



ACC

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Stage 1 Archaeological Assessment

Elora Sands Development C

Part of Lot 16, Concession 12, Former Geographic Township of Nichol, Now the
Township of Centre Wellington, Wellington County, Ontario

Original Report

Prepared for:

Ontario Ministry of Citizenship and Multiculturalism

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EXECUTIVE SUMMARY

Archaeological Consultants Canada (ACC) was contracted by the Proponent to conduct a Stage 1 & 2 archaeological assessment, including background research and property survey, for the Proposed Elora Sands Development C. The assessment was conducted to identify any archaeological constraints to development early within the planning process and is being completed prior to development approvals. The assessment was required under the *Planning Act, R.S.O. 1990*. The area of assessment, or the “subject property”, is located on Part of Lot 16, Concession 12, Former Geographic Township of Nichol, Now the Township of Centre Wellington, Wellington County, Ontario (Figure 1). The subject property measures 39.56 hectares (ha).

The Stage 1 assessment was conducted under Professional Archaeological License P066, held by Kristy O’Neal. The Ontario Ministry of Citizenship and Multiculturalism (MCM) assigned Project Information Form (PIF) number P066-0434-2024 to this project. No fieldwork was completed for this desktop assessment, therefore no permission to access the property was needed.

Stage 1 background research indicated that the subject property has general archaeological potential due to the following factors:

- The subject property is largely comprised of well-drained land that is suitable for human habitation.
- The subject property is located adjacent to three early historical transportation routes, Irvine Street, Gerrie Road, and Sideroad 15.
- A water source, an unnamed tributary of the Grand River is located within the subject property.
- The Grand River, a major transportation route, resource extraction area, and water source, is located just over 300 m from the subject property.

Given the above criteria, background archival research indicates that the subject property exhibits general archaeological potential for the discovery of both pre/post-contact Indigenous and Euro-Canadian archaeological resources therefore, a Stage 2 archaeological assessment is required.

Aerial imagery and topographic mapping indicates that 0.36 ha of the subject property consists of a watercourse, a tributary of the Grand River. If impacts to this watercourse are proposed, marine archaeological potential may be evaluated through a separate process following the MCM’s 2016 *Criteria for Evaluating Marine Archaeological Potential* checklist.

0.28 ha of the subject property has been previously intensively and extensively disturbed by major landscaping and construction activities involving grading below topsoil for construction of a residential house, agricultural buildings, and driveway. As no property inspection was

conducted as part of the Stage 1 assessment, visual inspection to confirm, document and map these areas of low to no archaeological potential is recommended.

The remainder of the subject property, 38.92 ha, retains archaeological potential and requires Stage 2 property survey. Agricultural fields account for 36.80 ha of the subject property. As the fields are ploughable land, the Stage 2 assessment of the fields should be completed by pedestrian survey at 5 m intervals. Woodlot, tree rows, and lawn areas account for 1.67 ha of the subject property. As these areas cannot be ploughed, Stage 2 assessment should be completed by test pit survey at 5 m grid intervals.

The following summarized recommendations are provided for consideration by the Proponent and by the MCM. Full recommendations can be found in the body of this report.

1. Aerial imagery and topographic mapping indicates 0.28 ha of the subject property exhibits low to no potential for the recovery of archaeological resources due previous disturbance, as shown in Figure 7 of this report. Stage 2 assessment should confirm the presence and extent of these areas of low archaeological potential, and they should be mapped and documented by photography.
2. Stage 2 archaeological assessment in the form of a pedestrian survey should be conducted on all ploughable lands, accounting for 36.80 ha of the subject property, as shown in Figure 7 of this report.
3. Stage 2 archaeological assessment in the form of a test pit survey should be conducted in all areas where ploughing is not possible or viable, including wooded, scrub, and lawn areas which account for 1.67 ha of the subject property, as shown in Figure 7 of this report.



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LIST OF ABBREVIATIONS

The following is a list of abbreviations and acronyms used throughout this report.

ACC	Archaeological Consultants Canada
ha	hectares
km	kilometre
m	metre
MCM	Ministry of Citizenship and Multiculturalism
OASD	Ontario Archaeological Sites Database
OHA	Ontario Heritage Act
PIF	Project Information Form
%	percent



PROJECT PERSONNEL

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Stage 1 Archaeological Assessment

Elora Sands Development C

Part of Lot 16, Concession 12, Former Geographic Township of Nichol,
Now the Township of Centre Wellington, Wellington County, Ontario

1.0 PROJECT CONTEXT

1.1 Development Context

Archaeological Consultants Canada (ACC) was contracted by the Proponent to conduct a Stage 1 & 2 archaeological assessment, including background research and property survey, for the Proposed Elora Sands Development C. The assessment was conducted to identify any archaeological constraints to development early within the planning process and is being completed prior to development approvals. The assessment was required under the *Planning Act, R.S.O. 1990*. The area of assessment, or the “subject property”, is located on Part of Lot 16, Concession 12, Former Geographic Township of Nichol, Now the Township of Centre Wellington, Wellington County, Ontario (Figure 1). The subject property measures 39.56 hectares (ha). The Proponent verified the subject property limits as defined within this report through aerial imagery.

The objective of a Stage 1 background study is to provide information about the subject property’s geography, history, previous archaeological fieldwork, and current land conditions. A Stage 1 study evaluates the subject property’s archaeological potential in order to recommend appropriate strategies for the Stage 2 survey.

The Stage 1 assessment was conducted under Professional Archaeological License P066, held by Kristy O’Neal. The Ontario Ministry of Citizenship and Multiculturalism (MCM) assigned Project Information Form (PIF) number P066-0434-2024 to this project. No fieldwork was completed for this desktop assessment, therefore no permission to access the property was needed.

All fieldwork and reporting were completed using MCM’s 2011 *Standards and Guidelines for Consultant Archaeologists*. This report documents the research, the field methods and results, and the conclusions and recommendations based on the Stage 1 archaeological assessment. All documents and records related to this project will be curated at the offices of ACC, in accordance with subsection 66(1) of the *Ontario Heritage Act* (OHA).

