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**TOWN OF MINTO**

**MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT  
FOR EXPANSION OF THE HARRISTON INDUSTRIAL PARK  
(COMMUNITY OF HARRISTON)**

**SCREENING REPORT**

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**SCREENING REPORT**

July 12, 2017

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**Appendix A Planning Related Documents**

**Appendix B Archaeological Assessment: Stage 1 & 2 Report**

**Appendix C Consultation Program**

**Appendix D Servicing Design Brief**

**TOWN OF MINTO**  
**CLASS ENVIRONMENTAL ASSESSMENT**  
**HARRISTON INDUSTRIAL PARK: ROAD & SERVICING EXTENSIONS**  
**ENVIRONMENTAL SCREENING REPORT**

## **1.0 INTRODUCTION**

### **1.1 Purpose of the Report**

The Town of Minto initiated a Class Environmental Assessment in October 2013 to evaluate the potential impacts of constructing new municipal road extensions within the Harriston Industrial Park to service lands planned for future development. The investigation also evaluated impacts associated with the installation of full municipal services within the planned road allowances. The process followed the procedures set out in the Municipal Class Environmental Assessment (Class EA) document, dated June 2000, as amended in 2007 & 2011. B. M. Ross and Associates Limited (BMROSS) was engaged to conduct the Class EA process on behalf of the proponent.

The purpose of this report is to document the Class EA planning and design process followed for this project. The report includes the following major components:

- An overview of the general project area.
- A summary of the deficiencies associated with the existing service infrastructure.
- A description of the alternative solutions considered for resolving the defined problems.
- A synopsis of the decision-making process conducted to select a preferred alternative.
- A detailed description of the preferred alternative.

### **1.2 Municipal Class Environmental Assessment (Class EA) Process**

Municipalities must adhere to the Environmental Assessment Act of Ontario (EA Act) when completing road, sewer or waterworks activities. The Act allows the use of Class Environmental Assessments for most municipal projects. The Municipal Class Environmental Assessment is an approved planning document which describes the process that proponents must follow in order to meet the requirements of the EA Act. The Class EA approach allows for the evaluation of alternatives to a project, and alternative methods of carrying out a project, and identifies potential environmental impacts. The process also involves mandatory requirements for public input.

The Class EA process is a method of evaluating projects which have the following important characteristics in common:

- They are recurring.
- They are usually similar in nature.
- They are usually limited in scale.
- They have a predictable range of environmental effects.
- They are responsive to mitigating measures.

If a Class EA planning process is followed, a proponent does not have to apply for formal approval under the EA Act. The development of the Class EA process for this project has followed the procedures set out in the Class EA document. Figure 1.1 presents a graphical outline of the procedures.

The Class EA planning process is divided into these five phases:

- Phase 1 – Problem or opportunity identification.
- Phase 2 - Evaluation of alternative solutions to the defined problems/opportunity and selection of a preferred solution.
- Phase 3 - Identification and evaluation of alternative design concepts in selection of a preferred design concept.
- Phase 4 - Preparation and submission of an Environmental Study Report (ESR) for public and government agency review.
- Phase 5 - Implementation of the preferred alternative and monitoring of any impacts.

Throughout the Class EA process, proponents are responsible for having regard for these principles of environmental planning:

- Consultation with affected parties throughout the process.
- Examination of a reasonable range of alternatives.
- Consideration of effects on all aspects of the environment.
- Application of a systematic methodology for evaluating alternatives.
- Clear documentation of the process to permit traceability of decision-making.

### **1.3 Classification of Project Schedules**

Projects are classified to different project schedules according to the potential complexity and the degree of environmental impacts that could be associated with the project. There are four levels of schedules:

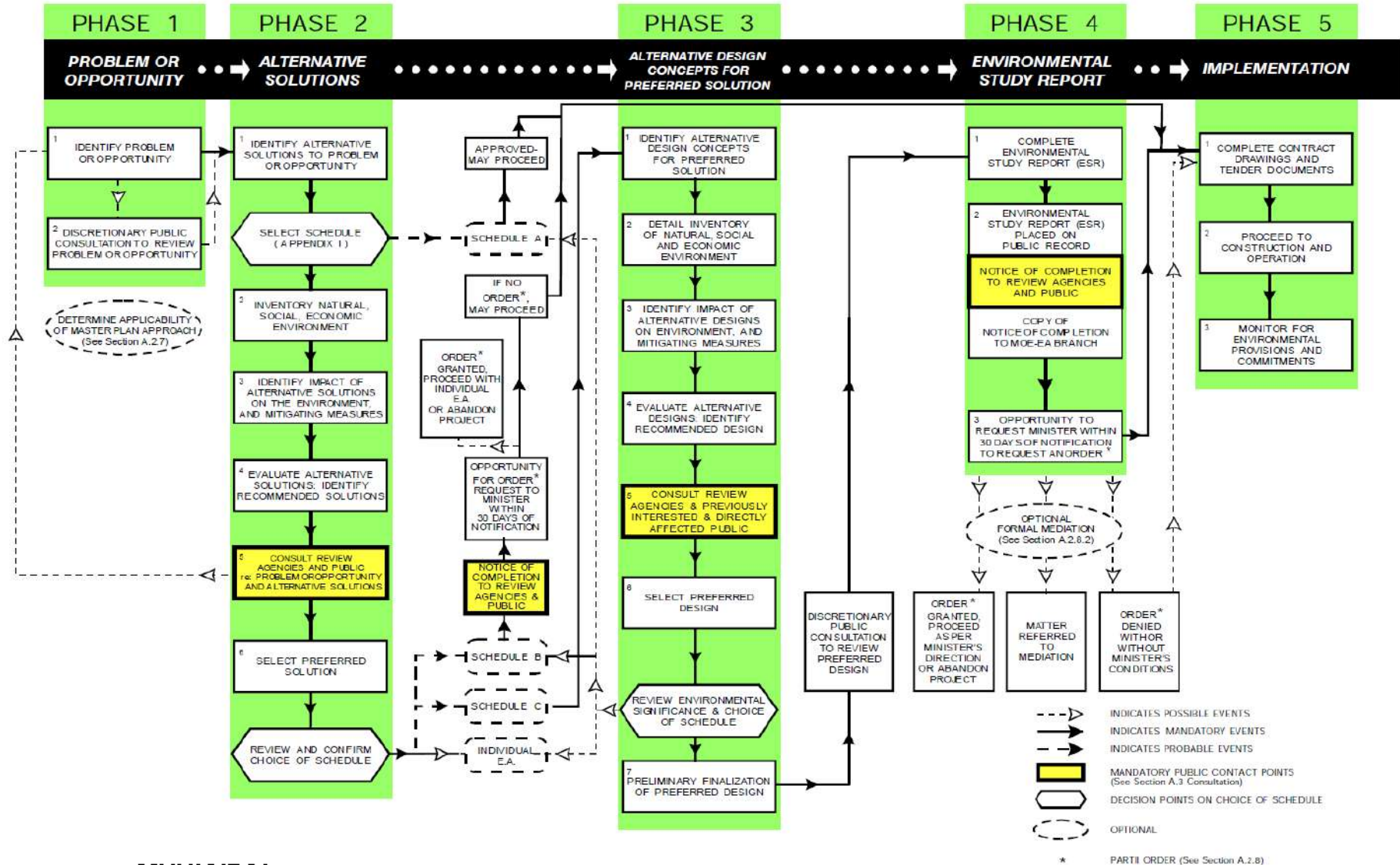
- Schedule A – Projects that are approved with no need to follow the Class EA process.
- Schedule A+ – Projects that are pre-approved but require some form of public notification.
- Schedule B – Projects that are approved following the completion of a screening process that incorporates Phases 1 and 2 of the Class EA process, as a minimum.
- Schedule C – Projects that are approved subject to following the full Class EA process.

The Class EA process is self-regulatory and municipalities are expected to identify the appropriate level of environmental assessment based upon the project they are considering.

### **1.4 Mechanism to Request a Higher Level of Environmental Assessment**

Under the terms of the Class EA document, the requirement to prepare an individual environmental assessment for approval is waived. However, if it is found that a project going through the Class EA process has associated with it significant environmental impacts, a person/party may request that the proponent voluntarily elevate the project to a higher level of environmental assessment. If the proponent declines, or if it is believed that the concerns are not properly dealt with, any individual or organization has the right to request that the Minister of the Environment and Climate Change make an order for the project to comply with Part II of the Environmental Assessment Act which addresses individual environmental assessments. This request must be submitted to the Minister within 30 days of the publication of the Notice of Completion of the Class EA process.

**NOTE:** This flow chart is to be read in conjunction with Part A of the Municipal Class EA



## **2.0 CLASS EA FRAMEWORK**

### **2.1 General Approach**

The Town of Minto initiated a formal Class EA process in October 2013 to define and evaluate alternative solutions for resolving servicing deficiencies and evaluating opportunities to expand, with the Harriston Industrial Park. The associated investigations followed the environmental screening process prescribed for Schedule B projects under the Class EA document. In general, the screening process required to conduct a Class EA incorporates these primary components:

- i. Background Review
- ii. Problem/ Opportunity Definition
- iii. Identification of Practical Solutions
- iv. Evaluation of Alternatives
- v. Selection of a Preferred Alternative
- vi. Publish Screening Report and Project Implementation

Figure 2.1 illustrates the general tasks associated with the process.

### **2.2 Background Review**

A background review was carried out to obtain a general characterization of the project area and to identify those factors that could influence the selection of alternative solutions to the defined problems.

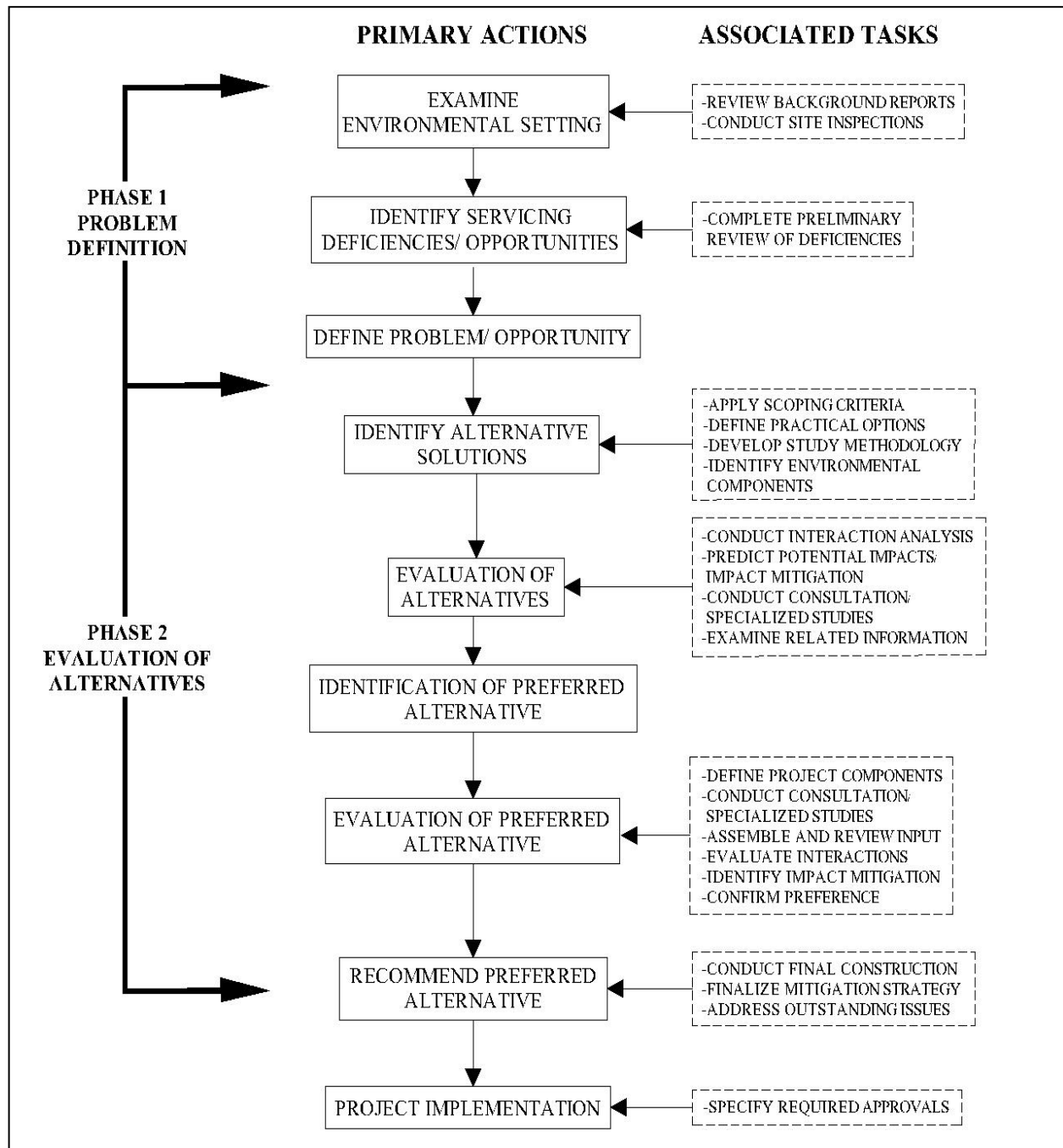
The background review for this Class EA process incorporated these activities:

- Assembly of information on the existing infrastructure and the environmental setting.
- Review of servicing deficiencies at the project site.
- Preliminary assessment of the identified deficiencies and potential remediation.

A desktop analysis of the project setting was completed as part of the background review process. The following represent the key sources of information for this analysis:

- BMROSS. Class Environmental Assessment for Sewage System Improvements: Community of Harriston.
- Chapman, L.J. and Putnam, D.F. *The Physiography of Southern Ontario*.
- Ministry of Natural Resources. Natural Heritage Information Centre website.
- Government of Canada. Species at Risk Public Registry website.
- Town of Minto. Files and discussions with staff.

**Figure 2.1**  
**Class EA Schedule B Screening Process and Related Tasks**



## **2.3 Project Study Area**

### **(a) Town of Minto**

The Towns of Harriston and Palmerston, the Village of Clifford and the Township of Minto amalgamated to form the Town of Minto in January 1999. The new Town has a population of more than 8,500 permanent residents and a land base of approximately 300 km<sup>2</sup>. In general, Minto is comprised of a number of small urban centres dispersed throughout a predominately rural landscape. Minto is located in the northwest corner of Wellington County, abutting the counties of Huron, Bruce and Grey. The Town is situated within a predominately rural region of Midwestern Ontario, serving as a focal point for the surrounding agricultural community. Figure 2.2 illustrates the general location of the Town of Minto and the community of Harriston.

### **(b) Community of Harriston**

Harriston represents one of the larger urban settlements in Minto with an estimated population of approximately 2,000 persons. The community is located at the centre of the municipality, at the intersection of Provincial Highways No. 9 and No. 89. The community is predominately a residential centre with an established commercial core and an expanding industrial sector. Harriston also provides a variety of facilities for local residents and the surrounding region including an arena, community centre, fire hall, elementary school and middle school. The community is generally bisected by the Maitland River, which meanders from northeast to southwest through the urban centre and includes a significant portion of flood prone lands in the west portion of the settlement.

## **2.4 Environmental Setting**

### **(a) Existing Natural Features**

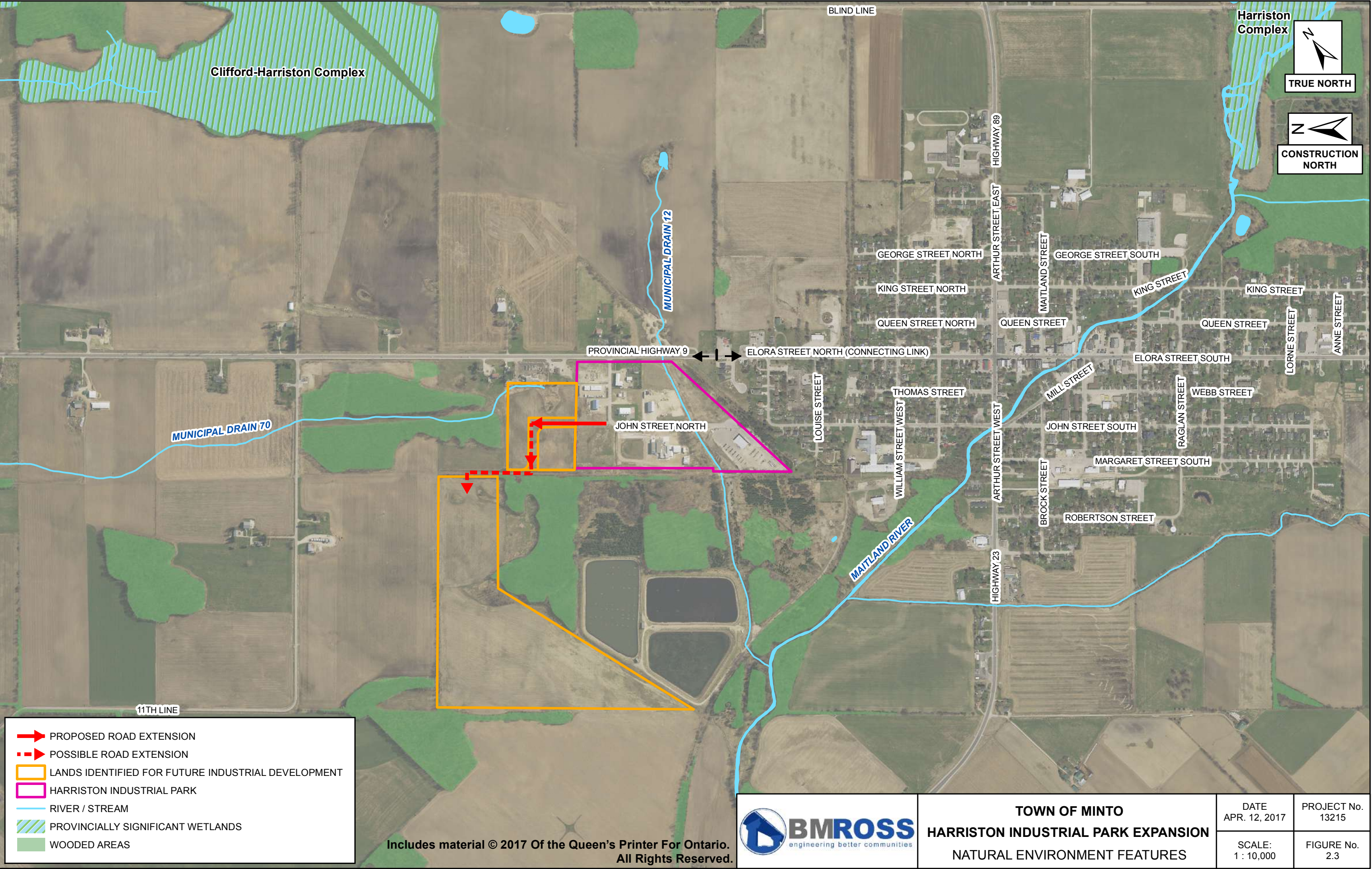
The community of Harriston is located within the Maitland River watershed, which discharges to Lake Huron at Goderich some 200 km downstream. As discussed, the community is located within a predominantly rural landscape and is surrounded on all sides by actively farmed agricultural lands. Natural areas within the urban portion of Harriston are limited to the Maitland River corridor and flood prone lands in the community's southwest corner, adjacent to the waste water treatment plant (WWTP).

The Ontario Ministry of Natural Resources and Forestry's Natural Heritage Information Centre database was consulted to verify the current status of significant features in the vicinity of the project study area. Utilizing a jurisdictional search of the Harriston area, one Provincially Significant Wetland Complex was identified within the immediate vicinity of the project area which is illustrated on Figure 2.3 and described briefly below;









PROPOSED ROAD EXTENSION

POSSIBLE ROAD EXTENSION

LANDS IDENTIFIED FOR FUTURE INDUSTRIAL DEVELOPMENT

HARRISTON INDUSTRIAL PARK

RIVER / STREAM

PROVINCIALY SIGNIFICANT WETLANDS

WOODED AREAS

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**BMROSS**  
engineering better communities

**TOWN OF MINTO**

**HARRISTON INDUSTRIAL PARK EXPANSION**

NATURAL ENVIRONMENT FEATURES

DATE APR. 12, 2017	PROJECT No. 13215
SCALE: 1 : 10,000	FIGURE No. 2.3



- **Clifford-Harriston Wetland Complex:** Located northeast and northwest of Harriston, the Clifford-Harriston Complex is a provincially significant wetland feature approximately 2,730 ha in size and is generally composed of 96% swamp, 2.5 % marsh and 1.5 % bog. The complex is composed of 30 individual wetlands with the closest wetland feature located approximately 0.9 km from the project study area.

## (b) Species at Risk Habitat

Two categories of Species at Risk were researched in conjunction with this project. The first are species protected through Federal Legislation; Canada's Species at Risk Act (SARA). The second category represents species identified as rare, threatened or endangered by the Province of Ontario. These species are tracked by the Ministry of Natural Resources and are documented on the Ontario Natural Heritage Information Centre (NHIC) web site. To protect the exact location of an identified species, both sites utilize range maps for identification purposes, which provide a large buffer around the actual species location. A summary of species at risk potentially present within the project study area are displayed on Tables 2.1 and 2.2.

### (i) Provincial Species at Risk – Endangered Species Act (ESA)

A search of the NHIC website revealed the potential presence of the following species within the project study area.

**Table 2.1**  
**Possible Provincial Species at Risk**

Species Name	Common Name	Species Type	Sighting	S Rank*
<i>Sistrurus catenatus</i>	Massasauga	Reptile	1962	S3
<i>Monarda didyma</i>	Scarlet Beebalm	Plant	1925	S3
<i>Chelydra Serpentine</i>	Snapping Turtle	Reptile	2004	S3

- \* **S1: Critically Imperiled**—Critically imperiled in the nation or state/province because of extreme rarity (often 5 or fewer occurrences).  
**S2: Imperiled**—Imperiled in the nation or province because of rarity due to very restricted range, very few populations (often 20 or fewer).  
**S3: Vulnerable**—Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer).  
**S4: Apparently Secure**—Uncommon but not rare; some cause for long-term concern due to declines or other factors.  
**S5: Secure**—Common, widespread, and abundant in the nation or state/province

## (ii) Federal Species at Risk (SARA)

A search of the Environment Canada Species at Risk website identified the following Schedule 1 species that have possible habitat in the vicinity of the project site.

**Table 2.2**  
**Possible Federal Species at Risk within the Project Study Area <sup>1</sup>.**

Component	Endangered	Threatened	Special Concern
<b>Mammals</b>	American Badger jacksoni subspecies	Grey Fox	-
<b>Birds</b>	Henslow's Sparrow, Northern Bobwhite	Least Bittern	Yellow-Breasted Chat virens subspecies
<b>Reptiles &amp; Amphibians</b>	Spotted Turtle		Milksnake, Eastern Ribbon Snake (Great Lakes Pop'n)
<b>Fishes</b>	-	-	-
<b>Lepidopterons</b>	-	-	Monarch
<b>Plants, Lichens, Moss</b>	American Ginseng, Butternut	-	Hill's Pondweed

Notes: 1. Defined by Schedule 1, Species at Risk Act

Land uses within the proposed service area are currently in active agricultural production and therefore contain little natural habitat. Lands abutting the proposed industrial expansion have been reforested and naturalized, providing a wide variety of high quality habitat for natural species potentially located within the areas researched in conjunction with the Class EA. It is therefore unlikely that any of the species identified in Tables 2.1 or 2.2 will be disturbed in conjunction with the proposed road and servicing extensions.

## (c) Breeding Bird Habitat

The most recent Atlas of the Breeding Birds of Ontario was referenced to identify potential species within the project study area. Proposed construction activities would be located within the geographic survey area entitled Square 17NJ06. A total of 48 birds, including species such as the Hooded Merganser, Northern Harrier, Great Horned Owl and Hairy Woodpecker have confirmed breeding status in this survey region. An additional 21 species were categorized as probable and 17 as possible, in regards to their breeding status.

The survey square extends over 100 square km and includes key habitat for the identified species, such as forests in all stages of growth, natural riverine areas and wetlands. The project study area forms a relatively small portion of this region (~5 ha) and includes limited habitat opportunities, as a majority of the subject lands are actively cultivated and are largely devoid of natural vegetation.

#### (d) Physiography and Soils

Table 2.3 summarizes the general physiographic features and soils evident in the vicinity of the subject property.

**Table 2.3**  
**Physiographic Features and Soil Types**

<b>Feature</b>	<b>General Characteristics</b>
Physiography	<ul style="list-style-type: none"><li>• Situated within the Dundalk Till Plain physiographic region which extends 2,395 km<sup>2</sup> across the Counties of Dufferin, Grey and Wellington.</li><li>• The till plain evident in the region is characterized as gently undulating with areas scored by shallow troughs (flutings). The plain is also populated by swamps/bogs and by poorly drained depressions.</li><li>• The till in the Wellington County portion of the formation is predominately comprised of loams or silt loams.</li></ul>
Soils and Drainage	<ul style="list-style-type: none"><li>• Soils in the study area are classified as Huron Clay Loam; a series of the Grey-Brown Podzolic soil group. These till loams are characterized as heavily textured limestone shale till. The series exhibits good drainage characteristics.</li><li>• Surface drainage is primarily from west to east towards the Maitland River. Portions of the existing lands also drain towards two Municipal Drains, Drain No. 70 to the north and Drain No. 12 to the east.</li></ul>

## 2.5 Project Study Area Description

### (a) Project Site

The Harriston Industrial Park is currently situated on lands described as Part of Lot 83, Concession D in the Community of Harriston. The park fronts Elora Street North (Highway 9), with site access provided via Hutchison Street and John Street. A number of existing industrial/commercial operations are situated within the park including three construction/building contractors, a poultry processing plant, a communications equipment manufacturer, a hydro sub-station and a car wash. A number of smaller parcels remain to be developed although most have been purchased in anticipation of development. Figure 2.4 includes site photographs of the existing Industrial Park site.

### (b) Proposed Industrial Park Expansion

The Harriston Industrial Park currently contains several vacant lots ranging in size from 1.1 ha to 0.5 ha. Although vacant, the lots have been purchased and are anticipated to be developed in the next 1 - 2 years. For this reason, two adjacent municipally-owned parcels have been identified for future industrial development.

**Figure 2.4: Site Photos**



**View looking north along John Street from current point of termination ▲**

**View looking south toward John Street from 11 Acre Abutting site ▼**



The first is an 11 acre parcel located immediately north of the existing industrial park. An additional 55 acre parcel is also available for future industrial development west of the 11 acre parcel on lands located adjacent to the Harriston wastewater treatment facility. Two new roads would need to be established to provide street access to these parcels. The first road would extend northerly from the intersection of Hutchison and John Street to service the 11 acre site. A second road would be extended west from this point to service the additional 55 acres. The roads would be constructed to a rural municipal standard and would incorporate an asphalt surface. Municipal services, including watermain, sanitary, and roadside ditches would also be installed within the new road allowances. Figure 2.5 illustrates the two parcels of land identified for future industrial development.

### **(c) Planning Act Considerations**

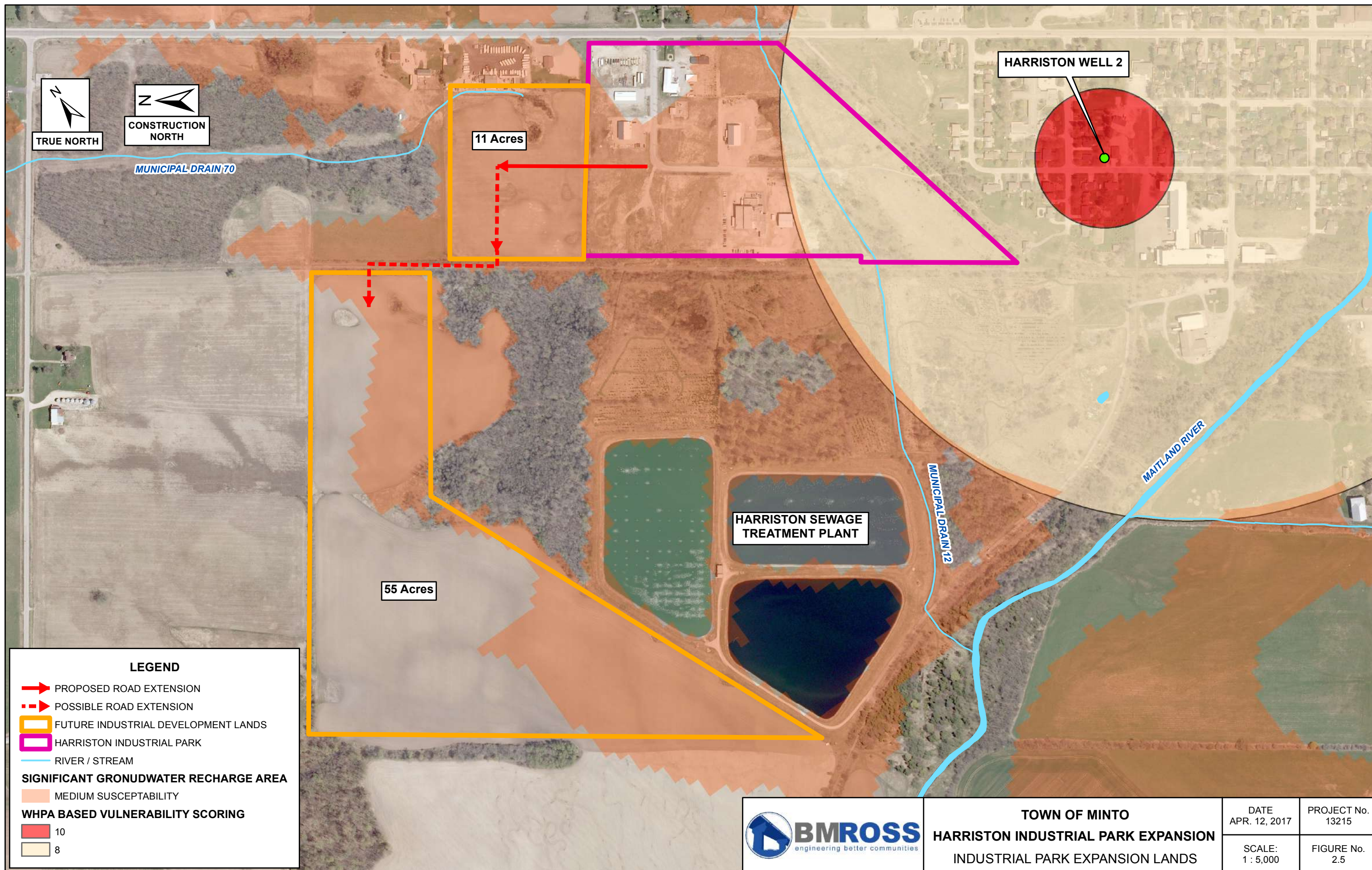
Lower tier municipalities in the County of Wellington, such as the Town of Minto, use the County of Wellington Official Plan as their guiding document for planning matters. Schedule A5-2 of the Wellington County Official Plan (1999) illustrates land use designations within the Community of Harriston (Appendix 'A'). The existing industrial park, as well as additional lands located to the north and northwest have been designated for industrial development.

Schedule 'A' Map 3 of the Minto Zoning By-Law (Appendix 'A'), shows current land uses in the community of Harriston. The existing Industrial Park is zoned M1 – Industrial. The 11 acre potential expansion lands located directly north are zoned M1- 40 (H) which is a site specific industrial zone with a holding provision attached to it. The holding provision identifies deficiencies with the parcel which must be addressed before development can proceed. The deficiencies include completion of a Stage 1 & 2 Archaeological Assessment, completion of suitable stormwater management plan for the subject lands and the possible completion of noise and vibration studies to address potential impacts for adjacent sensitive land uses.

A Stage 1 & 2 Archaeological Assessment was completed for the 55 acre and 11 acre parcels as part of the class EA process and a stormwater management plan was developed as part of the Class EA preferred alternative for use of the subject lands. Based upon consultation with the Wellington County Planning Department, it will be determined if noise and vibration studies are required once a site specific use is identified for individual parcels within the 11 acre site.

The 55 acre site, which is situated west of the 11 acre parcel, beyond the former rail line, is currently zoned future development. Since the site is designated for industrial development in the Wellington County Official Plan schedule, the future development zone would be changed when a site specific Industrial use for the lands is proposed.







#### **(d) Source Water Protection**

The three municipal wells servicing the community of Harriston were examined in conjunction with the Source Water Protection program undertaken by the Ausable Bayfield Maitland Valley Source Water Protection Region. The goal of the program is to protect drinking water sources from potential threats and risks associated with pre-existing or planned activities. Figure 2.5 illustrates the location of the proposed industrial expansion lands in relation to the well head protection areas (WHPA's) and other vulnerable areas mapped for the program. As shown on mapping, portions of the proposed road extensions, as well as future development lands identified for expansion of the industrial park, are located within some of these vulnerable areas. To address potential risks to drinking water sources, site specific policies may need to be developed for individual site uses as they are proposed within the expanded industrial park lands.

### **2.6 Existing Sewage Infrastructure**

#### **(a) Sewage Collection System**

A municipally owned and operated sewage system was constructed in Harriston in the mid-1960's consisting of a gravity collection system serving a portion of the community, two sewage pumping stations (SPS's) and a 3-celled facultative lagoon. Through the 1960's and 70's the collection system was gradually extended to the balance of the community. A major upgrading of the wastewater treatment facilities (WWTP) and replacement of the Main SPS took place in the early 1980's. At that time the treatment facility was modified to increase storage volume and an aeration system, facilities for phosphorus removal, and a stream flow proportional discharge system were added.

#### **(b) Sewage Pumping Stations**

Sewage flows generated within the urban limits of Harriston are conveyed by gravity to one of five key sewage pumping stations servicing various quadrants of the community. A small SPS is located on Robertson Street which services the southeast corner of Harriston. In 1991 a small sewage pumping station was constructed near the westerly limits of Harriston, within the Industrial Park. This station, referred to as the Industrial Park SPS, receives flows from adjacent land uses and conveys them to the east, where they discharge to the existing gravity collection system. Another secondary SPS, referred to as the Young Street SPS, is located at the intersection of Young and King Streets in the northeast quadrant. Flows from the north and northeastern portion of the community flow by gravity to this facility, where they are pumped by forcemain across the Maitland River into the gravity collection system flowing to the Main SPS which is located near the southerly limit of William Street. The Main SPS receives gravity flows conveyed from the secondary pumping stations (Robertson St. SPS, Young Street SPS and Industrial Park SPS) as well as gravity flows from the remainder of the community. Sewage is then pumped via forcemain to the WWTP. Following treatment of the sewage within the facility, effluent is discharged to the Maitland River.

### (c) Industrial Park Sewage Pumping Station Upgrades

As discussed, there are five key sewage pumping stations currently servicing the community of Harriston; the Main (William Street) SPS, the Robertson Street SPS, the Young Street SPS and the Industrial Park SPS, pictured below. The Industrial Park SPS was constructed in 1991 to service land uses in the northwest portion of the community, primarily within the industrial park. Future development areas located east of Highway No. 9 were also considered in the design of the existing station. The original facility was a small submersible station located on the west side of John Street North equipped with two 7.5 kW submersible sewage pumps. Each pump had a rated capacity of 10.0 L/s at 10.0 meters total dynamic head (TDH). The station's wetwell has an inside diameter of approximately 3.0 m and an overall depth of 9.0 m.

The forcemain from this pumping station originally consisted of approximately 200 m of 150 mm diameter pipe which discharged to the gravity collection system further south on John Street. The SPS was not equipped with a fixed diesel generator set, which acts as an alternative power source during extended power outages.



Lands located on the east side of Provincial Highway No. 9, northeast of the Industrial Park SPS, have recently been identified for future residential development. Servicing of the subject lands can best be accommodated by extending a gravity sewer southwest from the development site to the Industrial Park facility. Wet well capacity at the pumping station is sufficient to handle anticipated flows from the proposed residential development, however upgrading of the existing pumps and forcemain would be necessary. Upgrades to the Industrial Park SPS were recently completed (November 2014). The upgrades include the following works:

- Station equipped with two larger submersible pumps with one pump as duty and the other as standby, alternating duty. The pumps are rated at 34.7 L/s.
- Construction of a new 200 mm forcemain from the SPS directly to the existing lagoons. The new forcemain extends south alongside Municipal Drain 12 through privately owned lands to the WWTP.
- A fixed diesel generator set was installed to provide a back-up power supply during power outages.

## **2.7 Existing Water Supply**

### **(a) General**

Harriston is currently serviced by a waterworks that consists of: three drilled bedrock wells, three well houses, an elevated 1915 m<sup>3</sup> storage tank and a distribution network of watermain, ranging in diameter from 100 mm to 300mm. There are approximately 77 fire hydrants available for fire protection. The Well House is equipped with a stationary diesel generator that automatically goes into service during a power outage.

The bedrock wells are equipped with submersible pumps that discharge directly into the distribution system. The wells are controlled (start/stop) automatically based on elevated storage tank liquid levels and pressures in the distribution system. Each wellhouse is equipped with an alarm for chlorination system failure and corresponding lockout of well pumps.

Treatment of the raw water supply from Wells #1 and Well #3 occurs in Wellhouse #3, located on King St. Treatment of the raw water supply from Well #2 occurs in Wellhouse #2, located on John St. Disinfection is accomplished using 12% sodium hypochlorite. A feedline is connected to the well pump discharge piping. As raw water flows through the header, 12% sodium hypochlorite is injected full strength under pressure. The raw water is also treated with PW1680 for the sequestering of iron. After being treated the water then flows into the system's underground chlorine contact pipe, which has been designed to provide adequate contact time with chlorine to achieve a 2-log removal/inactivation of viruses. Once the disinfection process is complete, the water then enters the distribution system.

