



# 3469 CONCESSION ROAD 1 UXBRIDGE, ON

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## Air Quality Assessment

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**Project Location:**

3469 Concession Road 1  
Uxbridge, ON

**Prepared for:**

Grainboys Holdings Inc.  
1435 Old Forest Road  
Pickering, ON L1V 1N8

**Prepared by:**

MTE Consultants Inc.  
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**September 13, 2019**

**MTE File No.: 43750-101**



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## 1.0 INTRODUCTION

MTE Consultants Inc. (MTE) was retained by Grainboys Holdings Inc. (GHI) to conduct a Preliminary Air Quality Assessment and Odour Screening Assessment for the proposed industrial development at 3469 Concession Road 1 in Uxbridge, Ontario (the “Site” or the “Facility”). The Site is a rectangular-shaped 36.34 hectare (ha) lot located in the west portion of the Township of Uxbridge. Refer to **Figure 1** for a Site Location Map.

Note: The Ontario Ministry of the Environment, Conservation and Parks (MECP) was previously named the Ontario Ministry of the Environment (MOE) and the Ontario Ministry of the Environment and Climate Change (MOECC). For ease of discussion in this report, “MECP” or “Ministry” is used to represent this provincial ministry and is inclusive of MOE and MOECC.

## 2.0 BACKGROUND

MTE understands that GHI is currently in the planning stages associated with the development/construction of a proposed grain milling and blending facility at the Site to replace their existing facility located at 240 Industrial Parkway South in Aurora, Ontario. According to a report produced by Zelinka Priamo Ltd. (ZPL) titled “Preliminary Planning Justification Report” dated January 26, 2016, the proposed Facility would comprise of a dry grain processing plant consisting of milling, blending and packing, warehousing, shipping, enclosed cleaning tower and office space with a total footprint of approximately 4,500 square meters (approximately 1.2% of the property).

Due to the location of the proposed development and recommendations in the D-6 Guidelines, the Regional Municipality of Durham (RMD) has requested that air quality studies for noise, odour and dust be completed to assess potential impacts from the Site to local existing and proposed sensitive land uses. MTE understands that the noise study will be completed by others.

## 3.0 SCOPE OF WORK

The purpose of this Preliminary Air Quality Assessment is to assess potential air quality impacts from dust and odour to local existing and proposed sensitive land uses. The scope of work for this assignment included the following:

- Review of “*Preliminary Planning Justification Report*” prepared by Zelinka Priamo Ltd. for Port Royal Mills, dated January 2016;
- Review of current operating conditions at the existing GHI facility located at 240 Industrial Parkway South in Aurora, Ontario;

- Review of publically available information related to the Site and surrounding properties (e.g. aerial photographs, local zoning by-law/schedules, MECP Access Environment database, National Pollutant Release Inventory (NPRI) online database);
- Identification and assessment of current and potential future land uses at neighbouring properties; and
- Review / discussion of best management practices that could be implemented at the Site.

No physical inspection of the Site or surrounding properties and no monitoring activities (i.e. air, odour or dust sampling) were conducted as part of this assignment.

Based on a preliminary assessment of the current and potential future property uses identified through aerial photography, “Google Street View” and Zoning Maps and in consideration of the MECP document “*Guideline D-6 – Compatibility between Industrial Facilities and Sensitive Land Uses*”, a review of actual and proposed activities within 300 metres of the Site (hereby referred to as the “Study Area”) was deemed appropriate for the purposes of this assignment. The Site location, boundary, and extents of the Study are illustrated on **Figure 1**.

MTE understands that ZPL is providing planning services for the proposed facility and that ZPL along with RMD will review/assess compliance with MECP D-6 Guidelines. MTE did not complete a detailed review of these documents or provide comment with respect to planning implications.

#### **4.0 RECORDS REVIEW**

MTE contacted a representative from GHI to review current operating conditions at the GHI facility at 240 Industrial Parkway South in Aurora, Ontario. Additionally, MTE reviewed the following publically available information:

- Zoning Maps: Township of Uxbridge and Town of Whitchurch-Stouffville;
- Aerial photography and street view available online;
- MECP Access Environment online mapping tool; and
- NPRI online database.

Pertinent information is summarized below.

#### **4.1 Current Operating Conditions – Aurora Facility**

GHI has operated at their existing facility in Aurora for the past 28 years. Approximately 10,000 tonnes of grain are handled annually at this facility. GHI has indicated that moving their operations from the current location to the proposed Site would allow GHI to expand to meet current production demands while also allowing for a greater diversity of process capabilities.