1.2 Historical Context

1.2.1 Background Research

Stage 1 background research was conducted to determine the potential for finding and identifying archaeological resources including sites within the current subject property and to

determine the necessity of conducting a Stage 2 survey. This is done by reviewing geographic, archaeological, and historical data for the property and the surrounding area. The background research was conducted to:

- amass all the readily available information on any previous archaeological surveys in the area.
- determine the locations of any registered and unregistered sites within and around the subject property.
- develop an historical framework for assigning levels of potential significance to any new sites discovered during fieldwork.

1.2.2 A Cultural Chronology for Southern Ontario

Over their thousands of years of occupation in the general region, Indigenous peoples have left behind, to a greater or lesser degree, physical evidence of their lifeway activities and settlements at many locations. Based upon a published synthesis of Indigenous cultural occupations (Wright, 1968). Table 1 is a general outline of the cultural history of southern Ontario that is applicable to the subject property. Ellis and Ferris (1990) provide greater detail of the distinctive characteristics of each time period and cultural group.

It is likely that Ontario was occupied soon after the retreat of the Ice Age glaciers. The earliest known human occupation in the area was during the Paleoindian period (between 12,000 and 9,500 years ago) wherein small groups of nomadic peoples hunted big game such as caribou in a cool sub-arctic climate. Sites are typically found near glacial features such as the shorelines of glacial lakes or kettle ponds which would have allowed access to the low-lying environments that were favoured by caribou and other wildlife. These people were few and their small, temporary campsites are relatively rare. Paleoindian sites are recognized by the presence of distinctive artifacts such as fluted projectile points, beaked scrapers, and graves and by the preference for light colored chert, such as Collingwood chert. The Paleoindian Period is divided into two sub-periods, Early Paleoindian, and Late Paleoindian. People during the Archaic period (*circa* 10,000 to 2,800 years ago) were still primarily nomadic hunters, but they adapted to a more temperate climate. Groups were dispersed during winter months and converged around watercourses from the spring to fall in large fishing campsites. The Archaic period is characterized by the appearance of ground stone tools, notched, or stemmed projectile points. The Archaic Period is divided into three sub-periods, Early, Middle, and Late Archaic. During the Archaic Period, groups began to establish territorial settlements and introduce burial ceremonialism. There is a marked increase in the number and size of sites, especially during the Late Archaic period.

The Woodland period is distinguished by the introduction of pottery vessels for storage and cooking. Sites of the Woodland period (*circa* 3,000 to 400 years ago) are usually the most numerous because the population levels in southern Ontario had significantly increased, especially along the shores of Lakes Erie and Ontario. The Woodland Period is also marked by the establishment of complex long distance trading networks. The Woodland Period is divided



into three sub-periods, Early, Middle and Late Woodland. During the Late Woodland Period, there is increasing sedentarism and the establishment of horticulture, a reliance on tribal warfare, and the introduction of semi-permanent villages with large protective palisades. The Late Woodland period also envelops the emergence of Iroquoian tribes and confederacies.

Table 1: General Cultural Chronology for Southern Ontario

PERIOD	SUBDIVISION I	SUBDIVISION II	YEARS BEFORE PRESENT	COMMENTS
PALEOINDIAN	Early Paleoindian	Fluted Point Horizon	12,000-10,500	big game hunters
	Late Paleoindian	Holcombe & Hi-Lo Horizons	10,500-9,500	small nomadic groups
ARCHAIC	Early Archaic	Side Notched Horizon	10,000-9,700	nomadic hunters and gatherers
		Corner-Notched Horizon	9,700-8,900	
		Bifurcate Horizon	8,900-8,000	
	Middle Archaic	Middle Archaic I/Stemmed Horizon	8,000-5,500	territorial settlements
		Middle Archaic II	5,500-4,500	polished ground stone tools
	Late Archaic	Narrow Point Horizon	4,500-3,500	
		Broad Point Horizon	4,000-3,500	
		Small Point Horizon (including Haldimand and Glacial Kame Complexes)	3,500-2,800	burial ceremonialism
	WOODLAND	Early Woodland	Meadowood Complex	2,900-2,400
Middlesex Complex			2,500-2,000	
Middle Woodland		SW Ontario: Saugeen	2,300-1,500	long distance trade networks
		Western Basin: Couture	2,300-1,500	
Transitional Woodland		SW Ontario:		
		Princess Point	1,500/1,400-1,200	incipient agriculture
		Western Basin:		
Late Woodland: Ontario Iroquois Tradition		Early: Glen Meyer	1200/100-750/700	transition to village life
		Middle I: Uren	720/700-710/670	large villages with palisades
		Middle II: Middleport	710/670-670/600	wide distribution of ceramic styles
		Late: Neutral	600-450	
Late Woodland: Western Basin Tradition		Younge Phase	1200/1100-800	
		Springwells Phase	800-600	
		Wolf Phase	600-450	
HISTORIC	SW Ontario Iroquois	Historic Neutral	450-350	tribal warfare
	European Contact	Initial Contact	380-300	tribal displacement
		European Settlement	200 >	European settlement
		First Nations Resettlement	200 >	

(Compiled from Adams, 1994, Ellis *et al.*, 1990, Wright, 1968)

The historic period (from A.D. 1650 to 1900) begins with the arrival of Euro-Canadian groups. Sites of this period document European exploration, trade, and the displacement and devastation



of native groups caused by warfare and infectious disease. The most common sites of this period include Euro-Canadian homesteads, industries, churches, schools, and cemeteries.

While North America had been visited by Europeans on an increasing scale since the end of the 15th century, the first European to venture into what would become southern Ontario was Étienne Brûlé. Brûlé was sent by Samuel de Champlain in the summer of 1610 to consolidate an emerging relationship between the French and the First Nations, and to learn their languages and customs. Other Europeans would subsequently be sent by the French to train as interpreters. These men played an essential role in communications with the First Nations (Gervais and Rothe, 2004:182).

