

Agricultural Impact Assessment

Brechin Quarry

Part of Lots 11, 12 and 13, Concession 1, Township of Ramara, County of Simcoe

Date:

December, 2023

Prepared for:

LCP Quarry Limited

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TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	Data Collection and Review.....	1
1.2	Proposed Aggregate Extraction Operation	2
1.3	Purpose of the Study.....	3
2.0	STUDY AREA	4
2.1	Primary Study Area.....	4
2.2	Secondary Study Area	6
2.3	Census of Agriculture 2016 & 2021	10
3.0	FIELD DATA COLLECTION	12
3.1	Soil and CLI Capability.....	12
3.2	Microclimate for Specialty Crop Production	12
4.0	PLANNING POLICY FRAMEWORK	13
4.1	Provincial Policy Statement	13
4.2	Growth Plan for the Greater Golden Horseshoe.....	15
4.3	Simcoe County Official Plan	16
4.4	Township of Ramara Official Plan.....	17
5.0	ASSESSMENT OF IMPACT	20
5.1	Reduction / Loss of Agricultural Land and Infrastructure	20
5.2	Fragmentation of Agricultural Lands.....	20
5.3	Air Quality.....	21
5.4	Hydrogeology	21
5.5	Traffic.....	22
5.6	Blasting Impacts.....	22
5.7	Noise Impacts.....	22
5.8	Summary of Net Impacts.....	23
6.0	RECOMMENDATIONS	27
7.0	SUMMARY	27
	APPENDIX A Orion Environmental Agricultural Capability Report	29
	APPENDIX B Curriculum Vitae	30

LIST OF FIGURES

Figure 1	Agricultural Land Use Survey
Figure 2	CLI Soil Capability for Agriculture
Figure 3	Crop Heat Units
Figure 4	Growth Plan Agricultural System
Figure 5	County of Simcoe Official Plan Designation
Figure 6	Township of Ramara Official Plan Designation

LIST OF APPENDICES

Appendix A	Orion Environmental – Agricultural Considerations Letter
Appendix B	Curriculum Vitae – Pierre J. Chauvin, BSc (Agr), MA, MCIP, RPP

1.0 INTRODUCTION

MacNaughton Hermsen Britton Clarkson Planning Ltd. (MHBC) has been retained by LCP Quarry Limited to complete an Agricultural Impact Assessment for a proposed quarry operation on lands located on Part Lot 11, 12 & 13, Concession 1, in the Geographic Township of Mara, in the Township of Ramara, County of Simcoe (**See Figure 1**).

The proposed area to be licensed is 151.4 hectares, of which 91.5 hectares is proposed for extraction. The quarry is proposed to operate below the water table. The lands can be characterized as uncultivated fallow lands with some forested areas to the west. The surrounding lands include licenced aggregate operations, rural residential uses primarily along Highway 12, agricultural uses, and natural features.

LCP Quarry Limited is filing an application with the Ministry of Natural Resources and Forestry (MNRF) for a Class 'A' Licence under the Aggregate Resources Act, and a local Official Plan and Zoning By-law Amendments with the Township of Ramara to permit aggregate extraction on the subject lands.

The Growth Plan (2020) requires an AIA for new aggregate operations located in prime agricultural areas (Section 4.2.8.3:

In prime agricultural area, applications for new mineral aggregate operations shall be supported by an agricultural impact assessment and, where possible, shall seek to maintain or improve connectivity of the Agricultural System.

Since a portion of the site is located within a prime agricultural area, this report has been prepared to address the Growth Plan requirements and the content, methodology and format of this report is consistent with the Province's *Draft Agricultural Impact Assessment Guidelines*, released in March 2018 by the Ministry of Agriculture, Food and Rural Affairs (OMAFRA).

1.1 Data Collection and Review

In preparing this report, the following background materials at the provincial, upper tier and municipal levels were reviewed:

- Provincial Policy Statement (2020);
- The Growth Plan for the Greater Golden Horseshoe (2020)
- The County of Simcoe Official Plan (February 2023 Consolidation)
- The Township of Ramara Official Plan (June 2016 Consolidation)

A number of plans and reports were prepared in support of the applications and below is a list of reports that were reviewed as part of the preparation of this Agricultural Impact Assessment:

- Planning Justification Report and ARA Summary Statement, prepared by MHBC;
- Level 1 and Level 2 Hydrogeology and Hydrology Report, prepared by Azimuth Environmental Consulting;
- Level 1 and Level 2 Natural Environment Report, prepared by Azimuth Environmental Consulting;
- Traffic Impact Assessment, prepared by T. Y. LIN International Canada Inc. (TYLin);
- Noise Impact Assessment, prepared by HGC Engineering;
- Stage 1-2 Archaeological Assessment, prepared by Amick Consultants Ltd., Cultural Heritage Screening Report, prepared by MHBC; and,
- Blasting Impact Study, prepared by Explotech.

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

- Site plans including Existing Conditions Plan, Operation Plan and Rehabilitation Plan;
- Soil data resource information which should include Ontario Soil Survey reports and mapping, the provincial digital soil resource database, Canada Land Inventory Agricultural Capability mapping, Soil Suitability information and mapping (for specialty crops), and information from on-site investigations;
- Aerial photography (historic and recent) with effective user scale of 1:10,000 or smaller;
- Agricultural statistics (Statistics Canada, 2016 and 2021 Census of Agriculture);
- OMAFRA's constructed and agricultural Artificial Drainage Mapping (OMAFRA Agricultural Information Atlas);
- Agricultural Systems data from OMAFRA's Agricultural System Portal; and
- Parcel mapping/fabric of the area.

A land use survey was also conducted in October, 2020 with additional information gathered from Google Satellite Imagery utilized to gain a better understanding of the agricultural operations and activities in both the primary and secondary study areas. A summary of the land use survey is provided in Section 2.0 of this report. The potential for impacts on agriculture and the agricultural system will vary and mitigation is dependent on the type and sensitivity of the agricultural or agricultural-related activities identified in the primary and secondary study areas.

1.2 Proposed Aggregate Extraction Operation

The proposed Brechin Quarry lands are located on Part Lot 11, 12 & 13, Concession 1, in the Geographic Township of Mara, in the Township of Ramara, County of Simcoe (**Figure 1**). The lands are located to the west of Highway 12, immediately north of Concession Road 1. The North portion of the subject lands extend to Concession Road 2.

The proposed area to be licenced is 151.4 hectares, of which 91.5 hectares is proposed for extraction. Lands located on the west side of the subject lands are not proposed to be extracted. The subject lands consist primarily of vacant, fallow lands, and are not in agricultural production. Lands located outside of the limit of extraction to the west consist of natural features consisting of forested areas and seasonal drainage.

LCP Quarry Limited is applying for a Class A Quarry Licence to operate below the water table. Extraction activities are proposed to be developed in 2 phases, each broken down into two sub phases (1a-1b, 2a-2b). The proposed quarry will begin extraction in the north portion of the subject lands, with extraction advancing to the south/west. Extraction in Phase 2 will then head west (Phase 2a) until it reaches the western limit, at which time it will advance to the southern limit (Phase 2b). Material will be extracted, processed, and shipped from the subject lands to market using the existing road infrastructure system along Concession 2 and Highway 12.

The proposed Brechin Quarry lands contain approximately 69 million tonnes of high quality aggregate resources. LCP Quarry Limited is applying for a maximum annual tonnage limit of 2 million tonnes per year. The proposed material will be shipped primarily via Highway 12, consistent with other operations in the area.

The subject lands are proposed to be rehabilitated to an open lake as a result of the below water extraction, with some exposed quarry faces, shoreline wetland areas and naturalized buffer areas. The subject lands will not be rehabilitated back to an agricultural condition following the aggregate extraction operation.

1.3 Purpose of the Study

The purpose of this Agricultural Impact Assessment is to evaluate potential impacts on agriculture from the proposed aggregate extraction operation and identify mitigation measures to abate these impacts to the extent feasible. This report is not intended to provide baseline pre-extraction documentation, such as existing agricultural conditions and soil details, as the land will not be rehabilitated to an agricultural condition due to the proposed below water extraction.

As part of this AIA, surrounding agricultural land uses and structures on properties within 1.5 kilometres of the subject lands have been documented to assess the potential impact from the proposed aggregate operation on the agricultural uses/operations and determine the extent of mitigation that may be required.

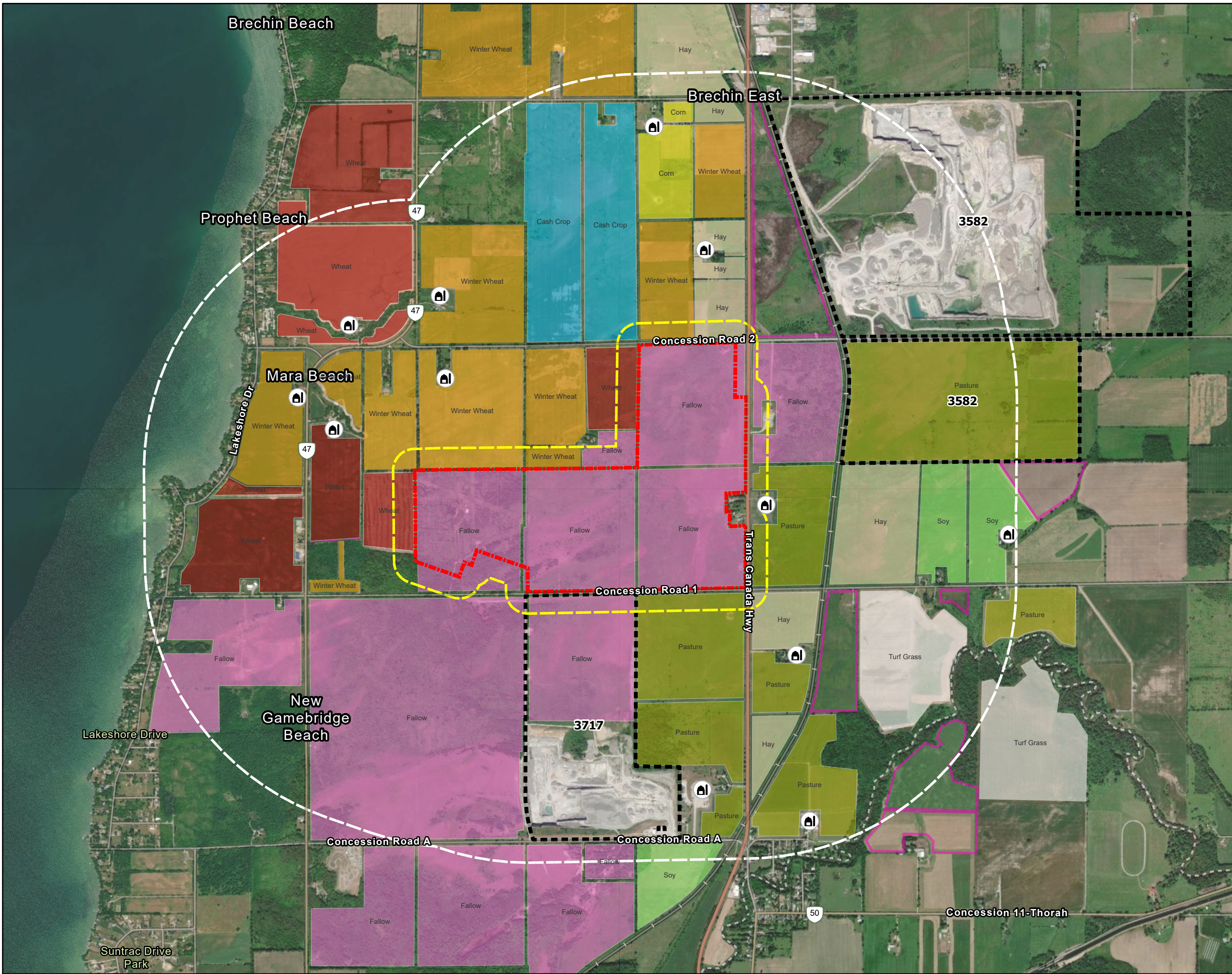


Figure 1:
Agricultural Land Uses

Part of Lots 11, 12 and 13, Concession 1,
Township of Ramara, County of Simcoe

LEGEND

- Proposed Licence Boundary
- Primary Study Area (120m)
- Secondary Study Area (1.5km)
- Existing Licence Boundary
- 🏠 Barns

Agricultural Land Use

- Corn
- Turf Grass
- Winter Wheat
- Pasture
- Fallow
- Hay
- Soy
- Wheat
- Cash Crop
- Unknown

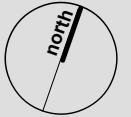
Source: Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada, Maxar

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2.0 STUDY AREA

An agricultural land use assessment was completed as part of this AIA and was based on a study area comprised of a 'Primary Study Area' and 'Secondary Study Area'. The Primary Study Area is the area immediately adjacent to the subject lands that has the potential to be directly impacted by the aggregate extraction operation. The Primary Study Area encompasses a radius of 120 metres from the subject lands.

