

**Stage 1 Archaeological Assessment
Background Study and Property Inspection**

**Eight Solar Projects in Barrie
Renewable Energy Environmental Assessment**

**Former Townships of Vespra and Oro, Simcoe County
Barrie, Ontario**

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Prepared for:

exp.
1595 Clark Blvd
Brampton, ON, M6T 4V1
Tel: 905-793-9800
Fax: 905-793-0641
John.smith@exp.com
www.exp.com

Archaeological Licence P057 (Robert Pihl)
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Archaeological Services Inc.

528 Bathurst St.
Toronto, Ontario
Canada, M5S 2P9

T 416-966-1069
F 416-966-9723
info@iASI.to/www.iASI.to

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EXECUTIVE SUMMARY

Archaeological Services Inc (ASI) was contracted by exp. (Brampton) to conduct a Stage 1 Background Study for Barrie Solar Projects Renewable Energy Approvals (REA) in Barrie, Ontario. The project involves the installation of two solar project along Storey Road (east of Russell Street), five solar projects along Penetanguishene Road (south of Old Barrie Road West), and one solar project east of Penetanguishene Road (south of Gore Road) in Barrie, Ontario.

The Stage 1 background study conducted to assist with the Barrie Solar Projects REA. The assessment determined that two archaeological sites have been registered within 1 km of the study area. A review of the geography and historical settlements of the study area suggested that all eight projects have potential for the identification of Aboriginal and Euro-Canadian archaeological resources.

The Stage 1 property inspection revealed that five L.P. locations are located in relatively undisturbed agricultural fields and retained archaeological potential. The property inspection also revealed that three L.P. locations do not retain potential due to low and wet conditions and previous disturbance cause by aggregate activity.

In light of these results to date, ASI makes the following recommendations:

1. Archaeological potential exists in five L.P. locations (L.P. #8, 14-17) as they are located in relatively undisturbed agricultural fields. These lands require a Stage 2 Property Assessment, which will be conducted by pedestrian or test pit survey. A test pit survey includes the systematic excavation of small test pits by hand at 5 m intervals and must be conducted as ploughing in not feasible on these lands;
2. Due to extensive and deep land alterations that have severely damaged the integrity of any potential archaeological resources, and low and wet conditions, the remaining three L.P. locations (L.P. #9-11) do not require further archaeological assessment; and,
3. Should the proposed work extend beyond the currently assessed L.P. locations study area then further Stage 1 assessment must be conducted to determine the archaeological potential of the surrounding lands.



**ARCHAEOLOGICAL SERVICES INC.
ENVIRONMENTAL ASSESSMENT DIVISION**

PROJECT PERSONNEL

*Senior Project Manager and
Project Director (licensee):*

Robert Pihl, MA, CAHP [MTC licence PO57]
*Partner and Senior Archaeologist
Manager, Environmental Assessment Division*

Project Manager

Sarah Jagelewski, Hon. BA
Research Archaeologist

Project Coordinator:

Sarah Jagelewski

Field Director:

Peter Carruthers, MA, CAHP [MTCS license P163]
Senior Associate

Report Writer and Graphics:

Heidy Schopf, MES
Research Archaeologist

Graphics:

Blake Williams, *MLitt*
GIS Technician

Report Reviewer:

Robert Pihl



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1.0 PROJECT CONTEXT

Archaeological Services Inc (ASI) was contracted by exp. (Brampton) to conduct a Stage 1 Background Study as part of the Barrie Solar Projects Renewable Energy Approvals (REA) in Barrie, Ontario. The project involves the installation of eight solar projects in Barrie, Ontario (Figure 1). The locations of the eight projects include:

- L.P. #8: 419 Penetanguishene Road, Barrie, Ontario
- L.P. #9 and #10: 1572 Story Road, Midhurst, Ontario
- L.P. #11: 1216 Penetanguishene Road, Barrie, Ontario
- L.P. #14-17: Lots 23, Concession 1, Penetanguishene Road, Barrie, Ontario

This assessment was conducted under the project management of Sarah Jagelewski and senior project management of Robert Pihl (P057), both of ASI; R. Pihl was also the licensee for the project (PIF P057-690-2012).

The objectives of this report are:

- To provide information about the geography, history, previous archaeological fieldwork and current land condition of the study area;
- To evaluate in detail the archaeological potential of the study area which can be used, if necessary, to support recommendations for Stage 2 Archaeological Assessment for all or parts of the property; and
- To recommend appropriate strategies for Stage 2 Archaeological Assessment, if necessary.

This report describes the Stage 1 assessment that was conducted for this project and is organized as follows: Section 1.0 describes the project context and summarizes the background study that was conducted to provide the archaeological and historical context for the project study area; Section 2.0 describes field methods employed for this assessment; Section 3.0 provides an analysis of the property inspection results and evaluates the archaeological potential of the study area; Section 4.0 provides recommendations for the next assessment steps; and the remaining sections contain other report information that is required by the Ministry of Tourism, Culture and Sport's (MTCS) 2011 *Standards and Guidelines for Consultant Archaeologists (S&G)*, e.g., advice on compliance with legislation, works cited, and mapping.

1.1 Development Context

All work has been undertaken as part of Ontario Regulation 359/09 within the Renewable Energy Approvals (REA) process under Part V.0.1 of the Environmental Protection Energy Act.



All activities carried out during this assessment were completed in accordance with the terms of the Ontario Heritage Act (2005) and the Standards and Guidelines for Consultant Archaeologists (S&G).

Permission to carry out all activities necessary for the completion of the assessment was granted by exp. on January 30, 2012.

1.2 Archaeological Context

This section provides background research pertaining to previous archaeological fieldwork conducted within and in the vicinity of the Barrie Solar Projects study area, its environmental characteristics (including drainage, soils or surficial geology and topography, etc.), and current land use and field conditions. Three sources of information were consulted to provide information about previous archaeological research in the study area; the site record forms for registered sites housed at the MTCS; published and unpublished documentary sources; and the files of ASI.

1.2.1 Current Land-Use and Field Conditions

The Official Plans for the Township of Springwater and the Township of Oro-Medonte were reviewed to determine the zoning and current land use of the solar eight L.P. locations.