The late 17th and early 18th centuries saw the growth and spread of the fur trade, with the establishment and maintenance of trading posts along the Great Lakes. In 1754, hostilities over trade and the territorial ambitions of the French and the British led to the Seven Years' War, which ended when the French surrendered in 1760 (Smith, 1987:22). In addition to cementing British control over the Province of Quebec, the British victory over the French also proved pivotal in catalyzing the Euro-Canadian settlement process.

During pre-contact and early contact times, the vicinity of the subject property would have contained a mixture of deciduous trees, coniferous trees, and open areas. In the early 19th century, Euro-Canadian settlers arrived via easily accessible colonization routes and began to clear the forests for agricultural purposes. In the 19th and early 20th centuries, the subject property and surrounding land were primarily used for agricultural purposes. Mixed farming was common, with wheat crops and beef cattle dominating the landscape (Chapman and Putnam, 1984:177).

The subject property was historically located on Lot 16, Concession 12, in the Geographic Township of Nichol, Wellington County. In 1791, the provinces of Lower Canada and Upper Canada were created from the former province of Quebec by a British parliamentary act. Colonel John Graves Simcoe was appointed as the Lieutenant Governor of Upper Canada and was tasked with governing and directing its settlement, as well as establishing a constitutional government based on Britain's model (Coyne et al, 1895:33).

Wellington County was originally part of the Wellington District, which included what are now the Counties of Wellington, Waterloo, Grey, and part of Dufferin (Mika and Mika, 1983). Wellington District was created in 1838; it was abolished in 1849 with the separation of the countries. Wellington County remained part of Waterloo County until 1854. Seen as an ideal farming area, the county was the first to be settled by the Canada Company (Middleton, 1927). The Canada Company was established by John Galt in 1826 and was a speculative colonization company that purchased extensive lands from the Crown (Macfarlane-Lizars & Macfarlane-Lizars, 1896).

Wellington County was named after Arthur Wellesley, Duke of Wellington (Mika and Mika, 1983). The county originally consisted of eleven townships: Amaranth, Arthur, Eramos, Erin, Garafraxa, Guelph, Maryborough, Nichol, Peel, Pilkington, and Puslinch.

Nichol Township, located along the Grand River, was originally granted to Six Nations members that allied themselves with the British during the American Revolutionary War. Joseph Brant was granted and tasked with taking legal care of the land. Brant leased the land to Honourable Thomas Clark for a period of 999 years. The area was surveyed and opened to settlers in 1822 (Middleton, 1927). The first settler was Rosewall Mathews, who built a house on the banks of the Grand River in 1817. Mathews resettled to Gulph after the repeated flooding of the river (Mika and Mika, 1983). In 1832 Captain Gilkeson came to the Elora area and established a sawmill and general store.

The nearest historic community was the village of Salem, located 500 metres (m) to the west of the subject property. The first settler in the area was Sem Wissler in 1844. This community was originally called Wynford, with the first post office opening in 1863. The town was renamed Salem in 1867 (Carter, 1984).

Historical records and mapping were examined for evidence of early Euro-Canadian occupation within and near the subject property in the mid- to late 19th century. Guy Leslie and Charles J. Wheelock's 1861 *Map of the County of Wellington, Canada West*. indicates that at that time James Middleton was the owner of Lot 16, Concession 12 (Figure 2). There are no structures depicted within or near the subject property. Early historical transportation routes run along the north, east and west of the subject property. The village of Salem is shown 500 m to the west, and the town of Elora is located approximately 800 m south of the subject property.

Walker & Miles' 1877 map of Nichol Township in the *Illustrated Historical Atlas of the County of Wellington* indicates that J. Middleton still owned Lot 16, Concession 12 (Figure 3). There are still no structures depicted within the subject property. The town limits of Salem and Elora remain the same. The early historical transportation roads are depicted in the same position.

It should be noted that while there are no structures illustrated within the subject property on the historical atlas maps, it does not necessarily mean that one or more structures were not present at that time, earlier or later. Not all features of interest were mapped systematically on the Ontario series of historical maps and atlases, given that they were financed by subscription, and subscribers were given preference regarding the level of detail provided on the maps (Caston, 1977:100). Given that the subject property fronts three concession roads there is the potential for 19th century buildings to be present, depending on the level of disturbance.

1.3 Archaeological Context

1.3.1 Natural Environment

The subject property is located within the Guelph Drumlin Field physiographic region. The till can be stony with large surface boulders, that are more numerous in some areas. The till is comprised of loamy and calcareous materials from the dolostone of the Amabel foundation. Below the escarpment is exposed red shale, that is pale brown in colour (Chapman and Putnam, 1984:137-138). The dominant physiographic landforms within the subject property include drumlinized till plains, with spillways surrounding a tributary of the Grand River (Ministry of Northern Development and Mines, 2007).

The *Soils of Wellington County* (Hoffman et al., 1963) indicates that there are three dominant surface soil types within the subject property (Figure 4). The majority of the subject property consists of Harriston loam. This soil consists of stone free loam till with good drainage and smooth, gently sloping topography. Brant fine sandy loam is found in the northwest portion of the subject property. This soil consists of stone free fine sand and silt loam that has good drainage and smooth to very gently sloping topography. Parkhill loam is found on lands surrounding the tributary of the Grand River that cuts through the subject property. The soil is a slightly stony loam till with poor drainage and smooth basin to level topography.

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. Primary water sources include, among others, lakes, rivers, creeks, and streams. Secondary water sources include intermittent streams, creeks, springs, marshes, and swamps. Past water sources, such as raised beach ridges, relic water channels, and glacial shorelines are also considered to have archaeological potential. Swamps and marshes are also important as resource extraction areas, and any resource areas are considered to have archaeological potential. The nearest water source is an unnamed tributary of the Grand River that runs through a portion of the subject property. The Grand River is located approximately 305 m to the northwest of the subject property.