The Secondary Study Area includes the potential area that may be affected by indirect impacts of the proposed operations. For the purposes of this assessment, we have assigned a Secondary Study Area of one and a half kilometres (1500 metres) from the subject lands.

A plan identifying the adjacent properties, existing crops and existing barns and residential structures within the study area is included as **Figure 1** of this report.

2.1 Primary Study Area

The predominant land uses within 120 metres of the proposed Brechin Quarry are agricultural (field crops) and rural residential dwellings (**Figure 1**).

At the time of the site visit, the subject lands were not farmed, and were in fallow. The subject lands are located just over 1.5 kilometres to the south of the Hamlet of Brechin, and have frontage onto Highway 12 (Trans Canada Highway) to the East, Concession 1 to the South, and Concession 2 to the North. The area is characterized by large parcels of land which are actively cash cropped, as well as wooded areas, livestock farms, and mineral aggregate operations. At the time of the Land Use Survey, surrounding uses included:

North: Agricultural cropping including winter wheat, hay, and wheat. Fallow lands were also observed.

South: Fallow lands and agricultural lands (pasture) and the James Dick Construction Limited Gamebridge Quarry (Licence #3717).

Northeast: Lafarge Canada Inc. Brechin Quarry (Licence #3582)

East: 4 Rural residential uses located along Highway 12, including one barn, which could be used for livestock (beef cattle). A marine boat restoration business (non agricultural use) was observed along Highway 12 as well.

West: Agricultural cropping including winter wheat and wheat and woodlands.

The site visit confirmed that surrounding land uses within the Primary Study Area are primarily agricultural in use, with a mix of cash cropping and livestock operations/barns. Lands are generally contiguous and not highly fragmented by non-agricultural uses, aside from the rural residential uses located to the East of the Subject Lands along Highway 12.

There is no agricultural production located on the subject lands. At the time of the land use survey and site visit, the lands were in fallow. While there are remnants of former agricultural buildings, there are currently no agricultural buildings or structures on the subject lands. A structure is located on the western most property of the subject lands, however it is was built to serve the former flying club and is not an agricultural building. Some older fencing (post and wire) was observed on the subject lands, however, no other agricultural investment or improvements were identified on the subject lands in the form of agricultural buildings, tile drainage, etc. **(Figure 1)**. Ultimately, the lands are not currently used for an agricultural purpose and there is no indication of their future use for agricultural purposes.

The following images illustrate the state of the subject lands.



Subject Lands – Fencing (Facing West from Highway 12)



Subject Lands - Fallow (Via Google Street – Facing West from Highway 12)



1569 Highway 12 (Facing east from Highway 12; east of the Subject Lands)

2.2 Secondary Study Area

The Secondary Study Area includes lands within a 1.5 kilometre radius of the subject lands. The Secondary Study Area is comprised of existing mineral aggregate operations (Lafarge Canada Inc. – Licence No. 3582 and James Dick Construction Limited – Licence No. 3717), agricultural uses including cash cropping and livestock uses, rural residential uses to the North and South, and residential uses located along Lake Simcoe to the West. In addition, a significant amount of land, primarily to the south, is in fallow. The following section is a summary of agricultural uses within the Secondary Study Area that existed on the day of field observations. Comments on the physical characteristics of existing farm structures are based solely on roadside observations and not supported by any formal structural assessment.

Overall, it was observed that agricultural production in the area includes the following (within a 1.5 kilometre radius):

- Winter Wheat
- Wheat
- Hay
- Soy
- Turf Grass
- Cattle (Beef, Goats)

Figure 1 illustrates the location and type of crops found in the Secondary Study Area. Four (4) barns were identified as being vacant with no evidence of livestock present, and likely being used for storage or other

purposes. All 4 of these barns were visible from Ramara Road 47 in the North West portion of the Secondary Study Area.

In total, six (6) barns were identified as being used to house livestock, or having the potential to house livestock in the future. These barns were located along Concession 2, Concession 3, Highway 12, Ramara Road 47 and Concession Road A. Images of four (4) these barns are included at the end of this subsection below.

The livestock identified in association with the barns was primarily beef cattle, except for one operation which had goats. The majority of these livestock operations are well buffered/separated from the subject lands, occurring within the outer portion of the Secondary Subject Area (1.5 km radius). All barns but one were located over 500 metres from the subject lands. One barn along Highway 12, which was identified as being capable of housing livestock in the future, is located approximately 200 metres from the subject lands. This barn, however, is separated from the proposed quarry by three existing rural residential lots located on Highway 12. Furthermore, extraction is proposed to be setback 150 metres from the three existing rural residential lots which assists in providing additional separation. Impacts to this barn/farm operation are discussed in Section 5 of this report.

Parcels adjacent to the subject lands were identified as containing systematic tile drainage, which indicates an investment in the lands for agricultural purposes. This is generally consistent with the continuous parcels and cash cropping in the area, which is characteristic of the broader Secondary Study Area.

Of note, the main land use in the Western portion of the Secondary Study Area, along Lake Simcoe, is residential. These residences likely include seasonal cottages as they are located along the lake. The Point of Mara Resort and Trailer Park is also located along Lake Simcoe, and is within the Secondary Study Area.

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



1842 Highway 12 (Facing west from Highway 12; north of the Subject Lands)



2325 Concession Road 3 (Facing south from Concession 3; north of the Subject Lands)



2239 Ramara Road 47 (Facing east from Ramara Road 47; west of the Subject Lands)



2178 Concession Road A (Facing north from Concession A; southeast of the Subject Lands)

2.3 Census of Agriculture 2016 & 2021

A review of the 2016 and 2021 Census of Agriculture for Simcoe County and Ramara was undertaken in order to provide an overview of agricultural production patterns, number of farms, and overall agricultural land. This helps confirm if current farming practices within the Study Areas are characteristic of the broader agricultural area.

The total number of farms in the County of Simcoe (1846) and the Township of Ramara (113) has declined since 2016. The Township of Ramara (19%) has experienced a larger rate of decline in total number of farms since 2016 than the County of (6.5%). Overall, the Province of Ontario has experienced a more gradual rate of decline of 2.5%.

The majority of farm uses in the Township of Ramara are beef cattle ranching and farming (45%), followed by other crop farming (24%) and oilseed and grain farming (17%). This is slightly similar to the County of Simcoe, where the majority of farm uses are oilseed and grain farming (30.4%), followed by beef cattle ranching and farming (19%) and other crop farming (15%). There are a total of 342 beef and cattle farms in the County of Simcoe, which means that the Township of Ramara accounts for approximately 15% of the County's cattle production (51 total farms).

In terms of parcel size, the Township of Ramara has various sizes of farms. 26% of farms in the Township are between 70 to 129 acres in size. This is followed by the 10-69 acre size range, with 19% of farms within this category, and the 180-239 acre size range, with 15% of all farms. This varies slightly from the County of Simcoe, where 27% of all farms are within the 10-69 acre range, followed by the 70-129 acre range with 24% of all farms, and then 130-179 acres with 9% of all farms.

Overall, the amount of lands in crops has slightly increased, by 0.2%, in the County of Simcoe. The Township of Ramara has not seen this increase, and instead experienced a stark decline in the overall amount of land in crops (-28.6 %).

Based on the site visits, the agricultural activities within the Primary and Secondary Study Areas are indicative of broader agricultural trends/cropping in the Township of Ramara and the County of Simcoe. The agricultural uses within the Study Areas are representative of normal agricultural production for the area.

3.0 FIELD DATA COLLECTION

3.1 Soil and CLI Capability

The Canada Land Inventory (CLI) system uses soil attributes to create a seven class system of land use capabilities. Class 1, 2, and 3 soils are capable of sustained common field crop production, and are considered “prime agricultural land” by the Province. Class 4 soils are limited for sustained agriculture while Class 5 is capable for the use of permanent pasture and hay. Class 6 soils are best used for pasture and Class 7 denotes soils or landforms that are not capable for use for arable culture or permanent pasture.

According to the CLI soils map produced by the Province (**Figure 2**), the subject lands are comprised of Classes 1, 3 and 6 soils.

An Agricultural Capability Assessment was completed by Orion Environmental Solutions on behalf of LCP Quarry Limited to determine the capability of the lands for agricultural production and conclude whether or not the lands should be considered Prime Agricultural Land. The Report concluded, based on historical farming practices on the subject lands, soil structure and depth, and discrepancies present in the Province’s mapping for surrounding land uses (quarries), that it is evident that the subject lands are not suitable for continued cultivation and would not be defined as Prime Agricultural Land. The letter has been included in this AIA as **Appendix A**.

3.2 Microclimate for Specialty Crop Production

Climate data was obtained from the OMAFRA document titled “Agronomy Guide for Field Crops – Publication 811 (June 2009)” and the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) Factsheet – Crop Heat Units for Corn and Other Warm Season Crops in Ontario, 1993. The subject lands are located within the 2700-2900 average accumulated Crop Heat Units (CH-MI) available for corn production in Ontario (**Figure 3**). The Crop Heat Units (CHU) index was originally developed for field corn and has been in use in Ontario for 30 years. The CHU ratings are based on the total accumulated crop heat units for the frost free growing season in each area of the province. CHU averages range between 2500 near North Bay to over 3500 near Windsor. The higher the CHU value, the longer the growing season and greater are the opportunities for growing value crops.

Because the subject lands are located within the 2700-2900 average accumulated Crop Heat Units, the agricultural lands are not subject to special climatic conditions. Given the typical climatic conditions, there are limited opportunities for growing speciality crops, and therefore, the properties have not been identified as a specialty crop area in the County of Simcoe and Township of Ramara Official Plans and do not meet the criteria as identified by the Province.

