

Appendix F

Agricultural Impact Assessment

Agricultural Impact Assessment

5952 Trafalgar Road

Hillsburgh, Town of Erin

Prepared For:

Ainley Group

Prepared By:

Beacon Environmental Limited

Date:

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Project:

225275



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GUIDING SOLUTIONS IN THE NATURAL ENVIRONMENT

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Report Versions Issued

Version	Date	Revisions
1.	November 2025	First Draft
2.	February 2026	First Final

1. Introduction

A Schedule “B” Water Class Environmental Assessment was completed in February 2020 (2020 EA) to develop solutions to address water supply and storage deficiencies for both existing development and future growth for Hillsburgh. In 2024, the Town of Erin (the Town) retained Ainley Group (Ainley) to review and update the recommendations of the 2020 EA based on new information, including an up-to-date understanding of the proposed development within the urban boundary. In 2025, Ainley evaluated alternative sites for the Hillsburgh water storage facility and the Erin-Hillsburgh Booster Pumping Station (BPS) in a report entitled *Town of Erin – Urban Centre Water, Servicing Class EA Addendum, Erin-Hillsburgh BPS and Hillsburgh Reservoir Site Alternatives* (hereafter “Ainley 2025”). Through the Municipal Class Environmental Assessment (MCEA) Phase 2 Detailed Evaluation process, Ainley concluded that the preferred alternative for the Hillsburgh water storage facility is located at 5952 Trafalgar Road (Ainley 2025).

Beacon Environmental Limited (Beacon) was retained to conduct an Agricultural Impact Assessment (AIA) as input to the MCEA Phase 2 Detailed Evaluation related to a review of the preferred site for the Hillsburgh water storage facility (hereafter the “study area”). The study area is located within property located at 5952 Trafalgar Road in Hillsburgh (hereafter the “subject property”; **Figure 1**), in the Town of Erin, in the County of Wellington (the County).

The subject property is approximately 39.31 hectares (97 acres) in size. The study area encompasses the proposed location of the Hillsburgh water storage facility and is situated in the northeast portion of the subject property.

The study area is approximately 0.57 hectares (1.4 acres). The subject property contains a single dwelling surrounded by fields which are farmed by tenant farmers, generally with a rotation of corn and soybean. Treed hedgerows are present on the subject property near the dwelling along the eastern property line.

An AIA was requested by the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA). As noted in an email from OMAFRA (Regan Zink, August 12, 2025), “The 2024 PPS provides direction related to non-agricultural uses in prime agricultural areas (Section 4.3.5) and requires that ‘Impacts from any new or expanding non-agricultural uses on the agricultural system are to be avoided, or where avoidance is not possible, minimized and mitigated as determined through an agricultural impact assessment or equivalent analysis, based on provincial guidance’.”

The subject property is identified by the Province as located within a Prime Agricultural Area. That said, the subject property is designated as Secondary Agricultural in the Town’s Official Plan (Office Consolidation, March 2025) and designated as Secondary Agricultural (Schedule B2) the County’s Official Plan (Office Consolidation, 2019).

This AIA provides a detailed description and understanding of the agricultural capability of study area, through the following:

- A desktop survey of the study area to provide an interpretation of the agricultural capability of the soil for various crops, including an assessment of the present Canada Land Inventory (CLI) designations;

- A reconnaissance level land use survey to characterize the land uses observed on and adjacent to the study area. This includes the types of land uses, both agricultural and non-agricultural, cropping patterns and natural land cover;
- A comparison of the CLI agricultural capability of the study area and the adjacent lands;
- An assessment of potential conflicts with surrounding agricultural operations; and
- A review of the applicable agricultural policies.

It is Beacon's opinion, per the following report, that the development of the proposed Hillsburgh water storage facility within the study area, subject to approvals and permits as may be required as part of the application, can proceed in a manner that is consistent with applicable agricultural policies.

2. Background and Study Objectives

To be consistent with the draft Agricultural Impact Assessment Guidance Document (2018), the AIA must identify a Primary Study Area and a Secondary Study Area. For this AIA, the Primary Study Area (PSA) includes the subject property, while all lands within 0.75 km (750 m) of the PSA boundaries comprise the Secondary Study Area (SSA). **Figure 2** shows the Primary and Secondary Study Areas.

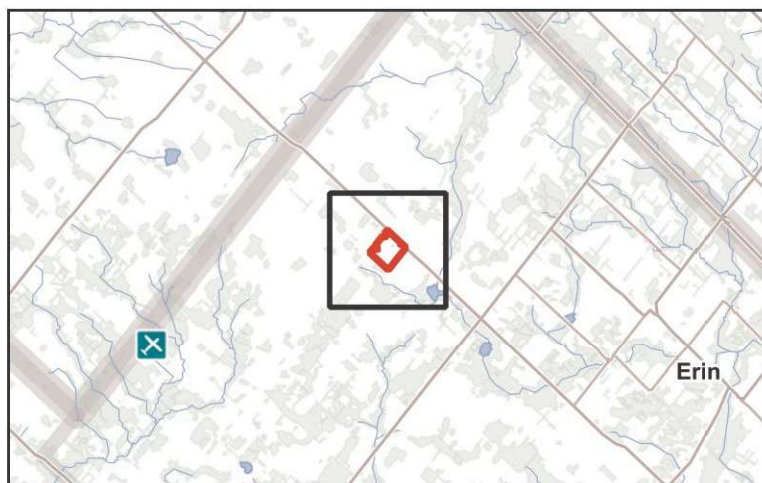
The study commenced with a background assessment of the present agricultural characteristics of the study area. Background information including published documents and information from provincial agencies was gathered and reviewed, including the OMAFRA March 2018 "Draft Agricultural Impact Assessment Guidance Document".