1.3.2 Current Land Use

Figure 5 provides the current land use of the subject property. The property consists of a residential house with associated farm buildings, agricultural fields, tree lines and an unnamed tributary of the Grand River. The subject property is located within a rural area on the outskirts of the Town of Elora. Side Road 15 is located directly north, Gerrie Road is located directly east, and Irvine Street is located directly west.

No fieldwork was conducted for this Stage 1 assessment.

1.3.3 Previous Archaeological Investigations

1.3.3.1 Registered Archaeological Sites

Previously registered archaeological sites can be used to indicate archaeological potential. To determine if any previous assessments have yielded archaeological sites, either within or surrounding the current subject property, two main sources were consulted. These include the *Ontario Archaeological Sites Database* (OASD) and the *Public Register of Archaeological Reports*, both of which are maintained by MCM.

The OASD contains archaeological sites registered within the Borden system (Borden, 1952). The Borden system divides Canada into 13 kilometre (km) by 18.5 km blocks based on longitude and latitude. Each Borden block is designated with a four-letter label and sites identified within the block are numbered sequentially as they are registered. The subject property is located within the *AkHc* Borden block.



According to the OASD, no archaeological sites have been registered within the subject property or within 1 km of the subject property (MCM, 2024a). The absence of registered sites may not necessarily be an accurate indication of cultural occupation, but rather it may reflect the lack of systematic archaeological surveys in the area.

Information concerning specific site locations is protected by provincial policy and is not fully subject to the *Freedom of Information Act*. The release of such information in the past has led to looting or various forms of illegally conducted site destruction. Confidentiality extends to all media capable of conveying location, including maps, drawings, or textual descriptions of a site location. MCM will provide information concerning site location to the party or an agent of the party holding title to a property, or to a licensed archaeologist with relevant cultural resource management interests.

1.3.3.2 Previous Archaeological Reports

A review of archaeological reports within the *Public Register of Archaeological Reports* indicated that there are no archaeological reports detailing previous archaeological fieldwork within the subject property or within 50 m of the subject property in MCM's register at the time this report was written (MCM, 2024b). Reports were searched based on registered site information, historic lots and concessions, and nearby streets.

ACC is conducting Stage 1 assessment of a parcel of land located directly to the south of the current subject property under PIF P066-0433-2024 (ACC, 2024). This desktop assessment is being conducted for the Elora Sands Development T, located on Lot 17, Concession 12. Background research indicates that the property retains archeological potential and requires a Stage 2 assessment. Figure 6 shows the location of this assessment in relation to the current subject property.

1.3.4 Archaeological Master Plans

The subject property is situated within an area that has not been subject to an archaeological master plan, management plan, or similar regional overview. The Township of Centre Wellington is currently in the process of undertaking a Cultural Heritage Landscape Study in order to identify, evaluate, inventory, and map significant Cultural Heritage Landscapes in Centre Wellington (Centre Wellington, 2024).

2.0 FIELD METHODS

An optional visual property inspection was not completed for the project. However, the entirety of the property was assessed and documented through background research of the geography, topography, and current condition of the property. This research was sufficient to identify the presence or absence of features of archaeological potential, and to make recommendations regarding further fieldwork.

Results of the Stage 1 assessment are shown in Figure 7.



3.0 RECORD OF FINDS

The subject property measures 39.56 ha. A tributary of the Grand River makes up 0.36 ha, or 1 percent (%) of the subject property.

3.1 Areas of Low to No Archaeological Potential

Areas of low to no archaeological potential include lands that have been previously disturbed, lands that have steeply sloping topography, and lands that are low-lying and permanently wet.

Aerial imagery and topographic mapping indicates that 0.28 ha, 1%, of the subject property has been previously intensively and extensively disturbed by major landscaping and construction activities involving grading below topsoil for construction of driveways, residential buildings, agricultural buildings, and outbuildings.

No areas of steeply sloping topography, characterized by slopes in excess of 20 degrees, were observed within the subject property. No low-lying and permanently wet areas were observed within the subject property.

Figure 7 shows the areas that have been identified during background research as having low to no archaeological potential. As no visual property inspection has been completed for this assessment, the Stage 2 assessment must confirm, document, and map all areas of low to no archaeological potential identified during this Stage 1 archaeological assessment.

3.2 Areas of Archaeological Potential

Areas of archaeological potential include undisturbed and well-drained lands such as agricultural fields, wooded areas, and manicured greenspaces. Based on background research 38.92 ha, 98% of the subject property, retains archaeological potential and requires Stage 2 survey.

36.80 ha, 93%, of the subject property consists of recently or actively cultivated agricultural field. According to Section 2.1.1 of the *Standards and Guidelines for Consultant Archaeologists* (MCM, 2011), pedestrian survey is required in actively or recently cultivated fields that can be ploughed. Therefore, Stage 2 archaeological assessment in these areas should be conducted by pedestrian survey at 5 m intervals.

According to 2.1.2 of the *Standards and Guidelines for Consultant Archaeologists* (MCM, 2011), test pit survey is required on terrain where ploughing is not viable, such as wooded areas, properties where existing landscaping or infrastructure would be damaged, overgrown farmland with heavy brush or rocky pasture, and narrow linear corridors up to 10 m wide. Wooded areas, tree rows, and manicured greenspace account for 1.67 ha, 5%, of the subject property. These portions meet the requirements of Section 2.1.2 1 of the *Standards and Guidelines for Consultant Archaeologists*, that ploughing or cultivation is not viable. Because these portions of the property cannot be ploughed, the Stage 2 assessment of these areas should be completed by test pit survey at 5 m grid intervals.



Figure 7 shows the areas that have been identified during background research to retain archaeological potential and require Stage 2 assessment.

3.3 Documentary Record

All fieldwork-related activities were documented and kept, including notes and observations and detailed maps. Appropriate photographic records were kept of the assessment and all image descriptions were recorded in a photo log.

