

SCOPED AGRICULTURAL **IMPACT ASSESSMENT**

Waterford Sand and Gravel
Law Quarry Crushed Stone Extension

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TABLE OF CONTENTS

1.	INTRODUCTION	1
1.1	Description of Proposal	1
1.2	Property Description and Location	1
1.3	Policy Requirements.....	2
1.1.1.	Provincial Policy Requirements	2
1.1.2.	Growth Plan for the Greater Golden Horseshoe (Consolidated 2020).....	3
1.1.3.	Region of Niagara Official Plan (Consolidated 2014).....	4
1.4	Overview of Study Methods and Consultation	4
1.5	Coordination with other Technical Studies and Reports	5
2.	STUDY AREA LAND-USE SURVEY & DATA REVIEW	6
2.1	Identification and Description of the Primary Study Area	6
2.2	Land Use Survey and Data Review of the Primary Study Area.....	6
2.2.1.	Description of Land Uses.....	6
2.2.2.	Slope and Topography	7
2.2.3.	Hydrology/Hydrogeology and Drainage.....	7
2.2.4.	Climate.....	7
2.2.5.	Soil and Microclimate	7
2.2.6.	Economic and Community Benefits of Agriculture	8
2.2.7.	Identification and Description of the Secondary Study Area.....	8
2.3	Land Use Survey and Data Review of the Secondary Study Area.....	8
2.3.1.	Description of Land Uses.....	8
2.3.2.	Slope and Topography	9
2.3.3.	Hydrology/Hydrogeology and Drainage.....	9
2.3.4.	Climate.....	10
2.3.5.	Soil and Microclimate	10
2.3.6.	Economic and Community Benefits of Agriculture	10

3.	ASSESSMENT OF POTENTIAL IMPACTS	11
3.1	Assessment of potential impacts from the Quarry Extension on the Primary and Secondary Study Area	11
3.2	Assessment of Economic and Community Impacts	14
4.	MITIGATION MEASURES.....	14
5.	SUMMARY OF NET IMPACTS	15
6.	CONCLUSIONS.....	18
APPENDIX A – REPORT FIGURES.....		19
LIST OF TABLES		20

LIST OF FIGURES

Figure 1	Location Map
Figure 2	Property Air Photo
Figure 3	Surrounding Context
Figure 4	Official Plan Schedule 'B'
Figure 5	Official Plan Schedule 'D1'
Figure 6	Soil Mapping
Figure 7	Provincial Agricultural System Mapping
Figure 8	Primary Study Area
Figure 9	Secondary Study Area
Figure 10	Township Land Use Schedule 'B'

LIST OF TABLES

Table 1	Assessment of Potential Impacts in the Primary and Secondary Study Area
Table 2	Summary of Net Impacts for the Proposed Law Quarry Expansion

1. INTRODUCTION

1.1 Description of Proposal

The proposal is for an extension to the existing Law Crushed Stone Quarry which is located at 10546 Highway #3 in the Township of Wainfleet, Region of Niagara. See **Figure 1**: Location.

The original R.E. Law Quarry first opened in the 1930s and has been serving the construction industry with high quality aggregate materials for more than 70 years. The existing Law Crushed Stone Quarry (“Law Quarry”) is operated by the Waterford Group, a speciality provider of materials and services for the manufacturing and construction industries. The existing Law Quarry is a total of 144ha and is comprised of two separate Aggregate Resources Act Licences (Licence #'s 4464 and #607541). The existing quarry operates both above and below the water table and is situated within the Bois Blanc and Bertie geological formations. The existing quarry has annual extraction limit of 800,000 tonnes.

This project proposal is for an extension to the existing Law Quarry on lands located immediately to the west. The purpose of the extension is to replace depleting reserves and continue to provide high-quality aggregate materials to local and regional construction markets. The quarry extension that will be licensed under the Aggregate Resources Act is proposed to be a total of 72.3 (this area is referred to “subject lands” in this Report) with a limit of extraction of 51.2ha and will operate both above and below the water table. The scale and nature of the operations at the quarry extension will be very similar to the existing quarry and the entrance/exit at the existing quarry will continue to service the quarry extension. The quarry extension may include the removal and relocation of Biederman Road, subject to the appropriate municipal approvals.

This scoped Agricultural Impact Assessment (AIA) is being completed for the proposed Law Quarry Extension for submission to the Region of Niagara as part of the Regional Official Plan Amendment Application, Township Official Plan Amendment, and Township Zoning By-Law Amendment Application. This Report will fulfill Region of Niagara Official Plan policy requirement s. 14.g.2, which is outlined below:

Any proposed development or site alteration for a non-agricultural use on lands situated outside of the Urban Area shall evaluate the capability of the site for agricultural use including soil, microclimate and drainage conditions, the existing pattern of agricultural or non-agricultural activities, and any potential impacts on surrounding agricultural activities.

An Aggregate Resources Act Licence application will also be submitted to the Ontario Ministry of Northern Development, Mines, Natural Resources and Forestry. There is no requirement to submit an Agricultural Impact Assessment with the Aggregate Resources Act Licences Application.

1.2 Property Description and Location

The proposed Law Quarry Extension is located on lands owned by the Waterford Group that are located directly adjacent to the existing quarry. The project location is about 3km west of Port Colborne and has frontage along Provincial Highway #3. The extension lands are bounded by the Wainfleet Bog to the

north, Highway #3 to the south, Biederman road and the existing quarry to the east and Graybiel Road to the West. See **Figure 2: Property Air Photo**

Adjacent and surrounding land uses include:

- **North** – Wainfleet Bog Provincially Significant Wetland
- **South** – Highway #3, Reeb Quarry (ARA Licence #607721), Rural Residential uses, and some limited agricultural uses (primarily hay)
- **West** – Rural Residential and some limited agricultural uses (primarily hay)
- **East** – Existing Law Quarry

There are a number of separate property parcels that comprise the quarry extension lands. Some of these properties are in an active agricultural condition. There are naturalized areas and natural heritage features located in the southwest and northern areas of the property parcels and some areas of the proposed extension lands are in a fallow condition and not cropped.

The rural area surrounding the proposed Law Quarry extension is highly fragmented and includes a mix of extractive uses, rural residential uses, and highway commercial. There are “pockets” of agricultural uses, but these are highly-fragmented by a mix of rural uses – See **Figure 3: Surrounding Context**. The Wainfleet Bog to the north and existing quarry comprise a large portion of the Scoped AIA Study Area as further discussed in Section 2 of this Report.

1.3 Policy Requirements

In the Region of Niagara Official Plan (Consolidated 2014 version), the subject lands are designated as “Rural Area” and “Possible Extractive Industrial” and are not designated “Good General Agricultural Area” – See **Figure 4: Official Plan Schedule B**. In the Township of Wainfleet Official Plan the property is designated as “Rural Area” and “Possible Extractive Industrial”. The subject lands are currently zoned A4 (Rural) with an Environmental Protection Overlay in the Township’s Zoning By-Law 034-2014. The Region of Niagara Official Plan Schedule D1 also maps the Subject Lands as a Potential Resource Area: Stone and a portion of the lands as “Possible Aggregate Area” - See **Figure 5: Official Plan Schedule D1**.

The Subject Lands are mapped as containing Class 4, Class 3 and Class 6 soils (Canada Land Inventory Mapping). See **Figure 6: Soil Mapping**

The Subject Lands are also located within the Growth Plan for the Greater Golden Horseshoe Provincial Plan area. In the Provincial Agricultural System Mapping, the subject lands are mapped as “Candidate Area” and the northwest area of the subject lands are mapped as being located within the Growth Plan Natural Heritage System. See **Figure 7: Provincial Agricultural System mapping**

1.1.1. Provincial Policy Requirements

The Provincial Policy Statement (2020) defines *Prime Agricultural Areas* as:

“areas where prime agricultural lands predominate. This includes areas of prime agricultural lands and associated Canada Land Inventory Class 4 through 7 lands, and additional areas where there is a local concentration of farms which exhibit characteristics of ongoing agriculture.”

Prime agricultural areas may be identified by the Ontario Ministry of Agriculture and Food using guidelines developed by the Province as amended from time to time. A prime agricultural area may also be identified through an alternative agricultural land evaluation system approved by the Province.”

Furthermore, *Prime Agricultural Lands* are defined as:

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.

Although the Subject Lands do include some mapped Class 3 soils, the subject lands and surrounding and adjacent lands are primarily mapping as having Class 4 soils – See **Figure 6: Soil Mapping**. In addition, the area is highly fragmented by industrial, highway commercial and rural residential developments. Therefore, the subject lands do not meet the definition of a *Prime Agricultural Area* and are considered *Rural Lands* in the Provincial Policy Framework.

The PPS policy 1.1.5.2. identifies *the management or use of resources* on rural lands as a permitted use.

1.1.2. Growth Plan for the Greater Golden Horseshoe (Consolidated 2020)

The Growth Plan defines *Prime Agricultural Areas* as:

An area where prime agricultural lands predominate. This includes areas of prime agricultural lands and associated Canada Land Inventory Class 4 through 7 lands and additional areas where there is a local concentration of farms which exhibit characteristics of ongoing agriculture. Prime agricultural areas are to be identified by the Ontario Ministry of Agriculture, Food and Rural Affairs using guidelines developed by the Province as amended from time to time. (Based on PPS, 2020 and modified for this Plan)

The Growth Plan uses the same definition as the PPS 2020 for *Prime Agricultural Areas*. An *Agricultural System* for the GGH has been identified by the Province. The Growth Plan *Agricultural System* is defined as:

The system mapped and issued by the Province in accordance with this Plan, comprised of a group of inter-connected elements that collectively create a viable, thriving agricultural sector. It has two components: 1. An agricultural land base comprised of prime agricultural areas, including specialty crop areas, and rural lands that together create a continuous productive land base for agriculture; 2. An agri-food network which includes infrastructure, services, and assets important to the viability of the agri-food sector

In the *Provincial Agricultural System*, the majority of the subject lands is mapped as a “Candidate Area” – See **Figure 7: Provincial Agricultural System mapping**.

