381m	No Storage Present	977m	N/A	Yes	Yes
#16 Type B	339m	356	1,166m	1,143m	Yes	Yes
#19 Type B	389m	404m	507m	592m	Yes	Yes
#22 Type B	234m	234m	285m	284m	Yes	Yes

Table 3: MDS Setback Requirements

The MDS formula was not applied to farm operations with barns that are not structurally sound and capable housing livestock. Three farm operations with structure which are in poor condition or now absent of structures to house livestock were identified fit this description (e.g., #7, #9, and #20). One retired farm operation (#21) appeared to be suitable for housing livestock based on initial field observations. We were able to contact the landowner to inquire about the livestock housing capability of the structures on the property. The landowner stated that the farm had previously operated as a dairy operation. However, the diary quota had been sold 18 years prior and the farm was currently being utilized as a cash cropping operation. The land owner also confirmed that the potential livestock housing structures on site would be classified as a retired livestock operation no longer suitable for housing livestock.

As per Guideline #12 in the *The Minimum Distance Separation (MDS) Document* (2017), a reduced MDS setback may be permitted if four or more non-agricultural uses are located between and closer to the livestock facility than the proposed development. These developments must be of the same or greater sensitivity than the proposed development (Type A or Type B). The non-agricultural uses must also be located within a 120° view of the nearest part of the livestock facility or manure storage to the proposed development.

Guideline #12 would apply to (#4, #9, #14, #17, and #18) and the reduced setbacks generated by these facilities do not encroach into the Subject Lands. It should be noted that even without the application of Guideline #12, the MDS I setbacks would not encroach into the Subject Lands.







5.0 AGRICULTURAL PRIORITY

The PPS requires that non-agricultural developments avoid locating in prime agricultural areas whenever possible. Where this is not possible or practical, the proposed development should be located on lands with lower agricultural priority.

The Subject Lands are located within a prime agricultural area; therefore, an assessment of the agricultural priority of the Subject Lands is required to address provincial policy. This analysis involves an assessment of whether the lands are considered to be part of a specialty crop area, the soil capability relative to other lands within the Study Area, the level of investment in agricultural infrastructure and land improvements, the parcel size, presence of existing non-farm land uses, ability to minimize potential conflict (e.g., meeting the MDS I setback requirements) and the zoning of the parcel.

We have concluded that relative to much of the prime agricultural area in the Study Area, the Subject Lands are lower priority agricultural lands for the following reasons:

- 1. They are not located within a specialty crop area and no specialty crops such as vegetable or fruit crops grown in the vicinity;
- 2. There is no farm infrastructure or land improvements on the Subject Lands.
- 3. The Subject Lands are small in size (approximately 6.05 ha) and are not a viable, stand-alone, agricultural parcel. It has marginal value for agricultural uses due to its small size; and
- 4. The Subject Lands are located in a fragmented agricultural area in which there is a mix of agricultural and non-agricultural land uses. The presence and prevalence of the non-farm land uses increases the potential for conflict arising between farm and non-farm land uses which in turn reduces the agricultural priority of the area.

6.0 ASSESSMENT OF ALTERNATIVE LOCATIONS

6.1 Provincial Policy

Policy 2.3.6.1 of the PPS states that under certain conditions planning authorities may permit limited, non-agricultural uses in prime agricultural areas. Policy 2.3.6.1 b) states, in part, that "limited non-residential uses" may be permitted. The proposed development is considered an institutional use and meets the requirements of non-residential use.

Section 2.3.6.1 also states that an application must demonstrate that:

- 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 provided for in policy 1.1.2 for additional land to be designated 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."

We have confirmed that the lands are not located within a provincially recognized specialty crop area and that the proposed development does not comply with the MDS I setback requirements and a minor variance would be required to permit development. The need for the development has been adequately addressed in Weston's planning justification report prepared by Weston Consulting for the proposed development. The evaluation of alternative locations is also required when considering non-agricultural uses in prime agricultural areas.

6.2 Evaluation of Alternative Locations

SMVS identified a general area for siting the proposed Hindu Temple that would accommodate worshipers in the communities of Bolton and East Caledon. Weston Consulting (Weston) prepared a report entitled *Policy and Data Driven Analysis – Site Selection* (December 2020). The purpose of the report to *"narrow down the list of candidate sites based on two reasonable premises;*

- Study area should be in close proximity to potential worshipers living in the residential centres of Caledon East and Bolton.
- Study area should largely avoid the areas within the Greenbelt Plan, Oak Ridges Moraine Conservation Plan, Niagara Escarpment Plan Area and natural heritage features, as there are no mechanisms to facilitate an amendment to the noted plans (illustrated in the inset below). Most of the Town is regulated by these plans."

The proposed Hindu Temple will be consistent with a Growth Plan objective of creating complete communities while respecting the need to preserve agricultural lands. It is understood that these Provincial planning policies restrict the potential for locating the proposed Hindu Temple to lands

outside of the Greenbelt Plan, Oak Ridges Moraine Conservation Plan, Niagara Escarpment Plan Area. As a result, it was not possible to locate the proposed development on non-prime agricultural areas.

Weston identified four candidate sites, all of which are located in the Caledon's prime agricultural area. However, these candidate sites all minimize the impacts on agricultural lands while addressing the locational needs of the proposed Hindu Temple. Weston concluded that the Subject Lands are the preferred candidate site.

6.2.1 Avoidance of Prime Agricultural Areas

The PPS first directs non-agricultural developments to avoid locating in prime agricultural areas whenever possible. We have reviewed the Regional and Local land use schedules for lands within the Study Area. The majority of this area is in the Town of Caledon's prime agricultural area. There are no reasonable options upon which the proposed Hindu Temple can be situated that avoids the lands designated prime agricultural area in the Study Area. This conclusion is consistent with Weston's conclusions. As demonstrated by Weston's *Policy and Data Driven Analysis – Site Selection* (December 2020), there are no reasonable options that avoid prime agricultural areas.

6.2.2 Low Priority Alternative Areas

Where it is not possible or practical to avoid lands within a prime agricultural area, the PPS directs development to locate on lands with lower agricultural priority. As shown in Figure 9 there are no opportunities to locate the proposed Hindu Temple on non-prime agricultural lands (i.e., CLI Classes 1-3).

Figure 10 shows the Subject Lands in relation to the Agricultural Land Base, the Greenbelt, and the Oak Ridges Moraine. This figure further demonstrates that reasonable locations which avoid prime agricultural areas are not present in the Study Area and in much of the Town of Caledon.

As discussed in the preceding section of the AIA (Section 5), there are several site characteristics which lower the agricultural priority of the Subject Lands. Based on our analysis and that of Westons' alternate site analysis, the proposed location is a reasonable choice that makes use of low priority agricultural lands. The proposed development is therefore consistent with Policy 2.3.6.1 in the PPS.




7.0 ASSESSMENT OF IMPACTS TO AGRICULTURE

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

Based on our review of the Agricultural System Portal, portions of the Subject Lands are located within the Region of Peel's agricultural system. The proposed development will have both direct and indirect impacts. However, the direct impacts are minimal, and it is unlikely that the proposed Hindu Temple will have significant, long-term negative effect on the surrounding agricultural lands and community.

7.1 Direct Impacts

7.1.1 Prime Agricultural Lands

There will be a minor loss of approximately 2.83 ha of prime agricultural lands. There are lands on southern portion of the lot, approximately 2.4 ha, that are not required for the development and will remain available for agricultural purposes.

7.1.2 Agricultural Infrastructure

There is no agricultural infrastructure present on the Subject Lands and thus, there will be no direct impact on agricultural infrastructure.

7.1.3 Agricultural Land Improvements

No agricultural land improvements such as tile drainage have been identified on the Subject Lands. Therefore, there will be no direct impact on agricultural land improvements.

7.1.4 Loss of Crop Land

Many farmers' lease and farm smaller parcels to supplement their farm operation (e.g., increase acreage of cultivated lands for feed production). Despite its small lot size (6.05ha) and only 5.24 ha of cultivatable land, the Subject Lands are being leased to a local farmer. The proposed development will only require the northern half and a portion of the southern half of the lot which will impact approximately 2.83 ha of cultivatable lands. The loss of 2.83 ha of prime agricultural land will have a negligible affect on the agricultural land base in the Study Area.

7.1.5 Minimum Distance Separation

The MDS I setback requirements have been calculated for the livestock and former livestock operations in the Study Area. The majority of the livestock operations are well removed from the proposed development and are not constraints to the development.

