

**DRAFT**

**Stage 1 Archaeological Assessment**

**Zone 6 Reservoir and Feedermain  
Class Environmental Assessment,  
Regional Municipality of Peel, Ontario**

**INTERIM REPORT**

Submitted to

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## EXECUTIVE SUMMARY

Archaeological Services Inc. (ASI) was contracted by Trow Associates Inc., Brampton, on behalf of the Region of Peel, to conduct a Stage 1 archaeological assessment as part of the Zone 6 Reservoir and Feedermain Class Environmental Assessment, Regional Municipality of Peel, Ontario. The study area is bound by Mayfield Road in the south, Old Baseline Road in the north, McLaughlin Road in the west, and Airport Road in the east.

The Stage 1 archaeological assessment determined that 13 archaeological sites have been registered within the study area limits. An additional eight archaeological sites have been registered on TRCA lands within the study area limits. A review of the general physiography and local nineteenth century land use suggested that the study area has potential for the identification of Aboriginal and Euro-Canadian archaeological sites.

In light of these results, the following recommendations are made:

1. A field review of the preferred Zone 6 reservoir and feedermain alternatives should be conducted, in accordance with the Ministry of Culture's draft *Standards and Guidelines for Consultant Archaeologists* (MCL 2006), in order to confirm the assessment of archaeological site potential and to determine the degree to which development and landscape alteration may have affected that potential.



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## 1.0 INTRODUCTION

Archaeological Services Inc. (ASI) was contracted by Trow Associates Inc., Brampton, on behalf the Region of Peel, to conduct a Stage 1 archaeological assessment as part of the Zone 6 Reservoir and Feedermain Class Environmental Assessment, Regional Municipality of Peel, Ontario (Figure 1). The study area is bound by Mayfield Road in the south, Old Baseline Road in the north, McLaughlin Road in the west, and Airport Road in the east.

Authorization to carry out the activities necessary for the completion of the Stage 1 assessment was granted to ASI by Trow Associates Inc. on April 8, 2009.

This report presents the results of the Stage 1 background research, and makes one recommendation.

## 2.0 BACKGROUND RESEARCH

The Stage 1 archaeological assessment of the study area was conducted in accordance with the *Ontario Heritage Act* (2005) and the Ontario Ministry of Culture's (MCL) draft *Standards and Guidelines for Consultant Archaeologists* (2006: Unit 1b). A Stage 1 archaeological assessment involves research to describe the known and potential archaeological resources within the vicinity of a study area. Such an assessment incorporates a review of previous archaeological research, physiography, and land use history. Background research was completed to identify any archaeological sites in the study area and to assess their archaeological potential.

### 2.1 Previous Archaeological Research

In order that an inventory of archaeological resources could be compiled for the study area, three sources of information were consulted: the site record forms for registered sites housed at the MCL; published and unpublished documentary sources; and the files of ASI.

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database (OASD) maintained by the MCL. This database contains archaeological sites registered within the Borden system. Under the Borden system, Canada has been divided into grid blocks based on latitude and longitude. A Borden block is approximately 13 kilometres east to west, and approximately 18.5 kilometres north to south. Each Borden block is referenced by a four-letter designator, and sites within a block are numbered sequentially as they are found. The study area under review is located in Borden blocks *AkGw* and *AkGx*.

According to the OASD (email communication, Robert von Bitter, MCL Data Coordinator, April 7, 2009), 13 archaeological sites have been registered within the limits of the Zone 6 study area (Table 1).



