

**STAGE 1-2 ARCHAEOLOGICAL
ASSESSMENT OF THE ARKELL LANDS
IN PART OF LOTS 7, 8 & 9,
CONCESSION 10, TOWNSHIP OF
PUSLINCH, WELLINGTON COUNTY,
ONTARIO**

SUBMITTED TO

TIMBERWORX CUSTOM HOMES INC.

AND

THE ONTARIO MINISTRY OF CITIZENSHIP AND MULTICULTURALISM

REPORT TYPE: ORIGINAL

ARCHAEOLOGICAL LICENSE NUMBER P1289, KARA ADAMS

PIF P1289-0424-2023

JANUARY 2024



January 2024

Table of Contents

Executive Summary	3
Project Personnel.....	4
Acknowledgements	4
1.0 PROJECT CONTEXT.....	5
1.1 DEVELOPMENT CONTEXT	5
1.1.1 Objectives	5
1.2 HISTORICAL CONTEXT	6
1.2.1 Pre and Early Post-Contact Aboriginal Resources	6
1.2.2 Historic Euro-Canadian Resources.....	8
1.3 ARCHAEOLOGICAL CONTEXT	9
1.3.1 The Natural Environment	9
1.3.2 Previously Known Archaeological Sites and Surveys.....	9
1.3.3 Summary of Past Archaeological Investigations within 50 Metres	10
1.3.4 Archaeological Potential	10
2.0 FIELD METHODS	12
3.0 RECORD OF FINDS	13
4.0 ANALYSIS AND CONCLUSION	14
5.0 RECOMMENDATIONS	15
6.0 ADVICE ON COMPLIANCE WITH LEGISLATION.....	16
7.0 BIBLIOGRAPHY AND RESOURCES.....	17
8.0 IMAGES.....	19
8.1 PHOTOGRAPHS	19
9.0 MAPS	27
 Figure 1: Topographic Map of Study Area	 28
Figure 2: Study Area.....	29
Figure 3: Portion of the Illustrated Historical Atlas Map of the County of Wellington, ON. 1878.....	30
Figure 4: Assessment Strategies and Results	31

STAGE 1-2 ARCHAEOLOGICAL ASSESSMENT: THE ARKELL LANDS

January 2024

Executive Summary

Lincoln Environmental Consulting Corp. (LEC) was retained by Timberworx Custom Homes Inc. to complete a Stage 1-2 archaeological assessment of the Arkell Lands to meet the requirements of the *Planning Act* (Government of Ontario 2014) in advance of a planning permit. The study area measures approximately 16.80 hectares in size and is located in part of Lots 7, 8 & 9, Concession 10, Township of Puslinch, Wellington County, Ontario.

This assessment was triggered by the Provincial Policy Statement that is informed by the *Planning Act* (Government of Ontario 1990a), which states that decisions affecting planning matters must be consistent with the policies outlined in the larger *Ontario Heritage Act* (1990b). According to Section 2.6.2 of the PPS, “*development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved.*”

In accordance with Section 1.3.1 of the Ministry of Tourism, Culture and Sport’s (MHSTCI) 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), the Stage 1 archaeological assessment of the Arkell Lands has determined that the study area exhibits high potential for the identification and recovery of archaeological resources and a Stage 2 archaeological assessment is recommended.

The Stage 2 assessment was conducted on May 10th and May 11th 2023, under archaeological consulting license P1289 issued to Kara Adams, MSc, of LEC by the MHSTCI. No archaeological resources were identified during the Stage 2 archaeological assessment of the study area, and as such **no further archaeological assessment of the property is recommended.**

The MHSTCI is asked to review the results presented and accept this report into the Ontario Public Register of Archaeological Reports.

STAGE 1-2 ARCHAEOLOGICAL ASSESSMENT: THE ARKELL LANDS

January 2024

Project Personnel

Licensed Archaeologist:	Kara Adams, MSC (P1289)
Project Manager:	Derek Lincoln, MA (P344)
Licensed Field Director:	Carley Adams, MSc (R1319)
Field Technicians:	Owen Gillet, Nick Maharaj, Owen McGrenere, Michael Bagnall, Jayden Duncan, Uluc Yumurutug, Tyler Glanville, Christian Drasovean, Zach Hagarth, Jacob Chrisjohn
GIS Specialist:	Derek Lincoln, MA (P344)
Report Writer:	Carley Adams, MSc (R1319)
Senior Review:	Derek Lincoln, MA (P344)

Acknowledgements

Proponent Contact:	Rob Stovel, Stovel Associates
--------------------	-------------------------------

January 2024

1.0 PROJECT CONTEXT

1.1 DEVELOPMENT CONTEXT

Lincoln Environmental Consulting Corp. (LEC) was retained by Timberworx Custom Homes Inc. to complete a Stage 1-2 archaeological assessment of the Arkell Lands to meet the requirements of the *Planning Act* (Government of Ontario 2014) in advance of a planning permit. The study area measures approximately 16.80 hectares in size and is located in part of Lots 7, 8 & 9, Concession 10, Township of Puslinch, Wellington County, Ontario.

