# STAGE 1-2 ARCHAEOLOGICAL ASSESSMENT OF 1830 WRIGLEY ROAD IN PART OF LOT 32, CONCESSION 8, FORMER TOWNSHIP NORTH DUMFRIES, NOW TOWN OF AYR, WATERLOO COUNTY, ONTARIO

SUBMITTED TO

**ORANGE ROCK DEVELOPMENTS** 

AND

THE MINISTRY OF CITIZENSHIP AND MULTICULTURALISM

REPORT TYPE: REVISED

ARCHAEOLOGICAL LICENSE NUMBER: P1289, KARA ADAMS, PHD

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## **Executive Summary**

Lincoln Environmental Consulting Corp. (LEC) was retained by Orange Rock Developments to complete a Stage 1-2 archaeological assessment of 1830 Wrigley Road to meet the requirements of the *Planning Act* (Government of Ontario 2014) in advance of a planning permit. The study area measures approximately 38.37 hectares in size and is located in part of Lot 32, Concession 8, Former Township North Dumfries, Now Town of Ayr, Waterloo 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 Citizenship and Multiculturalism's (MCM) 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), the Stage 1 archaeological assessment of 1830 Wrigley Road 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 10<sup>th</sup>, 2023, May 24<sup>th</sup>, 2023, and October 18<sup>th</sup>, 2023 under archaeological consulting license P1289 issued to Kara Adams, PhD, of LEC by the MCM. A total of two archaeological sites were located during the Stage 2 assessment of the property, and identified as a precontact lithic surface scatters.

Location 1 (AhHc-386) was identified during pedestrian survey in the north-west end of the property. Location has been interpreted as a pre-contact lithic scatter. The assemblage consists of 17 pieces of chipping detritus, distributed over approximately 0.02 hectares. Location 1 fulfills section 2.2 Standard 1c of the 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011). As such Location 1 is deemed to retain further cultural heritage value and interest and a Stage 3 site specific assessment is recommended.

Location 2 (AhHc-387) was identified during pedestrian survey in the north-west end of the property. Location has been interpreted as a pre-contact lithic scatter. The assemblage consists of 11 pieces of chipping detritus, distributed over approximately 0.03 hectares. Location 2 fulfills section 2.2 Standard 1c of the 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011). As such Location 2 is deemed to retain further cultural heritage value and interest and a Stage 3 site specific assessment is recommended.

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



# **Project Personnel**

Licensed Archaeologist: Kara Adams, MSC (P1289)

Project Manager: Derek Lincoln, MA (P344)

Licensed Field Director: Carley Adams MSc (R1319)

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# Acknowledgements

Proponent Contact: Devon Park, John Aarts Group



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# 1.0 PROJECT CONTEXT

### 1.1 DEVELOPMENT CONTEXT

Lincoln Environmental Consulting Corp. (LEC) was retained by Orange Rock Developments to complete a Stage 1-2 archaeological assessment of 1830 Wrigley Road to meet the requirements of the *Planning Act* (Government of Ontario 2014) in advance of a planning permit. The study area measures approximately 38.37 hectares in size and is located in part of Lot 32, Concession 8, Former Township North Dumfries, Now Town of Ayr, Waterloo 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 Cynthia Genereux of Orange Rock Developments.

### 1.1.1 Objectives

In compliance with the provincial standards and guidelines set out in the Ministry of Citizenship and Multiculturalism's (MCM) 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.



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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 MCM's 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 38.37 hectares of which approximately 68% consists of active agricultural fields, approximately 8% consists of low lying and wet areas, approximately 4 % consists of steeply sloped areas, approximately 4 % consists of residential and agricultural structures with associated parking considered to be visually disturbed, and approximately 16% consists of manicured lawn, overgrown meadow and woodlot. The study area is located at 1830 Wrigley Road in part of Lot 32, Concession 8, Former Township of North Dumfries, Now Town of Ayr, Waterloo County, Ontario.

### 1.2.1 Pre and Early Post-Contact Aboriginal Resources

Our knowledge of past First Peoples settlement and land use in Waterloo 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.



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### 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 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, multifamily dwellings that contained several families related through the female line. The Jesuit Relations describe several Neutral centres in existence in the 17<sup>th</sup> 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



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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.

Table 1: Cultural Chronology for Native Settlement within Waterloo 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 olonials, UELs



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### 1.2.2 Historic Euro-Canadian Resources

The 1878 *Illustrated Historical Atlas of Waterloo County's* map of the Township of North Dumfries depicts a densely 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 North Dumfries is depicted in Figure 3, and this part of the Lot is listed as not being owned, with no structures depicted near the study area.