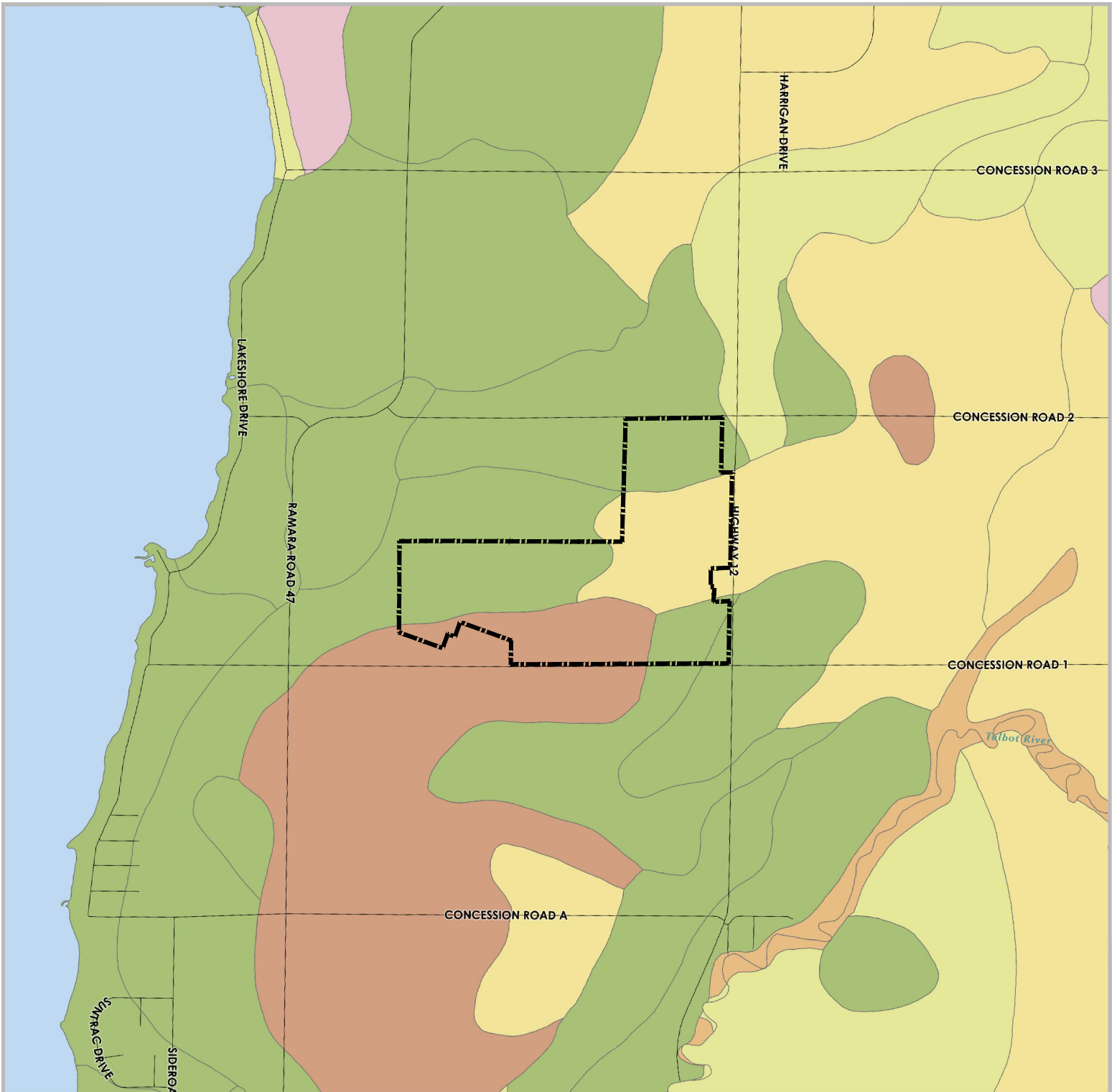




Figure 2:
Soil Capability for
Agriculture

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 Subject Lands  Lake Simcoe

CLI 1 Classification

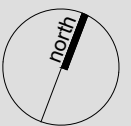
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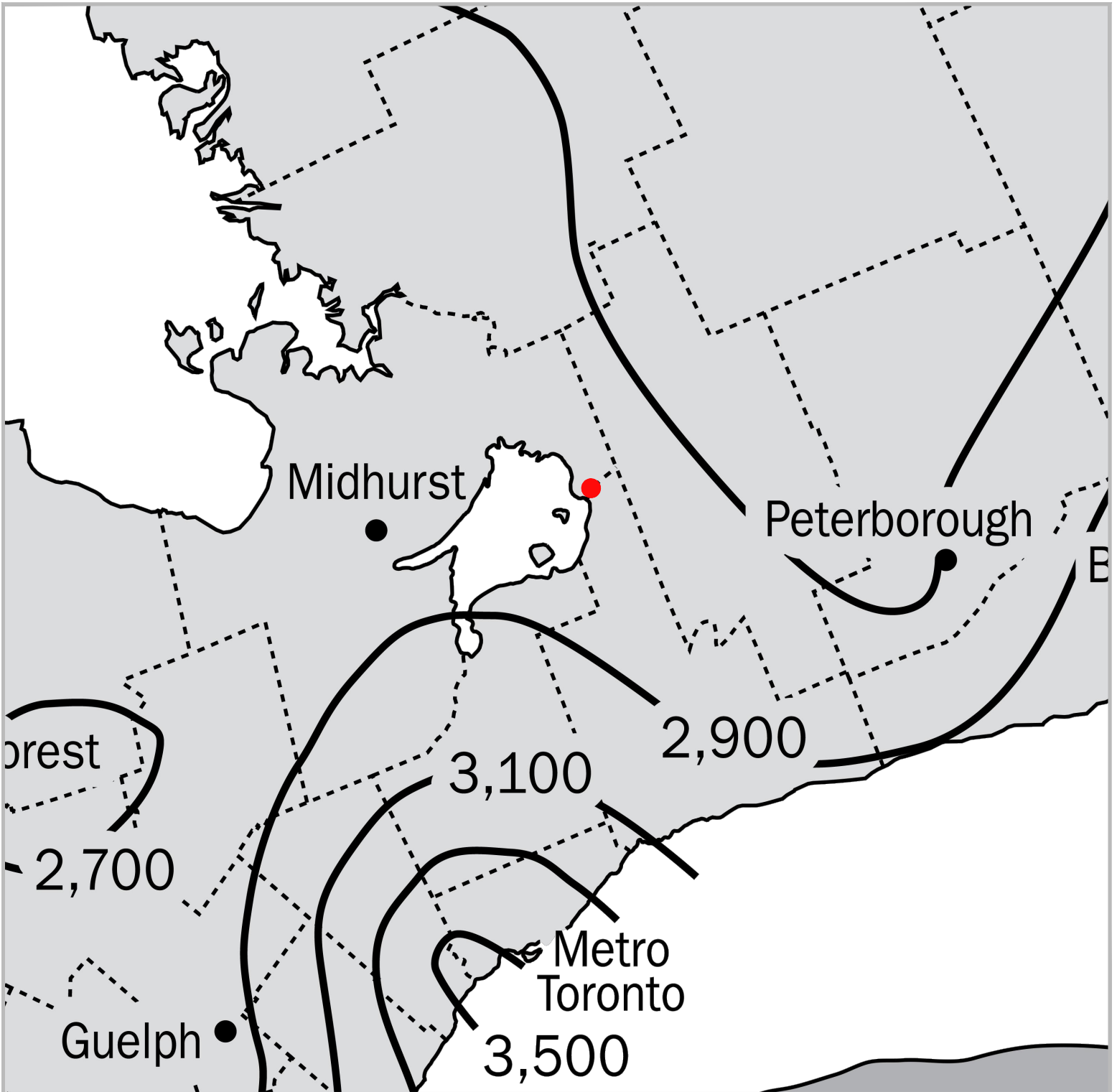


Figure 3:
Crop Heat Units

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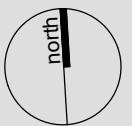
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4.0 PLANNING POLICY FRAMEWORK

A number of key documents were reviewed as part of this Agricultural Impact Assessment in order to provide a comprehensive assessment of the policy framework from an agricultural perspective regarding the proposed aggregate extraction operation. The following policies were reviewed to provide the agricultural land use policy framework related to the subject lands:

- Provincial Policy Statement (2020)
- The Growth Plan for the Greater Golden Horseshoe (2020)
- County of Simcoe Official Plan (Consolidated 2016)
- Township of Ramara Official Plan (2003)

To note, the Planning Justification Report provides a more in-depth review and analysis of the applicable planning documents and relevant policies. This AIA focuses primarily on planning policy, which pertains to agriculture and agricultural rehabilitation.

4.1 Provincial Policy Statement

The PPS establishes the policy foundation for regulating the development and use of land in the province and provides policy direction on matters of provincial interest related to land use planning and development. It provides a vision for land use planning in Ontario that encourages an efficient use of land, resources and public investment in infrastructure. The PPS strongly encourages development that will provide long term prosperity, environmental health and social wellbeing. The 2020 PPS applies to planning decisions made on or after the effective date and applies to the consideration of the proposed Official Plan and Zoning By-law Amendment applications.

The proposed location of the quarry will take place on lands designated Rural in the County and Township Official Plans. A small portion of the lands are designated Agricultural in the Official Plans.

The PPS defines “Prime agricultural areas” as:

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

Further, the PPS defines Prime agricultural land as:

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

The Subject Lands contain Class 1, 3, and 6 soils, which would be considered predominantly prime agricultural land as defined by the Province. As discussed previously in this report, an Agricultural Capability Assessment was completed, which concluded that the lands are not representative of Prime Agricultural lands.

The PPS defines specialty crop areas as:

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

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

There are no specialty crop areas within the Study Areas. The Growth Plan Agricultural Systems Mapping delineates known specialty crop areas, which are not identified on the Subject Lands or within the Study Areas. Further, the lands within the Primary Study Area are currently in fallow/pasture land and are not suitable for specialty crop production, or subject to special climatic conditions.

In prime agricultural areas, the PPS permits agriculture uses, agriculture-related uses and on-farm diversified uses. In accordance with the Provincial Policy all types, sizes and intensities of agricultural uses and normal farming practices are promoted and protected in prime agricultural areas.

Limited non-agricultural uses such as the extraction of mineral aggregate resources are permitted in prime agricultural areas in accordance with Policy 2.3.6 and 2.5.4. of the PPS.

Policy 2.3.6.1(a) provides that extraction of mineral aggregate resources is permitted in prime agricultural areas. Furthermore, policy 2.3.6.2 provides that *"impacts from any new or expanding non-agricultural uses on surrounding agricultural operations and lands are to be mitigated to the extent feasible"*. Anticipated impacts on the surrounding agricultural activities are discussed and addressed in Section 5 of this report.

Policy 2.5 of the PPS deals specifically with mineral aggregate resources and Policy 2.5.1 provides that mineral aggregate resources shall be protected for long term use. Therefore, although the PPS recognizes the importance of prime agricultural lands, it also recognizes the importance to sustain mineral resources for long term use.

Policy 2.5.2.2 of the PPS requires that *"extraction shall be undertaken in a manner which minimizes social, economic and environmental impacts."* The impacts of the operations on the surrounding agricultural land uses are discussed later in this report.

With respect to extraction in prime agricultural land, section 2.5.4.1 notes that extraction of mineral aggregate resources is permitted as an interim use *"in prime agricultural areas, on prime agricultural land."*

2.5.4.1 In prime agricultural areas, on prime agricultural land, extraction of mineral aggregate resources is permitted as an interim use provided that the site will be rehabilitated back to an agricultural condition. Complete rehabilitation to an agricultural condition is not required if:

- a) outside of a specialty crop area, there is a substantial quantity of mineral aggregate resources below the water table warranting extraction, or the depth of planned extraction in a quarry makes restoration of pre-extraction agricultural capability unfeasible;
- b) in a specialty crop area, there is a substantial quantity of high quality mineral aggregate resources below the water table warranting extraction, and the depth of planned extraction makes restoration of pre-extraction agricultural capability unfeasible;
- c) other alternatives have been considered by the applicant and found unsuitable. The consideration of other alternatives shall include resources in areas of Canada Land Inventory Class 4 through 7 lands, resources on lands identified as designated growth areas, and resources on prime agricultural lands where rehabilitation is feasible. Where no other alternatives are found, prime agricultural lands shall be protected in this order of priority: specialty crop areas, Canada Land Inventory Class 1, 2 and 3 lands; and
- d) Agricultural rehabilitation in remaining areas is maximized.

The proposed Brechin Quarry is not located within lands identified or characteristic of specialty crop lands. As the Brechin Quarry is proposed to operate below the water table, the depth of extraction will make the restoration of pre-extraction agricultural capability unfeasible.

The surrounding area consists primarily of Class 1-3 soils with some pockets of Class 5 and 6 soils. The Agricultural Capability Report indicates that the subject lands are not considered Prime Agricultural Land. As a result, agricultural rehabilitation is not required and the site represents a good alternative to other mapped Prime Agricultural Lands which have Prime Agricultural Capability. The lands are also located in an area which already contains quarry operations, which is preferable to minimize impacts to the agricultural system (see section 5.0).