Based on discussions with GHI, MTE understands that a primary source of emissions generated from the existing facility is suspended particulate matter. Suspended particulate matter can be released to the natural environment via the loading/unloading of grains and finished products. Resulting air quality impacts can be reduced via procedural and engineered controls. For example, the current facility utilizes pressure and/or vacuum for pneumatic conveyance of product. Pneumatic conveyance will typically reduce fugitive emissions when compared to more conventional conveyor / gravity fed systems.

The proposed Facility is anticipated to discharge similar contaminants as the Aurora facility (e.g. suspended particulate matter and other contaminants such as by-products of combustion). Emission rates and resulting off-property point of impingement (POI) concentrations at the proposed Facility will depend on the locations of specific processes and operations and cannot be evaluated until a final design of the Facility is completed.

#### 4.2 Zoning Maps: Township of Uxbridge and Town of Whitchurch-Stouffville

The Site is located within the Corporation of the Township of Uxbridge. It is noted that the west portion of the Study Area extends beyond Concession Road 1 which serves as a boundary between the Corporation of the Township of Uxbridge and the Town of Whitchurch-Stouffville. As a result, Zoning Maps published by both townships were reviewed to assess land use designations within the Study Area.

For the purposes of this assessment, MTE reviewed the “Schedule A3” zoning map published by the Corporation of the Township of Uxbridge and the “Schedule 36 & 42” zoning maps published by the Town of Whitchurch-Stouffville for information pertaining to the Site and surrounding properties located within the Study Area. **Figure 2** and **Figure 3** illustrate the zoning information for the Site and Study Area.

The Site is designated as a Rural Zone (RU) according to the “Schedule A3” zoning map. A summary of land use designations for surrounding properties within the Study Area is provided below:

Direction	Land Designations within Study Area	Source Zoning Map
North	Rural Zone (RU), Rural Zone (RU-80), Environmental Zone (EP), and Rural Industrial Zone (RU-28).	Schedule A3
East	Rural Zone (RU), Environmental Protection Zone (EP), Environmental Protection Zone (EP-13), and Rural Zone (RU-28)	
South	Industrial Zone (M1-14), Rural Zone (RU), Environmental Protection Zone (EP)	

Direction	Land Designations within Study Area	Source Zoning Map
West	Rural Zone (RU), Flood Hazard (FH), Environmental (ENV), Oak Ridge Moraine (ORM)	Schedule A3, 36, and 42

There are no current vacant properties that are described as future residential zoning identified within the Study Area. The nearest zones which may allow for residential dwellings are the Rural Urban Zones (RU's) located adjacent to the north, south, and west of the Facility.

### 4.3 Aerial Photography and Street View

MTE reviewed aerial photography (Google Earth) from 2018 as well as Google Street View for information pertaining to the proposed Site and surrounding properties. The proposed Site comprises of a building structure in the center of the property with the remainder of the property comprising mostly open field and trees. A summary of surrounding properties within the Study area is provided below:

Direction	Description
North	<ul style="list-style-type: none"> <li>The property adjacent to the north comprises an agriculture field with a single dwelling and various outbuildings (approximately 220 m from the Site).</li> <li>Further to the north, beyond Durham Regional Hwy 47, are various commercial and industrial facilities with an assortment of outbuildings, and parking areas. The nearest building is located approximately 240 m from the Site which appears to be occupied by <i>Stanmore Equipment Ltd.</i>, a construction equipment supplier.</li> </ul>
East	<ul style="list-style-type: none"> <li>The property adjacent to the east comprises a residential dwelling surrounded by wooded areas (the residential dwelling is located approximately 100 m from the Site).</li> <li>A railway adjacent to the south-east of the Site.</li> </ul>
South	<ul style="list-style-type: none"> <li>The property adjacent to the south is used as an agricultural industrial facility occupied by <i>St. Lawrence Grains &amp; Farm Supply Ltd.</i> The facility comprises storage bins (silos) and outbuildings. It is noted that suspended particulate matter and by-products of combustion may be generated at this facility.</li> <li>A residential dwelling with various outbuildings is located approximately 250 m south of the Site.</li> </ul>
West	<ul style="list-style-type: none"> <li>The properties adjacent to the west comprises of agricultural fields, vacant land, and residential dwellings. Identified residential dwellings include: <ul style="list-style-type: none"> <li>Two residential dwellings located along York Durham Line (approximately 10 m and 50 m from the Site)</li> <li>Four residential dwellings located along Lincolnville Lane (approximately 120 m, 160 m, and 200 m from the Site)</li> <li>Two residential dwellings located along Tenth Line (approximately 140 m and 270 m from the Site)</li> </ul> </li> </ul>

Approximate locations of the buildings and residential dwellings identified during this review are illustrated on **Figure 4**.