L.P. # 9, #10 and #11 are located in the Township of Springwater. All three L.P. locations are designated as “agricultural” lands (Township of Springwater 2007). It should be noted that a zoning by-law amendment was made for Lot 31, Concession II, which is the location of L.P. #9 and #10. Under this amendment the permitted uses for the lot include a single detached dwelling, an agricultural use, and a home occupation (Township of Springwater 2003).

L.P. #8 and #14-17 are located within the Township of Oro-Medonte. All five L.P. locations are designated as agricultural lands (2007a). The main objective of the agricultural zoning designation is to maintain and preserve the agricultural resources and character of the Township, enhance the economic role of agriculture, and protect these lands from non-agricultural development and land uses (Township of Oro-Medonte 2007b).

The Stage 1 property inspection was conducted by Peter Carruthers (P163) ASI, on March 28, 2012. The study area includes three eight solar projects that are grouped together in three separate locations. All L.P. locations are located in a rural setting and in agricultural fields.

1.2.2 Previous Archaeological Research

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database (OASD) maintained by the MTCS. 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 km east to west, and approximately 18.5 km 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 *BcGw* and *BcGu*.



According to the OASD (email communication, Robert von Bitter, MTCS Data Coordinator, February 2, 2012), two identified archaeological sites are located within 1 km of the study area.

The known registered sites are located with 1 km of L.P. #11 and #14-17. Details of the registered sites are summarized in Table 1.

Table 1: List of previously registered within 1 km of the study area

Borden #	Site Name	Cultural Affiliation	Site Type	Researcher
BcGw-44	Santulli	Middlle-Late Iroquoian	Campsite, Cabin	R. Sutton (1991)
BcGw-65	-	Pre-Contact	Findspot	G. Dibb (1998)

No registered archaeological sites are located within 50 m of any L.P. location.

1.2.3 Geography

In addition to the known archaeological sites, the state of the natural environment is an important predictor of archaeological potential. Accordingly, a description of the physiography and soils are briefly discussed for the study area.

Section 1.3.1 of the *S&G* stipulates that primary water sources (lakes, rivers, streams, creeks, etc.), secondary water sources (intermittent streams and creeks, springs, marshes, swamps, etc.), ancient water sources (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 the topography, shorelines of drained lakes or marshes, cobble beaches, etc.), as well as accessible or inaccessible shorelines (high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh, etc.) are characteristics that indicate archaeological potential.

Water has been identified as the major determinant of site selection and the presence of potable water is the single most important resource necessary for any extended human occupation or settlement. Since water sources have remained relatively stable in 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.

Section 1.3.1 of the *S&G* also lists other geographic characteristics that can indicate archaeological potential including: elevated topography (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. Physical indicators of use may be present, such as burials, structures, offerings, rock paintings or carvings. Resource areas, including; food or medicinal plants (migratory routes, spawning areas) are also considered characteristics that indicate archaeological potential.

The study area is situated within the Simcoe uplands physiographic region of southern Ontario (Chapman and Putnam 1984: 182-184). The Simcoe uplands form a large portion of Simcoe County, covering the area from Orillia to Barrie to the Penetang Peninsula. The uplands comprise a series of broad, rolling till plains. The till plains are separated by valleys and are bounded by



numerous shorelines, which indicate that these plains were once islands in ancient Lake Algonquin. The till is generally a gritty loam, becoming sandy and bouldery to the north.

Soils in the study area vary between the eight solar project locations. Each location and associated soils are briefly discussed below.

Soils in the L.P. #8 area consist of Bondhead loam. Bondhead soils occupy about 8 percent of Simcoe County (Hoffman et al. 1962). The topography for this soil group is smooth moderately to steeply sloping. Drainage for Bondhead loam is good and the soil is porous and slightly stony. Bondhead soils are well suited to most types of farming but in Simcoe County they are used mainly for dairying and mixed farming.

Soils in the vicinity of L.P. #9 and #10 consist of Tioga loamy sand and Vasey sandy loam. This combination of soils occurs in Essa, Vespra, Flos, Oro-Medonte and Orillia and occupies almost 6.5 percent of the total land area in Simcoe County (Hoffman et al 1962:74). Topographic characteristics of this complex are rugged with steep slopes, and some level areas occurring between or on the tops of hills. The soil is moderately stony with granite and limestone boulders present. Almost 45 percent of the Tioga/Vasey complex has been reforested. Mixed farming is carried out on remaining open areas. These soils tend to be droughty and are subject to erosion.

Soils in the L.P. #11 and #14-17 area consist of Lyons loam and Vasey sandy loam. Lyons loam occupies less than a half a percent of the total land in Simcoe County (Hoffman et al 1962). Lyons soils often occur in depressional areas and tend to have poor drainage. Lyons soils are most often used as pasture lands. The Vasey Series is a major soil series in Simcoe County and occupies almost 10 percent to the total lands in the County. Vasey soils have smooth moderately to steeply sloping topography and have good drainage. Vasey soils are used for general farming except in places where steep slope prohibits the use of heavy farm implements (Hoffman et al 1962).

Surficial geology information is mapped and presented in Figure 2 and soil drainage is presented in Figure 3.

The study area falls within the Willow Creek Subwatershed (NVCA 2007). The two main streams of this watershed are Willow Creek and Matheson Creek, which converge northwest of Midhurst and flow into Little Lake. Willow Creek runs north of L.P. #8, a tributary of Matheson Creek runs north of L.P. #9 and #10, and an unnamed tributary of Willow Creek runs through the L.P. #11 and #14-17 area. The Dalston wetland, which has provincial significance, is located approximately 1 km southeast of L.P. # 11 and #14-17 (NVCA 2007). The Shanty Bay Swamp is located 1.4 km east-north east of L.P. #8 (Township of Oro-Medonte 2007c).

1.3 Historical Context

This section provides a brief summary of historic research for the study area. A review of available primary and secondary source material was undertaken to produce a contextual overview, including a general description of settlement and historic land use. Historically, the study area is located in the former Vespra and Oro Townships, Simcoe County. The lot and concession numbers included in the study area are provided in Section 1.3.3 of this report.



1.3.1 Contact Period

The Petun were closely related to the Huron-Wendat and lived in the area west of Huronia near present day Collingwood (Ramsden 1990). They were called the Petun after their practice of growing large amounts of tobacco. It is speculated that the Huron-Wendat and the Petun may have formed a single group prior to the 17th century given the close similarities of their cultural traditions.