This assessment was triggered by the PPS that is informed by the *Planning Act* (Government of Ontario 1990a), which states that decisions affecting planning matters must be consistent with the policies outlined in the larger *Ontario Heritage Act* (1990b). According to Section 2.6.2 of the PPS, “*development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved.*”

Permission to enter the study area and document archaeological resources was provided by Rob Stovel of Stovel and Associates Inc.

1.1.1 Objectives

In compliance with the provincial standards and guidelines set out in the Ministry of Heritage, Sport, Tourism, and Culture Industries’ (MHSTCI) 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), the objectives of the Stage 1 Archaeological Overview/Background Study are as follows:

- To provide information about the study area’s geography, history, previous archaeological fieldwork, and current land conditions;
- To evaluate in detail the study area’s archaeological potential which will support recommendations for Stage 2 survey for all or parts of the property; and
- To recommend appropriate strategies for Stage 2 survey.

To meet these objectives LEC archaeologists employed the following research strategies:

- A review of relevant archaeological, historic and environmental literature pertaining to the study area;
- A review of the land use history, including pertinent historic maps; and
- An examination of the Ontario Archaeological Sites Database (ASDB) to determine the presence of known archaeological sites in and around the project area.

STAGE 1-2 ARCHAEOLOGICAL ASSESSMENT: THE ARKELL LANDS

January 2024

The objective of the Stage 2 assessment was to provide an overview of archaeological resources on the property and to determine whether any of the resources might be archaeological sites with cultural heritage value or interest and to provide specific direction for the protection, management and/or recovery of these resources. In compliance with the provincial standards and guidelines set out in the MHSTCI' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), the objectives of the Stage 2 Property Assessment are as follows:

- To document all archaeological resources within the study area;
- To determine whether the study area contains archaeological resources requiring further assessment; and
- To recommend appropriate Stage 3 assessment strategies for archaeological sites identified.

1.2 HISTORICAL CONTEXT

The study area is 16.80 hectares of which approximately 57% consists of active agricultural fields, and 43% consists of manicured lawn and woodlot. The study area is located at the Arkell Lands in part of Lots 7, 8 & 9, Concession 10, Township of Puslinch, Wellington County, Ontario.

1.2.1 Pre and Early Post-Contact Aboriginal Resources

Our knowledge of past First Peoples settlement and land use in Wellington County is incomplete. Nonetheless, using province-wide (MCCR 1997) and region-specific archaeological data, a generalized cultural chronology for native settlement in the area can be proposed. The following paragraphs provide a basic textual summary of the known general cultural trends and a tabular summary appears in Table 1.

The Paleoindian Period

The first human populations to inhabit Ontario came to the region between 12,000 and 10,000 years ago, coincident with the end of the last period of glaciation. Climate and environmental conditions were significantly different than they are today; local environs would not have been welcoming to anything but short-term settlement. Termed Paleoindians by archaeologists, Ontario first peoples would have crossed the landscape in small groups (i.e., bands or family units) searching for food, particularly migratory game species. In the area, caribou may have provided the staple of the Paleoindian diet, supplemented by wild plants, small game, birds and fish. Given the low density of populations on the landscape at this time and their mobile nature, Paleoindian sites are small and ephemeral. They are usually identified by the presence of fluted projectile points and other finely made stone tools.

Archaic

The archaeological record of early native life in Southern Ontario indicates a change in lifeways beginning circa 10,000 years ago at the start of what archaeologists call the Archaic Period. The Archaic populations are better known than their Paleoindian predecessors, with numerous sites found throughout the area. The characteristic projectile points of early Archaic populations appear similar in some respects to early varieties

STAGE 1-2 ARCHAEOLOGICAL ASSESSMENT: THE ARKELL LANDS

January 2024

and are likely a continuation of early trends. Archaic populations continued to rely heavily on game, particularly caribou, but diversified their diet and exploitation patterns with changing environmental conditions. A seasonal pattern of warm season riverine or lakeshore settlements and interior cold weather occupations has been documented in the archaeological record. Since the large cold weather mammal species that formed the basis of the Paleoindian subsistence pattern became extinct or moved northward with the onset of warmer climates, Archaic populations had a more varied diet, exploiting a range of plant, bird, mammal and fish species. Reliance on specific food resources like fish, deer and nuts becomes more pronounced through time and the presence of more hospitable environs and resource abundance led to the expansion of band and family sizes. In the archaeological record, this is evident in the presence of larger sites and aggregation camps, where several families or bands would come together in times of resource abundance. The change to more preferable environmental circumstances led to a rise in population density. As a result, Archaic sites are more abundant than those from the earlier period. Artifacts typical of these occupations include a variety of stemmed and notched projectile points, chipped stone scrapers, ground stone tools (e.g. celts, adzes) and ornaments (e.g. bannerstones, gorgets), bifaces or tool blanks, animal bone and waste flakes, a by-product of the tool making process.