A detailed list of records is presented in Table 2. All digital items have been duplicated and all paper items have been scanned and stored as digital documents. All items are housed in the corporate offices of ACC.

Under Section 6 of Regulation 881 of the OHA, ACC will keep in safekeeping all objects of archaeological significance that are found under the authority of the license and all field records that are made in the course of the work authorized by the license, except where the objects and records are donated to His Majesty the King in right of Ontario or are directed to be deposited in a public institution under subsection 66 (1) of the Act.

Table 2: Inventory of Documentary and Material Records

PROJECT INFORMATION		
ACC project number	395-01-24	
Licensee	Kristy O’Neal	
MCM PIF numbers	P066-0434-2024	
DOCUMENT/MATERIAL	NUMBER	DESCRIPTION
notes	1	pages (paper, with digital copies)
maps	1	aerial imagery of the subject property
	2	historic maps



4.0 ANALYSIS AND CONCLUSIONS

4.1 Potential for Archaeological Resources

Archaeological potential is defined as the likelihood of finding archaeological sites within a subject area. For planning purposes, determining archaeological potential provides a preliminary indication that significant sites might be found within the subject area, and consequently, that it may be necessary to allocate time and resources for archaeological survey and mitigation.

The framework for assigning levels of potential archaeological significance is drawn from provincial guidelines found in the *Standards and Guidelines for Consultant Archaeologists* (MCM, 2011: Sections 1.3.1 and 1.3.2). The following are features or characteristics that can indicate archaeological potential:

- previously identified archaeological sites
- water sources (It is important to distinguish types of water and shoreline, and to distinguish natural from artificial water sources, as these features affect site locations and types to varying degrees.)
 - primary water sources (e.g., lakes, rivers, streams, creeks)
 - secondary water sources (e.g., 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 the 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, plateaus)
- pockets of well-drained sandy soil, especially near areas of heavy soil or rocky ground
- distinctive land formation 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 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, portages)
- property listed on a municipal register or designated under the OHA or that is in a federal, provincial, or municipal historic landmark site
- property that local histories or informants have identified with possible archaeological sites, historical events, activities, or occupations

Archaeological potential can be determined not to be present for either the entire property or parts 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.

4.2 Discussion

Section 1.3.1 of the *Standards and Guidelines for Consultant Archaeologists* (MCM, 2011) lists criteria indicative of archaeological potential. Stage 1 background research indicated that the subject property has general archaeological potential due to the following factors:

- The subject property is largely comprised of well-drained land that is suitable for human habitation.
- The subject property is located adjacent to three early historical transportation routes, Irvine Street, Gerrie Road, and Sideroad 15.
- A water source, an unnamed tributary of the Grand River is located within the subject property.
- The Grand River, a major transportation route, resource extraction area, and water source, is located just over 300 m from the subject property.

Given the above criteria, background archival research indicates that the subject property exhibits general archaeological potential for the discovery of both pre/post-contact Indigenous



and Euro-Canadian archaeological resources therefore, a Stage 2 archaeological assessment is required.

The subject property measures 39.56 ha. Aerial imagery and topographic mapping indicates that 0.36 ha of the subject property consists of a watercourse, a tributary of the Grand River. If impacts to this watercourse are proposed, marine archaeological potential may be evaluated through a separate process following the MCM's 2016 *Criteria for Evaluating Marine Archaeological Potential* checklist.

0.28 ha of the subject property has been previously intensively and extensively disturbed by major landscaping and construction activities involving grading below topsoil for construction of a residential house, agricultural buildings, and driveway. As no property inspection was conducted as part of the Stage 1 assessment, visual inspection to confirm, document and map these areas of low to no archaeological potential is recommended.

The remainder of the subject property, 38.92 ha, retains archaeological potential and requires Stage 2 property survey. Agricultural fields account for 36.80 ha of the subject property. As the fields are ploughable land, the Stage 2 assessment of the fields should be completed by pedestrian survey at 5 m intervals. Woodlot, tree rows, and lawn areas account for 1.67 ha of the subject property. As these areas cannot be ploughed, Stage 2 assessment should be completed by test pit survey at 5 m grid intervals.



5.0 RECOMMENDATIONS

Subject to acceptance of the results and approval of the recommendations, MCM is requested to deem this report compliant with ministry requirements for archaeological fieldwork and reporting and to issue a letter accepting this report into the *Ontario Public Register of Archaeological Reports*.

The following recommendations are provided for consideration by the Proponent and by the MCM:

1. Aerial imagery and topographic mapping indicates 0.28 ha of the subject property exhibits low to no potential for the recovery of archaeological resources due previous disturbance, as shown in Figure 7 of this report. Stage 2 assessment should confirm the presence and extent of these areas of low archaeological potential, and they should be mapped and documented by photography.
2. Stage 2 archaeological assessment in the form of a pedestrian survey should be conducted on all ploughable lands, accounting for 36.80 ha of the subject property, as shown in Figure 7 of this report. The land to be assessed must be recently ploughed and must be disked after ploughing if the soil is heavy clay. Direction should be provided to the contractor undertaking the ploughing that the ploughing should be deep enough to provide total topsoil exposure, but not deeper than previous ploughing. The ploughed lands must be weathered by one heavy rainfall or several light rains to improve the visibility of archaeological resources. At least 80% of the ground surface must be visible to conduct a pedestrian survey. If the fields to be assessed do not meet the above conditions, then the land may need to be reploughed prior to survey. The ploughed lands should be surveyed at 5 m intervals.

When archaeological resources are found, the survey intervals will be decreased to 1 m intervals over a minimum of 20 m radius around the archaeological find to determine if it is an isolated find or part of a larger scatter. The 1 m interval survey should continue until the full extent of the surface scatter has been identified.