With the exception of their specialization in growing tobacco, the Petun shared many cultural traits with the Huron-Wendat (Garraad and Heidenreich 1978: 394-397). Like the Huron-Wendat, the Petun were sedentary, cultivated the land, and raised corn and tobacco. The Petun also shared the same beliefs as the Huron in sorcery, spirits, curing feasts, and other ceremonies.

In 1616, Samuel de Champlain found eight villages occupied by the Petun and mentioned that two more were under construction (Garraad and Heidenreich 1978). By 1639, the Jesuits listed nine Petun villages in addition to a number of smaller settlements. While there is historic information regarding the number of Petun settlements, no information was gathered concerning the size of the Petun nation. It is now estimated that the Petun population neared 3000 by the time of European contact.

Despite waging “cruel wars” against each other, the Petun and the Huron-Wendat were at peace at the time of Champlain’s arrival. This alliance included friendship, trade, and mutual help against common enemies. Petun relations were particularly close with the Huron-Wendat Attignawantan group. In the second half of the seventeenth century some Petun, and a large part of the Attignawantan, combined to become the Wyandot tribe, whose territory is located west of Lake Huron. The Petun also maintained strong relationships with the Neutral and Ottawa groups.

1.3.2 Township Survey and Settlement

Simcoe County was named in 1798 after John Graves Simcoe, the first lieutenant governor of Upper Canada. Samuel Wilmot first surveyed the Simcoe County when he received instructions in 1811 to survey a road of communication between Kempenfeldt Bay and Penetanguishene harbour (Hunter 1909:39). Wilmot first surveyed the lots so every farm lot was to contain 200 acres with a frontage of 80 rods of the road and with a depth of 400 rods. After 1818 lots were surveyed with a frontage of 120 rods. As a result the six townships along Pentanguishene Road have two kinds of survey patterns.

The land within Vespra Township was first settled in 1819, after the Penetanguishene Road (now Highway 93) was cut through from Kempenfeldt Bay to Georgian Bay by the British government. The first settlers began to locate along the Penetanguishene Road, and it was several more years before settlement spread to the interior of the township. Vespra remained a fairly remote area for several years. A mill was built at Willow Creek in Midhurst for lumber and flour in 1825. It is thought to have been the first mill built north of Lake Simcoe. The first settlers arrived in Minesing after the survey of the Minesing Road by George Lount in 1847 (Mika and Mika 1983:578-580).

Oro Township was named in 1820 by Lieutenant Governor Sir Peregrine Maitland after the Spanish word for ‘gold’ (Rayburn 1997:257). The name ‘oro’ is also a reference to the African



colony of Rio de Oro, which was known for its trade in slaves and gold. The Oro community was established in 1819 and was the only government-sponsored Black settlement in Upper Canada. Under this program, Black veterans of the War of 1812 who could be enlisted to meet hostile forces from Georgian Bay were offered free land grants (Brown 2004). Between 1819 and 1831 the government of Upper Canada sponsored black settlement along the west side of Wilberforce Street in Concession II of Oro Township (County of Simcoe 2012). These families were among the first permanent agricultural settlers in the area since no European agricultural settlement occurred in the Township before 1819. The black settlement eventually declined and by 1900 the Wilberforce Street settlement had disappeared. The last descendent of the original black settlers was James Thompson, who left Oro Township in 1949.

1.3.3 Historic Map Review

The 1881 Illustrated Atlas of the Dominion of Canada was reviewed to determine the potential for the presence of historic archaeological resources within the study area during the nineteenth century (Figure 4). 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 atlases. Historically, the study area is located in the former Townships of Vespra and Oro, Simcoe. The Lots and Concessions in the study area include:

- L.P. #8: Concession I, Lot 7 (Oro Township)
- L.P. #9 and #10: Concession II, Lot 31 (Vespra Township)
- L.P. #11: Concession I, Lot 23 (Vespra Township)
- L.P. #14-17: Concession I, Lot 23 (Oro Township)

No property owners or historic features are depicted in the study area. The exception is that the area for L.P. #8 is labelled as “BLK S”. This may be a reference to the nearby black settlements, but this cannot be verified. It should be noted that Penetanguishene Road and Russell Road are historically surveyed roads.

The 1929 Map of the County of Simcoe was reviewed to identify any major developments in the study area during the early twentieth century (Figure 5). The 1929 map demonstrates that no major development in the eight L.P. locations during the early twentieth century. One major change is that the C.P. Rail line had been constructed northwest of L.P. #9 and #10 during this period.

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 the water model outlined in Section 1.2.2 of this report since these occupations were subject to similar environmental constraints.



Section 1.3.1 of the *S&G* stipulates that areas of early Euro-Canadian settlement (pioneer homesteads, isolated cabins, farmstead complexes), early wharf or dock complexes, pioneer churches and early cemeteries, are considered to have archaeological potential. Early historical transportation routes (trails, passes, roads, railways, portage routes), properties listed on a municipal register or designated under the Ontario Heritage Act or a federal, provincial, or municipal historic landmark or site are also considered to have archaeological potential.

2.0 FIELD METHODS

A property inspection was conducted in order to gain first-hand knowledge of the geography, topography, and current conditions of the Barrie Solar Projects study area as per Section 1.2 of the *S&G*. A property inspection is a visual inspection only and does not include excavation or collection of archaeological resources.

Where applicable, Section 1.2, Standards 1-5 of the *S&G* were met as follows during the course of the property inspection:

- The eight L.P. locations were inspected systematically during optimal weather conditions which permitted good visibility of land features;
- Weather conditions were 24°C and sunny with no snow or precipitation;
- Coverage was sufficient to identify previously identified features of archaeological potential and additional features not visible on mapping; and,
- Additional features were documented as well as any features that will affect assessment strategies.

The property inspection found that the entire study area retained archaeological potential. Field observations are compiled onto a map of the study area in Section 7.0 (Figures 7-10) and associated photography is presented in Section 8.0 (Plates 1-11).

3.0 ANALYSIS AND CONCLUSIONS

The archaeological and historical context was analyzed to help determine the archaeological potential of the study area. A summary of the archaeological potential of the study area is presented in Section 3.1 of this report and a discussion of the archaeological potential model is provided in Section 3.2.