#### **4.4 Access Environment Online Mapping Tool**

The MECP provides information on approvals and registration through Access Environment, which currently displays Environmental Compliance Approvals (ECA) (formerly referred to as Certificates of Approval), Renewable Energy Approvals (REA) and registrations on the Environmental Activity and Sector Registry (EASR) from December 1999 onward.

MTE reviewed the Access Environment Online Mapping tool for information pertaining to properties within 300 metres of the Site. Only one record was found, a Certificate of Approval (CofA) for an Environmental Compliance Approval registered to Load Lifter Manufacturing Ltd. at 3 Anderson Blvd, Stouffville, Ontario (approximately 240 metres north of the Site). The CofA was issued on May 20, 2014 and is related to a metal fabrication facility with operations including paint spraying and welding. Paint spraying and welding operations can potentially result in the discharge of VOCs and Suspended Particulate Matter emissions. It should be noted that the CofA does not include any conditions related to fugitive emissions. The location of this property is illustrated in **Figure 4**.

There were no other records identified for properties within 300 metres of the Site.

#### **4.5 National Pollutant Release Inventory**

The National Pollutant Release Inventory (NPRI) was established in 1992 and is legislated under the Canadian Environmental Protection Act (CEPA, 1999). The NPRI requires companies to report information on releases and transfers of pollutants to the Government of Canada on an annual basis. Only facilities that meet established reporting criteria are required to report to the NPRI. Pollutants from mobile sources such as cars and trucks, households, facilities that release pollutants on a smaller scale and certain sector activities, such as agriculture and education and some mining activities, are not included in the NPRI.

Environment Canada makes the information available to Canadians in an annual public report and maintains a detailed inventory that can be accessed and searched through an online database. MTE reviewed the NPRI for information pertaining to properties within 300 metres of the Site and no NPRI records were identified.

### **5.0 ODOUR SCREENING ASSESSMENT**

Under Ontario Regulation (O.Reg.) 1/17 – Activities Requiring the Assessment of Air Emissions; the proposed Facility will be required to complete an Odour Screening evaluation.

Based on correspondence with ZPL and GHI, MTE has determined that the relevant North American Industrial Classification System (NAICS) number for the proposed Facility is 311211 – Flour Milling and Malt Manufacturing. MTE understands that the proposed Facility will not incorporate cooking or drying of animal products, food frying, plastic extrusion and melting, or printing. Similarly, MTE understands that the proposed Facility will not undertake any wastewater treatment processes on Site.

The results of the records review indicate that the closest potential odour receptor (i.e. residential dwelling) is located approximately 10 metres to the west of the Site.

Based on information provided to MTE including the NAICS code, results of preliminary Odour Screening indicate that the proposed Facility will not be required to complete any additional actions related to odour for permitting purposes (i.e. preparation of a Best Management Practices Plan for Odour or Odour Control Report).

## 6.0 DISCUSSION AND BEST MANAGEMENT PRACTICES

MTE assessed potential air quality impacts relating to the proposed Facility at 3469 Concession Road 1 in Uxbridge, Ontario. The proposed Site is located in Rural Zoned area with the nearest residential dwelling located west of the Site.

The records review identified the following off-Site activities within 300 metres of the Site that represent a potential concern with respect to air quality or dust:

Location	Property Description	Approximate Distance from Site (m)	Potential Contaminant Discharges
3199 York Durham Line 30, Stouffville, Ontario	St. Lawrence Grains & Farm Supply Ltd.	60	Suspended particulate matter, Potential By-products of combustion (heating equipment)
3 Anderson Blvd, Stouffville, Ontario	Load Lifter Manufacturing Ltd.	240	VOCs, Suspended particulate matter

Based on the information collected by MTE during this assignment, the proposed Facility would likely qualify for registration in the Environmental Activity and Sector Registry (EASR). As part of the EASR registration a detailed assessment of air emissions (Emission Summary and Dispersion Modelling report), odour and noise sources (Acoustic Assessment report) would be required. EASR registration should be completed in conjunction with the detailed design of the Facility and must be completed prior to initiating operations.

Notwithstanding the above, MTE offers the following best management practices that should be considered in design:



- Emission sources should be located as far from the property boundaries and sensitive receptors as possible;
- Exhaust stacks should be located at a higher elevation than air intakes;
- Ground level exhausts should be minimized and discharge points should be vertical and unimpeded;
- Planting vegetation along the boundaries of the Site should be considered;
- Equipping building exhausts with particulate control systems (i.e. fabric filter baghouses);
- Enclosure or partial enclosure of shipping/receiving area(s); and
- Use of pneumatic conveyance systems as opposed to mechanical conveyor systems.

Due to the nature of the activities at the proposed Facility (e.g. loading/unloading, uncaptured process emissions, track-out and re-entrainment of material) there is potential for the release of fugitive dust emissions at the Site. GHI should consider preparing a Best Management Practices Plan for Fugitive Dust.