Further, the subject lands contain a significant quantity of mineral aggregate below the water table warranting extraction. The depth of the proposed quarry will result in a landform that is not feasible for agricultural rehabilitation. Additionally, the proposed quarry is located in an area characterized by existing mineral aggregate operations, which have already altered the surrounding agricultural character of the area.

4.2 Growth Plan for the Greater Golden Horseshoe

The Growth Plan for the Greater Golden Horseshoe ('Growth Plan') is the Government of Ontario's initiative to plan for growth and development in a way that supports economic prosperity, protects the environment, and helps communities achieve a high quality of life. The Growth Plan was issued under the authority of Section 7 of the Places to Grow Act, 2005 and applies to the Greater Golden Horseshoe Growth Plan area. Any planning decisions made for lands in the Greater Golden Horseshoe Growth Plan area must conform to the policies of the Growth Plan.

The Growth Plan requires a balanced approach to the wise use and management of all resources, including those related to water, natural heritage, agriculture, cultural heritage, and mineral aggregates. Policy 4.2.6 of the Growth Plan requires that the Province identify an Agricultural System for the Greater Golden Horseshoe and that prime agricultural areas, including specialty crop areas, be designated and these areas be protected for long-term use for agriculture.

The Province has prepared preliminary agricultural mapping, which maps the site as Prime Agricultural Area within the Agricultural System. See **Figure 4**. As noted in Policy 4.2.6.8 this mapping does not apply until incorporated in the applicable upper or single tier Official Plan. The County of Simcoe and Township of Ramara has not implemented the Provincial mapping and therefore the majority of the site is designated Rural and a small portion is designated Agricultural. The portion of the site designated Agricultural is considered Prime Agricultural Area for the purpose of this report, however as discussed earlier this area does not contain Prime Agricultural Land.

The agricultural system in the Study Area can be characterized by cash cropping operations with some modest livestock operations and associated infrastructure. As the definition of the Agricultural System includes rural lands, the subject lands would be considered a part of the Agricultural System within the Study Area, Township and County.

Policy 4.2.6.3 outlines recommendations pertaining to land use compatibility, and states that 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. This report serves to provide recommendations to minimize and mitigate adverse impacts on the Agricultural System.

Additionally, the Growth Plan seeks to maintain and enhance the geographic continuity of the agricultural land base and the functional and economic connections to the agri-food network. This AIA serves to identify the economic connection to the agri-food network in the Study Area, and will discuss potential impacts to the agricultural land base in Section 5 of this report.

Policy 4.2.8 (3) states that in Prime Agricultural Areas, applications for new mineral aggregate operations will be supported by an agricultural impact assessment, and where possible, will seek to maintain or improve connectivity of the Agricultural System. This AIA serves to satisfy this policy. Recommendations on maintaining the connectivity of the Agricultural System are included in Section 5 of this report.

4.3 Simcoe County Official Plan

The County of Simcoe Official Plan was approved by the Province in April 2013, and recently consolidated in February of 2023. The Official Plan provides policy context for land use planning taking into consideration the economic, social, and environmental impacts of land use and development decisions.

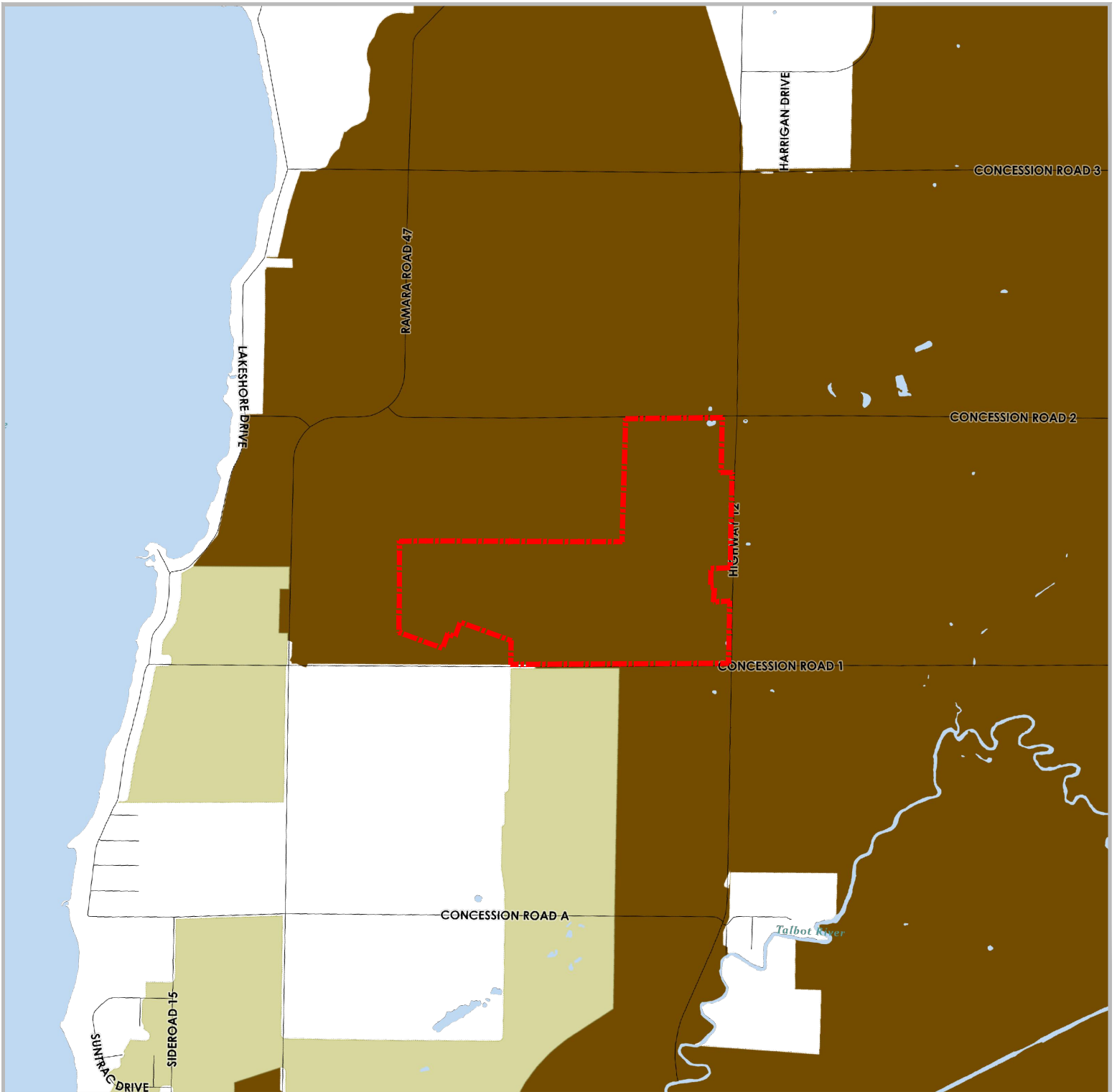


Figure 4:
Agricultural Land Base

LEGEND

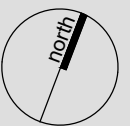
-  Subject Lands
-  Prime Agricultural Area
-  Candidate Area
-  Waterbodies

Date: December, 2023

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The goals of the Official Plan include the wise management and use of the County's resources, promote socially and physically accessible urban and rural communities, and further community economic development.

The subject lands are designated Agricultural and Rural in the County's Official Plan Schedule 5.1 (see **Figure 5**).

Section 3.6 of the County Official Plan outlines policies regarding Agriculture, and recognizes the importance of protecting Agricultural Lands in policy 3.6.5, which states that prime agricultural areas shall be protected for long term use for agriculture, and that all types, sizes and intensities of agricultural uses and normal farm practices shall be promoted and protected in accordance with provincial standards.

The County Official Plan also recognizes the importance of Mineral Aggregate operations, which it lists as a permitted use in the Agricultural Designation (3.6.6) in accordance with policies of the Mineral Aggregate designation.

The County Official Plan outlines policies pertaining to Rural Lands in policy 3.7. The objective of the rural policies is to "recognize, preserve, and protect the rural character and promote long-term diversity and viability of rural-economic activities." (3.7.1). Mineral aggregate operations are also permitted in the Rural Designation (3.7.4.a).

The County's Official Plan includes similar policies regarding Mineral Aggregate Extraction in Prime Agricultural Areas as the PPS. Policy 4.4.11 states that in Prime Agricultural Areas, on Prime Agricultural Land, aggregate extraction is permitted as an interim use. Agricultural rehabilitation is not required where there is a substantial quantity of aggregate below the water table, where the depth of extraction makes agricultural rehabilitation unfeasible, when other alternatives have been considered, and that agricultural rehabilitation in other areas has been maximized. As discussed above, the proposed quarry does not contain Prime Agricultural Land and is not required to be rehabilitated to an agricultural condition. Furthermore, the depth of extraction makes rehabilitation to an agricultural condition unfeasible. As such, the proposed quarry is not proposed to be rehabilitated back to an agricultural condition.

4.4 Township of Ramara Official Plan

The Township of Ramara Official Plan was adopted in July of 2003, and consolidated in January of 2016. The Township's Official Plan contains goals, objectives, and policies that guide Township Council, its committees, boards, officials, and the public with regard to land use and physical changes and their effect on economic, environmental and community considerations in the Township. The Township Official Plan pre-dates the 2020 PPS and 2020 Growth Plan.

The Township recognizes important industries in Section 2.2 of its Official Plan. Both Agriculture (2.2.1) and Aggregate (2.2.2) are recognized as being strengths of the Township's rural economic character.

Similar the County Plan, the subject lands are designated both Agriculture (24%) and Rural (76%) in the Township Official Plan Schedule A – Land Use (see **Figure 6** of this report).

Section 5.3 of the Official Plan outlines policies pertaining to Natural Resources in the Township, including Agricultural Resources and Aggregate Resources. The Plan distinguishes between Prime Agricultural Areas and Non-Prime Agricultural Areas as those areas with Classes 1-3 Soils and 400 hectares in area. These

differences are recognized on Schedule A of the Official Plan. Prime Agricultural Areas are generally protected for their long term use for agriculture, specifically crop and animal production (5.3.3.2).

The Official Plan outlines specific non-agricultural uses, which are permitted in Prime Agricultural Areas, which include Mineral Aggregate Resource Extraction in accordance with the Provincial Policy Statement and the policies of the Township Official Plan (5.3.3.6).

The Township Official Plan also recognizes the importance of protecting the agricultural system beyond the land base in policy 5.3.3.8, which states that “In considering non-agricultural development in designated Agricultural Areas, the Township will take responsibility to protect prime agricultural resources and agricultural operations including livestock, and the transport of farm machinery from incompatible activities.” Impacts to surrounding livestock operations and the traffic system are discussed in Section 5 of the report.

The Township’s Rural Land use policies are located within Section 9.4 of the Official Plan. The rural policies of the Plan are intended to “recognize non-prime agricultural areas and to limit non-farm land uses in addition to agricultural uses.” (9.4.1). The Rural Land designation permits a larger range of land uses than agricultural, and recognizes agriculturally related commercial and industrial uses (9.4.5).

Section 9 of the Official Plan outlines land use policies within the Township. This includes policies regarding rehabilitation of Mineral Aggregate operations, which states the following:

9.11.8.1 When considering an amendment to the Township’s Zoning Bylaw that would enable the establishment or expansion of a mineral aggregate operation, the Township will recommend to the Province conditions to be included in the aggregate licence or notations on the site plan to ensure proper rehabilitation of the lands. Proper rehabilitation means:

a. where the lands from which the extraction will occur are designated as “Agriculture” on Schedule A of this Plan, rehabilitation shall require the restoration of the lands to the previous agricultural capability of the lands. On these “Agriculture” lands, complete agricultural rehabilitation is not required if:

- i) there is a substantial quantity of mineral aggregates below the water table warranting extraction; or*
- ii) the depth of planned extraction in a quarry makes restoration of pre-extraction agricultural capability unfeasible; and*
- iii) other alternatives have been considered by the applicant and found unsuitable; and*
- iv) agricultural rehabilitation in remaining areas will be maximized; and*
- v) it has been demonstrated that such rehabilitation would negatively impact groundwater resources.*

b. where the lands from which the extraction will occur, including extraction below the established groundwater table, are within any designation other than “Agriculture” designation on Schedule A of this Plan, rehabilitation shall be compatible with the intended or sequential land use in terms of grading, post extraction elevations and vegetation cover and shall be compatible with existing and proposed land uses on lands adjacent to and in the vicinity of the subject lands

The subject lands are designated both Agricultural and Rural in the Township of Ramara Official Plan. The majority of the lands are considered to be Rural lands in the Township's Official Plan and thus would not be subject to policy 9.11.8.1.b noted above. However, the northern portion of the lands is considered Agricultural. As discussed previously, these lands do not contain Prime Agricultural Land and there is a substantial quantity of mineral aggregates below the water table warranting extraction. For additional information on the quantity and quality of aggregate resources onsite, please refer to the Aggregate Resources Summary Statement. As such, the lands are not required to be returned to an agricultural condition.