3.1 Analysis of Archaeological Potential

Section 1.3.1 of the *S&G* lists characteristics that indicate where archaeological resources are most likely to be found, and archaeological potential is confirmed when one or more features of archaeological potential are present. Accordingly, the Barrie Solar Projects study area meets the following criteria used for determining archaeological potential:



- Previously known archaeological sites (e.g. Santulli BcGw-44)
- Water source: primary, secondary, or past water source (e.g. Willow Creek)
- Early historical transportation routes (e.g. Penetanguishene Road)
- Pockets of well-drained sandy soil (e.g. Vasey sandy loam)

These criteria characterize the study area as having potential for the identification of Aboriginal and Euro-Canadian archaeological resources.

3.2 Archaeological Potential Model

An archaeological potential model is developed as a tool to assist land-use planners and policy makers in evaluating the threat to archaeological resources that might occur through proposed land-development projects. Since the majority of archaeological sites have not yet been documented or registered with the OASD, the only alternative is to use archaeological science to partition the landscape into zones that exhibit archaeological potential versus those that do not. The result is an archaeological potential map against which the footprint of proposed development alternatives can be evaluated.

Using the information from known archaeological sites and historic features, GIS mapping was reviewed to determine if archaeological potential is present within the study area. The mapping of archaeological site potential confirmed that the majority of the study area exhibits archaeological potential. Archaeological potential mapping is presented in Figure 6.

It should be noted that the purpose of an archaeological potential model is to identify areas with archaeological potential based on the indicators outlined in Section 1.3.1 of the *S&G*. It is important to recognize that the model is a predictor of archaeological potential only and cannot be used to eliminate archaeological potential from lands included in the model since recent developments and disturbances are not taken into account. The results of the property inspection, presented below, are used to assess whether the study area has been disturbed by previous activity (e.g. quarrying, major landscaping, building footprints, sewage and/or infrastructure development).

3.3 Analysis of Property Inspection Results

As mentioned in Section 1.0 of this report, The Barrie Solar Projects project involves the installation of eight solar projects in Barrie, Ontario. The property inspection results for each solar project location are discussed separately below.



3.3.1 L.P. #8

The property inspection for L.P. #8 revealed that the planned layout is located in a relatively undisturbed agricultural field, and is close to old beach strands, a historically surveyed road, and a watercourse. According, the L.P. #8 location exhibits archaeological potential and will require further archaeological assessment (Plates 1 and 2; Figure 7: areas marked in green). This determination is made in accordance with Section 1.3.1 of the *S&G*.

3.3.2 L.P. #9 and #10

The property inspection for L.P. #9 and #10 revealed that both locations fall within a former sand/aggregate pit that is now used as an agricultural field. The entire field in which both L.P. layouts are located has been excavated, which is evident from the artificially sloped edges of the field (Plates 3-6). Due to the deep and extensive disturbance cause by previous aggregate activity, the L.P. #9 and #10 solar project locations do not retain archaeological potential (Figure 8: areas marked in orange). This determination is made in accordance with Section 1.3.2 of the *S&G*.

3.3.3 L.P. #11

The property inspection for L.P. #11 demonstrated that L.P. # 11 is located in a low and wet portion of an agricultural field and is adjacent to a watercourse. It should be noted that the Dalston wetland is located in close proximity to this L.P. location. Due to the permanently wet character of the field, the L.P. #11 location does not retain archaeological potential due to low and wet conditions (Plates 7 and 8; Figure 9: area marked in blue). This determination is made in accordance with Section 2.1, Standard 2(i) of the *S&G*.

3.3.4 L.P. #14-17

The property inspection for L.P. #14-17 demonstrated that these proposed layouts are located in a relatively undisturbed agricultural field, east of Penetanguishene Road. The majority of the lands planned for the L.P. #14-17 solar project exhibits archaeological potential (Plates 9-11; Figure 10: areas marked in green). The property inspection also revealed that parts of the study area do not retain archaeological potential due to low and wet conditions (Plate 11; Figure 10: areas marked in blue). These respective determinations are made in accordance with Sections 1.3.2 and Section 2.1, Standard 2(i) of the *S&G*.

3.4 Conclusions

The Stage 1 background study was conducted to assist with the Barrie Solar Projects REA. The assessment determined that two archaeological sites have been registered within 1 km of the study area. A review of the geography and historic settlements of the study area suggested that all eight solar L.P. locations have potential for the identification of Aboriginal and Euro-Canadian archaeological resources. The property inspection revealed that five L.P. locations are located in relatively undisturbed agricultural fields and retained archaeological potential. The property



inspection also revealed that three L.P. locations do not retain potential due to low and wet conditions and previous disturbance caused by aggregate activity.

4.0 RECOMMENDATIONS

In light of the results of the background research undertaken for the Barrie Solar Projects REA, ASI makes the following recommendation:

1. Archaeological potential exists in five L.P. locations (L.P. #8, 14-17) as they are located in relatively undisturbed agricultural fields (Figures 7-10: areas marked in green). These lands require a Stage 2 Property Assessment, which will be conducted by pedestrian or test pit survey. A test pit survey includes the systematic excavation of small test pits by hand at 5 m intervals and must be conducted as ploughing is not feasible on these lands;
2. Due to extensive and deep land alterations that have severely damaged the integrity of any potential archaeological resources, and low and wet conditions, the remaining three L.P. locations (L.P. #9-11) do not require further archaeological assessment (Figures 7-10: areas marked in orange and blue; and,
3. Should the proposed work extend beyond the currently assessed L.P. locations study area then further Stage 1 assessment must be conducted to determine the archaeological potential of the surrounding lands

Notwithstanding the results and recommendations presented in this study, Archaeological Services Inc. notes that no archaeological assessment, no matter how thorough or carefully completed, can necessarily predict, account for, or identify every form of isolated or deeply buried archaeological deposit. In the event that archaeological remains are found during subsequent construction activities, the consultant archaeologist, approval authority, and the Cultural Programs Unit of the Ministry of Tourism, Culture and Sport should be immediately notified.

5.0 ADVICE ON COMPLIANCE WITH LEGISLATION

ASI advises compliance with the following legislation:

- This report is submitted to the Minister 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 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 sec. 48 (1) of the *Ontario Heritage Act*; and
- The *Cemeteries Act*, R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.