One farm operation to the east of the Subject Lands (i.e., Farm #5) does have an MDS I setback requirement that constrains development on a portion of the Subject Lands. However, by situating the

Hindu Temple beyond the MDS I setback requirement for a Type B land use, the development can meet the MDS I formulae as shown in Figure 8.

7.2 Indirect Impacts

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

7.2.1 Disruption to Surficial Drainage

It is our understanding that a stormwater drainage plan for the Subject Lands is to be completed as part of the planning process for the development. The Subject Lands are currently bounded to the north and east by municipal drains. No signs of drainage issues were observed during the field visit.

Surface runoff is only likely to have a potential impact on lands adjacent to the south of the property. To avoid surface runoff from impacting adjacent farmlands the continued use and of perimeter drains should be considered to deal with any surface flows not captured stormwater management of the site. Surface drainage should not be directed on to neighbouring farm lands unless through a natural drainage system.

7.2.2 Disruption to Farm Operations

Most active farms in the area are well removed from the Subject Lands and are unlikely to experience any form of disruption to their operations. The only farm operation potentially impacted is Farm Operation #5. It is important that the driveway to this operation remain open and accessible at all times. The proposed development must ensure that worshipers and visitors not block or use this driveway without the permission of the owner.

Non-farm traffic travelling to the Hindu Temple has the potential to increase conflict with farm machinery travelling along King Street and Centreville Creek Rd. King Street is only a two lane highway, however, there are wide shoulders which slow moving farm machinery can use to reduce impacts with non-farm vehicular traffic. King Street is a heavily travelled route which farmers must already contend with. The additional traffic generated by the proposed Hindu Temple will have a negligible effect on farm traffic.

Centreville Creek Rd. experiences a smaller volume of non-farm traffic. The proposed Hindu Temple will use a short section of Centreville Creek Rd. to connect the entrance to the site from King St. It is unlikely that there will be a discernible indirect impact on farm operations that rely on Centreville Creek Rd. to access their farm lands.

The potential for the development to block or restrict access to farm fields is insignificant. It is unlikely that there will be a negative impact on farm operations adjacent to the proposed Hindu Temple.

The development will have no effect on the flexibility of surrounding lands to accommodate changes in types of farming. The adjacent lands will not be affected and will still be able to cultivate common field crops and other agricultural products without limitation.

New non-farm development may have an affect on the existing farm wells, irrigation ponds, and ponds or other waterbodies used to provide livestock with sources of water in the surrounding area. The proposed Hindu Temple is not likely to have a measurable impact on the groundwater table or any surface water features upon which neighbouring farm operations rely.

Noise, dust and light can have a negative impact on some farm operations. Construction of the Hindu Temple may generate greater levels of noise, dust and lighting. No sensitive farm operations were identified that would be impacted by noise, dust and lighting. It is recommended that these elements be controlled and in compliance with Ministry of Environment, Conservation and Parks (MECP) guidelines. The potential indirect impacts will be negligible.

The proposed Hindu Temple will not be a significant source of noise, dust or light. No negative indirect impacts are anticipated.

7.2.3 Trespass and Vandalism

Farm operations within the Study Area already have to deal with the potential for trespass and vandalism due to the significant non-farm development that has already taken place in the Study Area. While there is the potential for instances to occur due to the influx of people to the area, the separation of surrounding properties with the intersection of King Street and Centreville Creek will help to reduce the potential for trespass and vandalism. The distance from the majority farm operations to the Subject Lands is greater than 500m, further reducing the potential for trespass and vandalism. Erecting perimeter fencing of the development will significantly reduce the potential impact of trespass and vandalism by confining worshipers to the Subject Lands.

Pets from time to time may wander away and stray on to neighboring farm properties and chase or bother livestock. Pets do not typically attend worship sites and therefore this is not likely to ever be an issue for agricultural operations in the area. However, the perimeter fencing recommended will further minimize the potential for stray pets.

7.3 Summary of Impacts

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

Table 4: Summary of Impacts

Potential Impact	Potential Degree	Mitigation Massura	Anticipated Not Impact
i otentiai impact	of Impact	Witigation Measure	Anticipated Net Impact
Direct Impacts			
Loss of prime agricultural	High	None Required	A loss of approximately 2.83 ha of
land			CLI Class 2 lands.
Loss of agricultural	None	None Required	No Impact
infrastructure			
Loss of agricultural land	None	None Required	No Impact
improvements			
Loss of cropland	Low	Maintain lands not required for development	Potential loss of approximately 2.24
		in agricultural production	ha of tillable land.
Indirect Impacts			
Surficial Drainage	Low	 Stormwater management plan 	No Impact
Disruption to Farm	Low	• Ensure that access to farm operations and	No Impact
Operations		farm fields is maintained at all times during	
		construction and operation	
Non-farm traffic	Low	 None Required 	No Impact
Conflict with MDS formula	High Potential	• Ensure that the Hindu Temple is located	Compliance with MDS I achieved
	for non-	outside of the MDS I setback requirement for	
	compliance	a Type B land use. MDS setbacks not applied	
		to infrastructure.	
Wells, Irrigation, water bodies	Low	 Hydrogeological study to assess potential 	No Impact pending implementation
		impacts	of Hydrogeological study
		 Implement recommendations if impact 	recommendations
		identified	

 Table 4:
 Summary of Impact (cont.)

Potential Impact	Potential Degree of Impact	Mitigation Measure	Anticipated Net Impact
Trespass and vandalism	Low	 Limited by distance and ease of access 	No Impact
Stray Pets		 Prepare signage to be placed around the 	
		to not leave the premises	
		 Installation of perimeter fencing 	
Noise, Dust & Light	Dust & Light Low + Adhere to Ministry of Environment,		No Impact
		Conservation and Parks (MECP) guidelines	

8.0 CONFORMITY WITH AGRICULTURAL POLICIES

8.1 Provincial Policy Statement

The Study Area is part of a larger prime agricultural area. Non-farm development in a prime agricultural area must conform to PPS policies. The proposed Hindu Temple must comply with Policy 2.3.6.1b) which allows municipalities to permit "limited non-residential uses" provided that all of the following can be 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 provided for in policy 1.1.2 for additional land to be designated 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."

We have concluded that the development is not in a specialty crop area and that it can comply with the applicable minimum distance separation guidelines. The need for the development has been addressed by Weston Consulting Inc. in their planning and justification report.

We have concluded that there a no opportunities to locate the development in a non-prime agricultural area given the locational requirements for the Hindu Temple. The Subject Lands are low priority agricultural lands and a reasonable location for the development. Lands of lower agricultural priority were not identified. The proposed development complies with Policy 2.3.6.1.

PPS Policy 2.3.6.2 requires that the impacts of non-agricultural land uses proposed in prime agricultural areas be assessed. Potential impacts identified are required to be mitigated to the extent feasible. We have demonstrated that the impact on the agriculture system will be negligible. Potential impacts will be avoided or minimized to the extent possible through mitigation.

8.2 Growth Plan for the Greater Golden Horseshoe

This Study fulfills the GPGGH requirement to complete an agricultural impact assessment. The AIA has demonstrated that the development application for the proposed Hindu Temple will be consistent with Section 4.2.6.3 of the GPGGH. The proposed development will have a negligible impact on the agricultural system.

8.3 Region of Peel Official Plan

The Region of Peel Official Plan (ROP) does not recognize a place of worship as a permitted use in the Agricultural Area designation. We understand based on communication with Weston Consulting staff that a Planning Advisory Committee meeting with Region staff determined that a Regional Official Plan Amendment is not required as part of the proposed development.

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The ROP states that non-residential uses in prime agricultural areas are subject to a municipal official plan amendment. To comply with Section 3.2.2.11, the Study has demonstrated that the proposed Hindu Temple cannot avoid the Region's prime agricultural area given the locational requirements identified by Weston. Based on Weston's assessment of alternative locations and our analysis of the lands, the AIA has concluded that the Subject Lands are lower priority agricultural lands and a reasonable choice of location.

The AIA has also demonstrated that the potential impacts of the development on agricultural land and operations are minor, most of which can be mitigated so that impacts can be avoided.

Section 3.2.2.3 of the ROP requires that new development be consistent with the MDS guidelines. The AIA determined that the Hindu Temple can be situated on the Subject Lands to comply with the MDS formulae.