Woodland Period

Significant changes in cultural and environmental patterns are witnessed in the Woodland Period (circa 950 B.C to historic times). The coniferous forests of earlier times were replaced by stands of mixed and deciduous species. Occupations became increasingly more permanent in this period, culminating in major semi-permanent villages by 1,000 years ago. Archaeologically, the most significant changes by Woodland times are the appearance of artifacts manufactured from modeled clay and the construction of house structures. The Woodland Period is often defined by the occurrence of pottery, storage facilities and residential areas similar to those that define the incipient agricultural or Neolithic period in Europe. The earliest pottery was rather crudely made by the coiling method and house structures were simple enclosures.

Iroquoian Period

The primary Late Woodland occupants of the area were the Neutral Nation, an Iroquoian speaking population described by European missionaries. Like other known Iroquoian groups including the Huron (Wendat) and Petun, the Neutral practiced a system of intensive horticulture based on three primary subsistence crops (corn, beans and squash). Neutral villages incorporated a number of longhouses, multi-family dwellings that contained several families related through the female line. The Jesuit Relations describe several Neutral centres in existence in the 17th century, including a number of sites where missions were later established. While precontact Neutral sites may be identified by a predominance of well-made pottery decorated with various simple and geometric motifs, triangular stone projectile points, clay pipes and ground stone implements, sites post-dating European contact are recognized through the appearance of various items of European manufacture. The latter include materials acquired by trade (e.g., glass beads, copper/brass kettles, iron axes, knives and other metal implements) in addition to the personal items of European visitors and Jesuit priests (e.g., finger rings, stoneware, rosaries, glassware). The Neutral were dispersed, and their population decimated by the arrival of epidemic European diseases and inter-tribal warfare.

STAGE 1-2 ARCHAEOLOGICAL ASSESSMENT: THE ARKELL LANDS

January 2024

Table 1: Cultural Chronology for Native Settlement within Wellington County

Period			Time Range (circa)	Diagnostic Features	Complexes
Paleoindian	Early		9000 – 8400 B.C.	fluted projectile points	Gainey, Barnes, Crowfield
	Late		8400 – 8000 B.C.	non-fluted and lanceolate points	Holcombe, Hi-Lo, Lanceolate
Archaic	Early		8000 – 6000 B.C.	serrated, notched, bifurcate base points	Nettling, Bifurcate Base Horizon
	Middle		6000 – 2500 B.C.	stemmed, side & corner notched points	Brewerton, Otter Creek, Stanly/Neville
	Late		2000 – 1800 B.C.	narrow points	Lamoka
			1800 – 1500 B.C.	broad points	Genesee, Adder Orchard, Perkiomen
			1500 – 1100 B.C.	small points	Crawford Knoll
	Terminal		1100 – 850 B.C.	first true cemeteries	Hind
Woodland	Early		800 – 400 B.C.	expanding stemmed points, Vinette pottery	Meadowood
	Middle		400 B.C. – A.D. 600	thick coiled pottery, notched rims; cord marked	Couture
	Late	Western Basin	A.D. 600 – 900	Wayne ware, vertical cord marked ceramics	Riviere au Vase-Algonquin
			A.D. 900 – 1200	first corn; ceramics with multiple band impressions	Young- Algonquin
			A.D. 1200 – 1400	longhouses; bag shaped pots, ribbed paddle	Springwells-Algonquin
			A.D. 1400-1600	villages with earthworks; Parker Festoon pots	Wolf- Algonquin
Contact		Aboriginal	A.D. 1600 – 1700	early historic native settlements	Neutral Huron, Odawa, Wenro
		Euro-Canadian	A.D. 1700-1760	fur trade, missionization, early military establishments	French
			A.D. 1760-1900	Military establishments, pioneer settlement	British colonials, UELs

1.2.2 Historic Euro-Canadian Resources

The 1878 *Illustrated Historical Atlas of Wellington County's* map of the Township of Puslinch depicts a settled urban landscape with several landowners, structures, early transportation routes, and early town sites. A portion of the 1878 historic map of the Township of Puslinch is depicted in Figure 3, and this part of the Lot is listed as being owned by J. Bell, with a single structure depicted near the study area.