The background assessment involved review of documentation for the study area from sources that included, but were not limited to the following:

- Ontario Ministry of Natural Resources (MNR) Ontario Base Mapping;
- MNR Geospatial Ontario (GEO) Database;
- Agriculture and Agri-Food Canada:
 - Soil Survey of Wellington County (<https://sis.agr.gc.ca/cansis/publications/surveys/on/on35/index.html>);
- OMAFRA Soil Survey Complex (<https://data.ontario.ca/dataset/soil-survey>);
- OMAFRA AgMaps Geographic Information Portal (<https://www.liaapplications.lrc.gov.on.ca/AgMaps/Index.html?viewer=AgMaps.AgMaps&locale=en-CA>);
- Colour, orthorectified, 2006, 2010 and 2015 aerial photography from First Base Solutions; and
- County of Wellington Provincial Agricultural Land Base & Natural Heritage Systems (<https://sgis.wellington.ca/Maps/index.html?viewer=ProvincialSystems>).

The specific objectives that have been completed as part of this AIA include the following:

- Review applicable agricultural policies and other background information;
- Assess the soil capability for common field crop productions using the CLI classification system;
- Undertake a land use survey of all lands within 750 m of the study area;



Site Location

Figure 1

5952 Trafalgar Road AIA



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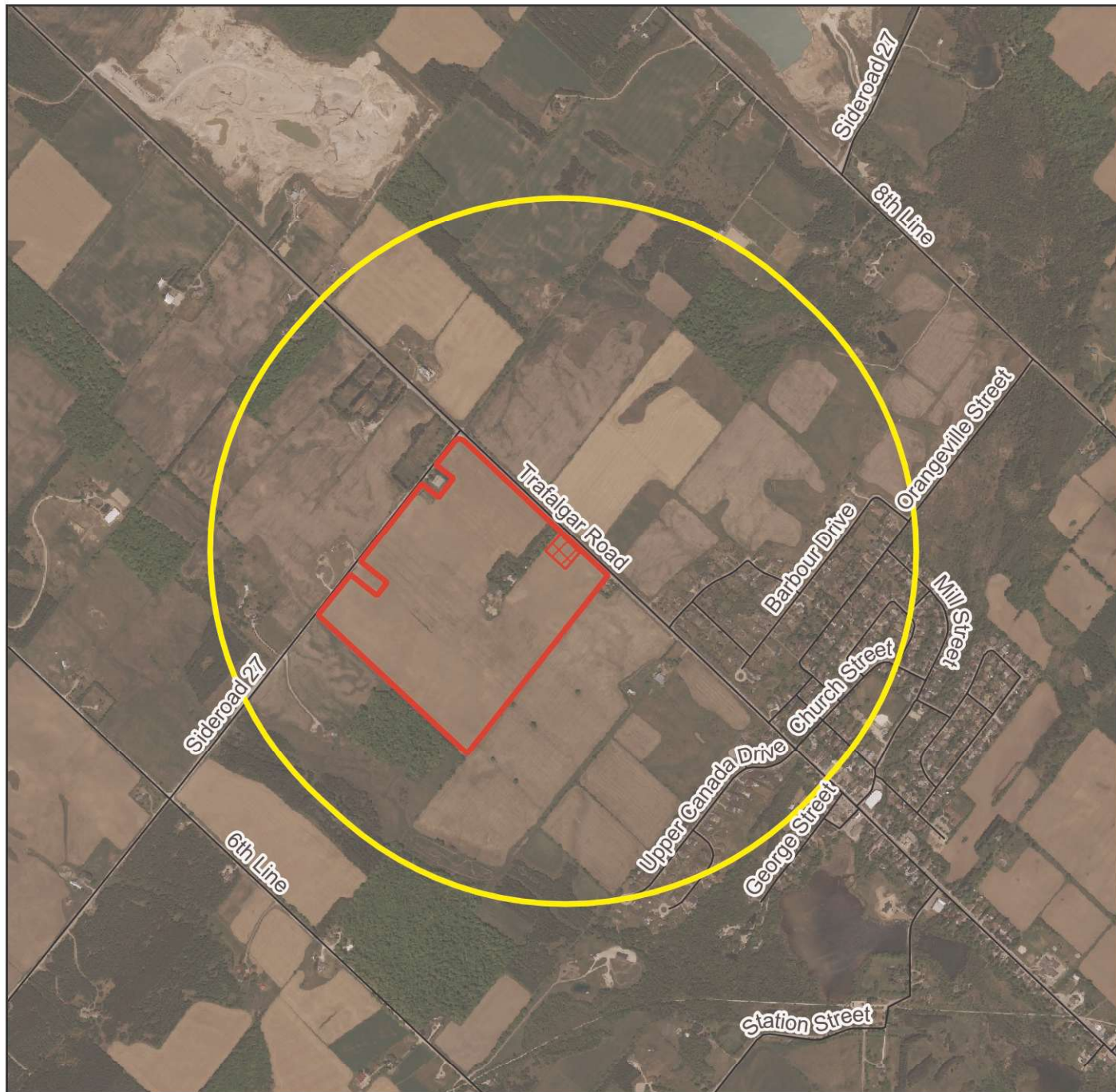
Prepared by: JN
Checked by: HB



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Legend

- Approximate Subject Property Boundary (PSA)
- Study Area
- Secondary Study Area (SSA)

Study Areas

Figure 2

5952 Trafalgar Road AIA



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- Assess the potential for fragmentation and the potential for direct and indirect impacts on agricultural resources within the study area; and
- Assess compliance with local agricultural policies.

3. Agricultural Policy Context

The applicable municipal and provincial policies that are subject to review include:

- Provincial Planning Statement (PPS; 2024);
- Town OP (2025, Consolidated); and
- County OP (2019, Consolidated).