3. Stage 2 archaeological assessment in the form of a test pit survey should be conducted in all areas where ploughing is not possible or viable, including wooded, scrub, and lawn areas which account for 1.67 ha of the subject property, as shown in Figure 7 of this report. Test pits should be excavated by hand at 5 m intervals. Test pits should be at least 30 centimetres in diameter and should be dug into the first 5 centimetres of subsoil. Test pits should be conducted to within 1 m of any disturbances or until test pits show evidence of recent ground disturbance. Each pit should be examined for stratigraphy, cultural features, or evidence of fill. All soil should be screened through wire mesh with an aperture no greater than 6 millimetres to facilitate artifact recovery. All artifacts should be collected according to their associated test pit. All test pits should be backfilled unless otherwise instructed.



When artifacts are found, the survey grid should be continued to determine whether there are further positive test pits. This may produce sufficient archaeological resources to meet criteria for requiring a Stage 3 archaeological assessment. When insufficient archaeological resources are found through continued grid survey to meet criteria for Stage 3 assessment, survey coverage around the positive test pit should be continued, by means of eight additional test pits and one or more 1 m by 1 m square test unit placed above the positive test pit.



6.0 ADVICE ON COMPLIANCE WITH LEGISLATION

The following advice on compliance with current legislation is provided for consideration:

- a. This report is submitted to the Minister of Citizenship and Multiculturalism as a condition of licensing in accordance with Part IV of the *Ontario Heritage Act*, R.S.O. 2005, c O.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 Citizenship and Multiculturalism, 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.
- b. 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 a 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 Archaeological Reports referred to in Section 65.1 of the *Ontario Heritage Act*.
- c. 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 Section 48 (1) of the *Ontario Heritage Act*.
- d. The *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 requires that any person discovering human remains must notify the local police or coroner and the Registrar, Burials Unit, at the Ministry of Public and Business Service Delivery and Procurement.
- e. It is an offence to destroy or alter an archaeological site without approval from the Ministry of Citizenship and Multiculturalism. 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 license.



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8.0 FIGURES

See the following pages for detailed assessment mapping and figures.



Figure 1: Location of the Subject Property on a Topographic Map

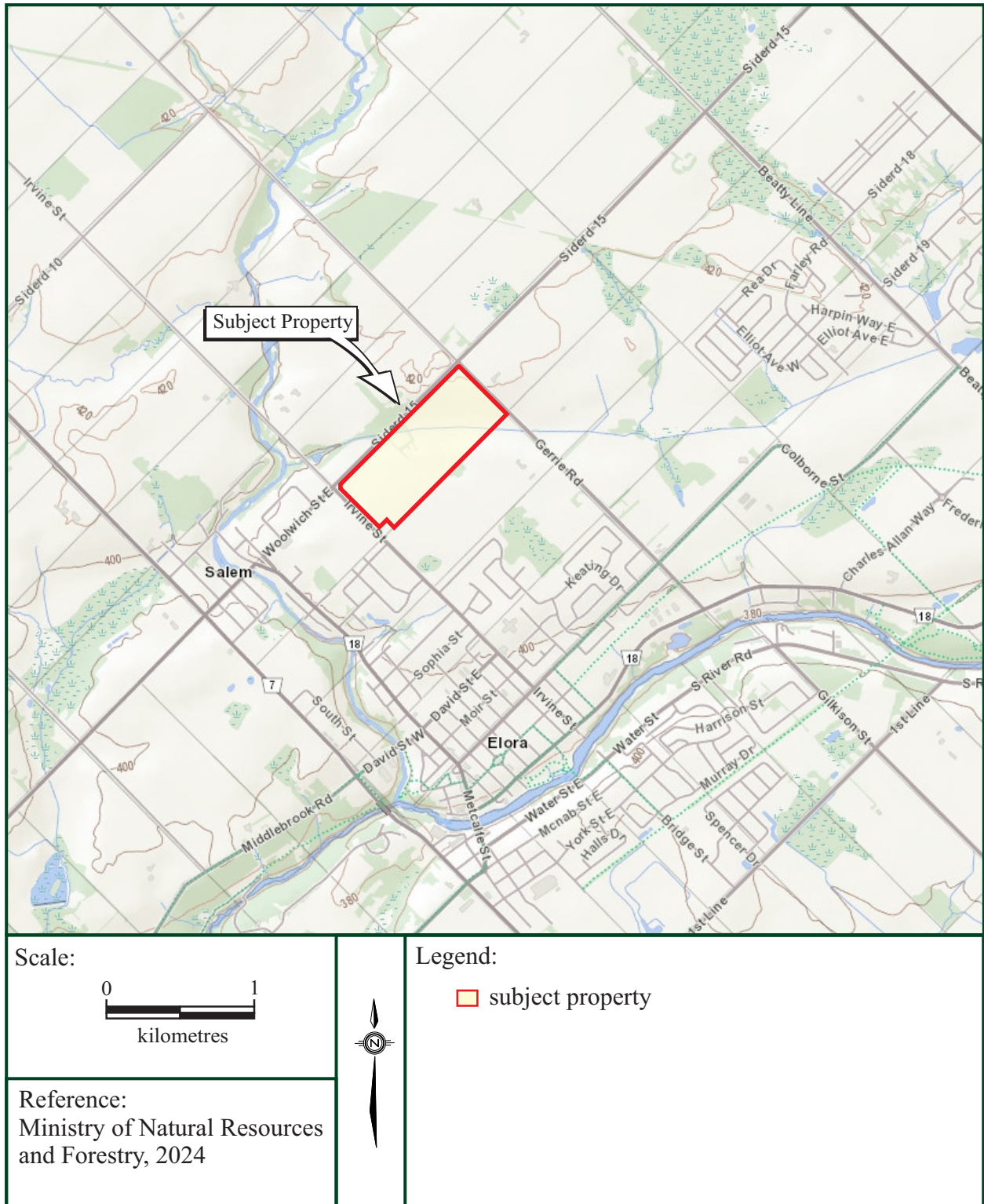


Figure 2: Location of the Subject Property on Leslie & Wheelock's 1861 Map of Wellington County, Canada West