The existing Industrial Park is serviced by 150 mm diameter watermain that are located within existing road allowances on John Street and Hutchinson Street. Service for the new industrial park would be via an extension of the existing watermain distribution system located on John Street.

## **3.0 CLASS EA PROCESS**

### **3.1 Phase 1 - Identification of Problem/Opportunity**

The community of Harriston is one of two major growth centres in the Town of Minto and is well situated to take advantage of additional growth opportunities given its location at the juncture of Highway 9 and Highways 23/89. The existing Harriston Industrial Park, and adjacent lands to the north and west, contain all of the land base identified for future industrial development within the settlement area. Expansion of the Industrial Park will create a broader range of serviced parcel sizes making Harriston more appealing for additional industrial/commercial growth. The following problem/opportunity has therefore been identified in conjunction with this project:

*The extension of John Street north of Hutchison Street, including full municipal services, is required to facilitate the development of additional industrial lands within the community of Harriston.*

### **3.2 Class EA Schedule**

Development of the proposed industrial park expansion would involve construction of a new road, where the right of way is entirely separate from any previous right of way and where no road surface previously existed. This type of activity is considered to be a Schedule 'B' activity, approved subject to the completion of Phases 1 & 2 of the Class EA process.

### **3.3 Phase 2 - Identification of Alternative Solutions**

The second phase of the Class EA process involves the identification and evaluation of alternative solutions to resolve the identified problem or opportunity. The evaluation of alternatives is conducted by examining the technical, economic, and environmental considerations associated with implementing any alternative. Mitigation measures that could lessen environmental impacts are also defined. A preferred solution or solutions is then selected.

#### **(a) Identification of Practical Alternatives**

A limited number of practical solutions to the defined problem were identified at the outset of this study. These alternatives, stated below, build upon the findings of the studies and reports discussed previously in this report. They are as follows:

**Alternative 1 – Expand the Harriston Industrial Park to service the 11 acre parcel.** This option involves the extension of John Street, north from its current limit to service the 11 acre abutting parcel. Full municipal servicing would be incorporated into the proposed road allowance and/or designated servicing easements.

**Alternative 2 – Expand the Harriston Industrial Park to service the 11 Acre and 55 Acre parcels.** This option involves the extension of John Street, north from its current limit to service the 11 acre abutting parcel and then a further extension west to service the additional 55 Acres. Full municipal servicing would be incorporated into the proposed road allowances and/or designated servicing easements.

**Alternative 3 – Do nothing.** This means that the proposed road extensions would not occur. The Do Nothing alternative may be implemented at any time in the design process prior to construction. This decision is typically made when the costs of all alternatives, both financial and environmental, significantly outweigh the benefits.

## **(b) Assessment Methodology**

An evaluation of alternatives process was carried out using a comparative assessment method designed to predict the nature and magnitude of environmental impacts resulting from each defined option and to assess the relative merits of the alternative solutions. The evaluation method involves these principal tasks:

- Identification of existing environmental conditions (baseline conditions, inventories)
- Assessment of existing land use activities, infrastructure, natural features and socio-economic characteristics (i.e., environmental scoping).
- Review of proposed alternatives and related works.
- Identification of environmental components and sub-components that may be affected by the defined alternatives (i.e., define evaluation criteria).
- Prediction of environmental impacts (positive, negative) resulting from the construction and implementation of the preferred alternative.
- Identification and evaluation of measures to mitigate adverse effects
- Selection of a preferred alternative following a comparative analysis of the relative merits of each option.

## **3.4 Identification of Environmental Components and Sub-Components**

### **(a) Environmental Features**

Section 3.3 of this report listed the alternative solutions that were identified in conjunction with the Class EA process. As part of the evaluation procedure, it is necessary to assess what effect each option may have on the environment and what measures can be taken to mitigate the identified impacts. The two main purposes of this exercise are to:

- Minimize or avoid adverse environmental effects associated with a project.
- Incorporate environmental factors into the decision-making process.

By definition, the EA Act generally separates the “environment” into five general elements:

- Natural environment
- Social environment
- Cultural environment
- Economic environment
- Technical environment

The identified environmental elements can be further subdivided into specific components which have the potential to be affected by the implementation of the alternative solutions. Table 3.1

provides an overview of the Specific Environmental Components considered of relevance to this investigation.

These components were identified following the initial round of public and agency input, and a preliminary review of each alternative with respect to technical considerations and the existing environmental setting of the project area. Table 3.1 summarizes the environmental features considered of relevance to this Class EA.

**Table 3.1**  
**Summary of Project-Related Environmental Considerations**

Element	Component	Sub-Component
Natural	Aquatic	<ul style="list-style-type: none"> <li>• Aquatic Resources</li> </ul>
	Atmosphere	<ul style="list-style-type: none"> <li>• Air Quality, Noise</li> </ul>
	Surface Water	<ul style="list-style-type: none"> <li>• Water Quality/ Quantity</li> <li>• Drainage Characteristics</li> </ul>
	Terrestrial	<ul style="list-style-type: none"> <li>• Amphibians &amp; Reptiles</li> <li>• Birds, Mammals</li> <li>• Vegetation</li> </ul>
	Geologic	<ul style="list-style-type: none"> <li>• Physiographic Features</li> <li>• Groundwater Quality/ Quantity</li> </ul>
Social	Neighbourhood	<ul style="list-style-type: none"> <li>• Disruption</li> </ul>
	Community	<ul style="list-style-type: none"> <li>• Health and Safety</li> <li>• Recreational Activities</li> </ul>
Cultural	Heritage	<ul style="list-style-type: none"> <li>• Historical/ Cultural Resources</li> </ul>
Economic	Project Area	<ul style="list-style-type: none"> <li>• Capital and Operational Costs</li> </ul>
	Community	<ul style="list-style-type: none"> <li>• Property Taxes</li> </ul>
Technical	Transportation	<ul style="list-style-type: none"> <li>• Traffic Patterns/ Volumes</li> <li>• Pedestrian/ Vehicular Safety</li> </ul>
	Infrastructure	<ul style="list-style-type: none"> <li>• Condition/ Age</li> <li>• Servicing Capacity</li> <li>• Utilities</li> </ul>

## (b) Impact Analysis

The environmental effects of each study alternative on the identified environmental features are generally determined through an assessment of the following impact predictors (i.e., impact criteria):

- Nature (direct, indirect, cumulative).
- Magnitude (level of effect, loss of function).
- Location/ Extent (where effect occurs, number/ volume affected).
- Scale (localized or regional effects).
- Timing (seasonality of effects, immediate or delayed impacts).
- Duration (period of impact).

- Socio-economic context (characteristics of community, implications for recovery).

For the purposes of this Class EA, impact determination criteria developed by Natural Resources Canada has been applied to predict the magnitude of environmental effects resulting from the implementation of a project. Table 3.2 summarizes the impact criteria.

**Table 3.2**  
**Criteria for Impact Determination**

<i>Level of Effect</i>	General Criteria
High	Implementation of the project could threaten sustainability of feature and should be considered a management concern. Additional remediation, monitoring and research may be required to reduce impact potential.
Moderate	Implementation of the project could result in a resource decline below baseline, but impact levels should stabilize following project completion and into the foreseeable future. Additional management actions may be required for mitigation purposes.
Low	Implementation of the project could have a limited impact upon the resource during the lifespan of the project. Research, monitoring and/or recovery initiatives may be required for mitigation purposes.
Minimal/ Nil	Implementation of the project could impact upon the resource during the construction phase of the project but would have a negligible impact on the resource during the operational phase.

Given the criteria defined in Table 3.2, the significance of adverse effects is predicated on these considerations:

- Impacts from a proposed alternative assessed as having a Moderate or High level of effect on a given feature would be considered significant.
- Impacts from a proposed alternative assessed as having a Minimal/ Nil to Low level of effect on a given feature would not be considered significant.

### **3.5 Evaluation of Alternative Solutions**

#### **(a) General**

The second component of Phase 2 of the Class EA process, being the evaluation of the defined alternatives, is conducted by examining the environmental considerations associated with implementing any alternative. Mitigation measures that could lessen environmental impacts are also defined. A preferred solution or solutions is then selected.

Several activities were incorporated into this assessment process, including a field inspection of the proposed road extension routes, a review of public and agency consultation received to date

and additional consultation with municipal staff and regulatory agencies. Table 3.3 summarizes the primary components of the alternatives being considered.

**Table 3.3**  
**Primary Components of the Identified Alternatives**

<b>Alternative</b>	<b>Required Works</b>
Alternative 1 (Extend John St. to service 11 Acre parcel)	<ul style="list-style-type: none"> <li>- Extend John Street approximately 230 m to the north. The new road would incorporate a rural cross-section 27 metres in width and include two lanes of traffic and roadside ditches.</li> <li>- Install watermain and sanitary sewer facilities within the proposed road allowance.</li> <li>- Construct individual on-site storm water management facilities on each parcel as they are developed. Site drainage is to be directed generally to the north to the existing Municipal Dain #70 for outlet.</li> </ul>
Alternative 2 (Extend John St. to service 11 Acre and 55 Acre parcels)	<ul style="list-style-type: none"> <li>- Extend John Street approximately 230 m to the north and then west into the 55 Acre site. The new road will incorporate a rural cross-section 27 metres in width and include two lanes of traffic and roadside ditches.</li> <li>- Install watermain and sanitary sewer facilities within the proposed road allowances.</li> <li>- Install a deep sanitary sewer from the existing Industrial Park SPS through the 11 acre site and into the 55 acre site, including Municipal Drain #12 crossing on John Street</li> <li>- Construct individual on-site storm water management facilities on each parcel within the 11 acre and 55 acre sites, as they are developed.</li> <li>- For development of the 55 Acre site, construct a drainage ditch along the westerly extent of the WWTP facility to direct site drainage to the Maitland River.</li> <li>- Complete cut and fill grading as required to achieve positive drainage towards the receiving water courses.</li> <li>- Install sanitary sewers and watermains within all road allowances within the 55 acre parcel.</li> </ul>
Alternative 3 (Do Nothing)	<ul style="list-style-type: none"> <li>- No new works planned.</li> </ul>

**(b) Comparative Analysis**

Table 3.4 provides a summary of the key considerations for each option with respect to the environmental components described in Table 3.1. The table identifies benefits and impacts that were identified as significant during the initial evaluation of alternatives. Potential mitigation measures for the identified impacts are also presented.



**Table 3.4**  
**Preliminary Evaluation of Alternatives**

<b>Alternative Solution</b>	<b>Anticipated Benefits</b>	<b>Potential Impacts</b>	<b>Potential Mitigation</b>
Alternative 1 (Extend John Street to service 11 Acre parcel)	<ul style="list-style-type: none"> <li>- Facilitates development of the subject lands that is consistent with the County Official Plan and compatible with surrounding land uses.</li> <li>- Provides subject lands with access to John Street and municipal servicing infrastructure.</li> <li>- Affected lands are under municipal ownership (i.e., no acquisition costs).</li> <li>- Promotes the further development of the existing industrial park through the provision of additional development parcel sizes and servicing.</li> <li>- Limits traffic disruption by constructing a new roadway and servicing corridor within relatively undeveloped areas.</li> <li>- Utilizes the existing Hwy. 9 access point.</li> <li>- Least expensive alternative.</li> </ul>	- Terrestrial and aquatic habitat could be affected by the project, as road construction would occur on undisturbed lands and in the vicinity of an existing drainage ditch.	<ul style="list-style-type: none"> <li>- Implement standard mitigation measures to minimize disruption during the construction phase of the project (e.g., erosion, sediment controls).</li> <li>- Consult with the Maitland Valley Conservation Authority and the Ministry of Natural Resources &amp; Forestry to assess the level of impact resulting from construction of the planned works. Provide mitigation and habitat compensation to address any significant concerns identified.</li> </ul>
		- Construction on undisturbed lands could impact upon the cultural heritage value of the area.	- An archaeological investigation was carried out on the entire industrial park. No significant cultural features were identified on the subject lands.
		- Minor impacts to traffic movement along John Street may occur due to the installation of services and roadwork in close proximity to existing roadways.	- Implement traffic control measures to limit traffic impacts during the construction phase (lane restrictions may be required for short durations).
		- Traffic volumes in the vicinity of the project site will increase following further industrial development (facilitated by the road/ servicing improvements)	- The identified impact cannot be mitigated in a substantive manner. However, the magnitude of traffic generated from industrial development is not expected to be significant in nature.

Alternative Solution	Anticipated Benefits	Potential Impacts	Potential Mitigation
Alternative 2 (Extend John Street to service 11 Acre and 55 Acre parcels)	<ul style="list-style-type: none"> <li>- Facilitates development of the subject lands that is consistent with the County Official Plan and compatible with surrounding land uses.</li> <li>- Provides subject lands with access to John Street and municipal servicing infrastructure.</li> <li>- A majority of the affected lands are under municipal ownership (i.e., no acquisition costs).</li> <li>- Provides a broader range of development parcel sizes to attract a greater variety of potential industrial/commercial clients.</li> <li>- Limits traffic disruption by constructing a new roadway and servicing corridor within relatively undeveloped areas.</li> <li>- Ensures that proposed servicing is sized appropriately to provide services to all lands identified for future industrial development.</li> <li>- Allows future development of the 55 Acre site to be phased over time without the need for additional environmental assessment review.</li> </ul>	<ul style="list-style-type: none"> <li>- Terrestrial and aquatic habitat could be affected by the project, as road construction would occur on undisturbed lands and in the vicinity of an existing drainage ditch.</li> <li>- Installation of deep sewer on John Street may impact Municipal Drain #12.</li> </ul>	<ul style="list-style-type: none"> <li>- Implement standard mitigation measures to minimize disruption during the construction phase of the project (e.g., erosion, sediment controls).</li> <li>- Consult with the Maitland Valley Conservation Authority and the Ministry of Natural Resources &amp; Forestry to assess the level of impact resulting from construction of the planned works. Provide mitigation and habitat compensation to address any significant concerns identified.</li> </ul>
		<ul style="list-style-type: none"> <li>- Construction on undisturbed lands could impact upon the cultural heritage value of the area.</li> </ul>	<ul style="list-style-type: none"> <li>- An archaeological investigation was carried out on the entire industrial park. No significant cultural features were identified on the subject lands.</li> </ul>
		<ul style="list-style-type: none"> <li>- Significant impacts to traffic movement along John Street will occur during construction of deep sanitary sewer within limits of the John Street road allowance.</li> </ul>	<ul style="list-style-type: none"> <li>- Implement traffic control measures to limit traffic impacts during the construction phase (lane restrictions may be required for short durations).</li> <li>- Alternative temporary access routes may need to be established during installation of the sewer to accommodate existing established industrial land uses.</li> </ul>
		<ul style="list-style-type: none"> <li>- Traffic volumes in the vicinity of the project site will increase following further industrial development (facilitated by the road/ servicing improvements)</li> </ul>	<ul style="list-style-type: none"> <li>- The identified impact cannot be mitigated in a substantive manner. However, the magnitude of traffic generated from industrial development is not expected to be significant in nature.</li> </ul>
Alternative 3 (Do Nothing)	<ul style="list-style-type: none"> <li>- Results in no additional environmental impacts.</li> </ul>	<ul style="list-style-type: none"> <li>- Fails to address the defined problem.</li> </ul>	<ul style="list-style-type: none"> <li>- The identified impact cannot be mitigated.</li> </ul>

Class EA for New Road and Servicing Extensions  
(Harriston Industrial Park)

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**(c) Environmental Effects Analysis**

The potential interactions between the identified alternatives and environmental components (Table 3.1) were examined as part of the evaluation of alternatives phase. The purpose of this analysis was to determine, in relative terms, the environmental effects of constructing and operating each identified alternative on the defined environmental components and sub-components (using the impact criteria described in Table 3.2). In this regard, the level of effect for the environmental interactions were rated as High, Moderate, Low and Minimal/ Nil. Potential mitigation measures were also considered as part of this evaluation.

Table 3.5 summarizes the outcome of the environmental effects analysis carried out for Alternatives 1 and 2. Alternative 3 (Do Nothing) is assumed to have no impacts upon the identified environmental components.

**Table 3.5**  
**Alternative Solutions:**  
**Environmental Effects Analysis**

<b>Environmental Component</b>	<b>Alternative Solution</b>	<b>Level of Effect</b>	<b>Impact Considerations (Construction and Operational Activities)</b>
<b>Natural</b> <ul style="list-style-type: none"> <li>Aquatic</li> </ul>	(1) Service 11 Acres	Minimal/ Nil	<ul style="list-style-type: none"> <li>Impacts to aquatic habitat may occur during construction. Impacts are expected to be minor in nature and would be minimized with standard mitigation measures.</li> <li>No impacts anticipated from the operation of the proposed works.</li> </ul>
	(2) Service 11 & 55 Acres	Low to Moderate	<ul style="list-style-type: none"> <li>A small drainage run bisects the 55 Acre parcel. Potential impacts to aquatic habitat could be anticipated from a road crossing of this feature.</li> <li>Construction of the deep sanitary sewer on John Street could impact aquatic habitat as the Municipal Drain will need to be crossed during installation.</li> </ul>
	(3) Do Nothing	Minimal/ Nil	<ul style="list-style-type: none"> <li>No impacts anticipated.</li> </ul>
<ul style="list-style-type: none"> <li>Atmosphere</li> </ul>	(1) Service 11 Acres	Minimal/ Nil	<ul style="list-style-type: none"> <li>Standard construction mitigation will be implemented to mitigate construction-related impacts on air quality and ambient noise levels.</li> <li>No impacts anticipated from the operation of the proposed works.</li> </ul>
	(2) Service 11 & 55 Acres	Minimal/ Nil	<ul style="list-style-type: none"> <li>Standard construction mitigation will be implemented to mitigate construction-related impacts on air quality and ambient noise levels.</li> <li>No impacts anticipated from the operation of the proposed works.</li> </ul>
	(2) Do Nothing	Minimal/ Nil	<ul style="list-style-type: none"> <li>No impacts anticipated.</li> </ul>
<ul style="list-style-type: none"> <li>Surface Water</li> </ul>	(1) Service 11 Acres	Low	<ul style="list-style-type: none"> <li>Sediment and erosion impacts may occur during construction. Impacts are expected to be minor in nature and would be minimized with standard mitigation measures.</li> <li>On-site stormwater management facilities will be constructed on each parcel as they develop to control surface water flows leaving the site.</li> <li>No impacts anticipated from the operation of the proposed works.</li> </ul>

	(2) Service 11 & 55 Acres	Moderate	<ul style="list-style-type: none"> <li>A small drainage run bisects the 55 Acre parcel. Potential impacts to surface water may occur during construction. Sediment and erosion control measures would be implemented during construction.</li> <li>On-site stormwater management facilities will be constructed on each parcel as they develop to control surface water flows leaving the site.</li> <li>Storm drainage will be directed to the Maitland River via a new outlet to be constructed at the southwest corner of the 55 Acre parcel. This may result in impacts to the Maitland River.</li> </ul>
	(3) Do Nothing	Minimal/ Nil	<ul style="list-style-type: none"> <li>No impacts anticipated.</li> </ul>
<ul style="list-style-type: none"> <li>Terrestrial</li> </ul>	(1) Service 11 Acres	Minimal/Nil	<ul style="list-style-type: none"> <li>Given that the 11 Acre parcel is actively cultivated, no impacts to terrestrial habitat are anticipated.</li> <li>No impacts anticipated from the operation of the proposed works.</li> </ul>
	(2) Service 11 & 55 Acres	Low to Medium	<ul style="list-style-type: none"> <li>Road construction required to access the 55 Acre parcel may impact forested areas located adjacent to the former rail line, which will be utilized as part of the proposed road access for the 55 acre parcel.</li> <li>To minimize impacts, tree clearing will be minimized as much as possible and will occur outside of sensitive breeding seasons for birds and wildlife.</li> <li>Sub-surface soil conditions along the rail line may require special handling during construction of the road to address potential contamination.</li> </ul>
	(3) Do Nothing	Minimal/ Nil	<ul style="list-style-type: none"> <li>No impacts anticipated.</li> </ul>
<b>Social</b> <ul style="list-style-type: none"> <li>Neighbourhood</li> </ul>	(1) Service 11 Acres	Low	<ul style="list-style-type: none"> <li>Development of the 11 Acre parcel may impact adjacent properties fronting on Highway No. 9.</li> <li>Construction-related impacts would be minimized with standard mitigation measures.</li> <li>No impacts anticipated from the operation of the proposed works, providing that measures to minimize impacts are incorporated into the design.</li> </ul>

	(2) Service 11 & 55 Acres	Low	<ul style="list-style-type: none"> <li>Development of the 11 Acre parcel may impact adjacent properties fronting on Highway No. 9. The 55 Acre parcel is more isolated from adjacent properties, therefore fewer impacts are anticipated.</li> <li>Construction-related impacts would be minimized with standard mitigation measures.</li> <li>No impacts anticipated from the operation of the proposed works, providing that measures to minimize impacts are incorporated into the design.</li> </ul>
	(3) Do Nothing	Minimal/ Nil	<ul style="list-style-type: none"> <li>No impacts anticipated.</li> </ul>
<ul style="list-style-type: none"> <li>Community</li> </ul>	(1) Service 11 Acres	Low	<ul style="list-style-type: none"> <li>Construction and operational activities associated with the proposed works do not present a significant threat to public health and safety.</li> <li>Standard health and safety measures will be utilized by construction contractors.</li> </ul>
	(2) Service 11 Acres & 55 Acres	Low	<ul style="list-style-type: none"> <li>Construction and operational activities associated with the proposed works do not present a significant threat to public health and safety.</li> <li>Standard health and safety measures will be utilized by construction contractors.</li> </ul>
	(3) Do Nothing	Low	<ul style="list-style-type: none"> <li>A lack of commercial/industrial growth and development in the community may negatively impact the community over the long term.</li> </ul>
<b>Cultural</b> <ul style="list-style-type: none"> <li>Heritage</li> </ul>	(1) Service 11 Acres	Minimal/ Nil	<ul style="list-style-type: none"> <li>No impacts anticipated, given the findings of the archaeological assessment previously conducted on the subject lands.</li> </ul>
	(2) Service 11 Acres & 55 Acres	Minimal/ Nil	<ul style="list-style-type: none"> <li>No impacts anticipated, given the findings of the archaeological assessment previously conducted on the subject lands.</li> </ul>
	(3) Do Nothing	Minimal/ Nil	<ul style="list-style-type: none"> <li>No impacts anticipated.</li> </ul>
<b>Economic</b> <ul style="list-style-type: none"> <li>Project &amp; Community</li> </ul>	(1) Service 11 Acres	Low	<ul style="list-style-type: none"> <li>Construction and operational activities associated with the proposed works should not generate significant economic impacts.</li> </ul>
	(2) Service 11 Acres & 55 Acres	Low/Medium	<ul style="list-style-type: none"> <li>Servicing of both the 11 Acre and 55 Acre parcel may result in economic hardship if development of the site is not anticipated in the immediate future.</li> <li>Cost savings may be realized by phasing the expansion over a number of years as development occurs.</li> </ul>
	(3) Do Nothing	Low	<ul style="list-style-type: none"> <li>A lack of commercial/industrial growth and development in the community may negatively impact the community over the long term.</li> </ul>

<b>Technical</b> • Transportation	(1) Service 11 Acres	Low	<ul style="list-style-type: none"> <li>Traffic movement in the vicinity of the project site may be temporarily impacted during the construction phase of the project. (Traffic control measures will be implemented to provide site access, as required).</li> <li>No impacts are anticipated from the operation of the proposed works.</li> </ul>
	(2) Service 11 Acres & 55 Acres	Low to Moderate	<ul style="list-style-type: none"> <li>Traffic movement in the vicinity of the project will be temporarily impacted during installation of the deep sanitary sewer on John Street. Alternative temporary access routes will need to be established to allow access to existing established industrial developments during construction. Upgrades to John Street, including a wider road platform and an improved turning radius at Hutchison Street, have been included.</li> <li>No impacts are anticipated from the operation of the proposed works.</li> </ul>
	(3) Do Nothing	Minimal/ Nil	<ul style="list-style-type: none"> <li>No impacts anticipated.</li> </ul>
	(1) Service 11 Acres	Low	<ul style="list-style-type: none"> <li>Most infrastructure is already sized to accommodate the 11 Acre parcel which abuts the existing industrial park, except for watermain which will require upgrading to achieve recommended fire protection pressures.</li> </ul>
• Infrastructure	(2) Service 11 Acres & 55 Acres	Low to Moderate	<ul style="list-style-type: none"> <li>Efficiencies will be realized by designing and sizing infrastructure to accommodate the additional 55 Acres now rather than retrofitting at a later date.</li> <li>Extending servicing to the 55 Acre site will require construction of a deeper sanitary sewer on John Street to provide gravity service to the site.</li> </ul>
	(3) Do Nothing	Minimal/ Nil	<ul style="list-style-type: none"> <li>No impacts anticipated.</li> </ul>

### **3.6 Identification of a Preferred Solution**

As an outcome of the preliminary assessment of alternatives summarized in Tables 3.4 and 3.5, the proponent indicated a preference for implementing Alternative 2 – Service both the 11 Acre and 55 Acre parcels, to address the defined problem.

The following are the key attributes associated with Alternative 2 which justified its preliminary selection as the preferred servicing plan:

- Facilitates the development of the subject lands for industrial purposes, as prescribed by existing Municipal and County planning documents.
- Provides efficiencies by sizing infrastructure to accommodate development of all lands designated for industrial development.
- Allows for phased development of the 11 acre and 55 acres sites to keep pace with demand and spread capital costs over a number of years.
- Minimizes traffic disruption by limiting construction activities primarily to areas outside of existing road allowances.
- Proposes development on lands not considered to be ecologically or culturally significant.
- Represents the most practical option from an engineering perspective.

## **4.0 PUBLIC CONSULTATION PROGRAM**

### **4.1 General**

Public consultation is an integral component of the Class EA process. Public consultation allows for an exchange of information which assists the proponent in making informed decisions during the evaluation of alternative solutions. During Phases 1 and 2 of the study process, consultation was undertaken to obtain input from the general public, adjacent property owners and review agencies that might have an interest in the project. In general, the consultation program involved the preparation of information describing the defined problem, the identified alternatives and the preferred alternatives under consideration. Comments obtained through the various consultation methods described in this section of the report were incorporated into the evaluation of alternatives phase of the investigation.

The components of the initial public consultation program are summarized in this section of the Screening Report and documented in Appendix 'C'. Comments received from the program and related correspondence are also discussed below and documented in the appendix.



## 4.2 Initial Public Notice

Contents: General project description  
 Issued: October 2, 2013  
 Placed In: Minto Express (October 2 & 9, 2013)  
 Wellington Advertiser (October 4<sup>th</sup>, 2013)  
 Circulated To: 28 Adjacent property owners  
 Input Period: Concluded November 1, 2013

No Comments were received as a result of this notice.

## 4.3 Review Agency Circulation

Contents: General study information, site plan illustrating proposed works  
 Circulated: October 2, 2013  
 Distributed To: 11 review agencies  
 Input Period: Concluded November 8, 2013

Comments Received:

Review Agency	Comments/ Concerns	Action Taken
Ministry of the Environment (MOE) (October 9, 2013) Via mail	<ul style="list-style-type: none"> <li>- Reviewed requirements associated with a Schedule B Class EA and documentation for same.</li> <li>- Confirmed that First Nations and Métis communities should be consulted as part of the process.</li> </ul>	<ul style="list-style-type: none"> <li>- Information noted and filed.</li> </ul>
Festival Hydro (October 31, 2013) Via-mail	<ul style="list-style-type: none"> <li>- The subject lands are not located within the area that they service.</li> <li>- Hydro One is the service provider for this area.</li> </ul>	<ul style="list-style-type: none"> <li>- Additional circulations will be directed to Hydro One.</li> </ul>
Ministry of Tourism, Culture and Sport (November 8, 2013) Via email	<ul style="list-style-type: none"> <li>- Project study area should be screened for potential impacts to buried cultural material as well as built cultural heritage.</li> <li>- Screening Check-Lists provided to assist with identifying potential concerns.</li> </ul>	<ul style="list-style-type: none"> <li>- A Stage 1 &amp; 2 Archaeological Assessment of the subject lands was completed.</li> </ul>
Maitland Valley Conservation Authority (November 8, 2013) Via-e-mail	<ul style="list-style-type: none"> <li>- Reviewed the project information and sent a map outlining the location of regulated areas.</li> <li>- Industrial lands identified for future development are located adjacent to areas identified as environmentally sensitive in the Wellington Cty. O.P.</li> <li>- Class EA should consider impacts associated with future industrial development not just the road and servicing extensions.</li> </ul>	<ul style="list-style-type: none"> <li>- Information noted and filed.</li> </ul>

## **4.4 Aboriginal Consultation**

### **(a) Aboriginal Consultation Process**

The Crown has a duty to consult with First Nation and Métis communities if there is a potential to impact on Aboriginal or treaty rights. This requirement is delegated to project proponents as part of the Class EA process, therefore the project proponent has a responsibility to conduct adequate and thorough consultation with Aboriginal communities as part of the Class EA consultation process. The project study area is located within the traditional territory of the Saugeen Ojibway Nation (SON) and also contains a number of sensitive natural features which may be of concern to First Nation and Métis communities in the area. These features include the Maitland River and the Clifford-Harriston Wetland Complex, both located in the vicinity of the project site.

### **(b) Background Review**

In order to identify Aboriginal Communities potentially impacted by the project the Aboriginal and Treaty Rights Information System (ATRIS) was consulted. A search was conducted for Aboriginal Communities, including their traditional territories, within a 50 km radius of the project study area. Utilizing this process, several aboriginal communities and organizations were identified in conjunction with this project as follows: Chippewas of Saugeen First Nation, Chippewas of Nawash Unceded First Nation, Historic Saugeen Métis, Metis Nation of Ontario, and Great Lakes Métis Council. Correspondence was subsequently forwarded to each community/organization detailing the proposed project and asking for input. A response was received from the Historic Saugeen Métis indicating that, due to the location of the project at the edge of their traditional territory, they would not request additional information on the project. Copies of all correspondence received or sent is included within Appendix 'C'

## **4.5 Project Update Letter**

Contents: General study information, site plan illustrating proposed works, details related to the preferred servicing plan.  
Circulated: April 10, 2017  
Distributed To: 8 review agencies, 19 adjacent property owners, 5 Aboriginal Communities  
Input Period: Concluded May 16, 2017

Comments Received:

<b>Review Agency</b>	<b>Comments/ Concerns</b>	<b>Action Taken</b>
Geoff Osborne Manager NRStor Inc. (Via phone and email)	<ul style="list-style-type: none"><li>- Manages energy facility located on John Street N. in the Industrial Park.</li><li>- Concerned with potential access/power interruptions during construction that may impact their operations.</li></ul>	<ul style="list-style-type: none"><li>- Advised that construction not scheduled until 2018 or later.</li><li>- Industrial Park residents will be contacted prior to construction to minimize impacts to existing residents as much as feasible.</li></ul>

<b>Review Agency</b>	<b>Comments/ Concerns</b>	<b>Action Taken</b>
Adjacent Property Owners (via Fax) May 16, 2017	<ul style="list-style-type: none"> <li>- Owns property adjacent to proposed Industrial Park expansion lands.</li> <li>- Concerned with potential impacts to property from noise, odour, environmental impacts related to future Industrial uses.</li> <li>- Would like a treed buffer erected between the properties to screen out potential impacts.</li> </ul>	<ul style="list-style-type: none"> <li>- Comments forwarded to the Town and Project Manager for their consideration.</li> </ul>
Adjacent Property Owners (via email) May 16, 2017	<ul style="list-style-type: none"> <li>- Received information package about the Industrial Park expansion.</li> <li>- Own property immediately south of 55 Acres.</li> <li>- Would be open to discussions with the Town about the access to the 55 acres going through their property.</li> </ul>	<ul style="list-style-type: none"> <li>- Information noted and filed.</li> <li>- Advised that expansion into the 55 acres may not occur for a number of years.</li> <li>- Town would contact them to discuss options in advance.</li> </ul>
Joseph Muller MTCS May 15, 2017 Via email	<ul style="list-style-type: none"> <li>- Reiterated comments submitted during initial consultation phase of the Class EA.</li> <li>- Noted that all documentation related to project screenings should be included in the EA documentation.</li> </ul>	<ul style="list-style-type: none"> <li>- Stage 1 &amp; 2 Archaeological Assessment and Screening Check-Lists included in EA documentation.</li> </ul>

## **5.0 PROJECT SPECIFIC EVALUATIONS**

### **5.1 General**

A number of project specific evaluations were undertaken in conjunction with the Class EA in order to better define potential impacts associated with implementation of the preferred alternative and to identify suitable mitigation measures to address those impacts. These studies include a conceptual stormwater management plan for the lands being serviced by the proposed road extensions, as well as Stage 1 & 2 archaeological assessments of all lands potentially disturbed in conjunction with the planned works. The lands to be serviced by the proposed road and servicing extensions are currently actively farmed agricultural lands. Construction of the proposed road extensions will alter the natural drainage patterns as fill placement associated with road construction and lot grading is needed to direct drainage to a new outlet.

### **5.2 Storm Water Management**

#### **(a) General**

A conceptual stormwater management plan was prepared in conjunction with the Class EA process in order to define facilities required to implement Alternative 2. The following sections of this report discuss the major components of the plan for this site including water quality and quantity controls as well as regulatory requirements.

#### **(b) Stormwater Quality and Quantity Controls**

Development of the 11 acre site will require that individual on-site stormwater quality and quantity measures be incorporated into the design of each site. Overall site drainage will be directed to the existing open Municipal Drain #70 located at the northeast corner of the site via rear yard swales, except for the southwest portion of the site which currently drains to the rail corridor. The Town may consider improvements to Municipal Drain #70 through the Drainage Act.

Development of the 55 acre site will be completed in 2 phases. Phase 1 will include construction of the main access road a distance of approximately 350 metres into the site. Road construction will incorporate roadside ditches and construction of a drainage ditch along the southwest perimeter of the 55 acre parcel in order to convey surface drainage flows from the northeast portion of the site to a new outlet at the Maitland River. Similar to development of the 11 acre site, individual on-site stormwater quality and quantity measures will be incorporated into the design of each individual site as it is developed.

Phase 2 would include development of the remaining undeveloped acreage of the 55 acre site located in the southwest corner adjacent to the WWTP. Similar to the rest of the site, stormwater drainage will be accommodated through the construction of individual on-site quantity and quality control measures.

An existing drainage run, which currently conveys surface runoff from farmlands located north of the 55 acre site, will be accommodated by installation of a culvert within the road allowance. This runoff will continue discharging to privately owned lands located east of the WWTP and will not be included within stormwater flows managed on the 55 Acre site.

### **Drainage Ditch Design**

In order to convey surface water flows from the northeast portion of the 55 Acres to the Maitland River, an open drainage ditch will be constructed along the southwest boundary of the site, adjacent to the Harriston WWTP. The ditch will be constructed at an approximate depth of 3 metres with 3:1 side slopes. A treed buffer will be installed along the top of bank to provide screening from adjacent industrial developments.

### **Additional Treatment Measures**

Development of individual parcels within the expanded industrial park could occur over a number of years. To minimize impacts to existing infrastructure, on-site sediment and erosion control measures will be implemented during the development of individual parcels. A treatment train approach would be implemented in the drainage area to control pollution at the source. In particular, the following controls would be implemented.

**Lot Level Controls** - Reduced lot grading could be required to promote natural infiltration and sedimentation.

**Conveyance Controls** - Long, broad grassed swales could be required, to promote infiltration and sedimentation.

### **(c) Stormwater Quantity Control**

#### **11 Acre and Phase 1 – 55 Acres**

Pre to post control of the 2 to 100 year storm events to be provided through on site control measures. It is proposed that the west lot discharge to the former C.N.R. railway ditch while the north and easterly parcels outlet to Municipal Drain 70. Under post development conditions the proposed road allowances will have uncontrolled flows. As such, over control of design flows from individual parcels will be required to maintain net pre to post conditions.

### **Major and Minor Drainage System**

Design of all on-site conveyance systems to be based on flows up to and including the 5 year event and directed to the intended outlet for the individual lots. Major system surface flow will be directed safely off-site to the individual lot's intended outlet.

### **5.3 Cultural Heritage Features**

As part of the Class EA process Timmins Martelle Heritage Consultants were engaged to complete an archaeological assessment of those portions of the subject lands being proposed for development. The assessment involved two stages of analysis: The first, conducted in the summer of 2014, examined the 55 acre site. The second, completed in November 2014, examined the 11 acre site. Both field investigations were preceded by completion of a Stage 1 background review which included an examination of historical data on the parcels. It was determined from this assessment that the potential for historical archaeological sites being present on the properties was high due to proximity to the Maitland River and proximity to an early transportation corridor (Hwy. 9). Stage 2 of the process involved field assessments of each parcel entailing a pedestrian survey after the sites had been ploughed and weathered. There were no findings of historical significance identified through these reviews, although two isolated find spots were identified on the 55 acre site. No additional assessment was recommended. A report, summarizing the process, was submitted to the Ministry of Tourism, Culture and Sport for clearance, which was received on June 28, 2016. The Report is included within Appendix 'B'.

### **5.4 Water Servicing**

#### **(a) General**

As noted previously, Harriston is currently serviced by a waterworks that consists of: three drilled bedrock wells, three wellhouses, an elevated 1915 m<sup>3</sup> storage tank and a distribution network of watermains, ranging in diameter from 100 mm to 300mm. There are approximately 77 fire hydrants currently available for fire protection. Distribution watermains currently extend into the existing Industrial Park and will be extended north on John Street, in conjunction with planned road construction, to service the expanded industrial park lands.