3.1 Provincial Planning Statement (2024)

The PPS provides policy direction on matters of provincial interest related to land use planning and development including agriculture. The PPS establishes the policy framework for setting land use priorities in Ontario as well as regulating development.

The 2024 PPS modifies and updates many of the former policies from the former documents. In relation to agriculture, the 2024 PPS provides the requirement for municipalities to:

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

This means that municipalities must specifically distinguish between prime agricultural areas and rural areas that may contain lesser quality agricultural capabilities.

Upper and lower tier Official Plans must now designate prime agricultural areas and rural areas separately and provide distinct policy direction for land uses in each of these designations.

Section 4.3.1.2 of the 2024 PPS requires that:

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

The PPS (2024) defines specialty crop areas as provided below. There are no specialty crop areas in or adjacent to the subject property.

Specialty crop area: means areas within the agricultural land base designated based on provincial guidance. In these areas, specialty crops are predominantly grown such as tender fruits (peaches, cherries, plums), grapes, other fruit crops, vegetable crops, greenhouse crops, and crops from agriculturally developed organic soil, usually resulting from:

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

OMAFRA has provided that over time technical guidance for the identification of “prime agricultural areas” has been outlined in the Foodland Guidelines (1978-1992), the Comprehensive Set of Policy Statements (1994), four PPSs and a draft Land Evaluation and Area Review (LEAR) Guideline. The OMAFRA online document *Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for Application of the Canada Land Inventory in Ontario* is the guideline available on the date of this report and was used in the analysis of the study area. Additionally, OMAFRA has prepared further detailed written guidelines in their Publication 851 entitled “Guidelines on Permitted Uses in Ontario’s Prime Agricultural Areas” (OMAFRA 2016).

The Ontario Ministry of Agriculture, Food and Agribusiness (OMAFRA) document *Soil Capability for Agriculture in Ontario 2024* is the most up to date guideline available on the date of this report and was used in the analysis of the study area.

The PPS (2024) has also provided the definition of a prime agricultural area as follows:

Prime agricultural area: means areas where prime agricultural lands predominate. This includes areas of prime agricultural lands and associated Canada Land Inventory Class 4 through 7 lands, and additional areas with a local concentration of farms which exhibit characteristics of ongoing agriculture. Prime agricultural areas may be identified by a planning authority based on provincial guidance or informed by mapping obtained from the Ontario Ministry of Agriculture, Food and Agribusiness and the Ontario Ministry of Rural Affairs or any successor to those ministries.

The definition of prime agricultural area again references provincial guidance. The definition provides that prime agricultural areas may also be identified using an alternate agricultural land evaluation as supported by the province.

It is important to distinguish between a prime agricultural area which is the basis of provincial land use policy and prime agricultural lands which describes the agricultural capability of the land and soils. The PPS (2024) states the following with respect to prime agricultural areas:

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

In addition, as noted in the OMAFRA email (Regan Zink, August 12, 2025), Section 4.3.5.2 states that,

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

3.2 County of Wellington Official Plan (2019, Consolidated)

The County OP affords several land use policies related to agriculture and consents. Relevant policies from Section 4.3.3 are provided below:

- a) Class 1, 2 and 3 agricultural soils, associated Class 4 to 7 soils and additional areas where there is a local concentration of farms which exhibit the characteristics of ongoing agriculture, and specialty crop land will be designated as prime agricultural areas unless:*
- i) municipal scale studies demonstrate that the land would more appropriately be placed in a greenlands or secondary agricultural designation in consultation with the OMAF;*
 - ii) studies demonstrate that limited non-residential use is appropriate.*

As noted above, the subject property is designated as Secondary Agricultural (Schedule B2). Policy 4.3 (Farmland Protection) defines Secondary Agricultural Areas in 4.3.2 as the following:

Areas with agricultural capability, but determined not to be prime agricultural areas will be identified as secondary agricultural areas. Agriculture will continue to be the dominant use but a range of other uses will also be allowed.

The County OP also provides requirements of an AIA and notes the following in Policy 4.6.5:

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

Regarding permitted uses in Secondary Agricultural Areas, Policy 6.5.3 states the following:

- Permitted uses and activities in Secondary Agricultural Areas may include:*
- a) all uses allowed in the Prime Agricultural Area;*
 - b) small scale commercial, industrial and institutional uses;*
 - c) public service facilities.*

3.3 Town of Erin Official Plan (2025, Consolidated)

The Town OP also provides land use policies related to agriculture in Section 4.2 (Agriculture). As noted above, the subject property is designated as Secondary Agricultural in the Town's Official Plan. Relevant sections of Policy 4.2.3 (Secondary Agricultural Areas) are provided below:

Secondary Agricultural Areas consist of lands within the rural area which are determined to be non-prime farmland, generally consisting of Class 4 to 7 and Organic Canada Land Inventory for Agriculture ranked soils, but which can sustain certain agricultural activities.

It is intended that agriculture will continue to be the dominant use in areas designated Secondary Agricultural, Minimum Distance Separation (MDS) requirements will continue to apply. Where a development application is made an adjacent landowner may request that an MDS II calculation be made to consider his potential for expansion and to be considered as part of the review of the application.

The use of lands in the Secondary Agricultural Area designation shall be guided by the policies of Section 6.5 of the County of Wellington Official Plan.

An assessment of policy compliance is provided in **Section 7** following the agricultural assessment.

4. Methodology

4.1 Background Review

Background information noted in **Section 2** above, including published documents and information from provincial agencies was gathered and reviewed at the outset of the project. Other sources of information, such as topographic maps, were also consulted prior to commencing the field investigation.