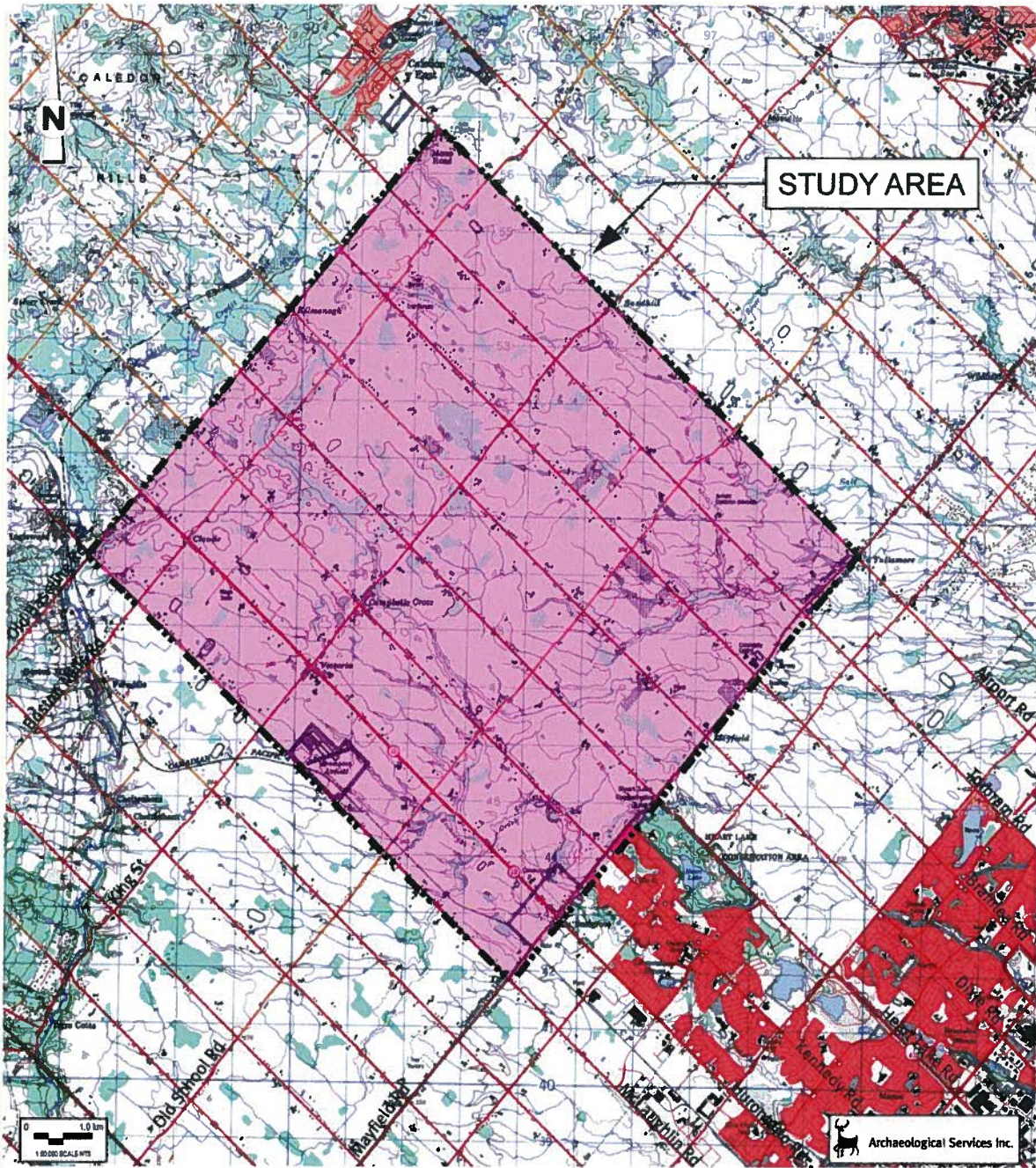


Figure 1: Location of the study area [NTS Sheet 30 M/12 (Brampton) and 30 M/13 (Bolton)].