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7.0 MAPS



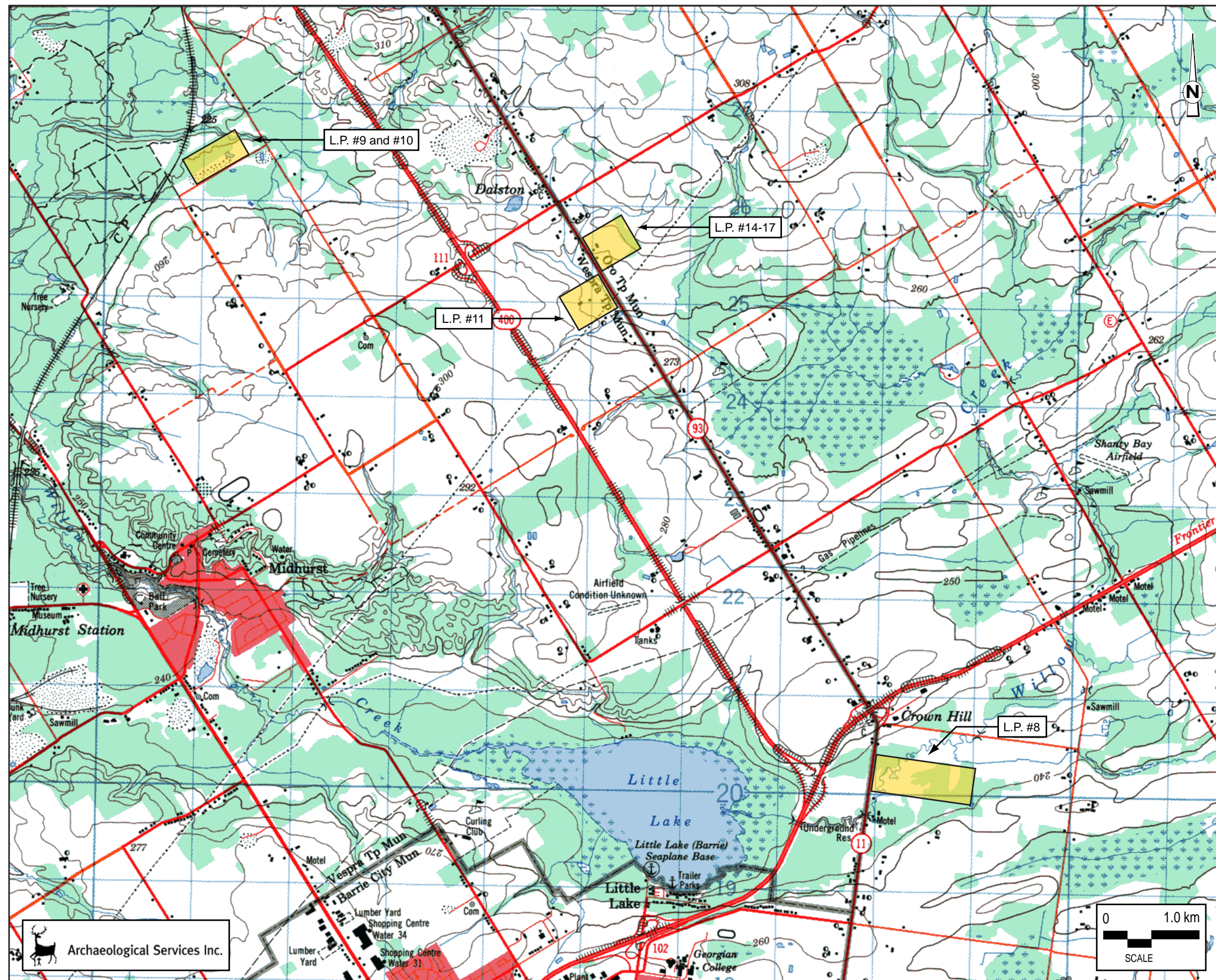


Figure 1: Location of the study area

Base Map: NTS Sheet 31 D/05

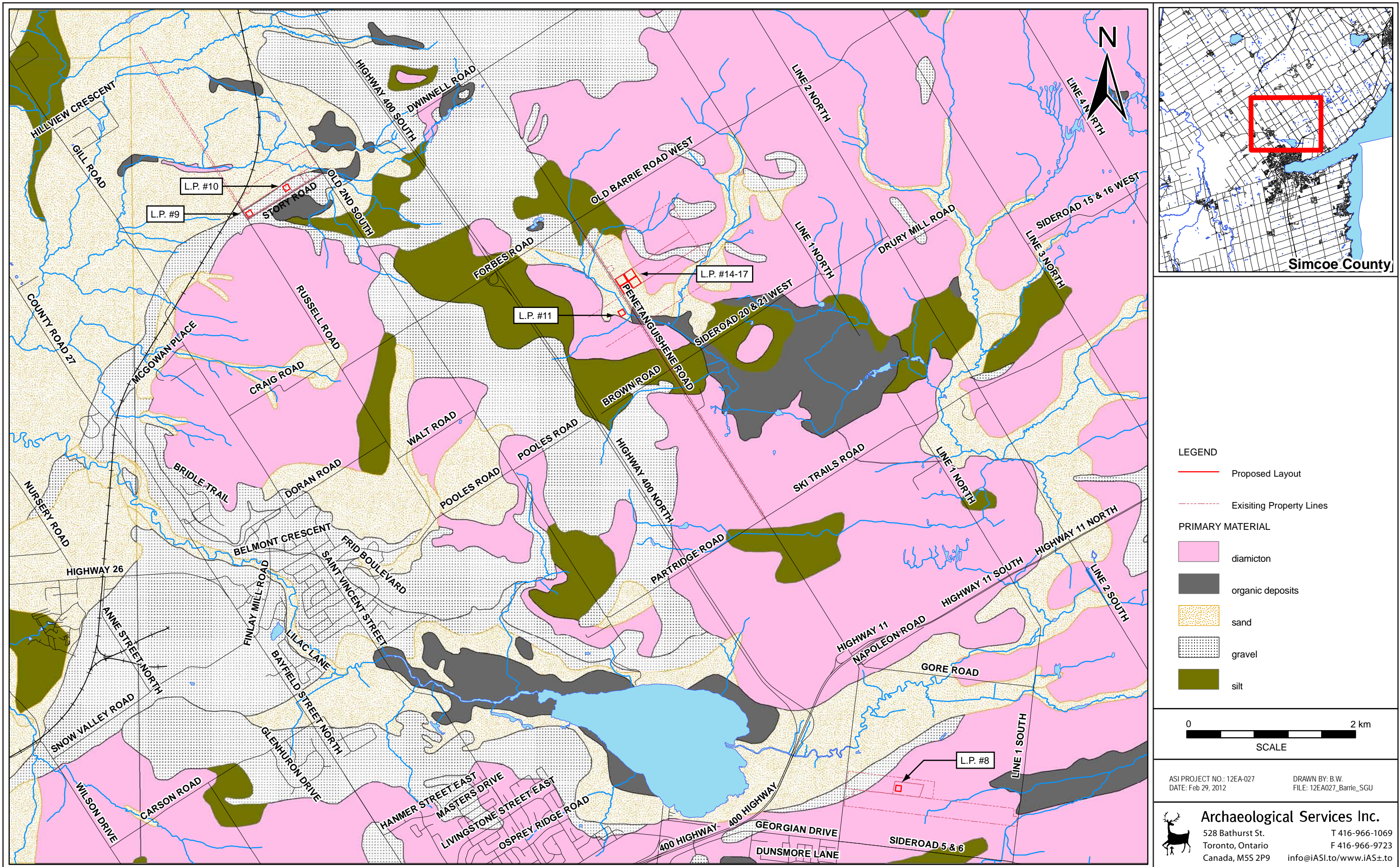


Figure 2: Surficial geology in the study area