STAGE 1-2 ARCHAEOLOGICAL ASSESSMENT: THE ARKELL LANDS

January 2024

1.3 ARCHAEOLOGICAL CONTEXT

The study area is 16.80 hectares of which approximately 57% consists of active agricultural fields, and 43% consists of manicured lawn and woodlot. The study area is located at the Arkell Lands in part of Lots 7, 8 & 9, Concession 10, Township of Puslinch, Wellington County, Ontario.

1.3.1 The Natural Environment

The project area is located in the Horseshow Moraines physiographic region as identified by Chapman and Putnam (1984:127-129).

From the edge of the escarpment in the Town of Caledon the moraines trend somewhat west of the Niagara Escarpment forming a belt of moderately hilly relief... Associated with the moraines is a system of old spillways with broad gravel terraces and swampy floors... Good cross-sections of this landscape may be seen along Highway 7 from Rockwood to Georgetown.

(Chapman and Putnam 1984:128)

The soils here are comprised of sandy loam, ideal for agricultural practices and aboriginal settlement.

Potable water is the single most important resource for any extended human occupation or settlement and since water sources in southwestern Ontario have remained relatively stable over time, proximity to drinkable water is regarded as a useful index for the evaluation of archaeological site potential. In fact, distance to water is one of the most commonly used variables for predictive modeling of archaeological site location in Ontario. The closest extant source of potable water is the Eramosa River which passes north-west of the study area.

1.3.2 Previously Known Archaeological Sites and Surveys

In order to compile an inventory of archaeological resources, the registered archaeological site records kept by the MHSTCI were consulted. In Ontario, information concerning archaeological sites stored in the ASDB is maintained by the MHSTCI. This database contains archaeological sites registered according to the Borden system. Under the Borden system, Canada is divided into grid blocks based on latitude and longitude. A Borden Block is approximately 13 kilometers east to west and approximately 18.5 kilometers 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.

Information concerning specific site locations is protected by provincial policy and is not fully subject to the *Freedom of Information and Protection of Privacy 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. The MHSTCI 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.

An examination of the ASDB has shown that there are 15 archaeological sites registered within a one-kilometer radius of the study area (Sites Data Search, Government of Ontario, May 5th, 2023); Table 2

STAGE 1-2 ARCHAEOLOGICAL ASSESSMENT: THE ARKELL LANDS

January 2024

summarizes the registered archaeological sites within one-kilometer of the study area. None of the sites fall within the current study area, nor within 50m of it.

Table 2: Registered Archaeological Sites within One Kilometer of the Study Area

Borden #	Site Name	Site Type	Cultural Affiliation
AjHa-56		Findspot	Archaic, Middle
AjHa-6	Starkey	Unknown	Post-Contact
AjHb-102		Other site	Woodland, Early
AjHb-103		Findspot	Woodland, Early
AjHb-104		Findspot	Archaic, Middle
AjHb-112		Scatter	Pre-Contact
AjHb-116		Scatter	Pre-Contact
AjHb-119	Haines	Homestead	Post-Contact, Euro-Canadian
AjHb-124	P191	Scatter	Pre-Contact
AjHb-125	Haines 1	Farmstead	Post-Contact
AjHb-95		Findspot	Archaic, Early
AjHb-96		Findspot	Archaic, Early
AjHb-97		Findspot	Archaic, Early
AjHb-98	Arkell 1	Other/discrete refuse Deposit, cabin	Post-Contact, Euro-Canadian
AjHb-99	Arkell 2	Homestead	Post-Contact

1.3.3 Summary of Past Archaeological Investigations within 50 Metres

There have been no documented archaeological investigations within 50 metres of the study area. However, it should be noted that the Ministry of Citizenship and Multiculturalism currently does not provide a complete inventory of archaeological assessments carried out within 50 metres of a property, so a complete inventory of assessments on lands adjacent to the subject property cannot be provided.

1.3.4 Archaeological Potential

Archaeological potential is established by determining the likelihood that archaeological resources may be present on a subject property. LEC applied archaeological potential criteria commonly used by MHSTCI (Government of Ontario 2011) to determine areas of archaeological potential within the region under study. These variables include proximity to previously identified archaeological sites, distance to various types of water sources, soil texture and drainage, glacial geomorphology, elevated topography and the general topographic variability of the area.

Distance to modern or ancient water sources is generally accepted as the most important determinant of past human settlement patterns and, considered alone, may result in a determination of archaeological potential. However, any combination of two or more other criteria, such as well-drained soils or topographic

STAGE 1-2 ARCHAEOLOGICAL ASSESSMENT: THE ARKELL LANDS

January 2024

variability, may also indicate archaeological potential. Finally, extensive land disturbance can eradicate archaeological potential (Wilson and Horne 1995).