**Table 1: List of registered sites within the limits of the Zone 6 study area.**

<b>Borden #</b>	<b>Site Name</b>	<b>Cultural Affiliation</b>	<b>Site Type</b>	<b>Researcher</b>
AkGw-14	Allison	Aboriginal	Undetermined	CARF* 1988
<b>AkGw-15</b>	<b>Clearbrook</b>	<b>Euro-Canadian</b>	<b>Homestead</b>	<b>CARF 1988</b>
AkGw-16	Mellow Gardens	Euro-Canadian	Homestead	CARF 1988 R. Sutton 2003
AkGw-88	Bartholomew Snell Homestead	Euro-Canadian	Homestead	LMA 1997
AkGw-107	Elias Snell Pioneer Homestead	Euro-Canadian	Homestead	LMA 1998
AkGw-237	McCarthy	Aboriginal	Isolated Find	R. Sutton 2003
AkGw-309	Stopover 2	Aboriginal	Undetermined	TRCA*** 2006
AkGw-310	Stopover 3	Aboriginal	Undetermined	TRCA 2006
AkGw-311	Stopover	Aboriginal	Undetermined	TRCA 2006
AkGw-312	Stopover 4	Aboriginal	Undetermined	TRCA 2006
AkGw-320	Stopover 5	Aboriginal	Isolated Find	TRCA 2006
<b>AkGx-48</b>	<b>Kilmanagh Crossroads</b>	<b>Euro-Canadian</b>	<b>Homestead</b>	<b>ASI 2006</b>
<b>AkGx-49</b>	<b>Caesar</b>	<b>Euro-Canadian</b>	<b>Homestead</b>	<b>ASI 2006</b>

\* further work recommended at sites listed in bold

The Allison site, AkGw-14, was registered in 1988 by the Cataraqui Archaeological Research Foundation (CARF) as part of the archaeological assessment of the Highway 410 extension between Bovaird Drive and Highway 10. Three Aboriginal lithic flakes were recovered from the surface of a knoll overlooking a marshy valley. The site type/function is undetermined. No further work was recommended, and the site was cleared of further archaeological concern.

The Clearbrook site, AkGw-15, was also registered in 1988 by the CARF as part of the assessment of the Highway 410 extension. The site, located north of Mayfield Road on the west side of Heart Lake Road, represents a historic Euro-Canadian homestead. The OASD does not indicate whether the site still exists. Further work maybe required at the Clearbrook site, if the proposed project impacts it.

The Mellow Gardens site, AkGw-16, was originally registered in 1983 by Thomas Ballentine as part of a future subdivision development in Caledon. The site, located north of Mayfield Road on the east side of Hurontario Road, represents a historic Euro-Canadian homestead. The site was relocated by CARF during the 1988 archaeological assessment of the Highway 410 extension, and then again in 2003 by Rick Sutton. No further work was recommended after the 2003 assessment, and the site was cleared of further archaeological concern.

The Bartholomew Snell Homestead, AkGw-88, was registered in 1997 by the London Museum of Archaeology (LMA). The site, located on the north side of Mayfield Road and east Hurontario Street represents a historic Euro-Canadian homestead. The site was fully excavated, and is of no further concern.

The Elias Snell Pioneer Homestead site, AkGw-107, was registered in 1998 by the LMA in advance of a subdivision development. The site, located at the northwest corner of Kennedy Road and Mayfield Road, contained 2 historic Euro-Canadian artifacts where the pioneer homestead of Elias Snell was originally located. Extensive archival research was compiled as part of work on the Bartholomew Snell



Homestead. No further work was recommended, and the site was cleared of further archaeological concern.

The McCarthy site, AkGw-237, was registered in 2003 by Rick Sutton as part of the archaeological assessment of several sections of the proposed Highway 410 corridor, between Heart Lake Road and Highway 10. The site is located north of Mayfield road and 400 metres east of Kennedy Road. A single projectile point made from Onondaga chert was recovered. Due to the isolate nature of the site, no further work was recommended, and the site was cleared of further archaeological concern.