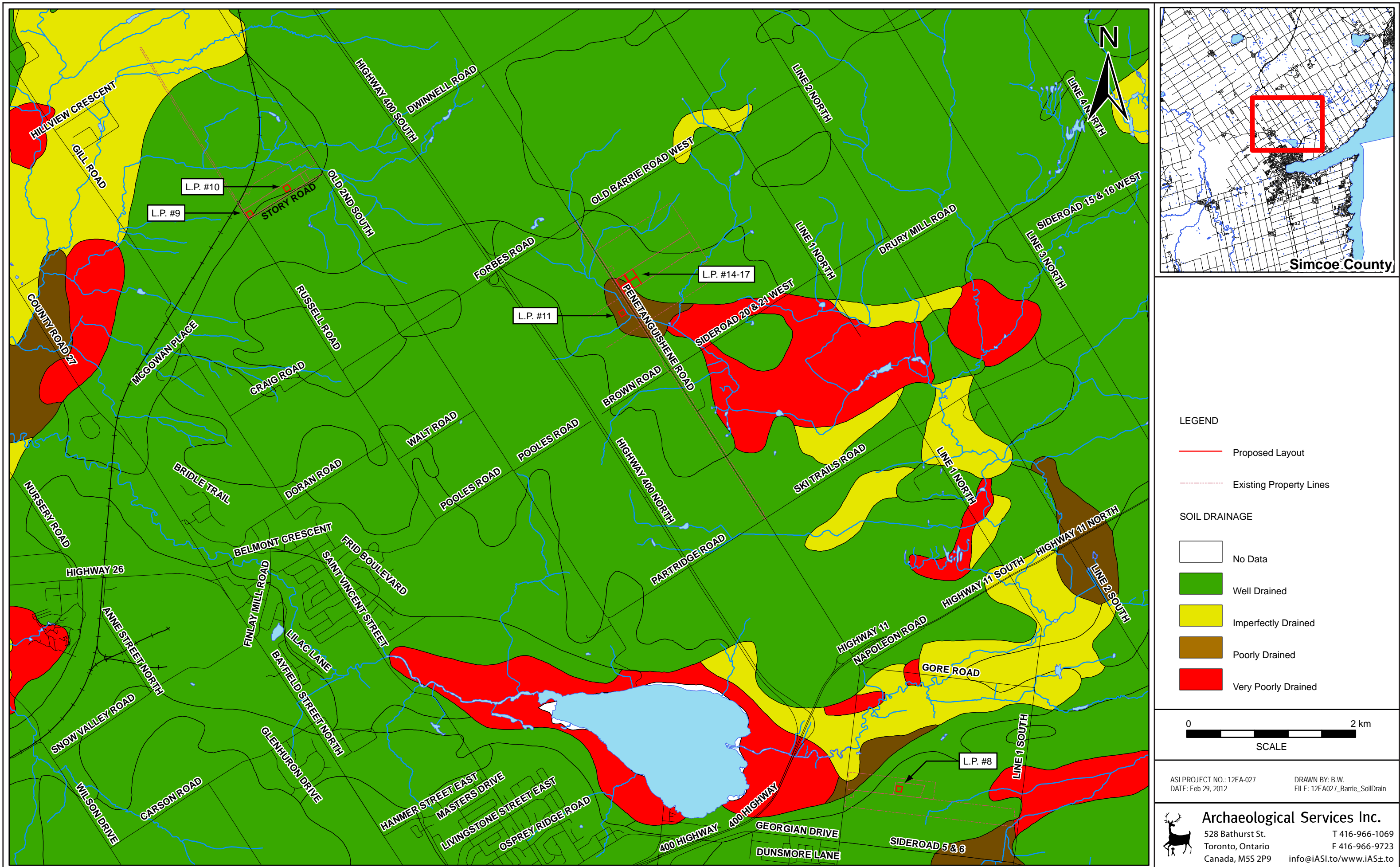


Figure 3: Soil drainage in the study area

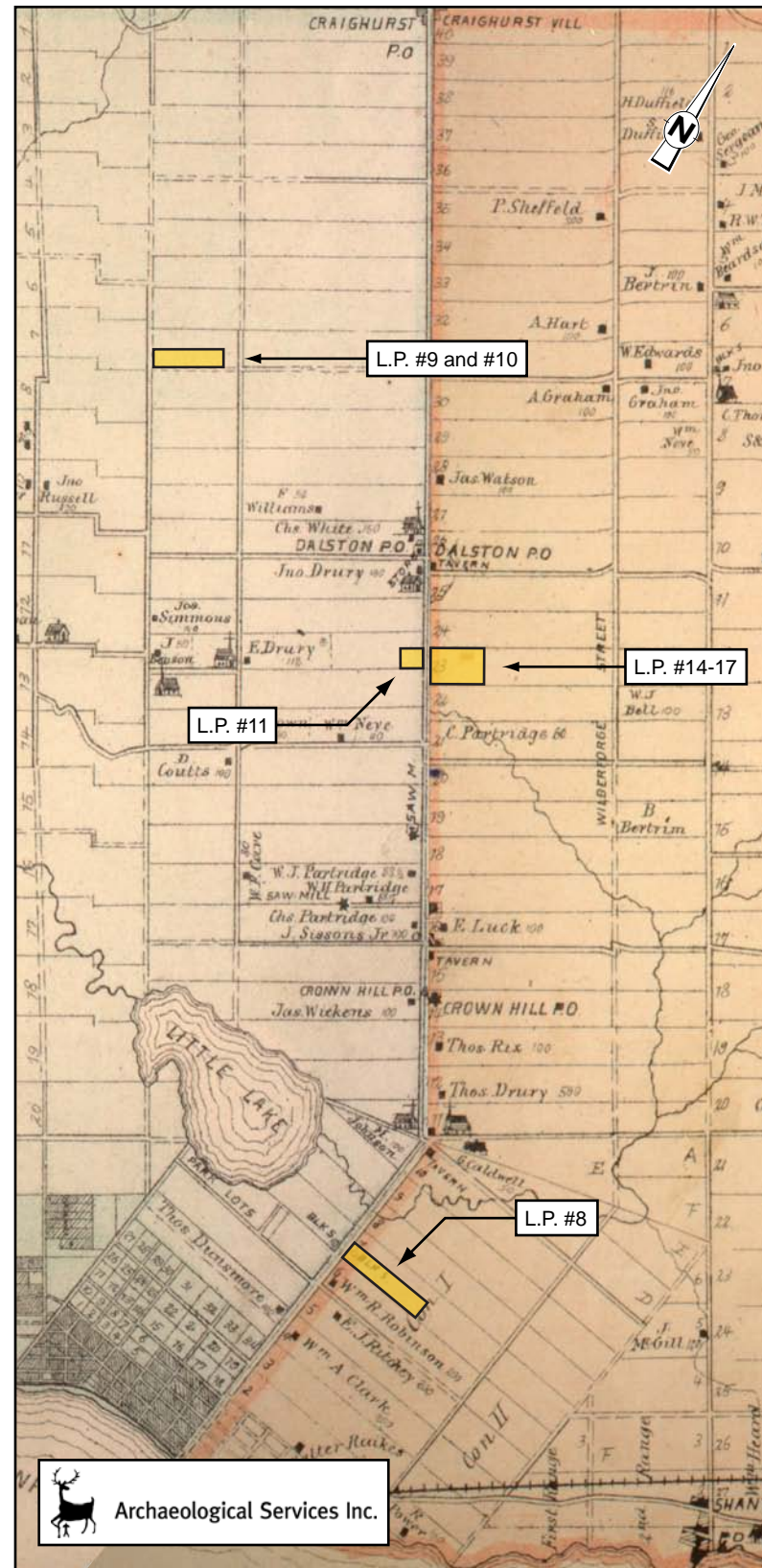


Figure 4: The study area overlaid on the 1881 maps of Vespra and Oro Townships

Base Map: Simcoe Supplement in the Illustrated Atlas of the Dominion of Canada (H. Belden 1881)