## 7.0 LIMITATIONS

Services provided by **MTE Consultants Inc.** (MTE) were conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the Environmental Engineering & Consulting profession. No other warranty or representation, expressed or implied, as to the accuracy of the information, conclusions or recommendations is included or intended in this report.

This report was completed for the sole use of MTE and their client. It was completed in accordance with the Scope of Work referred in the text. As such, this report may not deal with all issues potentially applicable to the Site and may omit issues, which are, or may be, of interest to the reader. Furthermore this report was completed by reviewing publically available records and communications with Grainboys Holdings Inc. (GHI). No physical inspection of the Site or surrounding properties and no monitoring activities (i.e. air, odour or dust sampling) were conducted as part of this assignment.

Any use which a third party makes of this report, or any reliance on, or decisions to be made based upon it, are the responsibility of such third parties. MTE accepts no responsibility for liabilities incurred by or damages, if any suffered by any third party as a result of decisions made or actions taken, based upon this report. Others with interest in the Site should undertake their own investigations and studies to determine how or if the condition affects them or their plans.

We trust the completed work meets your current requirements. If you have any questions or concerns, please do not hesitate to contact the undersigned directly at 519-743-6500.

Yours truly,

**MTE CONSULTANTS INC.**



*For* Robert Reaume, P. Eng.  
Division Manager, Environmental



Amitoj Khurana, E.I.T  
Environmental Engineer-in-training

ASK:apm

Attach.

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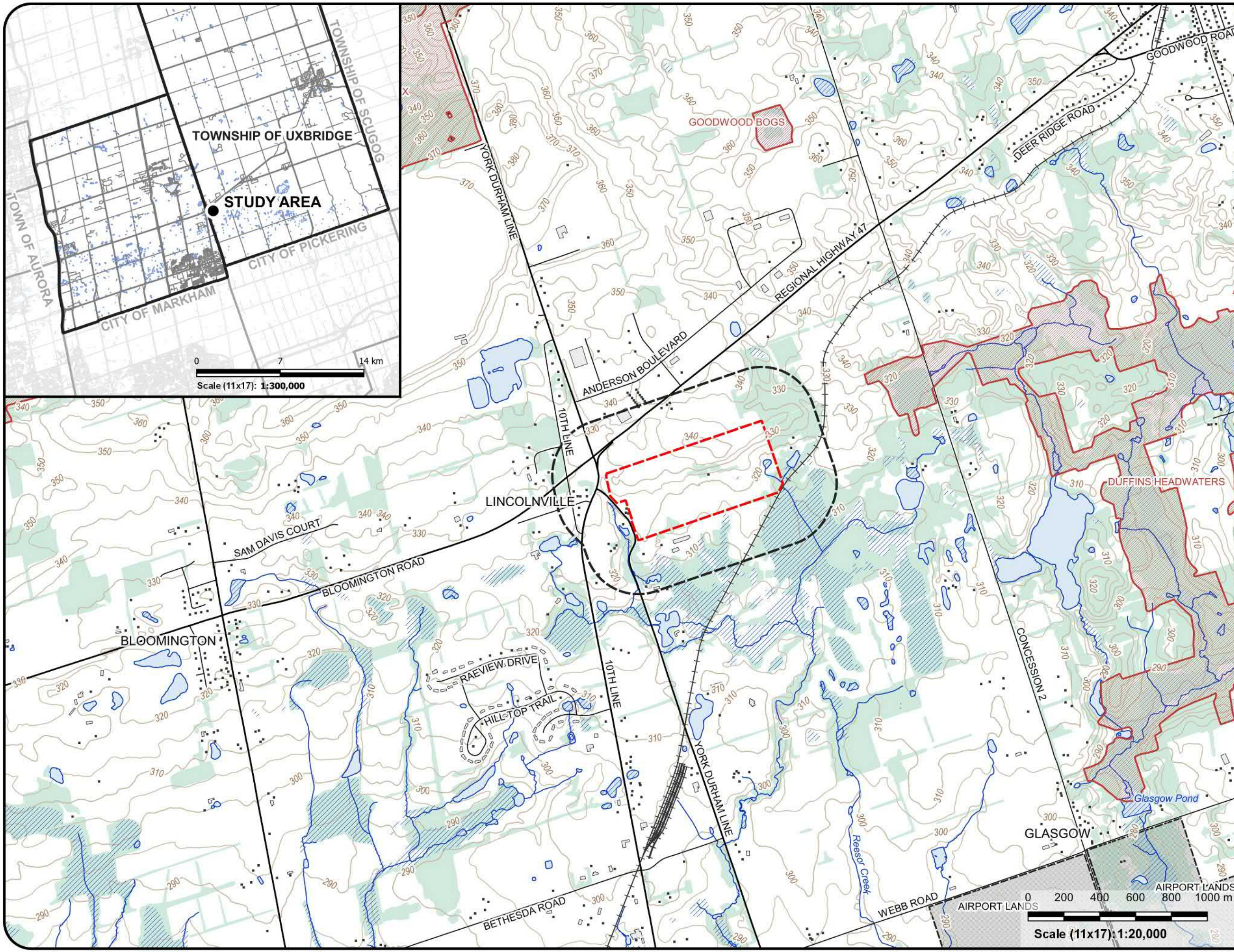
## 8.0 REFERENCES