A series of five sites were registered in 2006 by the Toronto and Region Conservation Authority (TRCA) during the Stage 1-3 archaeological assessment at the Heart Lake Road Conservation Area for the Mayfield Road widening and Stormwater Pond project . The Stopover 2 site, AkGw-309, contained five Aboriginal artifacts of unknown cultural affiliation. The Stopover 3 site, AkGw-310, contained nine artifacts (7 Aboriginal and 2 Euro-Canadian). The Stopover site, AkGw-311, contained 14 Aboriginal artifacts of unknown cultural affiliation. The Stopover 4 site, AkGw-312, contained five Aboriginal artifacts of unknown cultural affiliation. Finally, the Stopover 5 site, AkGw-320, consisted of an isolated findspot of unknown Aboriginal cultural affiliation.

The Kilmanagh Crossroads site, AkGx-48, was registered in 2006 by ASI as part of the Stage 2 archaeological assessment of Dixie Road, between King Street and Olde Base Line. The site, located at the southeast corner of the intersection of Dixie Road and Olde Baseline Road, represents an early nineteenth century occupation. A Stage 3 archaeological assessment was undertaken to further understand the occupation of the site. A total of 1,942 artifacts were recovered from 17 test units excavated throughout the site. These largely comprised artifacts related to the Architectural and Tools and Equipment classes. Further work was recommended, if the Kilmanagh Crossroads site (AkGx-48) cannot be protected.

Finally, the Caesar site, AkGx-49, was also registered in 2006 by ASI as part of the Stage 2 archaeological assessment of Dixie Road, between King Street and Olde Base Line. The site, located along the west side of Dixie Road at the southwest corner of its intersection with Boston Mills Road, represents a mid-nineteenth century occupation. A Stage 3 archaeological assessment was undertaken to further understand the occupation of the site. A total of 912 artifacts were recovered from the four test units excavated at the Caesar site. The assemblage consisted of a variety of coarse and refined earthenware ceramics, container and window glass, machine cut nails, horse shoe nails, personal items, and faunal bone, largely characteristic of mid-nineteenth century sites in Ontario. Further work was recommended, if the Caesar Crossroads site (AkGx-48) cannot be protected.

According to the Toronto and Region Conservation Authority (email communication, Alistair R. Jolly, TRCA Senior Archaeological Technical Assistant, May 14, 2009), eight additional archaeological sites have been registered on TRCA lands within the limits of the Zone 6 study area (Table 2).

**Table 2: List of registered sites on TRCA lands within the limits of the Zone 6 study area.**

Borden #	Site Name	Cultural Affiliation	Site Type
AkGw-238	Tortuga	Aboriginal	Lithic Scatter
AkGw-239	Felis Arbor	Aboriginal	Isolated Find
AkGw-240	Pilum	Aboriginal	Isolated Find
AkGw-241	Sagitta	Aboriginal	Isolated Find



Borden #	Site Name	Cultural Affiliation	Site Type
AkGw-242	Square Head 2	Euro-Canadian	Isolated Find
AkGw-243	Saxum	Aboriginal	Isolated Find
AkGw-244	Acutum	Aboriginal	Isolated Find
AkGw-288	Square Head 1	Euro-Canadian	Isolated Find

## 2.2 Physiography and Assessment of Aboriginal Archaeological Potential

The study area is situated within the South Slope and Oak Ridges Moraine physiographic regions of southern Ontario. The South Slope tilts southward from the heights of the Oak Ridges Moraine into the Lake Ontario basin (Chapman and Putnam 1984:172-174). This region is a broad, relatively featureless till plain which spans an area of approximately 2300 square kilometres extending from the Oak Ridges Moraine south to Lake Ontario, and from the Niagara Escarpment east to the Trent River. The South Slope overlies the limestones of the Verulam and Lindsay Formations, the grey shale of the Georgian Bay Formation and the red shale of the Queenston Formation. Till soils of this physiographic region are more sandy in the east and clayey in the west (Chapman and Putnam 1984:173). The plain narrows to about 10-12 kilometres in width at Pickering and is comprised of a large area of glaciolacustrine clay and silt veneer. These deposits represent the easternmost extension of the Peel Ponds (Hewitt 1969: Map 2124), which are of periglacial deep-water origin. Within Durham, the plain is somewhat drumlinized; the drumlins are scattered, long, thin and tend to be oriented directly up slope.