8.4 Town of Caledon Official Plan

As per section 4.13 of the Town of Caledon Official Plan, Prime Agricultural Areas are described as lands that "generally coincide with a relatively large area of high capability agricultural lands recognized as Class 1, 2, and 3..." Section 5.1.1.17.1 requires an AIA be conducted for any proposed development within prime agricultural areas that have the potential to negatively impact agricultural uses. This Study fulfills this requirement. The AIA has identified potential direct and indirect impacts associated with the proposed development and provided mitigation measures that can be implemented to minimize or avoid potential impacts. As required by Section 5.1.1.17.2, alternative locations have been addressed and we have concluded that although the Town's prime agricultural area cannot be avoided, the proposed location for the Hindu Temple is a reasonable choice of location which utilizes low priority agricultural lands.

To be consistent with Section 5.1.1.61 of the OP the location of the Hindu Temple can be situated to meet the MDS I setback requirements for both Type A and B land uses.

9.0 CONCLUSION

This AIA has assessed the agricultural resources and farm operations within the Study Area and assessed the potential impacts associated with proposed place or worship development. We have determined that the following:

- The Subject Lands are situated in a prime agricultural area which cannot be avoided due to the locational requirement identified in the report prepared by Weston Consulting - *Policy and Data Driven Analysis – Site Selection* (December 2020);
- 2. The alternate site assessment determined that the Subject Lands are a reasonable choice of location for the proposed development. Other locations on lower priority lands were not identified;
- 3. The proposed Hindu Temple will be located on lower priority agricultural lands and the development will have a negligible impact on the Agricultural System;
- 4. The proposed Hindu Temple will be compatible with the surrounding land uses and will not set a precedent by introducing a new, non-farm land use to the area;
- 5. The majority of the farm operations identified in the Study Area are well removed from the proposed Hindu Temple and will not be impacted by the development proposal. There are no agricultural infrastructure and land improvements on the Subject Lands. Potential direct and indirect impacts can be avoided through mitigation. The impact on the Agricultural System will be limited to the loss of only 2.83 ha of prime agricultural land (CLI Class 2). Approximately 2.4 ha will remain available for agricultural cropping purposes;
- 6. The MDS I setback for one farm operation does encroach into the Subject Lands, however, the proposed Hindu Temple development will be situated to meet the MDS I setback requirements for Type B land uses. The parking area has been assessed as a Type A land use and as such will meet the MDS I setback requirements. No MDS setback is required from the proposed septic bed and dry pond;
- 7. The proposed SMVS Hindu Temple will comply with Provincial policies and those of the Region of Peel and Town of Caledon.

This AIA was prepared by Sean Colville and Brett Espensen. Their CV's are included in Appendix H.

Respectfully submitted by:

ean Cale

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Brett Espensen, B.A. Hons, EMA. Colville Consulting Inc.

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Appendix A Development Plan



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Appendix B Climate Data

Dec 24, 2020

Climate Normals 1981-2010 Station Data

Metadata including Station Name, Province, Latitude, Longitude, Elevation, Climate ID, WMO ID, TC ID

STATION_NAME	PROVINCE	LATITUDE	LONGITUDE	ELEVATION	CLIMATE_ID	WMO_ID	TC_ID
WOODBRIDGE	ON	43°47'00.0 00" N	79°36'00.000" W	164.0 m	6159575		

Legend

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

B = At least 25 years

C = At least 20 years

D = At least 15 years

1981 to 2010 Canadian Climate Normals station data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Code
Temperature														
Daily Average (°C)	-6.6	-4.8	-0.4	6.6	12.9	18.1	20.8	19.6	15.4	9	3.1	-2.8	7.6	D
Standard Deviation	3.1	2.5	2.2	1.6	2.1	1.6	1.2	1.6	1.3	1.3	1.7	2.8	2.7	D
Daily Maximum (°C)	-2.5	-0.5	4.3	12	18.8	24.1	26.9	25.4	20.9	13.9	6.9	0.8	12.6	D
Daily Minimum (°C)	-10.7	-9.2	-5.2	1.2	6.8	12	14.7	13.8	9.8	4	-0.8	-6.4	2.5	D
Extreme Maximum (°C)	17	15.5	26.5	31.5	33	36	39	37.2	36.1	30.6	25	19.5		
Date (yyyy/dd)	2005/13	2000/27	1998/30	1990/25	1987/30	1988/25	1988/07	1975/01	1952/13	1951/05	1950/01	1982/03		
Extreme Minimum (°C)	-34.5	-30	-29.4	-17.2	-6.7	-1.7	2.8	-0.6	-5	-11.7	-18.3	-30		
Date (yyyy/dd)	1994/16	1979/18	1950/04	1972/07	1966/08	1972/11	1968/30	1952/25	1957/28	1972/20	1949/26	1980/25		
Precipitation														
Rainfall (mm)	20.4	23.2	31.4	59.6	79.1	76.3	70.4	80.4	84.6	66	71.1	34.6	697	С
Snowfall (cm)	29.9	21.1	17.8	3.7	0	0	0	0	0	0.5	7.2	22.8	102.8	С
Precipitation (mm)	50.3	44.2	49.2	63.3	79.1	76.3	70.4	80.4	84.6	66.5	78.3	57.4	799.8	С
Extreme Daily Rainfall (mm)	34	32.5	35.3	43.2	61	64.5	63	80.3	72.5	121.2	44.7	41		
Date (yyyy/dd)	1995/14	1968/01	1974/04	1951/12	2000/12	1967/10	1960/09	1956/29	1986/10	1954/15	1962/09	1998/06		
Extreme Daily Snowfall (cm)	26.7	27.9	33	14	0	0	0	0	0	12.7	30.5	29.2		
Date (yyyy/dd)	1968/14	1964/06	1949/10	1961/01	1949/01	1949/01	1949/01	1949/01	1949/01	1969/21	1950/24	1968/27		
Extreme Daily Precipitation (mm)	49.5	32.5	35.3	43.2	61	64.5	63	80.3	72.5	121.2	44.7	41		
Date (yyyy/dd)	1968/14	1968/01	1974/04	1951/12	2000/12	1967/10	1960/09	1956/29	1986/10	1954/15	1962/09	1998/06		
Extreme Snow Depth (cm)	22	21	14	13	0	0	0	0	0	0	4	17		
Date (yyyy/dd)	1994/17	1994/14	1994/10	1994/07	1983/01	1983/01	1983/01	1983/01	1983/01	1983/01	1994/23	1994/11		

Days with Maxi	mum Temper	ature												
<= 0 °C	20.4	15	8.4	0.52	0	0	0	0	0	0	2.8	14.5	61.6	D
> 0 °C	10.7	13.2	22.6	29.5	31	30	31	31	30	31	27.2	16.6	303.7	D
> 10 °C	0.43	0.61	5.2	16.9	29.1	30	31	31	29.9	23.4	7.2	1.2	205.9	D
> 20 °C	0	0	0.7	3.2	12.1	23.2	29.7	28.2	16.1	3.5	0.1	0	116.8	D
> 30 °C	0	0	0	0.22	0.4	2.7	5.3	3.3	0.4	0	0	0	12.3	D
> 35 °C	0	0	0	0	0	0.26	0.47	0.13	0	0	0	0	0.86	D