4.2 Field Investigation

A field investigation was undertaken on September 23, 2025. The purpose of the field investigation was to document existing conditions, and to undertake a reconnaissance survey to document agricultural operations, relative level of investment in agricultural operations, the cropping pattern observed, and the mix of land uses within the SSA. It is noted that Beacon did not have permission to enter the subject property (PSA) and all surveys of the study area were undertaken from the subject property boundary.

4.2.1 Land Use and Infrastructure

A reconnaissance land use survey of the SSA was undertaken to document the number and type of existing and retired agricultural operations, including evidence of agricultural land improvements. The type and location of field crops was also documented from roadside surveys.

4.3 Alternate Location Investigation

Beacon reviewed the agricultural sources listed in **Section 2** for the other two (2) Hillsburgh water storage facilities assessed in the Ainley 2025 report (Barbour Field and 5916 Trafalgar Road).

5. Agricultural Resources

5.1 Bedrock and Physical Geography

The subject property lies over a complex of sandstone, shale, dolostone, and siltstone (Ontario Geological Survey 2003). The physiography of the area is described in Chapman and Putman (1984) as the Hillsburgh Sandhills. The Hillsburgh Sandhills physiographic region covers an area of approximately 16,576 hectares. The area is generally characterized by till plains and kame moraines.

The Quaternary Geology of the subject property consists of sand, gravel, minor silt, clay, and till associated with glaciofluvial deposits and glacial till (Ontario Geological Survey 2003).

5.2 Topography and Drainage

The overland drainage from the subject property flows generally in a north to south direction. The Ontario Base Map, supplemented with field observations, reveals that the topography ranges from gently sloped to steeper slopes (i.e., >25%), with steeper slopes primarily in areas associated with the southwest portion of the subject property, outside of the study area.

Using slope class definitions found in the 4th Edition Field Manual for Describing Soils in Ontario (Denholm and Schut 1993), the land associated with the study area contains nearly level to very gentle slopes (i.e., 0.5% - 5.0%).

5.3 Climate

The analysis of climate was restricted to a review of existing published literature. Instrumentation was not employed to measure the climate of the subject property.

5.3.1 Crop Heat Units

The Crop Heat Unit (CHU) measurement was originally designed for selecting corn varieties and can be used as a means of comparing the climactic conditions of different areas of the province. The CHU value of an area is based upon temperature and is detailed in a Factsheet 93-119 (Brown and Bootsma 1997) produced by OMAFRA. Specifically, crop heat units are determined using daily minimum and maximum air temperatures accumulated over the growing season. The CHU rating of an area is determined by the total accumulated crop heat units for the frost-free growing season in the various areas of the province (Brown and Bootsma 1997).

The CHU measurement system was revised in accordance with changing farming practices and crop varieties (OMAFRA 2011). Under the new CHU measurement system, the proportion of crop heat units in the study area is found to be 2,900 CHU (**Figure 3**), consistent with moderately good farming opportunity. More specific measurements are not available for this method.



Figure 3. Crop Heat Units (OMAFRA 2011). Subject Property Indicated by Red Arrow.