### 1.3 ARCHAEOLOGICAL CONTEXT

The study area is 38.37 hectares of which approximately 68% consists of active agricultural fields, approximately 8% consists of low lying and wet areas, approximately 4 % consists of steeply sloped areas, approximately 4 % consists of residential and agricultural structures with associated parking considered to be visually disturbed, and approximately 16% consists of manicured lawn, overgrown meadow and woodlot. The study area is located at 1830 Wrigley Road in part of Lot 32, Concession 8, Former Township of North Dumfries, Now Town of Ayr, Waterloo County, Ontario.

### 1.3.1 The Natural Environment

The project area is located in the Waterloo Hills physiographic region as identified by Chapman and Putnam (1984:146). This region is largely composed of sandy hills, including ridges of sandy till, kames and kame moraines.

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 Nith 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 MCM were consulted. In Ontario, information concerning archaeological sites stored in the ASDB is maintained by the MCM. 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 MCM



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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 38 archaeological sites registered within a one-kilometer radius of the study area (Sites Data Search, Government of Ontario, May 10<sup>th</sup>, 2023); Table 2 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
AhHc-10	Turnbull	Other, Unknown	Other
AhHc-11	Ayr		
AhHc-114	Bawzinheimer	Other building, Homestead, Midden	Post-Contact, Euro-Canadian
AhHc-116	Hilltop 3	Findspot	Archaic, Early
AhHc-17	Hall		
AhHc-205		Unknown	Archaic, Middle
AhHc-207		Village	Archaic, Middle Woodland, Middle
AhHc-208			•
AhHc-209			Post-Contact Pre-Contact
			Post-Contact
AhHc-210			Pre-Contact
AhHc-211		Unknown	Woodland, Late
AhHc-212		G.I.I.I.O.II.I	Troodiana, Eato
AhHc-213			
AhHc-214			Woodland
AhHc-215			Pre-Contact
AhHc-219	AhHc-219	Scatter	Pre-Contact
AhHc-220	AhHc-220	Findspot	Woodland
AhHc-221	AhHc-221	Scatter	Pre-Contact Pre-Contact
AhHc-222	AhHc-222	Scatter	Pre-Contact
AhHc-223	AhHc-223	Findspot	Archaic, Late
AhHc-224	AhHc-224	Findspot	Woodland, Early
AhHc-225	AhHc-225	Findspot	Woodland, Middle
AhHc-226	AhHc-226	Scatter	Pre-Contact
AhHc-227	AhHc-227	Scatter	Pre-Contact
AhHc-228	AhHc-228	Scatter	Woodland, Early
AhHc-229	AhHc-229	Scatter	Pre-Contact
AhHc-230	AhHc-230	Scatter	Pre-Contact
AhHc-231	AhHc-231	Farmstead	Post-Contact, Euro-Canadian
AhHc-232	Fulton Site	Farmstead	Post-Contact, Euro-Canadian
AhHc-26	Van Oostveen	Other, Campsite	Archaic, Late
AhHc-320	Stanley Street Cemetery	Cemetery	Post-Contact, Euro-Canadian
AhHc-327	Swan	House, Residential	Post-Contact, Euro-Canadian
AhHc-355	Ayr Mill Race	Manufacturing, Mill	Post-Contact, Euro-Canadian
AhHc-52	Mill Pond Acres # 1	3,	•
AhHc-53	Mill Pond Acres #2	Hunting	Woodland, Late
AhHc-54	Mill Pond Acres #3	Unknown	Woodland, Late
AhHc-55	Mill Pond Acres #4	Other	Other



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Borden #	Site Name	Site Type	Cultural Affiliation
AhHc-204		Other, Campsite	Archaic, Late

### 1.3.3 Summary of Past Archaeological Investigations within 50 Metres

In 2011 a Stage 1-2 AA was conducted on the adjacent property east of the current subject area under license number P347-040-2011. A total of 13 pre-contact lithic sites, four pre-contact lithic findspots and two Euro-Canadian sites were identified. The pre-contact site AhHc-224 lies within 50m of the current subject property and was been determined to represent isolated and ephemeral components that do not have cultural heritage value and do not warrant further archaeological consideration. (ASI, 2011)

### 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 MCM (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 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 Nith 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.