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Dec 24, 2020

Days with Mini	mum Tempera	ature]										
> 0 °C	1.7	1.7	5	16.2	27.4	30	31	30.9	29.4	23.6	11.4	3.6	211.7	D
<= 2 °C	30.6	27.4	28.4	18	6	0.5	0	0.13	2.1	11.9	22.7	29.6	177.2	D
<= 0 °C	29.4	26.6	26	13.8	3.6	0	0	0.07	0.6	7.4	18.7	27.4	153.5	D
< -2 °C	26.2	22.9	19.5	6.7	0.65	0	0	0	0	2.7	11.2	22	111.8	D
< -10 °C	15	12.2	5.9	0.13	0	0	0	0	0	0	0.8	7.8	41.8	D
< -20 °C	3.6	1.8	0.48	0	0	0	0	0	0	0	0	0.64	6.5	D
< - 30 °C	0.13	0	0	0	0	0	0	0	0	0	0	0	0.13	D
Days with Rain														
>= 0.2 mm	4.2	4.4	6.4	10.7	12	10.8	9.5	9.6	10.6	12.6	11.1	6.5	108.3	С
>= 5 mm	1.3	1.5	2.2	4	5.2	5.1	4.3	4.6	4.8	4.3	4.7	2.6	44.6	С
>= 10 mm	0.54	0.71	0.88	1.9	2.9	2.7	2.6	2.4	3	2	2.8	1.1	23.5	С
>= 25 mm	0.08	0.17	0.04	0.25	0.35	0.32	0.36	0.77	0.68	0.23	0.36	0.05	3.7	C
Dave With Spay	uf all													
Days with show	10.2	6 9	E 1	1 5	0	0	0	0	0	0.22	2	7 5	24.2	C
>= 0.2 cm	10.2	1.2	5.1	1.5	0	0	0	0	0	0.25	0.26	1.5	54.5	C C
>= 3 cm	1.9	1.5	1.1	0.23	0	0	0	0	0	0.05	0.50	1.4	0.5	C C
>= 10 cm	0.57	0.33	0.5	0	0	0	0	0	0	0	0.18	0.33	1.5	C C
2-25 Cm	0	0	0.04	0	0	0	0	0	0	0	0	0	0.04	C
Days with Precipit	tation													
>= 0.2 mm	13.5	10.3	10.7	11.8	12	10.8	9.5	9.6	10.6	12.7	13.1	12.8	137.4	С
>= 5 mm	3.3	2.8	3.4	4.3	5.2	5.1	4.3	4.6	4.8	4.4	5.1	4.1	51.4	С
>= 10 mm	1.2	1.2	1.4	2	2.9	2.7	2.6	2.4	3	2	3	1.5	25.8	С
>= 25 mm	0.09	0.21	0.08	0.25	0.35	0.32	0.36	0.77	0.68	0.23	0.41	0.1	3.9	C
Probability of last temperature in sprin	ng of 0 °C or lo	wer on or af	ter indicated da	tes				10%	25%	33%	50%	66%	75%	90%
Date								28-May	23-May	19-May	15-May	11-May	9-May	1-May
Probability of first temperature in fall	of 0 °C or lowe	er on or befo	re indicated dat	es				10%	25%	33%	50%	66%	75%	90%
Date								9-Sep	21-Sep	23-Sep	28-Sep	2-Oct	4-Oct	13-0ct
Probability of frost-free period equal t	Probability of frost-free period equal to or less than indicated period (Days)							10%	25%	33%	50%	66%	75%	90%
Days								115	120	128	134	140	143	155

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Appendix C Canada Land Inventory

Canada Land Inventory Soil Capability Classification for Agriculture

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

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

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

Definitions of the Capability Classes

Class 1 - Soils in this class have no significant limitations in use for crops. Soils in Class 1 are level to nearly level, deep, well to imperfectly drained and have good nutrient and water holding capacity. They can be managed and cropped without difficulty. Under good management they are moderately high to high in productivity for the full range of common field crops

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

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

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

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

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

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

Definitions of the Prime and Non-prime Agricultural Lands

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

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

Definitions of the Capability Subclasses

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

Subclass Definitions:

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

Class	Soil Characteristics
2E	Loss of the original plough layer, incorporation of original B horizon material into the present plough layer, and general organic matter losses have resulted in moderate losses to soil productivity.
3E	Loss of original solum (A and B horizons) has resulted in a plough layer consisting mostly of Loamy or Clayey parent material. Organic matter content of the cultivated surface is less than 2%.
4E	Loss of original solum (A and B horizons) has resulted in a cultivated layer consisting mainly of Sandy parent material with an organic matter content of less than 2%; shallow gullies and occasionally deep gullies which cannot be crossed by machinery may also be present.
5E	The original solum (A and B horizons) has been removed exposing very gravelly material and/or frequent deep gullies are present which cannot be crossed by machinery.

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

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

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

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

			class	material with no Bt horizon present within 100 cm of surface
3F	Sandy	Loamy or Clayey	Any drainage class	Acid parent material
3F	Loamy or clayey	Any Texture Group	Any drainage class	Acid parent material
4F	Sandy	Sandy or very gravelly	Any drainage class	Acid parent material
4F	Very gravelly	Any texture	Rapid to imperfect	Neutral to alkaline parent material
5F	Very Gravelly	Any texture	All drainage classes	Acid parent material

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

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

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

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

Subclass T - Topography

The steepness of the surface slope and the pattern or frequency of slopes in different directions are considered topographic limitations if they: 1) increase the cost of farming the land over that of level or less sloping land; 2) decrease the uniformity of growth and maturity of crops; and 3) increase the potential of water and tillage erosion.

Determination of Subclass T for Very Gravelly and Sandy Soils

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

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

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

S = Simple Slopes >50 m in length

C =Complex Slopes <50 m in length

Subclass W - Excess water:

The presence of excess soil moisture, other than that brought about by inundation, is a limitation to field crop agriculture. Excess water may result from inadequate soil drainage, a high water table, seepage or runoff from surrounding areas.

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

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Appendix D Site Photographs



Photo 1: Site 2- Retired livestock operation as viewed from sports complex.



Photo 2: Site 11 – Retired livestock operation. No signs of livestock on site



Photo 3: Site 16 – Livestock Operation. Observed from road.



Photo 4: Site 20 – Retired Livestock Operation, no longer suitable for housing livestock.



Photo 5: View of Subject Lands (Planted in Alfalfa) on day off soil survey



Photo 6: Soil survey site 1 - Soil profile.



Photo 7: Soil Survey site 2 – Soil profile



Photo 8: Location of soil survey site 3 on southwest corner of Subject Lands.

TOWN OF CALEDON PLANNING RECEIVED Dec 24, 2020

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Appendix E Soil Data Sheets

24, 20	20						SOIL D	ATA SH	EET					
Sit	te No.	1		Date	(DD/I	MM/YY)		GPS	6 Co	ordinates		1	Project N	umber:
		<u> </u>				- 20						1	020007	
Su	rveyor SMC]		Obse	Auger	n Type		AIA	for 6	Name 3939 King Stre	eet, Ca	aledon		
	MOD	E OF		NO. ²	1	SLOPE CL	ASS	SLO	PE	POSITION	SLO	PE %	LENGTH	
0	DEPOS	SITION		MT		С			m		2.5			
				NO.2		DRAINAG	E CLASS	STC	NIN	IESS RC		ESS	-	-
						IM			Х		Х]		
				NO.3	5		_			_		-		
	HOR	IZONS			DEPT	H (cm)		COLO	DUR	S	%			CONSIG
D	Ма	Suffix	Mod.	Up	per	Lower	Matrix (Colours	N	Iottle Colours	C.F.	FIELL	TEATURE	CONSIG
	A	р			0	20	0				_		CI	FR -
	В	tgj			20	55							SiCI	
	C	кд			55	100)						SICI	F
							-							
Mod	e of Der	osition		Slope	Class	Draina	ne Class		Stor	iness/Rockiness			Consistency	/
MT	Morain	al Till		Aa	0-0.5%	6 RA	Rapidly		X	Non			L- Loose	-
LA	Lacust	rine		Bb	0.5-2.0)% WE	Well		1	Slightly			FR - Friable	
GF	Glacia	l Fluvial		Cc	2-5%	MW	Mod. Well		2	Moderately			F - Firm	
	Aluvial	Lacustinne		Du Fe	0-9% 0-15%	PO	Poorly		3 4	very Excessively			vr - very ri	1111
, . L	/ lavia			Ff	15-309	% VP	Very Poorly	,	5	Exceedingly				
				Gg	30-459	6								
Dep	th to (cm	<u>n):</u>	r	1	Mottles	<u>6</u>		_						
Bed	rock stricting	Laver		-	Hor	Izon Abun.	Size	Contrast	1	Abundanca	Sizo		Contract	
Carl	onates	Layei			C	C	L	F		F - Few	<u>5120</u> F - Fir	ne	Faint	
Gley	Colours	3		1					1	C - Common	M - M	edium	Distinct	
Wat	er Table]]	M - Many	L - La	rge	Prominent	