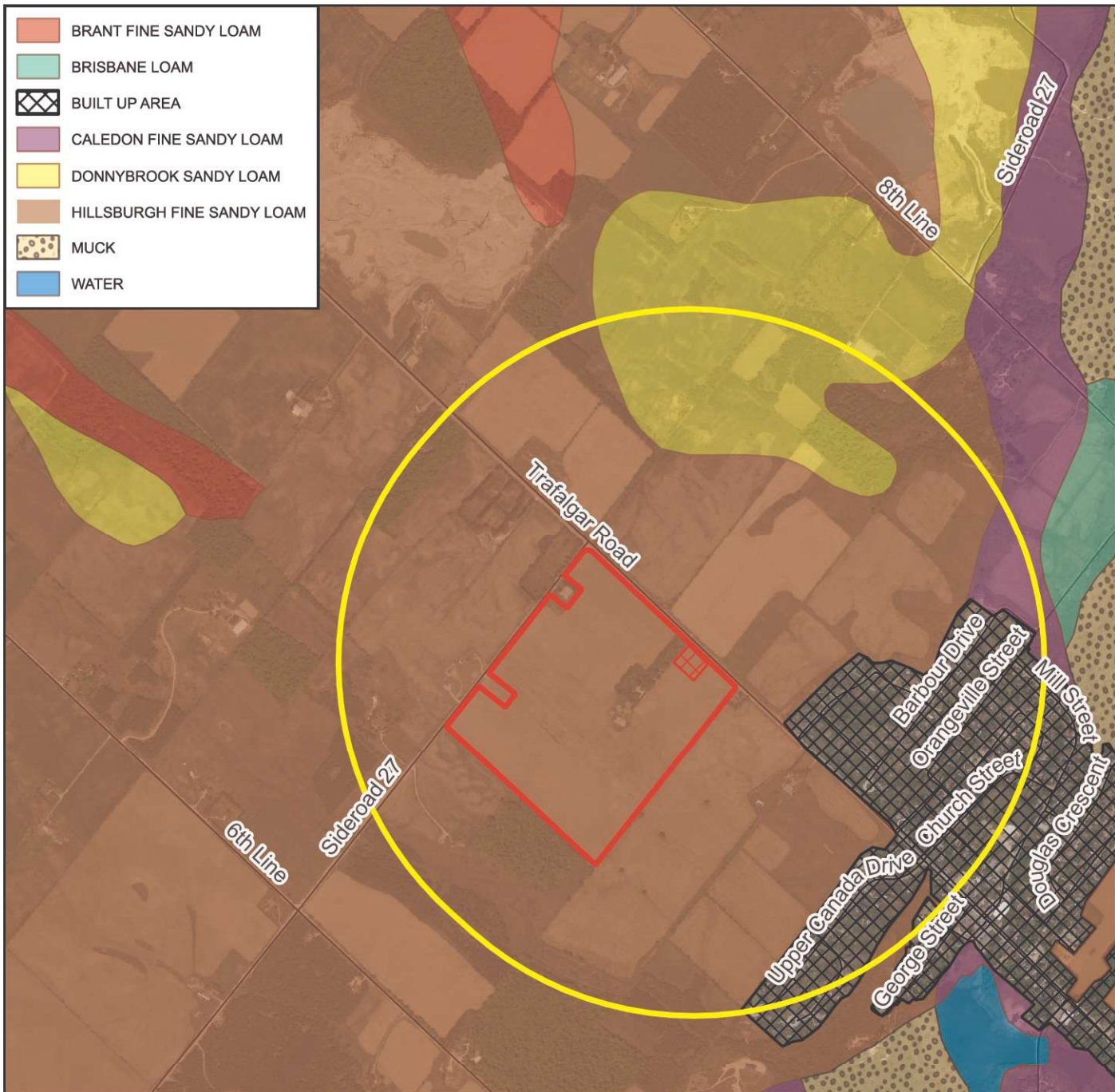
5.4 Soils

The Soil Survey of Wellington County (Report No. 35) prepared by the Experimental Farms Service, Canada Department of Agriculture and the Ontario Agricultural College was published in 1963 and mapped the soils of the entire County. Included with that report is a printed map of the soils in the County presented at a scale of 1:63,360.

Additionally, OMAFRA provides an interactive online Agricultural Systems Portal to access agricultural production, land use and the agri-food network information. The Portal includes most of the data provided by the soil surveys completed throughout Ontario. The database was accessed in November 2025.

5.4.1 Subject Property Soil Types

The background review identified a single soil type mapped within the PSA (**Figure 4**). Both the subject property and the study area are mapped as the Hillsburgh Fine Sandy Loam of the Hillsburgh Series, which is described in the subsection below.



Legend

- Approximate Subject Property Boundary (PSA)
- Study Area
- Secondary Study Area (SSA)

Soils

Figure 4

5952 Trafalgar Road AIA



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5.4.1.1 Hillsburgh Series

The Soil Survey of Wellington County (1963) describes the Hillsburgh Series parent material as calcareous fine sand in end moraine. The profile generally consists of fine sandy loam or fine loamy sand over fine sand. The Series is well drained sandy soil on rough topography. The Soil Survey of Wellington County (1963) notes that the soils are very susceptible to wind erosion and small stones can be seen at the surface in areas of severe soil loss. On the scale of good, good to fair, fair, fair to poor and poor cropland, the Hillsburgh Series rates as fair cropland.

5.5 Canada Land Inventory

The CLI is a comprehensive multi-disciplinary land inventory of rural Canada, covering over 2.5 million square kilometers of land and water. The CLI consists of a soil survey with rankings from 1 to 7, with Class 1 soil being the best agricultural land and Class 7 having no capability for agricultural activities. The CLI also provides sub-classes which specify the limitations of the soil (for example, excessive water, adverse climate, stoniness, and topography).

The CLI ranking is the classification of climate and soil capability for the production of common field crops (e.g., corn, soybeans, small grains, and forages). Class 1 soils have no significant limitations for agriculture, while Class 2 soils have moderate limitations that restrict the range of crops or require moderate conservation practices. Class 3 soils have moderately severe limitations that restrict the range of crops or require moderate conservation practices. Class 4 soils have severe limitations for use with crops. Class 5 soils have severe limitations that restrict capability to producing perennial forage crops, and improvement practices are feasible. The Class 5 limitations are so severe that the soils are not capable of use for sustained production of annual field crops. Class 6 soils are capable only of producing perennial forage crops, and improvement practices are not feasible. Class 7 soils have no capacity for arable culture or permanent pasture.

The CLI Mapsheet 40 P-O (Kitchener 1968) describes the land associated with the PSA as being within a polygon of 60% Class 3 soil and 40% Class 5 soil. The legend on the Mapsheet provides definitions for the subclasses (based on limitations) and describes the subject property as having adverse topographic (T) and soil (S) limitations.

Similarly, the land associated with the PSA is described on the CLI Agricultural Capability mapping provided by OMAFRA (AgMaps Geographic Information Portal) as being in an area of 60% Class 3 and 40% Class 5 soils.

OMAFRA more recently, in cooperation with the Ministry of Natural Resources, compiled a geo-spatial soils database (Soil Survey Complex) for Southern Ontario (March 2023). The database consolidated the existing soil data mapped on a county basis. Like the CLI Agricultural Capability mapping noted above, the updated soil complex database contains other descriptive information including slope class, CLI ranking, stoniness, drainage class and soil texture.

The Soil Survey Complex suggests that the PSA is contained within a polygon that consists of Hillsburgh Fine Sandy Loam of 60% Class 3 and 40% Class 5 CLI rating (**Figure 4**). In Ontario, there are eleven limitation subclasses (**Table 1**). The limitation subclasses of the Class 3 soils are listed as F and M, and S and T for the Class 5 soils. The study area is contained within this polygon.

Table 1. CLI Limitation Sub-Class Description

Code	CLI Sub-Class Description
C	Land subject to crop heat unit regimes of < 2300 (i.e., adverse Climate)
D	Adverse soil structure (i.e., Depth of rooting zone is restricted)
E	Loss of soil profile from Erosion
F	Low inherent soil Fertility
I	Subject to occasional flooding (Inundation) from adjacent streams or water bodies
M	Low inherent moisture holding capacity
P	Presence of surface stones > 15 cm diameter
R	Presence of consolidated bedrock within one metre of the soil surface
S	Presence of a combination of the Subclasses F and M, or, the presence of a combination of the Subclasses P and R, with a third limitation (e.g., 3FMT = 3ST or 5PRE = 5SE)
T	Presence of adverse Topography
W	Subject to excessive Water saturation in the soil profile

Table 2 summarizes the soil capability associated with the PSA in the OMAFRA digital database (Soil Survey Complex March 2023).