As discussed above, distance to water is an essential factor in archaeological potential modeling. When evaluating distance to water it is important to distinguish between water and shoreline, as well as natural and artificial water sources, as these features affect sites' locations and types to varying degrees. The MHSTCI categorizes water sources in the following manner:

- Primary water sources: lakes, rivers, streams, creeks;
- Secondary water sources: intermittent streams and creeks, springs, marshes and swamps;
- Past water sources: glacial lake shorelines, relic river or stream channels, cobble beaches, shorelines of drained lakes or marshes; and
- Accessible or inaccessible shorelines: high bluffs, swamp or marshy lake edges, sandbars stretching into marsh.

The closest extant source of potable water is the Eramosa River which passes north-west of the study area. The water resources that exist and existed close to the study area indicate archaeological potential.

Soil texture can be an important determinant of past settlement, usually in combination with other factors such as topography. As indicated previously, the soils within the study area are variable, but include pockets of well-drained and sandy soils that would be suitable for pre-contact Aboriginal agriculture.

An examination of the ASDB has shown that there are 15 archaeological sites registered within a one-kilometer radius of the study area, though none of them lie within it, nor within 50 meters of it.

For Euro-Canadian sites, archaeological potential can be extended to areas of early Euro-Canadian settlement, including places of military or pioneer settlements; early transportation routes; and properties listed on the municipal register or designated under the *Ontario Heritage Act* or property that local histories or informants have identified with possible historical events. The *Illustrated Historical Atlas of Wellington County* demonstrates that the study area and its environs were densely occupied by Euro-Canadian settlers by the later 19th century. Much of the established road system and agricultural settlement from that time is still visible today.

When the above listed criteria are applied to the study area, the archaeological potential for pre-contact Aboriginal, post-contact Aboriginal, and Euro-Canadian sites is deemed to be moderate to high. Thus, in accordance with Section 1.3.1 of the MHSTCI' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), the Stage 1 archaeological assessment of the Arkell Lands has determined that the study area exhibits moderate to high potential for the identification and recovery of archaeological resources and a Stage 2 archaeological assessment is recommended.

STAGE 1-2 ARCHAEOLOGICAL ASSESSMENT: THE ARKELL LANDS

January 2024

2.0 FIELD METHODS

The Stage 2 assessment of the Arkell Lands was conducted on May 10th, 2023 under PIF # P1289-0424-2023 issued to Kara Adams, MSc, of LEC by the MHSTCI. The study area is 16.80 hectares of which approximately 57% consists of active agricultural fields, and 43% consists of manicured lawn and woodlot. The study area is located at the Arkell Lands in part of Lots 7, 8 & 9, Concession 10, Township of Puslinch, Wellington County, Ontario.

During the Stage 2 survey, assessment conditions were excellent and at no time were the field, weather, or lighting conditions detrimental to the recovery of archaeological material (Table 4). Photos 1 to 15 confirm that field conditions met the requirements for a Stage 2 archaeological assessment, as per the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Section 7.8.6 Standard 1a; Government of Ontario 2011). Figure 4 provides an illustration of the Stage 2 assessment methods, as well as photograph locations and directions.

Table 3: Field and Weather Conditions

Date	Activity	Weather	Field Conditions
May 10 th , 2023	Pedestrian survey and test pit survey	Cool, overcast	Soils dry and friable, screens well; >90% visibility
May 11 th 2023	Pedestrian survey and test pit survey	Cool, overcast	Soils dry and friable, screens well; >90% visibility

Approximately 43% of the study area consists of manicured lawn and woodlot. These areas were subject to test pit survey at 5-metre intervals in accordance with Section 2.1.2 of the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). Each test pit was at least 30 centimeters in diameter and excavated five centimeters into sterile subsoil. Test pitting was conducted within one meter of built structures in accordance with Section 2.1.1 Standard 4 of the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). The soils and test pits were then examined for stratigraphy, cultural features, or evidence of fill. All soil was screened through six-millimeter (mm) mesh hardware cloth to facilitate the recovery of small artifacts and then used to backfill the pit. No further archaeological methods were employed since no artifacts were recovered during the test pit survey.

Approximately 57% of the study area consists of active agricultural fields. These areas were subject to pedestrian survey at 5-metre intervals in accordance with Section 2.1.1 of the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). These areas were ploughed and allowed to weather sufficiently. The conditions at the time of assessment were optimal and soil surface visibility was greater than 90%. No further archaeological methods were employed since no artifacts were recovered during the pedestrian survey.

January 2024

3.0 RECORD OF FINDS

The Stage 2 archaeological assessment was conducted employing the methods described in Section 2.0. An inventory of the documentary record generated by fieldwork is provided in Table 5 below. No archaeological resources were identified during the Stage 2 archaeological assessment of the study area.