Growth Plan Policy 4.2.6.8 states that:

Outside of the Greenbelt Area, provincial mapping of the agricultural land base does not apply until it has been implemented in the applicable upper- or single-tier official plan. Until that time, prime agricultural areas identified in upper- and single-tier official plans that were approved and in effect as of July 1, 2017 will be considered the agricultural land base for the purposes of this Plan

The Subject Lands are Designated as “Rural” and “Possible Extractive Industrial” in the Region of Niagara Official Plan and Township of Wainfleet Official Plan. Therefore, the subjects lands are not considered a Prime Agricultural Area under the Growth Plan policy Framework.

As the Subject Lands are not considered Prime Agricultural Lands or Prime Agricultural Areas; therefore, there is no requirement to rehabilitate back to an Agricultural Condition or to complete an Agricultural Impact Assessment for submission with the Aggregate Resources Act Licence Application.

1.1.3. Region of Niagara Official Plan (Consolidated 2014)

A Pre-Consultation meeting occurred with Region of Niagara Planning staff on March 30, 2021. During this meeting, Regional staff confirmed that a Scoped AIA was required for a Regional Official Plan Amendment as required by Official Plan Policy 14.G.2:

Any proposed development or site alteration for a non-agricultural use on lands situated outside of the Urban Area shall evaluate the capability of the site for agricultural use including soil, microclimate and drainage conditions, the existing pattern of agricultural or non-agricultural activities, and any potential impacts on surrounding agricultural activities.

As the proposed quarry extension is a non-agricultural use located outside of the Urban Area; therefore, the proposed development meets the criteria outlined policy 14.G.2 (Table 14-2) for requiring the completion and submission of an AIA.

This scoped AIA is being completed for submission to the Region of Niagara to fulfill the Official Plan policy requirement. A Terms of Reference for the Scoped AIA Reports was circulated to Regional staff on July 14, 2021 and approved on July 15, 2021.

1.4 Overview of Study Methods and Consultation

This scoped AIA generally follows the Draft Agricultural Impact Assessment (AIA) Guidance Document (March 2018) technical guidelines for the completion of AIA’s, but has been scoped given that the subject lands and surrounding area are not a *Prime Agricultural Area*. There is no Provincial requirement that requires the completion of an AIA for this proposed development.

In preparing this report, the following Municipal and Provincial Land Use Plans, Policies, and documents were reviewed:

- Provincial Policy Statement (2020)
- Growth Plan (2020)
- Region of Niagara Official Plan (Consolidated 2014)
- Township of Wainfleet Official Plan (Consolidated January 2016)
- Township of Wainfleet Zoning By-Law 581-78

In addition the following information sources were used for data collection and analysis in this Report:

- OMAFRA Agricultural Portal including information on Canada Land Inventory Agricultural Capability mapping, Soil Suitability, artificial drains, crops and livestock etc.
- OMAFRA AgMaps GIS Mapping Portal
- Aerial photography (historic and recent) from Google Earth

- Parcel mapping/fabric of the area;
- NPCA, Region of Niagara, and MNDMNRF mapping information.
- A Site visit of the property and surrounding area
- Completed Technical Reports for the Quarry Extension Aggregate and Planning Applications
- Law Quarry Extension Site Plans

Satellite Imagery, OMAFRA Mapping, policy review, and a Site Visit to the primary and secondary study area were the primary study methods used for data and information gathering in the preparation of this report. A summary of the agricultural land use survey is included in section 2.0 of this report.

Numerous pre-consultation meetings have occurred with the Conservation Authority, Township, Region and Ministry of Northern Development and Mines, Natural Resources and Forestry.

The Subject Lands are currently owned by the Waterford Group and are leased to a tenant farmer. Some anecdotal information regarding the agricultural use of the subject lands is included in this Report.

Additional consultation activities will occur as part of the submission, review, and circulation of Planning Act and Aggregate Resources Act applications.

1.5 Coordination with other Technical Studies and Reports

In drafting this Scoped AIA, the Aggregate Resources Act Site Plan and other technical reports and studies completed for the Aggregate Resources Act Licence Application and Planning Act Applications were reviewed to assess potential impacts and develop any required mitigation measures.

2. STUDY AREA LAND-USE SURVEY & DATA REVIEW

2.1 Identification and Description of the Primary Study Area

The focus of the primary study area is to understand the current status of agriculture in the immediate area of the proposed quarry extension and assess the potential impact of removing agricultural lands (permanently or temporarily) to allow for the proposed development.

The *Provincial AIA Guidance Materials* recommend that the Primary Study area for *mineral aggregate resources extraction* include the proposed area to be licensed¹.

For this scoped AIA, the primary study area (PSA) has been defined as the proposed License Boundary and adjacent 120m of land area. This is shown on **Figure 8: Primary Study Area**.

2.2 Land Use Survey and Data Review of the Primary Study Area

2.2.1. Description of Land Uses

As shown on **Figure 8: Primary Study Area**, the current uses within the PSA include:

- Agriculture
- Rural Residential
- Resource Extraction (existing Law Quarry and Reeb Quarry)
- Institutional and commercial
- Natural Heritage Features (Woodlands and Wetlands)

The PSA is comprised of several separate Assessment Parcels owned by Waterford Sand and Gravel. The largest of these parcels is currently in agricultural production. There is one farmstead with barn located within the proposed quarry Licence boundary. These structures are located outside of the limit of extraction and are not currently associated with any agricultural use.

One agricultural use is located within 120m of the Subject Lands on the west side of Graybiel Road (20808 Graybiel Road). MPAC records describe this property as “*Land owned by a non-farmer improved with a non-farm residence with a portion being farmed*”. This property contains a barn structure with livestock, livestock paddocks, and cropped fields. This farm is not contiguous with the subject lands.

As the PSA is a mix of rural residential uses, natural heritage features, existing extractive industrial uses and high-way commercial uses, there is limited agricultural facilities and farm infrastructure. There are no agricultural businesses located within the PSA.

¹ Page 17

2.2.2. Slope and Topography

The PSA has a topography that is relatively flat and varies from an elevation of about 184masl near Highway #3 to 180masl in the north end of the property towards the Wainfleet Bog. There is a rock outcrop located near the center of the agricultural area of the property that has an elevation of around 186masl. Due to this rocky area with limited topsoil near the center of the PSA, this area is not in agricultural production.

The buried Onondaga Escarpment is a prominent physiographic features that is also located in the northern portion of the PSA, outside of the proposed Licence boundary but within the 120m adjacent lands.

2.2.3. Hydrology/Hydrogeology and Drainage

There are no surface water features within the PSA, except for surface water associated with the existing Law quarry. There are no mapped municipal or tile drains within the PSA.

According to topographic mapping, a surface water drainage divide bisects the PSA. Surface water run-off in the norther part of the PSA drains north to the Bierderman Drain. Drainage in the south of the site drains to the Eagle Marsh Drain and ultimately to Lake Erie.

All water that collects within the proposed quarry extension will be directed to the existing quarry sump via an internal drainage network and the directed to Eagle Marsh Drain.

The proposed end-use of the quarry extension is a lake which will fill naturally with precipitation and groundwater discharge once the dewatering sump is decommissioned. No surface water discharge from the future quarry lake to surface water drainage features is expected.

It is expected that once final rehabilitation is achieved, the operation of private wells in the vicinity of the Suite will return to similar to or greater than baseline conditions.²

No negative drainage or hydrogeology impacts are anticipated that would affect the limited agricultural uses in the PSA.

2.2.4. Climate

The PSA does not include any specialty crop areas.

2.2.5. Soil and Microclimate

The soils in PSA are a mix of Class 3, 4, and 6 soils. The PSA is not considered a *Prime Agricultural Area* or *Specialty Crop Area*. The Provincial Agricultural System mapping identifies the PSA as "Candidate Area".

The PSA is comprised of the following toy types:

- Welland –Loamy Phase (WLL.L)
- Franktown – Very Shallow Phase (FKW.V)
- Farmington (FRM)

² Law Quarry Extension Level 2 Water Report, WSP March 2022

2.2.6. Economic and Community Benefits of Agriculture

Based on information in the OMAFRA Agricultural Systems Portal there is no agricultural facilities or infrastructure located within the PSA (e.g. tile drains, dairy plants, farm product warehouses etc.). The agricultural uses within the PSA are limited to some hay and cash crop production; there are no specialty crops.

There is one property located along Graybiel road that has a barn with livestock which appears to be a small-scale agricultural operation (e.g. hobby farm). The agricultural uses in the PSA are identified in **Figure 8**.

The property owner has indicated that within the Subject Lands, The bedrock is close to surface and therefore the soil is very thin and arid and contains large amounts of rock fragments. There are visible rock outcrops within the agricultural fields. In addition, due to the poor soil conditions the agricultural areas are prone to droughty conditions.

Besides the large area of the subject lands that are in crop production, the agricultural area in the PSA is highly fragmented by roads, natural heritage features, the existing quarry, and rural residential land uses. The area in the PSA is zoned Rural (Zone 4a), Institutional (Zone 12), and Extractive Industrial (Zone M2) in the Township Zoning by-law.