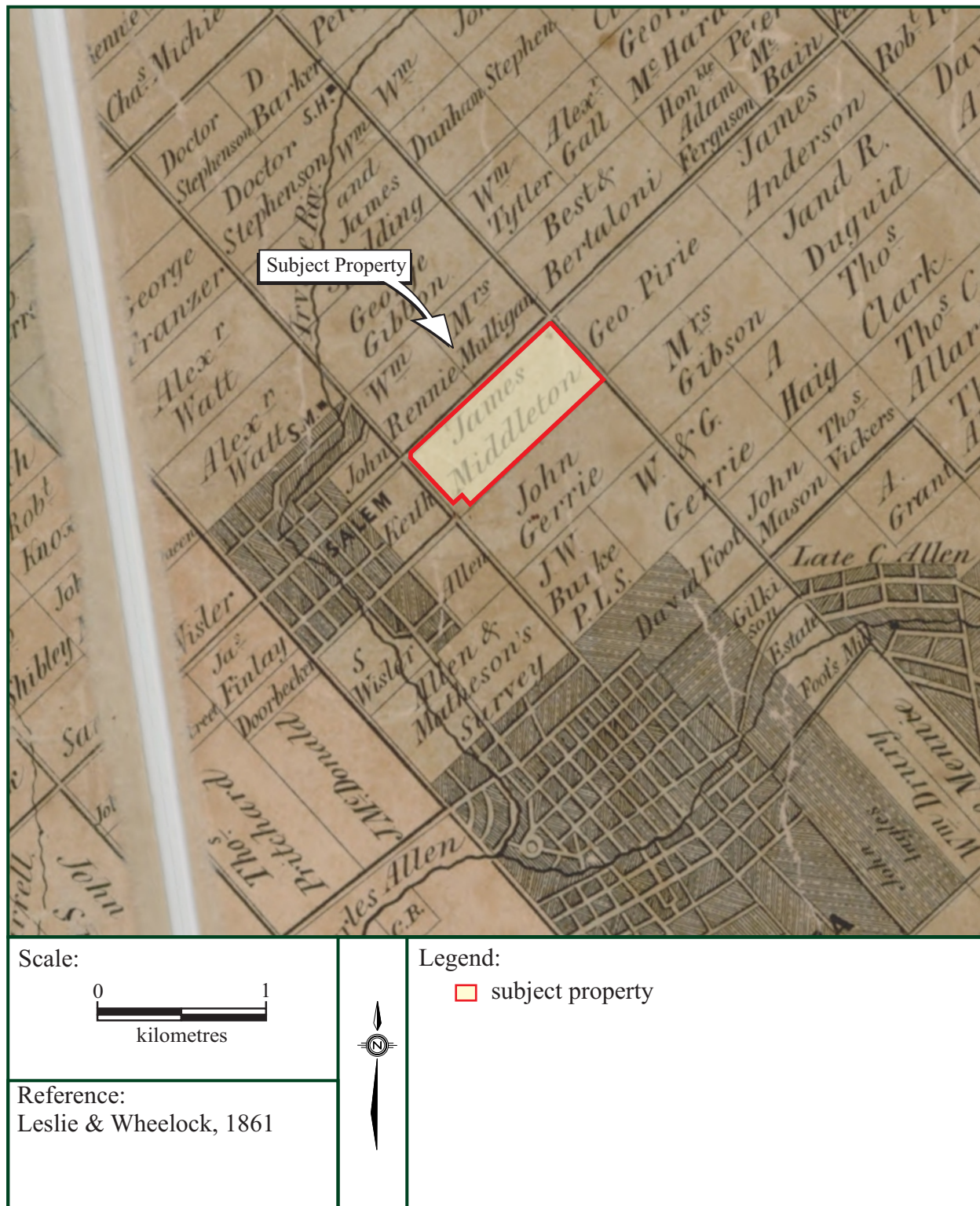


Figure 3: Location of the Subject Property on Walker & Miles' 1877 Illustrated Historical Atlas Map of Nichol Township, Wellington County