Table 4: Inventory of Documented Record

Document Type	Current Location of Document Type	Additional Comments
1 Page1 of field notes	LEC office, London	In original field book and photocopied in project file
1 Hand drawn map	LEC office, London	In original field book and photocopied in project file
1 map provided by Client	LEC office, London	Hard and digital copies in project file
38 Digital photographs	LEC office, London	Stored digitally in project file

January 2024

4.0 ANALYSIS AND CONCLUSION

Approximately 43% of the study area consists of manicured lawn and woodlot. These areas were subject to test pit survey at 5-metre intervals in accordance with Section 2.1.2 of the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). Each test pit was at least 30 centimeters in diameter and excavated five centimeters into sterile subsoil. Test pitting was conducted within one meter of built structures in accordance with Section 2.1.1 Standard 4 of the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). The soils and test pits were then examined for stratigraphy, cultural features, or evidence of fill. All soil was screened through six-millimeter (mm) mesh hardware cloth to facilitate the recovery of small artifacts and then used to backfill the pit. No further archaeological methods were employed since no artifacts were recovered during the test pit survey. Approximately 57% of the study area consists of active agricultural fields. These areas were subject to pedestrian survey at 5-metre intervals in accordance with Section 2.1.1 of the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). These areas were ploughed and allowed to weather sufficiently. The conditions at the time of assessment were optimal and soil surface visibility was greater than 90%. No further archaeological methods were employed since no artifacts were recovered during the pedestrian survey.

The Stage 2 assessment did not result in the identification of any archaeological resources.

January 2024

5.0 RECOMMENDATIONS

The Stage 2 archaeological assessment was carried out in accordance with the Ministry of Heritage, Sport, Tourism, and Culture Industries' Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011).

All work met provincial standards and no archaeological sites were identified during the Stage 2 assessment. If construction plans change to incorporate new areas that were not subject to a Stage 2 field survey, these must be assessed prior to the initiation of construction. In keeping with legislative stipulations, all construction, and demolition-related impacts (including, for example, machine travel, material storage and stockpiling, earth moving) must be restricted to the areas that were archaeologically assessed and cleared by the Ministry of Heritage, Sport, Tourism, and Culture Industries through acceptance of the assessment report into the provincial register.

As no archaeological resources were found on the subject property, no further archaeological assessment of the property is required.

January 2024

6.0 ADVICE ON COMPLIANCE WITH 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 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*.

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*.

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.

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.

January 2024

7.0 BIBLIOGRAPHY AND RESOURCES

- Adams, Nick. 1994. *Field Manual for Avocational Archaeologists in Ontario*. Ontario Archaeological Society Inc., Archaeological Stewardship Project.
- Brock, Daniel. 1972. *History of the County of Wellington, Canada*. Belleville: Mika Studio.
- Caston, Wayne A. 1997. Evolution in the Mapping of Southern Ontario and Wellington County. *Wellington County History* 10:91-106.
- Chapman, Lyman John and Donald F. Putnam. 1984. *The Physiography of Southern Ontario*. 3rd ed. Ontario Geological Survey Special Volume 2. Toronto: Ministry of Natural Resources.
- Eley, Betty E. and Peter H. von Bitter 1989. *Cherts of Southern Ontario*. Toronto: Royal Ontario Museum.
- Ellis, Chris J. and Neal Ferris (editors). 1990. *The Archaeology of Southern Ontario to A.D. 1650*. Occasional Publication of the London Chapter, Ontario Archaeological Society, Number 5.
- Feest, Johanna E. and Christian F. Feest 1978. The Ottawa. In *Handbook of North American Indians*. Vol.15 Northeast, pp. 772-786. B.G. Trigger, ed. Washington: Smithsonian Institute.
- Ferris, Neal. 2009. *The Archaeology of Native-Lived Colonialism: Challenging History in the Great Lakes*. Tucson: University of Arizona Press.
- Gentilcore, Louis R. and C. Grant Head. 1984. *Ontario's History in Maps*. Toronto: University of Toronto Press.
- Government of Ontario. 1990a. *Ontario Planning Act*, R.S.O. 1990, CHAPTER P.13. Last amendment: 2011, c. 6, Sched. 2.
- Government of Ontario. 1990b. *Ontario Heritage Act*, R.S.O. 1990, CHAPTER O.18. Last amendment: 2009, c. 33, Sched. 11, s. 6.
- Government of Ontario. 2011. *Standards and Guidelines for Consultant Archaeologists*. Toronto: Ministry of Tourism, Culture and Sport.
- Government of Ontario. n.d. *Archaeological Sites Database Files*. Toronto: Archaeology Programs Unit, Ministry of Tourism, Culture and Sport.
- Konrad, Victor. 1981. An Iroquois Frontier: The North Shore of Lake Ontario during the Late Seventeenth Century. *Journal of Historical Geography* 7(2).
- Middleton, Jess Edgar and Fred Landon. 1927. *Province of Ontario – A History 1615 to 1927*. Toronto: Dominion Publishing Company.
- Morris, J.L. 1943. *Indians of Ontario*. 1964 reprint. Toronto: Department of Lands and Forests.