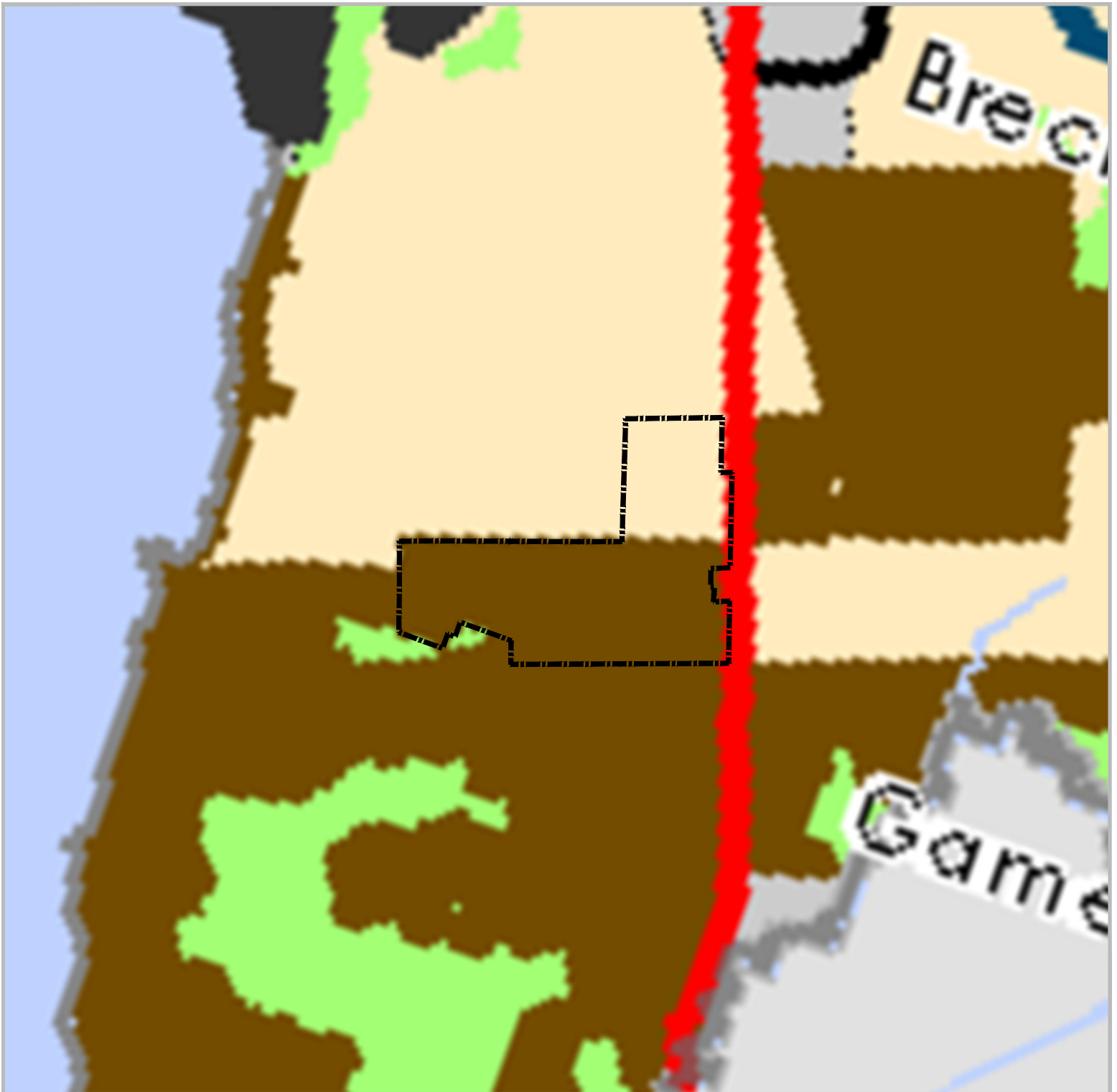









Figure 5:
 County of Simcoe
 Official Plan Schedule
 5.1- Land Use
 Designations

LEGEND

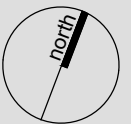
-  Subject Lands
-  Greenlands
-  Agriculture
-  Rural
-  Settlements
-  Settlement Area Boundary
-  Provincial Highway

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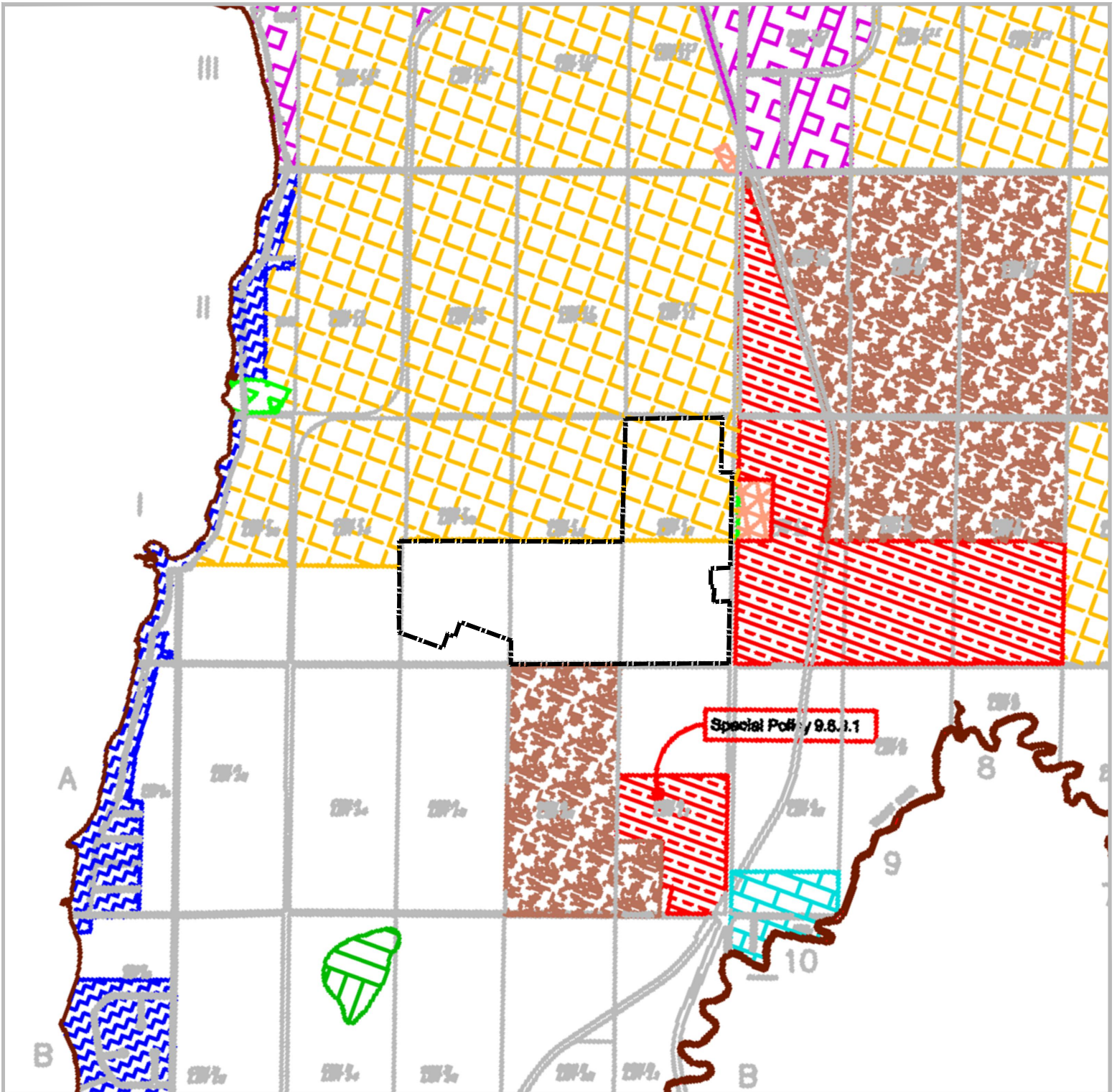




Figure 6:
Township of Ramara
Official Plan Schedule A-
Land Use Designations

LEGEND

-  Subject Lands
-  Natural Area Protection
-  Agriculture
-  Village
-  Hamlet
-  Shoreline Residential
-  Designation Commercial
-  Mineral Aggregate Extraction Area
-  Rural

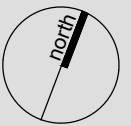
Source: Township of Ramara, Official Plan - Schedule A "Land Use Plan", 2006

Date: December, 2023

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5.0 ASSESSMENT OF IMPACT

As previously noted, mineral aggregate extraction is considered a permitted use in prime agricultural areas in accordance with Provincial, County and local policy. Provincial and local policies require that impacts on surrounding agricultural operations and lands be mitigated to the extent feasible. Although resource uses such as mineral aggregate extraction have traditionally been considered part of the agricultural / rural landscape fabric, impacts from these land uses on surrounding agricultural uses should be considered and mitigated to the extent feasible. Impacts associated with the reduction / loss of agricultural land and / or infrastructure, agricultural land fragmentation, dust, noise, road traffic, water resources and other agricultural operations as a result of the proposed mineral aggregate expansion on the subject lands have been assessed and are reviewed in the following sections.

5.1 Reduction / Loss of Agricultural Land and Infrastructure

As discussed in Section 2 of the report, the 91.5 hectares of land proposed for extraction is currently in fallow, and has not been cropped in recent history. As identified in the Agricultural Capability Report, the lands are not considered to be Prime Agricultural Lands, explaining the lack of production. These lands are typical of some of the surrounding lands, which are also left in fallow. There are no agricultural buildings or structures on the subject lands, and therefore there will be no loss of agricultural infrastructure.

The proposed quarry will thus result in the loss of 91.5 hectares of agricultural land that is not considered capable of high levels of agricultural production, but are mapped as Class 1, 3, and 6 soils according to CLI mapping.

5.2 Fragmentation of Agricultural Lands

The subject lands are not in agricultural production, and have not been in agricultural production historically, and thus have been left in fallow with no prevention of overgrowth for pasture lands. There have been no significant improvements to the lands such as fencing or agricultural buildings, nor is there any tile drainage located onsite. The majority of the lands are designated Rural in the Township Official Plan, however, the northern portion is designated Agricultural. The agricultural lands are characteristic of the rural lands located on the southern portion of the property and in the south portion of the Study Area.

The proposed quarry operation will operate below the water table and, as a result, will not be rehabilitated back to an agricultural condition once extraction is completed.

Extraction of the property will result in the loss of 91.5 hectares of agricultural land, 39 hectares of that being designated Agricultural by the County and Township Official Plan. However, this will not result in the fragmentation of the land base as the lands to the South of the proposed quarry operation are also in fallow and not in agricultural production.

The proposed rehabilitation of the licence area to an open-water feature with naturalized side slopes will create a final land use that is compatible with the surrounding agricultural uses and will provide alternative benefits such as flood attenuation, habitat for wildlife, and surface water reserves that could be used for irrigation. Lands will remain in their current condition for as long as feasibly possible prior to extraction.