#### **(b) Pressures and Fire Flows**

The initial evaluation of providing water servicing to the industrial park expansion identified that existing available fire flows to the existing industrial park are significantly deficient (i.e. 56-66 L/s) in relation to suggested target flow rates (i.e. 150 L/s). It was determined that there is currently an inadequately sized connection between the existing elevated tank and the industrial park in terms of transmitting large fire flows (i.e. generally only smaller diameter looped watermain). An option for constructing ground level storage and pumping was considered, but is cost prohibitive and would increase annual O&M costs. Looping the 200mm dia. Elora Street watermain to Hutchison Street was evaluated but it will not significantly increase fire flow rates to the industrial park expansion parcels.

Further analysis was completed to evaluate the effect of upgrading sections of the existing distribution system to improve that connection. It was determined that there should be a minimum 300mm dia. connection between the elevated tank and the existing industrial park connection at Adelaide Street. Figure 5.1 illustrates our understanding of existing 300mm dia.

mains and the proposed location where watermain could be upgraded to a minimum 300mm dia. to provide that connectivity. The Town would need to confirm these are their preferred routes, and decide when these upgrades would be constructed.

**(c) Recommended Servicing Approach**

The watermain installed within the existing and proposed industrial park will be a long dead-end line (potentially up to 2km). Therefore, to transmit higher fire flows through a long dead-end watermain without a booster pump will require a watermain larger than 300mm dia. Evaluations indicate fire flows >124 L/s will be achieved for a 350mm dia. dead-end line and >145 L/s using a 400mm dia. This includes replacement of the existing industrial park's 200mm dia. watermain on John Street. The Town will need to select the size of watermain that will be used.

There will be additional operational and maintenance efforts required by the Town's drinking-water system Operator to help prevent problems (e.g. low chlorine residual) associated with low water use for such a long larger diameter dead-end line (e.g. regular flushing of the watermain).

**5.5 Sanitary Servicing**

**(a) General**

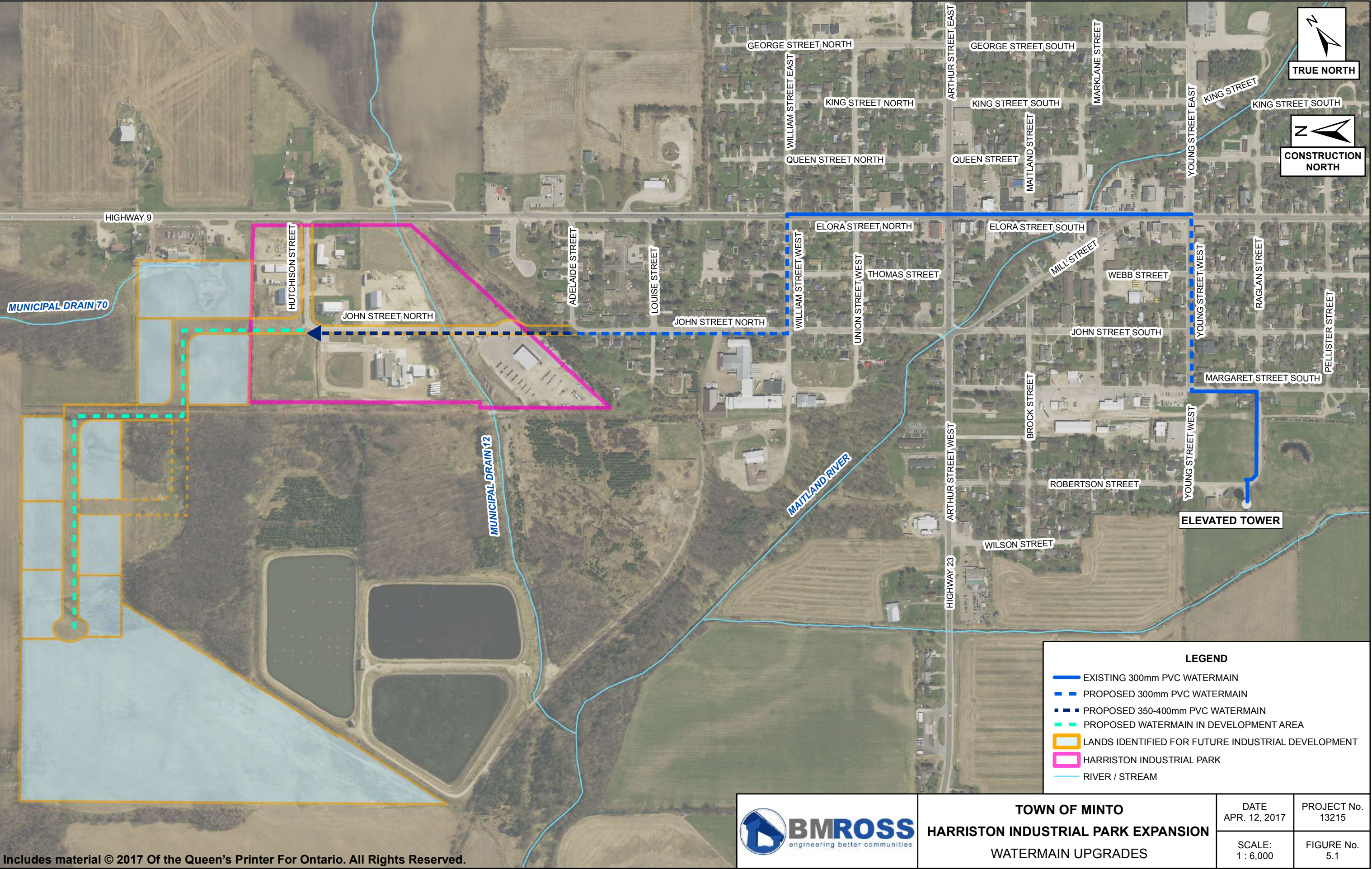
As discussed, Harriston is currently serviced by a municipally owned and operated sewage system that was constructed in the mid-1960's consisting of a gravity collection system, five sewage pumping stations (SPS's) and a 3-celled facultative lagoon. The Main SPS receives gravity flows conveyed from the secondary pumping stations as well as gravity flows from the remainder of the community. Sewage is then pumped via forcemain to the WWTP. Following treatment of the sewage within the facility, effluent is discharged to the Maitland River.

**(b) Sanitary Servicing Options**

The initial sanitary servicing option that was considered by the Town was the extension of the existing John Street gravity sewer to service Phase 1 (11 acre site), and the servicing of Phase 2 through the construction of a new Sewage Pumping Station (SPS) along with the associated gravity sewer and forcemain discharge to the sewage lagoons. The existing industrial park is serviced by the John Street (Industrial Park) SPS.

Another option was subsequently evaluated, that being the replacement of the existing John Street sanitary sewer with a deep sewer and the extension of that sewer north and west into the Phase 1 and Phase 2 parcels. Sewage discharges from the industrial park to the sewage lagoons would be provided by the existing newly upgraded Industrial Park SPS. This option cannot provide gravity service to the furthest southwesterly section of Phase 2 unless one large site is developed, although it may still then require its own pumping station. Smaller developments could be serviced by individual lot sewage pumps. Figure 5.2 illustrates the sanitary servicing options that were reviewed as part of the Class EA.





**TOWN OF MINTO**  
**HARRISTON INDUSTRIAL PARK EXPANSION**  
**WATERMAIN UPGRADES**

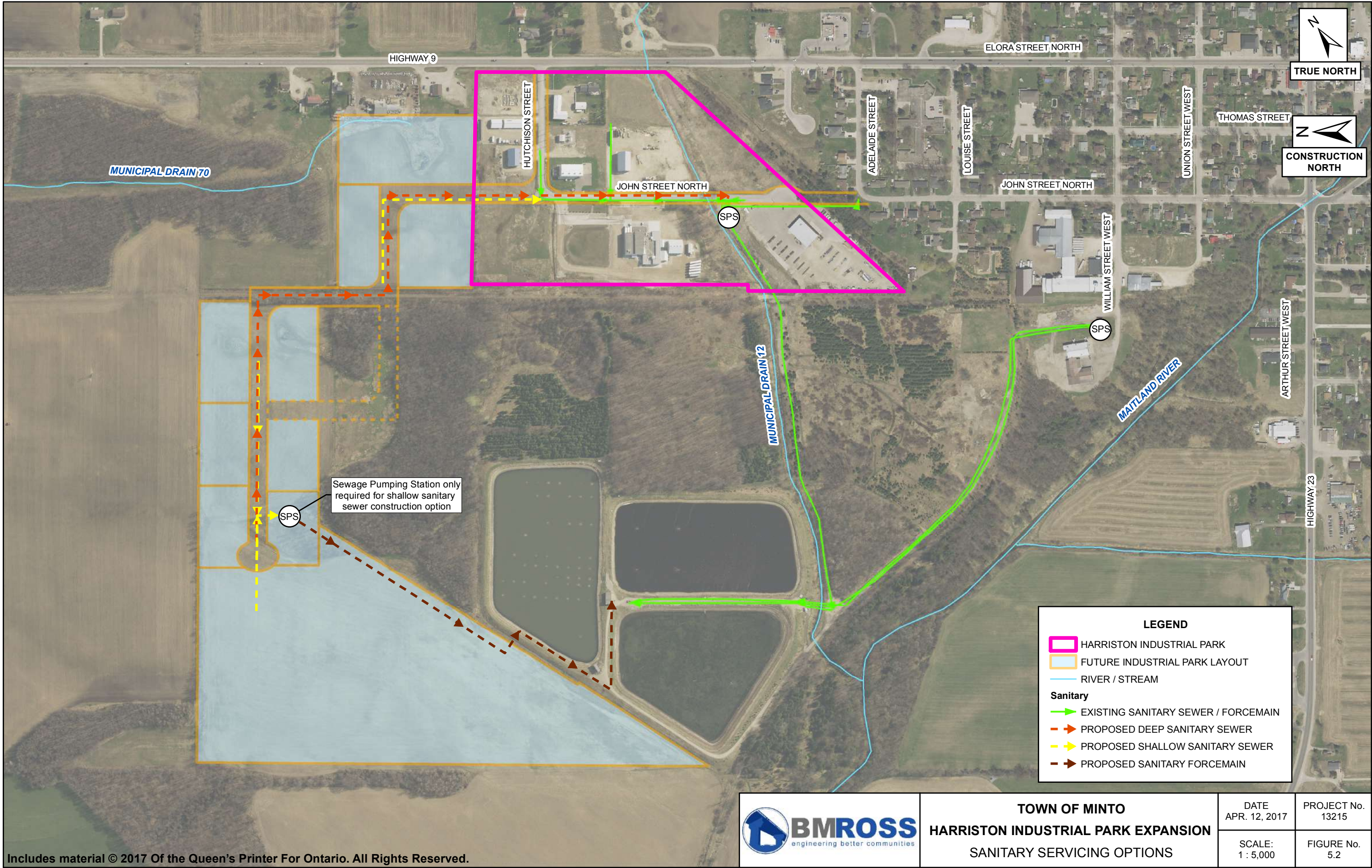
DATE  
APR. 12, 2017

PROJECT No.  
13215

SCALE:  
1 : 6,000

FIGURE No.  
5.1







### **(c) Recommended Servicing Approach**

Following a review of these options, the Town selected the deep sanitary sewer option for servicing of the 11 Acre and 55 Acre sites. This option was selected for the following reasons:

- Would avoid construction and subsequent maintenance costs associated with another sewage pumping station.
- Road reconstruction on John Street, needed to install the deep sanitary sewer, would provide an opportunity to improve the road surface and drainage to better accommodate the existing industrial users.
- Better long term solution to the servicing needs of the area.

## **5.6 Road and Parcel Configurations**

### **(a) Methodology**

The proposed industrial park expansion is comprised of two parcels being 11 acres (4.5 ha) and 55 acres (18.2 ha) in size respectively. To ensure that the broadest range of available lot sizes are made available for development, a variety of road and lot servicing alternatives were explored in conjunction with the Class EA process.

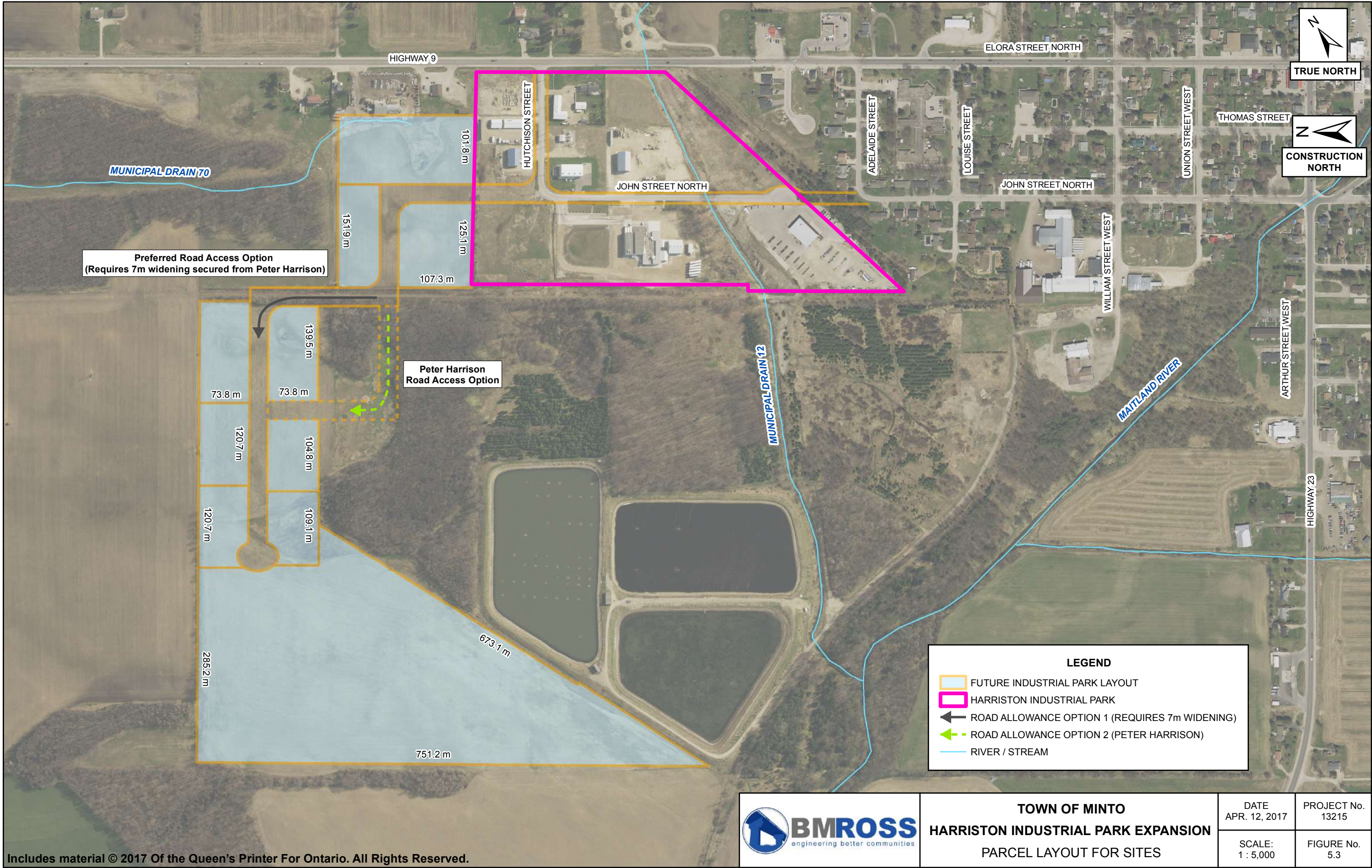
### **(b) Selection of a Preferred Road Alignment**

The municipality reviewed the various road and parcel alignment alternatives presented and indicated a preference for Option 2, shown on Figure 5.3. This alignment option was selected because it offered a variety of parcel sizes and required the least amount of road construction while providing access to the greatest amount of industrial land for development. The parcel configuration illustrated on Figure 5.3 is conceptual and may change based on the area required for any individual development.

### **(c) Access to 55 Acre Site**

During review of the various road and parcel configurations available to the Municipality, a different routing option to access the 55 acre site became apparent. An adjacent property owner, who owns the lands located directly west of the 11 acre site, expressed interest in permitting the road access through their property. This new route would allow the westerly extension of John Street to continue directly west from the 11 acre site rather than travelling north along the former rail line before entering the 55 acre site. This option would open additional lands for industrial development but would require construction within a small wooded area situated at the northwest extent of the private parcel. This alternate route is illustrated on Figure 5.3.







#### (d) Road Cross Section

Proposed road extensions within the industrial park expansion will be constructed to a rural cross section with an 8 metre paved road surface, gravel shoulders, and roadside ditches to convey surface water flows. The road allowance will be a total of 27 metres in width to allow for the wider road platform and roadside ditches.

### 5.7 Proposed Phasing Plan

Due to the large scale of the planned Industrial Park expansion, a proposed phasing plan is recommended for implementation purposes. The recommended phases are based primarily upon the two main parcels which comprise the Town's industrial land holdings, with Phase 1 being associated with the 11 acre parcel and Phases 2 & 3 with the 55 acre site. However, limitations presented by existing site topography and ease of servicing also play a role. Table 5.1 describes the primary components of the proposed phasing plan and identifies the individual servicing components associated with each phase of the expansion as well as an anticipated high level opinion of costs for implementation.

**Table 5.1**  
**Proposed Phasing Plan:**  
**Harriston Industrial Park Expansion**  
**Upgrades within Existing Industrial Park**

	<b>Anticipated Cost*</b>
Watermain from John/Adelaide to John/Hutchinson	\$325,000.00
Sanitary sewer from SPS to Hutchinson	\$150,000.00
John Street reconstruction	\$445,000.00
Drain #12 culvert upgrades road culverts/subdrains	\$100,000.00
<b>Total</b>	<b>\$1,020,000.00</b>
<b>Phase 1 – 11 Acre Site</b>	
<b>Phase 1 – 11 Acre Site</b>	
John Street Extension to cul de sac	\$245,000.00
John Street Watermains	\$225,000.00
John Street Sanitary Sewers	\$155,000.00
<b>Total Phase 1</b>	<b>\$625,000.00</b>
<b>Phase 2 – East Part 55 Acre Site</b>	
Road Extension west via Rail Corridor	\$345,000.00
Construction of Drainage Ditch and outlet to Maitland River	\$275,000.00
Watermains within road allowances	\$285,000.00
Sanitary sewers within road allowances	\$180,000.00
<b>Total Phase 2</b>	<b>\$1,085,000.00</b>

\*High level opinions of cost based upon 2015 construction pricing. Exclusions include but are not limited to: hydro servicing;

## **5.8 Anticipated Costs**

It is anticipated that the Industrial Park expansion will be implemented over a 5-20 year time frame with project costs potentially offset through provincial or federal grant programs. Table 5.1 illustrates anticipated costs for the first two phases of the proposed plan. Phase 1 of the proposed expansion (11 acre site) is anticipated to be scheduled for construction in 2018/19 while the remaining phases could be completed as time, finances, and/or other economic drivers dictate. Given that development of Phase 3 could be 15-20 years in the future and the scope of that development will be dependent on the size and scale of the proposal, opinions of cost are not shown for that phase of the Industrial Park expansion.

The above costs include full road construction, a contingency allowance (20%) and an engineering allowance (15%). It is anticipated that the costs associated with Phases 2 & 3 will be partly allocated to future industrial park users either through an area rating by-law or future development charges should they come into effect.

## **6.0 IDENTIFICATION OF POTENTIAL IMPACTS**

### **6.1 General Project Scope**

#### **(a) Construction Phase**

The construction plan for this project generally includes the following general tasks:

- Mobilize to the site.
- Provide traffic signs, barricades and roadside protection at the limits of the construction area, as required.
- Complete site layout, including service locates.
- Employ erosion and sediment controls and protect existing drainage outlet (conduct routine inspections of erosion controls throughout construction period).
- Clear and grub trees to facilitate construction (as required).
- Excavate for, and place, structures, service piping and drainage facilities, including bedding (native or granular backfill).
- Place and grade granular material associated with road subbase.
- Grade and restore disturbed areas and place erosion protection around culvert ends.
- Complete infiltration/exfiltration and deflection testing of sanitary sewers, and CCTV inspections.
- Reconnect existing drains and services, complete all required inspections and testing.
- Swab, test, flush, disinfect and sample watermains.
- Place granular base and asphalt surfacing.
- Carry out standard site restoration activities.
- Complete all required documentation and reporting on the works.
- Conduct any required remediation (i.e., surface sealing).

## 6.2 Environmental Effects

### (a) General

In reviewing the various criteria identified in Section 4 of this report and additional comments provided during the public and agency consultation program, a number of specific environmental elements were identified which could be adversely affected by the implementation of the preferred alternative. The impact of specific components of the proposed construction on the identified environmental elements, are summarized in Table 6.1. Specific mitigation measures for the identified impacts are also presented. The table identifies impacts directly related to road and servicing construction which are generally short-term in nature and of limited duration. Impacts of a greater magnitude and duration (traffic volume, aesthetic impacts, impacts related to development of the subject lands) are also discussed in the following section.

**Table 6.1**  
**Construction Related Environmental Effects**

	Environmental Components  Key Project Works and Activities	Geology and Hydrology Resources	Aquatic Resources	Significant Environmental Features	Cultural Heritage Resources	Social Environment	Economic Environment	Technical Environment
<b>1</b>	<b>Construction Component</b>							
	Contractor Mobilization to the site	○	○	○	○	●	○	○
	Establishment of Temporary Storage Areas	○	●	○	○	●	○	○
	Traffic Control Plan Implementation	○	○	○	○	●	○	○
	Site Clearing	○	●	●	○	○	○	○
	Installation of Sediment Control Devices	○	●	○	○	○	○	○
	Drain crossing of sanitary sewer on John St.	○	●	○	○	○	○	●
	Road and Servicing Excavation	●	●	○	●	●	○	●
	Dewatering	●	●	○	○	○	○	○
	Temporary Storage of Fuels	●	●	○	○	○	○	○
	Installation of sewers and watermains	●	●	○	○	○	○	●
	Grading	○	●	○	○	●	○	○
	Construction Traffic	○	○	○	○	●	○	○
	Site Restoration (seeding/topsoil)	○	○	○	○	○	○	○

● Potential for adverse effect    ○ No adverse effect expected

## (b) Construction Mitigation

Construction-related activities associated with project implementation have the potential to impact upon existing environmental features, the general public and construction workers. The contractor will therefore be responsible for carrying out these activities in accordance with industry safety standards and all applicable legislation. Mitigation measures will also be incorporated into the construction specifications to ensure that operations are conducted in a manner that limits detrimental effects to the environment.

Table 6.2 outlines a series of standard mitigation measures that are typically incorporated into construction specifications. For this project, contract specifications may need to be modified depending upon the nature of the construction activity and any additional requirements of the regulatory agencies.

**Table 6.2**  
**Typical Mitigation for Construction-Related Activities**

<b>Construction Activity</b>	<b>Typical Mitigation Measure</b>
Refuelling and Maintenance	<ul style="list-style-type: none"> <li>- Identify suitable locations for designated refuelling and maintenance areas.</li> <li>- Restrict refuelling or maintaining equipment near watercourses. Non-spill equipment is required within 30 m of any watercourse. Fuelled equipment shall be stored overnight not less than 30 m from the edge of water.</li> <li>- Avoid cleaning equipment in watercourses and in locations where debris can gain access to sewers or watercourses.</li> <li>- Prepare to intercept, clean up, and dispose of any spillage that may occur (whether on land or water).</li> </ul>
Traffic Control	<ul style="list-style-type: none"> <li>- The Contractor shall prepare and submit a traffic plan to the Project Engineer and Town for review and acceptance. Alternative access routes for the existing Industrial Park users may be explored during construction of the deep sewer on John Street.</li> <li>- The Contractor will provide adequate signage and barricades.</li> </ul>
Disposal	<ul style="list-style-type: none"> <li>- Dispose of all construction debris in approved locations.</li> <li>- Do not empty fuel, lubricants or pesticides into sewers or watercourses.</li> </ul>
Pesticides	<ul style="list-style-type: none"> <li>- Co-ordinate the use of pesticides and herbicides with affected landowners and the local pesticide control officer.</li> </ul>
Work in Sensitive Areas	<ul style="list-style-type: none"> <li>- Inform the Contract Administrator of the proposed schedule for each watercourse crossing or other work in sensitive areas.</li> <li>- Avoid encroachment on unique natural areas; do not disturb habitats of rare or endangered species. Restrict the number of locations where equipment is allowed to cross a watercourse.</li> <li>- Restore stream channels following completion of the required work, including protection of stream banks.</li> </ul>

<b>Construction Activity</b>	<b>Typical Mitigation Measure</b>
Silt Control	<ul style="list-style-type: none"> <li>- Excavation &amp; construction adjacent to watercourses shall not proceed until the channel has been isolated from the work area through installation of turbidity curtains parallel to the stream banks.</li> <li>- Silt fences shall be installed and maintained down slope from any stockpile locations.</li> </ul>
Dust Control	<ul style="list-style-type: none"> <li>- Cover or wet down dry materials and rubbish to prevent blowing dust and debris.</li> <li>- Avoid the use of chemical dust control products adjacent to wetlands and watercourses.</li> </ul>
Site Clearing	<ul style="list-style-type: none"> <li>- Protective measures shall be taken to safeguard trees from construction operations.</li> <li>- Equipment or vehicles shall not be parked, repaired or refuelled near the drip line area of any tree not designated for removal. Construction and earth materials shall also not be stockpiled within the defined drip line areas.</li> <li>- Restrict tree removal to areas designated by the Contract Administrator.</li> <li>- Minimize stripping of topsoil and vegetation.</li> </ul>
Sedimentation/ Erosion Control	<ul style="list-style-type: none"> <li>- Erect sediment fencing to control excess sediment loss during construction.</li> <li>- Minimize removal of vegetation from sloped approaches to watercourses.</li> <li>- Protect watercourses, wetlands, catch basins and pipe ends from sediment intrusion.</li> <li>- Complete restoration works following construction.</li> <li>- Install straw bale check dams in ditch lines following rough grading of ditches.</li> </ul>
Noise Control	<ul style="list-style-type: none"> <li>- Site procedures should be established to minimize noise levels in accordance with local by-laws.</li> <li>- Night time or Sunday work shall not be permitted, except in emergency situations.</li> </ul>

### c) Operations Phase

Upon completion of the project the proponent, in accordance with normal municipal practices, would maintain the road and municipal services. In this regard, the roadway/ services will be subject to routine maintenance and snow removal activities. Standard response procedures would also be employed to resolve maintenance problems and emergencies.



### **6.3 Assessment of Interactions**

Based upon the findings of the general impact assessment (Tables 3.4 and 3.5), the environmental interactions analysis (Table 6.1) and input received through the agency consultation program, the project has the potential to impact upon three environmental elements being the Social Environment, the Natural Environment and the Economic Environment.

A description of the potential impacts is described in detail within this section of the report. Measures designed to minimize the impacts are also presented. The determination of appropriate mitigation measures incorporated an assessment of previous studies and investigations, site specific requirements and an evaluation of a broad range of alternatives. This assessment was based on a consideration of three broad approaches to impact mitigation; avoidance, minimization of adverse effects, and compensation.

### **6.4 Social Impacts**

#### **(a) Potential Impact to Residents/Adjacent Properties (short term)**

A majority of the works associated with the preferred alternative will occur on lands located within existing industrial areas with limited residential development or adjacent to vacant agricultural lands zoned for future development. However, reconstruction of John Street to install the deep sewer and the extension of John Street, north to service the 11 acre parcel, will impact residents within the existing industrial park as well as property owners located on Highway No. 9 adjacent to the subject lands. Steps will be taken to minimize the impacts to residents however proposed construction activities may present temporary access issues to some properties. Residents living immediately adjacent to the work area may experience construction related impacts (noise/traffic disruption/restricted access) through much of the construction period.

#### **(b) Impact to Adjacent Properties (long-term)**

As discussed within Section 2.5 of the report, the 11 Acre parcel to be serviced in conjunction with the preferred alternative, is currently zoned MI-40 (H). As noted, the (H) represents a holding zone which would be lifted once the identified studies have been completed. A Stage 1 & 2 Archaeological Assessment was completed on the subject lands in conjunction with the Class EA process. No significant buried cultural material was identified during the assessment. Potential impacts related to sound and vibration, as it affects adjacent properties located along Highway No. 9, will be dealt with when the individual parcels are developed and specific uses are known. The Ministry of the Environment and Climate Change has very specific criteria to assess the level of impact for a given activity or use. It would therefore be more practical to ensure that appropriate setbacks or measures are incorporated for each individual site at the time that each property is rezoned to remove the holding zone.

## **6.5 Potential Impacts to Natural Features**

### **(a) General**

Construction activities associated with the proposed road and servicing extensions, could pose a risk to aquatic habitat, given that certain aspects of the construction will be required immediately adjacent to an open watercourse. Accordingly, a series of protective measures will be incorporated into construction plans to help mitigate any identified impacts. As well, any lands disturbed by the construction process would be restored. All remediation planned for the project will also be carried out in accordance with the mitigation and restoration requirements of the regulatory agencies. The following provides detailed descriptions of potential impacts associated with components of the environment identified above and the specific measures proposed to mitigate the impacts to specific features of the natural environment.

### **(b) Lot Layout**

At the outset of the Class EA process, it was proposed that the planned road extension going west from John Street to service the 55 Acre parcel could be constructed in two locations. The first option would extend directly south from the terminus of John Street through lands owned by an adjacent property owner, and would therefore bisect a small wooded area. This road option was considered feasible, as it maximized lot sizes within the 55 Acre parcel and opened up additional lands for industrial development. A second road option was also considered which utilized the municipally-owned former rail line lying between the 11 acre and 55 acre parcels. Following an assessment of lot layout options for the 55 Acre parcel, it was determined that the northerly route which utilized the former rail line and stayed completely within municipally owned lands, was the preferred route for access to the 55 acre parcel. This route would also minimize impacts to the small forested area located immediately west of the 11 acre site.

### **(c) Aquatic Habitat**

For this project, construction of stormwater management facilities for the 11 Acre and 55 Acre parcels will require construction in the vicinity of existing open municipal drains, which ultimately discharge to the Maitland River or one of its tributaries. A series of remedial measures have been proposed which will minimize impacts to the river during construction. To minimize potential impacts to the adjacent watercourses, sediment and erosion control measures will be implemented at the construction sites to prevent sediment laden runoff from reaching the channels. Sediment and erosion control measures will consist of sediment fences around the work areas, straw bale filters installed within roadside ditches and erosion protection around topsoil stockpiles.

#### **d) Terrestrial Habitat**

Small wooded areas are located adjacent to the boundaries of the 11 acre and 55 acre sites, as well as the former CNR rail line. Minor impacts to these forested areas may occur during construction of the proposed road extensions and drainage upgrades. To minimize impacts to these areas, tree removal associated with the proposed road and servicing construction will be minimized as much as possible. The limit of clearing will be clearly demarcated prior to the onset of construction through the installation of exclusionary fencing.



In addition, all tree removal would be timed to occur outside of the breeding bird season (April 1 to August 30) to minimize impacts to local wildlife. All disturbed areas will be restored following the completion of construction.

### **6.6 Potential Impact to Economic Environment**

Development of the proposed road and servicing extensions represents a significant capital expenditure to the Town of Minto. The Town is seeking funding from several sources in order to minimize the impact of the project on local residents. Other measures being utilized by the municipality to offset the impact of project costs are as follows:

- The project will be phased over a number of years to coincide with demand.
- A reserve fund will be established to pay for capital costs associated with the project.
- New development proposed for lands serviced in conjunction with this project may be subject to development charges.

The municipality is confident that the above noted measures will provide sufficient financial mitigation to offset the financial impact of the project on municipal residents.

## **7.0 CONCLUSIONS AND STUDY RECOMMENDATIONS**

### **7.1 General**

The purpose of this part of the study was to develop conclusions and recommendations for future action. This stage involved the completion of a final evaluation of study findings and the identification of a preferred alternative.

## **7.2 Study Conclusions**

Based upon a review of the current environmental setting, no impacts were identified with the preferred alternative that could not be mitigated. In this respect implementation of the identified industrial park road and servicing extensions appears to be appropriate for the subject lands and should not result in significant environmental effects. It was therefore concluded from the Class EA investigation that the Town of Minto should proceed with implementation of this servicing plan, pending the receipt of all required approvals and in accordance with all mitigation measures defined during the approvals process.

## **7.3 Selection of the Preferred Alternative**

Given the above, selection of Alternative 2, Extension of Roads and Services to service both the 11 Acre and 55 Acre parcels, has been selected as the preferred solution to the identified problems. The works associated with the preferred alternative are summarized below.

## **7.4 Proposed Works**

The following sections summarize the initial conceptual designs associated with the preferred alternative as well as the proposed implementation phasing.

### **(a) 11 Acre Parcel – Phase 1**

- Consult with existing industries regarding traffic control and establish, if suitable, a temporary access route.
- Installation of a larger watermain and a deeper sanitary sewer within the existing John Street road allowance, including a crossing of Municipal Drain 12.
- Extend John Street approximately 230 m to the north culminating in the construction of a temporary cul de sac. The new road will incorporate a rural cross-section 27 metres in width and include two lanes of traffic and roadside ditches.
- Construction of individual on-site storm water management facilities on each parcel within the 11 acre site, as they are developed. Where possible, site drainage is to be directed to the northeast to the existing Municipal Dain #70 for outlet; otherwise, drainage should be directed to the John Street ditch.
- Easements may be needed, adjacent to rear lot limits, in order to safely convey stormwater to an appropriate outlet.

### **(b) 55 Acre Parcel - Phase 2**

- Obtain a 7m widening along the westerly side of the former rail lands
- Extension of road access west to the limit of the 11 acre site and then north along the former rail line to access the 55 acre parcel. The new road will incorporate a rural cross-section 27 metres in width and include two lanes of traffic and roadside ditches.

- Installation of watermains and sanitary sewer facilities within the proposed road allowances for a distance of approximately 350 metres.
- Construction of individual on-site storm water management facilities on each parcel within the east portion of the 55 acre site, as they are developed. Site drainage is to be directed to the southwest to a proposed drainage ditch for outlet.
- Construction of a drainage ditch along the southwest limit of the site, adjacent to the WWTP, and then through an unopened road allowance, to convey stormwater drainage flows from the north portion of the site to the Maitland River.

**(c) 55 Acre Parcel – Phase 3**

- Extension of road access west to the limit of development. The new road will incorporate a rural cross-section 27 metres in width and include two lanes of traffic and roadside ditches.
- Installation of watermains within the proposed road allowance.
- Installation of sanitary sewer as far west as feasible to obtain gravity flow. Servicing could be extended beyond this point through installation of individual pumped systems discharging to the gravity sewer.
- Construction of individual on-site storm water management facilities on each parcel within the west portion of the 55 acre site, as they are developed. Site drainage is to be directed to the drainage ditch constructed during Phase 3 for outlet.

**7.5 Class EA Project Schedule**

The recommended solution is considered a Schedule "B" project under the terms of the Class EA document, as the project involves the construction of a new road and servicing extensions outside of existing utility corridors or road allowances. This project is approved following the completion of an environmental screening process.

**7.6 Final Public Consultation**

A Notice of Completion was recently published in the local newspaper and circulated to adjacent property owners and review agencies (refer to Appendix C). The notice identified the preferred alternative and provided the basis for appeal of the selected servicing plan (i.e., a Part II Order request to the Minister of the Environment prior to the conclusion of the review period).

The following summarizes the distribution of the notice:

Contents:	Identification of preferred solution, key project components
Issued:	July 12, 2017
Placed In:	Harriston Review (July 12; July 19, 2017)
Distributed To:	10 review agencies, 43 Adjacent Property Owners
Review Period:	Concludes August 11, 2017

## **7.7 Project Implementation**

It is anticipated that the planned works described within this report will be constructed over several construction seasons, pending the successful completion of the Class EA process, the receipt of all necessary approvals and the securing of adequate funding. The works will be completed by a qualified Contractor following a competitive selection process. The constructed works will be warranted by the Contractor for a period prescribed in the contract documentation (typically one year). Following construction, the Town of Minto will maintain the physical condition and operation of all built works and will perform remediation work as required and in accordance with the requirements of applicable regulatory agencies.

## **7.8 Approvals**

### **(a) General**

A limited number of approvals will be required in order to facilitate the implementation of the recommended solution. The following are the key approvals required to permit the construction of the proposed works.

### **(b) Conservation Authorities Act**

Some components of this project may involve construction on lands regulated by the Maitland Valley Conservation Authority. In accordance with the Conservation Authorities Act, an application will be submitted to the Conservation Authority to obtain approval for the project. The application will set out the measures proposed to protect sensitive lands, such as stream banks, during construction in order to minimize the negative impacts of the project on the ecology of the area. The Authority may require additional measures be incorporated into the construction plan as part of the approvals process.

### **(c) Ontario Water Resources Act**

The works associated with the preferred alternative are subject to the Ontario Water Resources Act. Consequently, the project cannot proceed until the municipality has received the necessary Environmental Compliance Approvals (ECA) from the MOECC. These Certificates will define how the project must be implemented.

## **7.9 Summary of Impact Mitigation**

A series of remediation measures will be implemented in order to minimize the environmental impacts associated with the proposed works. The following represent the key measures of the proposed mitigation plan:

- Erosion and sediment control measures will be implemented throughout the entire work zone to minimize sediment loadings to watercourses.
- The Ontario Occupational Health and Safety Act will apply to all project related activity in order to minimize the risks posed by construction.
- Consultation with existing Industrial Park owners will occur in advance of construction to identify alternative access routes and review existing entrance requirements.
- Local traffic will be permitted access to those portions of municipal road allowances not directly impacted by the proposed construction activities. Signage advising of the impending construction will be erected well in advance of the proposed construction.
- Construction activities will be conducted in accordance with contract documentation and the impact mitigation requirements of various regulatory agencies. The work will be monitored through on-site supervision.
- Any areas which are disturbed as a result of construction will be restored following completion of the project.
- Any necessary approvals will be obtained from regulatory review agencies prior to implementation of the proposed works.
- Any required tree removals should occur outside of the bird breeding season.