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An examination of the ASDB has shown that there are 38 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 Waterloo County* demonstrates that the study area and its environs were densely occupied by Euro-Canadian settlers by the later 19<sup>th</sup> 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 MCM's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), the Stage 1 archaeological assessment of 1830 Wrigley Road 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.



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### 2.0 FIELD METHODS

The Stage 2 assessment of 1830 Wrigley Road was conducted on May 10<sup>th</sup>, 2023, May 24<sup>th</sup>, 2023, and October 18<sup>th</sup>, 2023 under PIF # P1289-0422-2023 issued to Kara Adams, PhD, of LEC by the MCM. The study area is 38.37 hectares of which approximately 68% consists of active agricultural fields, approximately 8% consists of low lying and wet areas, approximately 4% consists of steeply sloped areas, approximately 4% consists of residential and agricultural structures with associated parking considered to be visually disturbed, and approximately 16% consists of manicured lawn, overgrown meadow and woodlot. The study area is located at 1830 Wrigley Road in part of Lot 32, Concession 8, Former Township of North Dumfries, Now Town of Ayr, Waterloo 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 3). Photos 1 to 22 confirm that field conditions met the requirements for a Stage 2 archaeological assessment, as per the MCM'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.

Date	Activity	Weather	Field Conditions
May 10 <sup>th</sup> , 2023	Pedestrian Survey, Test Pit Survey	Overcast, cool	soils dry and friable, screens well
May 24 <sup>th</sup> , 2023	Pedestrian Survey	Sunny, warm	soils dry and friable
October 18 <sup>th</sup> , 2023	Test Pit Survey	Overcast, cool	soils dry and friable, screens well

**Table 3: Field and Weather Conditions** 

Approximately 68% of the study area consists of active agricultural fields. These areas were subject to pedestrian survey at 5-metre and 1-metre intervals in accordance with Section 2.1.1 of the MCM's 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011). The fields were ploughed and allowed to weather sufficiently. Conditions were optimal and visibility at the time of the assessment was 95%. One archaeological location was identified during the pedestrian survey, and the survey was intensified to 1-metre intervals to a distance of 20 meters beyond the outermost surface finds.

Approximately 16% of the study area consists of manicured lawn with trees. These areas were subject to test pit survey at 5-metre intervals in accordance with Section 2.1.2 of the MCM'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 MCM'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



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Approximately 4% of the study area consists of residential and agricultural structures with driveways. These areas were visually deemed to be disturbed and to not retain archaeological potential. These areas were not assessed but were subject to photo documentation.

Approximately 4% of the study area consists of steeply sloped areas > 20%. These areas were not assessed but were subject to photo documentation.

Approximately 8% of the study area consists of low lying and wet areas. These areas were not assessed but were subject to photo documentation.

AtotaloftwoarchaeologicalsiteswerelocatedduringtheStage2assessmentofthepropertyandidentified as a pre-contact lithic surface scatters.

Location 1 (AhHc-386) was identified during pedestrian survey in the north-west end of the property. Location has been interpreted as a pre-contact lithic scatter. The assemblage consists of 17 pieces of chipping detritus, distributed over approximately 0.02 hectares. Location 1 does fulfill section 2.2 Standard 1c of the 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011). As such Location 1 is deemed to retain further cultural heritage value and interest and a Stage 3 site specific assessment is recommended.

Location 2 (AhHc-387) was identified during pedestrian survey in the north-west end of the property. Location has been interpreted as a pre-contact lithic scatter. The assemblage consists of 11 pieces of chipping detritus, distributed over approximately 0.03 hectares. Location 2 does fulfill section 2.2 Standard 1c of the 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011). As such Location 2 is deemed to retain further cultural heritage value and interest and a Stage 3 site specific assessment is recommended.

A CSP was conducted for the entirety of the site areas as part of the Stage 2 property assessment. Visibility during the CSP was optimal and the CSP consisted of accurately mapping the location of all artifacts on the surface with a Top Con FC-5000 Network Rover, using NADD83. All coordinates taken during the Stage 2 assessment are listed in the Supplementary Documentation to this report.



## 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 4 below. No archaeological resources were identified during the Stage 2 archaeological assessment of the study area.