In addition, a portion of the Wainfleet Bog is located within the northern portion of the PSA and is a provincially significant wetland that is characterized by a low-lying peat bog composed of organic material and peat deposits. Due to the environmental sensitivity of this feature, it is not suitable for agricultural activities and is also not proposed to be included with the Law Quarry Extension Licence.

Due to high land-use heterogeneity and fragmentation as well as the poor soil quality, there is very limited economic and community benefits associated with the current agricultural uses in the PSA.

2.2.7. Identification and Description of the Secondary Study Area

The focus of the Secondary Study Area (SSA) is to understand the status of agriculture in the area to be able to assess the potential impact of removing agricultural lands (permanently or temporarily for the proposed development. The SSA focuses on understanding agriculture in the surrounding area and how this area will be potentially impacted from the proposed development and removal of agricultural land within the Primary Study Area.

For this study, the SSA was determined to be 1,500m; however, the land-use survey was limited to air photo-interpretation and verified with a site survey by car. Not all lands within the 1,500m were accessible from public roadways. The results of the land use survey are shown in **Figure 9**: Secondary Study Area.

2.3 Land Use Survey and Data Review of the Secondary Study Area

2.3.1. Description of Land Uses

As shown on **Figure 9**: Secondary Study Area and **Figure 10**: Township Land Use Schedule B, the current uses within the PSA include:

- Agriculture (fallow, pasture, cash crop, hobby livestock farm, equestrian)

- Rural Residential
- Resource Extraction (existing Law Quarry)
- Institutional (church) and highway commercial
- Natural Heritage Features and Conservation Land (Wainfleet Bog and Wainfleet Wetlands Conservation Area)
- Rural Residential and Residential

A significant portion of the SSA is comprised of extractive industrial uses, including the existing Law Quarry and the Reeb Quarry Aggregate Resources act Licences. In addition, natural heritage features and Conservation Land also makes up a larger portion of the SSA including the Wainfleet Bog and then Wainfleet Wetlands Conservation Areas. These areas are not suitable for agricultural uses. As shown in **Figure 10**: Township Schedule B, there are very limited areas in the SSA that are designated as “Agricultural Area”. A small area in the western portion of the SSA is designated “Specialty Crop Area”. Areas that are designated as “Agricultural Area” are areas consisting of prime agricultural lands. Areas designated as “Specialty Crop Area” have agriculturally developed organic soils. On the Township Land Use Schedule B, the land uses that predominate in the SSA include extractive industrial, rural lands, and environmental conservation and protections areas.

Due to the large mix of different land uses in the SSA, properties vary in size and include a number of rural residential lots. The largest properties in the SSA include the existing quarry licences (Law quarry and Reeb quarry) and conservation lands owned by the Niagara Peninsula Region Conservation Authority (i.e. Wainfleet Bog and Wainfleet wetlands).

Overall, there are limited agricultural uses in the SSA including some field crop areas (predominately soy beans in 2021) and several equestrian facilities. The area is highly fragmented with a mix of rural uses and natural heritage features and is not comprised of large homogenous agricultural uses that can be found in other areas of the Region of Niagara. As described in Section 2.3.6 there are also limited agricultural business and agri-food facilities.

2.3.2. Slope and Topography

The SSA is situated within the Haldminad Clay Plain physiographic region, extending from the Niagara Escarpment in the north to Lake Erie in the South. This physiographic region is characterized by low topographic relief and poorly drained soils. The Wainfleet Bog, located in the northern portion of the SSA, is a significant low-lying peat bog composed of organic material and peat deposits.

2.3.3. Hydrology/Hydrogeology and Drainage

There are a number of constructed municipal drains within the Secondary Study Area, including the Bierderman Drain, Eagle Marsh Drain, and C.S.Q Drain #12 and #20. Some properties located within the northwestern portion of the SSA are mapped as having tile drains.

The SSA is part of three subwatersheds including, Eagle Marsh Drain (southeast), Biederman Drain (northeast), and Feeder Canal (southwest).

The Level 2 Hydrogeology Report (WSP, March 2022) included the majority of the SSA in the hydrogeological review and impact assessment. This included the completion of a water well survey, installation of monitoring wells, hydraulic testing, groundwater and surface monitoring, and the development of a numerical groundwater flow model.

Similarly to the PSA, no negative drainage or hydrogeology impacts are anticipated that would affect the current and any future agricultural uses in the SSA

2.3.4. Climate

The SSA does not include any specialty crop areas as mapped by the Province. The Township of Wainfleet Official Plan does designate a small area in the northwestern part of the SSA as a Specialty Crop Area.

In the Township of Wainfleet Official Plan Specialty Crop Areas are defined as areas where specialty crops such as crops from agriculturally developed organic soil lands are predominantly grown. See Figure 10.

2.3.5. Soil and Microclimate

The soils in the SSA are a mix of Class 3, Class 4, Class 5, and Class 6. There is a small amount of Class 2 soils located in the southwest area of the SSA. There is also large areas of Class 0 soils which are attributed to the wetland area, quarry, conservation area, and the residential settlement along the Lakeshore Road west. There are no specialty crop areas, as mapped by the Province, and only a small portion of the northwestern area of the SSA is mapped as a *Prime Agricultural Area* in the Provincial Agricultural Mapping. In the Provincial Agricultural System Mapping the majority of the SSA is unmapped (i.e. existing Law Quarry and Reeb Quarry, Wainfleet Bog) or mapped as "Candidate Area". (see **Figure 7**).

2.3.6. Economic and Community Benefits of Agriculture

A review of the Ontario Agricultural System Portal mapping indicates that there is only one Agriculturally-related use within the SSA:

- Lowland Farms Ltd. Equipment Sales, located at 20252 Youngs Road South

There are no mapped vineyards, greenhouses, vegetable fields or animal processing facilities located within the SSA. There are two areas that are mapped as fruit fields; however, based on air photo review these areas do not appear to be feasible for fruit production and likely represent mapping errors.

Two properties within the SSA are mapped as being included in the Provincial Premise Registry and are therefore associated with agri-food activities. These properties are located at 21241 Rattler Road (Lakefront Produce) and 11020 Ellsworth Road South (Niagara Beeway). Both properties are located more than one kilometer away from the proposed quarry extension.

A number of properties within the SSA are mapped as Farm Property Class Tax Rated Parcels for the 2021 Program Year. The majority of these mapped parcels are located to the west and east of the subject lands and appear to be producing field crops.

Based on the site-survey and air photo review, there are a number of agricultural land uses within the SSA. The agricultural uses that are located in the SSA are predominately field crops or pasture. In addition, a number of small equestrian uses (i.e. hobby farm) as well large equestrian facilities were identified (e.g. Horseplay Niagara, Aspen Acres Farm) were also identified.

Similar to the PSA, the agricultural uses in the SSA are highly fragmented with many difference non-contiguous land-uses spread out over the SSA. A large portion of the SSA is unsuitable for agricultural uses due to natural heritage features and existing extractive industrial uses. Overall, the area is comprised of low agricultural use and productivity compared to other areas within the Region of Niagara and Township of Wainfleet. The proposed quarry extension is not anticipated to have any negative impacts on the current economic and community benefits of agriculture and agricultural uses in the SSA.

3. ASSESSMENT OF POTENTIAL IMPACTS

3.1 Assessment of potential impacts from the Quarry Extension on the Primary and Secondary Study Area

Table 1 summarize the assessment of impacts to the PSA and SSA from the proposed quarry extension:

Table 1: Assessment of potential impacts in the Primary and Secondary Study Area

Potential Impact	Primary Study Area	Secondary Study Area (SSA)
1. Loss of Agricultural land	<p>The proposed conversion of agricultural land to an aggregate use is permitted in provincial and local policy.</p> <p>Approximately 50ha of land that is currently in agricultural production will be permanently converted to a quarry and subsequently a lake through final rehabilitation. The agricultural land that will be converted is not Prime Agricultural Land and is not located in a Prime Agricultural Area.</p>	There will be no anticipated impact to the SSA
2. Fragmentation of agricultural lands and operations	The area is already highly fragmented. The proposed quarry extension is separated from adjacent agricultural lands by intervening rural residential uses and municipal and provincial roads.	There will be no anticipated impact to the SSA due to fragmentation. The SSA is already highly fragmented with a mix of different, non-agricultural land uses.
3. The type of agricultural, agriculture-related or on-farm diversified uses being	The agricultural use being lost will not have a significant impact on the already limited agricultural	The agricultural use being lost will not have a significant impact on the already limited agricultural

lost and the significance this has for supporting other agricultural production in the surrounding area	uses in the PSA.	uses in the SSA.
4. The loss of existing and future farming opportunities	The lands proposed for the Law Quarry Extension are not Prime Agricultural Lands and are not located in a Prime Agricultural Area. The subject lands are comprised of lower soil classes. There is limited existing and future agricultural opportunity within the subject lands due to soil quality conditions.	The proposed quarry extension will not result in a loss of exiting and/or future farming opportunity within the SSA.
5. Minimum Distance Separation changes (where applicable) that will constrain future farm operations	Not applicable	not applicable.
6. The loss of infrastructure, services or assets important to the surrounding agricultural community and agri-food sector	The proposed quarry extension will not result in any loss of agricultural services, infrastructure or assets in the PSA.	The proposed quarry extension will not result in any loss of agricultural services, infrastructure or assets in the SSA.
7. The loss of agricultural investments in structures and land improvements (e.g. artificial drainage)	The proposed quarry extension will not result in any loss of investments in structures and land improvements in the PSA.	The proposed quarry extension will not result in any loss of investments in structures and land improvements in the SSA.
8. The disruption or loss of function to artificial drainage and irrigation installations	There will be no disruption or loss of artificial drainage/irrigation installations in the PSA.	There will be no disruption or loss of artificial drainage/irrigation installations in the PSA.
9. Changes to the soil drainage regime	No changes to the soil drainage regime are anticipated in the PSA.	No changes to the soil drainage regime are anticipated in the SSA.
10.Changes to surface drainage features which could have an effect on adjacent lands	Drainage on adjacent lands in the PSA will not be impacted by the proposed quarry extension. Potential drainage impacts were assessed in the Hydrogeology Level 2 Report (WSP March 2022)	There will be no drainage impacts in the SSA.
11.Changes to landforms, elevations and slope that could alter microclimatic conditions (e.g. modification to slopes that may reduce or improve cold air drainage opportunities and changes to elevation may have an impact on diurnal temperatures)	The subject lands are relatively flat and the area is not identified as a Prime Agricultural Area or Specialty Crop area in Provincial mapping. Except for the subject lands, there are limited agricultural uses in the PSA.	There are no provincially mapped Specialty Crop Areas in the SSA. No changes to microclimatic conditions are expected in the SSA.