## **7.10 Class EA Study Completion**

The following activities are required in order to complete the formal Class EA screening process:

- Address outstanding issues resulting from issuance of the Notice of Completion.
- Finalize the Screening Report following the conclusion of the 30-day review period.
- Advise the Town of Minto and the Ministry of the Environment and Climate Change (MOECC) when the study process is complete (assuming no Part II Order requests are filed).

## 8.0 SUMMARY

This report documents the Municipal Class Environmental Assessment process conducted to define a solution to deficiencies and servicing opportunities associated with the Harriston Industrial Park serving the community of Harriston.

The related problems and opportunities were established as:

*The extension of John Street north of Hutchison Street, including full municipal services, is required to facilitate the development of additional industrial lands within the community of Harriston.*

The preferred solution, to extend roads and servicing to service both the 11 acre and 55 acre municipally-owned industrial parcels, represents the most practical approach to resolving the defined problems with the existing Harriston Industrial Park. The proposed project is a Schedule B activity under the terms of the Class EA. The Town of Minto intends to proceed with the implementation of this project upon completion of the Class EA investigation and after receipt of all necessary approvals.

All of which is respectfully submitted.

B. M. ROSS AND ASSOCIATES LIMITED

Per \_\_\_\_\_  
Frank Vanderloo, P. Eng.  
Project Manager

Per \_\_\_\_\_  
Kelly Vader, RPP, MCIP  
Environmental Planner

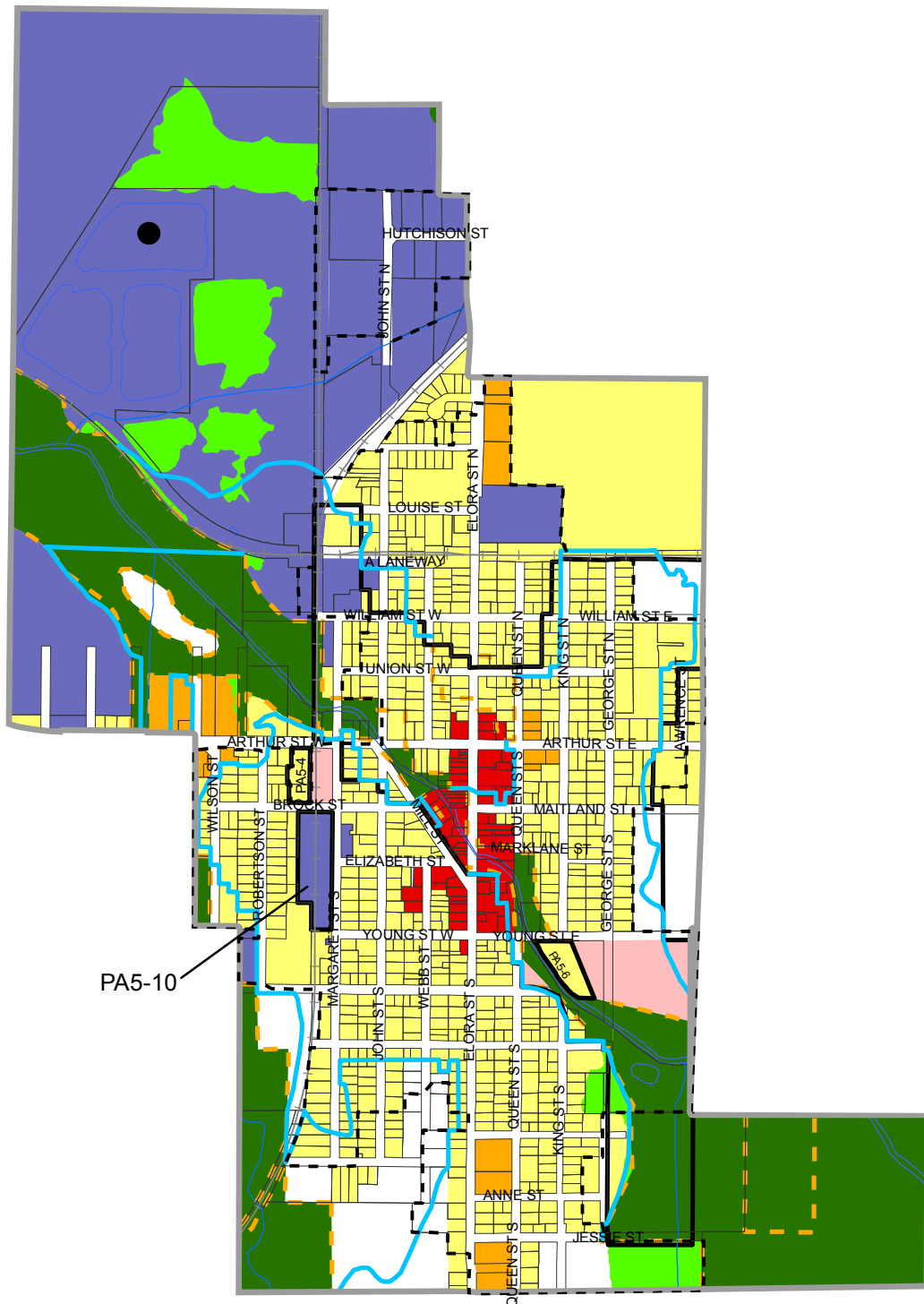


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**APPENDIX A**

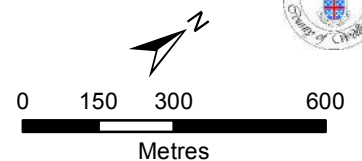
**PLANNING RELATED DOCUMENTS**



#### Legend

- |                           |                        |
|---------------------------|------------------------|
| Residential               | Future Development     |
| Central Business District | Regional Floodline     |
| Highway Commercial        | Special Policy Area    |
| Industrial                | Lakes, Rivers, Streams |
| Recreational              | Built Boundary         |
| Core Greenlands           | 100 Year Floodline     |
| Greenlands                | Railways               |
| Waste Water Facility      | PA Policy Area         |

#### HARRISTON Town of Minto Schedule A5-2



May 6th, 1999  
Updated: January 22, 2015.  
Date Printed: March 9, 2015.

# HARRISTON

## Town of Minto

### Schedule 'A' Map 3

#### Legend:

- AGRICULTURAL ZONE

UNSERVED RESIDENTIAL ZONE

LOW DENSITY RESIDENTIAL ZONE

LOW DENSITY RESIDENTIAL ZONE

MEDIUM DENSITY RESIDENTIAL ZONE

HIGH DENSITY RESIDENTIAL ZONE

ESTATE RESIDENTIAL ZONE

MOBILE HOME PARK ZONE

CENTRAL COMMERCIAL ZONE

HIGHWAY COMMERCIAL ZONE

NEIGHBOURHOOD COMMERCIAL ZONE

SHOPPING CENTRE COMMERCIAL ZONE

HAMLET COMMERCIAL ZONE

MIXED USE ZONE

MAIN STREET MIXED USE ZONE

AGRICULTURAL COMMERCIAL ZONE

INDUSTRIAL ZONE

RURAL INDUSTRIAL ZONE

EXTRACTIVE INDUSTRIAL ZONE

INSTITUTIONAL ZONE

OPEN SPACE ZONE

FUTURE DEVELOPMENT ZONE

NATURAL ENVIRONMENT ZONE

FLOODWAY ZONE

FLOOD FRINGE OVERLAY ZONE ONE

FLOOD FRINGE OVERLAY ZONE TWO
- A

R1A

R1B

R1C

R2

R3

ER

MH

C1

C2

C3

C4

C5

MU1

MU2

AC

M1

RIN

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IN

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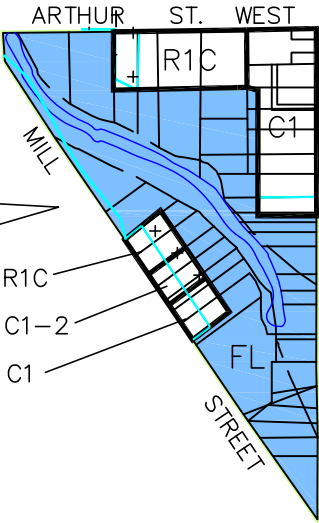
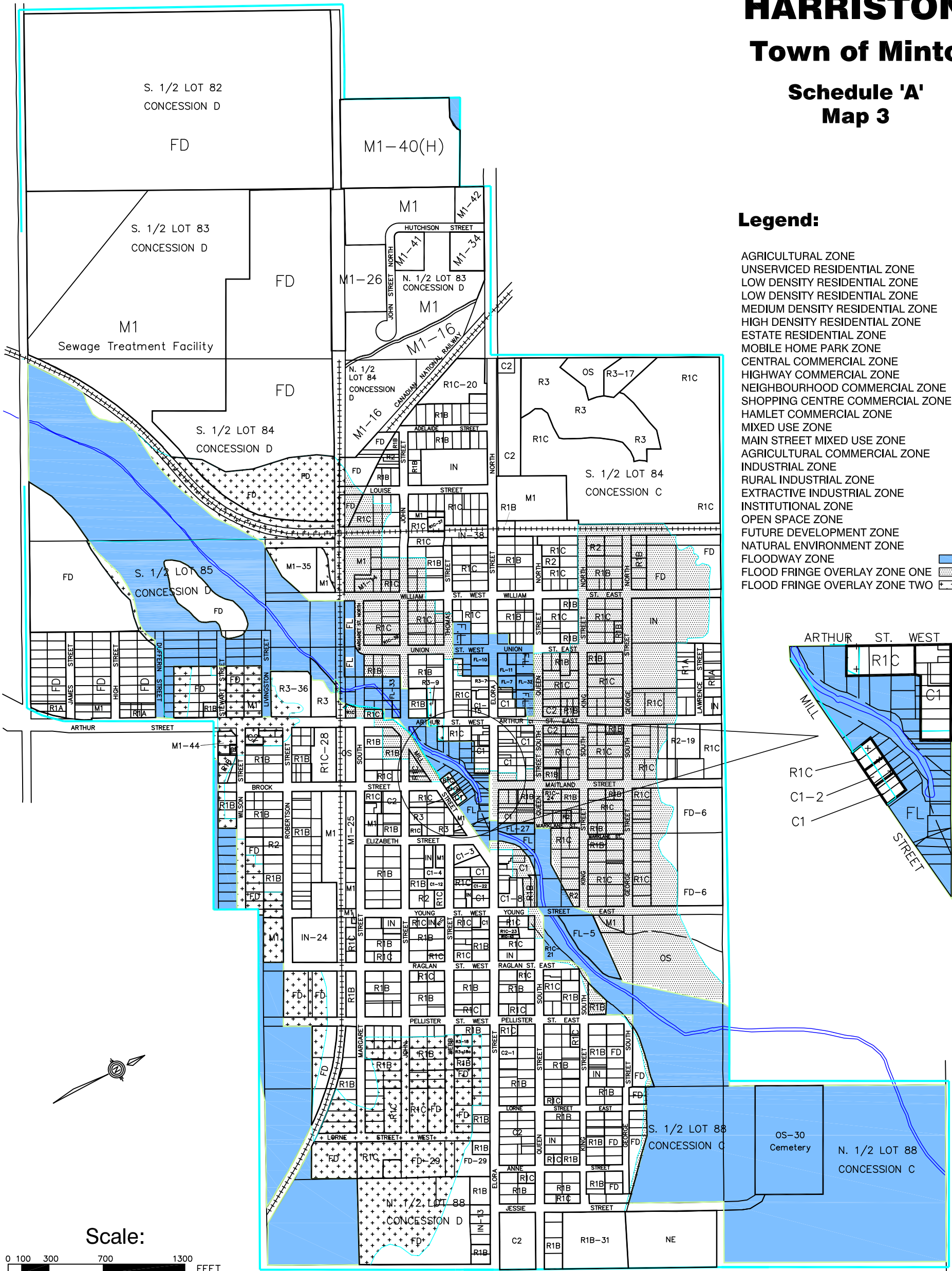
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## **APPENDIX B**

### **ARCHAEOLOGICAL ASSESSMENT: STAGE 1 & 2 REPORT**

## Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes

### A Checklist for the Non-Specialist

The **purpose of the checklist** is to determine:

- if a property(ies) or project area:
  - is a recognized heritage property
  - may be of cultural heritage value
- it includes all areas that may be impacted by project activities, including – but not limited to:
  - the main project area
  - temporary storage
  - staging and working areas
  - temporary roads and detours

**Processes covered** under this checklist, such as:

- *Planning Act*
- *Environmental Assessment Act*
- *Aggregates Resources Act*
- *Ontario Heritage Act* – Standards and Guidelines for Conservation of Provincial Heritage Properties

### Cultural Heritage Evaluation Report (CHER)

If you **are** not sure how to answer one or more of the questions on the checklist, you may want to hire a qualified person(s) (see **page 5** for definitions) to undertake a cultural heritage evaluation report (CHER).

The **CHER** will help you:

- identify, evaluate and protect cultural heritage resources on your property or project area
- reduce potential delays and risks to a project

### Other **C**hecklists

Please **use** a separate checklist for your project, if:

- you are seeking a Renewable Energy Approval under Ontario Regulation 359/09 – [separate checklist](#)
- your Parent Class EA document has an approved screening criteria (as referenced in Question 1)

Please **refer** to the Instructions pages for more detailed information and when completing this form.



Project or Property Name

Harriston Industrial Park Expansion

Project or Property Location (upper and lower or single tier municipality)

Town of Minto

Proponent Name

Bill White, CAO/Clerk, Town of Minto

Proponent Contact Information

## Screening Questions

	<b>Yes</b>	<b>No</b>
1. Is there a pre-approved screening checklist, methodology or process in place?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes, please follow the pre-approved screening checklist, methodology or process.

If No, continue to Question 2.

### Part A: Screening for known (or recognized) Cultural Heritage Value

	<b>Yes</b>	<b>No</b>
2. Has the property (or project area) been evaluated before and found <b>not</b> to be of cultural heritage value?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes, do not complete the rest of the checklist.

The proponent, property owner and/or approval authority will:

- summarize the previous evaluation and
- add this checklist to the project file, with the appropriate documents that demonstrate a cultural heritage evaluation was undertaken

The summary and appropriate documentation may be:

- submitted as part of a report requirement
- maintained by the property owner, proponent or approval authority

If No, continue to Question 3.

	<b>Yes</b>	<b>No</b>
3. Is the property (or project area):		
a. identified, designated or otherwise protected under the <i>Ontario Heritage Act</i> as being of cultural heritage value?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. a National Historic Site (or part of)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. designated under the <i>Heritage Railway Stations Protection Act</i> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. designated under the <i>Heritage Lighthouse Protection Act</i> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office (FHBRO)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes to any of the above questions, you need to hire a qualified person(s) to undertake:

- a Cultural Heritage Evaluation Report, if a Statement of Cultural Heritage Value has not previously been prepared or the statement needs to be updated

If a Statement of Cultural Heritage Value has been prepared previously and if alterations or development are proposed, you need to hire a qualified person(s) to undertake:

- a Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No, continue to Question 4.



## Part B: Screening for Potential Cultural Heritage Value

	Yes	No
4. Does the property (or project area) contain a parcel of land that:		
a. is the subject of a municipal, provincial or federal commemorative or interpretive plaque?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. has or is adjacent to a known burial site and/or cemetery?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. is in a Canadian Heritage River watershed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. contains buildings or structures that are 40 or more years old?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Part C: Other Considerations

	Yes	No
5. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area):		
a. is considered a landmark in the local community or contains any structures or sites that are important in defining the character of the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. has a special association with a community, person or historical event?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. contains or is part of a cultural heritage landscape?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes to one or more of the above questions (Part B and C), there is potential for cultural heritage resources on the property or within the project area.

You need to hire a qualified person(s) to undertake:

- Cultural Heritage Evaluation Report (CHER)

If the property is determined to be of cultural heritage value and alterations or development is proposed, you need to hire a qualified person(s) to undertake:

- Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No to all of the above questions, there is low potential for built heritage or cultural heritage landscape on the property.

The proponent, property owner and/or approval authority will:

- summarize the conclusion
- add this checklist with the appropriate documentation to the project file

The summary and appropriate documentation may be:

- submitted as part of a report requirement e.g. under the *Environmental Assessment Act*, *Planning Act* processes
- maintained by the property owner, proponent or approval authority



## Instructions

Please have the following available, when requesting information related to the screening questions below:

- a clear map showing the location and boundary of the property or project area
  - large scale and small scale showing nearby township names for context purposes
- the municipal addresses of all properties within the project area
- the lot(s), concession(s), and parcel number(s) of all properties within a project area

For more information, see the Ministry of Tourism, Culture and Sport's [Ontario Heritage Toolkit](#) or [Standards and Guidelines for Conservation of Provincial Heritage Properties](#).

In this context, the following definitions apply:

- **qualified person(s)** means individuals – professional engineers, architects, archaeologists, etc. – having relevant, recent experience in the conservation of cultural heritage resources.
- **proponent** means a person, agency, group or organization that carries out or proposes to carry out an undertaking or is the owner or person having charge, management or control of an undertaking.

### 1. Is there a pre-approved screening checklist, methodology or process in place?

An existing checklist, methodology or process may already be in place for identifying potential cultural heritage resources, including:

- one endorsed by a municipality
- an environmental assessment process e.g. screening checklist for municipal bridges
- one that is approved by the Ministry of Tourism, Culture and Sport (MTCS) under the Ontario government's [Standards & Guidelines for Conservation of Provincial Heritage Properties](#) [s.B.2.]

## Part A: Screening for known (or recognized) Cultural Heritage Value

### 2. Has the property (or project area) been evaluated before and found not to be of cultural heritage value?

Respond 'yes' to this question, if all of the following are true:

A property can be considered not to be of cultural heritage value if:

- a Cultural Heritage Evaluation Report (CHER) - or equivalent - has been prepared for the property with the advice of a qualified person and it has been determined not to be of cultural heritage value and/or
- the municipal heritage committee has evaluated the property for its cultural heritage value or interest and determined that the property is not of cultural heritage value or interest

A property may need to be re-evaluated, if:

- there is evidence that its heritage attributes may have changed
- new information is available
- the existing Statement of Cultural Heritage Value does not provide the information necessary to manage the property
- the evaluation took place after 2005 and did not use the criteria in Regulations 9/06 and 10/06

**Note:** Ontario government ministries and public bodies [prescribed under Regulation 157/10] may continue to use their existing evaluation processes, until the evaluation process required under section B.2 of the Standards & Guidelines for Conservation of Provincial Heritage Properties has been developed and approved by MTCS.

To determine if your property or project area has been evaluated, contact:

- the approval authority
- the proponent
- the Ministry of Tourism, Culture and Sport

### 3a. Is the property (or project area) identified, designated or otherwise protected under the *Ontario Heritage Act* as being of cultural heritage value e.g.:

i. designated under the *Ontario Heritage Act*

- individual designation (Part IV)
- part of a heritage conservation district (Part V)

**Stage 1 and 2 Archaeological Assessment  
Municipal Class Environmental Assessment  
John Street Extension – Harriston Industrial Park  
Part of Lots 82 and 83, Concession D  
Former Township of Minto, Town of Harriston,  
Now the Town of Minto,  
Community of Harriston,  
Wellington County, Ontario**

Submitted to

**B. M. Ross and Associates Limited**  
62 North Street, Goderich, ON N7A 2T4

and

**The Ontario Ministry of Tourism, Culture and Sport**

**Prepared by**



**Timmins Martelle  
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Archaeological License Number: Matthew Beaudoin, Ph.D., P324  
Our File: 2013-073  
PIF Number: P324-0034-2014

May 2015

(Original Report submitted to Ministry of Tourism, Culture and Sport 27 May 2015)

## Executive Summary

A Stage 1 and 2 archaeological assessment was conducted for a roughly 29.48 hectare (roughly 72.8 acre) parcel that is part of Lots 82 and 83, Concession D, in the former Township of Minto, Town of Harriston, now part of the Town of Minto, Community of Harriston, Wellington County. The parcel encompasses lands for a proposed expansion of the Harriston Industrial Park, located on the southeast side of Highway 9 in Harriston. John Street North will also be extended west and south to provide access to the new industrial lands. The latter will sit west of the community's existing sewer lagoons. Our assessment was carried out as part of a municipal Class Environmental Assessment for the proposed expansion and at the request of B.M Ross and Associates, who are coordinating the EA work on behalf of the municipality. The assessment was conducted in accordance with the *Ontario Heritage Act* (RSO 1990) and with Section 5(3)(c) of the *Environmental Assessment Act*. The purpose of our work was to determine whether there were potential or known heritage resources present that might be impacted by the proposed undertaking.

The Stage 1 background study included a review of current land use, historic and modern maps, registered archaeological sites and previous archaeological studies, past settlement history for the area, and a consideration of topographic and physiographic features, soils and drainage. According to the map-based review, the survey area is intersected by or in proximity to (i.e., within 300 metres of) at least three features signalling archaeological potential: 1) a major watercourse (the Maitland River); 2) lesser watercourses (Drain 70, Drain 12 and an unnamed tributary, likely associated with the original route of Drain 70); 3) 19<sup>th</sup> century transportation routes (Highway 9 and the former Wellington Grey and Bruce Railway); and 4) mapped 19<sup>th</sup> century structures (those of J. Dickson and G. Hughes). As such, the project lands demonstrated potential for the discovery of archaeological resources and a Stage 2 archaeological assessment was recommended.

The proposed impact areas encompass active agricultural lands, overgrown and treed lands, as well as partially disturbed zones adjacent to the existing industrial park. The Stage 2 archaeological assessment consisted of a pedestrian survey of the ploughed agricultural portion (88.36%; 26.05 ha) and a test pit survey of grassed and wooded lands (0.12ha; 0.41 %). The treed lands contained pristine soils and these were test pitted at a five metre interval. The grassed extension of John Street North through the existing industrial park was judgmentally test pitted to confirm disturbance (0.19 ha; 0.64%). Another 9.4% of the project lands were not surveyed due to low archaeological potential. These lands included the railway easement which runs through the north end of the industrial park expansion (0.89 ha; 3.02%), as well as low-lying, wet areas (6.38%; 1.88 ha). Finally 1.19% (0.35 ha) of the project lands, representing a stretch of the John Street North extension south of the railway, was not yet assessed due to the fact that it had not been ploughed. It will require assessment at a future date.





The Stage 2 survey resulted in the discovery of two archaeological find spots. The first, designated Location 1 (AlHf-4), was a find of an early Middle Archaic Stanley Stemmed/Stanley Neville projectile point. Despite the intensification of the survey interval and a thorough investigation of the area surrounding the find, no additional artifacts were noted. As such, this is considered an isolated find. The second find spot, designated Location 2, consisted of a non-diagnostic biface fragment and two flakes. Again, an intensified survey at this location did not result in the discovery of additional archaeological material.

All work met provincial standards and two archaeological locations were identified during the Stage 2 assessments. The locations do not meet provincial criteria for further investigation. Location 1 is an isolated projectile point and its cultural heritage value and interest has been sufficiently documented. Stage 3 testing is not recommended. Location 2 consists of a biface and two flakes with low cultural heritage value. Stage 3 testing is not recommended. Given this, all of the surveyed portions of the project area should be considered free of archaeological concern.

A 180 metre long 20 metre wide corridor south a railway easement that bisects the Harriston Industrial Park extension lands was not surveyed as it was not ploughed at the time of the Stage 2 assessment. As such, this area has further archaeological concern and will require Stage 2 assessment at a later date and if the proposed route for the John Street extension is retained.

Should construction plans change to incorporate new areas not previously subject to Stage 1 evaluation or Stage 2 survey, additional archaeological assessment will also be required.

These recommendations are subject to report review and acceptance by the Ministry of Tourism, Culture and Sport and to the provisions established in Section 5.0 of this report.



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**Stage 1 and 2 Archaeological Assessment  
Municipal Class Environmental Assessment  
John Street Extension – Harriston Industrial Park  
Part of Lots 82 and 83, Concession D  
Former Township of Minto, Town of Harriston,  
Now the Town of Minto,  
Community of Harriston,  
Wellington County, Ontario**

## **1.0 PROJECT CONTEXT**

### **1.1 Development Context**

#### ***1.1.1 Introduction***

A Stage 1 and 2 archaeological assessment was conducted for a roughly 28.1 hectare (roughly 69 acre) parcel that is part of Lots 82 and 83, Concession D, in the former Township of Minto, Town of Harriston, now part of the Town of Minto, Community of Harriston, Wellington County. The parcel encompasses lands for a proposed expansion of the Harriston Industrial Park, located on the southeast side of Highway 9 in Harriston. John Street North will also be extended west and south to provide access to the new industrial lands. The latter will sit west of the community's existing sewer lagoons. Our assessment was carried out as part of a municipal Class Environmental Assessment for the proposed expansion and at the request of B.M Ross and Associates, who are coordinating the EA work on behalf of the municipality. The assessment was conducted in accordance with the *Ontario Heritage Act* (RSO 1990) and with Section 5(3)(c) of the *Environmental Assessment Act*. The purpose of our work was to determine whether there were potential or known heritage resources present that might be impacted by the proposed undertaking.

All archaeological consulting activities were performed under the Professional Archaeological License of Matthew Beaudoin, Ph.D. (P324) and in accordance with the *Standards and Guidelines for Consultant Archaeologists* (MTC 2011). Permission to enter the property and conduct all required archaeological activities (including the collection of artifacts, where present) was given by Kelly Vader, B.M. Ross and Associates, agent for the Town of Minto.

#### ***1.1.2 Purpose and Legislative Context***

The *Ontario Heritage Act* makes provisions for the protection and conservation of heritage resources in the Province of Ontario. Heritage concerns are recognized as a matter of provincial interest in Section 2.6.2 of the *Provincial Policy Statement* which stipulates that municipalities shall have regard for the conservation of features of significant architectural, cultural, historical, archaeological or scientific interest. The

purpose of a Stage 1 background study is to determine if there is potential for cultural resources to be found on a property for which a change in land use is pending. It is used to determine the need for a Stage 2 field assessment involving the search for archaeological sites. In accordance with *Provincial Policy Statement* 2.6, if significant sites are found, a strategy (usually avoidance, preservation or excavation) must be put forth for their mitigation.

The *Environmental Assessment Act* also provides for the protection and conservation of the “environment,” widely defined to cover “cultural heritage” resources. Section 5(3)(c) of the *Act* stipulates that heritage resources to be affected by a proposed undertaking be identified during the environmental screening process. Within the context of an Environmental Assessment, the purpose of a Stage 1 background study is to determine if the project has potential to negatively impact known or unknown archaeological resources. A Stage 2 assessment establishes if archaeological sites are present within the proposed impact areas, while a Stage 3 assessment evaluates their cultural heritage value. In the case of archaeological resources, potentially detrimental effects to archaeological resources are mitigated through Stage 4 protection and avoidance and/or excavation.

## **2.0 STAGE 1 ARCHAEOLOGICAL ASSESSMENT**

### **2.1 Methods and Sources**

A Stage 1 overview and background study was conducted to gather information about known and potential cultural heritage resources within the project lands. According to the 2011 *Standards and Guidelines for Consultant Archaeologists*, a Stage 1 background study must include a review of:

- an up-to-date listing from the Ontario Archaeological Sites Database (OASD) of registered archaeological sites within 1 km of the study area;
- reports of previous archaeological fieldwork within a radius of 50 metres around the property;
- topographic maps at 1:10,000 (recent and historical) or the most detailed scale available;
- historic settlement maps (e.g., historical atlas);
- archaeological management plans or other archaeological potential mapping (when available); and
- commemorative plaques or monuments on or near the property.

For this project, the following activities were carried out to satisfy or exceed the aforementioned requirements:





- a database search was filed with Robert von Bitter of the Ministry of Tourism, Culture and Sport requesting a listing of registered archaeological sites within 1 km of the subject lands (received July 2, 2014);
- a review of known prior archaeological reports for the property and adjacent lands (note the Ministry of Tourism, Culture and Sport currently does not keep a publicly accessible record of archaeological assessments carried out in the Province of Ontario, so a complete inventory of prior assessment work nearby is not available);
- Ontario Base Mapping (1:10,000) was reviewed through ArcGIS and mapping layers provided by geographynetwork.ca;
- a series of historic maps was reviewed relating to post-1800 land settlement.

There are no applicable archaeological management plans for the area and no historical plaques in the vicinity of the project lands.

Additional sources of information were also consulted, including modern aerial photographs, local history accounts, soils and physiography data provided by the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), and both 1:50,000 (Natural Resources Canada) and finer scale topographic mapping.

When compiled, this information was used to create a summary of the characteristics of the subject lands, in an effort to evaluate their archaeological potential. The Province (MTC 2011 – Section 1.3.1) has recently defined the criteria that identify archaeological potential as:

- previously identified archaeological sites
- water sources
  - primary water sources (lakes, rivers, streams, creeks)
  - secondary water courses (intermittent streams and creeks, springs, marshes, swamps)
  - features indicating past water sources (e.g., glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels indicated by clear dip or swale in topography, shorelines of drained lakes or marshes, cobble beaches)
  - accessible or inaccessible shoreline (e.g., high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh)
- elevated topography (e.g., eskers, drumlins, large knolls, plateaux)
- pockets of well-drained sandy soil, especially near areas of heavy soil or rocky ground
- distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases; there may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings



- resource areas, including:
  - food or medicinal plants (e.g., migratory routes, spawning areas, prairie)
  - scarce raw materials (e.g., quartz, copper, ochre or outcrops of chert)
  - early Euro-Canadian industry (e.g., fur trade, logging, prospecting, mining)
- areas of early Euro-Canadian settlement. These include places of early military or pioneer settlement (e.g., pioneer homesteads, isolated cabins, farmstead complexes), early wharf or dock complexes, pioneer churches and early cemeteries. There may be commemorative markers of their history, such as local, provincial, or federal monuments or heritage parks.
- early historical transportation routes (e.g., trails, passes, roads, railways, portage routes)
- property listed on a municipal register or designated under the *Ontario Heritage Act* or that is a federal, provincial, or municipal historic landmark or site
- property that local histories or informants have identified with possible archaeological sites, historical events, activities or occupations.

In Southern Ontario (south of the Canadian Shield), any lands within 300 metres of any of the features listed above are considered to have potential for the discovery of archaeological resources.

Typically, a Stage 1 assessment will determine potential for traditional First Peoples' and historic era sites independently. This is due to the fact that lifeways varied considerably during these eras so that criteria used to evaluate potential for each type of site also differs.

It should be noted that some factors can also negate the potential for discovery of intact archaeological deposits. Subsection 1.3.2 of the 2011 *Standards and Guidelines for Consultant Archaeologists* indicates that archaeological potential can be removed in instances where land has been subject to extensive and deep alterations that have severely damaged the integrity of any archaeological resources. Major disturbances indicating removal of archaeological potential include, but are not limited to:

- quarrying
- major landscaping involving grading below topsoil
- building footprints; and
- sewage and infrastructure development.

Some activities (agricultural cultivation, surface landscaping, installation of gravel trails, etc.) may result in minor alterations to the surface topsoil but do not necessarily affect or remove archaeological potential. It is not uncommon for archaeological sites, including structural foundations, subsurface features and burials, to be found intact beneath major surface features like roadways and parking lots. Archaeological potential is, therefore, not removed in cases where there is a chance of



deeply buried deposits, as in a developed or urban context or floodplain where modern features or alluvial soils can effectively cap and preserve archaeological resources.

## **2.2 Archaeological Context**

### ***2.2.1 Project Lands: Overview and Physical Setting***

The Town of Minto wishes to expand the Harriston Industrial Park, a parcel of land located southeast of Highway 9 on the western periphery of the Harriston settlement area (Maps 1 to 3). The expansion lands fall to the north and south of a former railway easement which sits north of the community's sewage lagoons. The expansion extends west from the existing industrial complex and will also require an extension of John Street North to service the new lands. The extension of John Street North will travel westward for roughly 250 metres then turn south for another 250 metres before it turns westward once more to service the proposed industrial lots south of the railway easement. Here it will connect to a main roadway through the southerly industrial lots, which terminates at both ends with cul-de-sacs. The latter will be flanked by industrial lots ranging in size from 0.84 ha to 3.8 ha (2.1 to 9.4 acres). The project lands cumulatively encompass roughly 28.1 ha or roughly 69 acres and fall within Lots 82 and 83, Concession D, in the former Township of Minto, Town of Harriston, now in the Town of Minto, Wellington County (Maps 1 and 2). The lands are primarily active agricultural fields, although these are cut in places by small wetlands and low-lying areas. Two separate agricultural fields in the north (5 ha; Image 1) and south (23 ha; Image 2) are cut by a former railway easement (Image 3) and are west of the existing portion of John Street North (Image 4). The northernmost field backs onto commercial/industrial lots along Highway 9. The currently undeveloped portion of the John Street right-of-way east of the northern agricultural field is overgrown and shows signs of obvious prior disturbance, with a used gravel trail passing throughout, moderated ditched sections and services (Images 5 to 8). Part of the southerly section of John Street crosses through a mature woodlot (Image 9). The limits of the project area are largely defined by field edges and property boundaries or were otherwise established in the field by survey stakes, proponent mapping and GPS coordinates.

The subject property falls within the physiographic region known as the Teeswater Drumlin Field (Chapman and Putnam 1984:139). The region lies in front of the northwest limb of the Horseshoe Moraine. In the vicinity of Harriston, the drumlins are well-formed and consist of low, wide, oval hills with gentle slopes. The southwest section of the project area lies within a drumlinized till plain, while the rest of the property lies within a spillway surrounding a finger of the Saugeen Kames Moraine, which is located directly to the northeast (Chapman and Putnam 1984:139) (Map 4). The underlying bedrock in the area consists of a brown dolomite and brown to bluish argillaceous dolomite of the Bertie-Akron formation (Hoffman et al. 1963:10). This formation runs in a narrow band from the northwest corner of the Town of Minto, through the community of Harriston, to the community of Palmerston on the south edge of the Town of Minto (Hoffman et al. 1963:11). Harriston loam, a relatively stone-free



loam with good drainage (Hoffman et al. 1963:28), is found within the majority of the north half and the very southeast corner of the parcel, while Listowel loam, an imperfectly drained soil (Hoffman, *et al* 1963: 28), is found within the majority of the south half of the project area. A linear deposit of Parkhill loam, a poorly drained loam that occurs in depressions (Hoffman, *et al* 1963: 26), cuts through the north end of the project area (Map 5). The property is characterized by gently rolling topography, with many low rises and swales, as well as flatter lands to the south of the railway easement. Water collects seasonally in some of the lower dips in the landscape.

The general vicinity of the project area is drained by the Maitland River which is located to the southeast (Map 6). The river begins in Arthur Township, Wellington County and flows west into Harriston. It continues west into Huron County turns southwest flowing past Auburn and empties into Lake Huron in Goderich, Ontario. Drain 70, a channelized tributary of the Maitland River, flows east to west along the parcel's north boundary (Image 10). Another tributary of the latter watercourse bisects the southern agricultural field (Image 11), while Drain 12, a tributary of the Maitland River, runs to the east-southeast of the project area.

#### ***2.2.2 Summary of Registered or Known Archaeological Sites***

According to the Ontario Archaeological Sites Database (OASD), there are no registered archaeological sites within one kilometre of the project area (date received July 2, 2014).

#### ***2.2.3 Summary of Past Archaeological investigations Within 50 Metres***

During the course of this study, no record was found of archaeological investigation within 50 metres of the project lands. It should be noted that the Ministry of Tourism, Culture and Sport does not maintain an accessible database of archaeological assessment areas in the province and therefore it cannot be determined if additional studies were done in the immediate vicinity.

#### ***2.2.4 Dates of Archaeological Fieldwork***

The Stage 2 fieldwork was conducted on June 12, 25, November 24 and December 1, 2014.

### **2.3 Historical Context**

#### ***2.3.1 Early First Peoples Settlement in Southern Ontario***

Very little archaeological investigation has occurred in this portion of Wellington County. However, using region-specific and province-wide models, a baseline cultural chronology for traditional First Peoples settlement in the area can be proposed and is generalized below. A tabular summary of the same information appears in Table 1.



**Table 1: Generalized Chronology for First Peoples Settlement in Southwestern Ontario**

Period			Time Range (circa)	Diagnostic Features	Complexes
Paleoindian	Early		9000 - 8400 B.C.	fluted projectile points	Gainey, Barnes, Crowfield
	Late		8400 - 8000 B.C.	non-fluted and lanceolate points	Holcombe, Hi-Lo, Lanceolate
Archaic	Early		8000 - 6000 B.C.	serrated, notched, bifurcate base points	Nettling
	Middle		6000 - 2500 B.C.	stemmed, side & corner notched points	Brewerton, Otter Creek, Stanly/Neville
	Late		2000 - 1800 B.C.	narrow points	Lamoka
			1800 - 1500 B.C.	broad points	Genesee, Adder Orchard, Perkiomen
			1500 - 1100 B.C.	small points	Crawford Knoll
	Terminal		1100 - 950 B.C.	first true cemeteries	Hind
Woodland	Early		950 - 400 B.C.	expanding stemmed points, Vinette pottery	Meadowood
	Middle		400 B.C. - A.D. 500	dentate, pseudo-scallop pottery	Saugeen
	Transitional		A.D. 500 - 900	first corn, cord-wrapped stick pottery	Princess Point
	Late	Early Iroquoian	A.D. 900 - 1300	first villages, corn horticulture, longhouses	Glen Meyer
		Middle Iroquoian	A.D. 1300 - 1400	large villages and houses	Uren, Middleport
		Late Iroquoian	A.D. 1400 - 1650	tribal emergence, territoriality, first Europeans	Neutral Iroquois
Contact		Aboriginal	A.D. 1700 - 1875	treaties, mixture of Native & European items	Chippewa, Ojibway
		Euro-Canadian	A.D. 1796 - present	English goods, homesteads	European settlement, pioneer life

### *Paleoindian*

The first human populations to inhabit the area came to the region between 12,000 and 10,000 years ago, coincident with the end of the last period of glaciation. Climate and environmental conditions were significantly different then they are today; local environs would not have been welcoming to anything but short-term settlement. Termed Paleoindians by archaeologists, Ontario's first peoples would have crossed the landscape in small groups (i.e., bands or family units) searching for food, particularly migratory game species. In this area, caribou may have provided the staple of Paleoindian diet, supplemented by wild plants, small game and fish.