The Oak Ridges Moraine stands out as one of the most distinctive physiographic units of Southern Ontario (Chapman and Putnam 1984:166-169). It extends from the Niagara Escarpment to the Trent River, forming a height of land which divides the streams of the Lake Ontario drainage basin from those flowing into Georgian Bay and the Trent River. However, the hummocky topography and porous sediments have resulted in very few streams in the centre of the upland. Instead, water percolates down through the sands until reaching an aquitard, which directs flow laterally. Springs issuing from the flanks of the moraine feed streams that have dissected the peripheral slopes.

Potable water is the single most important resource necessary for any extended human occupation or settlement. Since water sources have remained relatively stable in south central Ontario after the Pleistocene era, proximity to water can be regarded as a useful index for the evaluation of archaeological site potential. Indeed, distance from water has been one of the most commonly used variables for predictive modeling of site location. Before recorded history, Toronto was a junction point of land and water routes, with trails running northward from the shoreline along river routes.

The MCL's draft *Standards and Guidelines for Consultant Archaeologists* (2006: Unit 1b 5-12) stipulates that undisturbed land within 300 meters of a primary water source (lakes, rivers, streams, creeks, etc.), undisturbed land within 200 meters of a secondary water source (intermittent streams and creeks, springs, marshes, swamps, etc.), as well as undisturbed land within 300 meters of an ancient water source (as indicated by remnant beaches, shore cliffs, terraces, abandoned river channel features, etc.), is considered to have archaeological potential. Etobicoke Creek, as well as numerous tributaries of the Credit River, Little Credit River, Mimico Creek and the West Humber River traverse the study area.



Therefore, depending on the degree of previous land disturbance, it may be concluded that there is potential for the recovery of Aboriginal remains within the study area.

### 2.3 Assessment of Euro-Canadian Archaeological Potential

The 1877 *Illustrated Historical Atlas of the County of Peel, Ontario* was reviewed to determine the potential for the presence of historical archaeological remains within the study area during the nineteenth century (Figure 2).

The study area is located on Lots 18 to 34, Concessions I (west of Hurontario) and I to VI (east of Hurontario), former Township of Chinguacousy, County of Peel. The atlas depicts several property owners/residents and historic features within the study area. Historic features are presented in Table 2. A number of historic communities are also located within the study area, including, Kilmanagh, Mono Road, Victoria, Campbell's Cross, Sandhill, Edmonton, Mayfield, and Tullamore. It should be noted, however, that not all features of interest were mapped systematically in the Ontario series of historical atlases, given that they were financed by subscription, and subscribers were given preference with regard to the level of detail provided on the maps. Moreover, not every feature of interest would have been within the scope of the atlas.

**Table 3: List of Historic Features within the Study Area.**

Lot	Concession	Historic Feature
18	I E	Church
20	III E	Church
22	II E	Church, cemetery
22	IV E	Church
23	III E	Schoolhouse
23	VI E	Schoolhouse
30	II E	Schoolhouse
32	IV E	2 church
33	I E	Church
33	II E	Church

For the Euro-Canadian period, the majority of early nineteenth century farmsteads (i.e., those which are arguably the most potentially significant resources and whose locations are rarely recorded on nineteenth century maps) are likely to be captured by the basic proximity to water model outlined in Section 2.2, since these occupations were subject to similar environmental constraints. An added factor, however, is the development of the network of concession roads and railroads through the course of the nineteenth century. These transportation routes frequently influenced the siting of farmsteads and businesses. Accordingly, undisturbed lands within 100 meters of an early settlement road are also considered to have potential for the presence of Euro-Canadian archaeological sites. Within the study area, all major north-south and east-west thoroughfares can be considered to be early settlement roads.