<p>12.Changes to hydrogeological conditions that could affect neighboring municipal or private wells, sources of irrigation water and sources of water for livestock</p>	<p>A Hydrogeological Level 2 (WSP 2022) Report was completed for the proposed quarry extension. The potential impacts on hydrogeological conditions including municipal and private wells was assessed.</p> <p>The Report concluded that water well interference is not expected and recommended a comprehensive monitoring and mitigation plan.</p> <p>No hydrogeological impacts to the PSA are anticipated.</p>	<p>No hydrogeological impacts to the SSA are anticipated.</p>
<p>13.Disruption to surrounding farm operations, activities and management (e.g. temporary loss of productive agricultural lands, cultivation, seeding, spraying, harvesting, field access, use of road network)</p>	<p>The proposed quarry extension will not results in any disruption to surrounding farm operations and management in the PSA. The agricultural operations on the subject lands are not contiguous with adjacent agricultural operations and are bordered by the existing quarry, roads, and the Wainfleet Bog.</p>	<p>The proposed quarry extension will not results in any disruption to surrounding farm operations and management in the SSA.</p>
<p>14.The potential effects of noise, vibration, dust, and traffic on agricultural operations and activities</p>	<p>The potential impacts from noise, vibration, and dust have been assessed in the technical reports and required mitigation measures are included on the site plan. There will be no adverse impacts to the adjacent properties and limited agricultural uses in the PSA.</p> <p>No change to the current traffic volumes generated by the existing quarry are expected.</p>	<p>There will be no adverse impacts from noise, vibration, and dust to the agricultural uses in the SSA.</p>
<p>15.Potential compatibility concerns such as normal farm practices facing challenges with e.g. nuisance complaints, vandalism and trespassing that may occur with the new development being established and</p>	<p>The PSA already includes a diverse mix of land uses including the existing Law Quarry. The proposed quarry extension will not result in any new compatibility concerns for adjacent agricultural uses.</p>	<p>The SSA includes a diverse mic of rural land uses, including existing Licenced quarries. The proposed quarry extension will not introduce a new compatibility issues with normal farm practices in the SSA.</p>
<p>16.The inability or challenges to</p>	<p>The quarry extension will not</p>	<p>There will be no impact on traffic</p>

<p>move farm vehicles and equipment along roads due to increased traffic caused by haul routes, changes in road design.</p>	<p>result in any changes to the current traffic patterns originating from the existing quarry. No increase in production or annual tonnage is proposed. There will be no impact on traffic in the PSA.</p>	<p>in the SSA.</p>
--	--	--------------------

3.2 Assessment of Economic and Community Impacts

The Primary and Secondary Study areas are not considered to be *Prime Agricultural Areas*. These areas are a diverse mix of rural uses including agriculture, residential, natural heritage features, extractive industrial, and commercial.

The agricultural uses that are located within the PSA and the SSA are limited and highly fragmented. Adjacent and surrounding agricultural uses will not be adversely impacted through the implementation of mitigation measures to control and limit noise, dust, and vibration from blasting. Based on the impact assessment outlined in Table 1, there will be no loss to the economic and community benefits associated with agriculture in the study areas.

4. MITIGATION MEASURES

Based on the completed analysis and impact assessment of the proposed quarry extension on existing agricultural uses in the primary and secondary study areas, the following mitigation measures are recommended.

These mitigation measures will be implemented on the Law Quarry Extension Site Plan to reduce impacts of the proposed extension on the agricultural uses in the Primary and Secondary Study Area. Rehabilitation to an agricultural land use is not proposed nor required by local or provincial policy.

1. Extraction shall occur in phases to minimize the amount of disturbed area. To the extent feasible, later phases of the operation that are not currently in extraction should remain in agricultural production for as long as realistically possible.
2. All of the recommended mitigation measures from the technical reports (noise, dust, blasting etc.) shall be included on the Site Plan and implemented by the quarry operator/Licensee to prevent impacts to adjacent and surrounding agricultural uses.
3. If during extraction, the material below the water table is found to be of insufficient quality or quantity to warrant extraction, then the operator should consider revising the rehabilitation plan to implement agricultural rehabilitation of the property, where feasible.

5. 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 Law Quarry Extension minimizes or mitigates impacts on surrounding agricultural uses.

Table 2: Summary of Net Impacts for the proposed Law Quarry Extension

Objective	Mitigation Measure	Description
Minimize the loss of agricultural land	Select areas with less agricultural land and lower priority agricultural lands	The subject lands are not Prime Agricultural Lands and contain limited Class 3 soils. The subject lands are lower priority agricultural lands.
	Rehabilitate the land	The new licence is proposed to include below water table extraction and therefore rehabilitation to an agricultural use post extraction is not feasible. As the subject lands are not Prime Agricultural Lands, there is no policy requirement to rehabilitate back to an agricultural land use.
	Phase Development	Development will be occur in five sequential phases.
Minimize the fragmentation of agricultural land	Maintain farm parcels	The proposed extension will not result in creating isolated agricultural lands as they are an extension of an existing aggregate operation. The lands are bound by the existing quarry to east, wetland to the west, Highway 3 to the south, and rural residential uses to the west.
Minimize impacts on farmland and agricultural operations	Minimum Distance Separation	MDS I and II setbacks are not required for mineral aggregate resources.
	Select compatible land uses; put lower impact development adjacent to farmland and operations	There are limited surrounding and adjacent agricultural land uses. The proposed quarry extension. would be buffered from adjacent agricultural land

		uses through the provision of setbacks, berms and existing vegetation.
	Design to support agriculture (e.g. help farms to continue to operate; help prevent and reduce trespassing and vandalism)	<p>Conflicts between the proposed extension and the surrounding agricultural land uses will be minimized through the implementation of physical and visual barriers (vegetative berms), similar to what is currently in use at the existing pit.</p> <p>There will be no change to the existing haul route or truck traffic volumes.</p> <p>Processing facilities will be located in close proximity to the working face and will operate in accordance with the Technical Report recommendations, best management practices, and MOECP guidelines to mitigate noise and dust impacts.</p>
Minimize and mitigate changes in water quality or quantity	Implement a groundwater monitoring program	A groundwater monitoring program is included on the quarry Site Plan.
Mitigating impacts during construction or operations (e.g. mitigate dust, noise)	Adjust operational procedures to accommodate agriculture in the area	<p>There are limited agricultural uses in the area which are already accustomed to the existing quarry operations.</p> <p>There are no large livestock operations in the area which would be affected by the operation.</p>
	Vegetative berms	<p>The quarry extension includes a minimum of 30m setbacks from adjacent lands</p> <p>Vegetative berms will also be implemented which will provide a visual barrier.</p>
	Maintain, restore or construct	The subject lands do not include any farm

	farm infrastructure	infrastructure
Mitigate ongoing impacts from new development	Implement measures that can be in place post development to support compatibility with agriculture	All planting associated with the berms and future rehabilitation will be non-invasive species and will not impact surrounding agricultural producers.
Education to achieve greater compatibility between agricultural and non-agricultural uses	Education and awareness	The quarry operator/licencess has been operating the existing quarry and is not aware of any agricultural compatibility issues. The quarry extension would continue to be operated in a similar manner. The quarry operator would address any complaints, if required.

6. CONCLUSIONS

This Report fulfills Region of Niagara Official **Plan policy requirement s. 14.g.2**, and is completed in accordance with the approved Scoped Agricultural Impact Assessment Terms of Reference.

In summary, the proposed Law Quarry Extension on the subject lands is not anticipated to have a negative impact on the long term agricultural uses and operations in the primary or secondary study areas.

Based on a detailed review of all applicable Provincial and local policy, as well as considering the surrounding uses, operation, and rehabilitation plan for the proposed Licence, it is our opinion that:

- The subject lands are not Prime Agricultural Lands in a Prime Agricultural Area
- Mineral aggregate extraction is a permitted use Rural lands in accordance with the PPS, Growth Plan, Region of Niagara Official Plan, and Township of Wainfleet Official Plan
- No new haul routes are being created and existing truck traffic to/from the existing aggregate operations is not expected to change.
- Impacts from dust, noise, and blasting will be mitigated through implementation of prescribed conditions and the technical report recommendations included on the Site Plan.
- There are no impacts anticipated to the surrounding and adjacent agricultural uses or operations as a result of the proposed quarry extension.