F CALI NNINC EIVED	EDON G D													
24, 202	20						SOIL	DATA SH	EET					
Sit	e No. 2]		Date	(DD/I 9	MM/YY) 20		GPS	S Co	ordinates]	Project N C20007	umber:
Sur S	rveyor SMC]		Obse	ervatio Auge	on Type r		Proj AIA	ect for (Name 6939 King Stre	eet, C	aledon		
C	MOD DEPOS	E OF SITION		NO. MT	1	SLOPE CL	ASS	SLC	PE m	POSITION	SLC	PE %	LENGTH]
				NO.2 NO.3	2]]]	DRAINAGI	E CLASS	S STO		IESS RC		ESS		
	HOR	IZONS			DEPT	ΓH (cm)		COL	OUF	RS	%			CONCIETEN
D	Ма	Suffix	Mod.	Up	per	Lower	Matrix	k Colours	Ν	Iottle Colours	C.F.	FIELL	JIEXIURE	CONSISTEN
	A	p tai			0	25	5				_		SiCL	FR r
-	BC.	tgj ai			20 55	50 7(_		SICL	F
	C	9J ka			70	100)				_		SiCL	' F
Mode	e of Dep	position		Slope	Class	Drainag	e Class		Stor	niness/Rockiness			Consistency	
MT	Morair	nal Till		Aa	0-0.5%	6 RA	Rapidly		Х	Non			L- Loose	
LA GE	Lacust	trine I Fluvial		Bb Cc	0.5-2.0	0% WE MW	Well Mod We	Ш	1	Slightly Moderately			FR - Friable F - Firm	
GL	Glacia	Lacustrine		Dd	2-9%	IM	Imperfect	tly	3	Very			VF - Very Fi	rm
AL	Aluvia			Ee	9-15%	PO	Poorly		4	Excessively			-	
				Ff Go	15-30°	% VP	Very Poo	rly	5	Exceedingly				
<u>D</u> ept	th to (cn	n):		Gy	Mottle	70 <u>S</u>								
Bedr	rock]	Hor	izon Abun.	Size	Contrast	-					
Cons	stricting	Layer							-	Abundance	<u>Size</u>	20	Contrast Eaint	
Glev	Colours	S								C - Common	M - M	ledium	Distinct	
Wate	er Table]]	M - Many	L - La	arge	Prominent	
NO	TES:													



Contrast - the difference between the mottle colour and the matrix colour, using the Munsell Soil Color Charts.

	Difference from matrix in							
	Hue* pages	Value* units	Chroma* units					
Faint	0	≤2	≤1					
	1	0	0					
Distinct	0	3 - 4	2-4					
	1	⊴2	≤1					
Prominent	0	≥4	≥4					
	1	≥2	≥1					
	2+	≥0	≥0					

▲ Color Charts (see page 25) e.g. common, fine, distinct brown (10YR 5/3) the width if th 11 mottles, Values in the table are taken from 1982 CanSIS manual for describing soils in the field.
Fine <5mm</p>

Abundance - the proportion of the exposed surface occupied by mottles (%) (refer to Appendix II for additional area percentage charts).



Size - the diameter of the mottle if round, or, the greatest dimension if length is not more than 2 or 3 times the width, or, the width if the mottle is long and narrow.

Medium 5 - 15mm Coarse >15mm

OF CAL ANNING CEIVE	EDON G D													
24, 202	20						SOIL [DATA SH	EET					
Sit	e No. 3]		Date	(DD/N 9	/IM/YY) 20		GPS	6 Co	ordinates]	Project No C20007	umber:
Sui S	rveyor SMC]		Obse	ervatio Auger	n Type		Proj AIA	ect N for 6	Name 939 King Stre	eet, C	aledon		
C	MODI DEPOS	E OF SITION		NO. MT NO.2 NO.3	1 2 3	SLOPE CL B DRAINAGI IM	ASS E CLASS	SLO STC	PE M DNIN X	POSITION ESS RC 	SLC 1 OCKIN X	PE %] ESS]		
	HOR	IZONS			DEPT	H (cm)		COL	JUR	S	%		TEVTUDE	
D	Ма	Suffix	Mod.	Up	per	Lower	Matrix	Colours	N	Iottle Colours	C.F.	FIELD	TEXTURE	CONSISTENCY
	A	р			0	20	0				_	SiCL		FR -
	В	tgj			20	45	5				_	SiCL		F
		кд			45	100	, 					SICL		г
							_							
Mod	e of Dep	<u>osition</u>		Slope	Class	Drainag	ge Class		Ston	iness/Rockiness			Consistency	<u>,</u>
MT	Morain	al Till		Aa	0-0.5%	RA	Rapidly		X	Non			L- Loose	
	Clacial	rine Eluvial		BD	0.5-2.0	1% VVE M/M	Mod Well		1	Slightly			FR - Friable F - Firm	
GL	Glacia	Lacustrine		Dd	2-378 5-9%	IM	Imperfectly	/	2 3	Verv			VF - Verv Fi	rm
AL	Aluvial			Ee	9-15%	PO	Poorly		4	Excessively				
				Ff	15-30%	6 VP	Very Poorl	у	5	Exceedingly				
				Gg	30-45%	6								
<u>Dept</u>	<u>th to (cm</u>	<u>ı):</u>		7	Mottles	<u>8</u>	-	-						
Bedr	ock	Lauran		4	Hori	izon Abun.	Size	Contrast	1	A humals are a	0:		Contract	
Cons	stricting	Layer		4					-	Abundance	<u>Size</u>	20	<u>Contrast</u>	
Glev				-					-		г-гі М-М	ne Iedium	Distinct	
Wate	er Table	,								M - Manv	L - L 2	arae	Prominent	
			ļ	1	<u>.</u>	I	1		J		10	U -		

NOTES: Free Carbonates observed in the B horizon



Contrast - the difference between the mottle colour and the matrix colour, using the Munsell Soil Color Charts.

	Difference from matrix in							
	Hue* pages	Value* units	Chroma* units					
Faint	0	≤2	≤1					
	1	0	0					
Distinct	0	3 - 4	2-4					
	1	≤2	≤1					
Prominent	0	≥4	≥4					
	1	≥2	≿1					
l l	2+	≥0	≥0					
ue, Value, and Chroma differences are determined using the Munsell Soil								

Loror unarts (see page 25) e.g. common, fine, distinct brown (10YR 5/3) 11 mottles, Values in the table are taken from 1982 CanSIS manual for describing soils in the field.

Abundance - the proportion of the exposed surface occupied by mottles (%) (refer to Appendix II for additional area percentage charts).



Size - the diameter of the mottle if round, or, the greatest dimension if length is not more than 2 or 3 times the width, or, the width if the mottle is long and narrow.



TOWN OF CALEDON PLANNING RECEIVED Dec 24, 2020

COLVILLE CONSULTING INC.

Appendix F Land Use Notes

Land Use Survey Notes											
Weather	Partly Cloudy	Date	July 21 st , 2020								
Temperature	22°C	File	C20007								

Site No	Type of Use	Type of Operation	Description of Operation
1	Non-Agricultural	Recreational	"Johnston Sports Park" Baseball diamonds and soccer fields.
2	Agricultural	Retired livestock Operation	Bank barn in fair to good condition. Based on parcel fabric, appears to be part of rec centre, not house adjacent to it – likely used to storage. No sign of livestock (manure, fencing, feed, etc.) structurally, appears to still be able to house livestock.
3	Non-Agricultural	Commercial	Appears to be landscaping or construction operation.
4	Agricultural	Hobby Farm	Small barn like structure observed from air photo. Not observed form roadside. 1400m fro Subject Lands, no letter left.
5	Agricultural	Hobby Farm	Bank barn in good condition, one horse observed in paddock outback. Talked with Landowner on site (October 7) who said he could have a maximum of 6 medium frames horses OR 8 beef cattle. Manure stored outback on cement slab.
6	Non-Agricultural	Institutional	"Macville Public School"
7	Agricultural	Retired livestock operation	Old bank barn in poor condition. Most of the roof on the barn is missing. No sign of livestock. No longer suitable for housing livestock.
8	Non-Agricultural Commercial		"CPI" small commercial operation, unsure of service.
9	Agricultural	Retired livestock operation	OFA member. Letter left in mailbox.
10	Non-Agricultural	Commercial	"Silecchia Enterprises" small business, furniture?
11	Agricultural	Retired livestock operation	Fair condition bank barn on site. Older model tractors, RV's and boats stored on site. No signs of livestock on site. Does not appear to be active.
12	Agriculture- Related	Commercial	"Tuttle's small engine repair" Small workshop. Steel sided out building out back.