Given the low density of populations on the landscape at this time and their mobile nature, Paleoindian sites are small and ephemeral. They are usually identified by the presence of fluted projectile points often manufactured on a highly distinctive whitish-grey chert named "Fossil Hill" (after the formation) or "Collingwood," from the Niagara Escarpment west of Collingwood. In Ontario, Paleoindian sites are often found in association with former glacial shorelines, beaches and embayments.

### *Archaic*

Settlement and subsistence patterns change significantly during the Archaic period as both the landscape and ecosystem adjusted to the retreat of the glaciers.





Building on earlier patterns, early Archaic populations continued the mobile lifestyle of their predecessors. Through time and with the development of more resource rich local environments, these groups gradually reduced the size of the territories they exploited on a regular basis. A seasonal pattern of warm season riverine or lakeshore settlements and interior cold weather occupations has been documented in the archaeological record. Since the large cold weather mammal species that formed the basis of the Paleoindian subsistence pattern became extinct or moved northward with the onset of warmer climate conditions Archaic populations had a more varied diet, exploiting a range of plant, bird, mammal and fish species. Reliance on specific food resources like fish, deer and nuts becomes more pronounced through time and the presence of more hospitable environments and resource abundance led to the expansion of band and family sizes. In the archaeological record, this is evident in the presence of larger sites and aggregation camps, where several families or bands would come together in times of plenty. The change to more preferable environmental circumstances led to a rise in population density. As a result, Archaic sites are more abundant than those from the earlier period. Artifacts typical of these occupations include a variety of stemmed and notched projectile points, chipped stone scrapers, ground stone tools (e.g., celts, adzes) and ornaments (e.g., bannerstones, gorgets), bifaces or tool blanks, animal bone (where and when preserved) and waste flakes, a byproduct of the tool making process.

#### *Early, Middle and Transitional Woodland*

Significant changes in cultural and environmental patterns are witnessed in the Early, Middle and Transitional Woodland periods (ca. 950 B.C. to 1000 A.D.). Occupations became increasingly more permanent in this period, culminating in major semi-permanent villages by roughly 1,000 years ago. Archaeologically, the most significant changes by Woodland peoples are the appearance of artifacts manufactured from modeled clay and the emergence of more sedentary villages. The earliest pottery was crudely made by the coiling method and early house structures were simple oval enclosures. The Early and Middle Woodland periods are also characterized by extensive trade in raw materials, objects and finished tools, with sites in Ontario containing trade items with origins in the Mississippi and Ohio River valleys. A rise in mortuary ceremonialism is also evident, culminating in the construction of large burial mounds.

#### *Late Woodland - Iroquoian Period*

In Southwestern Ontario after roughly 1000 A.D., there is a clear record of Iroquoian populations in various regions. By the contact period the Petun or Tobacco Nation was resident along the south shore of Nottawasaga Bay, the Huron or Wendat Nation resided northwest of Lake Simcoe and the Neutral or Nation settled along the shore of Lake Erie. It is thought that populations ancestral to these groups migrated to their historic homelands from locations to the south and southeast. Iroquoian groups practiced a system of intensive horticulture based on three primary subsistence crops (corn, beans and squash) but also grew tobacco. Their villages incorporated any number of longhouses, multi-family dwellings that contained several families related through the



female line. *The Jesuit Relations* describe several of the prominent Iroquoian centres in existence in the 17<sup>th</sup> century, including a number of sites where missions were established. While pre-contact Iroquoian sites may be identified by a predominance of well-made pottery decorated with various simple and geometric motifs, triangular stone projectile points, clay pipes and ground stone implements, sites post-dating European contact are recognized through the appearance of various items of European manufacture. The latter include materials acquired by trade (e.g., glass beads, copper/brass kettles, iron axes, knives and other metal implements) in addition to the personal items of European visitors and Jesuit priests (e.g., finger rings, stoneware, rosaries, glassware).

Iroquoian horticulturalists lived side by side with more mobile Algonquin speakers, most notably the Odawa (or "Ottawa") and Ojibwa in this portion of Ontario. Because Iroquoian and Algonquin groups interacted closely and regularly, it is often difficult to differentiate them archaeologically. Petun, Huron-Wendat and Neutral populations were driven out of their historic homelands by Five Nations Iroquois circa 1650 after being heavily decimated by European epidemic disease and warfare.

### *17<sup>th</sup> and 18<sup>th</sup> Century Odawa and Ojibwa*

At the time of European contact in the early 17th century, the Bruce Peninsula was occupied by Algonquin speaking Odawa groups who maintained a close relationship with the Iroquoian speaking Petun peoples living along the southern shore of Nottawasaga Bay (Fox 1990:461). The Ojibwa, who are also Algonquian speakers, lived in the region extending from the Georgian Bay area to the north shore of Lake Superior prior to European contact (Schmalz 1991). Both the Odawa and Ojibwa were disrupted and displaced by Iroquois hostilities in the 1650s (Schmalz 1977), but had regrouped by the last quarter of the 17th century (Ferris 1989) and returned to their homeland. In the 1690s Ottawa, Potawatomi and Ojibwa groups pushed the Iroquois out of their historic territory (Schmalz 1977). Some Ojibwa settled on the Bruce Peninsula while others moved south to the north shore of Lake Ontario and the southern shores of Lake Huron.

### **2.3.2 Historic Euro-Canadian and Municipal Settlement**

The subject property is situated within Lots 82 and 83, Concession D, South of Highway 9, in the Former Township of Minto, Wellington County. In 1877, the property was just outside the urban limits of Harriston. A brief discussion of early Euro-Canadian and municipal settlement in both the township and the town is provided below, together with a consideration of features that would otherwise indicate historic era archaeological potential.

Wellington County originally formed part of the Wellington District, which was established in 1838 and incorporated all of Wellington, Waterloo and Grey Counties and a portion of the County of Dufferin. The County of Wellington gained political independence from these other counties in the 1850s and held its first council in January of 1864. The Township of Minto was first surveyed in 1853 and settlement of the



township proceeded shortly after (HAPC 1906:2). While the first settlers appeared in the township in the early 1850s, it was not until 1856 that the first patent in the Township was earned by one Augustus C. Fyfe (HAPC 1906:6). From 1856 to 1862, settlement in the township was slow but steady. In 1854 a sawmill built by George Harrison was established in the location of the future Town of Harriston. The settlement of Harriston itself was laid out by Harrison, the community's founder, in 1855 and 1856. Mr. Harrison built one of the first houses in the settlement and by 1856 he and James Stark built and opened its first hotel. Between 1856 and 1859 a gristmill, school, blacksmith shop, and general merchandise store were present in the community. The Knox Presbyterian Church was the first church in Harriston, a frame structure erected around 1860. In 1861 a new general store was built. Despite these establishments settlement within Harriston itself remained slow, with only a dozen houses built within its boundaries by 1859. Poor road conditions would also hamper settlement for some time; many of the major roads from Guelph, Hamilton and Mount Forest were regularly flooded and unpassable (HAPC 1906:8).

Conditions for settlement improved in 1863 when the Elora and Saugeen Road (Highway 9) was built throughout the Township. This road entered the southeast corner of the township, passed through the middle of Harriston, and continued northwest to the settlement of Clifford on the northwest edge of the township (HAPC 1906:96-97, Harrison 1978: 29-31). The Wellington, Grey and Bruce Railway was built in 1870 and reached from the south edge of the Township all the way to the Town of Harriston. After the establishment of the railway settlement in the township rapidly increased (HAPC 1906:2,6). A second railway, a segment of the Toronto, Grey and Bruce Railway, came in 1873. The former would eventually be taken over by the Grand Trunk Railway.

On January 1, 1873, Harriston was incorporated as a village and in 1874 it was incorporated as a town with A. Meiklejohn as its Mayor. From this time on the town grew rapidly and by 1906 it had a waterworks system, fire department, town hall, a library, four churches, a high school, two weekly newspapers, two banks, over a dozen businesses and manufacturing factories and a population of about eighteen hundred people (HAPC 1906:8).

According to the *Illustrated Historical Atlas of Wellington County* (Walker & Miles 1877), the western portion of the project area (part of Lot 82, Concession D) was owned by G. Hughes, while the eastern portion (part of Lot 83, Concession D) was owned by J. Dickson (Map 7). Dickson's structure was on the west side of his landholding, but outside of the project area. The residence of Hughes fronted Highway 9, but was also outside of the project area. The 1906 atlas map does not depict any 20<sup>th</sup> century structures within the subject property, which was then owned by John Chambers and Benjamin Tarr (Map 8). However, it should be noted that historic maps are not always accurate representations of past land use conditions of the time. The historic mapping indicates that Highway 9 (north of the project area) was open by 1877 and the railway through the project area was also active by that time. While the 1877 map



indicates that 11<sup>th</sup> Line was also open, the 1906 atlas map depicts it as unopened road allowance. This road segment is currently inactive.

## **2.4 Analysis and Conclusions**

As noted in Section 2.1, the Province of Ontario has identified numerous factors that signal the potential of a property to contain archaeological resources. Based on the archaeological and historical context reviewed above, the project lands are intersected by or in proximity to (i.e., within 300 metres of) at least three features signalling archaeological potential: 1) a major watercourse (the Maitland River); 2) lesser watercourses (Drain 70, Drain 12 and an unnamed tributary); 3) 19<sup>th</sup> century transportation routes (Highway 9 and the former Wellington, Grey and Bruce Railway); and 4) mapped 19<sup>th</sup> century structures (those of J. Dickson and G. Hughes). Potential for the discovery of First Peoples sites is indicated by the proximity of a potable water and watercourses. The potential for the discovery of 19<sup>th</sup> century and EuroCanadian sites is demonstrated by the proximity of the historic transportation routes and mapped structures.

A review of project maps and aerial photographs revealed that the project lands are largely agricultural fields that have not witnessed prior development and retain archaeological potential. Some lands appeared to contain prior disturbance (railway easement, John Street North immediate westerly extension) or low-lying and wet areas of likely low potential.

## **2.5 Recommendations**

Given that the project lands demonstrated potential for the discovery of archaeological resources, a Stage 2 archaeological assessment was recommended. In keeping with provincial standards, all grassed and treed lands were recommended for test pit survey using a five metre interval. The active agricultural lands were recommended for a pedestrian survey using a five metre interval. Areas identified as possible zones of disturbance (i.e., the railway easement and immediate extension of John Street) and potentially low-lying and wet were recommended for more detailed review in the field at which time a thorough inspection could be undertaken and photo-documentation could take place. In sum, all of the property was considered to have archaeological potential pending a Stage 2 field inspection and, therefore, a separate map detailing zones of archaeological potential is not provided herein (as per Section 7.7.4 Standard 1 and 7.7.6 Standards 1 and 2).



### **3.0 STAGE 2 ARCHAEOLOGICAL ASSESSMENT**

#### **3.1 Field Methods**

The Stage 2 fieldwork was conducted on four separate dates in 2014:

- June 12, 2014 – hot, humid then thunderstorms delayed fieldwork;
- June 25, 2014 – warm, humid, overcast weather;
- November 24, 2014 – cool with rain – fieldwork suspended; and
- December 1, 2014 – cool, sunny, overcast weather.

In accordance with MTCS standards (MTC 2011:29, Section 2.1, Standard 3), all fieldwork was undertaken in appropriate lighting and weather conditions.

The Stage 2 field assessment consisted of a combined pedestrian and test pit survey. The active agricultural lands were subject to a pedestrian survey at a five metre interval (Images 12 and 13). Prior to survey, the fields had been ploughed and allowed to weather under several rains. Surface visibility that was greater than 80 percent (Images 14 and 15). When artifacts were identified on the surface, the survey interval was reduced to one metre and an intensified survey of a minimum of 20 metres beyond the find was undertaken.

Smaller portions of the project area were subject to test pitting (Image 16). Test pits measuring approximately 30 cm (shovel-width) were excavated through the first 5 cm of subsoil with all fill screened through 6 mm hardware cloth. When screening was completed, the soil strata in the test pits was examined before they were backfilled with soil, recapped with sod, and tamped down with foot and shovel. Test pitting extended to within 1 m of all built features, where present.

A small section of woodlot within the proposed John Street extension south of the railway was subject to a standard test pit survey at a five metre transect interval. Typical test pits in the woodlot contained natural soils consisting of brown clay loam topsoil over yellowish brown silt clay subsoil. Here test pits measured approximately 20 cm in depth (Image 17).

During a test pit survey it was established that the grassed area immediately northwest of John Street contained no intact topsoil (Image 8). Test pits placed judgements throughout the 20 metre wide road easement confirmed the area was graded and leveled with clay and sand fill (Image 18). Gravel intrusions were found throughout the fill layer and yellowish-brown silt clay subsoil was encountered at roughly 45 cm below surface. Other areas of obvious and extensive disturbance included the paved portion of John Street at the northeast limit of the project area (Images 5 to 8) and the railway easement (Image 3). Low-lying and wet areas were encountered along the northeast boundary near Highway 9 (Image 10), in association with the tributary bisecting the southern agricultural field (Images 11 and 19) and in two small depressions within the agricultural field just south of the railway easement (Images 20 to 22). These areas were





deemed to be of low archaeological potential and were eliminated from survey following photo-documentation.

It should be noted that a 180 metre long, 20 metre wide extension of John Street located south of the railway easement was not ploughed at the time of the Stage 2 assessment and could not be surveyed (Image 23). This 20 metre wide strip of land will require survey in the future and if the proposed boundaries of the road extension are retained throughout the completion of the EA.

In sum, 88.36% (26.05 ha) of the project area was ploughed and surveyed via a pedestrian survey at five metre intervals. Another 0.41% (0.12 ha) of the property was in woodlot containing pristine soils which was test pitted at a five metre interval, while 0.64% (0.19 ha) was judgementally test pitted to confirm disturbance. Roughly 9.4% of the property was not surveyed because it was deemed to be of low archaeological potential. This included land occupied by the railway easement (3.02%; 0.89 ha), as well as low-lying, wet areas (6.38%; 1.88 ha). Finally 1.19% (0.35 ha) of the project area could not be surveyed because it was not ploughed at the time of the Stage 2 assessment.

Map 9 illustrates the Stage 2 field conditions observed and assessment methods used during this project. The same set also shows the location and orientation of photos appearing in this report. Map 10 illustrates the results overlaid on the proposed technical plan provided by the proponent.

### **3.2 Record of Finds**

Two archaeological find spots were identified during the Stage 2 pedestrian survey. These have been designated Location 1 and Location 2. A general description of our findings at each of these locations is provided below. More specific details about site locations occur in the “Supplementary Documentation” portion of this report.

#### *Location 1 (AlHf-4)*

Location 1 consists of a single artifact, a complete projectile point manufactured on Bois Blanc formation chert, likely from a source on the Lake Huron shoreline (Image 24). The piece is a complete stemmed, Stanley Stemmed (Stanley/Neville) projectile point dating to the early part of the Middle Archaic (ca. 8000-7500 BP; Ellis 1987). The tool has a narrow and short stem with basal thinning to produce a shallow concavity at the base. The blade has a plano-convex profile, long sinuous edges that have been moderately reworked, and the distal margins project at a right angle from the stem. The maximum length, width and thickness measurements of the tool are 57.6 mm, 29.3 mm and 5.3 mm, respectively. Despite the intensification of the survey interval to one metre and a search of a radius of 20 metres around the find, no additional archaeological material was recovered.



**Table 2: Location 1 (AlHf-4) Stage 2 Artifact Catalogue**

Cat.	Context	Artifact	n	Comments
1	surface	projectile point	1	Bois Blanc; complete; stemmed; Stanley Neville
		<b>Total</b>	<b>1</b>	

*Location 2 (no Borden number assigned)*

Location 2 consists of three lithic artifacts (all collected) found in a 7 metre (north-south) by 12 metre (east-west) area (Image 25). The first of these is an undiagnostic and crude biface end fragment made on Kettle Point chert. The extant portion of the tool measures 16.4 mm in maximum length, 29.5 mm in width and 8.1 mm in thickness. The two other artifacts collected include two possible secondary flakes of Bois Blanc chert. Neither have well-defined flake characteristics. Despite the intensification of the survey interval to one metre and a search of 20 metres around the periphery of the artifact location, no additional archaeological material was recovered.

**Table 3: Location 2 Stage 2 Artifact Catalogue**

Cat.	Context	Artifact	n	Comments
1	surface	biface	1	Kettle Point; fragment
2	surface	chipping detritus	2	2 possible Bois Blanc flakes
		<b>Total</b>	<b>3</b>	

**Table 4: Inventory of Documentary Records**

- Field notes and field maps – June 12, 25, November 24 and December 1, 2014
- Photo catalogue- images June 12 (P1050717-78), June 25 (P1070701-16), November 24 (P1040093-97) and December 1 (P1050010-30)
- One plastic bag containing two individual bagged artifacts sorted by catalogue number with paper labels:
  - Bag 1: **John St. Extension Harriston Industrial Park**, 2013-073, Stage 2, Location 1, All Artifacts
  - Bag 2: **John St. Extension Harriston Industrial Park**, 2013-073, Stage 2, Location 2, All Artifacts
  - All within a larger project bag with project label:
  - Large Bag: **John St. Extension Harriston Industrial Park**, 2013-073, Stage 2, All Locations, All Artifacts
- Bag is located within a “Various Small Projects completed in 2014” banker’s box
- Artifacts and files held at Timmins Martelle Heritage Consultants Inc., @ the Museum of Ontario Archaeology, 1600 Attawandaron Road, London, ON N6G 3M6



### 3.3 Analysis and Conclusions

A Stage 2 archaeological assessment was carried out in keeping with the Province of Ontario's *Standards and Guidelines for Consultant Archaeologists* (MTC 2011). The pedestrian survey documented two archaeological locations. Section 2.2 of the *Standards and Guidelines for Consultant Archaeologists* establishes provincial criteria for determining if archaeological locations require Stage 3 assessment. Based on these criteria the requirement for Stage 3 testing for each location can be evaluated.

Location 1 (AlHf-4) is a Middle Archaic Stanley Stemmed/Stamley Neville projectile point dating to ca. 8,000 to 7,500 years before the present (Ellis 1987). Given that the intensified survey did not reveal additional archaeological material, this is an isolated find that has been sufficiently documented. Therefore, the site does not meet any of the criteria listed in Section 2.2 for Stage 3 assessment and no further work is recommended.

Location 2 consists of a biface and two possible flakes found in a 7 metre (north-south) by 12 metre (east-west) area. This is a small find spot of native artifacts but, because the pieces are not more specifically diagnostic, a more precise cultural or temporal affiliation cannot be assigned to them. Given the location consists of less than five non-diagnostic artifacts within a 10 by 10 metre area it does not meet provincial criteria for further testing and no further assessment is recommended.

### 3.4 Recommendations

All work met provincial standards and two archaeological locations were identified during the Stage 2 assessments. The locations do not meet provincial criteria for further investigation. Location 1 is an isolated projectile point and its cultural heritage value and interest has been sufficiently documented. Stage 3 testing is not recommended. Location 2 consists of a biface and two flakes. Stage 3 testing is not recommended. Given this, all of the surveyed portions of the project area should be considered free of archaeological concern.

A 180 metre long 20 metre wide corridor south a railway easement that bisects the Harriston Industrial Park extension lands was not surveyed as it was not ploughed at the time of the Stage 2 assessment. As such, this area has further archaeological concern and will require Stage 2 assessment at a later date and if the proposed route for the John Street extension is retained.

Should construction plans change to incorporate new areas not previously subject to Stage 1 evaluation or Stage 2 survey, additional archaeological assessment will also be required.



These recommendations are subject to report review and acceptance by the Ministry of Tourism, Culture and Sport and to the provisions established in Section 5.0 of this report.

#### **4.0 SUMMARY**

A Stage 1 and 2 archaeological assessment was conducted for a proposed expansion of the Harriston Industrial Park complex and John Street North in the Community of Harriston, Wellington County, Ontario. The Stage 1 assessment revealed that most of the project lands exhibited potential for the discovery of archaeological resources. As such, a Stage 2 field survey was undertaken, including a pedestrian survey of agricultural lands and test pit survey of grassed, wooded areas. Low-lying and wet, as well as areas of former disturbance, were photo-documented and eliminated from the survey. The pedestrian survey resulted in the discovery of two archaeological locations, both of which are occurrences of single or a small number of native artifacts that do not meet provincial criteria for further investigation. All surveyed areas should be considered free of archaeological concern. A stretch of the proposed John Street North road extension, south of a railway easement that bisects the property, was not surveyed because the area was not ploughed at the time of assessment. This will require survey at a later date if the route of John Street is retained through project completion. Furthermore, should construction plans change to incorporate other areas not investigated during this study, additional assessment will also be required.

#### **5.0 ADVICE ON COMPLIANCE WITH LEGISLATION**

This report is submitted to the Ministry of Tourism, Culture and Sport as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism, Culture and Sport, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.



Should previously undocumented (i.e., unknown or deeply buried) archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48(1) of the *Ontario Heritage Act*. Further, archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48 (1) of the *Ontario Heritage Act* and may not be altered, or have artifacts removed from them, except by a person holding an archaeological licence.

The *Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33* requires that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Small Business and Consumer Services. The Registrar of Cemeteries, Cemeteries Regulation Unit can be reached at (416) 326-8404 or (416) 326-8393.

## **6.0 BIBLIOGRAPHY**

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## **7.0 IMAGES**



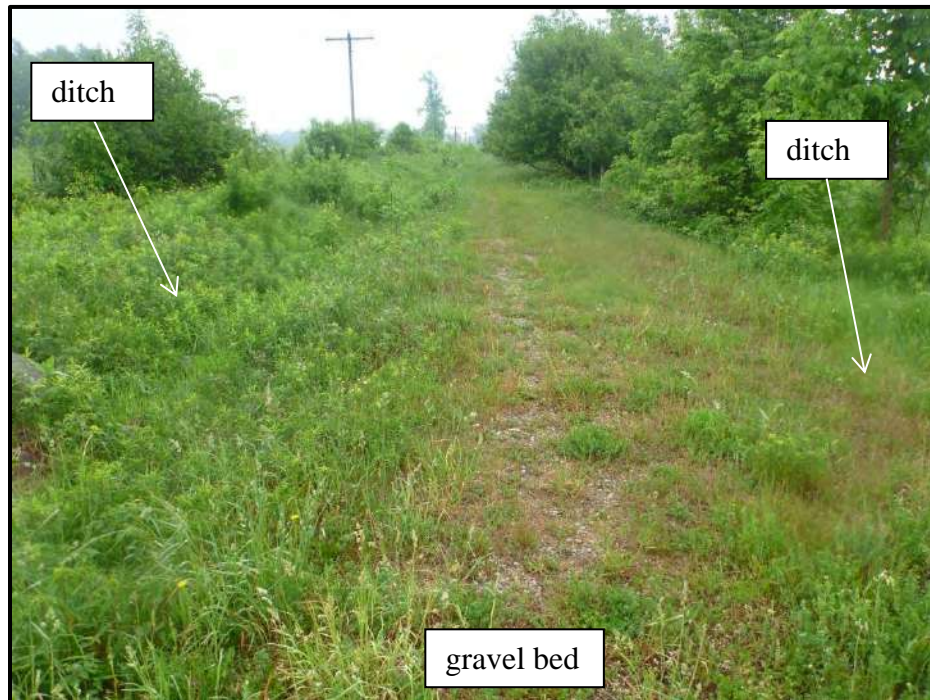
**Image 1: North Agricultural Field (looking east)**



**Image 2: South Agricultural Field (looking east)**



**Image 3: Railway Easement with Gravel Bed and Ditches (looking southeast)**



**Image 4: Existing Portion of John Street Through Harriston Industrial Park (looking east)**





**Image 5: Services at End of Current Portion of John Street (looking west)**



**Image 6: Services at End of Current Portion of John Street (looking southwest)**





**Image 7: Gravelled Trail Through Unopened Portion of John Street (looking west)**



**Image 8: Disturbed Surface of John Street Extension West of Existing Road**





**Image 9: Woodlot Forming Part of John Street Extension (looking north)**



**Image 10: Low-lying and Wet Lands Along North Boundary (looking northeast)**



**Image 11: View of Tributary Crossing South Agricultural Field (looking south)**



**Image 12: Pedestrian Survey Within North Agricultural Field  
(looking east)**





**Image 13: Pedestrian Survey in Progress Within South Agricultural Field  
(looking northeast)**



**Image 14: Surface Visibility Within North Agricultural Field**



**Image 15: Surface Visibility Within South Agricultural Field**



**Image 16: Test Pit Survey in Progress (looking northeast)**





**Image 17: Typical Test Pit Within Woodlot**



**Image 18: Disturbed Test Pit in Grassed Area Near John Street North**





**Image 19: Wetland Associated with Tributary Crossing Southern Agricultural Field  
(looking southwest)**



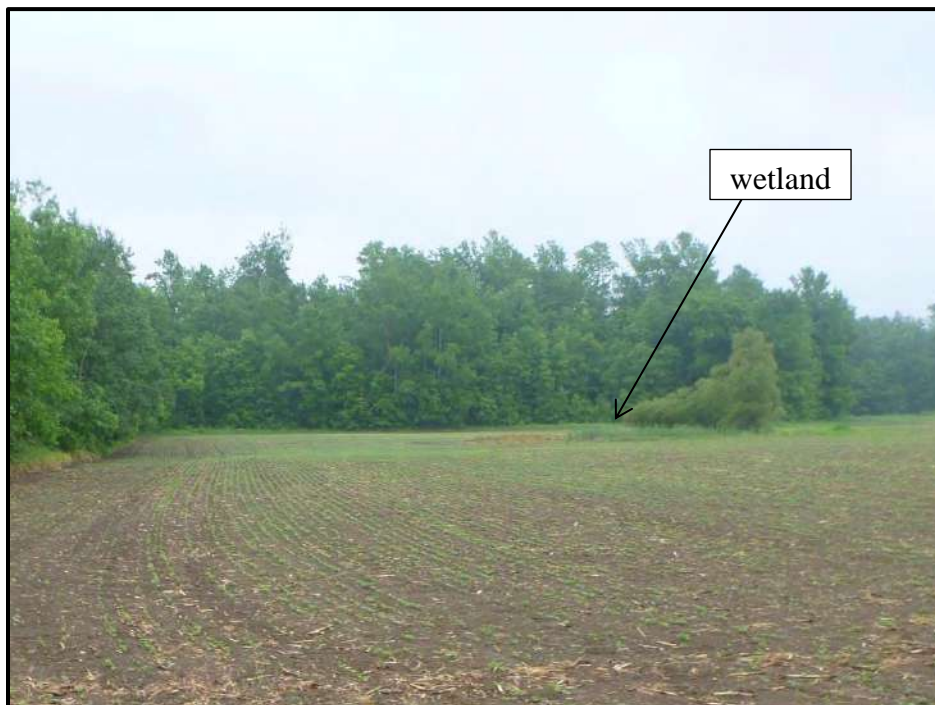
**Image 20: Wetland in Southern Agricultural Field (looking southwest)**



**Image 21: Standing Water in Wetland in Southern Agricultural Field**



**Image 22: Small Wetland in Southern Agricultural Field East of Woodlot (looking east)**

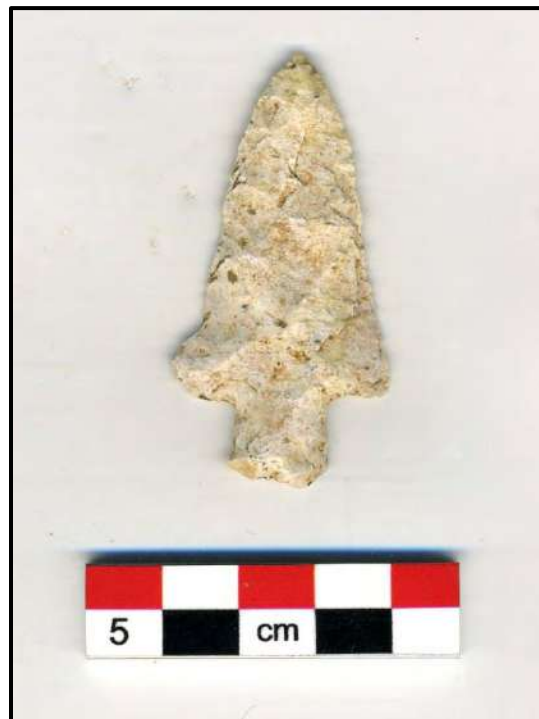




**Image 23: Unploughed Portion of John Street Extension South of Railway  
(looking northeast)**



**Image 24: Location 1 (AlHf-4) Stage 2 Artifact**





**Image 25: Location 2 Stage 2 Artifacts**

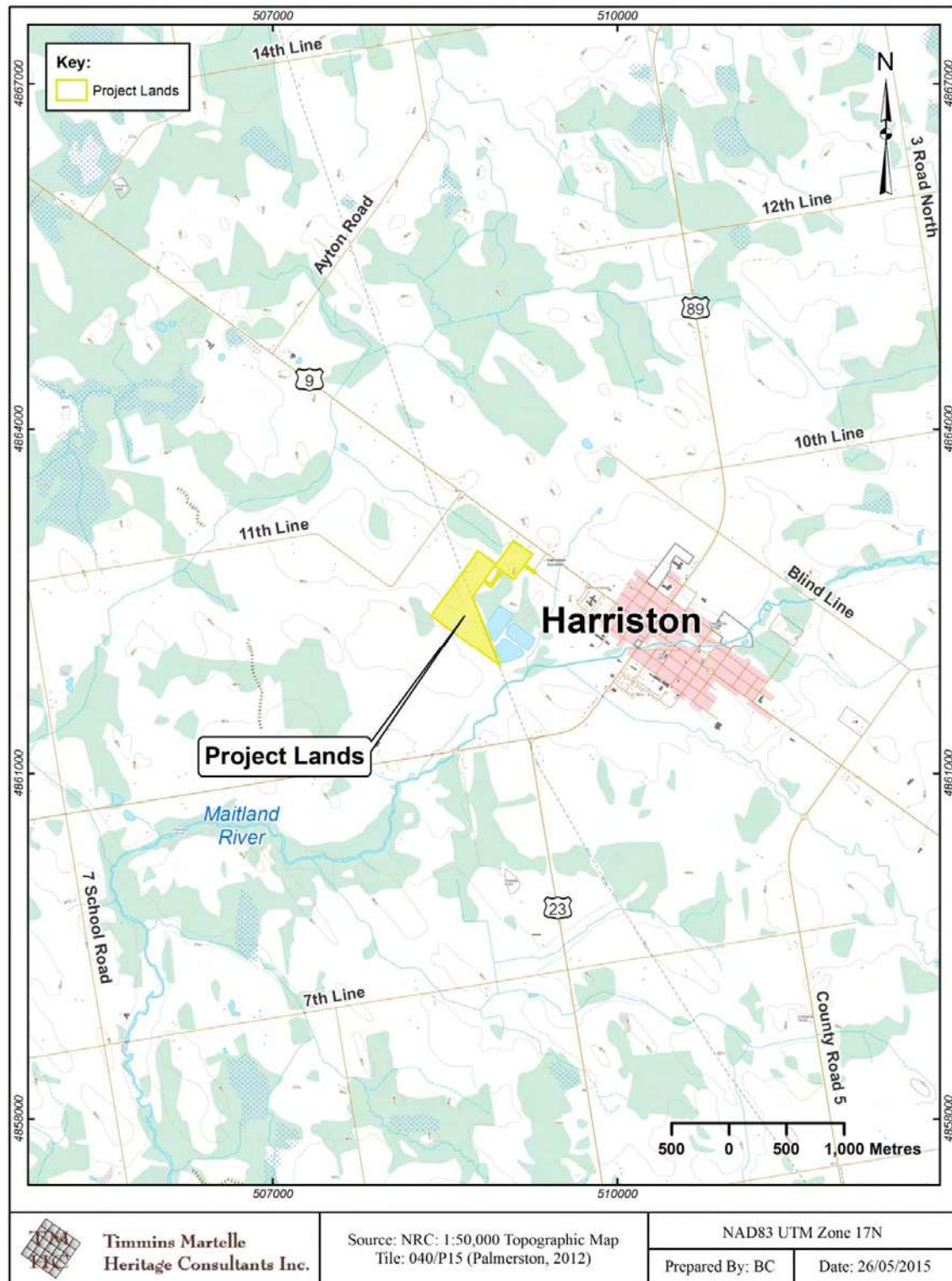


*Top: crude biface fragment;  
Bottom: potential flakes of Bois Blanc chert (poor flake characteristics)*