The following list of references and sources were reviewed for the purposes of preparing this Study:

Reference / Source	Date
"Guideline D-6 Compatibility Between Industrial Facilities and Sensitive Land Uses" Environmental Planning & Analysis Branch, Ministry of the Environment and Climate Change.	July 1995
"Preliminary Planning Justification Report For Port Royal Mills" Zelinka Priamo Ltd.	January 28, 2016
Google Street View	June 2018
Aerial photographs, Google Earth	July 2018
Ontario Ministry of the Environment and Climate Change Access Environment (website)	August 8, 2019 (date of search)
Environment Canada National Pollutant Release Inventory (website)	August 8, 2019 (date of search)
Schedule A3, Zone Map, Corporation of the Township of Uxbridge	February 2018
Schedule 36 and 42, Zone Map, Town of Whitchurch-Stouffville	January 2019

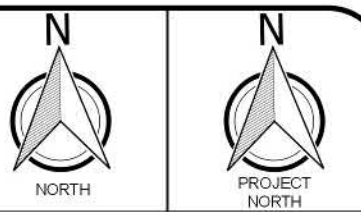


## FIGURES



0 7 14 km  
Scale (11x17): 1:300,000

0 200 400 600 800 1000 m  
Scale (11x17): 1:20,000



**Legend**

- Study Area
- Site Boundary
- Areas of Natural and Scientific Interest
- Building as Symbol
- Building to Scale
- Roads**
  - Arterial
  - Local
  - Railroad
- Elevation Contour (masl)**
  - Major
  - Minor
- Watercourse
- Wetland
- Waterbody
- Federal Land Other
- Wooded Area

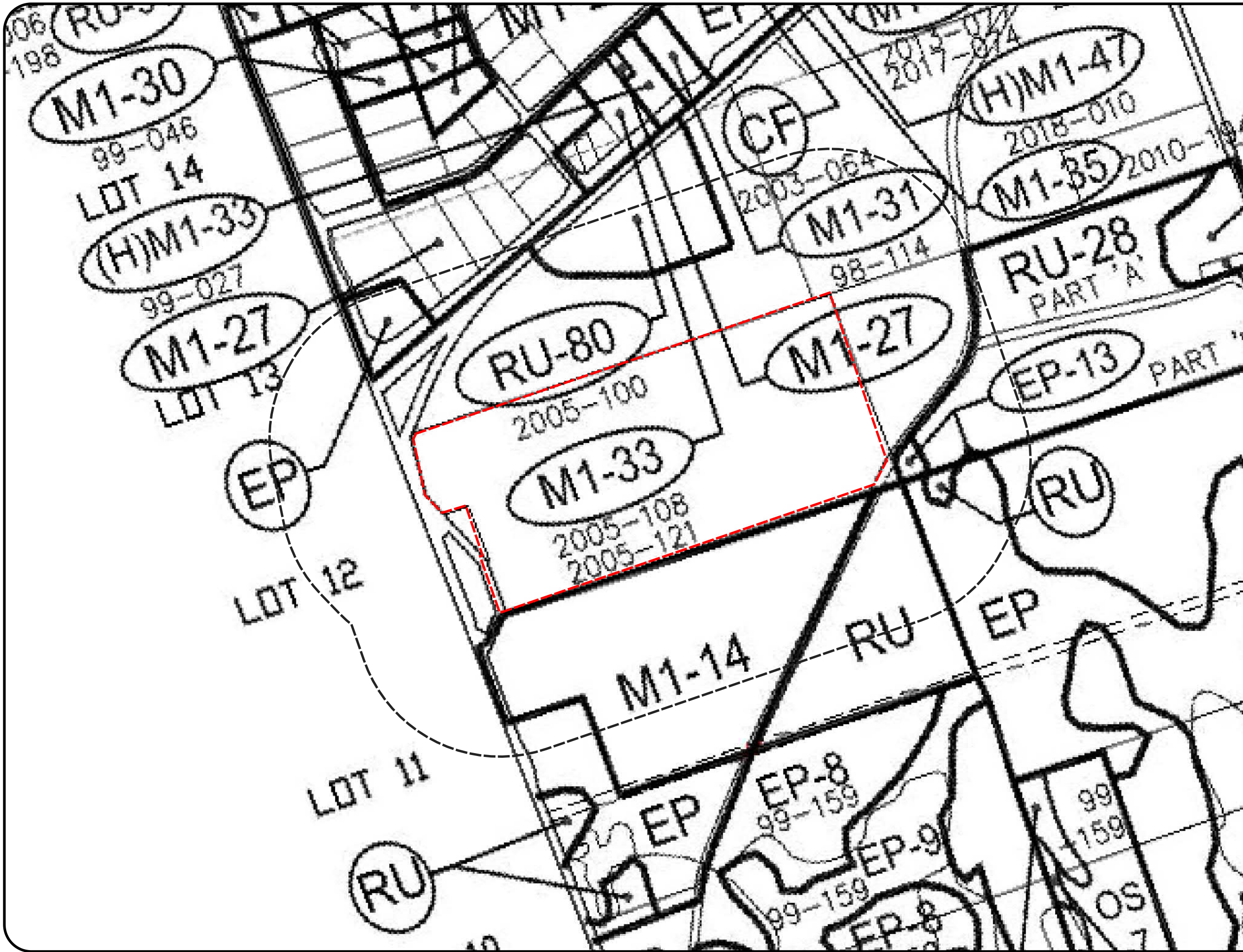
Data Sources:  
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Project CRS: NAD83 / UTM zone 17N