			Small engine vehicles on site.				
13	Non-Agricultural	Commercial	Appears to be workshop/mechanic. Large structure with multiple garage doors. No signs of livestock.				
14	Agricultural	Hobby Farm	Possible hobby farm as observed from aerial photos. Small Quonset hut observed from road.				
15	Non-Agricultural	Commercial	"Aluminum Ltd"				
16	Agricultural	Livestock Operation	Wood sided bank barn appears to be in fair/good condition – observed from road. OFA member. Cement capped silo, steel sided grain bin on site. No signs of livestock observed on site. Page wire fence in good condition. Letter put in mailbox.				
17	Agricultural	Hobby Farm	Small Hobby farm – difficult to see check air photos. Should be blocked by NFR's.				
18	Agricultural	Hobby Farm	Small hobby farm. Visible form air photos, not road. NFR block.				
19	Agricultural	Livestock operation	Talked with landowner – Andrew – who provided information on other farms in the area. Used to have dairy cows but heard got a virus and they ended up selling quota. Barns currently empty but will be getting 100 head of beef cattle in the fall Manure stored outside, on cement slab.				
20	Agricultural	Retired livestock operation	Info form landowner #19. – 1 barn on site was used for hay; the floor has since rotted out, in poor condition. The other barn house beef cattle. Also in poor condition and not suitable for housing livestock.				
21	Agricultural	Retired livestock operation	Called Landowner on August 13. No longer housing livestock on site. They sold their quota 18 years ago. Landowner confirmed that the operation could be considered a retired livestock operation no longer suitable for housing livestock.				
22	Agricultural	Hobby Farm	Appears to be a small hobby farm on site. No sign of livestock. Small garden on front of property				

	Total Number	Active	Retired or Remnant
Agricultural	icultural 14		6
		2 Livestock Operation	
Agriculture-related	1	1 Tuttle's Small	0
		Engine Repair	
On-farm Diversified	0	0	0
	Total Number	Commercial	Other
Non-Agricultural	7	5 - several of which	Institutional -1
		appear to be related to	Recreational - 1
		landscaping and	
		construction	
COLVILLE CONSULTING INC.

Appendix G MDS Reports



Minimum Distance Separation I

C20007 Prepared By: Nash Colville, Assistant Environmental Consultant, Colville Consulting Inc

Description:	AIA for 6939 King S	IA for 6939 King St, Town of Caledon						
Application Date:	Monday, August 17	, 2020						
Municipal File Number:								
Proposed Application:	New or expanding Type B Land Use	zone or designation for	an institutional use outside of a settlement area					
Applicant Contact Inform Brett Espensen Colville Consulting Inc.	mation	Location of Subj Regional Munic ALBION, Conce	ject Lands ipality of Peel, Town of Caledon ession: 2, Lot: 10					
St Catharines, ON, Can Phone #1: 905-246-881 Email: Brett@colvillecol	nada 0 nsultinginc.ca	Roll Number:	21240100080260000000					

Calculation Name:	Farm 11
Description:	Retired Livestock Operation

Farm Contact Information

Not Specified

Location of existing livestock facility or anaerobic digester Regional Municipality of Peel, Town of Caledon

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ALBION, Concession: 2, Lot: 11

Roll Number: 21240100060380000000

Total Lot Size: 20.77 ha

The barn area is an estimate only and is intended to provide users with an indication of whether the number of livestock entered is reasonable.

Manure Type	Type of Livestock/Manure	Existing Maximum Number	Existing Maximum Number (NU)	Estimated Livestock Barn Area
Solid	Unoccupied Livestock Barn, -	436 m ²	21.8	436 m ²

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

Existing Manure Storage: No storage required (manure is stored for less than 14 days)

Design Capacity (NU): 21.8 .6

Potential Design Capacity (NU)	: 43.
--------------------------------	-------

Factor (Odour Pote	A ential)	Factor B (Size)		Factor (Manure	r D Type)	Fa (Encroach	actor E hing Land Use)	Building Base Distance F' (minimum distance from livestock barn)	(actual distance from livestock barn)
1.0	Χ	247.2	Χ	0.7	Х	2.2	=	381 m (1249 ft)	TBD
								Storage Base Distance 'S' (minimum distance from manure storage)	
								No storage present	

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

Calculation Name: Description:

Farm 16 Active Livestock Operation

Farm Contact Information

Not Specified

Location of existing livestock facility or anaerobic digester Regional Municipality of Peel, Town of Caledon ALBION, Concession: 2, Lot: 12 Roll Number:

21240100060390000000

Fotal Lot Size:	45.4	ha	
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The barn area is an estimate only and is intended to provide users with an indication of whether the number of livestock entered is reasonable.

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Minimum Distance Separation I

C20007 Prepared By: Nash Colville, Assistant Environmental Consultant, Colville Consulting Inc

	Type of Livestock/Manure	Existing Maximum Number	Existing Maximum Number (NU)	Estimated Livestock Barr Area
Solid	Unoccupied Livestock Barn, -	302 m²	15.1	302 m ²
The	livestock/manure information has not been confirmed with the property ow	ner and/or farm o	operator.	
xisting M	anure Storage: L1. Solid, outside, no cover, 18-30% DM, with uncovered	l liquid runoff stor	age	
otential D	Design Capacity (NU): 30.2			
Factor A Odour Poten 1.0	AFactor BFactor DFactor EBuilding Base Dtial)(Size)(Manure Type)(Encroaching Land Use)(minimum distance fromX220.4X0.7X2.2=339 m (11)	vistance F' n livestock barn) (a I 14 ft)	actual distance from I TBD	livestock barn)
	Storage Base D (minimum distance from 356 m (11	istance 'S' manure storage) (ac 68 ft)	ctual distance from m TBD	nanure storage)
uloululoi				
escription	Active Livestock Operation Location of exi ified	sting livestock f	acility or anaer Town of Caledon	obic digester
escription arm Cont Not Spec	Active Livestock Operation act Information Location of exit ified Regional Mun ALBION, Con	sting livestock f icipality of Peel, [–] cession: 3, Lot: 9	acility or anaer Town of Caledon	obic digester
escription farm Cont Not Spec	Active Livestock Operation act Information Location of exit ified Regional Mun ALBION, Con Roll Number:	sting livestock f icipality of Peel, [–] cession: 3, Lot: 9 21240100050	acility or anaero Town of Caledon 0330000000	obic digester
escription arm Cont Not Spec	n: Active Livestock Operation act Information Location of exi fied Regional Mun ALBION, Con Roll Number: Total Lot Size	sting livestock f icipality of Peel, cession: 3, Lot: 9 21240100050 : 38.85 ha	acility or anaero Town of Caledon 0330000000	obic digester
The barn all assonable	n: Active Livestock Operation act Information Location of exi ified Regional Mun ALBION, Con Roll Number: Total Lot Size Total Lot Size rea is an estimate only and is intended to provide users with an indication Interview	sting livestock f icipality of Peel, [–] cession: 3, Lot: 9 21240100050 : 38.85 ha of whether the nu	facility or anaero Town of Caledon 0330000000 1 0330000000 1 0330000000 1 030000000 1 030000000 1 000000000 1 000000000 1 00000000	obic digester
The barn an easonable Manure Type	n: Active Livestock Operation act Information Location of exit fied Regional Mun ALBION, Con Roll Number: Total Lot Size Total Lot Size rea is an estimate only and is intended to provide users with an indication Type of Livestock/Manure	sting livestock f icipality of Peel, [–] cession: 3, Lot: 9 21240100050 : 38.85 ha of whether the nu Existing Maximum Number	acility or anaero Town of Caledon 0330000000 i umber of livestock Existing Maximum Number (NU)	c entered is Estimated Livestock Barr
The barn and the b	n: Active Livestock Operation act Information Location of exit ified Regional Mun ALBION, Con Roll Number: Total Lot Size Total Lot Size rea is an estimate only and is intended to provide users with an indication Type of Livestock/Manure Beef, Backgrounders (7 - 12.5 months), Confinement Livestock barn is currently unoccupied]	sting livestock f icipality of Peel, [–] cession: 3, Lot: 9 21240100050 : 38.85 ha of whether the nu Existing Maximum Number 100	Facility or anaero Town of Caledon 0330000000 0330000000 Imber of livestock Existing Maximum Number (NU) 33.3	c entered is Estimated Livestock Barr Area Unavailable
he barn an he barn an he barn an basonable Manure Type Solid	n: Active Livestock Operation act Information Location of exi ified Regional Mun ALBION, Con Roll Number: Total Lot Size Total Lot Size rea is an estimate only and is intended to provide users with an indication Type of Livestock/Manure Beef, Backgrounders (7 - 12.5 months), Confinement [Livestock barn is currently unoccupied] anure Storage: L1. Solid, outside, no cover, 18-30% DM, with uncovered	sting livestock f icipality of Peel, cession: 3, Lot: 9 21240100050 : 38.85 ha of whether the nu Existing Maximum Number 100	Facility or anaero Town of Caledon 0330000000 0330000000 Imber of livestock Existing Maximum Number (NU) 33.3 age	c entered is Estimated Livestock Barr Area Unavailable
he barn an easonable Manure Type Solid	n: Active Livestock Operation act Information Location of exit field Regional Mun ALBION, Con Roll Number: Total Lot Size Total Lot Size rea is an estimate only and is intended to provide users with an indication Type of Livestock/Manure Beef, Backgrounders (7 - 12.5 months), Confinement [Livestock barn is currently unoccupied] anure Storage: L1. Solid, outside, no cover, 18-30% DM, with uncovered bacity (NU):	sting livestock f icipality of Peel, [–] cession: 3, Lot: 9 21240100050 : 38.85 ha of whether the nu Existing Maximum Number 100	Facility or anaero Form of Caledon D330000000 D330000000 Imber of livestock Existing Maximum Number (NU) 33.3 rage	c entered is Estimated Livestock Barr Area Unavailable