Therefore, depending on the degree of previous land disturbance, it may be concluded that there is potential for the recovery of historic cultural material within the study area.



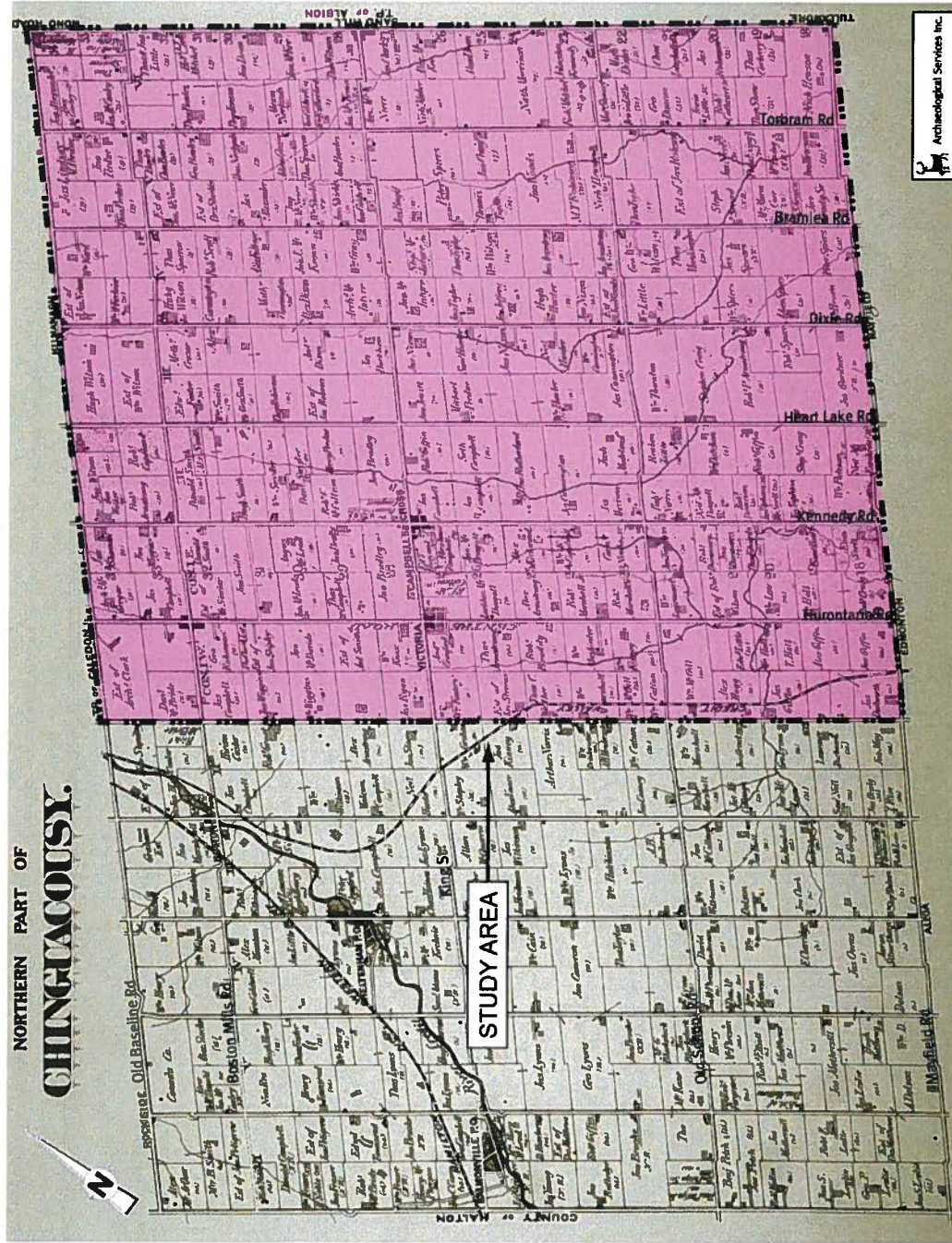


Figure 2: The study area overlaid on the map of Chinguacousy Township in 1877 Illustrated Historical Atlas of County of Peel.