Ph. (519) 743-6500 www.mte85.com

Client	Grainboys Holdings Inc.
Project	Preliminary Air Quality Assessment
Site	3469 Con Road 1 Uxbridge, Ontario
Title	<b>Site Location Map</b>

Reviewed By	RMR	Project No	43750-101
Prepared By	FAH	Figure No	1
Drawn By	JKC		
Date	Sep. 2019		



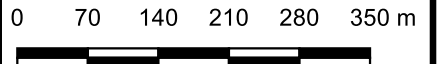
**Legend**

- Site Boundary
- Study Area (300m Buffer)
- Study Area

GENERAL ZONE CATEGORIES

- EP ENVIRONMENTAL PROTECTION ZONE
  - OS RECREATIONAL OPEN SPACE ZONE
  - RU RURAL ZONE
  - CF COMMUNITY FACILITY ZONE
  - RC RECREATIONAL CLUSTER ZONE
  - ER ESTATE RESIDENTIAL ZONE
  - M1 RURAL INDUSTRIAL ZONE
  - M3 RURAL RESOURCE EXTRACTION ZONE
  - M5 AGGREGATE PROCESSING ZONE
- Lands Affected By Freestanding By-law No. 90-39

Data Sources:  
Schedule 'A3' Zone Map Corporation of the Township of Uxbridge



Scale (11x17): 1:7,500

Project CRS: NAD83 / UTM zone 17N



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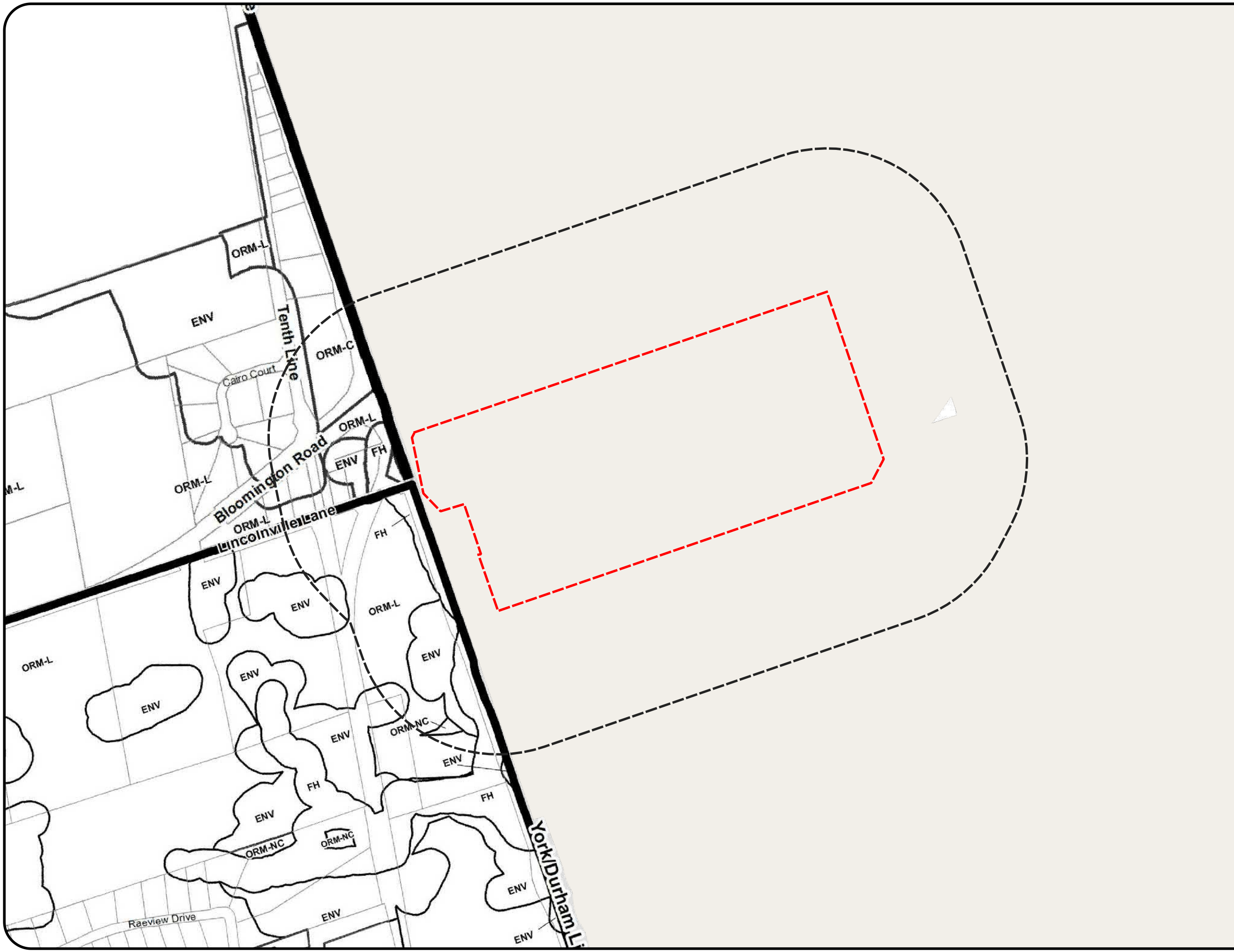
Client  
Grainboys Holdings Inc.

Project  
Preliminary Air Quality Assessment

Site  
3469 Con Road 1 Uxbridge, Ontario

**Township of Uxbridge  
Zoning Map**

Reviewed By	RMR	Project No	43750-101
Prepared By	FAH	Figure No	2
Drawn By	JKC		
Date	Sep. 2019		

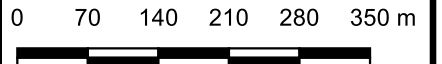


**Legend**

- Site Boundary