Respectfully submitted by,

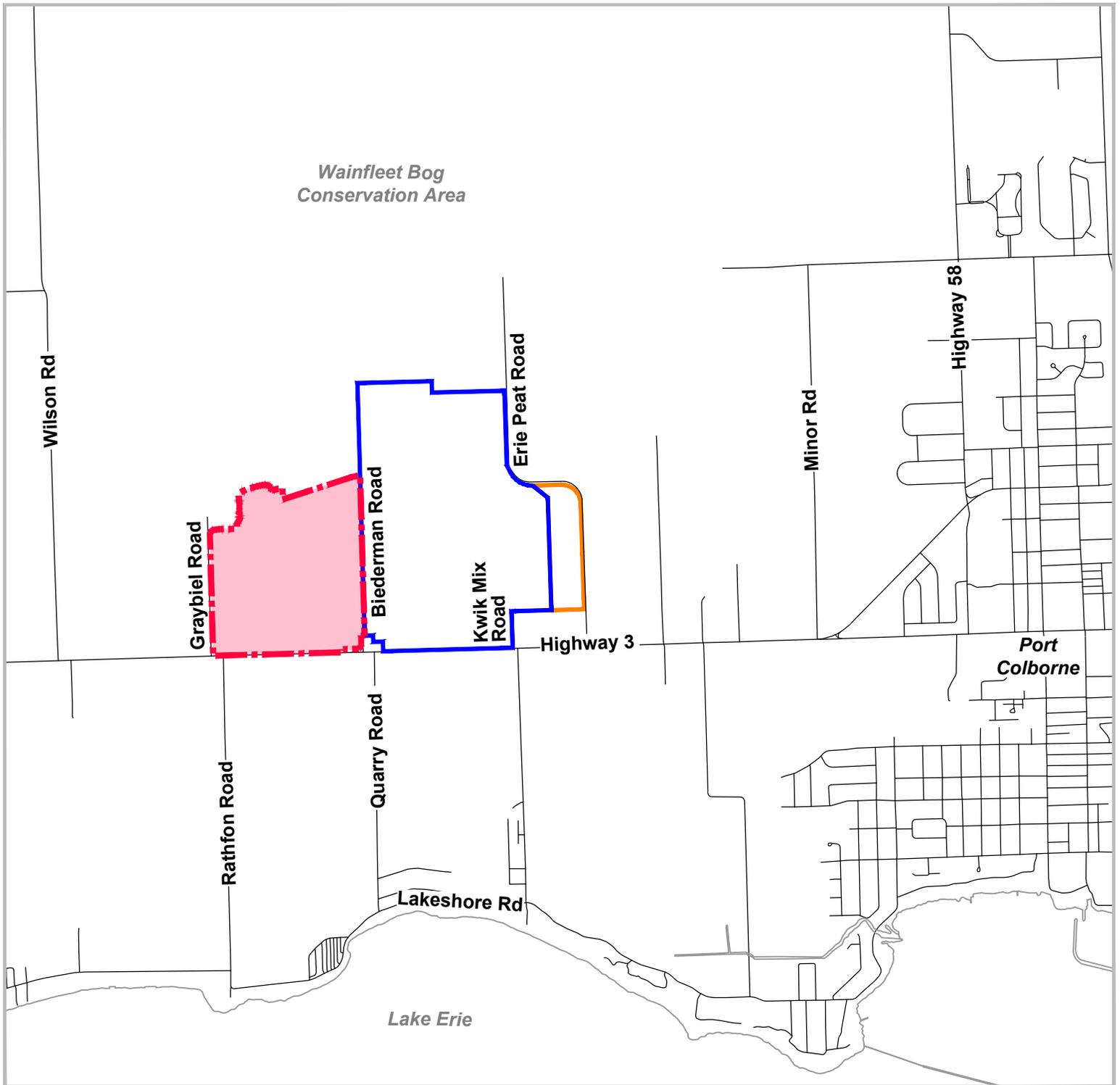
MacNaughton Hermsen Britton Clarkson Planning Limited (MHBC)

Per:



Caitlin Port, MES, MCIP, RPP

APPENDIX A – REPORT FIGURES



**Figure 1
Location Map**

LEGEND



Proposed Licensed Boundary



Existing Law Quarry (Licence #4464)



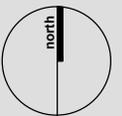
Existing Law Quarry (Licence #607541)

DATE: November 2020

FILE: 0956B

SCALE: 1:50,000

DRAWN: CAC/DGS



K:\0956C-WATERFORD SAND AND GRAVEL LIMITED LAW QUARRY EXTENSION\RPT\PLANNING JUSTIFICATION REPORT\LOCATION.DWG

Waterford Sand & Gravel Limited

Part of Lots 6 & 7, Concession 2
Part of Road Allowance Between Lots 5 & 6,
Concession 2,
Township of Wainfleet
Regional Municipality of Niagara



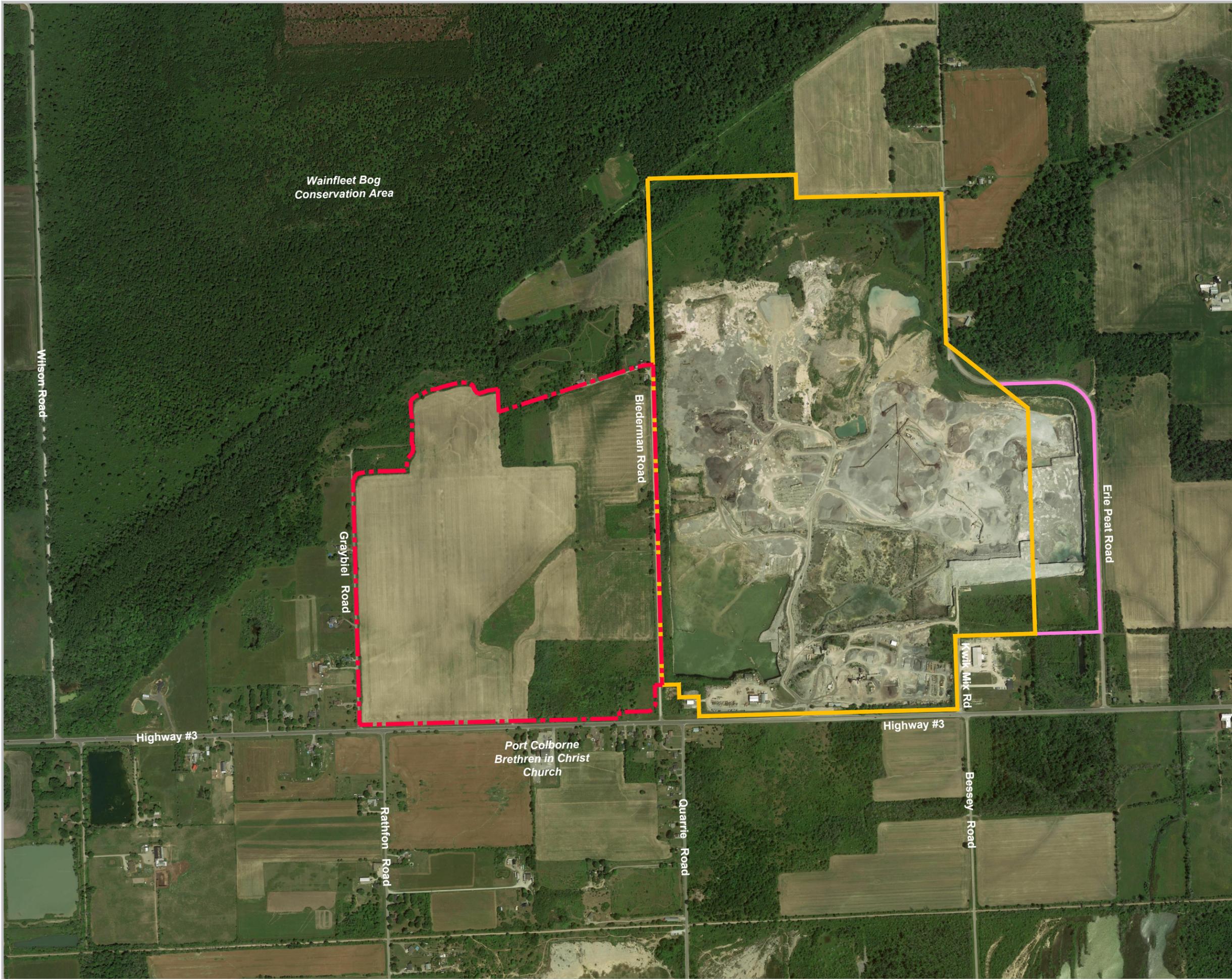
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Figure 2 Property Air Photo

Waterford Sand & Gravel Limited
 Part of Lots 6 & 7, Concession 2
 Part of Road Allowance Between Lots 5 & 6,
 Concession 2,
 Township of Wainfleet
 Regional Municipality of Niagara

Legend

-  Proposed Licensed Boundary
-  Existing Law Quarry (Licence #4464)
-  Existing Law Quarry (Licence #607541)



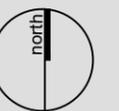
Base Plan Source:
 Air Photo - Google (2018)

DATE: November 2020

SCALE: 1:10,000

FILE: 0956C

DRAWN: DGS/CAC



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Figure 3
Surrounding Context

Waterford Sand & Gravel Limited
 Part of Lots 6 & 7, Concession 2
 Part of Road Allowance Between Lots 5 & 6,
 Concession 2,
 Township of Wainfleet
 Regional Municipality of Niagara