5.3 Air Quality

There are a number of typical sources of fugitive dust emissions resulting from mineral aggregate operations including:

- On-site traffic;
- Internal roads, paved and unpaved areas;
- Material stockpiles;
- Loading / unloading areas and loading / unloading techniques;
- Material spills;
- Material conveyance system;
- Crushing and screening equipment; and
- Active quarry faces.

The ARA sets provincial standards for dust control in pits and quarries. All new licences must adhere to the following prescribed conditions as set out in the ARA provincial standards for a Quarry Below Water operation:

- Dust will be mitigated on site;
- Water or other provincially approved dust suppressants will be applied to internal haul roads and processing areas as often as required to mitigate dust;
- Processing equipment will be equipped with dust suppressing or collecting devices, where the equipment makes dust or is operated within 300 metres of a sensitive receptor; and
- If required, an environmental compliance approval (ECA) will be obtained from the processing equipment to be used on site.

Dust is required to be mitigated on site through the prescribed conditions of the ARA.

One livestock operation was identified within the Primary Study area to the east of the proposed quarry lands. However, it is important to note that the livestock operation is well separated/buffered via two sensitive receptors (residences), which dust must be mitigated for under the ARA. As a result, it is not anticipated that dust or emissions will have an impact on surrounding agricultural or livestock uses, subject to the implementation of on site dust mitigation.

5.4 Hydrogeology

Management of water resources is an important consideration for farm operations, particularly for watering field/ vegetable crops and hydrating livestock. Changes to the hydrologic and/or hydrogeological conditions in the area surrounding the subject lands could have a negative impact on farm operations and crop yields.

A hydrogeological assessment has been completed by Azimuth Environmental Consulting and concludes that surrounding wells will be protected. As part of the new licence, a water level and quality monitoring program has been recommended for both groundwater and surface water. The establishment of a private well monitoring program has also been recommended if landowner access is provided.

Although wells are not anticipated to be adversely impacted by the proposed Quarry, as a confirmatory measure, it is recommended that the well at the livestock operation located at 1569 Highway 12 shall be included in the private well monitoring program if the landowner provides access.

As a result of the above monitoring, it is anticipated that any impacts on surrounding agricultural uses/operations will be mitigated to the extent feasible, and that the proposed quarry will not have a significant negative impact on surrounding agricultural uses from a hydrogeological perspective.

5.5 Traffic

The proposed operation is located with frontage along Concessions 1 and 2 and Highway 12. The proposed entrance to the quarry will be located at the north portion of the subject lands, onto Concession 2, and will then proceed to Highway 12.

Highway 12 is a provincial highway, which is designed for heavy truck and commercial traffic. Traffic along Concession Road 2 will be minimized to the extent possible and used only for local deliveries.

As a result, the proposed operation is not anticipated to have impacts on agricultural traffic in the area. This opinion recognizes Highway 12 as a Provincial highway, as well as the fact that other mineral aggregate operations exist in the area and have established haul routes which agricultural traffic is accustomed to.

5.6 Blasting Impacts

Impacts from blasting can include vibrations felt by neighbouring sensitive receptors and agricultural operations. Vibrations from blasts could have potential impacts to surrounding agricultural structures and livestock operations.

Blasting is required to meet certain standards set and regulated by the Province. As such, blasting at the proposed operation will be undertaken in accordance with provincial standards to protect surrounding residential and agricultural farm complexes.

A Blast Impact Analysis was completed by Explotech and concluded that the proposed operation could meet Provincial requirements for surrounding sensitive uses. As such, blasting is not anticipated to have negative impacts on surrounding agricultural operations. This opinion recognizes that the closest livestock operation is located further away than other sensitive receptors.

5.7 Noise Impacts

Noise is an additional potential impact from aggregate operations. A Noise Impact Study has been prepared by HGC Engineering to consider sound emission levels for the proposed expansion. The Noise Impact Study confirms that sound levels from the proposed quarry, predicted under worst-case operating scenarios and

with the recommended noise control measures will comply with the MECP guideline limits at the existing, most potentially impacted neighbouring receptors.

The Noise Impact Assessment also recommends noise control measures be implemented by the applicant. This includes the development of noise barriers (berms) in the setbacks of the operation, restrictions on the type, location and amount of equipment, and the utilization of localized shielding when drilling. From an agricultural perspective, the recommendations of the Noise Impact Study will ensure surrounding agricultural uses are not negatively impacted from a noise perspective.

5.8 Summary of Net Impacts

The following table is consistent with Table 3 (*Minimize and Mitigate Impacts*) found in section 3.2.2 of the Province's *Draft Agricultural Impact Assessment Guidelines*. The purpose of this table is to provide a summary of how the proposed expansion minimizes or mitigates impacts on surrounding agricultural uses.

Table 1: Summary of Net Impacts

Objective	Mitigation Measure	Description
Minimize the loss of agricultural land	Select areas with less agricultural land and lower priority agricultural lands	An Agricultural Capability Analysis was completed for the subject site and concluded the site does not contain Prime Agricultural Land. A majority of the lands are designated "Rural" in the Township of Ramara Official Plan, with only a small portion being designated Agriculture.
	Rehabilitate the land	Due to the operation extracting below the water table, the land will be rehabilitated to an open body of water with shoreline wetlands and naturalized side slopes and buffers.
	Phase Development	The proposed quarry will be extracted in phases. As a result, on-site lands currently in an 'agricultural' condition will remain as such for as long as possible until they are needed for extraction.
Minimize the fragmentation of agricultural land	Maintain farm parcels	The subject lands are not and have not historically been used

Objective	Mitigation Measure	Description
		for farming. Surrounding parcels will not be impacted. Since below water extraction is proposed, the parcels will not be maintained. Fragmentation is minimized as surrounding lands are also considered Rural lands and not used for agricultural production.
Minimize impacts on farmland and agricultural operations	Minimum Distance Separation	MDS I and II setbacks are not required for new or expanding pits and quarries.
	Select compatible land uses; put lower impact development adjacent to farmland and operations	The proposed quarry and the surrounding agricultural lands will be buffered through the implementation of physical setbacks and visual barriers to reduce conflicts between uses.
	Design to support agriculture (e.g. help farms to continue to operate; help prevent and reduce trespassing and vandalism)	The proposed quarry includes visual and acoustic berms to minimize impacts on surrounding land uses. The portion of the extraction limit that is closest to the nearest livestock operation will be setback 150 metres from the property line to increase separation distances and reduce potential impacts.
Minimize and mitigate changes in water quality or quantity	Implement a groundwater monitoring program	A groundwater monitoring program is proposed to monitor both the water levels as well as water quality. Where possible, livestock operations in the primary study area should be included in the private well survey which is recommended by the Water Report.

Objective	Mitigation Measure	Description
Mitigating impacts during construction or operations (e.g. mitigate dust, noise)	Adjust operational procedures to accommodate agriculture in the area	<p>Noise and dust will be mitigated from the subject lands in accordance with Provincial Standards.</p> <p>The proposed quarry will operate from 7am to 6pm on Monday to Friday and from 7:00am to 12:00pm on Saturdays. Processing and shipping is permitted from 5:30am to 6pm on Monday to Friday and from 7:00am to 12:00pm on Saturdays.</p> <p>Livestock operations in the area are already accustomed to existing mineral aggregate operations in the Study Area.</p> <p>The proposed quarry has been designed to meet acceptable impact levels for adjacent sensitive uses which are closer to the proposed operation than the nearest livestock operation (215m).</p> <p>The proposed quarry will not pose any additional impacts to surrounding livestock operations.</p>
	Vegetative berms	Visual and Acoustic berms will be used to minimize impacts to surrounding land uses.
	Maintain, restore or construct farm infrastructure	There is no identified farm infrastructure on the subject lands.
Mitigate ongoing impacts from new development	Implement measures that can be in place post development to support compatibility with agriculture	All measures associated with the operational berms and rehabilitated land form will be non-invasive species and will

Objective	Mitigation Measure	Description
		not impact agricultural production on surrounding properties when the subject site is rehabilitated.
Education to achieve greater compatibility between agricultural and non-agricultural uses	Education and awareness	Agricultural and non-agricultural uses already exist in this area and the proposed Quarry will not result in an incompatible land use with adjacent agricultural operations.

6.0 RECOMMENDATIONS

Based on our analysis, and the conclusions of the other technical reports, it is recommended the Aggregate Resources Act site plans include the following conclusion: the livestock operation located at 1569 Highway 12 shall be included in the private well monitoring program if the landowner provides access.

7.0 SUMMARY

In summary, the proposed mineral aggregate extraction on the subject lands is not anticipated to have a significant negative impact on the long-term agricultural uses and operations on the subject lands and within the primary / secondary study areas. This opinion recognizes the following:

- Mineral aggregate extraction is a permitted use on prime agricultural land and within prime agricultural areas as well as rural lands in accordance with the PPS, Growth Plan, County of Simcoe Official Plan and Township of Ramara Official Plan;
- The subject lands are not within a specialty crop area and do not contain soils that would support specialty crops;
- The majority of the lands are designated Rural in the County of Simcoe and Township of Ramara Official Plans. The northern parcel is designated Agricultural in the County of Simcoe and Township of Ramara Official Plans. The lands to the north have been determined to **not** be considered Prime Agricultural Land via an Agricultural Capability Report completed by Orion Environmental Solutions, which considered soil type, historical agricultural practices, and surrounding land use/mapping discrepancies;
- As the lands are not considered Prime Agricultural Land, agricultural rehabilitation is not required in accordance with PPS Policy 2.5.4.1;
- The proposed haul route is a Provincial Highway, which is designed for heavy truck traffic. Additionally, agricultural traffic is accustomed to truck traffic from surrounding aggregate operations;
- Impacts from dust and noise/blasting will be mitigated through implementation of provincially prescribed conditions and the technical report recommendations included on the Site Plan;
- There are no impacts anticipated on the surrounding and adjacent agricultural uses or operations as a result of the proposed operation;
- The proposal is located on lands, which are not in agricultural production nor have they experienced significant agricultural investment; and,

- The final rehabilitated land-use will be compatible with the surrounding agricultural uses and operations and will create landscape diversity.

Respectfully submitted by,

A handwritten signature in black ink, consisting of a large, stylized 'P' followed by a horizontal line and a diagonal stroke.

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

APPENDIX A | Orion Environmental Agricultural Capability Report

November 28, 2023

OEC 19-037

Azimuth Environmental Consulting Inc.
642 Welham Road
Barrie, Ontario, L4N 9A1

Attention: Mike Jones

**Re: Agricultural Capability Assessment
Lot 11 and 12 Concession 1, South Half Lot 13 Concession 1 and North Half
of Lot 10 Concession 1, Township of Ramara, County of Simcoe**

Dear Mr. Jones:

Orion Environmental is pleased to submit our Agricultural Capability Assessment of the lands within Lot 11 and 12 Concession 1, the South Half Lot 13 Concession 1 and the North Half of Lot 10 Concession 1, Township of Ramara, County of Simcoe. The purpose of the analysis is to determine the capability of the lands for agricultural production and provide an opinion if the lands should be designated prime agricultural area or as rural lands.

To assess the agricultural capability of the soils we undertook a review of information sources such as soil surveys, historic agricultural land use, field review of the site and adjacent lands and review of published information to determine the findings made in this report. The following sections provide our assessment of this information as it pertains to the agricultural capability of the site.

PROPERTY DESCRIPTION

The property is located in Lot 11 Concession 1, the South Half of Lot 12 Concession 1 and the North Half of Lot 10 Concession 1 Township of Ramara, County of Simcoe. Figure 1 shows the property location geographically and Figure 2 provides a more detailed aerial photography mapping of the site. The agricultural lands are comprised of 2440 Concession Road 1(42 ha), 1506 Highway 12 (39ha) and 1646 Highway 12 (39 ha). None of these parcels currently have any farm buildings and evidence of any farmsteads being present. Currently the lands are successional unimproved pasture

lands dominated by woody growth. The parcel at 1645 Highway 12 has no agricultural lands and is in natural succession and is dominated by trees and woody shrub growth. It currently is being used for a non-agricultural commercial land use as a marina.