## 8.0 MAPS

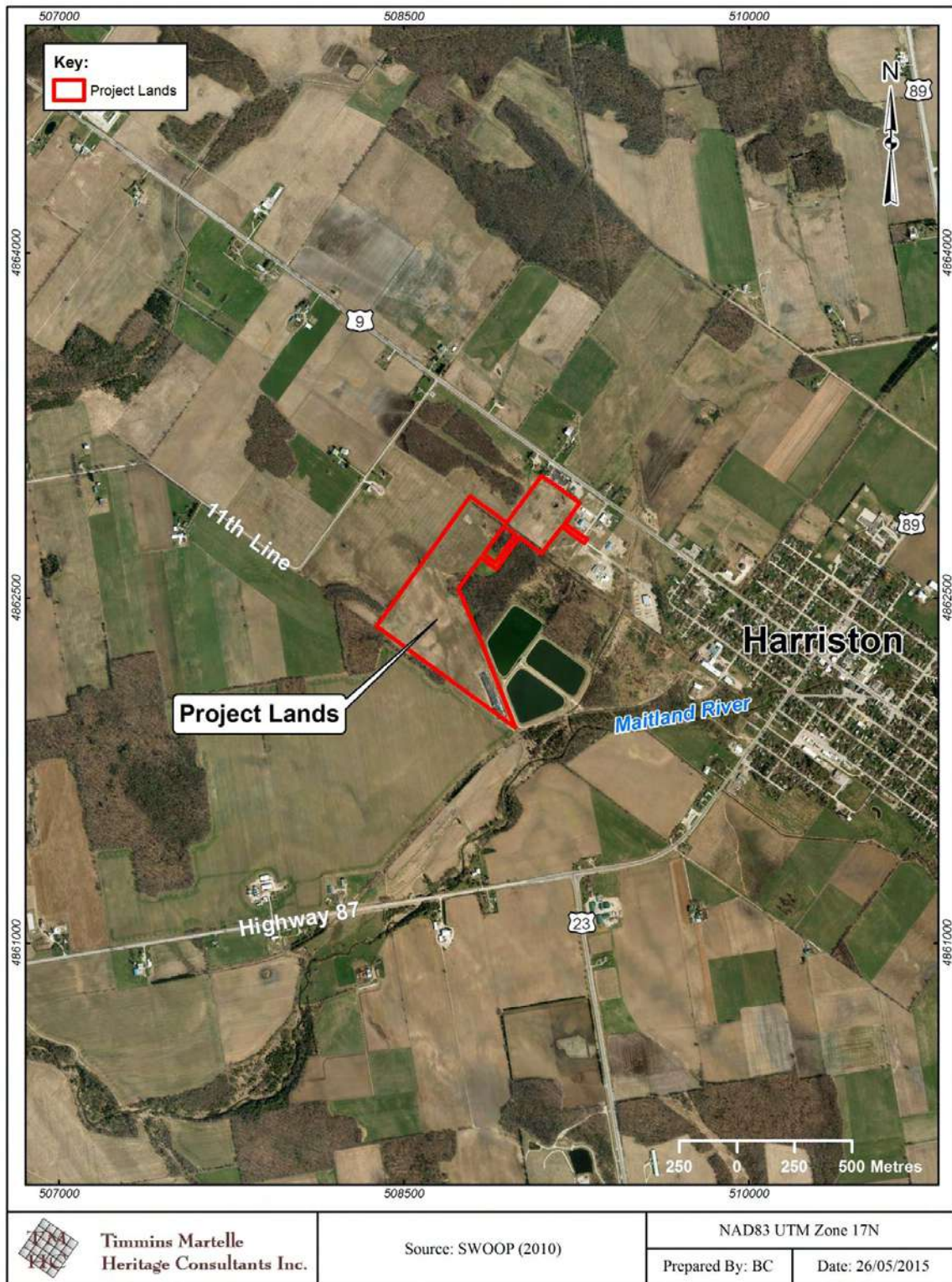




**Map 1: Location of Project Lands in Harriston, ON**



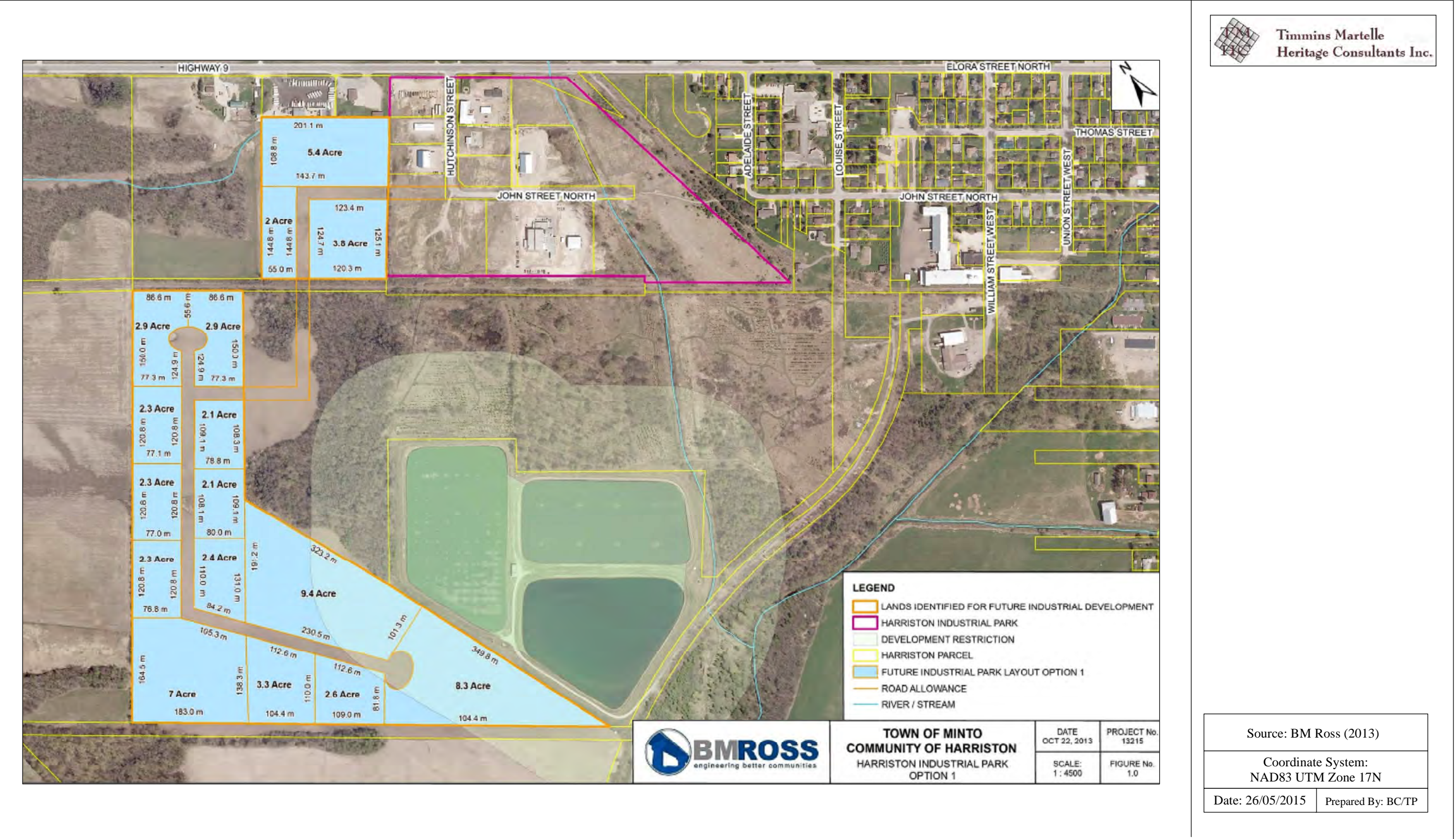




**Map 2: Aerial Photograph Showing the Location of the Project Lands in  
Harriston, ON**



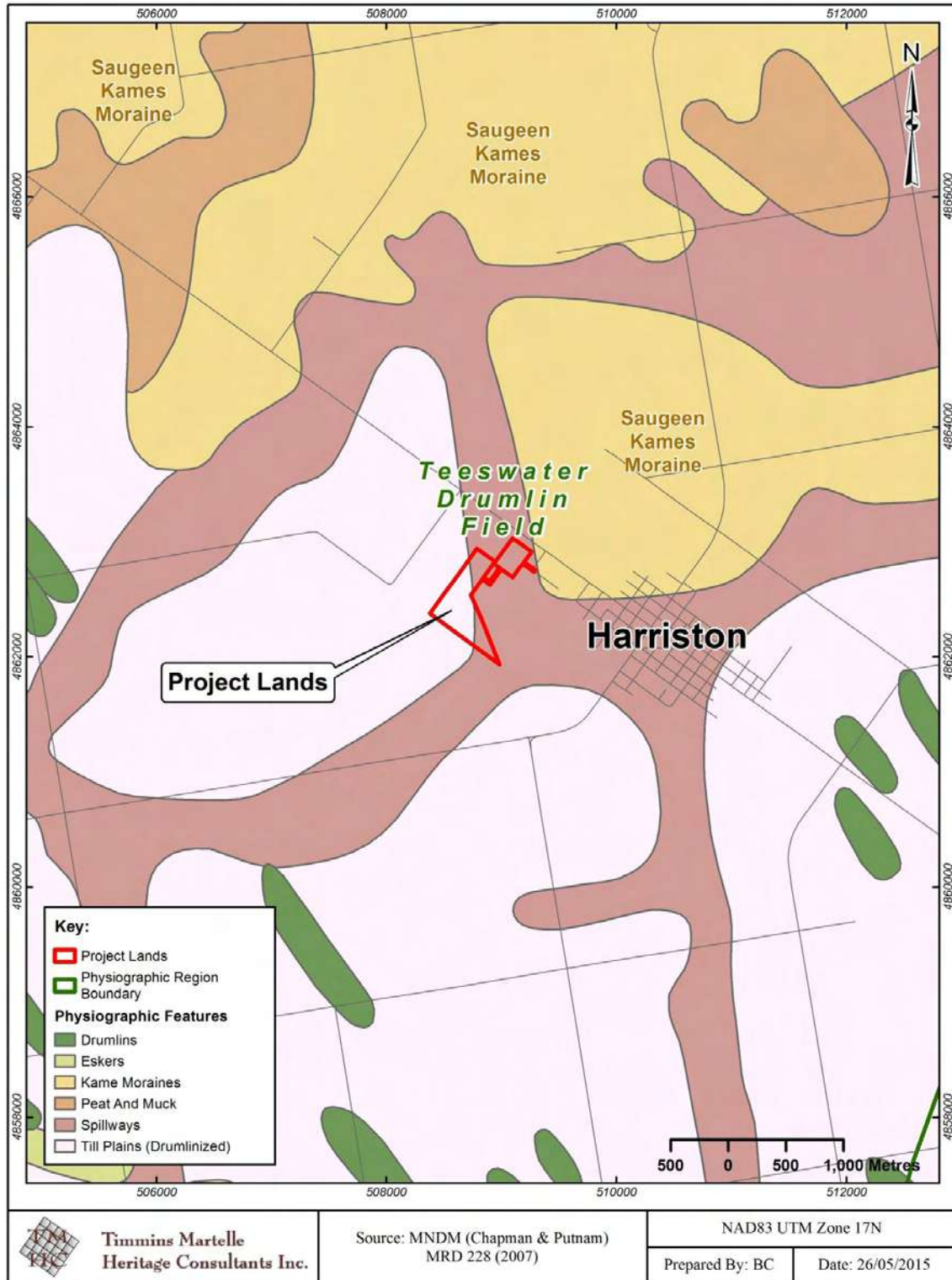




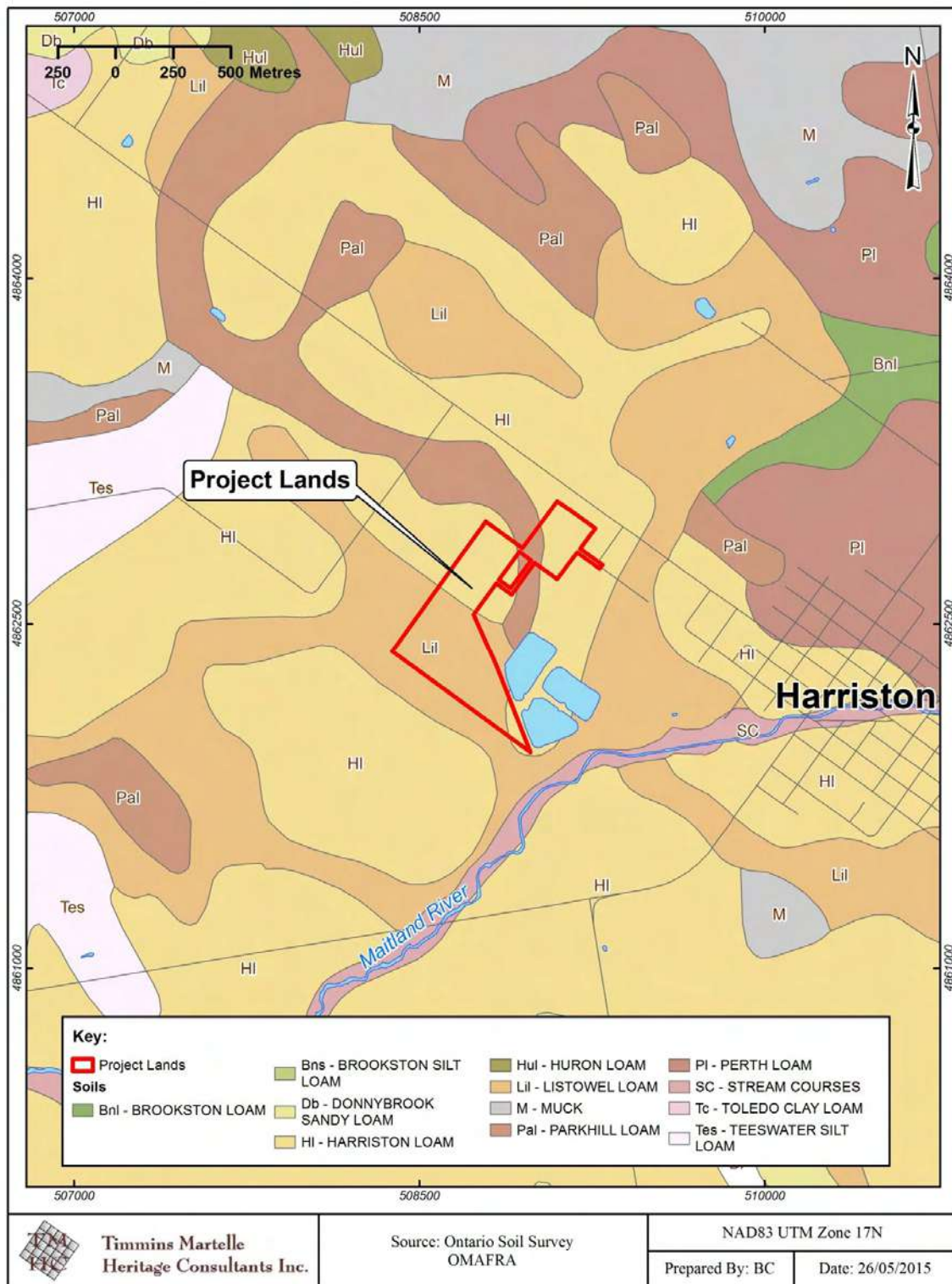
Map 3: Proponent Map





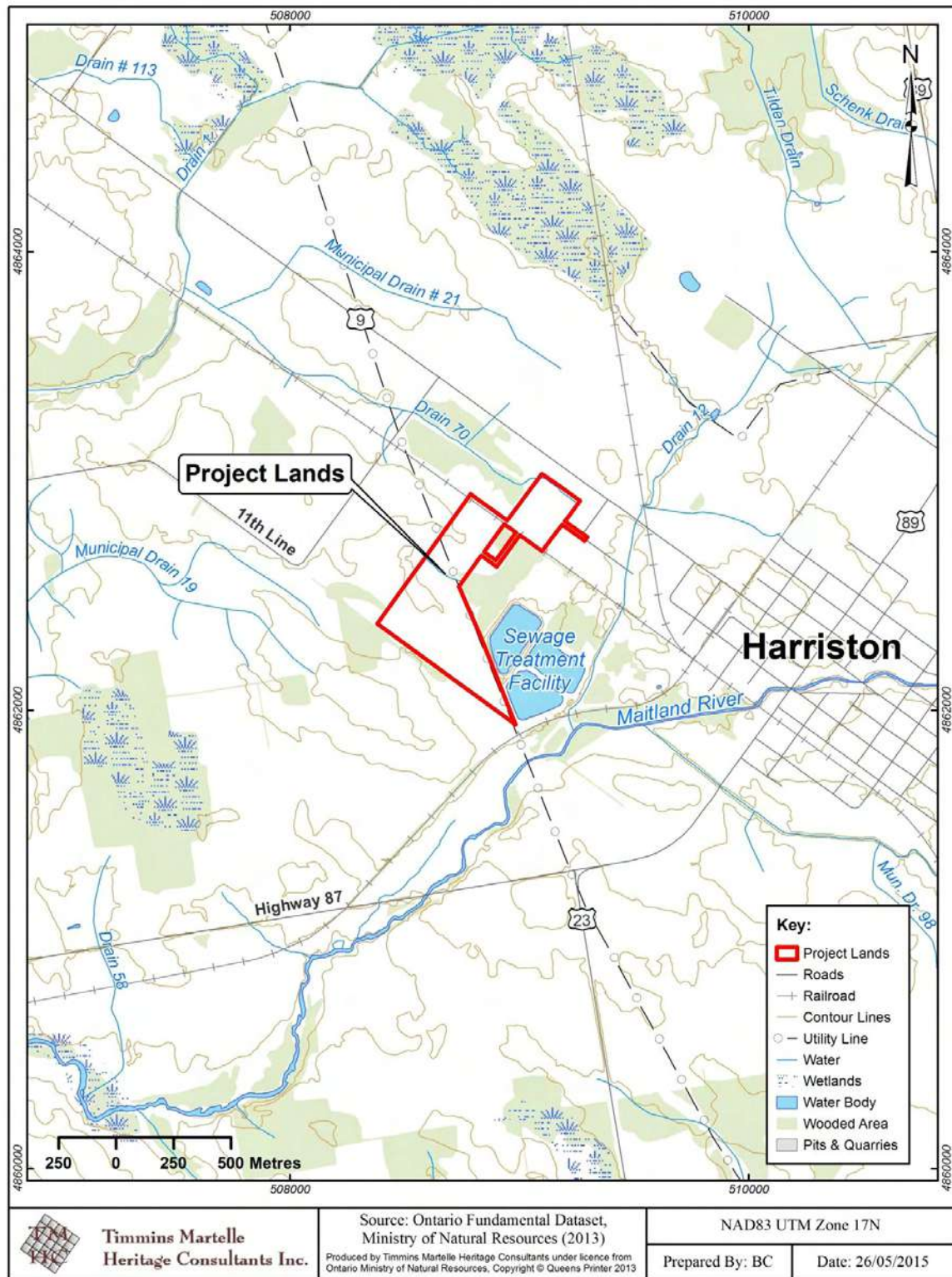


**Map 4: Physiography within the Vicinity of the Project Lands**



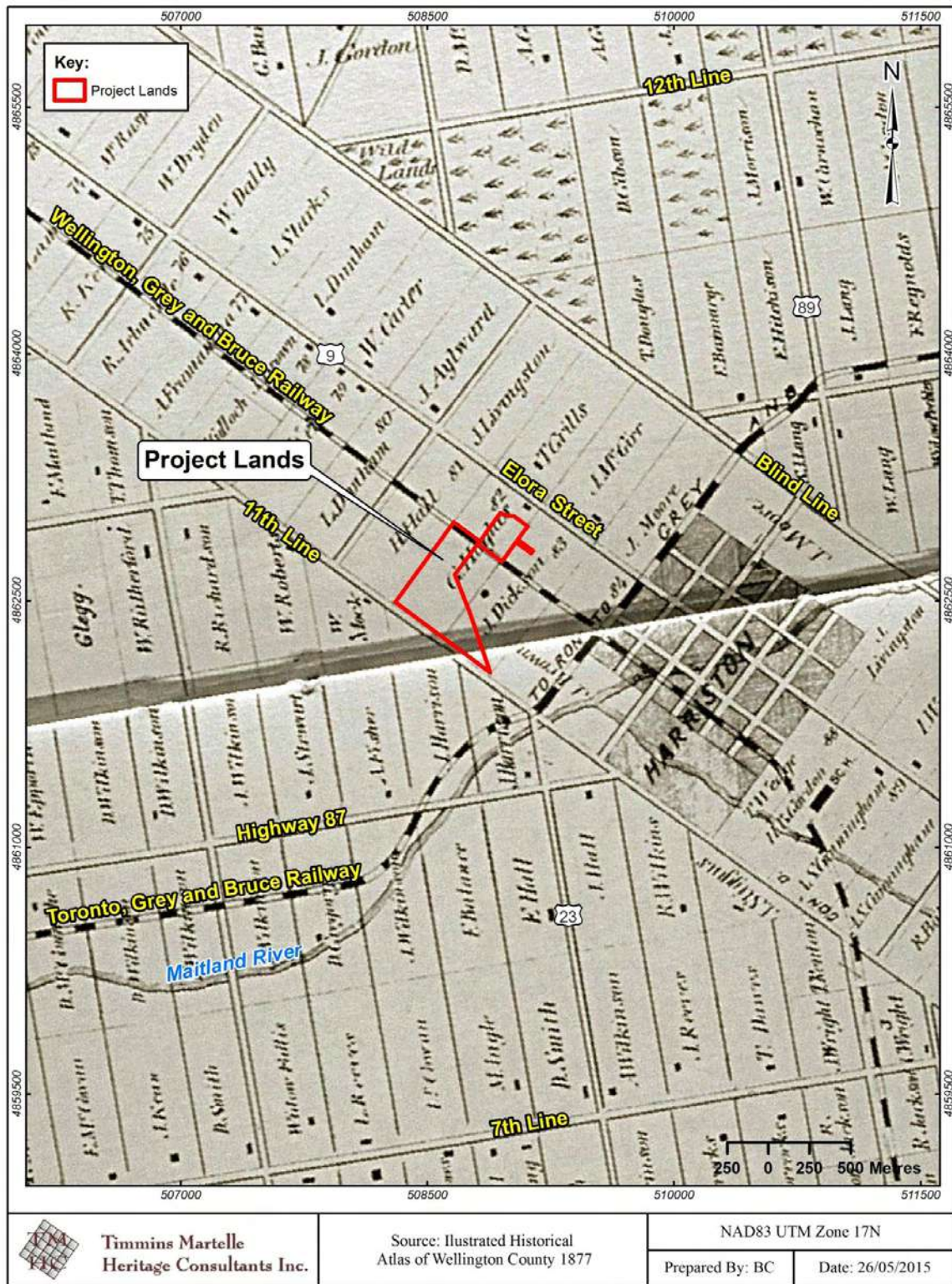
**Map 5: Soils within the Vicinity of the Project Lands**





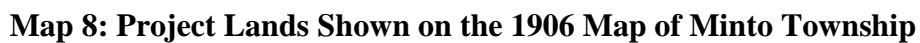
**Map 6: Drainage within the Vicinity of the Project Lands**



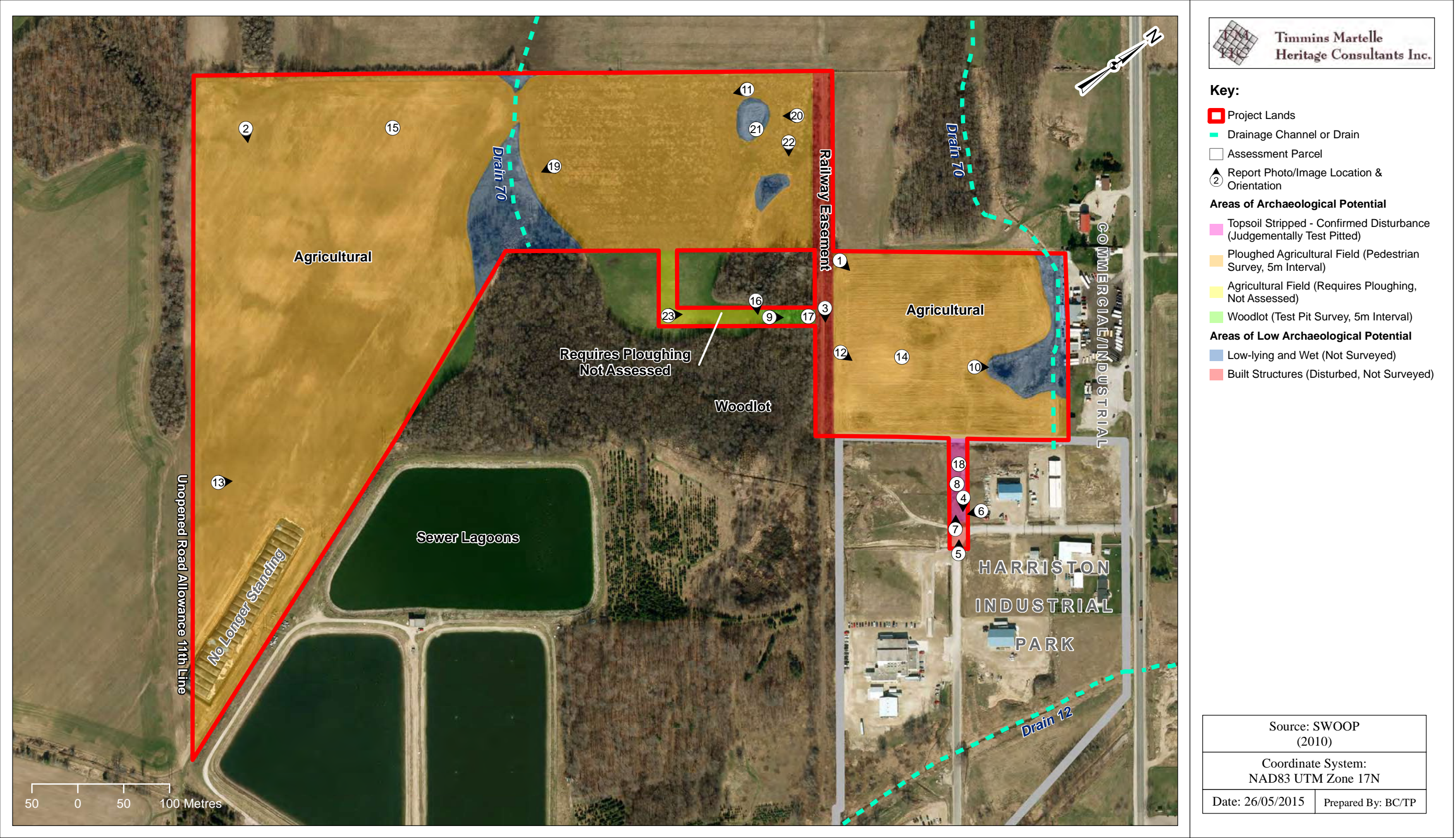


Map 7: Project Lands Shown on the 1877 Map of Minto Township





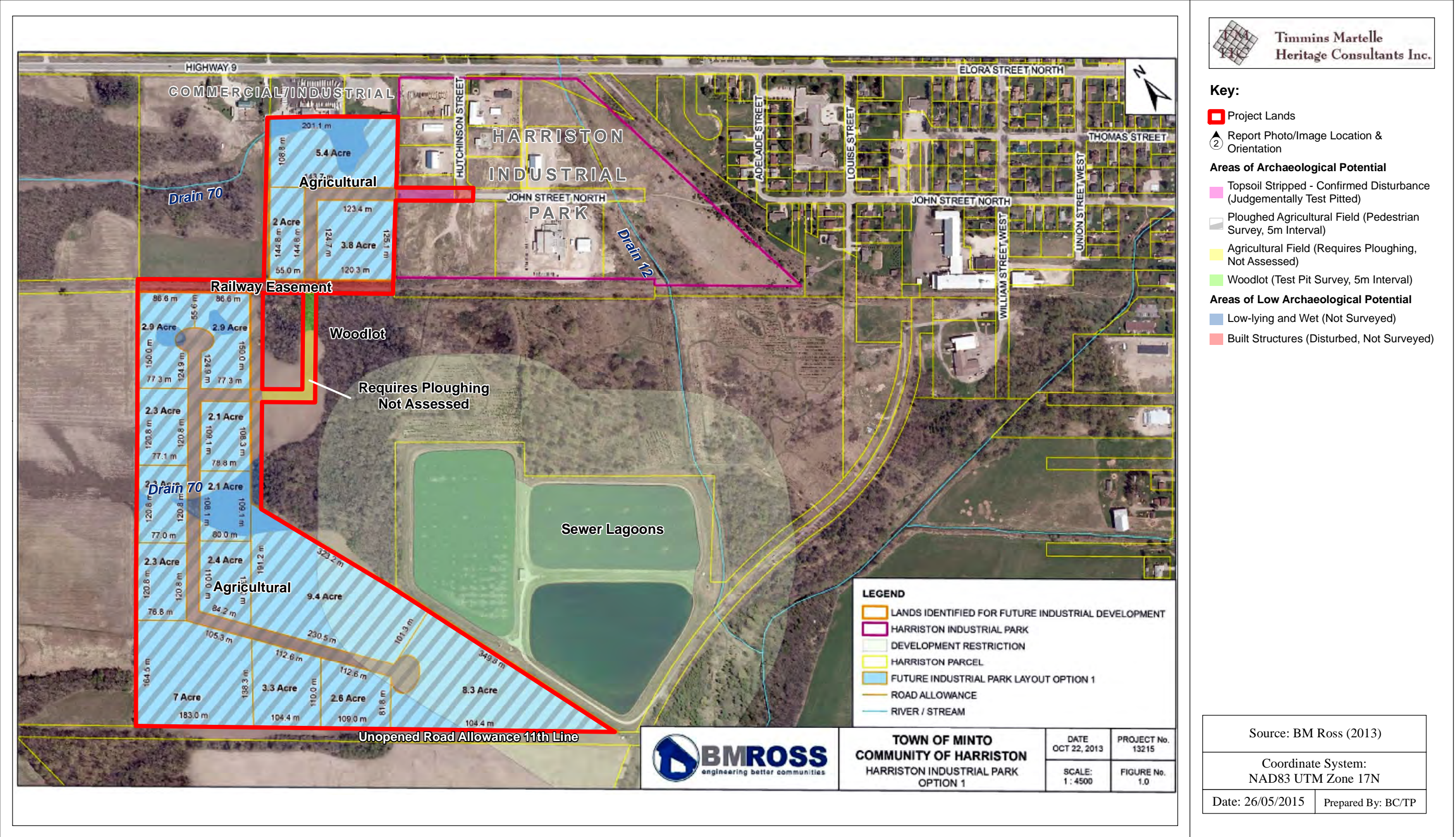




Map 9: Stage 2 Field Conditions and Assessment Methods







Map 10: Stage 2 Field Conditions and Assessment Methods Shown on Proponent Mapping





**Stage 1 and 2 Archaeological Assessment  
Municipal Class Environmental Assessment  
John Street Extension – Harriston Industrial Park  
Part of Lots 82 and 83, Concession D  
Former Township of Minto, Town of Harriston,  
Now the Town of Minto,  
Community of Harriston,  
Wellington County, Ontario**

**SUPPLEMENTARY DOCUMENTATION**  
(to be removed for public circulation of this report)



***P324-034-2014 Location 1 (AIHf-4)***

Location 1 is an isolated find spot located within the south ploughed field along the western boundary of the project area. The find consists of a complete Bois Blanc chert projectile point located roughly three metres east of a north-south trending treed field edge and approximately 55 metres south of a Drain 70 wetland adjacent to west property boundary. The Bois Blanc chert source is likely along the Lake Huron shoreline. The point is a Stanley/Neville projectile point Middle Archaic piece dating circa 8000-7500 B.P. (Ellis 1987). Upon discovery of the artifact, the pedestrian survey transect was decreased to a one metre interval for a 20 metre radius around the find spot. No other archaeological material was identified. The site does not meet provincial criteria for further intensification as per Standard 1 a. of Section 2.2 of the *Standards and Guidelines for Consultant Archaeologists*. Therefore, Stage 3 testing is not recommended.

A GPS reading was taken using a WAAS enabled GPS unit manufactured by Garmin. One coordinate was taken as per section 5.2a of the *Standards and Guidelines for Consultant Archaeologists* and is presented in the table below. Using NAD 83 and at an elevation of 384 metres asl the point was taken at the find spot with an accuracy of 5 metres or better.

Point	Zone	UTM	Accuracy
Artifact Location	17T	508568 E 4862627 N	+/- 5 m
West Property Boundary	17T	508568 E 4862628 N	+/- 5 m
Drain 70 Wetland	17T	508577 E 4862647 N	+/- 5 m



***P324-034-2014 Location 2 (no Borden designation)***

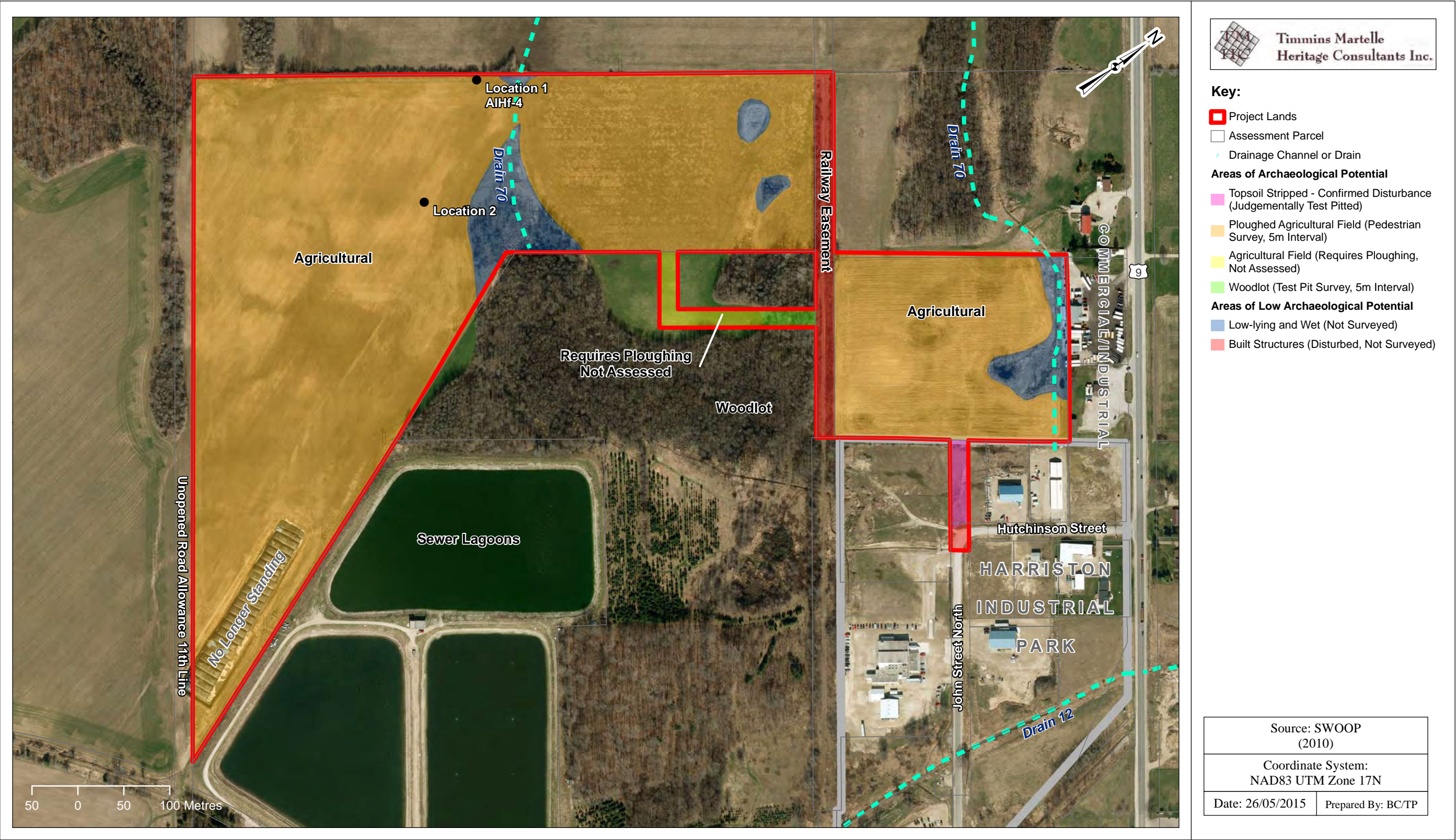
Location 2 is a scatter of three artifacts located within the south ploughed field south of Drain 70. The find consists of a biface made on Kettle Point chert and two Bois Blanc chert flakes located roughly 90 metres east from a north-south trending treed field edge and approximately 45 metres south from the east wetland associated with Drain 70. The scatter measures seven metres (north-south) by 12 metres (east-west). Upon discovery of the initial find, the pedestrian survey transect was decreased to a one metre interval for a 20 metre radius around the find spot. No other archaeological material was identified beyond what is presented. The site does not meet provincial criteria for further investigation as per Standard 1 a. of Section 2.2 of the *Standards and Guidelines for Consultant Archaeologists*. Therefore, Stage 3 is not recommended.

GPS readings were taken using WAAS enabled GPS unit manufactured by Garmin. Five coordinates were taken as per section 5.2b of the *Standards and Guidelines for Consultant Archaeologists* and is presented in the table below. Using NAD 83 and at an elevation reading of 381 metres asl the points were taken with an accuracy of 5 metres or better.

Point	Zone	UTM	Accuracy
Site Centre	17T	508641 E 4862501 N	+/- 5 m
Site North Boundary	17T	508648 E 4862502 N	+/- 5 m
Site South Boundary	17T	508635 E 4862499 N	+/- 5 m
Site East Boundary	17T	508641 E 4862499 N	+/- 5 m
Site West Boundary	17T	508635 E 4862504 N	+/- 5 m
West Property boundary	17T	508527 E 4862575 N	+/- 5 m
Drain 70 Wetland	17T	508626 E 4862516 N	+/- 5 m



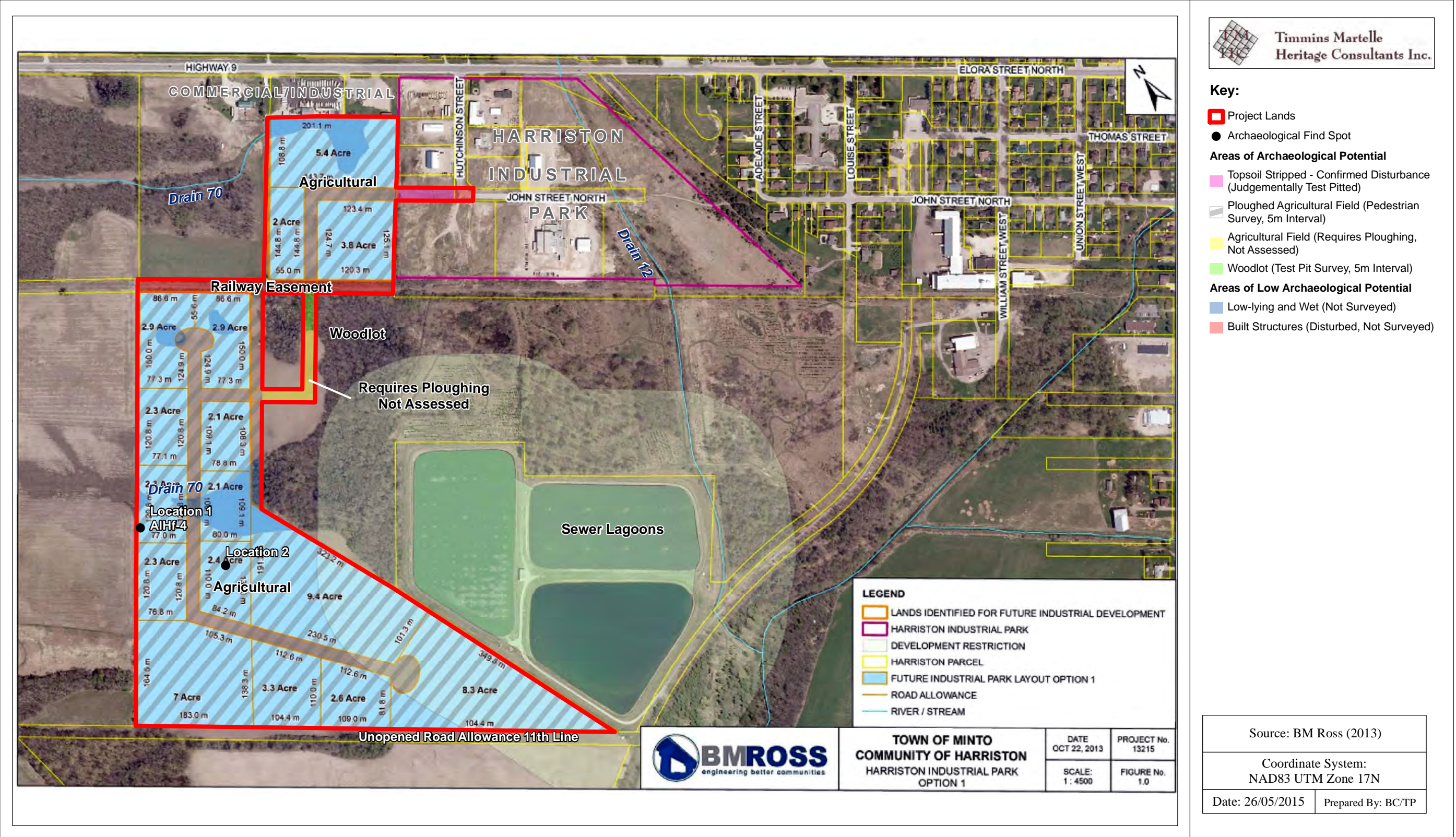




SD Map 1: Stage 2 Field Conditions, Assessment Methods and Location of Archaeological Find Spots







SD Map 2: Stage 2 Field Conditions, Assessment Methods and Location of Archaeological Find Spots





**Ministry of Tourism, Culture and Sport**

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**Ministère du Tourisme, de la Culture et du Sport**

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Jun 28, 2016

Matthew Beaudoin (P324)  
Timmins Martelle Heritage Consultants Inc.  
1600 Attawandaron London ON N6G 3M6

**RE: Review and Entry into the Ontario Public Register of Archaeological Reports: Archaeological Assessment Report Entitled, "Stage 1 and 2 Archaeological Assessment Municipal Class Environmental Assessment John Street Extension – Harriston Industrial Park Part of Lots 82 and 83, Concession D Former Township of Minto, Town of Harriston, Now the Town of Minto, Community of Harriston, Wellington County, Ontario", Dated May 27, 2015, Filed with MTCS Toronto Office on Jun 9, 2015, MTCS Project Information Form Number P324-0034-2014**

Dear Dr. Beaudoin:

This office has reviewed the above-mentioned report, which has been submitted to this ministry as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18.<sup>1</sup> This review has been carried out in order to determine whether the licensed professional consultant archaeologist has met the terms and conditions of their licence, that the licensee assessed the property and documented archaeological resources using a process that accords with the 2011 Standards and Guidelines for Consultant Archaeologists set by the ministry, and that the archaeological fieldwork and report recommendations are consistent with the conservation, protection and preservation of the cultural heritage of Ontario.