- Study Area (300m Buffer)

- ZONE DESCRIPTION**
- Section 4**  
 AG - Agricultural  
 ENV - Environmental  
 FH - Flood Hazard  
 ORM-C - Oak Ridges Moraine Countryside  
 ORM-L - Oak Ridges Moraine Linkage  
 ORM-NC - Oak Ridges Moraine Natural Core
- Section 5**  
 RPS - Residential Private Services  
 RV - Residential Village  
 R1 - Residential 1  
 R2 - Residential 2  
 R3 - Residential 3  
 R4 - Residential 4  
 RM1 - Residential Multiple 1  
 RM2 - Residential Multiple 2
- Section 5a**  
 RN1 - New Residential 1  
 RN2 - New Residential 2  
 RN3 - New Residential 3  
 RN4 - New Residential 4  
 RN5 - New Residential 5
- Section 6**  
 CM1 - Downtown Mixed Commercial  
 CM2 - Western Approach Mixed Commercial  
 CMB - Commercial Residential Mixed - Ballantrae  
 CG - General Commercial  
 CL - Local Commercial  
 CV - Village Commercial  
 CR - Recreational Commercial
- Section 7**  
 EBPEBP-G - Employment Business Park / - Gormley  
 EHEH-G - Employment Heavy / - Gormley  
 ELLEL-G - Employment Light / - Gormley  
 ED - Employment Disposal  
 EX - Employment Extraction
- Section 8**  
 I - Institutional  
 OS - Open Space  
 D - Development Reserve
- Section 9**  
 h - Holding Symbol  
 f - Flood Vulnerable  
 t - Temporary Use  
 w - Water Restriction  
 WDA - Waste Disposal Area