Parcels 2440 Concession Road 1 and 1506 Highway 12 are designated and zoned Rural. The parcel at 1646 Highway 12 and 1645 Highway 12 are zoned Agriculture.

ON-SITE AND ADJACENT LANDS AGRICULTURAL RESOURCE INVENTORY

To assess the capability of the lands for agriculture we undertook a review of the existing and adjacent agricultural land uses, published mapping for soils and agricultural capability for crop production to determine the value of the property from an agricultural perspective.

Soils

There are five different soil types present on the property according to the OMAFRA Soil Survey Complex. The lands are predominately loam comprised of Smithfield Clay Loam, Otonabee Loam, Farmington Loam and Emily Loam – Shallow Phase. The Soil Survey of Ontario County Report No. 23 (Ontario County previously lands east of Lake Simcoe) describe the soil characteristics. Smithfield Clay Loam is imperfectly drained, stone free fertile clay but its productivity is limited by drainage. Otonabee Loam is well drained, stony and have shallow topsoil over very stoney till. Farmington Loam is a shallow soil over bedrock that ranges from a few inches to one foot in depth with variable drainage depending on the bedrock topography. Emily Loam – Shallow Phase is shallow soil over bedrock with imperfect drainage and stones and boulders that limit cultivation.

As shown in Figure 3 the site is predominately Ontario/Farmington/Emily loam meaning the site is predominately shallow soils over bedrock with stones at surface and within the overburden. Shallow soils over bedrock are subject to drought and the presence of stones limits cultivation. Reviewing the historic 1954 and 1989 aerial photography shows the lands are dominated by pasture and lack any significant areas of cultivation, as shown in Figures 4 and 5. Aerial photography from 1989 to 2018 show cultivation declining to the present-day condition were all the lands are unimproved pasture is natural succession back to woody vegetation.

Azimuth Environmental is undertaking the hydrogeological assessment of the site. Based on their borehole data for ground water monitoring they described the surficial soils as light brown/grey, dense sandy silt with clay and stone with greater clay and

stone content with depth. Boreholes were dry to top of limestone bedrock contact. The site has a high proportion of float/boulders all over the pasture portion of the Site. Topsoil was noted as thin and low organic content, with a thickness that varied from 3" to 8". The shallow topsoil underlain by bedrock results in soils unsuitable for cultivation as demonstrated by the predominance of unimproved pasture and successional woody growth.

Drainage

There is no record of any existing or previous tile drainage or evidence of drainage improvements made to land. The topography of the property drains surface runoff towards the north and south east. The historic aerial photography from 1989 shows the lands have been used for forage and pasture with no evidence of common field crop cultivation (see Figure 2). Dug farm ponds are present at low points on the property which indicate long term grazing and poor soil drainage to sustain the ponds through the summer months.

ON-SITE FEATURES

Farm History

The 1954 aerial photography does not show any active farmstead associated with the property (see Figure 5). The lands appear to have random woody vegetation in the fields with no evidence of any cultivation. Small fenced areas appear to have been in hay production. Between 1989 – 2018 the lands show a continual transition to unimproved permanent pasture and natural succession to woody vegetation.

Historically in central Ontario farms were 40ha parcels and this size of farm sustained family farms. The lack of any farmstead buildings would indicate these 40ha (100 acre) parcels have never been able to sustain an economically viable agricultural operation.

Off-site Land Use Features

The adjacent agricultural lands to the south and west show the comparable areas of permanent pasture or forage crops. The presence of two active quarries reinforces the predominance of bedrock overburden in the area which adversely impacts soil productivity through a limited depth of productive topsoil and a lack of subsurface drainage.

AGRICULTURAL VIABILITY

The OMAFRA soil capability for agriculture mapping defines the majority of the lands as Canada Land Inventory soil capability Class 1 – 3 as shown in Figure 3. The historic use of the lands as unimproved permanent pasture confirmed the soils are not prime agricultural land suitable for continuous cultivation. This discrepancy between actual agricultural land use and CLI mapping is not unusual given the original Canada Land Inventory soil capability classifications were created in the 1960's based on a landscape or a township level of soil mapping that utilized aerial photography interpretation and representative field surveys to confirm the interpretations. This level of analysis is not appropriate for a site-specific assessment and the CLI has never been refined to reflect land use. The Ministry of Agriculture and Food in a 1978 fact sheet on the Soil Capability Classification for Agriculture stated soil mapping at the scale done for the County Soil Surveys is to be used to prepare semi-detailed resource inventory, regional planning and locate areas for development (e.g., settlement areas). Therefore, when applying provincial CLI to a planning application there should be regard for agricultural and non-agricultural historic land use in determining agricultural capability. In my experience lands suitable for cultivation that are economically viable have remained in cultivation, even when individual stopped farming that lands continue to be worked by a local farmer. Figure 6 provides the soil capability for crop production for the subject lands based on the site characteristics and historic agricultural land use.

The Province has defined the subject property, the surrounding lands and the two existing quarries as prime agricultural lands or candidate agricultural lands in the Greater Golden Horseshoe Growth Plan (see Figure 7). The errors in this mapping confirms that no analysis or land use verification was done to accurately define the provincial agricultural system. In my opinion, using this provincial data base to define agricultural lands on site specific basis would severely compromise the credibility of the municipal planning process, forcing you to defend an agricultural system fraught with errors.

CONCLUSION

Based on the historic land use on the property it is evident the lands are not suitable for continued cultivation and would not be defined as prime agricultural land. Aerial photography shows the lands have been used as unimproved pasture with no apparent effort to control natural succession to woody plant growth. The lack of any evidence of a farmstead on any of the large parcels further reinforces the lands lack capability for sufficient crop production to sustain an economically viable farming enterprise.

If you have any questions or require further information, please do not hesitate to call.

Yours truly,
ORION ENVIRONMENTAL SOLUTIONS, INC.

A handwritten signature in blue ink, appearing to read "Paul Neals", is written over the printed name.

Paul Neals, B.Sc. Agr., P.Ag.
Principal

PCN:

Attach:

Cc: James Newlands, MHBC

References

A Place to Grow Growth Plan for the Greater Golden Horseshoe, May 2019.

Canada Department of Agriculture, Simcoe County Soil Survey Report No.23.

County of Simcoe Official Plan, December 2016

County of Simcoe GIS mapping.

Ontario Ministry of Agriculture, Food and Rural Affairs, AgMaps web site.

Ontario Ministry of Agriculture, Food and Rural Affairs, Implementation Procedures for the Agricultural System in Ontario's Greater Golden Horseshoe, February 2018.