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Document Type	Current Location of Document Type	Additional Comments						
1 Page 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						
55 Digital photographs	LEC office, London	Stored digitally in project file						
17 Location 1 Artifacts	LEC office, London	Stored in individual bags, in 1 banker's box						
11 Location 2 Artifacts	LEC office, London	Stored in individual bags, in 1 banker's box						
2 Artifact catalogues	LEC office, London	Artifact Catalogue stored digitally in project file						

**Table 4: Inventory of Documented Record** 

All the material culture collected during the Stage 2 property assessment is contained in 1 Bankers' box. It will be temporarily housed at the LEC London office until formal arrangements can be made for transfer to an MCM collections facility.

### 3.1 CULTURAL MATERIAL

### **3.1.1 Location 1**

Location 1 was identified during pedestrian survey in the North-west corner of the property as a precontact lithic scatter. Location 1 consists of 17 pieces of chipping detritus distributed over an area of approximately 0.02 hectares. A Stage 3 site specific assessment is recommended for Location 1 in accordance with Section 2.1.1 of the MCM's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). Apprendix A provides a full catalogue of the artifacts recovered during the Stage 2 assessment. Table 5 summarizes the artifacts recovered during the Stage 2 assessment of Location 1. A sample of the artifacts recovered from the Stage 2 assessment of Location 1 are depicted in Plate 1 in Section 8.2 of this report.

### 3.1.1.1 Chipping Detritus

A total of 17 pieces of chipping detritus were recovered. All pieces of chipping detritus were subject to morphological analysis following the classification scheme described by Andrefsky (1998), Thomas (1992), and Odell (2004). Table 5 outlines the results of the detailed morphological analysis of the chipping detritus.



**Table 5: Chipped Stone Debitage Analysis** 

Material	Th	mary inning ike	Seco Retou Flake		Seco Knap Flake		Biface Thinnir Flake	ıg	Flake Fragm	ent	Shat	ter	Total Analyz	zed
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Kettle Point	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onondaga	2	11.8	0	0	13	76.4	0	0	2	11.8	0	0	17	100
Total	2	11.8	0	0	13	76.4	0	0	2	11.8	0	0	17	100

The morphological analysis of the chipped stone debitage indicates that secondary knapping flakes comprise most of the assemblage while 2 primary knapping flakes and 2 flake fragments were also recovered. The morphological analysis of the flake assemblage from Location 1 suggests that the lithic practices at this site consisted mainly of the re-sharpening and maintenance of expedient tools from existing inventory or debitage.

Primary flakes are produced during the initial reduction phases of raw material blanks and tend to exhibit minimal dorsal flake scarring. These flakes are also characterized by the presence of cortex, or original unflaked area, on their dorsal surfaces and proximal ends. Secondary knapping flakes are long and thin and have three or more flake scars on the dorsal face and little or no cortex (Thomas 1992). Secondary Reduction flakes are the result of precise flake removal through pressure flaking, where the maker applies direct pressure onto a specific part of the tool to facilitate flake removal. Pressure flaking generally produces smaller, thinner flakes than does percussion flaking.

Onondaga formation chert is from the Middle Devonian age, with outcrops occurring along the north shore of Lake Erie between Long Point and the Niagara River (Eley and von Bitter 1989). It is a high-quality raw material frequently utilized by pre-contact people and often found at archaeological sites in southern Ontario. Onondaga chert occurs in nodules or irregular thin beds. It is a dense non-porous rock that may be light to dark grey, bluish grey, brown or black and can be mottled with a dull to vitreous or waxy lustre (Eley and von Bitter 1989).

The entirety of the assemblage is manufactured from Onondaga chert. Chert type identifications were accomplished visually using reference materials located in the LEC London office. The sole use of Onondaga chert indicates that the people at the site were relying on a single source of raw material. Primary outcrops of Onondaga chert are found along Lake Erie.

### **3.1.1.2 SUMMARY**

Location 1 has been identified as a pre-contact lithic scatter of indeterminate age where manufacturing activities involved tool maintenance. Location 1 does fulfill section 2.2 Standard 1c of the 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011). As such Location 1 is deemed to retain further cultural heritage value and interest and a Stage 3 site specific assessment is recommended.

### **3.1.2 Location 2**

Location 2 was identified during pedestrian survey in the North-west corner of the property as a precontact lithic scatter. Location 1 consists of 11 pieces of chipping detritus distributed over an area of approximately 0.03 hectares. A Stage 3 site specific assessment is recommended for Location 1 in



accordance with Section 2.1.1 of the MCM's 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011). Appendix B provides a full catalogue of the artifacts recovered during the Stage 2 assessment. Table 6 summarizes the artifacts recovered during the Stage 2 assessment of Location 1. A sample of the artifacts recovered from the Stage 2 assessment of Location 2 are depicted in Plate 2 in Section 8.2 of this report.