STAGE 1-2 ARCHAEOLOGICAL ASSESSMENT: THE ARKELL LANDS

January 2024

Page & Co. H.R. 1878. *Illustrated Historical Atlas of the County of Middlesex, Ont.* Toronto: H.R. Page & Co.

Rogers, Edward S. 1978. Southeastern Ojibwa. In *Handbook of North American Indians*, Vol. 15 Northeast, pp. 760-771. B.G. Trigger, ed. Washington: Smithsonian Institution Press.

Schmalz, Peter S. 1991. *The Ojibwa of Southern Ontario*. Toronto: University of Toronto Press.

Smith, W.H. 1946. *Smith's Canadian Gazetteer: Comprising Statistical and General Information Respecting all Parts of the Upper Province, or Canada West*. Toronto: H. & W. Rowsell.

STAGE 1-2 ARCHAEOLOGICAL ASSESSMENT: THE ARKELL LANDS

January 2024

8.0 IMAGES

8.1 PHOTOGRAPHS



Photo 1 : Assessed by 5m Interval Pedestrian Survey Facing North-east

STAGE 1-2 ARCHAEOLOGICAL ASSESSMENT: THE ARKELL LANDS

January 2024



Photo 2 : Assessed by 5m Interval Pedestrian Survey Facing North-west



Photo 3 : Assessed by 5m Interval Pedestrian Survey Facing South-west

STAGE 1-2 ARCHAEOLOGICAL ASSESSMENT: THE ARKELL LANDS

January 2024



Photo 4 : Assessed by 5m Interval Pedestrian Survey Facing North-west



Photo 5: Assessed by 5m Interval Pedestrian Survey Facing South-west

STAGE 1-2 ARCHAEOLOGICAL ASSESSMENT: THE ARKELL LANDS

January 2024



Photo 6 : Assessed by 5m Interval Pedestrian Survey Facing South-east



Photo 7 : Assessed by 5m Interval Test Pit Survey Facing North-west

STAGE 1-2 ARCHAEOLOGICAL ASSESSMENT: THE ARKELL LANDS

January 2024



Photo 8 : Assessed by 5m Interval Test Pit Survey Facing East



Photo 9 : Assessed by 5m Interval Test Pit Survey Facing North

STAGE 1-2 ARCHAEOLOGICAL ASSESSMENT: THE ARKELL LANDS

January 2024



Photo 10 : Assessed by 5m Interval Test Pit Survey Facing South



Photo 11 : Assessed by 5m Interval Pedestrian Survey Facing North-west

STAGE 1-2 ARCHAEOLOGICAL ASSESSMENT: THE ARKELL LANDS

January 2024



Photo 12 : Assessed by 5m Interval Pedestrian Survey Facing South-west



Photo 13: Typical Test Pit Facing North

STAGE 1-2 ARCHAEOLOGICAL ASSESSMENT: THE ARKELL LANDS

January 2024



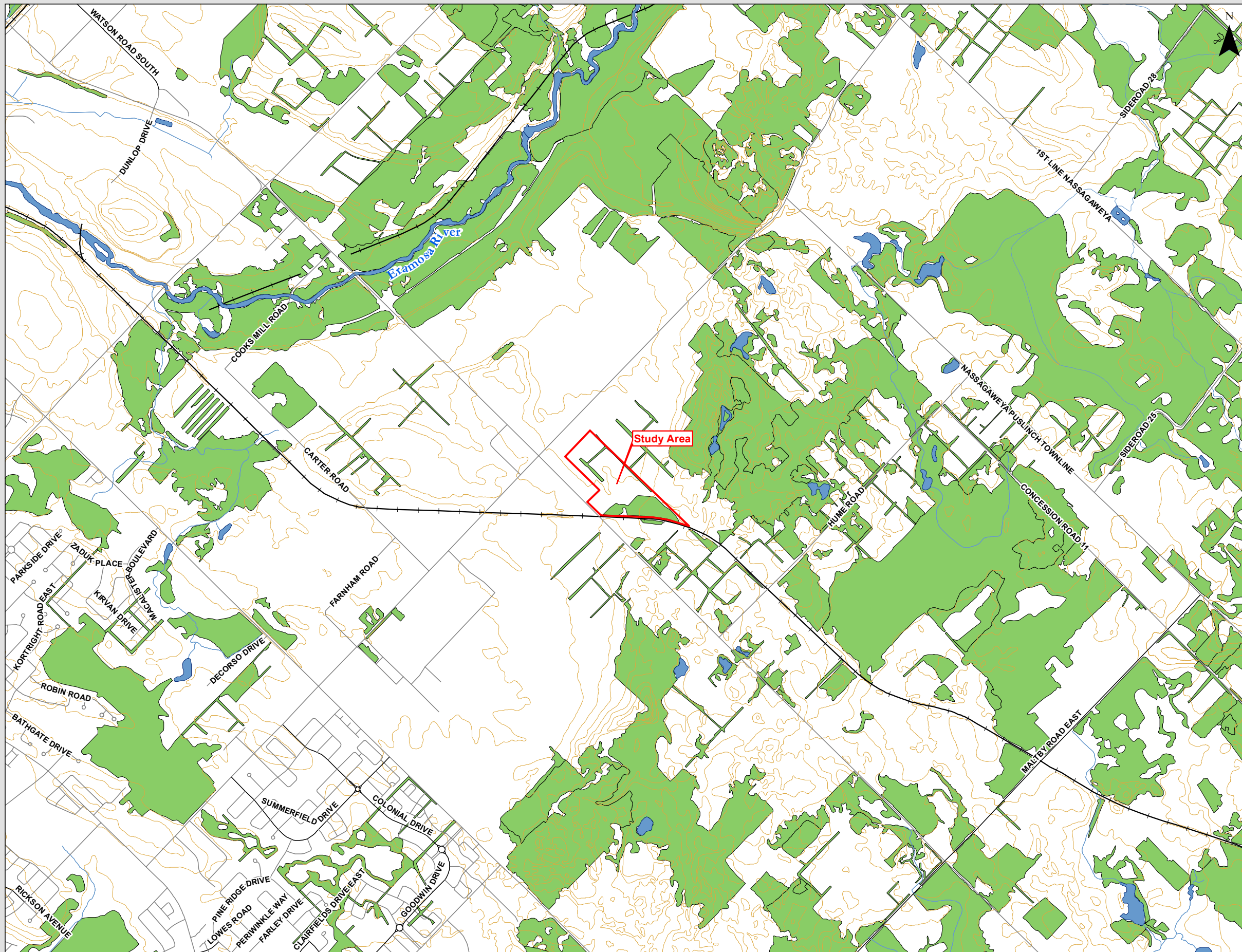
Photo 14: Typical Field Conditions Facing North



Photo 15: Typical Field Conditions Facing North

January 2024

9.0 MAPS