LEGEND



Subject Property

ORION ENVIRONMENTAL SOLUTIONS

DATE ISSUED: APR 2020

CREATED BY: PCN

PROJECT NO. - 19-037

Not To Scale

Figure 1



LEGEND



Subject Property



Dug Pond For Livestock



Succession Woody Growth Concentrations

ORION ENVIRONMENTAL SOLUTIONS

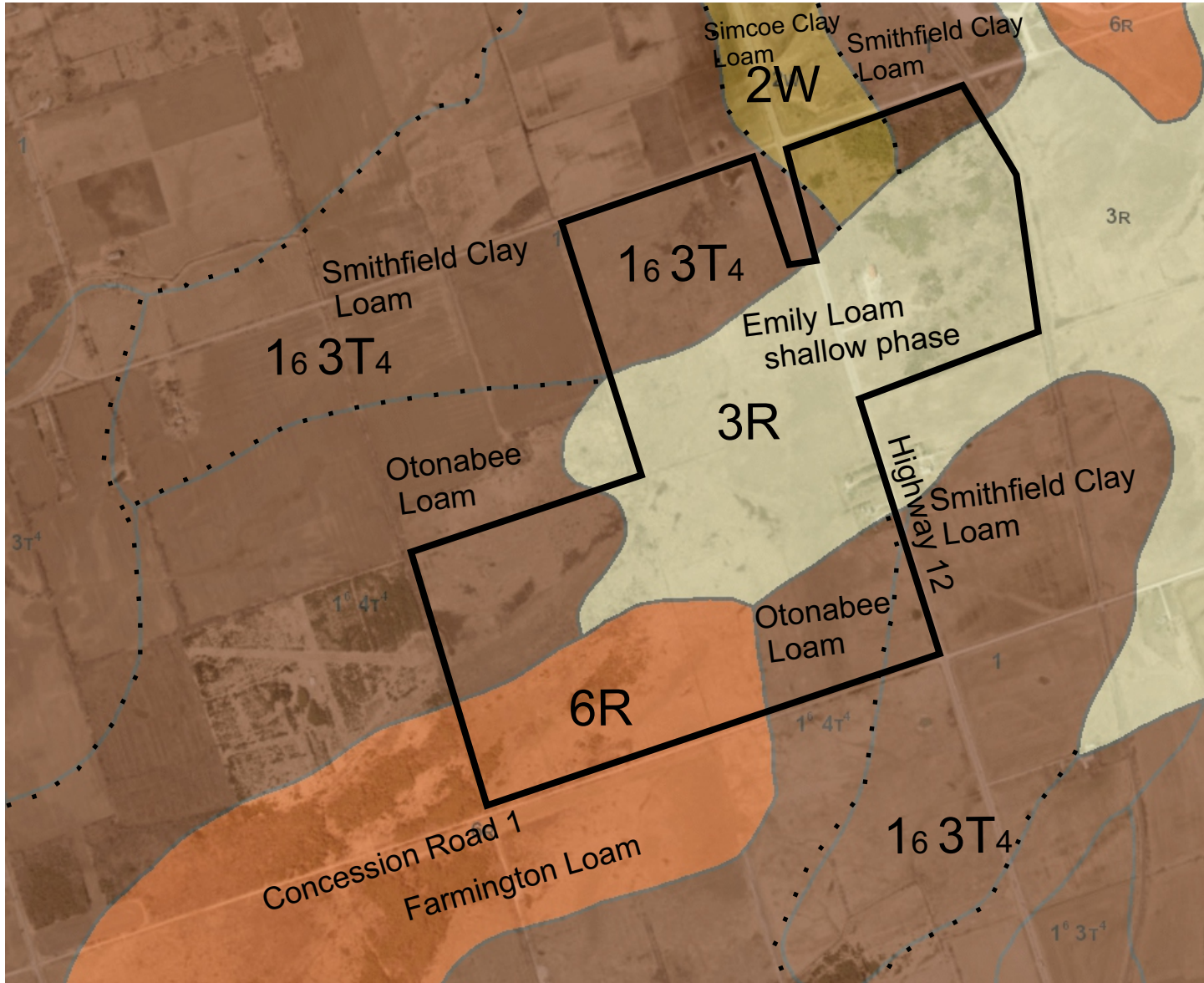
DATE ISSUED: APR 2020

CREATED BY: PCN

PROJECT NO. - 19-037

Not To Scale

Figure 2



LEGEND



Subject Property

3R

CLI Soil Capability for Agriculture

ORION ENVIRONMENTAL SOLUTIONS

DATE ISSUED: APR 2020

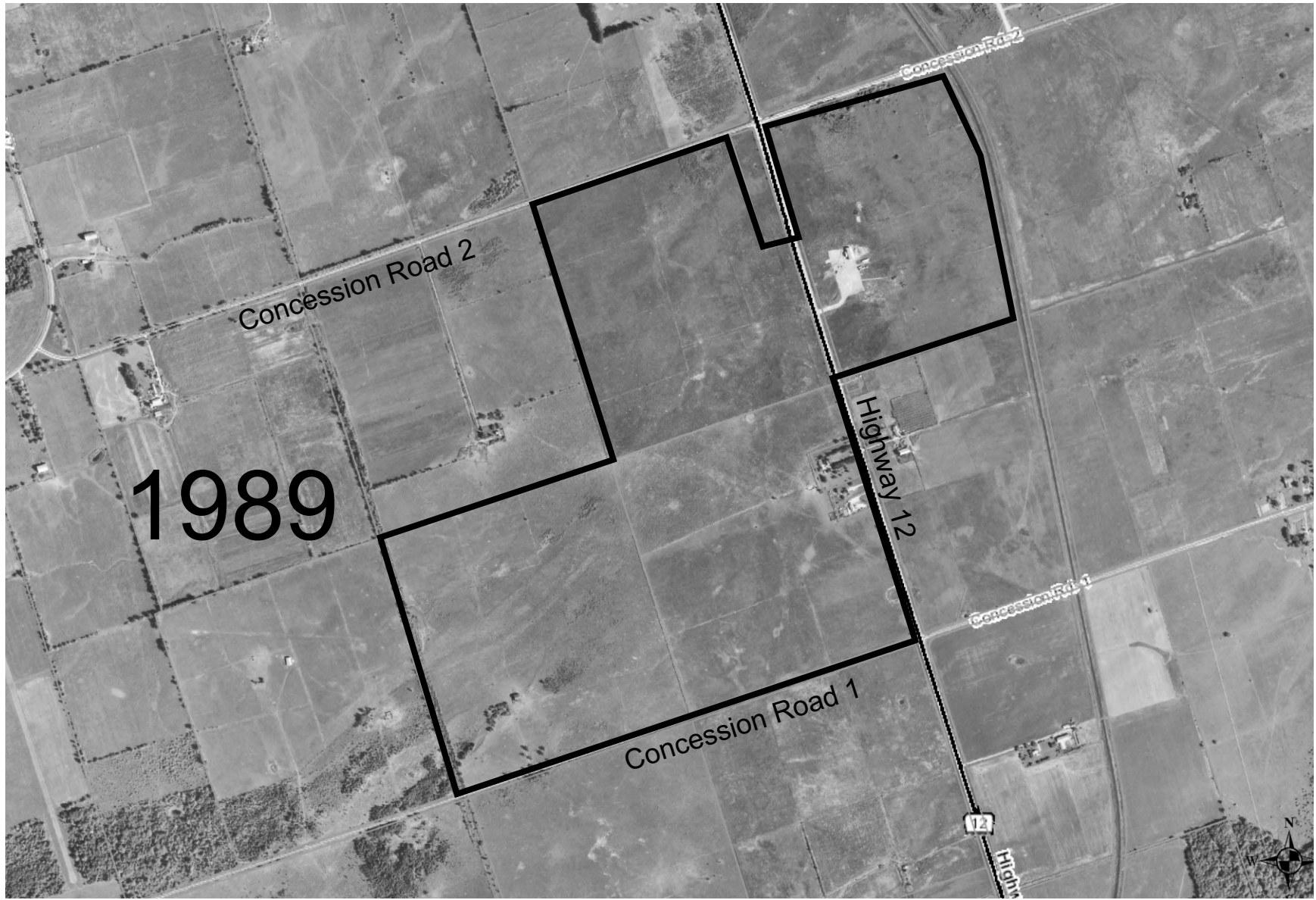
CREATED BY: PCN

PROJECT NO. - 19-037

Not To Scale

Map Source: OMAFRA Agricultural System Portal website

Figure 3



1989



LEGEND

 Subject Property

Map Source: Simcoe County GIS

ORION ENVIRONMENTAL SOLUTIONS

DATE ISSUED: APR 2020
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Figure 4



LEGEND



Subject Property

Map Source: Simcoe County GIS

ORION ENVIRONMENTAL SOLUTIONS

DATE ISSUED: APR 2020

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Not To Scale

Figure 5



LEGEND



Subject Property



Dug Pond For Livestock



Succession Woody Growth Concentrations

ORION ENVIRONMENTAL SOLUTIONS

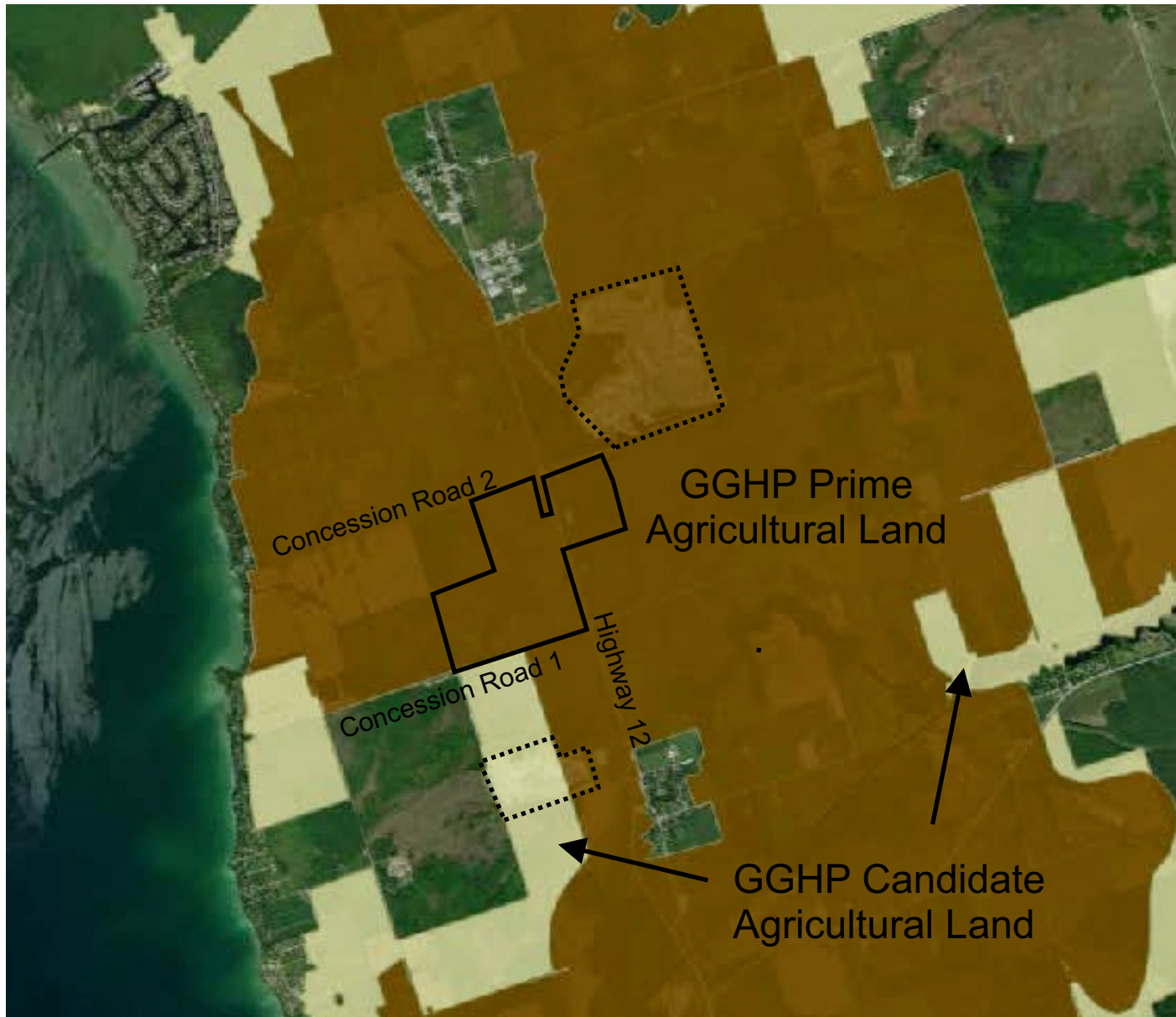
DATE ISSUED: APR 2020

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Figure 6



LEGEND



Subject Property



Existing Operating Quarry

Map Source: OMAFRA Agricultural System Portal website

ORION ENVIRONMENTAL SOLUTIONS

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Figure 7

APPENDIX B | Curriculum Vitae



CURRICULUM VITAE

Pierre Chauvin, MA, MCIP, RPP
Partner

EDUCATION

1997
Masters of Arts, Regional Planning
and Resource Development
University of Waterloo

1993
Bachelor of Science in Agriculture
University of Guelph

Pierre Chauvin is Partner with MHBC has been with the firm since 1998. Mr. Chauvin provides urban planning services for both public and private sector clients across Ontario. His professional activities include project management, community/policy planning, and land development. Pierre's experience ranges from residential, institutional, industrial and commercial development, environmental and recreational planning and agricultural/rural planning. Pierre has provided expert planning evidence at the Ontario Municipal Board, Ontario Land Tribunal and other tribunals. Pierre holds a Masters degree in Regional Planning and Resource Development and a Bachelor of Science in Agriculture degree with a major in Natural Resources Management. Pierre is a full member of the Canadian Institute of Planners and Ontario Professional Planners Institute, and a member of Parks and Recreation Ontario.

PROFESSIONAL ASSOCIATIONS

Full Member, Canadian Institute of Planners
Full Member, Ontario Professional Planners Institute
Member of Parks & Recreation Ontario
Chair of the Homebuilders' Association Liaison Committee with the Grand River Conservation Authority
Member of the Waterloo Region Homebuilders' Association Liaison Committee with the Region of Waterloo
Past Chair and member of the Industry Luncheon Committee, Guelph & District Homebuilders' Association
Past Member of Board of Directors, Guelph & District Homebuilders' Association
Past Member, Committee of Adjustment for the Township of Centre Wellington
Past Member, Heritage Centre Wellington Committee (LACAC)
Past Member (Build Committee), Habitat for Humanity - Centre Wellington
Past Member, Grand River Conservation Authority, Recreation Working Group
Past Vice-Chair, Village of Elora Planning Advisory Committee

PROFESSIONAL HISTORY

2013 - Present	Partner, MacNaughton Hermsen Britton Clarkson Planning Limited
2004 - 2013	Associate, MacNaughton Hermsen Britton Clarkson Planning Limited
1998 - 2004	Planner / Senior Planner, MacNaughton Hermsen Britton Clarkson Planning Limited
1997 - 1998	Assistant Planning Officer, Upper Grand District School Board

CONTACT

540 Bingemans Centre Drive,
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www.mhbcplan.com

SELECTED PROJECT EXPERIENCE

Review and/or preparation of numerous planning approvals relating to draft plan of subdivisions, draft plan of condominiums, site plans, Official Plan amendments, Zoning By-law amendments, consents and minor variances throughout the Region of Waterloo, the Counties of Wellington, Brant, Norfolk, Perth, Oxford, Huron, Bruce and surrounding areas.

Project lead and consultant for the preparation of an Official Plan Update and Zoning By-law Review for the Municipality of Kincardine.

Project lead and consultant for the preparation of an Official Plan Update for the Township of Huron-Kinloss and a Comprehensive Zoning By-law Review.

Project planner and lead in providing development review services for the County of Perth, County of Bruce and City of Stratford.

Consultant to the Upper Grand District School Board regarding the justification and approval of a new secondary school in the City of Guelph (on-going).

Consultant to the Municipality of North Perth on the Northeast Listowel Industrial Subdivision and Municipal Class Environmental Assessment (on-going).

Prepared Official Plan Amendment and policies as well as implementing Zoning By-law to implement the Source Water Protection Plan policies for the Counties of Norfolk, Elgin and Middlesex. Prepared Official Plan Amendment and policies to implement the Source Water Protection Plan policies for the County of Wellington.

Consultant to Grand River Conservation Authority, County of Wellington and County of Perth in the development of Source Water Protection water quality policies for the Lake Erie Region Source Protection Plan.

Project lead and consultant to the County of Norfolk to prepare an Issues and Report for the Hastings Drive (Long Point) Zoning By-law Study.

Consultant to the Huron-Perth Catholic District School Board regarding the justification and approval of a new elementary school in the Municipality of North Perth (Listowel).

Consultant to the City of Woodstock regarding the justification and approval of the East Woodstock Secondary Plan & Design Study. Prepared Official Plan Amendment and policies to implement the Secondary Plan.

Consultant to the Municipality of North Perth on the Southeast Listowel Community Plan. Justification of an urban expansion in the former Town of Listowel (Municipality of North Perth) and preparation of an Industrial Plan of Subdivision for a 50 acre property.

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