### 3.1.2.1 Chipping Detritus

A total of 11 pieces of chipping detritus were recovered. All pieces of chipping detritus were subject to morphological analysis following the classification scheme described by Andrefsky (1998), Thomas (1992), and Odell (2004). Table 5 outlines the results of the detailed morphological analysis of the chipping detritus.

Material	Th	mary inning ike	Seco Retou Flake	ıch	Seco Knap Flake		Biface Thinnir Flake	ıg	Flake Fragm	ent	Shat	ter	Total Analyz	ed
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Kettle Point	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onondaga	2	18.18	0	0	8	72.7	0	0	0	0	1	9.12	11	100
Total	2	18.18	0	0	8	72.7	0	0	0	0	1	9.12	11	100

**Table 5: Chipped Stone Debitage Analysis** 

The morphological analysis of the chipped stone debitage indicates that secondary knapping flakes comprise most of the assemblage while 2 primary knapping flakes and 1 piece of shatter were also recovered. The shatter was noted as possibly being natural. The morphological analysis of the flake assemblage from Location 2 suggests that the lithic practices at this site consisted mainly of the resharpening and maintenance of expedient tools from existing inventory or debitage.

Primary flakes are produced during the initial reduction phases of raw material blanks and tend to exhibit minimal dorsal flake scarring. These flakes are also characterized by the presence of cortex, or original unflaked area, on their dorsal surfaces and proximal ends. Secondary knapping flakes are long and thin and have three or more flake scars on the dorsal face and little or no cortex (Thomas 1992). Secondary Reduction flakes are the result of precise flake removal through pressure flaking, where the maker applies direct pressure onto a specific part of the tool to facilitate flake removal. Pressure flaking generally produces smaller, thinner flakes than does percussion flaking.

Onondaga formation chert is from the Middle Devonian age, with outcrops occurring along the north shore of Lake Erie between Long Point and the Niagara River (Eley and von Bitter 1989). It is a high-quality raw material frequently utilized by pre-contact people and often found at archaeological sites in southern Ontario. Onondaga chert occurs in nodules or irregular thin beds. It is a dense non-porous rock that may be light to dark grey, bluish grey, brown or black and can be mottled with a dull to vitreous or waxy lustre (Eley and von Bitter 1989).

The entirety of the assemblage is manufactured from Onondaga chert. Chert type identifications were accomplished visually using reference materials located in the LEC London office. The sole use of Onondaga chert indicates that the people at the site were relying on a single source of raw material. Primary outcrops of Onondaga chert are found along Lake Erie.



### **3.1.2.2 SUMMARY**

Location 2 has been identified as a pre-contact lithic scatter of indeterminate age where manufacturing activities involved tool maintenance. Location 2 does fulfill section 2.2 Standard 1c of the 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011). As such Location 2 is deemed to retain further cultural heritage value and interest and a Stage 3 site specific assessment is recommended.

### 3.2 ARTIFACT CATALOGUE

A complete artifact catalogue for Location 1 is presented in Appendix A. A complete artefact catalogue for Location 2 is presented in Appendix B.



Analysis and Conclusion May 2024

### 4.0 ANALYSIS AND CONCLUSION

The Stage 2 assessment of 1830 Wrigley Road was conducted on May 10<sup>th</sup>, 2023, May 24<sup>th</sup>, 2023, and October 18<sup>th</sup>, 2023 in accordance with the MCM's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). The Stage 2 property assessment consisted of pedestrian survey at 5m and 1m intervals, and test pit survey at 5m intervals.

A total of two archaeological sites were located during the Stage 2 assessment of the property and identified as a pre-contact lithic surface scatters.

Location 1 (AhHc-386) was identified during pedestrian survey in the north-west end of the property. Location has been interpreted as a pre-contact lithic scatter. The assemblage consists of 17 pieces of chipping detritus, distributed over approximately 0.02 hectares. Location 1 does fulfill section 2.2 Standard 1c of the 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011). As such Location 1 is deemed to retain further cultural heritage value and interest and a Stage 3 site specific assessment is recommended.

Location 2 (AhHc-387) was identified during pedestrian survey in the north-west end of the property. Location has been interpreted as a pre-contact lithic scatter. The assemblage consists of 11 pieces of chipping detritus, distributed over approximately 0.03 hectares. Location 2 does fulfill section 2.2 Standard 1c of the 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011). As such Location 2 is deemed to retain further cultural heritage value and interest and a Stage 3 site specific assessment is recommended.