Data Sources:  
 Town of Whitchurch-Stouffville Zoning Bylaw 2010-001-ZO



Scale (11x17): 1:7,500

Project CRS: NAD83 / UTM zone 17N



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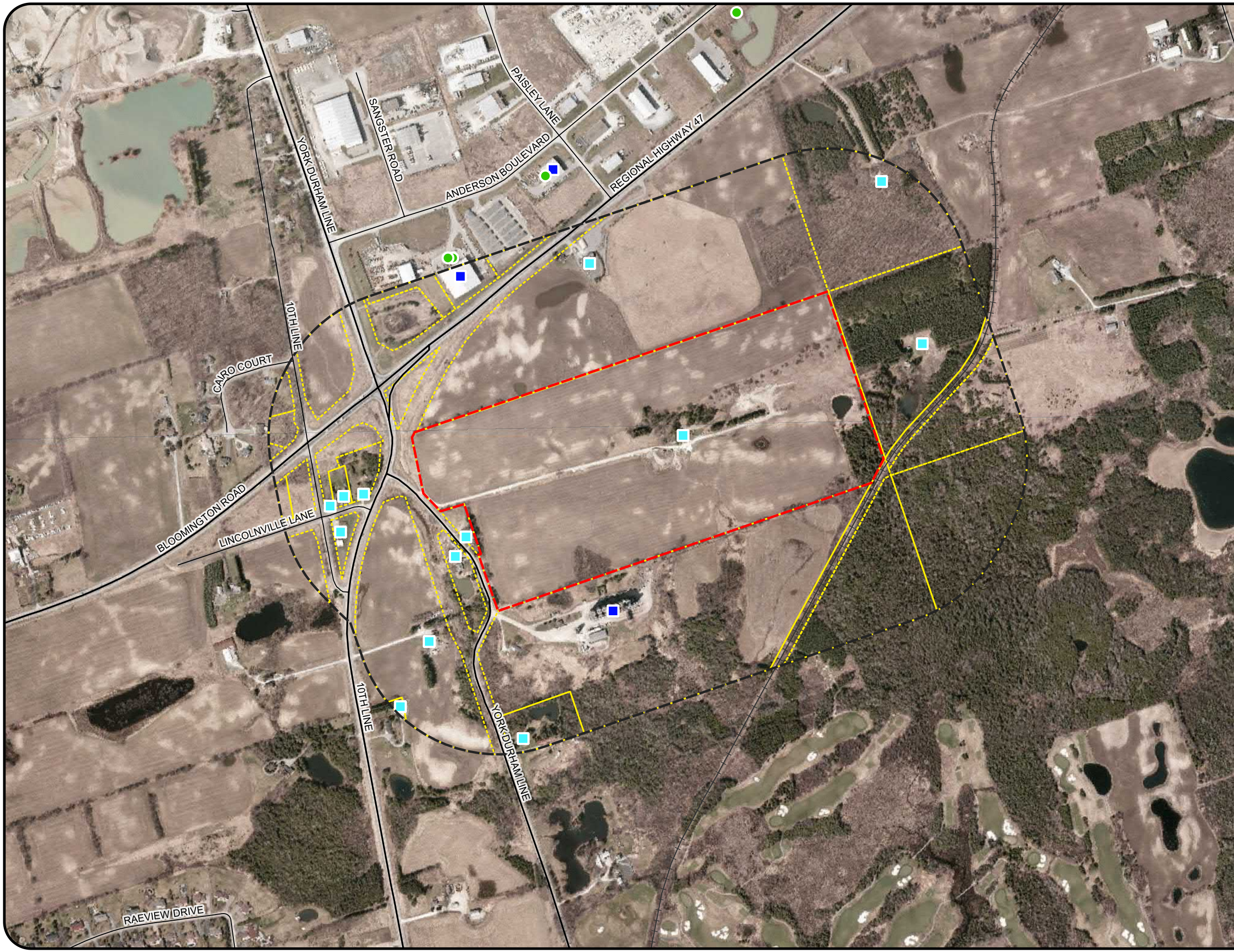
Client  
 Grainboys Holdings Inc.

Project  
 Preliminary Air Quality Assessment

Site  
 3469 Con Road 1 Uxbridge, Ontario

**Town of Whitchurch-Stouffville Zoning Map**

Reviewed By	RMR	Project No	43750-101
Prepared By	FAH	Figure No	3
Drawn By	JKC		
Date	Sep. 2019		



**Legend**

- Site Boundary
- Study Area
- Approximate Property Boundaries
- Observed Property Use**
- Industrial
- Residence
- MOE Access Environment Entries**
- ECA
- Roads**
- Arterial
- Local
- ++ Railroad

Data Sources:  
 Contains information licensed under the Open Government License Ontario

0 70 140 210 280 350 m

**Scale (11x17): 1:7,500**

Project CRS: NAD83 / UTM zone 17N

Client		Grainboys Holdings Inc.	
Project		Preliminary Air Quality Assessment	
Site		3469 Con Road 1 Uxbridge, Ontario	
<b>Site Layout</b>			
Reviewed By	RMR	Project No	43750-101
Prepared By	FAH	Figure No	<b>4</b>
Drawn By	JKC		
Date	Sep. 2019		