X 315.75 X 0.7 X 2.2 389 m (1276 ft) 0.8 TBD = Storage Base Distance 'S' (minimum distance from manure storage) (actual distance from manure storage) TBD

404 m (1326 ft)



Prepared By: Nash Colville, Assistant Environmental Consultant, Colville Consulting Inc

Calculation Name:	Farm 2
Description:	Retired Livestock Operation

Farm Contact Information Not Specified Location of existing livestock facility or anaerobic digester

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Regional Municipality of Peel, Town of Caledon ALBION, Concession: 2, Lot: 11

Roll Number:

21240100051572000000



The barn area is an estimate only and is intended to provide users with an indication of whether the number of livestock entered is reasonable.

Manure Type	Type of Livestock/Manure	Existing Maximum Number	Existing Maximum Number (NU)	Estimated Livestock Barn Area
Solid	Unoccupied Livestock Barn, -	408 m ²	20.4	408 m ²

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

Existing Manure Storage: No storage required (manure is stored for less than 14 days)

Design Capacity (NU):	20.4
Potential Design Capacity (NU):	40.8

Factor (Odour Pote	A ential)	Factor B (Size)		Facto (Manure	r D Type)	Facto (Encroaching	r E Land Use)	Building Base Distance F' (minimum distance from livestock barn)	(actual distance from livestock barn)
1.0	Х	241.6	Х	0.7	Х	2.2	=	372 m (1221 ft)	TBD
								Storage Base Distance 'S' (minimum distance from manure storage)	
								No storage present	

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

Calculation Name:FarmDescription:Hobby

Farm 22 Hobby Farm

Farm Contact Information Not Specified Location of existing livestock facility or anaerobic digester Regional Municipality of Peel, Town of Caledon

ALBION, Concession: 3, Lot: 10

Roll Number: 21240100050350000000

Total Lot Size: 4.1 ha

The barn area is an estimate only and is intended to provide users with an indication of whether the number of livestock entered is reasonable.

Manure Type	Type of Livestock/Manure	Existing Maximum Number	Existing Maximum Number (NU)	Estimated Livestock Barn Area
Solid	Beef, Backgrounders (7 - 12.5 months), Yard/Barn	51	17.0	190 m²

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The livestock/manure information has not been confirmed with the property owner and/or farm operator. Existing Manure Storage: V3. Solid, outside, no cover, >= 30% DM Design Capacity (NU): 17.0 Factor A Factor B Factor D Factor C (Manure Type) (Encreaching Land Use) (minimum distance from insusce been) (actual distance from ins		Ontario	C20007 Prepared By: Nash Colville, Assistant Environmental Consultant, Colville Consu				
Existing Manure Storage: V3. Solid, outside, no cover, >= 30% DM Design Capacity (NU): 17.0 Protential Cisca Protor B Protor B Propertification Protor B Propert Information Nath Colville Propert Information Nath Colville Propert Information Nath Colville Propertification Protor Propertific Protor Propertific Protor Propertific Protor Protor Propertific Protor Propertific Protor Prot	The	livestock/manure inform	ation has not been confirmed	d with the property own	er and/or farm o	operator.	
Design Capacity (NU): 17.0 Proteinial Design Capacity (NU): 17.0 (odour Potential) Factor A Factor A (odour Potential) Factor A Factor A (odour Potential) Factor B Factor A Factor B (odour Potential) Factor B Factor A Factor B (odour Potential) Factor B Calculation Name: Factor B (actual distance from Investork: 0.8 X 189.99 X 0.7 X 2.2 = 234 m (768 ft) TBD Calculation Name: Farm Contact Information Hobby Farm Factor A Regional Municipatity of Peel, Town of Caledon ALBION, Concession: 3, Ut: 10 Roll Number: 21240100050370000000 Image: 21240100050370000000 <	Existing M	anure Storage: V3. So	lid, outside, no cover, >= 30%	% DM			
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TOWN OF CALEDON PLANNING RECEIVED Dec 24, 2020

COLVILLE CONSULTING INC.

Appendix H Curriculum Vitae





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

404 Queenston St., St. Catharines, ON L2P 2Y2 Tel: 905 935-2161 Email: sean@colvilleconsultinginc.com

EDUCATION

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

PROFESSIONAL AFFILIATIONS

Ontario Institute of Agrology Agricultural Institute of Canada

POSITIONS HELD

2003 – Present	Colville Consulting Inc., St. Catharines, Ontario. President
2001 – 2003:	ESG International Inc., St. Catharines, Senior Project Manager/Office Manager
1998 – 2001:	ESG International Inc., Guelph, Senior Project Manager
1988 – 1998:	ESG International Inc., Guelph, Project Manager
1984 – 1988:	MacLaren Plansearch Ltd., Halifax, Nova Scotia, Soil Scientist
05/1982 - 09/1983:	Nova Scotia Department of Agriculture and Marketing, Nova Scotia, Assistant Soil
	Scientist

EXPERIENCE

Sean M. Colville, B.Sc., P.Ag., president of Colville Consulting Inc., established the firm in June of 2003 to provide consulting services for clients involving matters related to agriculture and the natural environmental. Sean has over 30 years of consulting experience which includes agricultural resource evaluation studies, soil survey and interpretation of agricultural capability, agricultural impact assessment and alternate site assessments, and soil and microclimatic rehabilitation/restoration projects. Sean has extensive experience interpreting agricultural land use policies involving development applications and settlement expansion proposals.

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

Sean has been qualified to present expert testimony before the Ontario Municipal Board, the Consolidated Joint Board the Assessment Review Board, Ontario Superior Court proceedings and the Normal Farm Practices Protection Board for projects involving land use planning matters as they relate to agriculture, impact assessment, resource evaluation and soil science.

Agricultural Impact Assessment, Alternative Site Studies, Minimum Distance Separation

Sean specializes in agricultural impact assessment and alternative site studies for development applications and urban boundary expansion proposals. His experience includes well over 100 agricultural impact assessments and soil surveys for a wide variety of projects including Class EAs for linear facilities, waste management facilities, municipal services, impact assessments for aggregate operations, residential, commercial, recreational, industrial and institutional developments. Many of these projects require the interpretation of agricultural land use policies, inventory and assessment of the agricultural resources, land use, land tenure, an assessment of conflict potential including determination of minimum distance separation requirements, identification of prime agricultural lands and areas, and interpretation of the agricultural priority of lands proposed for development. Sean has been retained by both municipalities and private sector clients to prepare agricultural impact assessment for settlement area expansion proposals and the development of secondary plans. Sean has also been retained by municipalities to complete peer review studies of agricultural impacts assessments and minimum distance separation calculations for various development applications.

The list below provides some examples of the studies completed by Sean. The bolded bullets identify examples of settlement area expansion.