### 3.0 DETERMINATION OF ARCHAEOLOGICAL POTENTIAL

The MCL's draft *Standards and Guidelines for Consultant Archaeologists* cites eleven criteria that indicate where archaeological resources are most likely to be found (2006: Unit 1b 12). Archaeological potential is confirmed when one or more features of archaeological potential are present.

The Zone 6 study area meets five of the eleven criteria used for determining archaeological potential:

- Known archaeological sites within 250 metres;
- Primary water source within 300 metres, secondary water source within 200 metres, or past water source within 300 metres;
- Distinctive land formations;
- Indications of early Euro-Canadian settlement; and
- Associated with historic transportation routes.

These criteria characterize the study area as having both Aboriginal and Euro-Canadian archaeological potential, and the distribution of this potential has been mapped in Figure 3, in areas indicated by pink highlighting. A field review will be conducted to confirm the presence of areas exhibiting site potential.

### 4.0 FIELD REVIEW

A field review of the preferred Zone 6 reservoir and feedermain alternatives will be conducted by Mr. Peter Carruthers (P163), ASI, in the near future, in order to confirm the assessment of archaeological site potential and to determine the degree to which development and landscape alterations may have affected that potential. The results of the field review will be summarized here.

### 5.0 CONCLUSIONS AND RECOMMENDATIONS

The Stage 1 archaeological assessment was conducted as part of the Zone 6 Reservoir and Feedermain Class Environmental Assessment, in the Regional Municipality of Peel, Ontario. The assessment determined that 13 archaeological sites have been registered within the study area limits. An additional eight archaeological sites have been registered on TRCA lands within the study area limits. A review of the general physiography and local nineteenth century land use suggested that the study area has potential for the identification of Aboriginal and Euro-Canadian archaeological sites.

In light of these results, the following recommendations are made:

1. A field review of the preferred Zone 6 reservoir and feedermain alternatives should be conducted, in accordance with the Ministry of Culture's draft *Standards and Guidelines for Consultant Archaeologists* (MCL 2006), in order to confirm the assessment of archaeological site potential and to determine the degree to which development and landscape alteration may have affected that potential.