Table 2. Agricultural Capability Classes Associated with the PSA as Shown in the OMAFRA Digital Soil Survey Complex (March 2023)

Soil Series	CLI Capability Rating	Agricultural Capability Class	Agricultural Capability Subclass 1	Agricultural Capability Subclass 2	Drainage Class	A Horizon Soil Texture
Hillsburgh Fine Sandy Loam	Class 3 (60%)	Soils have moderately severe limitations that reduce the choice of crops or require moderate conservation practices.	Low inherent soil Fertility	Low inherent moisture holding capacity	Well-drained	Fine Sandy Loam
Hillsburgh Fine Sandy Loam	Class 5 (40%)	Soils have severe limitations on use for crops.	Presence of a combination of the Subclasses F and M, or, the presence of a combination of the Subclasses P and R, with a third limitation	Presence of adverse Topography	Well-drained	Fine Sandy Loam

It is important to note that neither the PSA, nor the SSA are identified by the Province as specialty crop areas.

5.6 Municipal Drainage

Municipal drains have been a fixture of rural Ontario's infrastructure since the 1800s. Most municipal drains were constructed to improve the drainage of agricultural land by serving as the discharge point for private agricultural tile drainage systems. Tile drainage is both agronomically and economically beneficial for reasons including better growing conditions, improved soil structure, better trafficability, reduced energy consumption, more timely planting and harvest, and improved yields for a variety of crops.

OMAFRA maintains records of artificial drainage in Ontario. The LIO online database was accessed for the most up to date records of artificial drainage within and adjacent to the PSA. No tile drainage was identified within or adjacent to the PSA.

5.7 Agricultural Land Use and Infrastructure

A land use reconnaissance survey was undertaken on September 23, 2025.

5.7.1 Subject Property

As noted previously, the subject property is approximately 39.31 hectares (97 acres) in size and is currently farmed by tenant farmers, generally under a corn–soybean rotation. Treed hedgerows are present in the central portion of the subject property, surrounding the existing dwelling. The study area, approximately 0.57 hectares (1.4 acres), consists solely of cropped land with no trees or other notable vegetation or features.

At the time of the site visit, there was no indication of recent upgrades or related investment into the existing agricultural infrastructure in the PSA.

5.7.2 Surrounding Use

The PSA lies approximately 1.4 km northwest of the centre of the community of Hillsburgh, within the boundary of the Town of Erin. There are a mix of land uses in the area surrounding the PSA, consistent with the regional land uses. To examine land use change in the area over time, aerial photos from 2004, 2009, 2015, 2017 and 2021 were compared to the most recent aerial photography available through Google Earth®. Land use surrounding and within the PSA is consistent between years and was always primarily agricultural.

The Agricultural Resources Inventory or ARI (OMAFRA 1983) provides an overview and reference of the location, quantity, and quality of the historical use of agricultural land in Ontario. The ARI evaluated the mix of crops and classified their proportion more specifically, thereby identifying land use systems which are valid over a long period of time. The ARI shows agricultural resources within the general area to consist of hay systems, pasture systems, grazing systems, continuous row crop, and woodlands. Within the PSA, the agricultural resources are listed as a pasture system (western, southern, and central portions), and hay system (northern and eastern edges).

6. Agricultural Assessment

Land use planning decisions attempt to balance the competing demands for land. Generally, the primary factor in the evaluation of agricultural lands is soil capability ratings (CLI mapping). Additional factors in land planning decisions include the existing investments in agricultural facilities, land and infrastructure and changes to agricultural land use patterns, the presence of rural non-farm residents and their integration, land fragmentation, intrusions of non-agriculture land uses, and non-resident ownership of lands.

Beacon understands that this AIA was requested by OMAFRA to evaluate the impacts of the proposed loss of approximately 1.4 acres from the agricultural land base for a new water storage facility. The following analysis provides further assessment of agricultural resources, agricultural infrastructure, fragmentation, and land use conflict.

6.1 Agricultural Resources

As noted in Section 5.5, neither the subject property nor the surrounding lands are identified by the Province as specialty crop areas; in this regard, the proposed water storage facility will not consume prime agricultural land.

The primary soil series in the study area is the Hillsburgh Fine Sandy Loam. A detailed review of the CLI mapping was completed for the study area to assess the land for qualification as prime agricultural soil. According to the CLI classification rating (refer to **Tables 1 and 2**), the polygon in which the study area is located consists of 60% Class 3, and 40% Class 5. The limitations of the Class 3 soils are soil fertility and moisture retention, and the limitations of the Class 5 soils are soil fertility and moisture retention, coupled with adverse topography.

It was noted above that Beacon did not have permission to enter the subject property and all surveys of the study area were undertaken from the subject property boundary. From the reconnaissance survey of the study area, it is Beacon's opinion that the soils associated with the study area would be the Class 3 soils as there was no adverse topography noted in the study area as the study area contains nearly level to very gentle slopes (i.e., 0.5% - 5.0%).

6.2 Agricultural Infrastructure

Agricultural investment is directly related to the improvement of land through tile drainage or irrigation equipment, and through the improvements to agricultural infrastructure (e.g., barns, manure storage, sheds). Agricultural fields and facilities that have increased capital investment are generally more worthy of preservation and are readily identifiable through visual inspection of the facilities.