- Agricultural Impact Assessment, Milton (2018)
- Agricultural Impact Assessment for Port Colborne Quarries Inc. (2018)
- Agricultural Impact Assessment for Twenty Road East Group, Hamilton (2017)
- Agricultural Impact Assessment for Mayfield West Secondary Plan Update, Town of Caledon (2017)
- Agricultural Impact Assessment for the Book Road Land Owners Group, City of Hamilton (2016)
- Agricultural Impact Assessment for Schuyler Farms Limited, County of Norfolk (2015)
- Minimum Distance Separation for single family residence, Dundas, City of Hamilton (2015)
- Agricultural Impact Assessment & Comparative Analysis of Alternative Sites for Employment Land Options - Northumberland County (2015)
- Agricultural Impact Assessment and Alternative Site Assessment for North West Quadrant, Niagara Falls, Regional Municipality of Niagara (2014)
- Agricultural Impact Assessment for Smith Farm Airport Employment Growth District, City of Hamilton (2014-15)
- Agricultural Alternate Site Study in Cavan-Monaghan Township for Brookfield Residential (2014)
- Agricultural Impact Assessment and Alternative Site Analysis for Angus Manor, Township of Essa, Simcoe County (2014)
- King Township Official Plan: Review and Update of Agricultural Policies, King Township (2014)
- Agricultural Impact Assessment for Vision Georgetown, Town of Halton Hills (2013-14)
- Agricultural Impact Assessment for Bolton Residential Expansion Study, Town of Caledon (2013-14)
- Agricultural Impact Assessment for Canadian Motor Speedway racetrack in Fort Erie (2007-2012)
- Agricultural Impact Assessment for multiple sites in City of Niagara Falls (2011)
- Agricultural Impact Assessment of the Zone 6 Reservoir and Feedermain, Class EA Regional Municipality of Peel (2009)
- Agricultural Impact Assessment of the North Bolton Elevated Tank and Feedermain, Class EA Regional Municipality of Peel (2009)
- Agricultural Impact Assessment of the Alloa Reservoir, Pumping Station and Feedermain, Class EA -Regional Municipality of Peel (2008)
- Urban Boundary Expansion Mayfield West Phase II Secondary Plan Agricultural Impact Assessment Town of Caledon (2008 - Present)
- Urban Boundary Expansion South Albion/Bolton Community Plan Agricultural Impact Assessment Town of Caledon(2009)
- Urban Boundary Expansion Agricultural Screening Study for the Township of West Lincoln's Growth Management Study, Regional Municipality of Niagara (2007)
- Urban Boundary Expansion Agricultural Studies for Niagara Gateway Estates, Town of Grimsby, Regional Municipality of Niagara (2003)
- Urban Boundary Expansion Agricultural Impact Assessment and Alternative Site Study for Regional Official Plan Amendment #9 Secondary Plan – City of Hamilton (2003)
- Niagara Region Mid-Term Waste Disposal Alternatives Study (2003)

Soil Survey and Resource Evaluation

As a Pedologist (soil scientist), Sean is highly experienced in completing soil surveys, soil resource evaluations and assessing the productivity of soil for common field crops using the Canada Land Inventory system (CLI) of soil classification and for soil suitability for production of specialty crops using the system developed by the Ontario Ministry of Agriculture and Food. He has extensive experience interpreting the soil landscape, glacial landforms and soil forming processes; is skilled in the use of aerial photography for stereoscopic interpretation and identification of soil landforms for soil map production. Sean is recognized by the Ontario Ministry of Agriculture, Food and Rural Affairs as a Consulting Pedologist and a qualified soil scientist capable of preparing soil capability assessments based on the Canada Land Inventory (CLI) Soil Capability Classification for Agriculture (ARDA, 1965).

Sean has lead and participated in a number of large soil survey programs in Ontario, Nova Scotia and New Brunswick. Sean's soil survey experience includes:

- conducting well over 200 soil surveys of various size and scale to assess the soil capability for identification of prime and non-prime agricultural lands for agricultural impact assessments and other studies;
- conducting soil surveys along linear facilities to determine depth of topsoil and subsoil, assess soil
 capability along the route to determine baseline conditions and identify areas that pose limitations to
 construction;
- the preparation of soil maps, CLI maps and reports for solar farm applications to address the Ontario Power Authority's requirements for ground-mounted solar project on agricultural lands;
- conducting county level soil survey reports that included the delineation, evaluation and mapping of soils series and the assessment of the soil capability for selected areas in Cumberland County, Colchester County, Hants County and Kings County, Nova Scotia;
- conducting county level soil survey reports that included the delineation, evaluation and mapping of soils series and the assessment of the soil capability for selected areas in Westmoreland County, New Brunswick; and
- conducting soil surveys for paired watershed studies assessing the benefits and effectiveness of no-till cultivation compared to traditional methods in Oxford County, Ontario.

LEAR Studies

Sean is very familiar with Land Evaluation and Area Review (LEAR) methodologies and has prepared a LEAR study to identify Prime Agricultural Areas in the Town of Mono, County of Dufferin. Sean has also applied LEAR methodologies when completing alternate site studies to assist municipalities identify low priority agricultural lands for settlement area expansion purposes and to assist development proponents justify choice of location, to ensure that proposed settlement area expansion or proposed development applications is consistent with the Provincial Policy Statement.

Agricultural Rehabilitation and Monitoring

Sean has prepared a number of rehabilitation plans for the aggregate industry and for highway and pipeline construction projects. Sean also has experience assessing the economic impacts for compensation related to the temporary or permanent loss of use of agricultural land often associated with the construction of linear facilities. Specific examples agricultural rehabilitation and monitoring studies include:

- Development and implementation of a soil reclamation plan for TransCanada Pipelines. This involved an investigation as to the extent of contamination and debris along a pipeline easement, as well as an analysis of the soil quality, the level of degradation and the development of mitigation measures to restore the agricultural capability of the site for specialty crop production;
- Development of progressive agricultural rehabilitation plan for Vineland Quarry and Crushed Stone Limited's quarry expansion project in Vineland, Ontario. The rehabilitation plan included the restoration of a significant portion of the sites climate to a condition suitable for the production of grape and tender fruit trees;
- Prepared progressive agricultural rehabilitation plans for the expansion of LaFarge's Fonthill pit located on the Fonthill Kame. This area has special soil and microclimatic characteristics that make it suitable for the production of specialty crops. The rehabilitation plans considered both the soils and microclimatic conditions in the design in order to restore the site following extraction to conditions suitable for the production of specialty crops;
- Development of a progressive agricultural rehabilitation plan for Walker Brothers Quarries Ltd. quarry expansion project in Niagara Falls, Ontario. Also prepared and implemented the vegetation screening and naturalization concepts for which annual monitoring reports are prepared for review by the City of Niagara Falls and the Ministry of Natural Resources; and
- Soil and crop monitoring, and post construction monitoring of soil and crops for various TransCanada Pipeline, Union Gas, and Enbridge pipeline construction projects. Projects often included the development of restoration recommendations to improve soil conditions and crop yields.

Publications

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

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





Brett Espensen, B.A., EMAGP

EDUCATION

B.A. Honours, Major in Environmental Governance and Geography, University of Guelph, 2013 Graduate Certificate, Environmental Management and Assessment, Niagara College, 2014

POSITIONS HELD

May 2014 – Present	Colville Consulting Inc., St. Catharines, Ontario.
May – July, 2011-2013	PRT Growing Services Ltd

EXPERIENCE

Brett Espensen, Environmental and Agricultural Consultant at Colville Consulting Inc., has over 5 years of formal educational training and experience in Environmental Planning. Brett has completed Minimum Distance Separation (MDS) Requirements, Alternative Site Assessments, Agricultural Impact Assessments, and Environmental Impact Statements in his role as an Agricultural Consultant at Colville.

Through his education, Brett has gained a broad base knowledge of Environmental Planning and Management, which he has taken with him to his work with Mr. Sean Colville, P. Ag., at Colville Consulting. His work at Colville includes the interpretation of regional and local land use policies, creation and interpretation of land use maps, environmental protection policies, and species at risk regulations. He has participated in the completion of Agricultural Impact Assessments, Environmental Impact Studies, and the Ministry of Natural Resources Species at Risk permitting process. Brett has also been actively involved in the supervision of interns from the Environmental Management and Assessment Graduate Program at Niagara College. He has completed work both in the field—doing land use surveys—and in the office, through the preparation of reports and mapping.

Some Colville Consulting projects that Brett has been involved in include:

- Agricultural Impact Assessment of Activa Holdings in the Kitchener area, Region of Waterloo
- Agricultural Impact Assessment for Elle B Inc. in the Laurentian Valley area, Renfrew County
- Agricultural Impact Assessment for Mayfield West Phase 2 Secondary Plan Update, Town of Caledon
- Land Evaluation Study for Golder Associates Ltd., Region of Waterloo
- Agricultural Impact Assessment for Titan Trailers Inc., Delhi, Ontario
- Minimum Distance Separation (MDS I) Report Dundas, Ontario
- Minimum Distance Separation (MDS I) Report Stayner, Ontario
- Supervision of post-construction reclamation crews during vegetation remediation over TransCanada pipelines in the Region of Peel
- Environmental Impact Statement for proposed fuel station, City of Hamilton
- Acoustic Monitoring for Bat roosting identification, in the Vineland area, Regional Municipality of Niagara

ADDITIONAL QUALIFICATIONS AND TRAINING

- Brett has completed basic industrial Workplace Hazardous Materials Information System (WHMIS) training
- Extensively acquainted with the Occupational Health and Safety Act
- Valid Drivers Licence Class G
- Standard First Aid Training