The report documents the assessment/mitigation of the study area as depicted in Map 2 and Map 9 of the above titled report and recommends the following:

All work met provincial standards and two archaeological locations were identified during the Stage 2 assessments. The locations do not meet provincial criteria for further investigation. Location 1 is an isolated projectile point and its cultural heritage value and interest has been sufficiently documented. Stage 3 testing is not recommended. Location 2 consists of a biface and two flakes. Stage 3 testing is not recommended. Given this, all of the surveyed portions of the project area should be considered free of archaeological concern.

\*A 180 metre long 20 metre wide corridor (yellow on Map 9) south a railway easement that bisects the Harriston Industrial Park extension lands was not surveyed as it was not ploughed at the time of the Stage 2 assessment. As such, this area has further archaeological concern and will require Stage 2 assessment at a later date and if the proposed route for the John Street extension is retained.

Should construction plans change to incorporate new areas not previously subject to Stage 1 evaluation or

Stage 2 survey, additional archaeological assessment will also be required.

Based on the information contained in the report, the ministry is satisfied that the fieldwork and reporting for the archaeological assessment are consistent with the ministry's 2011 Standards and Guidelines for Consultant Archaeologists and the terms and conditions for archaeological licences. This report has been entered into the Ontario Public Register of Archaeological Reports. Please note that the ministry makes no representation or warranty as to the completeness, accuracy or quality of reports in the register.

Should you require any further information regarding this matter, please feel free to contact me.

Sincerely,

Jenna Down  
Archaeology Review Officer

cc. Archaeology Licensing Officer  
Kelly Vader, B.M. Ross and Associates Ltd.  
Bill White, Town of Minto  
Bill White, Town of Minto

<sup>1</sup>In no way will the ministry be liable for any harm, damages, costs, expenses, losses, claims or actions that may result: (a) if the Report(s) or its recommendations are discovered to be inaccurate, incomplete, misleading or fraudulent; or (b) from the issuance of this letter. Further measures may need to be taken in the event that additional artifacts or archaeological sites are identified or the Report(s) is otherwise found to be inaccurate, incomplete, misleading or fraudulent.

**APPENDIX C**

**CONSULTATION PROGRAM**





## TOWN OF MINTO (COMMUNITY OF HARRISTON)

### MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT HARRISTON INDUSTRIAL PARK: ROAD & SERVICING EXTENSIONS

## NOTICE OF STUDY COMMENCEMENT

#### THE PROJECT:

The Town of Minto is planning to extend road and municipal services within the Harriston Industrial Park in order to service additional industrial lands located west of John Street (refer to accompanying key plan). Servicing extensions, which will include sanitary sewers, watermains and stormwater drainage on the proposed road extensions or adjacent lands, will also be examined in conjunction with the project.

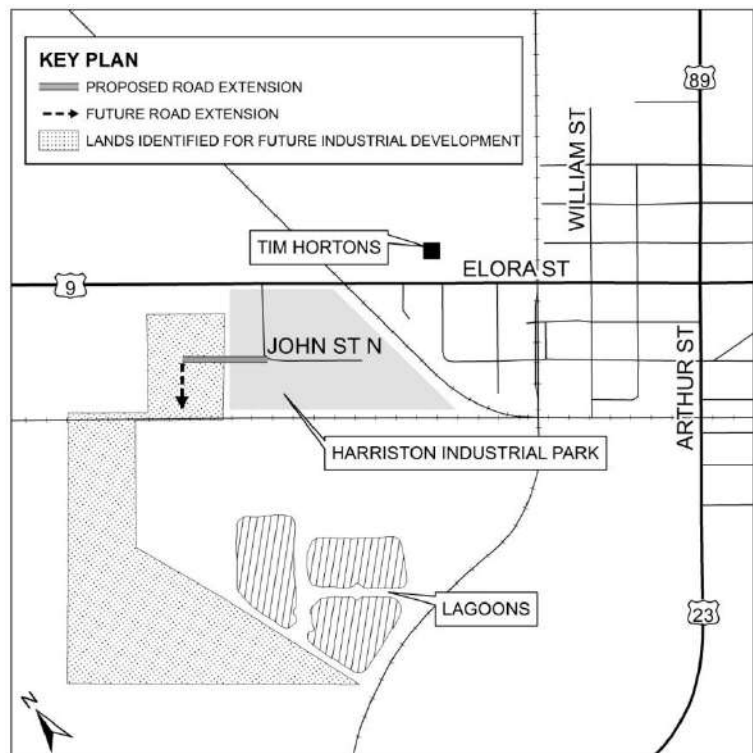
#### THE ENVIRONMENTAL ASSESSMENT PROCESS:

The planning for this project is following the environmental screening process established for Schedule B activities under the Municipal Class Environmental Assessment (Class EA) document (approved October 2000, as amended in 2007 and 2011). The purpose of the Environmental Assessment process is to identify any potential environmental impacts associated with the project and to plan for appropriate mitigation of any impacts. The process includes consultation with the public, stakeholders and government review agencies.

#### PUBLIC INVOLVEMENT:

Public input and comments are invited for incorporation into the planning and design of this project and will be received until **November 1, 2013** at the address listed below. Any comments collected in conjunction with the study, will be maintained on file for use during the project and may be included in project documentation. With the exception of personal information, all comments will become part of the public record.

For further information on this project, or to review the Municipal Class EA process, please contact the Project Engineers: B. M. Ross and Associates: 62 North Street, Goderich, Ontario, N7A 2T4. Telephone (Toll Free): (888) 524-2641. Fax (519) 524-4403. Kelly Vader, Environmental Planner (e-mail: kvader@bmross.net).



Bill White, CAO-Clerk  
Town of Minto

This Notice Issued October 2, 2013

**B. M. ROSS AND ASSOCIATES LIMITED**  
**Engineers and Planners**  
62 North Street, Goderich, ON N7A 2T4  
p. (519) 524-2641 • f. (519) 524-4403  
[www.bmross.net](http://www.bmross.net)

File No. 13215

October 2, 2013

See Attached List

**Re: Town of Minto – Class Environmental Assessment  
Harriston Industrial Park: Road and Servicing Extensions  
Community of Harriston**

The Town of Minto is planning to extend road and municipal services within the Harriston Industrial Park in order to service additional industrial lands located west of John Street. Servicing extensions, which will include sanitary sewers, watermain and stormwater drainage on the proposed road extensions or adjacent lands, will also be examined in conjunction with the project.

Phase one of the proposed road and servicing project would involve an extension of John Street to service the 11 acre parcel located immediately west of John Street. Subsequent phases to the southwest would require further road and servicing extensions to service the additional lands (approximately 55 acres) designated for industrial development.

The planning for this project is following the environmental screening process set out for Schedule 'B' activities under the Municipal Class Environmental Assessment (Class EA) document (approved October 2000, as amended in 2007 and 2011, under the terms of the *Environmental Assessment Act*). The purpose of the Class EA screening process is to identify any potential environmental impacts associated with the proposed works and to plan for appropriate mitigation of any identified impacts. This process includes consultation with the public, stakeholder and government review agencies.

Your organization has been identified as possibly having an interest in the project and we are soliciting your input. Please forward your response to our office by **November 8, 2013**. If you have any questions or require further information on this project, please contact the undersigned.

Yours very truly

**B. M. ROSS AND ASSOCIATES LIMITED**

Per \_\_\_\_\_  
Kelly Vader, RPP, MCIP  
Environmental Planner

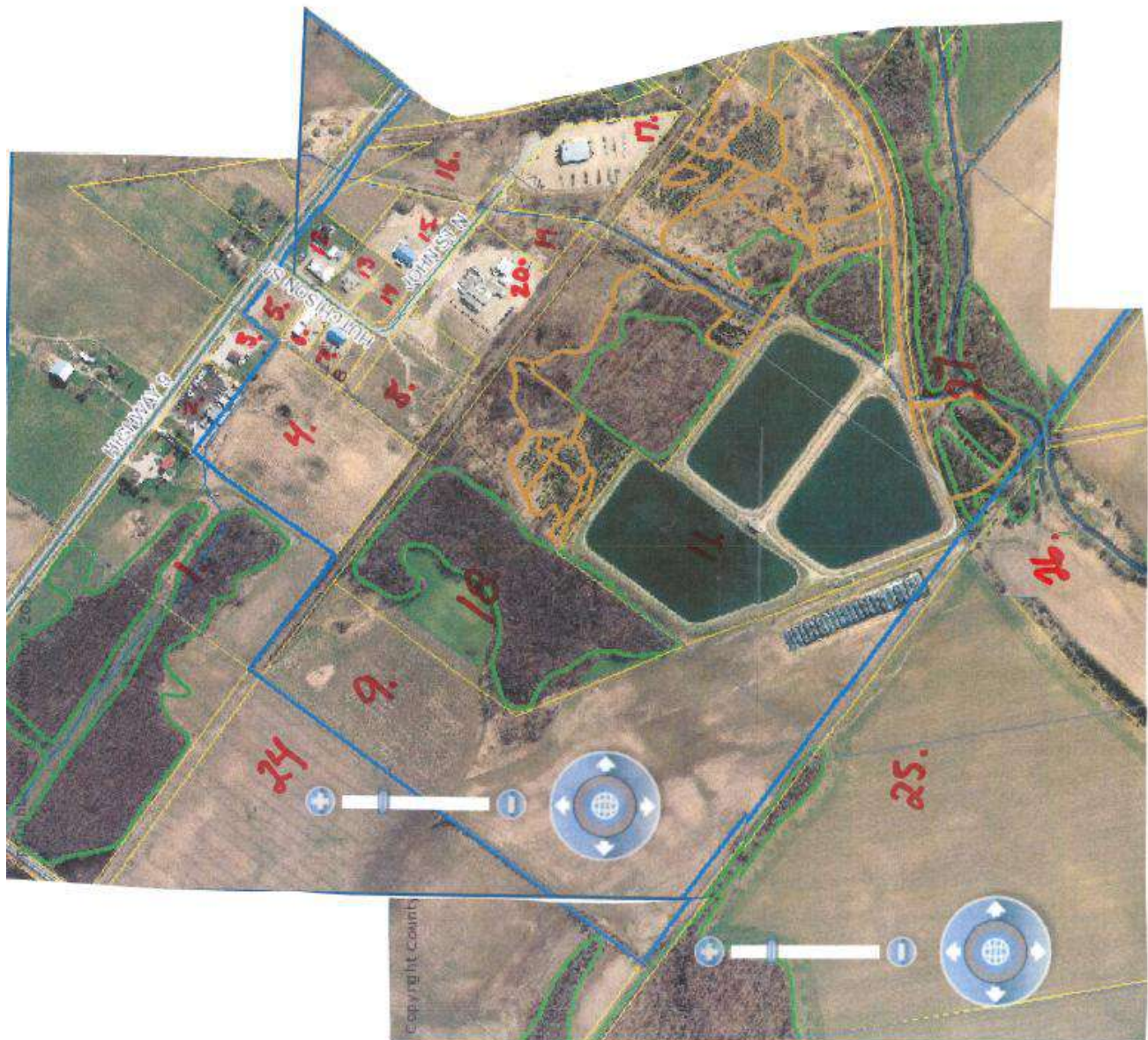
KV:es  
Encl.  
c.c. Bill White, CAO-Clerk, Town of Minto

**TOWN OF MINTO  
(COMMUNITY OF HARRISTON)**  
**MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT**  
**HARRISTON INDUSTRIAL PARK: ROAD & SERVICING EXTENSIONS**

**REVIEW AGENCY CIRCULATION LIST**

REVIEW AGENCY	INVOLVEMENT
Ministry of the Environment (EA Coordinator) - Southwest District Office - London	Mandatory Contact
Ministry of Natural Resources (District Planner) - Guelph Office	Potential Impact upon Natural Environment
Ministry of Culture, Tourism and Sport - Culture Services Unit (Toronto)	Potential Impact upon Heritage Features
Ministry of Transportation (London)	Impact on Transportation
Maitland Valley Conservation Authority	Potential Impact on Environmental Features
Town of Minto	Copy of Correspondence - Proponent
Wellington County - Administration - Emergency Services (EMS, Fire Dispatch, CEMC) - Planning and Development Department	General Information
Minto Fire Department – Harriston Station 87 Elora St. S., Harriston, ON N0G 1Z0	General Information
Festival Hydro 187 Erie St, Stratford, ON N5A 2M6	General Information
Union Gas (London)	General Information
Bell (Kitchener)	General Information

Properties Circulated in Conjunction with the Industrial Park Expansion Class EA



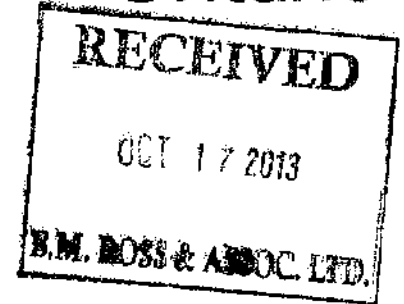


**Ministry of the Environment**

West-Central Region  
Technical Support Section  
Air, Pesticides & Environmental  
Planning  
12th Floor  
119 King St W  
Hamilton ON L8P 4Y7  
Fax: (905)521-7820  
Tel:

**Ministère de l'Environnement**

Direction régionale du Centre-Ouest  
Section du Soutien Technique  
Air, pesticides et planification  
environnementale  
12e étage  
119 rue King W  
Hamilton ON L8P 4Y7  
Télécopieur: (905)521-7820  
Tél:



October 9, 2013

Mr. Bill White, CAO-Clerk  
The Corporation of the Town of Minto  
5941 Highway 89 R.R. 1, P.O. Box 160, Harriston  
Minto, Ontario, N0G 1Z0  
Canada

✓ Ms Kelly Vader  
B.M. Ross and Associates Ltd.  
62 North Street  
Goderich, Ontario

Dear Ms Vader and Mr. White:

**RE: Town of Minto - Class Environmental Assessment**  
Harriston Industrial Park: Road and Servicing Extensions  
Response to Notice of Commencement  
Reference Number 8086-9CBLQ4

This letter is our response to the Notice of Study Commencement for the above noted project. This response acknowledges that the Town of Minto has indicated that its study is following the Schedule "B" process as per the MEA Class EA in order to determine a preferred means of extending roads, water, sanitary and stormwater management servicing for an expansion to the existing Harriston Industrial Park.

Thank you for the opportunity to comment on this project.

Based on the information submitted, we have identified the following key project details with respect to the proposed undertaking:

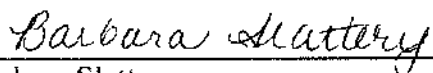
In accordance with the Class EA, Schedule "B" projects require that a Project File be prepared. The Project File shall be organized in such a way as to clearly demonstrate that the appropriate steps in Phases 1 and 2 have been followed and explain the following:

- background to the project and earlier studies;

You must contact the Director, Environmental Approvals Branch if a project may **adversely affect an Aboriginal or treaty right**, or if a **Part II Order request is anticipated**; the Ministry will then determine whether the Crown has a duty to consult. Information and resources to assist you in fulfilling this requirement are provided as an attachment.

Should you or any members of your project team have any questions regarding the above, please contact me at (905) 521-7864 or at [Barbara.slattery@ontario.ca](mailto:Barbara.slattery@ontario.ca).

Yours truly,

A handwritten signature in cursive script that reads "Barbara Slattery". The signature is written in dark ink and is positioned above a horizontal line.

Barbara Slattery

Environmental Assessment/Planning Coordinator  
West Central Region

File Storage Number: EA05 MI CL HA

cc. Cam Hall, MOE - Guelph District Office (via email only)  
Martha Weber, MOE - Guelph (via email only)

## Kelly Vader

---

**From:** Jac Vanderbaan [vanderj@festivalhydro.com]  
**Sent:** October-31-13 5:37 PM  
**To:** kvader@bmross.net  
**Subject:** Class EA - Town of Minto

Kelly,

Festival Hydro received a package from BM Ross regarding the Harriston Industrial Park: Road and Servicing Extension. Our service area does not include this location. Our nearest serviced area is the community of Brussels, about 40 km away.

I think Hydro One is the hydro provider for that area.

Sincerely,

Jac Vanderbaan, P.Eng., CMA  
Chief Operating Officer  
Festival Hydro Inc.  
Tel 519-271-4703x241  
Fax 519-271-7204

**B. M. ROSS AND ASSOCIATES LIMITED**  
**Engineers and Planners**  
Box 1179, 206 Industrial Drive  
Mount Forest, ON, Canada N0G 2L0  
p. (519) 323-2945 • f. (519) 323-3551  
[www.bmross.net](http://www.bmross.net)

File No. 13215

October 20, 2014

Planning Department  
Hydro One  
Box 130, 56 Embro Street  
Beachville, ON N0J 1A0

**Re: Town of Minto – Class Environmental Assessment  
Harriston Industrial Park: Road and Servicing Extensions  
Community of Harriston**

The Town of Minto is planning to extend road and municipal services within the Harriston Industrial Park in order to service additional industrial lands located north and northwest of John Street. Servicing extensions, which will include sanitary sewers, watermain and stormwater drainage on the proposed road extensions or adjacent lands, will also be examined in conjunction with the project. The enclosed Figure 1.0 provides a general location plan.

Phase One of the proposed road and servicing project would involve an extension of John Street to service the 11 acre parcel located immediately north of John Street. Subsequent phases to the northwest would require further road and servicing extensions to service the additional lands (approximately 55 acres) designated for industrial development.

The planning for this project is following the environmental screening process set out for Schedule 'B' activities under the Municipal Class Environmental Assessment (Class EA) document (approved October 2000, as amended in 2007 and 2011, under the terms of the *Environmental Assessment Act*). The purpose of the Class EA screening process is to identify any potential environmental impacts associated with the proposed works and to plan for appropriate mitigation of any identified impacts. This process includes consultation with the public, stakeholder and government review agencies.

Your organization has been identified as possibly having an interest in the project and we are soliciting your input. Please forward your response to our office by **November 21, 2014**.

Please also comment on the following (pictures enclosed):

1. There is an existing overhead hydro line that crosses the 55 acre site along and beyond the northwest side of the sewage lagoons. Is this owned by Hydro One? Is there a registered easement and if so please provide details?
2. There is an existing pole line along the former railway tracks that lie on the west side of the 11 acres. Who owns that pole line? Is there an easement?



3. Will there need to be any property allocated within this Industrial Park for a substation or other Hydro One works?
4. The Town of Minto urban areas are typically supplied by Westario Power. In the Palmerston Industrial Park there was a question regarding whether Westario or Hydro One is the supplier and whether a Service Area Amendment would be required. Do you foresee Hydro One being able to provide services in this new Harriston industrial park area or will a Service Area Amendment apply?

If you have any questions or require further information on this project, please contact the undersigned.

Yours very truly

B. M. ROSS AND ASSOCIATES LIMITED

Per \_\_\_\_\_  
Frank Vanderloo, P. Eng.

Encl.

c.c. Bill White, CAO-Clerk, Town of Minto (letter, by email only)

**Ministry of Tourism,  
Culture and Sport**

Culture Services Unit  
Programs and Services Branch  
401 Bay Street, Suite 1700  
Toronto ON M7A 0A7  
Tel: 416 314 7145  
Fax: 416 314 7175

**Ministère du Tourisme,  
de la Culture et du Sport**

Unité des services culturels  
Direction des programmes et des services  
401, rue Bay, Bureau 1700  
Toronto ON M7A 0A7  
Tél: 416 314 7145  
Téléc: 416 314 7175



November 8, 2013 (EMAIL ONLY)

Kelly Vader  
B.M. and Associates Ross Limited  
62 North Street  
Goderich, ON N7A 2T4  
E: kvader@bmross.net

**RE: Town of Minto – Class Environmental Assessment  
Harriston Industrial Park: Road and Servicing Extensions  
MTCS file no. 0000336**

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Dear Kelly Vader:

Thank you for providing the Ministry of Tourism, Culture and Sport (MTCS) with the Notice of Commencement for your project. For this undertaking, it is the mandate of MTCS, under the *Ontario Heritage Act* (OHA), to conserve, protect and preserve Ontario's cultural heritage, including:

- Archaeological resources;
- Built heritage resources, including bridges and monuments; and,
- Cultural heritage landscapes.

Under the EA process, a determination of the project's potential impact on these cultural heritage resources is required. Please advise MTCS whether archaeological and/or heritage impact assessments will be completed for your EA project, and forward them to MTCS, before issuing a Notice of Completion.

**Archaeological Resources**

Screening your EA project with the attached MTCS *Criteria for Evaluating Archaeological Potential* determines whether it may impact archaeological resources. MTCS archaeological sites data are available at [archaeologysites@ontario.ca](mailto:archaeologysites@ontario.ca). If your EA project area exhibits archaeological potential, then an archaeological assessment (AA) is recommended by an OHA licensed archaeologist and the AA report forwarded to MTCS for review. On brief review of our data, there are no registered archaeological sites in the immediate vicinity of the project, but is in an area of archaeological potential.

**Built Heritage and Cultural Heritage Landscapes**

The MTCS *Screening for Impacts to Built Heritage and Cultural Heritage Landscapes* checklist attached determines whether your EA project may impact these cultural heritage resources: the clerks for the Town of Minto and Wellington County can provide information on property registered or designated under the *Ontario Heritage Act*. If your EA project may impact known or potential cultural heritage resources, MTCS recommends that a Heritage Impact Assessment (HIA) be prepared by a qualified consultant. The MTCS [Info Sheet #5: Heritage Impact Assessments and Conservation Plans](#) outlines the scope of HIAs. Please send completed HIAs to MTCS and the local municipality for review, and make it available to local heritage organizations with an interest, such as the Harriston Historical Society.

**Environmental Assessment Reporting**

HIA and AA reports and their recommendations are part of the EA project. The Environmental Study Report should document and summarize any determinations that no cultural heritage resources are impacted and no technical studies are warranted as part of the EA process. MTCS is in no way liable if the information in the completed checklists is found to be inaccurate or incomplete.

Thank-you for circulating MTCS on this project: please continue to do so through the EA process, and contact me for any questions or clarification.

Sincerely,

Joseph Muller  
Heritage Planner  
Joseph.Muller@ontario.ca

Copied to: Bill White, CAO-Clerk, Town of Minto

Disclaimer: The Ministry of Tourism, Culture and Sport reserves the right to review projects for their potential to impact archaeological, built heritage and cultural heritage landscape resources, and recommend that archaeological and/or heritage impact assessments be undertaken.

Please notify MTCS if archaeological resources are impacted by EA project work. All activities impacting archaeological resources must cease immediately, and a licensed archaeologist is required to carry out a determination of their nature and significance.

If human remains are encountered, all activities must cease immediately and the local police be contacted as well as the Cemeteries Regulation Unit of the Ministry of Consumer Services must be contacted. In situations where human remains are associated with archaeological resources, MTCS should also be notified to ensure that the site is not subject to unlicensed alterations which would be a contravention of the *Ontario Heritage Act*.

# Ministry of Tourism and Culture Criteria for Determining Archaeological Potential

## A Checklist for the Non-Specialist

Feature of Archaeological Potential	Yes	No	Unknown
1. Known archaeological sites within 300 m of property	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Physical Features	Yes	No	Unknown
2. Water on or near the property If yes, what kind of water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a) Primary water source (lake, river, large creek, etc) ▪ within 300 m, OR ▪ 50 m for properties in northern Ontario and Canadian Shield terrain*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Secondary water source (stream, spring, marsh, swamp, etc) ▪ within 300 m, OR ▪ 50 m for properties in northern Ontario and Canadian Shield terrain*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Past water source (beach ridge, river bed, relic creek, ancient shoreline, etc) ▪ within 300 m, OR ▪ 150 m for properties in northern Ontario and Canadian Shield terrain*	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Elevated topography on property (knolls, drumlins, eskers, plateaus, etc)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Pockets of sandy soil in a clay or rocky area on property	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Distinctive land formations on property (mounds, caverns, waterfalls, peninsulas, etc)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Cultural Features	Yes	No	Unknown
6. Known burial site or cemetery on or adjacent to the property (cemetery is registered with the Cemeteries Regulation Unit)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Food or scarce resource harvest areas on property (traditional fishing locations, agricultural/berry extraction areas, etc)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Indications of early Euro-Canadian settlement within 300 m of property (monuments, cemeteries, structures, etc)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. Early historic transportation routes within 100 m of property (historic road, trail, portage, rail corridor, etc)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Property-specific Information	Yes	No	Unknown
10. Property is designated and/or listed under the <i>Ontario Heritage Act</i> (municipal register and lands described in Reg. 875 of the <i>Ontario Heritage Act</i> )	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11. Local knowledge of archaeological potential of property (from aboriginal communities, heritage organisations, municipal heritage committees, etc)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12. Recent ground disturbance <sup>†</sup> (post-1960, extensive and deep land alterations)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The entire property should be screened for archaeological potential, not only the footprint where work is proposed.

\*Northern Ontario is defined as Manitoulin Island, the Districts of Muskoka, Haliburton and Nipissing, and areas to the north. The Canadian Shield is defined as the area of Ontario underlain by the Precambrian Shield.

<sup>†</sup> Archaeological potential can be determined not to be present for either the entire property or a part(s) of it when the area under consideration has been subject to extensive and deep land alterations that have severely damaged the integrity of any archaeological resources. This is commonly referred to as 'disturbed' or 'disturbance', and may include: quarrying, major landscaping involving grading below topsoil, building footprints, sewage and infrastructure development. Activities such as agricultural cultivation, gardening, minor grading and landscaping do not necessarily affect archaeological potential.



### Scoring the results:

If **Yes** to any of 1, 2a-c, 6 or 11

→ archaeological potential is **determined** – assessment is required

If **Yes** to two or more of 3 to 5 or 7-10

→ archaeological potential is **determined** – assessment is required

If **Yes** to 12 or **No** to 1 to 10

→ **low** archaeological potential is **determined** – assessment may or may not be required (depending on answers from 1-11)

If 3 or more **Unknown**

→ more research is required (See note below for more information)

**Note:** If archaeological potential features are unknown, a professional archaeologist licensed under the *Ontario Heritage Act* should be retained to carry out a minimum Stage 1 archaeological assessment report confirming potential or low potential. All reports are to be in compliance with provincial archaeological assessment standards and guidelines.

## Screening for Impacts to Built Heritage and Cultural Heritage Landscapes

This checklist is intended to help proponents determine whether their project could affect known or potential cultural heritage resources. The completed checklist should be returned to the appropriate Heritage Planner or Heritage Advisor at the Ministry of Tourism and Culture.

### Step 1 – Screening for Recognized Cultural Heritage Value

YES	NO	Unknown	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. Is the subject property designated or adjacent* to a property designated under the <i>Ontario Heritage Act</i> ?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. Is the subject property listed on the municipal heritage register or a provincial register/list? (e.g. Ontario Heritage Bridge List)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. Is the subject property within or adjacent to a Heritage Conservation District?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4. Does the subject property have an Ontario Heritage Trust easement or is it adjacent to such a property?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5. Is there a provincial or federal plaque on or near the subject property?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6. Is the subject property a National Historic Site?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. Is the subject property recognized or valued by an Aboriginal community?

### Step 2 – Screening Potential Resources

YES	NO	Unknown	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>Built heritage resources</b>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. Does the subject property or an adjacent property contain any buildings or structures over <b>forty years old<sup>†</sup></b> that are:
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▪ Residential structures (e.g. house, apartment building, shanty or trap line shelter)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▪ Farm buildings (e.g. barns, outbuildings, silos, windmills)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▪ Industrial, commercial or institutional buildings (e.g. a factory, school, etc.)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▪ Engineering works (e.g. bridges, water or communications towers, roads, water/sewer systems, dams, earthworks, etc.)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▪ Monuments or Landmark Features (e.g. cairns, statues, obelisks, fountains, reflecting pools, retaining walls, boundary or claim markers, etc.)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. Is the subject property or an adjacent property associated with a known architect or builder?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. Is the subject property or an adjacent property associated with a person or event of historic interest?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4. When the municipal heritage planner was contacted regarding potential cultural heritage value of the subject property, did they express interest or concern?
<b>YES</b>	<b>NO</b>	<b>Unknown</b>	<b>Cultural heritage landscapes</b>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5. Does the subject property contain landscape features such as:
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▪ Burial sites and/or cemeteries
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▪ Parks or gardens
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▪ Quarries, mining, industrial or farming operations
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▪ Canals
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▪ Prominent natural features that could have special value to people (such as waterfalls, rocky outcrops, large specimen trees, caves, etc.)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▪ Evidence of other human-made alterations to the natural landscape (such as trails, boundary or way-finding markers, mounds, earthworks, cultivation, non-native species, etc.)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6. Is the subject property within a Canadian Heritage River watershed?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. Is the subject property near the Rideau Canal Corridor UNESCO World Heritage Site?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8. Is there any evidence from documentary sources (e.g., local histories, a local recognition program, research studies, previous heritage impact assessment reports, etc.) or local knowledge or Aboriginal oral history, associating the subject property/ area with historic events, activities or persons?

## **MEMORANDUM**

**TO: Kelly Vader, Environmental Planner, B.M. Ross & Associates Ltd.**  
**CC: Bill White, CAO-Clerk, Town of Minto**  
**FROM: Brandi Walter, Environmental Planner/Regulations Technician, MVCA**  
**DATE: November 8, 2013**  
**SUBJECT: Town of Minto – Class Environmental Assessment**  
**Harriston Industrial Park: Road and Servicing Extensions**  
**Community of Harriston**

Maitland Valley Conservation Authority (MVCA) has reviewed the notice of Class Environmental Assessment for the John Street road and servicing extensions. Based on our review of resource mapping and the County of Wellington Official Plan (May 15, 2013) and Zoning By-Law for the Town of Minto, we offer the following comments.

The proposed road and servicing extension will allow for future development of industrial lands within the Community of Harriston. Currently the properties identified for future development are designated industrial in the County of Wellington's Official Plan and are zoned Industrial Special Zone (M1-40 (H)) and Future Development. MVCA understands that a zoning by-law amendment will be required for the lands zoned FD, and to remove the holding symbol on the M1-40 (H) lands prior to industrial development on the subject lands.

### **Natural Heritage Features (Greenlands)**

Located adjacent to the subject lands are Significant Woodlands, and Wildlife and Plant Habitat (see attached aerial photo).

The above features are identified as Greenlands in the County of Wellington's Official Plan (OP). The Greenlands policies in the OP require the following where development is proposed adjacent to the greenlands systems;

1. identify the nature of the natural heritage resource(s) potentially impacted by the development;
2. prepare, where required, an environmental impact assessment to address potential impacts
3. consider enhancement of the natural area where appropriate and reasonable; and
4. demonstrate that there will be no negative impacts on the natural heritage resources or features or on its ecological function.

No development will be approved unless the County is satisfied that the Greenland Policies are met.

We understand that the Class E.A. process is a provincial requirement for assessment of the impacts of municipal services and infrastructure, which differs from the review process for planning applications where the above requirements are mandatory. However, it is our opinion that the Township must also assess the impacts of the future industrial developments, which will be a consequence of the road and service extensions. It is prudent for the Class E.A. to assess the potential impacts of future industrial development on the above-noted natural heritage features, where mitigation or prohibition is identified early in the process. As such, it makes sense for the Township to have regard for the County's policies for future industrial development adjacent to the natural heritage features prior to approving the road and services extension.

Therefore, we recommend that B.M. Ross consider the impacts of future industrial use to the adjacent natural heritage features, considering that these lands will require a zoning by-law amendment prior to development.

#### Natural Hazards and MVCA Regulated Lands

The subject lands and proposed road extension are not located in floodplain or other areas that would be a significant hazard to development.

MVCA's resource mapping shows that the subject lands contain watercourses. Watercourses plus 15 metres from stable top of bank are MVCA regulated areas, pursuant to *Ontario Regulation 164/06 (Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation)*. As such, proposed development (construction, grading, filling) adjacent to the watercourse and proposed interference or alteration with the watercourse requires the permission of MVCA prior to doing the work.

#### Stormwater Management and Proposed Facilities

MVCA wishes to review the stormwater management plans and proposed facilities for the subject lands. Please contact Steve Jackson of this office for pre-consultation of the stormwater management plans.

#### Groundwater Resources

MVCA's resource mapping identifies that the subject lands are partially underlain by a Significant Groundwater Recharge Area. We expect that the Class E.A. will make recommendation for mitigation to prevent contamination of the groundwater resource from Industrial use.

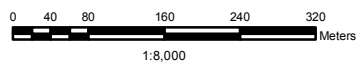
Thank you for the opportunity to comment at this time. Feel free to contact this office if you have any questions.





- Watercourse
- Significant Woodlands, Wildlife and Plant Habitat
- Regulatory Floodplain
- Sig. GW Recharge Area

## TOWN OF MINTO HARRISTON PROPOSED JOHN ST ROAD EXTENSION



Date: Insert Date  
Produced By: Map Maker

Map Projection: UTM NAD83 Zone 17  
File: - Example- S:\GIS\GISProjects\Watershed Map

MAITLAND VALLEY CONSERVATION AUTHORITY  
1093 Marietta Street, Box 127, Wexford, ON N0G 2X0  
519 333-3537 Fax: 519 333-3316 Email: mvald@mvca.on.ca



Produced by Maitland Valley Conservation Authority, GIS/Planning Services under Licence with Ontario Ministry of Natural Resources.  
Copyright (c) Queen's Printer 1992, 2013  
Aerial Photography taken in 2010 by Mapcon.  
This map is for illustrative purposes only. Information contained hereon is not a substitute for professional review or a site survey and is subject to change without notice. The Maitland Valley Conservation Authority takes no responsibility for, nor guarantees, the accuracy of the information contained on this map. Any interpretations or conclusions drawn from this map are the sole responsibility of the user.



**B. M. ROSS AND ASSOCIATES LIMITED**  
**Engineers and Planners**

62 North Street, Goderich, ON N7A 2T4  
p. (519) 524-2641 • f. (519) 524-4403  
[www.bmross.net](http://www.bmross.net)

File No. 13215

Z:\13215-Minto-Class\_EA-Harriston\_Industrial\_Pk\Projects\Class EA\Agency Consultation\First Nations\First Nations Letter

Date

First Nation Letter (See Attached List)

**Re: Town of Minto – Class Environmental Assessment  
Harriston Industrial Park: Road and Servicing Extensions  
Community of Harriston**

The Town of Minto is planning to extend road and municipal services within the Harriston Industrial Park in order to service additional industrial lands located west of John Street. Servicing extensions, which will include sanitary sewers, watermain and stormwater drainage on the proposed road extensions or adjacent lands, will also be examined in conjunction with the project.

Phase one of the proposed road and servicing project would involve an extension of John Street to service the 11 acre parcel located immediately west of John Street. Subsequent phases to the southwest would require further road and servicing extensions to service the additional lands (approximately 55 acres) designated for industrial development.

The planning for this project is following the environmental screening process set out for Schedule 'B' activities under the Municipal Class Environmental Assessment (Class EA) document (approved October 2000, as amended in 2007 and 2011, under the terms of the *Environmental Assessment Act*). The purpose of the Class EA screening process is to identify any potential environmental impacts associated with the proposed works and to plan for appropriate mitigation of any identified impacts. This process includes consultation with the public, stakeholder and government review agencies.

Your community has been identified as possibly having an interest in this project. For your convenience, a response form is enclosed along with a self-addressed stamped envelope. Please return by **December 15, 2013**. If you have any questions on this matter or require further information, please contact the undersigned at 888-524-2641 or by e-mail at [kvader@bmross.net](mailto:kvader@bmross.net).

Yours very truly

**B. M. ROSS AND ASSOCIATES LIMITED**

Per \_\_\_\_\_  
Kelly Vader, RPP, MCIP  
Environmental Planner

KV:  
Encl.  
c.c. Bill White, CAO-Clerk, Town of Minto

Z:\13215-Minto-Class\_EA-Harriston\_Industrial\_Pk\Projects\Class EA\Agency Consultation\First Nations\First Nations Letter

**TOWN OF MINTO  
COMMUNITY OF HARRISTON**

**CLASS ENVIRONMENTAL ASSESSMENT  
HARRISTON INDUSTRIAL PARK: ROAD & SERVICING EXTENSIONS  
PROJECT 13215**

**AGENCY CIRCULATION LIST:  
ABORIGINAL INTERESTS**

---

**Additional First Nation Consultation List**

Chippewas of Saugeen  
Hwy. 21, R.R. # 1  
Southampton ON N0H 2L0

Chief Ralph Akiwenzie  
Chippewas of Nawash  
Unceded First Nation  
R.R. #5  
Wiarton ON N0H 2T0

Ray Raciot, President  
Grey Bruce Peninsula Metis Council  
380 9<sup>th</sup> Street East  
Owen Sound ON N4K 1P1

Métis Nation of Ontario  
500 Old St. Patrick Street, Unit D  
Ottawa ON K1N 9G4

Historic Saugeen Métis  
204 High Street, Box 1492  
Southampton ON N0H 2L0

## Response Form

**Project Name:** Class EA, Harriston Industrial Park: Road & Servicing Extensions, Harriston, ON

**Project Description:** The Town of Minto is planning to extend road and municipal services within the Harriston Industrial Park in order to service additional industrial lands located west of John Street. Servicing extensions, which will include sanitary sewers, watermains and stormwater drainage on the proposed road extensions or adjacent lands, will also be examined in conjunction with the project.