Livestock rearing requires an investment in agricultural facilities, dairy operations require a relatively large investment in maintaining facilities for the production of milk, and poultry and hog operations require specific production facilities that involve capital investment. Conversely, beef production, hobby horse and sheep operations generally require less infrastructure, and therefore, less investment. A large

investment in infrastructure can occur for certain cash crops as well, as some facilities include large storage and drying equipment.

Within the PSA, and within the study area in particular, there was no indication of recent upgrades or related investment into the existing agricultural infrastructure.

6.3 Fragmentation

The conversion of agricultural lands to residential, recreational, or commercial land can have a variety of effects, including fragmentation of the landscape. Fragmentation of farmlands generally reduces the economic viability of the lands by reducing the efficiency of which lands can be farmed and increasing the operating costs for other farms, particularly if the fragmentation results in several small and separated parcels.

The 2024 PPS planning policies recognize the impact of fragmentation on agricultural lands and try to minimize the fragmentation of agricultural lands for non-agricultural uses. For example, the PPS policies do not permit lot creation in prime agricultural areas for residential purposes, and they recognize that new permitted development in prime agricultural areas should avoid further fragmentation of the agricultural land base whenever possible.

Lands within the SSA are highly fragmented, particularly through the development of non-agricultural uses within the adjacent settlement area, severance of agricultural parcels, and local aggregate operations. As a result, the level of fragmentation reduces the agricultural priority of the lands and increases the potential for conflict with non-agricultural practices.

The proposed development of the water storage facility represents approximately 1.4% of the overall land of the subject property. The proposed loss of currently tillable farmland is minimal, and the water storage facility is not expected to affect the operational efficiency of surrounding agricultural lands.

6.4 Land Use Conflict

The level of compatibility between differing land uses obviously varies. Generally, uses that have few “people” interfacing with agriculture enhance compatibility. Land use conflict can be described on a micro (neighbour to neighbour) level and a macro (urban form) level. Micro conflicts can include dust, odours, noise, chemicals, etc., while macro conflict can include pollutants in water sources, flooding, and livestock noise.

6.4.1 Right to Farm

Agricultural practices may result in discomfort or inconveniences in areas adjacent to farming operations. The *Farming and Food Production Protection Act* (1998) protects farms from nuisance complaints made by neighbours, provided they are following normal farm practices. As defined in the *Act*, a normal farm practice is one that:

Is conducted in a manner consistent with proper and acceptable customs and standards as established and followed by similar agricultural operations under similar circumstances; or

Makes use of innovative technology in a manner consistent with proper advanced farm management practices.

The bulk of farm nuisance complaints are about odours emanating from manure handling and storage. However, examples of other nuisance complaints might include light from greenhouses at night, vibration from trucks, fans, or boilers, smoke from burning tree pruning or other organic wastes, flies from manure, spilled feed, noise from crop drying fans, irrigation pumps, dust from field tillage equipment, or truck traffic.

Due to the location of the proposed water storage facility, and the small footprint of the study area, short-term disruption to the tenant farmer may occur during construction. Long-term disruption to farm practices surrounding the proposed water reservoir is unlikely.

6.4.2 Traffic

Increased vehicle traffic along roadways can lead to safety issues with respect to the movement of slow moving, farm machinery and, as well, interrupt or alter farm traffic flow patterns. Due to the location and intensity of the existing farm operations and the low impact from the completed water storage facility, future farm traffic will likely not be affected.

6.4.3 Trespass and Vandalism

Trespassing and vandalism impacts are generally related to development within agricultural areas that primarily consist of specialty crop operations or large livestock operations. There are no designated specialty crop areas or large livestock operations within or adjacent to the PSA.

Farming, particularly row crop (e.g., corn), is generally the focus of the surrounding agricultural practice. Mitigation measures may include but are not limited to fencing between the respective land uses, the use of signage indicating prosecution for violation of trespassing and plantings of low dense woody vegetation as a physical barrier to the water storage facility.

6.5 Alternate Location Investigation

Although the Ainley 2025 report identified the study area as the best location of the Hillsburgh water reservoir, a desktop analysis of the two alternate locations was also completed.

Both alternate locations are also located in a polygon which consists of 60% Class 3, and 40% Class 5. The limitations of the Class 3 soils are soil fertility and moisture retention, and the limitations of the Class 5 soils are soil fertility and moisture retention, coupled with adverse topography. There is no difference between the study area and the alternative sites regarding CLI ranking.

Similarly, the two alternate locations generally consist of the same agricultural characteristics of the study area. The main difference is that the study area is designated as Secondary Agricultural, whereas the other two alternatives are designated as Primary Urban Centre. The Secondary Agricultural designation does not restrict the development of a water storage facility in the study area.

It is Beacon's opinion that agriculturally, neither of the two alternate locations would be a preferred location over the 5952 Trafalgar Road location.

7. Agricultural Policy Conformity

The following commentary describes how the proposed land use change conforms with the relevant provincial, and municipal environmental legislation and policies, provided that development proceeds as indicated.

7.1 Provincial Planning Statement (2024)

Prime agricultural areas are included in Provincial land use policy and prime agricultural lands describe the agricultural capability of the land and soils. Prime agricultural areas exist where prime agricultural lands predominate and may be identified by OMAFRA using guidelines developed by the Province as amended from time to time. Prime agricultural lands include specialty crop areas and CLI Classes 1, 2 and 3 soils, in this order of priority for protection.

As noted above, the Soil Survey Complex suggests the entirety of the subject property, including the study area proposed for the development is contained within a polygon that consists of 60% Class 3 and 40% Class 5 soils. The limitation subclasses of the Class 3 soils are listed as F and M. It is Beacon's opinion that the soils associated with the study area would be the Class 3 soils as there was no adverse topography noted in the study area as the study area contains nearly level to very gentle slopes (i.e., 0.5% - 5.0%).