Figure 5: The study area overlaid on the 1929 map of Simcoe County

Base Map: Map of the County of Simcoe (1929)

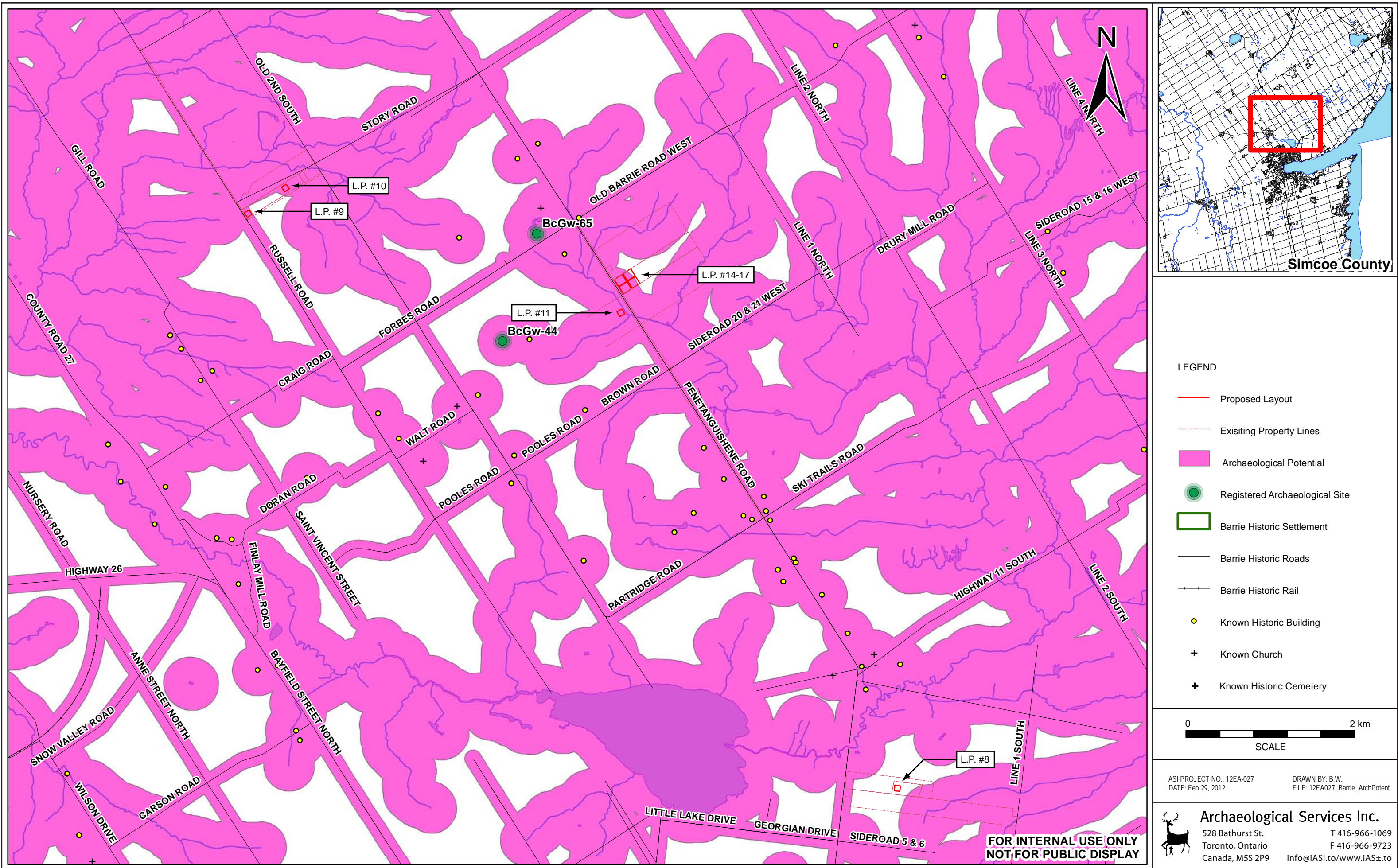
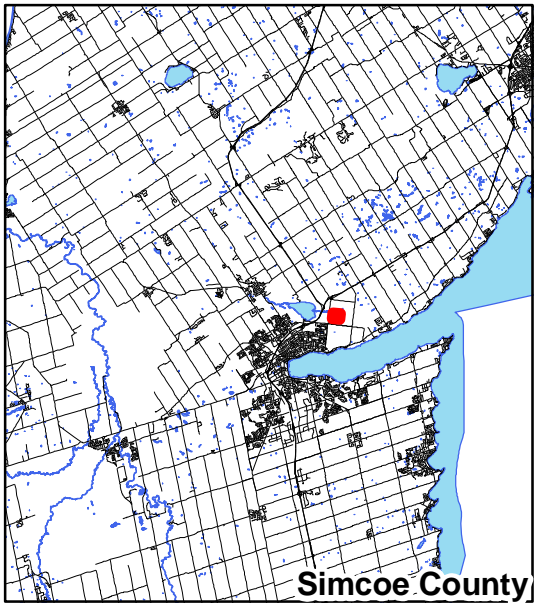
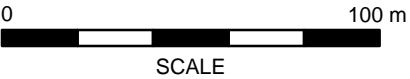