Phase one of the proposed road and servicing project would involve an extension of John Street to service the 11 acre parcel located immediately west of John Street. Subsequent phases to the southwest would require further road and servicing extensions to service the additional lands (approximately 55 acres) designated for industrial development.

**Project Location:** Harriston, Town of Minto, Wellington County, Ontario

**(Key Plan of Project Location attached)**

**Please Detach and Return in Envelope Provided**

-----

**Name of Aboriginal Community:** \_\_\_\_\_

**Please check appropriate box**

☐

**Please send additional information on this project.**

☐

**We would like to meet with representatives of this project.**

☐

**We have no concerns with this project and do not wish to be consulted further.**

**Project Name:** 13215

**Location:** Harriston

**Proponent:** Town of Minto



Name of Aboriginal Community: Historic Saugeen Métis

☒ Just on the edge of territory. Due to time & resources we will not request any further information.

Please check appropriate box

☐

Please send additional information on this project.

Thank you.

☐

We would like to meet with representatives of this project.

☐

We have no concerns with this project and do not wish to be consulted further.

Project Name: 13215

Location: Harriston

Proponent: Town of Minto

RECEIVED

NOV 18 2013

B.M. ROSS & ASSOC. LTD.

**B. M. ROSS AND ASSOCIATES LIMITED**  
**Engineers and Planners**  
62 North Street, Goderich, ON N7A 2T4  
p. (519) 524-2641 • f. (519) 524-4403  
[www.bmross.net](http://www.bmross.net)

File No. 13215

April 10, 2017

Dear Resident

**Re: Town of Minto – Class Environmental Assessment  
Harriston Industrial Park: Road and Servicing Extensions  
Community of Harriston**

The Town of Minto initiated a Class EA process to expand the Harriston Industrial Park in September 2013. The planned expansion will include the extension of a road network and full municipal services in order to service lands designated for industrial development located north and west of John Street adjacent to the existing industrial park. The proposed servicing extensions will include sanitary sewers, watermain and stormwater drainage on the proposed road extensions and/or adjacent lands. The subject lands are currently in agricultural production and are designated for Industrial Development in the Wellington County Official Plan. Below is a photo of the subject lands looking north.



After completing the initial phases of the EA process in 2014, the project was put on hold for two years while servicing implications were considered and other municipal priorities. The Municipality now plans to complete the Class EA so they can move forward with implementation of the preferred Alternative. Information on the project was circulated to review agencies and adjacent property owners during the initial consultation phase of the Class EA in 2013 and there were no negative impacts identified with the proposed servicing plan at that time.

This correspondence is being forwarded to provide an update on study investigations and to seek input on the preferred road and servicing alternatives prior to formal selection of a preferred design. Phase one of the proposed road and servicing project would involve an extension of John Street to service an 11 acre parcel located immediately northwest of the existing industrial park. Subsequent phases to the southwest would require further road and servicing extensions to service the additional lands (approximately 55 acres) located adjacent to the Harriston sewage treatment facility (STP), which are designated for industrial development in the Wellington County Official Plan.

#### **i) Road and Servicing Extensions**

Figure No. 2.1 (attached) illustrates the road pattern proposed to service the two industrial parcels along with anticipated water and sanitary servicing extensions. The planned road cross-section would include a 27 metre wide road allowance with an 8 metre paved, two lane road surface and roadside ditches to convey surface water drainage. To access the 55 acre parcel, the road extension would travel north along the former rail line a distance of approximately 200 metres before turning west into the 55 acres. An internal road would be constructed down the centre of the 55 acres with development parcels located on each side for future industrial site development.

#### **ii) Sanitary Servicing**

Sanitary servicing of the industrial park expansion would occur in two phases. Phase 1 would involve servicing of the 11 acre site with a deep gravity sewer extending the length of John Street in conjunction with the planned road extension. Sewage from the 11 acre site would be conveyed by gravity south along John Street to the existing Industrial Park sewage pumping station (SPS), which was recently upgraded and has sufficient capacity to accept sanitary sewage flows from the site. Phase 2 of the sanitary servicing plan would involve the extension of the gravity sewer into the 55 acre parcel as far as possible given the existing topography while maintaining sufficient cover. Based on topographic information obtained from the site, the sewer would extend approximately 600 metres along the proposed access roadway before insufficient cover is encountered. Additional properties beyond this point could be serviced by individual grinder pump units discharging to the gravity sewer.

#### **iii) Water Servicing**

Harriston is currently serviced by a waterworks that consists of: three drilled bedrock wells, three well houses, an elevated 1915 m<sup>3</sup> storage tank, and a distribution network of watermains ranging in diameter from 100 mm to 300mm. The existing watermain distribution system would be extended along John Street and then westerly to service the additional 55 acre site. The existing water system has sufficient supply to service the future needs of the industrial park expansion; however available fire flow rates would be less than target fire protection rates selected by the Town. Additional upgrades to the existing Harriston water distribution system are planned which would improve water flows to the Industrial Park over time.

#### **iv) Stormwater Management**

Stormwater management servicing of the expanded industrial park would also be accomplished in two primary phases. Phase 1 would involve development of the 11 acre site which would generally drain to the northeast to an existing municipal drain (Municipal Drain 70) located at the northeast corner of the site. Stormwater management would be accomplished through individual on-site detention facilities constructed as sites are developed. Overland flows would be conveyed to the rear of the lots and then towards the existing open municipal drain, which may need to be upgraded at some point as development proceeds.

Drainage of the 55 acre site would involve the construction of a drainage ditch adjacent to the existing sewage treatment facility which would convey flows from the central and northeast portions of the site, west to a discharge location to the Maitland River via a new outlet sewer. Limited filling would need to occur in order to achieve positive drainage flows within the site. Stormwater management would be accomplished through individual on-site detention facilities constructed as sites are developed. External drainage arising north of the site would be collected and discharged south of the site to an existing drainage run located east of the sewage lagoons.

**v) Class EA Investigations**

A Stage 1 & 2 Archaeological Investigation was completed as part of the Class EA process on both the 11 Acre and 55 Acre sites. The review included a background investigation (Stage 1) and an on-site review (Stage 2) to look for evidence of buried cultural material. There were no cultural materials identified during the review and no further investigations were recommended for the site.

The planning for this project is following the environmental screening process set out for Schedule 'B' activities under the Municipal Class Environmental Assessment (Class EA) document (approved October 2000, as amended in 2007 and 2011). The purpose of the Class EA screening process is to identify any potential environmental impacts associated with the proposed works and to plan for appropriate mitigation of any identified impacts. This process includes consultation with the public, stakeholder and government review agencies.

As an adjacent property owner, you were previously contacted regarding this project and we are soliciting your input on the proposed servicing plan. Please forward any questions or concerns to the undersigned prior to May 16, 2017.

Yours very truly

**B. M. ROSS AND ASSOCIATES LIMITED**

Per \_\_\_\_\_  
Kelly Vader, RPP, MCIP  
Environmental Planner

KV:es  
Encl.

c.c. Bill White, CAO-Clerk, Town of Minto



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File No. 13215

April 7, 2017

‘Agency’  
See Attached List

**Re: Town of Minto – Class Environmental Assessment  
Harriston Industrial Park: Road and Servicing Extensions  
Community of Harriston**

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Your organization was previously contacted regarding this project and we are soliciting your input on the proposed servicing plan. Please forward your response to our office by **May 16, 2017**. If you have any questions or require further information on this project, please contact the undersigned.

Yours very truly

**B. M. ROSS AND ASSOCIATES LIMITED**

Per \_\_\_\_\_  
Kelly Vader, RPP, MCIP  
Environmental Planner

KV:  
Encl.

c.c. Bill White, CAO-Clerk, Town of Minto

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File No. 13215

April 7, 2017

‘FN’

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Yours very truly

**B. M. ROSS AND ASSOCIATES LIMITED**

Per \_\_\_\_\_  
Kelly Vader, RPP, MCIP  
Environmental Planner

KV:es  
Encl.

c.c. Bill White, CAO-Clerk, Town of Minto

Jim & Doreen Harkness  
5808 Hwy #9, Harriston, ON, N0G 1Z0  
Ph: 519-338-3946 • Fax: 519-338-2756  
Email: [jimh@harknessequipment.ca](mailto:jimh@harknessequipment.ca)

Email:  
Mail:  
Fax: 519-524-4403 May 15, 2017 3:30 #  
Inter-Office:  
Date: May 12, 2017  
Page(s):

B.M. Ross & Associates Ltd  
62 North Street  
Goderich, On., N7A 2T4

Attention: Kelly Vader  
c.c. Bill White, Town of Minto

Re: Harriston Industrial Park File #13215, your letter dated April 10, 2017

As adjacent land owners here is our response.

1. We don't want to stand in the way of progress or Harriston expansion. Hopefully the addition of more tax base will lower or at least maintain the excessive business tax we pay on our Lot 76, Conc C premises at present.

On the other hand.

- A. Property we own adjacent to the proposed expansion has been in the family name for 127 years (1890) when my grandfather purchased it.
- B. The two storey brick home on the property has undergone extensive renovations as a future retirement home for Doreen and I.
- C. We are looking forward to retirement on this pastoral acreage where I was raised. Last week five deer were grazing on the proposed industrial land mid-afternoon.
- D. At present there is little problem with the existing industrial park, we are approximately 2000 feet from the most active industry Tenderfresh, although it is visible.
- E. When the lagoons were built 60-70 years ago there was an ongoing problem with odour when the wind came from the south. With the prevailing winds town folk in Harriston put up with the odour for years. That problem appears to have been rectified but may surface again as population and industry increase.
- F. We do on quiet summer nights hear pumps at the lagoon under certain conditions.

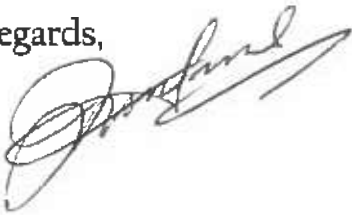
Continued...

The conditions we would like to see on the park expansion are.

1. Acceptance of industry only that is non-polluting with respect to
  - Air quality, soil and water pollution.
  - Noise pollution.
  - Visual pollution.
2. To achieve at least conditions 2 & 3 of above we are requesting a windbreak or tree cover; two rows wide on the proposed property and that the tree cover height be sufficient to cover heights of the buildings in the park. Also that the trees be an evergreen variety for year round protection.
3. That any lighting in the park be directed downwards to eliminate glare and visibility of hi-intensity lighting from the residence on adjoining property.
4. That sufficient source of natural gas be available in the proposed industrial park expansion that the existing or larger grain drier on this adjoining property could be serviced (approximately 1000 feet distance from property line.)

Upon completion of our tenure on the property it is willed to our four sons. In the meantime I am available to act on my and their behalf and answer any questions that may arise subject to our conditions on the park expansion.

Regards,



Jim & Doreen Harkness  
Alan Harkness - Vancouver  
Doug Harkness - Clifford  
John Harkness - Harriston  
James Harkness - Toronto



**Ministry of Tourism,  
Culture and Sport**

Heritage Program Unit  
Programs and Services Branch  
401 Bay Street, Suite 1700  
Toronto ON M7A 0A7  
Tel: 416 314 7145  
Fax: 416 212 1802

**Ministère du Tourisme,  
de la Culture et du Sport**

Unité des programmes patrimoine  
Direction des programmes et des services  
401, rue Bay, Bureau 1700  
Toronto ON M7A 0A7  
Tél: 416 314 7145  
Télé: 416 212 1802



May 15, 2017 (EMAIL ONLY)

Kelly Vader, RPP, MCIP  
B.M. Ross and Associates Limited  
62 North Street  
Goderich, ON N7A 2T4  
E: kvader@bmross.net

**RE: MTCS file #: 0000336**  
**Proponent: Town of Minto**  
**Subject: Municipal Class Environmental Assessment**  
**Harriston Industrial Park: Road and Servicing Extensions**  
**Location: Harriston, Town of Minto, County of Wellington, Ontario**

---

Dear Kelly Vader:

Thank you for providing the Ministry of Tourism, Culture and Sport (MTCS) with the Notice for your project. MTCS's interest in this Environmental Assessment (EA) project relates to its mandate of conserving Ontario's cultural heritage, which includes:

- Archaeological resources, including land-based and marine;
- Built heritage resources, including bridges and monuments; and,
- Cultural heritage landscapes.

Under the EA process, the proponent is required to determine a project's potential impact on cultural heritage resources. While some cultural heritage resources may have already been formally identified, others may be identified through screening and evaluation. Indigenous communities may have knowledge that can contribute to the identification of cultural heritage resources, and we suggest that any engagement with Indigenous communities includes a discussion about known or potential cultural heritage resources that are of value to these communities. Municipal Heritage Committees, historical societies and other local heritage organizations may also have knowledge that contributes to the identification of cultural heritage resources.

**Archaeological Resources**

An archaeological assessment (AA) has been undertaken under PIF# P324-0034-2014 by an archaeologist licenced under the *OHA*, who submitted the report directly to MTCS for review. The report recommends no further AA, and has been entered into the *Ontario Public Register of Archaeological Reports*.

**Built Heritage and Cultural Heritage Landscapes**

As noted in our prior correspondence of November 8, 2013, the MTCS [Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes](#) should be completed to help determine whether your EA project may impact cultural heritage resources. The Clerks for the Town of Minto and County of Wellington can provide information on property registered or designated under the *Ontario Heritage Act*. Municipal Heritage Planners can also provide information that will assist you in completing the checklist.

If potential or known heritage resources exist, MTCS recommends that a Heritage Impact Assessment (HIA), prepared by a qualified consultant, should be completed to assess potential project impacts. Our Ministry's [Info Sheet #5: Heritage Impact Assessments and Conservation Plans](#) outlines the scope of HIAs. Please send the HIA to MTCS for review, and make it available to local organizations or individuals who have expressed interest in review.

### **Environmental Assessment Reporting**

All technical heritage studies and their recommendations are to be addressed and incorporated into EA projects. Please advise MTCS whether any technical heritage studies will be completed for your EA project, and provide them to MTCS before issuing a Notice of Completion. If your screening has identified no known or potential cultural heritage resources, or no impacts to these resources, please include the completed checklists and supporting documentation in the EA report or file.

Thank-you for consulting MTCS on this project: please continue to do so through the EA process, and contact me for any questions or clarification.

Sincerely,

Joseph Muller, RPP/MCIP  
Heritage Planner  
Joseph.Muller@Ontario.ca

Copied to: Bill White, CAO-Clerk, Town of Minto

It is the sole responsibility of proponents to ensure that any information and documentation submitted as part of their EA report or file is accurate. MTCS makes no representation or warranty as to the completeness, accuracy or quality of the any checklists, reports or supporting documentation submitted as part of the EA process, and in no way shall MTCS be liable for any harm, damages, costs, expenses, losses, claims or actions that may result if any checklists, reports or supporting documents are discovered to be inaccurate, incomplete, misleading or fraudulent.

Please notify MTCS if archaeological resources are impacted by EA project work. All activities impacting archaeological resources must cease immediately, and a licensed archaeologist is required to carry out an archaeological assessment in accordance with the Ontario Heritage Act and the Standards and Guidelines for Consultant Archaeologists.

If human remains are encountered, all activities must cease immediately and the local police as well as the Cemeteries Regulation Unit of the Ministry of Government and Consumer Services must be contacted. In situations where human remains are associated with archaeological resources, MTCS should also be notified to ensure that the site is not subject to unlicensed alterations which would be a contravention of the Ontario Heritage Act.

**APPENDIX D**

**SERVICING DESIGN BRIEF**

**Town of Minto  
Community of Harriston  
Industrial Park Expansion  
Upgrade Options  
Design Brief**

Job # :	13215
Date :	June 16, 2014
Revised :	

## **1.0 Background**

The Town of Minto is looking at servicing for development two industrial properties near the existing Wastewater Treatment Plant. One is approximately 5 ha located immediately northwest of the existing industrial park area and Hutchinson Street. The other is approximately 22 ha located north and west of the existing Wastewater Treatment Plant. Both areas are currently being used for agricultural purposes. Two options have been developed to service these areas. The difference between the two options is how the roads (and ultimately sewer and water services) will be laid out. The purpose of these design notes are to conceptually establish how the sewer layout will look so that the two options can be compared on a cost basis.

The sewers and original SPS design were completed under 87167.

For the purposes of these notes, we will call the 5 ha. parcel of land - Area 1 and the 22 ha. parcel of land - Area 2.

The first effort is to determine if Area 1 and 2 can be drained by gravity to the existing industrial park SPS and if that SPS has capacity to handle these extra flows.

## **2.0 From 12106**

According to the design brief for the upgrades to the Industrial Park SPS, Area 1 was considered as part of the 20-year design flow to this station. Area 2 was not considered. The following flow rates were used to project future flows for Area 1:

Industrial Sewage Flow	=	35 m <sup>3</sup> /ha/day	
	=	0.4051 L/ha/sec	
Infiltration	=	15,000 L/ha/day	This number is assumed based on existing conditions. In comparison with 1982 MOE guidelines (227 L/cap/d) this value (193 L/cap/d) appears reasonable.
	=	0.174 L/ha/sec	
Peaking factor	=	2.5 (based on existing conditions)	

There was 6 ha. of undeveloped land noted in the existing industrial park lands which was also accounted for in the 20-year SPS upgrade design. Of the 6 ha., 3.6 ha. would feed into the sewer on the same side as the proposed 5 ha. development lands, the remainder would feed into the SPS from the other direction. The existing industrial development is contributing 2 L/s of ADF and 6.1 L/s of PDF. For the undeveloped industrial land and Area 1, a peaking factor of 2.5 was established based on existing conditions. For the existing industrial lands, Farm Fresh was calculated to be contributing 2 L/s of ADF + infiltration and the remainder of the existing industries were identified as dry industries. All of the existing industries were identified as producing a PDF of 6.1 L/s. We will assume that Farm Fresh has a peak flow = ADF x peak factor of 2.04 + Infiltration = 4.43 L/s. Then the remaining 5 industrial contributors will split the remaining 1.67 L/s of PDF equally.



### 3.0 Projected Flows - Option 1

Refer to Figure No. 1.0 for a plan view indicating drainage area locations.

Drainage Area	Area ( Ha )	Drainage Area Avg Q ( L/s )	Peak Sewage Q ( L/s )	Peak Infiltration Q ( L/s )	Total Peak Sewage Q ( L/s )
A	1.8	0.73	1.82	0.31	2.14
B	0.2	0.08	0.20	0.03	0.24
C	0.5	0.20	0.51	0.09	0.59
D	0.5	0.20	0.51	0.09	0.59
E	0.6	0.24	0.61	0.10	0.71
F	0.6	0.12	0.24	0.10	0.34
G	0.4	0.12	0.24	0.07	0.31
H	0.4	0.12	0.24	0.07	0.31
I	0.4	0.12	0.24	0.07	0.31
J	1.0	0.12	0.24	0.17	0.41
K	2.0	2.04	4.08	0.35	4.43
<b>Total</b>	<b>8.4</b>	<b>4.09</b>	<b>8.92</b>	<b>1.46</b>	<b>10.37</b>
1A	1.5	0.61	1.52	0.26	1.78
1B	0.8	0.32	0.81	0.14	0.95
1C	2.2	0.89	2.23	0.38	2.61
<b>Total</b>	<b>4.5</b>	<b>1.82</b>	<b>4.56</b>	<b>0.78</b>	<b>5.34</b>
2A	3.4	1.38	3.44	0.59	4.03
2B	1.1	0.45	1.11	0.19	1.30
2C	1.3	0.53	1.32	0.23	1.54
2D	2.8	1.13	2.84	0.49	3.32
2E	0.9	0.36	0.91	0.16	1.07
2F	1.0	0.41	1.01	0.17	1.19
2G	3.8	1.54	3.85	0.66	4.51
2H	0.9	0.36	0.91	0.16	1.07
2I	0.8	0.32	0.81	0.14	0.95
2J	0.9	0.36	0.91	0.16	1.07
2K	0.8	0.32	0.81	0.14	0.95
2L	1.2	0.49	1.22	0.21	1.42
2M	1.2	0.49	1.22	0.21	1.42
<b>Total</b>	<b>20.1</b>	<b>8.14</b>	<b>20.36</b>	<b>3.49</b>	<b>23.85</b>

#### 4.0 Projected Flows - Option 2

Refer to Figure No. 2.0 for a plan view indicating drainage area locations.

Drainage Area	Area ( Ha )	Drainage Area Avg Q ( L/s )	Peak Sewage Q ( L/s / ha )	Peak Infiltration Q ( L/s / ha )	Total Peak Sewage Q ( L/s / ha )
A	1.8	0.73	1.82	0.31	2.14
B	0.2	0.08	0.20	0.03	0.24
C	0.5	0.20	0.51	0.09	0.59
D	0.5	0.20	0.51	0.09	0.59
E	0.6	0.24	0.61	0.10	0.71
F	0.6	0.12	0.24	0.10	0.34
G	0.4	0.12	0.24	0.07	0.31
H	0.4	0.12	0.24	0.07	0.31
I	0.4	0.12	0.24	0.07	0.31
J	1.0	0.12	0.24	0.17	0.41
K	2.0	2.04	4.08	0.35	4.43
<b>Total</b>	<b>8.4</b>	<b>4.09</b>	<b>8.92</b>	<b>1.46</b>	<b>10.37</b>
1A	0.8	0.32	0.81	0.14	0.95
1B	0.8	0.32	0.81	0.14	0.95
1C	0.4	0.16	0.41	0.07	0.47
1D	0.4	0.16	0.41	0.07	0.47
1E	1.1	0.45	1.11	0.19	1.30
1F	1.1	0.45	1.11	0.19	1.30
<b>Total</b>	<b>4.6</b>	<b>1.86</b>	<b>4.66</b>	<b>0.80</b>	<b>5.46</b>
2A	3.2	1.30	3.24	0.56	3.80
2B	0.9	0.36	0.91	0.16	1.07
2C	0.9	0.36	0.91	0.16	1.07
2D	0.6	0.24	0.61	0.10	0.71
2E	0.8	0.32	0.81	0.14	0.95
2F	0.9	0.36	0.91	0.16	1.07
2G	2.7	1.09	2.73	0.47	3.20
2H	0.8	0.32	0.81	0.14	0.95
2I	0.9	0.36	0.91	0.16	1.07
2J	1.5	0.61	1.52	0.26	1.78
2K	0.9	0.36	0.91	0.16	1.07
2L	1.1	0.45	1.11	0.19	1.30
2M	0.9	0.36	0.91	0.16	1.07
2N	0.8	0.32	0.81	0.14	0.95
2O	1.1	0.45	1.11	0.19	1.30
2P	1.1	0.45	1.11	0.19	1.30
<b>Total</b>	<b>19.1</b>	<b>7.74</b>	<b>19.34</b>	<b>3.32</b>	<b>22.66</b>

#### 5.0 Sanitary Sewer Layout

##### 5.1 Can we service Area 1 and Area 2 by Gravity to the Industrial Park SPS?

There are points in Area 2 that are 1300m away from the existing stub at Hutchinson Street and John Street that have critically low elevations at approximately 380.7 masl. The sanitary sewer stub at this intersection is a 200mm dia. sewer with an invert of 377.315 masl.

Using a 200mm dia. sewer at min grade (0.40%) this would mean a rise of:

5.2 m

Without accounting for extra fall across bends and manholes. **This will not be possible.**

Using a 300mm dia. sewer the min grade changes to 0.22% which means a rise of:

2.86 m

377.315 + 2.86 =

380.175 masl

**This would give us 0.3m of cover, therefore still not possible.**

Based on the above, we will not be able to service both Areas 1 and 2 by gravity sewer, but what about just Area 1?

## 5.2 Can we service just Area 1 by Gravity to the Industrial Park SPS?

There are 3 critically low areas along the future roadway which include:

1. 380.2 masl at approximately 50m from the existing stub.
2. 380.8 masl at approximately 290m from the existing stub.
3. 381.5 masl at approximately 375m from the existing stub.

Using a 200mm dia. sewer at min grade would mean respective rises of:

		Cover at point
1.	0.2 m	2.485
2.	1.16 m	2.125
3.	1.5 m	2.485

Using a 250mm dia. sewer at min grade (0.28%) would mean respective rises of:

		Cover at point
1.	0.14 m	2.495
2.	0.812 m	2.423
3.	1.05 m	2.885

Using a 300mm dia. sewer at min grade would mean respective rises of:

		Cover at point
1.	0.11 m	2.475
2.	0.638 m	2.547
3.	0.825 m	3.06

Servicing Area 1 will be possible by gravity.

Assume we will be using a 250mm dia. sewer at min. grade with the goal of achieving a min. cover of 2.4m. If the Town feels that none of the future industrial users in Area 1 will require a basement or deeper foundation, we could consider a 200mm dia. sewer or a shallower one.

## 5.3 What can we use for Area 2?

Topography in Area 2 is such that there is generally a low spot followed by a high spot followed by a low spot followed by another high spot and then ending in a low spot as you move from the north to the south. In other words there are two local high spots. To minimize sewer burial depths, locate the new SPS between these two high spots. Option 1 and Option 2 take similar paths but the sewer lengths are longer in Option 2 so consider only Option 2 for the initial layout.

Grade in front of the proposed SPS is approximately 381.5 masl.

The critical elevation to the south is 380.6 masl which is located 465m away. Hence, we need to figure out the fall required from the southerly direction (assume 0.3m extra for safety). Assume at our lowest point we need 2.4m of cover.

Using a \_\_\_ dia. sewer at min grade would mean a fall of:

	Length (m)	Min Grade (%)	Fall (m)	Cover at starting point (m)	Cover prior to SPS (m)	Sewer Inv. prior to SPS (masl)	Say
200mm dia.	465	0.4	1.86	2.4	5.16		
250mm dia.	465	0.28	1.302	2.4	4.602	376.348	376.350
300mm dia.	465	0.22	1.023	2.4	4.323		

To keep the sewer more shallow, assume 250mm dia. at min. grade. Sewer invert at road prior to SPS will be at 376.500.

Will 200mm dia. work heading towards the north?

The critical elevation towards the north is 381.7 masl which is located 310m away. Assume at our lowest point we need 2.4m of cover with 0.3m of added safety.

Using a \_\_\_ dia. sewer at min grade would mean a fall of:

	Length (m)	Min Grade (%)	Fall (m)	Cover at starting point (m)	Cover prior to SPS (m)	Sewer Inv. prior to SPS (masl)
200mm dia.	310	0.4	1.24	2.4	3.74	377.26
250mm dia.	310	0.28	0.868	2.4	3.368	377.582
300mm dia.	310	0.22	0.682	2.4	3.182	

Grade to the south is critical, we can use a 200mm dia sewer at high grade (up to 0.8%) to the north.

# Sewer Design Sheet

Harriston Industrial Park - Option 1

Conceptual Design (See Fig. 3.0)

Project No. 13215

For Manning's Roughness use

$n = 0.013$

Date Jun 12/14

Rev.

Page

MH to MH	Tributary Area			Design Flows			Pipe Design						
	Existing (ha)	Future (ha)	Acc Area (ha)	Peak Sewage (l/s)	Infiltration (l/s)	Total Accumulated Peak Flow (l/s)	Pipe Dia (mm)	Length (m)	Grade (%)	Capacity (L/s)	Velocity (m/s)	u/s Invert (m)	d/s Invert (m)
Area 1 + Existing Ind.													
11 to 10	0.0	2.3	2.3	2.3	0.40	2.73	250	65	0.28	31.5	0.64	378.487	378.305
10 to 9	0.0	0.0	2.3	0.0	0.00	2.73	250	60	0.28	31.5	0.64	378.255	378.087
9 to 8	0.0	2.2	4.5	2.2	0.38	5.34	250	120	0.28	31.5	0.64	378.037	377.701
8 to 3	0.0	0.0	4.5	0.0	0.00	5.34	250	120	0.28	31.5	0.64	377.651	377.315
1 to 2	1.4	0.5	1.9	1.2	0.33	1.55	200	75	0.53	23.9	0.76	378.109	377.711
2 to 3	0.4	0.7	3.0	0.9	0.19	2.69	200	73	0.5	23.2	0.74	377.711	377.322
3 to 4	2.0	1.8	11.3	5.9	0.66	14.59	200	100.5	0.6	25.4	0.81	377.269	376.669
5 to 4	1.0	0.6	1.6	0.8	0.28	1.12	200	103	0.4	20.7	0.66	377.140	376.727
4 to 6	0.0	0.0	12.9	0.0	0.00	15.71	200	80	0.95	32.0	1.02	376.664	375.903
6 to 7	0.0	0.0	12.9	0.0	0.00	15.71	200	91.5	0.89	30.9	0.98	375.886	375.069

MH to MH	Tributary Area			Design Flows			Pipe Design						
	Existing (ha)	Future (ha)	Acc Area (ha)	Peak Sewage (l/s)	Infiltration (l/s)	Total Accumulated Peak Flow (l/s)	Pipe Dia (mm)	Length (m)	Grade (%)	Capacity (L/s)	Velocity (m/s)	u/s Invert (m)	d/s Invert (m)
Area 2													
12 to 13	0.0	2.4	2.4	2.4	0.42	2.85	200	85	0.80	29.3	0.93	379.090	378.410
13 to 14	0.0	1.7	4.1	1.7	0.30	4.86	200	115	0.80	29.3	0.93	378.360	377.440
14 to 15	0.0	1.7	5.8	1.7	0.30	6.88	200	105	0.80	29.3	0.93	377.390	376.550
19 to 18	0.0	8.3	8.3	8.4	1.44	9.85	200	120	0.4	20.7	0.66	378.560	378.080
18 to 17	0.0	1.3	9.6	1.3	0.23	11.39	200	120	0.4	20.7	0.66	378.030	377.550
17 to 16	0.0	3.8	13.4	3.8	0.66	15.90	200	105	0.4	20.7	0.66	377.500	377.080
16 to 15	0.0	0.9	14.3	0.9	0.16	16.96	200	120	0.4	20.7	0.66	377.030	376.550
15 to SPS	0.0	0.0	20.1	0.0	0.00	23.85	250	30	0.5	42.0	0.86	376.500	376.350

Therefore, all sewers have a full-flow velocity above 0.6m/s and all projected flow rates are below pipe capacities so the proposed layout will work.



# Sewer Design Sheet

Harriston Industrial Park - Option 2

Conceptual Design (See Fig. 4.0)

Project No. 13215

For Manning's Roughness use

$n = 0.013$

Date Jun 12/14

Rev.

Page

MH to MH	Tributary Area			Design Flows			Pipe Design						
	Existing (ha)	Future (ha)	Acc Area (ha)	Peak Sewage (l/s)	Infiltration (l/s)	Total Accumulated Peak Flow (l/s)	Pipe Dia (mm)	Length (m)	Grade (%)	Capacity (L/s)	Velocity (m/s)	u/s Invert (m)	d/s Invert (m)
Area 1 + Existing Ind.													
11 to 10	0.0	1.6	1.6	1.6	0.28	1.90	250	65	0.28	31.5	0.64	378.487	378.305
10 to 9	0.0	0.4	2.0	0.4	0.07	2.37	250	60	0.28	31.5	0.64	378.255	378.087
9 to 8	0.0	2.6	4.6	2.6	0.45	5.46	250	120	0.28	31.5	0.64	378.037	377.701
8 to 3	0.0	0.0	4.6	0.0	0.00	5.46	250	120	0.28	31.5	0.64	377.651	377.315
1 to 2	1.4	0.5	1.9	1.2	0.33	1.55	200	75	0.53	23.9	0.76	378.109	377.711
2 to 3	0.4	0.7	3.0	0.9	0.19	2.69	200	73	0.5	23.2	0.74	377.711	377.322
3 to 4	2.0	1.8	11.4	5.9	0.66	14.71	200	100.5	0.6	25.4	0.81	377.269	376.669
5 to 4	1.0	0.6	1.6	0.8	0.28	1.12	200	103	0.4	20.7	0.66	377.140	376.727
4 to 6	0.0	0.0	13.0	0.0	0.00	15.83	200	80	0.95	32.0	1.02	376.664	375.903
6 to 7	0.0	0.0	13.0	0.0	0.00	15.83	200	91.5	0.89	30.9	0.98	375.886	375.069

MH to MH	Tributary Area			Design Flows			Pipe Design						
	Existing (ha)	Future (ha)	Acc Area (ha)	Peak Sewage (l/s)	Infiltration (l/s)	Total Accumulated Peak Flow (l/s)	Pipe Dia (mm)	Length (m)	Grade (%)	Capacity (L/s)	Velocity (m/s)	u/s Invert (m)	d/s Invert (m)
Area 2													
12 to 13	0.0	2.2	2.2	2.2	0.38	2.61	200	120	0.8	29.3	0.93	378.920	377.960
13 to 14	0.0	1.7	3.9	1.7	0.30	4.63	200	110	0.7	27.4	0.87	377.910	377.140
14 to 15	0.0	2.0	5.9	2.0	0.35	7.00	200	90	0.6	25.4	0.81	377.090	376.550
21 to 20	0.0	5.9	5.9	6.0	1.02	7.00	250	120	0.28	31.5	0.64	378.368	378.032
20 to 19	0.0	0.9	6.8	0.9	0.16	8.07	250	105	0.28	31.5	0.64	377.982	377.688
19 to 18	0.0	1.8	8.6	1.8	0.31	10.20	250	115	0.28	31.5	0.64	377.638	377.316
22 to 18	0.0	0.6	0.6	0.6	0.10	0.71	200	85	0.6	25.4	0.81	379.410	378.900
18 to 17	0.0	0.8	10.0	0.8	0.14	11.86	250	95	0.28	31.5	0.64	377.266	377.000
17 to 16	0.0	0.8	10.8	0.8	0.14	12.81	250	95	0.28	31.5	0.64	376.950	376.684
24 to 23	0.0	1.5	1.5	1.5	0.26	1.78	200	70	1.2	35.9	1.14	378.834	377.994
23 to 16	0.0	0.9	2.4	0.9	0.16	2.85	200	105	1.2	35.9	1.14	377.944	376.884
16 to 15	0.0	0.0	13.2	0.0	0.00	15.66	250	30	0.28	31.5	0.64	376.634	376.550
15 to SPS	0.0	0.0	19.1	0.0	0.00	22.66	300	30	0.5	68.4	0.97	376.500	376.350

Therefore, all sewers have a full-flow velocity above 0.6m/s and all projected flow rates are below pipe capacities so the proposed layout will work.

**TOWN OF MINTO  
HARRISTON INDUSTRIAL PARK  
EXPANSION**

**File No. 13215**

**ROAD CONCEPTUAL  
DESIGN NOTES**

## DESIGN NOTES INDEX

<b>D.N. No.</b>	<b>Description</b>	<b>Designer Name</b>	<b>Date</b>
<b>1</b>	Background information used for evaluating various typical sections for this industrial park expansion: <ul style="list-style-type: none"> <li>• Hutchison St. road measurements (Oct 17/14)               <ul style="list-style-type: none"> <li>• Municipal Works Design Manual excerpts</li> <li>• MTO Geometric design standards excerpts                   <ul style="list-style-type: none"> <li>• Interoffice email communications</li> <li>• Rough ACAD sections</li> </ul> </li> </ul> </li> <li>• Palmerston Industrial Park drawings and sections</li> </ul>	FCV	Nov/14
<b>2</b>	Noble Lane section (Palmerston Industrial Park) – 21.34m ROW	-	Job #07186
<b>3</b>	Minto Road section (Palmerston Industrial Park) – 20.1m ROW	-	Job #01158
<b>4</b>	Preliminary recommended typical section – 27m ROW selected by Town to accommodate variations in grade + hydro line	FCV	Nov/14
<b>5</b>			

**TOWN OF MINTO  
HARRISTON INDUSTRIAL PARK  
EXPANSION**

**File No. 13215**

**WATER SERVICING  
CONCEPTUAL DESIGN  
NOTES**



## DESIGN NOTES INDEX

<b>D.N. No.</b>	<b>Description</b>	<b>Designer Name</b>	<b>Date</b>
<b>1</b>	Water distribution system rehabilitation study - excerpts	-	Feb 19/91
<b>2</b>	ESR for water storage expansion - excerpts	-	Dec 18/95
<b>3</b>	MOE Design Guidelines for DWS – fire protection excerpts	-	2008
<b>4</b>	Preliminary WaterCAD model results & hydrant flow test results	AJG	2014
<b>5</b>	Email from Town fire department re: superior tanker shuttle rate Email to Town re: typical design levels used for fire protection	Town FCV	Nov 24/14 Nov 24/14
<b>6</b>	O. Reg. 213/07 Fire Code – Part 6 Fire Protection	-	-
<b>7</b>	Water Supply for Public Fire Protection	FUS	1999
<b>8</b>	Existing water distribution system upgrade lengths and existing sizes and materials	FCV	Jan/15
<b>9</b>	Elevated storage schematic with key liquid elevations	-	Sep/95
<b>10</b>	Elevated storage shop drawing dimensions and elevations and calculations to determine fire storage elevations	Landmark FCV	May 25/01 Jan/15
<b>11</b>	Model comparison to hydrant flow tests	AJG	Jan 23/15
<b>12</b>	Consider surplus storage situation in relation to fire protection	FCV	Jan 23/15
<b>13</b>	Consider higher elevated tank level during fire Consider surplus well supply capacity re: fire protection	FCV	Jan 23/15
<b>14</b>	Consider possible impact of Well 2 on fire flow	FCV	Jan 23/15
<b>15</b>	Town input on target fire flow Steve's comment on sprinkler statement for ESR	Town SDB	Jan 29/15 Feb 2/15
<b>16</b>	Additional model run results post-Jan 26/15 meeting with Town staff	AJG	Feb 20/15
<b>17</b>	Revised Fire Protection Considerations Memo	FCV	Mar 13/15
<b>18</b>			