Section 4.3.5.2 of the PPS requires that impacts from new non-agricultural uses on surrounding agricultural operations be mitigated to the extent feasible. The proposed use of the study area is non-agricultural; however, due to the size and proposed use of the study area, it is expected to have zero to near-zero impact on the prime agricultural lands of the subject property or on surrounding agricultural operations. Accordingly, the proposed development of the water storage facility and associated use will be consistent with the PPS.

7.2 County of Wellington Official Plan (2019, Consolidated)

The County OP designates the subject property, including the study area as being a Secondary Agricultural Area. The County OP recognizes that agriculture will continue to be the dominant use, but a range of other uses is also allowed within lands designated Secondary Agricultural Area.

This AIA has assessed the potential impacts of the proposed development, and it is Beacon's opinion that the construction and operation of the water storage facility will have no impact on surrounding agricultural lands or agricultural operations.

Recommendations contained in this AIA provide measures to avoid, minimize or mitigate impacts of non-agricultural development on agricultural operations and the agricultural system.

7.3 Town of Erin Official Plan (2025, Consolidated)

The Town OP also provides land use policies related to agriculture in Section 4.2 (Agriculture). As noted above, the PSA is designated as Secondary Agricultural, which the Town has determined to be non-prime farmland. The Town's Official Plan also notes that use of lands in the Secondary Agricultural Area designation shall be guided by the policies of Section 6.5 of the County of Wellington Official Plan.

As noted in **Section 3.2**, regarding permitted uses in Secondary Agricultural Areas in the County OP, Policy 6.5.3 states that permitted uses and activities may include small scale commercial, industrial and institutional uses, and public service facilities. Therefore, the development of the water storage facility in the study area complies with the policies of the Town OP.

8. Conclusions

Beacon was retained to conduct an AIA as input to the MCEA Phase 2 Detailed Evaluation related to a review of the preferred site for the Hillsburgh water storage facility.

The AIA assesses the existing agricultural capability of the PSA and the potential impacts from development of the water storage facility on agriculture, farm operations and the surrounding area. Beacon provides the following conclusions:

- The Soil Survey Complex suggests that the PSA, including the study area, is contained within a polygon that consists of 60% Class 3 and 40% Class 5 soils. It is Beacon's opinion that the soils associated with the study area would be the Class 3 soils as there was no adverse topography noted in the study area as the study area contains nearly level to very gentle slopes (i.e., 0.5% - 5.0%);
- None of the PSA or SSA is designated by the Province as an area for specialty crops;
- Within the PSA, and within the study area in particular, there was no indication of recent upgrades or related investment into the existing agricultural infrastructure;
- The proposed development of the water storage facility represents approximately 1.4% of the overall land of the subject property. The proposed loss of currently tillable farmland is minimal, and the water storage facility is not expected to affect the operational efficiency of surrounding agricultural lands;
- Due to the location of the proposed water storage facility, and the small footprint of the study area, short-term disruption to the tenant farmer may occur during construction. Long-term disruption to farm practices surrounding the proposed water reservoir is unlikely;
- Due to the location and intensity of the existing farm operations and the low impact from the completed water storage facility, future farm traffic will likely not be affected;

- Mitigation measures may include but are not limited to fencing between the respective land uses, the use of signage indicating prosecution for violation of trespassing and plantings of low dense woody vegetation as a physical barrier to the water storage facility; and
- It is Beacon's opinion that agriculturally, neither of the two alternate locations would be a preferred location over the 5952 Trafalgar Road location.

It is Beacon's opinion that the development of the Hillsburgh water storage facility as proposed, subject to the above recommendations and approvals and permits as may be required as part of the development, can proceed in a manner that is consistent with applicable agricultural policies.

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9. References

- Brown, D., and A. Bootsma. 1997.
Crop Heat Units for Corn and Other Warm Season Crops in Ontario. Ontario Ministry of Agriculture Food and Rural Affairs, Factsheet 93-119.
- Chapman, L. J. and D. F. Putnam. 1984.
The Physiography of Southern Ontario, Third Edition. Ontario Geological Survey Special Volume 2.
- Denholm K .A and L. W. Schut. 1993.
Field manual for Describing Soils in Ontario 4th ed. Land Resource Science, University of Guelph.
- Hoffman D.W. and B. C. Matthews. 1963.
Soil Survey of Wellington County. Report No. 35 of the Ontario Soil Survey. Experimental Farm Service, Canada Department of Agriculture and the Ontario Agricultural College.
- Ontario Geological Survey. 1997.
Quaternary Geology of Ontario Dataset 14.
- Ontario Geological Survey. 2003.
Surficial geology of Southern Ontario; Ontario Geological Survey, Miscellaneous Release--Data 128.
- Ontario Ministry of Agriculture, Food and Agribusiness. 2024.
Soil Capability for Agriculture in Ontario 2024.
- Ontario Ministry of Agriculture, Food and Rural Affairs. 2023.
Soil Survey Complex (<https://data.ontario.ca/dataset/soil-survey>).
- Ontario Ministry of Agriculture, Food and Rural Affairs. 2018.
Draft Agricultural Impact Assessment (AIA) Guidance Document.
- Ontario Ministry of Agriculture, Food and Rural Affairs. 2016.
Guidelines on Permitted Uses in Ontario's Prime Agricultural Areas – Publication 851. Queens Printer for Ontario, Toronto.
- Ontario Ministry of Agriculture, Food and Rural Affairs. 2011.
Agronomy Guide for Field Crops – Publication 811. Queens Printer for Ontario, Toronto.
- Ontario Ministry of Agriculture and Food. 1983.
Agriculture Resource Inventory