- Legend**
- Proposed Licensed Boundary
 - Proposed Limit of Extraction
 - Existing Law Quarry (Licence #4464)
 - Existing Law Quarry (Licence #607541)



Source: Air Photo - Google (2018)

DATE: March 2022

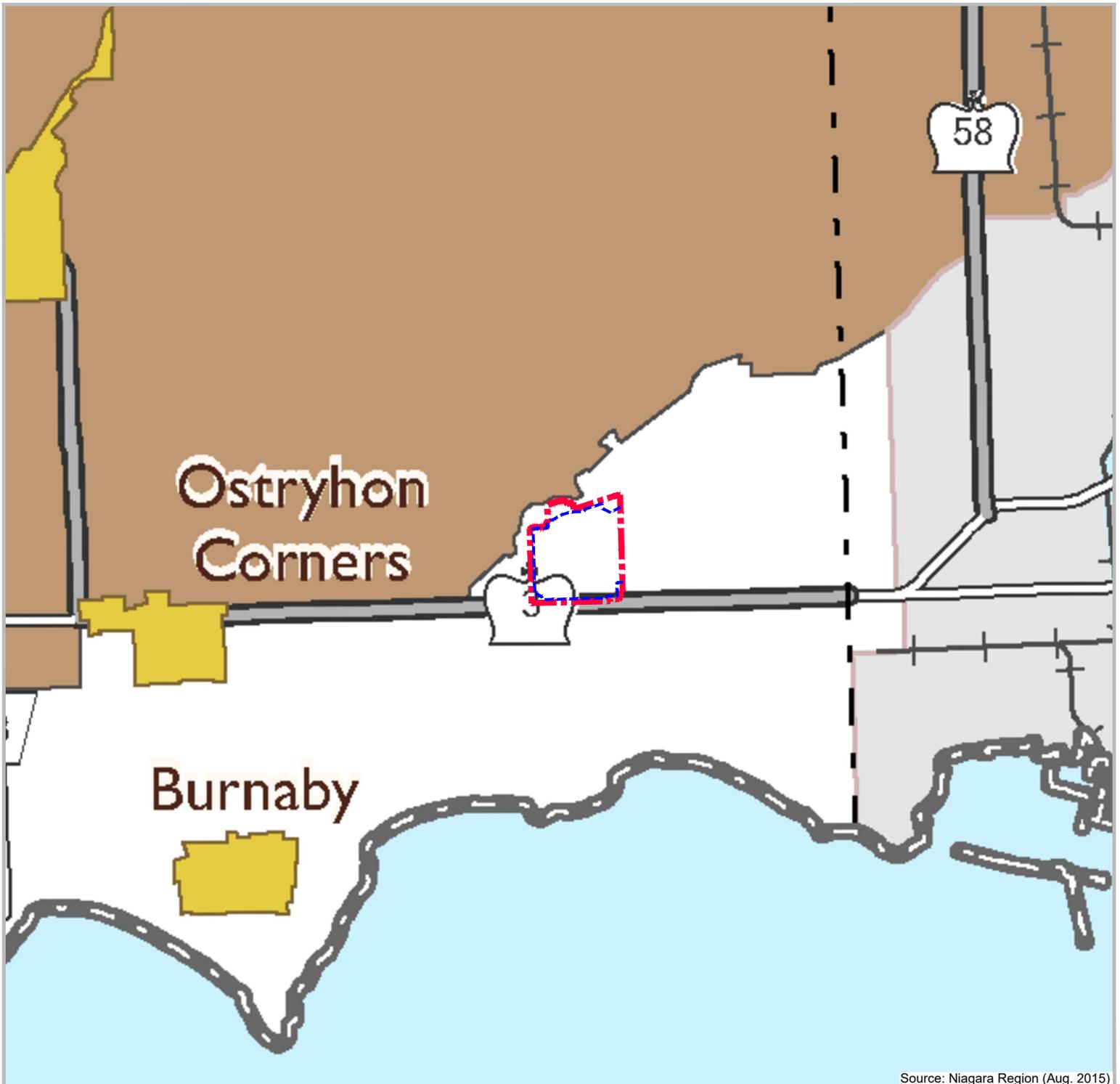
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FILE: 0956C

DRAWN: DGS/CAC

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 2022\SurroundingContext.dwg





Source: Niagara Region (Aug. 2015)

Figure 4
**Niagara Region
 Official Plan -
 Agricultural Land
 Base (Schedule B)**

LEGEND

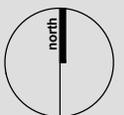
-  Proposed Licensed Boundary
-  Proposed Limit of Extraction
-  Good General Agriculture Area
-  Rural Area
-  Urban Area
-  Hamlet (Refer to Policy 4.H.I.6)
-  Provincial Road
-  Regional Road

DATE: March 2022

FILE: 0956C

SCALE: 1:50,000

DRAWN: CAC



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Waterford Sand & Gravel Limited
 Part of Lots 6 & 7, Concession 2
 Part of Road Allowance Between Lots 5 & 6,
 Concession 2,
 Township of Wainfleet
 Regional Municipality of Niagara

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 ARCHITECTURE
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Source: Niagara Region (August 2015)

Figure 5
**Niagara Region
 Official Plan -
 Potential Resource
 Areas: Stone
 (Schedule D1)**

LEGEND

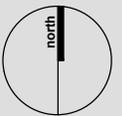
-  Proposed Licensed Boundary
-  Silurian Formation
-  Devonian Formation
-  Outcrop - Stone within 3' of Surface

DATE: November 2020

FILE: 0956B

SCALE: 1:50,000

DRAWN: CAC



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Waterford Sand & Gravel Limited
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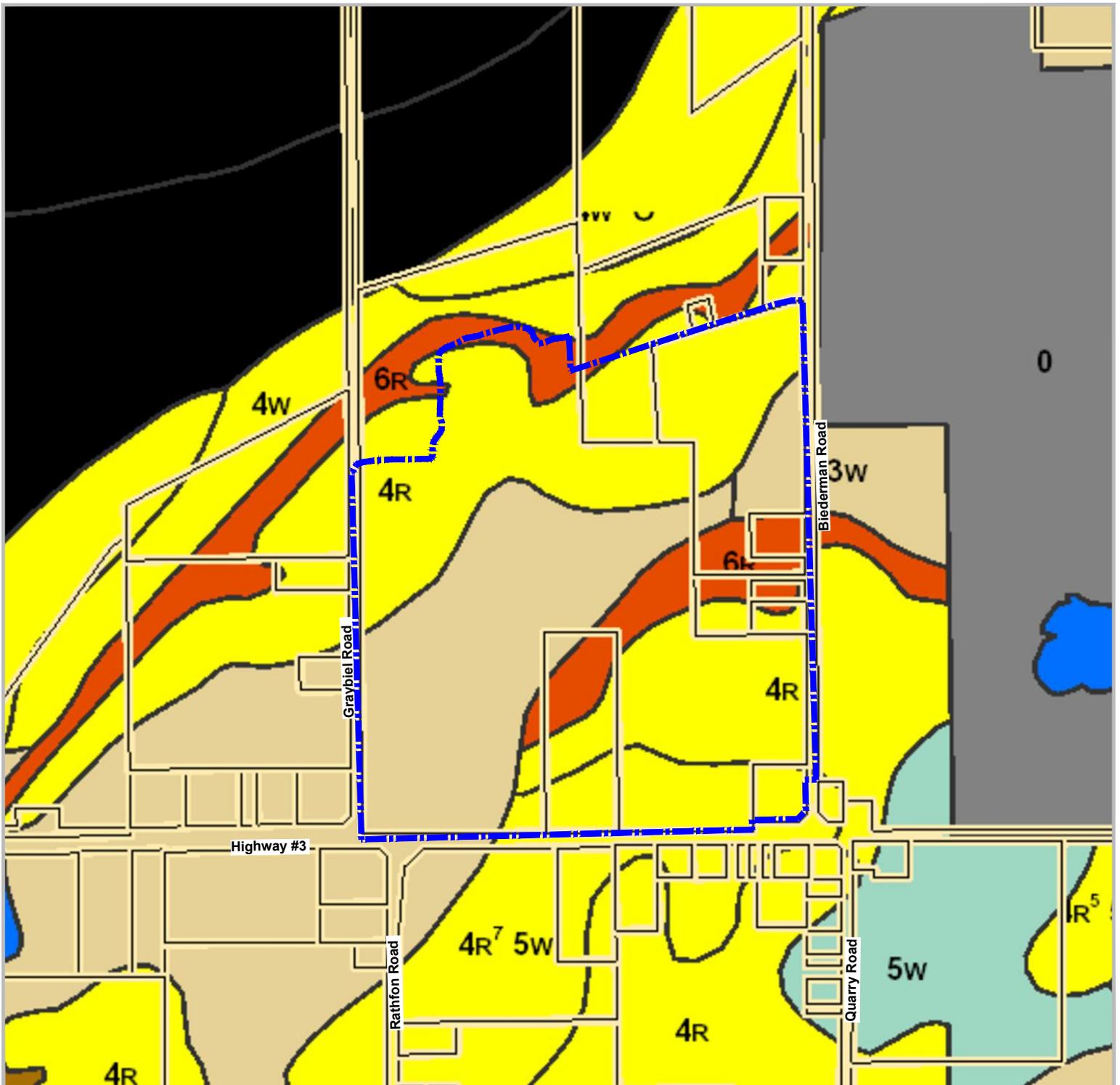