Figure 6: Archaeological potential in the study area



LEGEND

- Proposed Layout
- Existing Property Lines
- No Potential - Disturbed
- No Potential - Low and Wet
- Archaeological Potential
- Photo Location and Direction



ASI PROJECT NO.: 12EA-027
DATE: Apr 10, 2012

DRAWN BY: B.W.
FILE: 12EA027_Barrie_L8

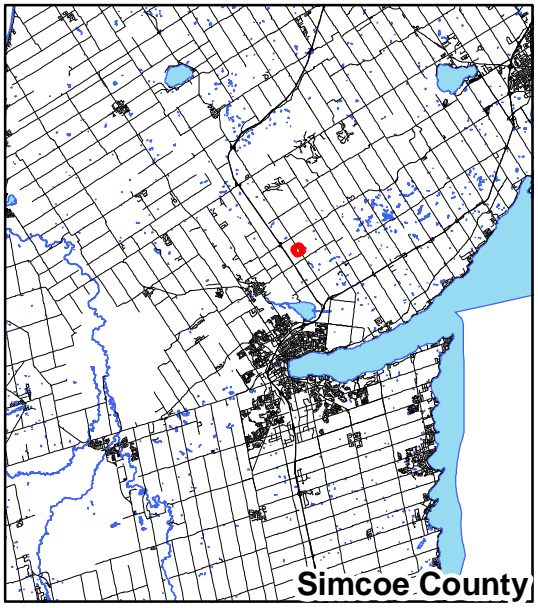
Archaeological Services Inc.
528 Bathurst St.
Toronto, Ontario
Canada, M5S 2P9

T 416-966-1069
F 416-966-9723
info@iASI.to/www.iAS±.to

Figure 7: Eight Solar Projects in Barrie (L.P. #8) - Results of Stage 1 Archaeological Assessment



Figure 8: Eight Solar Projects in Barrie (L.P. #9 and #10) - Results of Stage 1 Archaeological Assessment



LEGEND

- Proposed Layout
- Existing Property Lines
- No Potential - Disturbed
- No Potential - Low and Wet
- Archaeological Potential
- Photo Location and Direction

0 50 m
SCALE

ASI PROJECT NO.: 12EA-027
DATE: Apr 10, 2012

DRAWN BY: B.W.
FILE: 12EA027_Barrie_L11

 **Archaeological Services Inc.**
528 Bathurst St. T 416-966-1069
Toronto, Ontario F 416-966-9723
Canada, M5S 2P9 info@iASI.to/www.iAS±.to

Figure 9: Eight Solar Projects in Barrie (L.P. #11) - Results of Stage 1 Archaeological Assessment



Figure 10: Eight Solar Projects in Barrie (L.P. #14-17) - Results of Stage 1 Archaeological Assessment

8.0 IMAGES

8.1 L.P. #8



Plate 1: North view of L.P. #8. Field has potential.



Plate 2: Southwest view across L.P. #8. Field has potential and requires further work.



8.2 L.P. # 9 and #10



Plate 3: East-northeast view of south end of L.P. #9. Area is a former sand pit. Grading and disturbance from previous aggregate activity. No potential.



Plate 4: East-northeast view from west end of L.P. #9. Field is a sand pit that has regenerated. No potential – all disturbed.



Plate 5: North-northwest view across L.P. #10. Area is a former sand pit and is graded and disturbed. No potential.



Plate 6: East-northeast view of southern end of L.P. #10. Road and field are at bottom of former sand pit. All graded and disturbed – no potential.



8.3 L.P. #11



Plate 7: West-northwest view of L.P. #11. Area is low and wet – no potential



Plate 8: South view of L.P. #11. Area is low and wet – no potential.



8.4 L.P. #14-17



Plate 9: East-northeast view across L.P. #14 and L.P. #15. Potential in field.



Plate 10: North-northwest view across L.P. #16 and L.P. #14. Potential in field.



Plate 11: North-northeast view across field. Potential in field for all L.P. locations. Low and wet areas in foreground and in distance.