A CSP was conducted for the entirety of the site areas as part of the Stage 2 property assessment. Visibility during the CSP was optimal and the CSP consisted of accurately mapping the location of all artifacts on the surface with a Top Con FC-5000 Network Rover, using NADD83. All coordinates taken during the Stage 2 assessment are listed in the Supplementary Documentation to this report.



Recommendations May 2024

### 5.0 RECOMMENDATIONS

The Stage 2 archaeological assessment was carried out in accordance with the Ministry of Citizenship and Multiculturalism's Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011). All work met provincial standards and two 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 Citizenship and Multiculturalism through acceptance of the assessment report into the provincial register.

### Location 1

Location 1 (AhHc-386) was identified during pedestrian survey in the north-west end of the property. Location has been interpreted as a pre-contact lithic scatter. The assemblage consists of 17 pieces of chipping detritus, distributed over approximately 0.02 hectares. Location 1 does fulfill section 2.2 Standard 1c of the 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011). As such Location 1 is deemed to retain further cultural heritage value and interest and a Stage 3 site specific assessment is recommended. As it is yet undetermined weather the site will require a Stage 4 mitigation, Stage 3 strategies should follow Table 3.1 of section 3.2.3 of the 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011), for "small pre-contact and post-contact sites where it is not yet evident that the level of cultural heritage value or interest will result in a recommendation to proceed to stage 4. Test units should be excavated at 5 meter intervals across the extent of the site, with an additional 20% in areas of interest or higher artifact concentrations.

### Location 2

Location 2 (AhHc-387) was identified during pedestrian survey in the north-west end of the property. Location has been interpreted as a pre-contact lithic scatter. The assemblage consists of 11 pieces of chipping detritus, distributed over approximately 0.03 hectares. Location 2 does fulfill section 2.2 Standard 1c of the 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011). As such Location 2 is deemed to retain further cultural heritage value and interest and a Stage 3 site specific assessment is recommended. As it is yet undetermined weather the site will require a Stage 4 mitigation, Stage 3 strategies should follow Table 3.1 of section 3.2.3 of the 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011), for "small pre-contact and post-contact sites where it is not yet evident that the level of cultural heritage value or interest will result in a recommendation to proceed to stage 4. Test units should be excavated at 5 meter intervals across the extent of the site, with an additional 20% in areas of interest or higher artifact concentrations.

The MCM is asked to review the results presented and to accept this report into the Ontario Public Register of Archaeological Reports. Additional archaeological assessment is still required and so the archaeological site recommended for further archaeological fieldwork remains subject to Section 48(1) of the Ontario Heritage Act and may not be altered, or have artifacts removed, except by a person holding an archaeological license.



Advice on Compliance with Legislation May 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 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.

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.



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### 7.0 BIBLIOGRAPHY AND RESOURCES