Figure 6
Soil Capability for
Agriculture

LEGEND



Proposed Licensed Boundary

CLI Agriculture Capability

-  Unclassified
-  Class 3
-  Class 4
-  Class 5
-  Class 6
-  Organic Soil

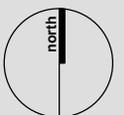
Source: AgMAPs online mapping service, ©Queen's Printer for Ontario 2021

DATE: February 17, 2021

FILE: 0956B

SCALE: 1:10,000

DRAWN: DGS



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 Regional Municipality of Niagara



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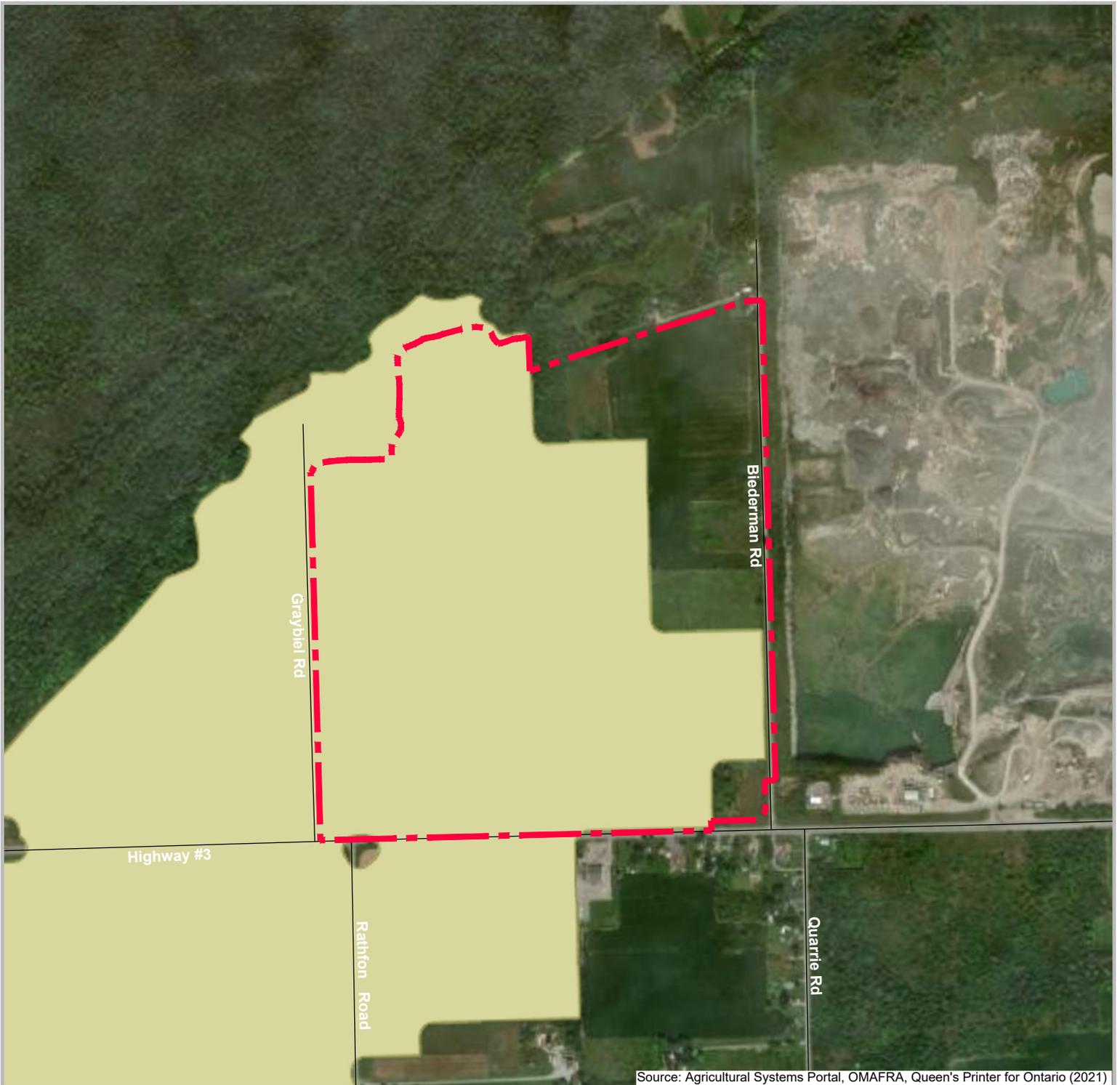


Figure 7
**Provincial
 Agricultural
 System**

LEGEND



Proposed Licensed Boundary



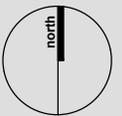
Candidate Area

DATE: May 2022

FILE: 0956C

SCALE: 1:10,000

DRAWN: CAC



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 2022\PROVINCIALAGSYSTEM.DWG

Waterford Sand & Gravel Limited

Part of Lots 6 & 7, Concession 2
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 Regional Municipality of Niagara



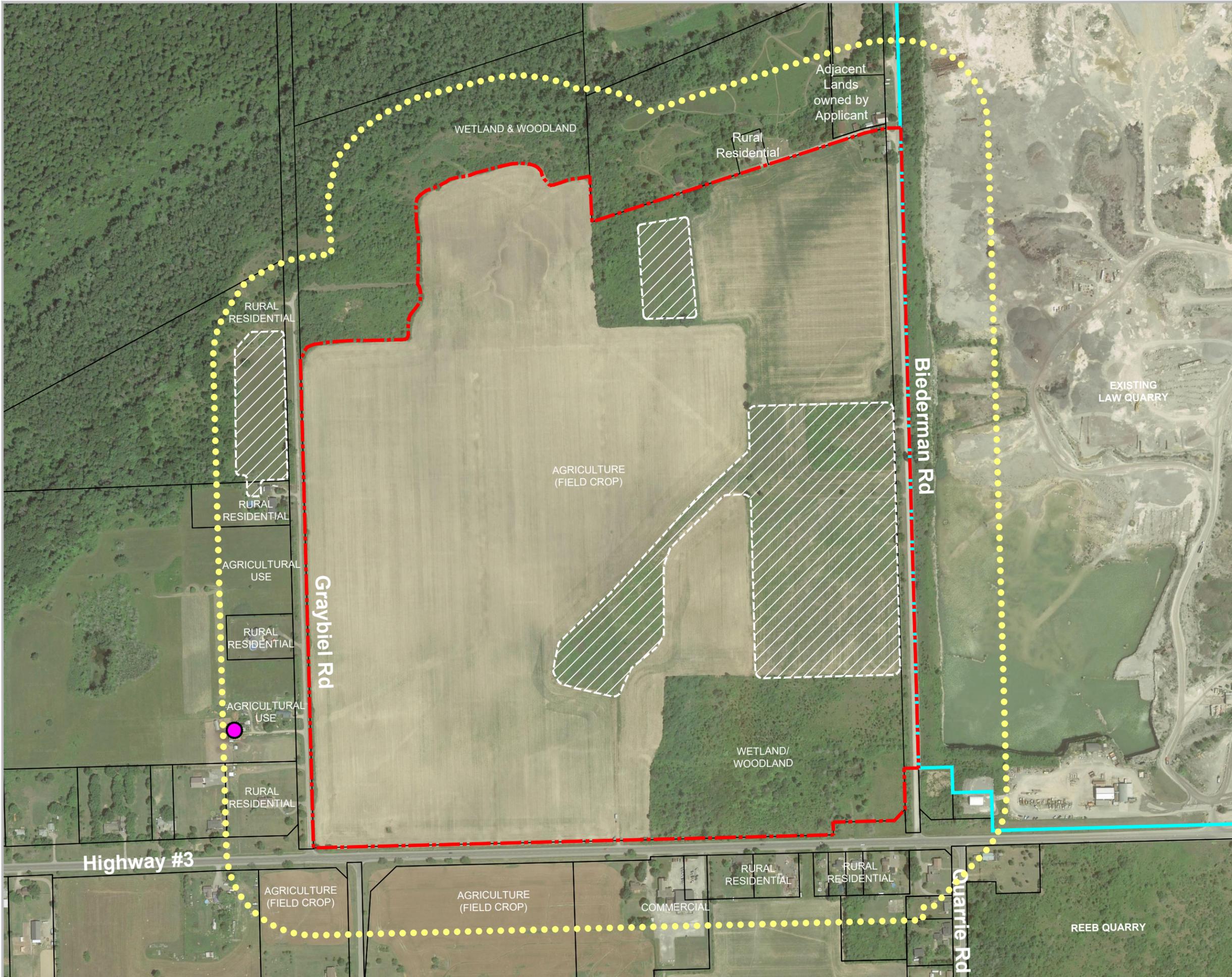
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Figure 8
**Land Uses in the
 Primary Study Area**

Waterford Sand & Gravel Limited
 Part of Lots 6 & 7, Concession 2
 Part of Road Allowance Between Lots 5 & 6,
 Concession 2,
 Township of Wainfleet
 Regional Municipality of Niagara

Legend

-  Proposed Licensed Boundary
-  Primary Study Area (120m from License Boundary)
-  Existing Law Quarry (Licence #4464)
-  Not Cropped 2021
-  Barn in use



Source: Air Photo - Google (2018)