Figure 4: Location of the Subject Property on a Map of Wellington County Soils

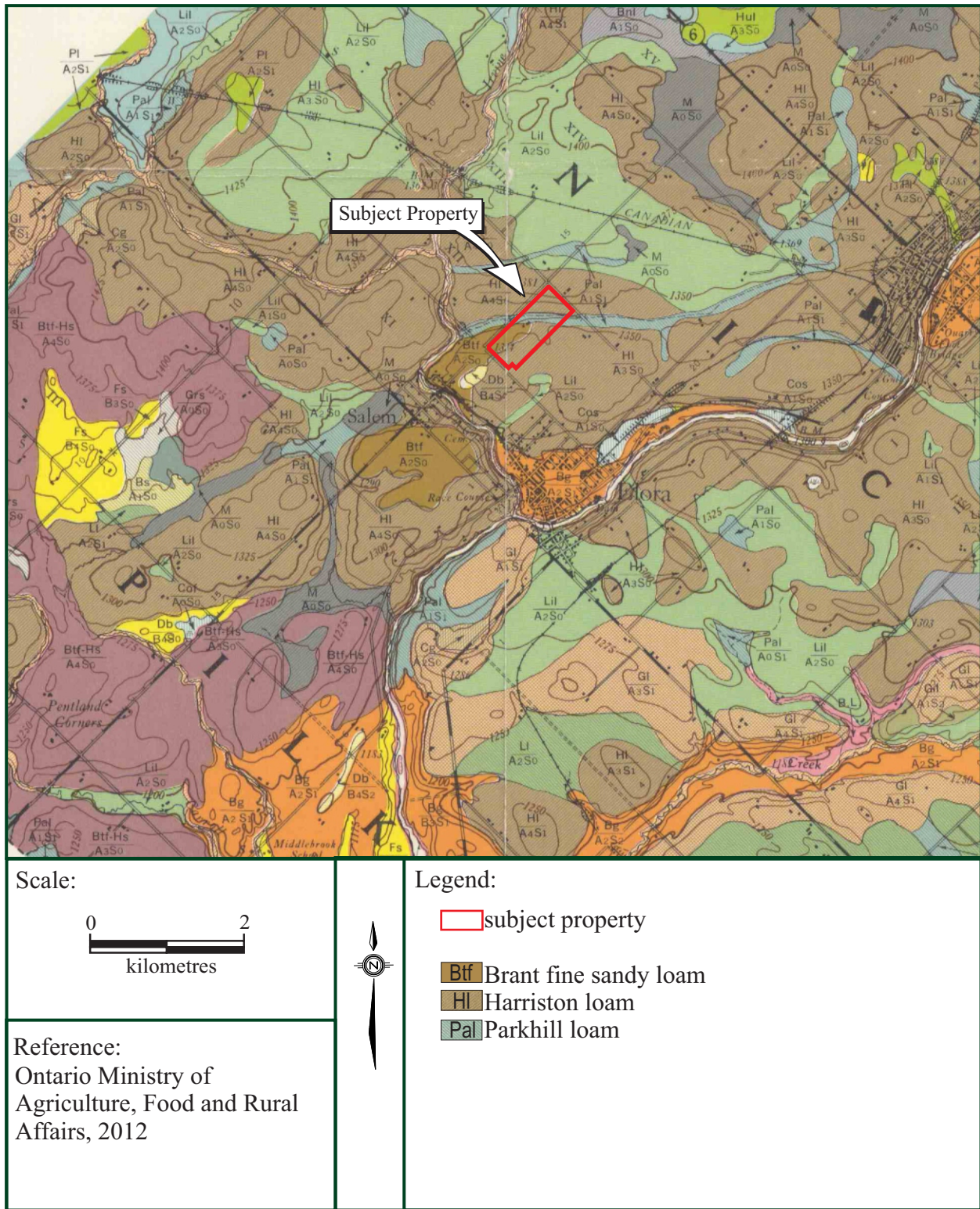


Figure 5: Current Land Use of the Subject Property



Figure 6: Previous Archaeological Assessments Conducted within 50 m of the Subject Property

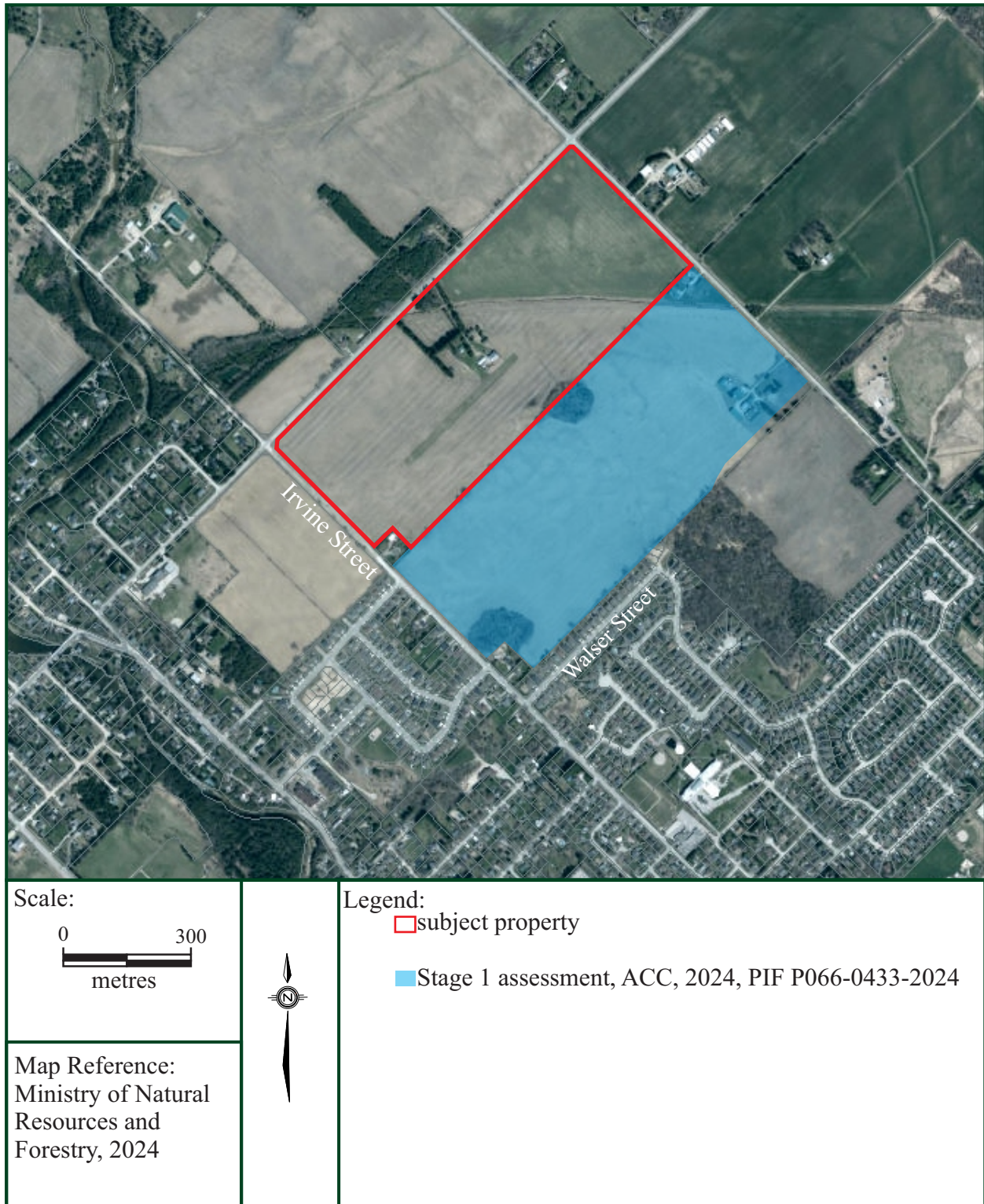


Figure 7: Results of the Stage 1 Archaeological Assessment of the Subject Property