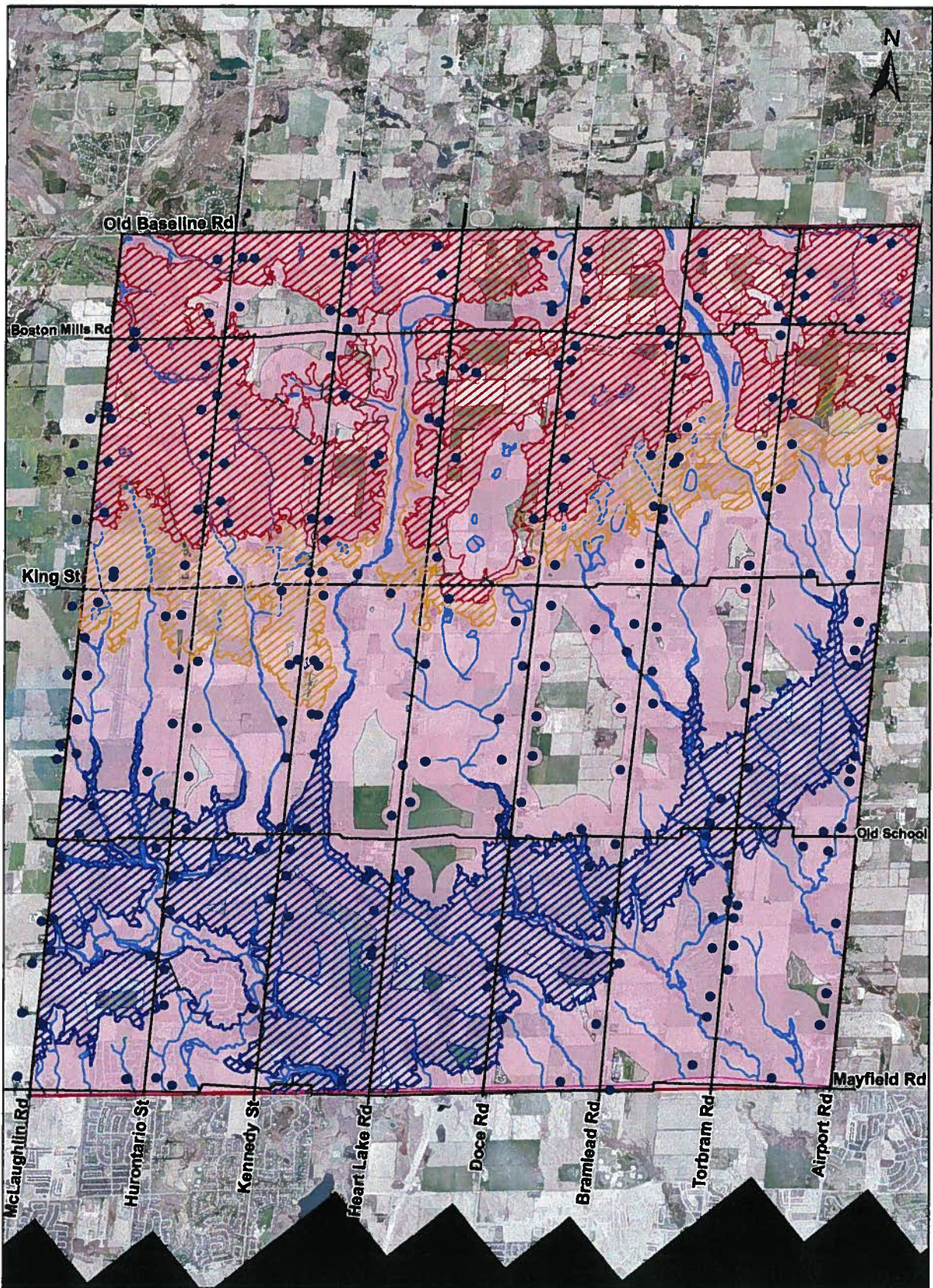


Figure 3: Areas of Archaeological Potential within the Zone 6 Study Area



Archaeological Potential  
(89.26% of Study Area)

Study Area

Known Euro-Canadian Features

Historic Roads (Modern names)

0 0.4 0.8 1.6  
Kilometers

DATE:  
June 8th, 2009

FILE:  
08EA218\_219\_Figure3\_arch\_potential\_2

The following Ministry of Culture conditions also apply:

- This report is filed with the Minister of Culture in compliance with sec. 65 (1) of the Ontario Heritage Act. The ministry reviews reports to ensure that the licensee has met the terms and conditions of the licence and archaeological resources have been identified and documented according to the standards and guidelines set by the ministry, ensuring the conservation, protection and preservation of the heritage of Ontario. It is recommended that development not proceed before receiving confirmation that the Ministry of Culture has entered the report into the provincial register of reports.
- Should previously unknown or unassessed deeply buried archaeological resources be uncovered during development, 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 archaeologist to carry out archaeological fieldwork, in compliance with sec. 48 (1) of the Ontario Heritage Act.
- Any person discovering human remains must immediately notify the police or coroner and the Registrar of Cemeteries, Ministry of Government Services.

The documentation and artifacts related to the archaeological assessment of this project will be curated by Archaeological Services Inc. until such a time that arrangements for their ultimate transfer to Her Majesty the Queen in right of Ontario, or other public institution, can be made to the satisfaction of the project owner, the Ontario Ministry of Culture, and any other legitimate interest groups.

## 6.0 REFERENCES CITED

Chapman, L. J. and F. Putnam

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