DATE: May 2022

SCALE: 1:5,000

FILE: 0956C

DRAWN: DGS/CAC

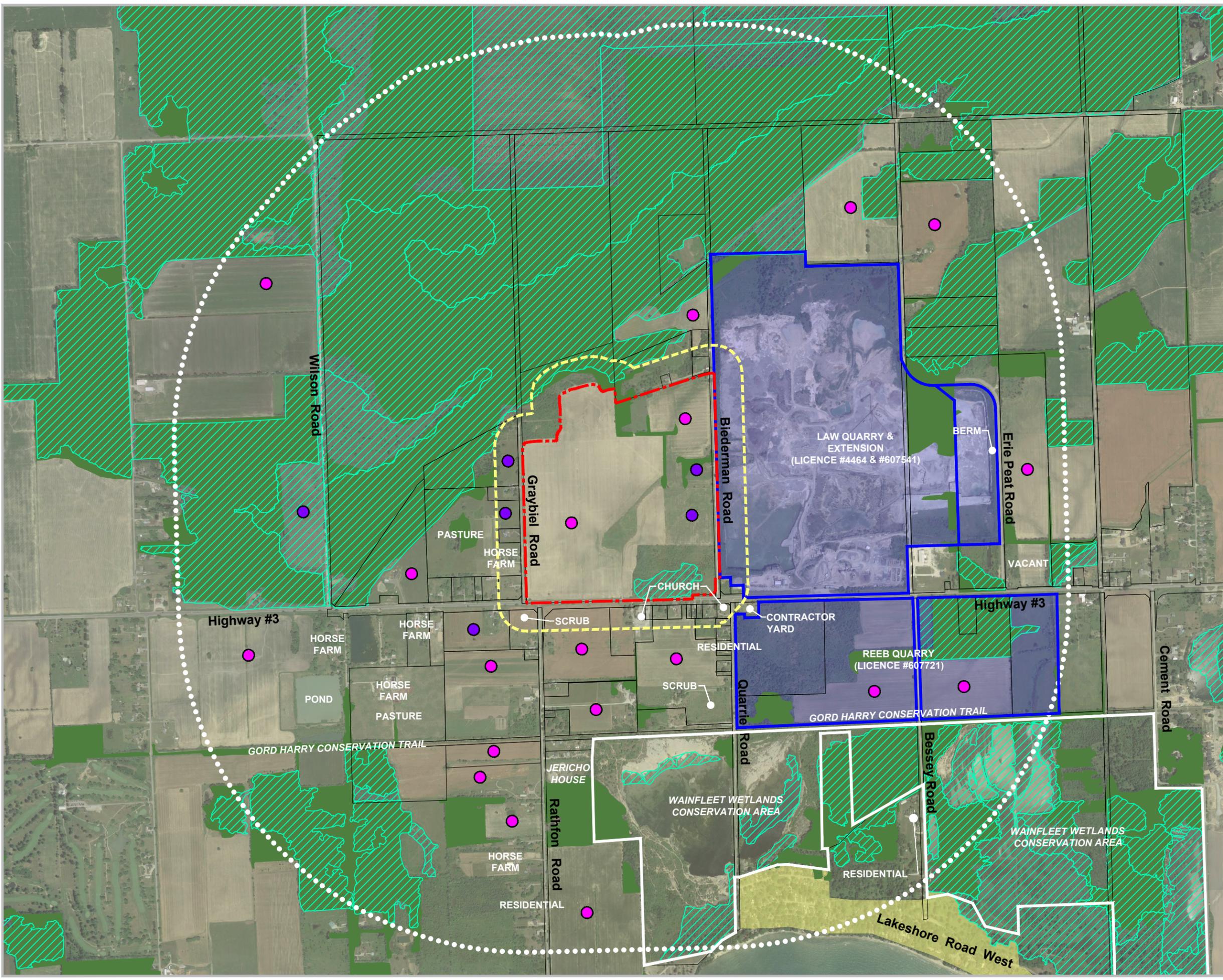


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 2022\LandUses-PrimaryStudyArea.dwg

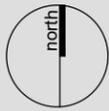
Figure 9
**Land Uses in the
 Secondary Study Area**

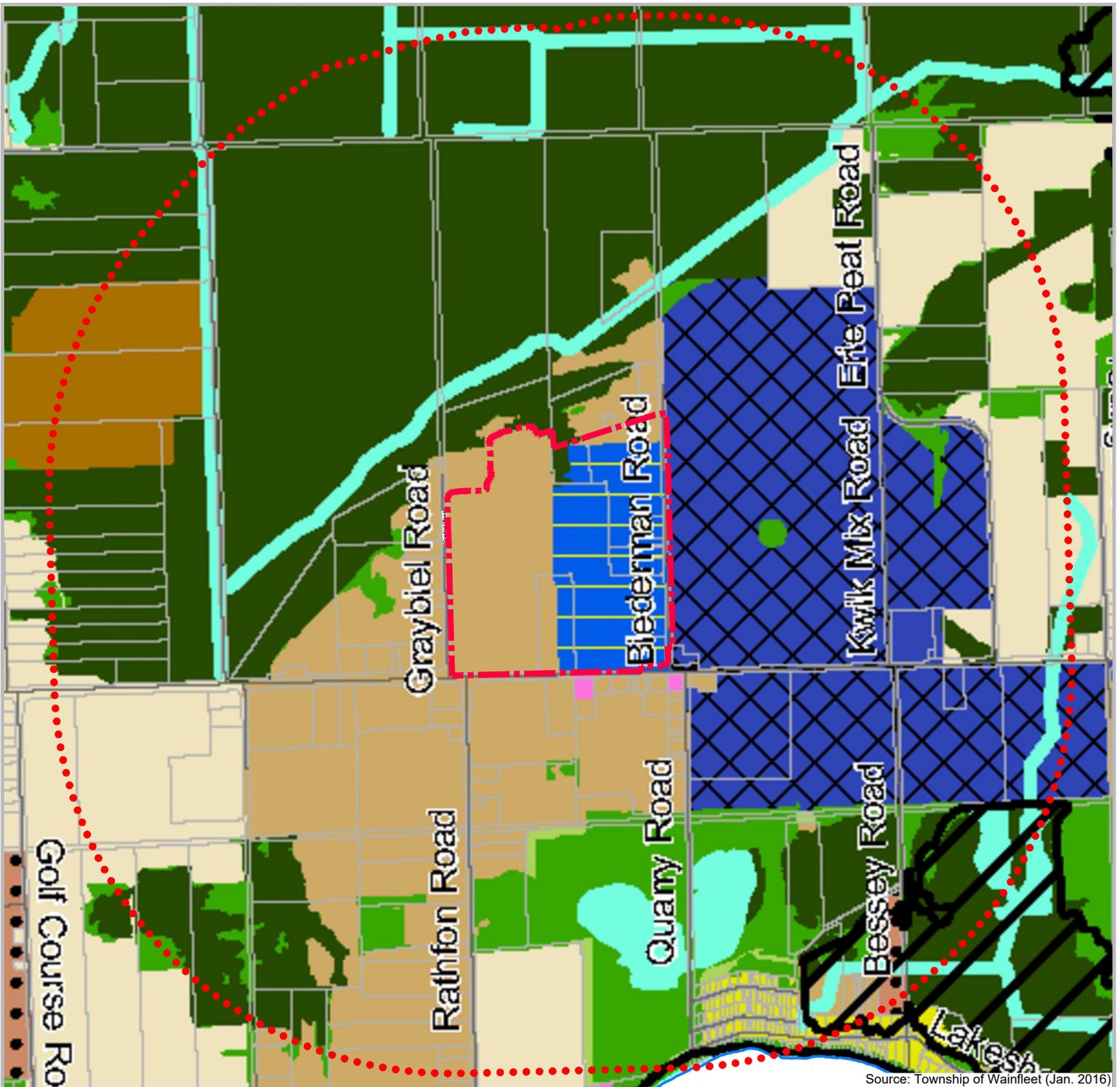
Waterford Sand & Gravel Limited
 Part of Lots 6 & 7, Concession 2
 Part of Road Allowance Between Lots 5 & 6,
 Concession 2,
 Township of Wainfleet
 Regional Municipality of Niagara

- Legend**
- Proposed Licensed Boundary
 - 120m Radius
 - 1,500m Radius
 - Existing Quarry
 - Conservation Area
 - Wooded Area (MNRF)
 - Wetland (MNRF)
 - Lakeshore Residential
 - Agricultural Field Crop
 - Non-Agricultural Field Use



Source:
 Air Photo - Google (2018)
 Wooded Area - MNRF (Ontario Geohub, 2018)
 Wetlands - MNRF (Ontario Geohub, 2022)
 Conservation Areas - Niagara Peninsula Conservation Authority (2021)
 Lakeshore Residential - Sch. B, Township of Wainfleet Official Plan (2016)

DATE: May 2022	
SCALE: NTS	
FILE: 0956C	
DRAWN: DGS/CAC	



Source: Township of Wainfleet (Jan. 2016)

Figure 10
**Township of Wainfleet
 Official Plan -
 Township Land Use
 (Schedule B)**

Waterford Sand & Gravel Limited
 Part of Lots 6 & 7, Concession 2
 Part of Road Allowance Between Lots 5 & 6,
 Concession 2,
 Township of Wainfleet
 Regional Municipality of Niagara

LEGEND

- - - - - Proposed Licensed Boundary
- Secondary Study Area

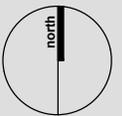
	Agricultural Area
	Rural Area
	Specialty Crop Area
	Lakeshore Residential
	Parks and Open Space
	Resort Recreational
	Tourist Commercial
	Institutional
	Industrial
	Extractive Industrial
	Poss Extra Industrial
	Hamlets
	Hazard Lands
	Fish Habitat
	Environmental Conservation Area (ECA)
	Environmental Protection Area (EPA)

DATE: May 2022

FILE: 0956C

SCALE: NTS

DRAWN: CAC



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