Stage 1-2 Archaeological Assessment of the Arkell Lands, Arkell, Ontario

Figure 1: Topographic Map of Study Area

This drawing has been prepared for the use of Lincoln Environmental Consulting's client and may not be used or reproduced by a third party, except as agreed upon by the Lincoln Environmental Consulting and the client, as required by law or for use by governmental reviewing agencies. Lincoln Environmental Consulting does not accept responsibility for any party that modifies this drawing without Lincoln Environmental Consulting's expressed consent.

Date: July, 2023

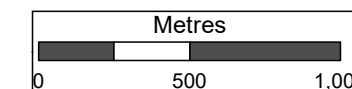
Source: OBM
<http://www.geographynetwork.ca/website/obm/viewer.htm>

Scale 1:25,000

Datum: NAD 1983 UTM Zone 17N

Legend

- Study Area
- Watercourse
- Local Road
- Waterbody
- Major Road
- Wooded Area
- Railroad
- Contour Lines





**Stage 1-2 Archaeological
Assessment of the
Arkell Lands,
Arkell, Ontario**

Figure 2: Study Area

This drawing has been prepared for the use of Lincoln Environmental Consulting's client and may not be used or reproduced by a third party, except as agreed upon by the Lincoln Environmental Consulting and the client, as required by law or for use by governmental reviewing agencies. Lincoln Environmental Consulting does not accept responsibility for any party that modifies this drawing without Lincoln Environmental Consulting's expressed consent.

Date: July, 2023

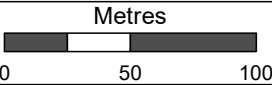
Source: Bing Maps

Scale 1:3,000

Datum: NAD 1983 UTM Zone 17N

Legend

 Study Area





**Stage 1-2 Archaeological
Assessment of the
Arkell Lands,
Arkell, Ontario**

**Figure 4: Assessment
Strategies and Results**

This drawing has been prepared for the use of Lincoln Environmental Consulting's client and may not be used or reproduced by a third party, except as agreed upon by the Lincoln Environmental Consulting and the client, as required by law or for use by governmental reviewing agencies. Lincoln Environmental Consulting does not accept responsibility for any party that modifies this drawing without Lincoln Environmental Consulting's expressed consent.

Date: July, 2023

Source: Bing Maps

Scale 1:3,000

Datum: NAD 1983 UTM Zone 17N

Legend

- Photo Location
- Study Area
- Assessed by Pedestrian Survey at 5m Intervals
- Assessed by Test Pit Survey at 5m Intervals