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# 8.0 IMAGES

# **8.1 PHOTOGRAPHS**



Photo 1: Visually Disturbed, Subject to Photo Documentation Facing North





Photo 2: Assessed by 5m Interval Test Pit Survey Facing West



Photo 3: Assessed by 5m Interval Test Pit Survey Facing East





Photo 4: Visually Disturbed, Photo Documented Facing West



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





Photo 6: Assessed by 5m Interval Test Pit Survey Facing East



Photo 7: Low Lying and Wet, Photo Documented Facing North





Photo 8: Steeply Sloped >20%, Photo Documented Facing South



Photo 9: Visually Disturbed, Photo Documented Facing South





Photo 10: Assessed by 5m Interval Pedestrian Survey Facing West



Photo 11: Assessed by 5m Interval Pedestrian Survey Facing South





Photo 12: Assessed by 5m Interval Pedestrian Survey Facing North



Photo 13: Assessed by 5m Interval Pedestrian Survey Facing East





Photo 14: Visually Disturbed, Photo Documented Facing West



Photo 15: Assessed by 5m Interval Pedestrian Survey Facing East





Photo 16: Assessed by 5m Interval Pedestrian Survey Facing West



Photo 17: Assessed by 5m Interval Pedestrian Survey Facing South





Photo 18: Assessed by 5m Interval Pedestrian Survey Facing North



Photo 19: Low Lying and Wet, Photo Documented Facing North





Photo 20: Assessed by 5m Interval Pedestrian Survey Facing North



Photo 21: Field Conditions Facing North





Photo 22: Typical Test Pit Facing North



# **8.2 ARTIFACT SAMPLES**



Plate 1: Location 1 Artifact Sample



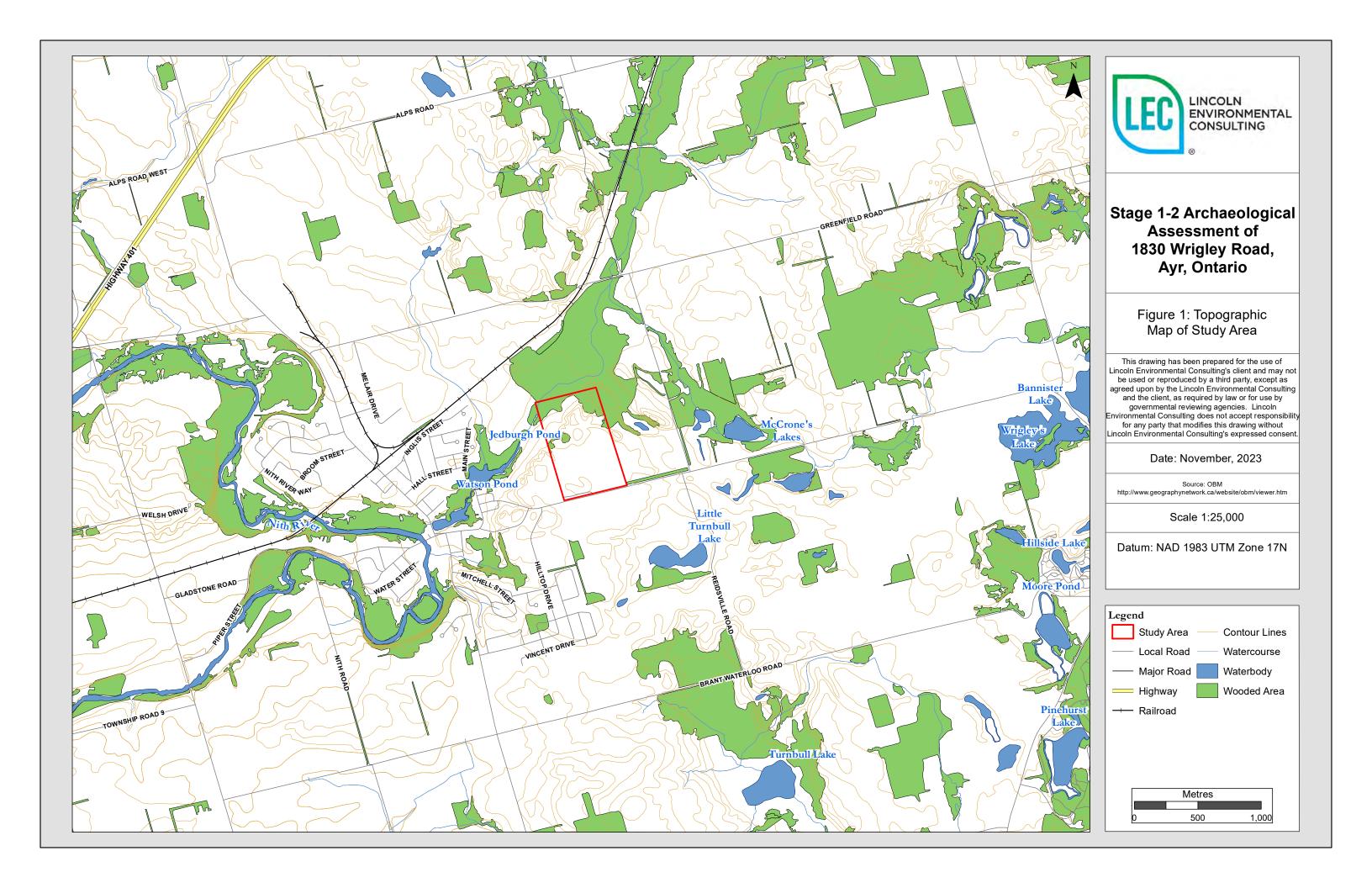
Plate 2: Location 2 Artifact Sample



Maps May 2024

# 9.0 MAPS









# Stage 1-2 Archaeological Assessment of 1830 Wrigley Road, Ayr, Ontario

Figure 2: Study Area

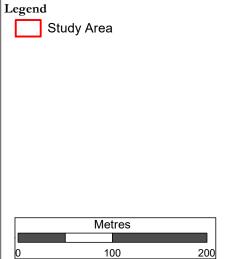
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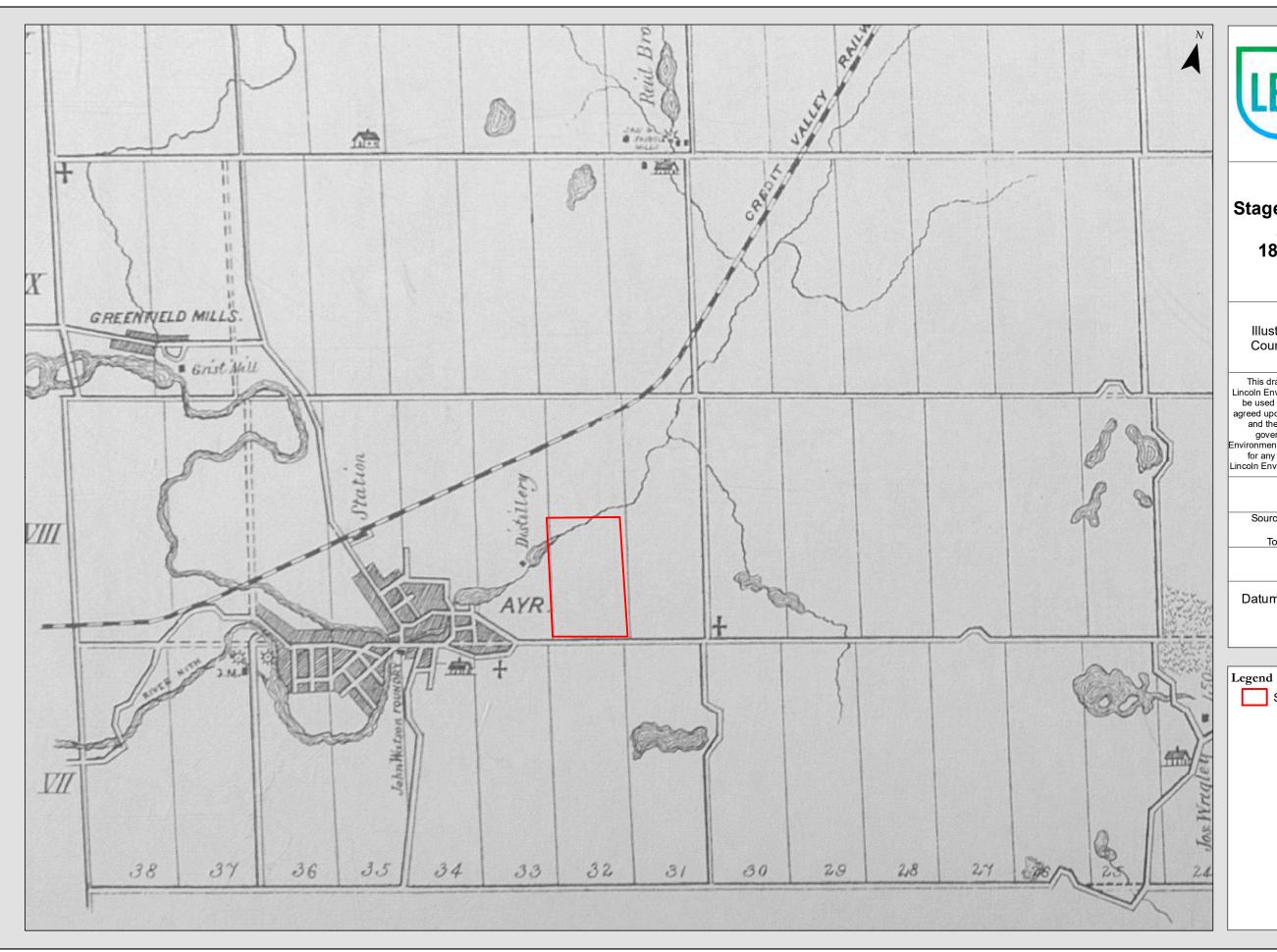
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Source: Bing Maps

Scale 1:4,000

Datum: NAD 1983 UTM Zone 17N







# Stage 1-2 Archaeological Assessment of 1830 Wrigley Road, Ayr, Ontario

Figure 3: Portion of the Illustrated Historical Atlas of the County of Waterloo, Ont, 1881 - Dumfries Township

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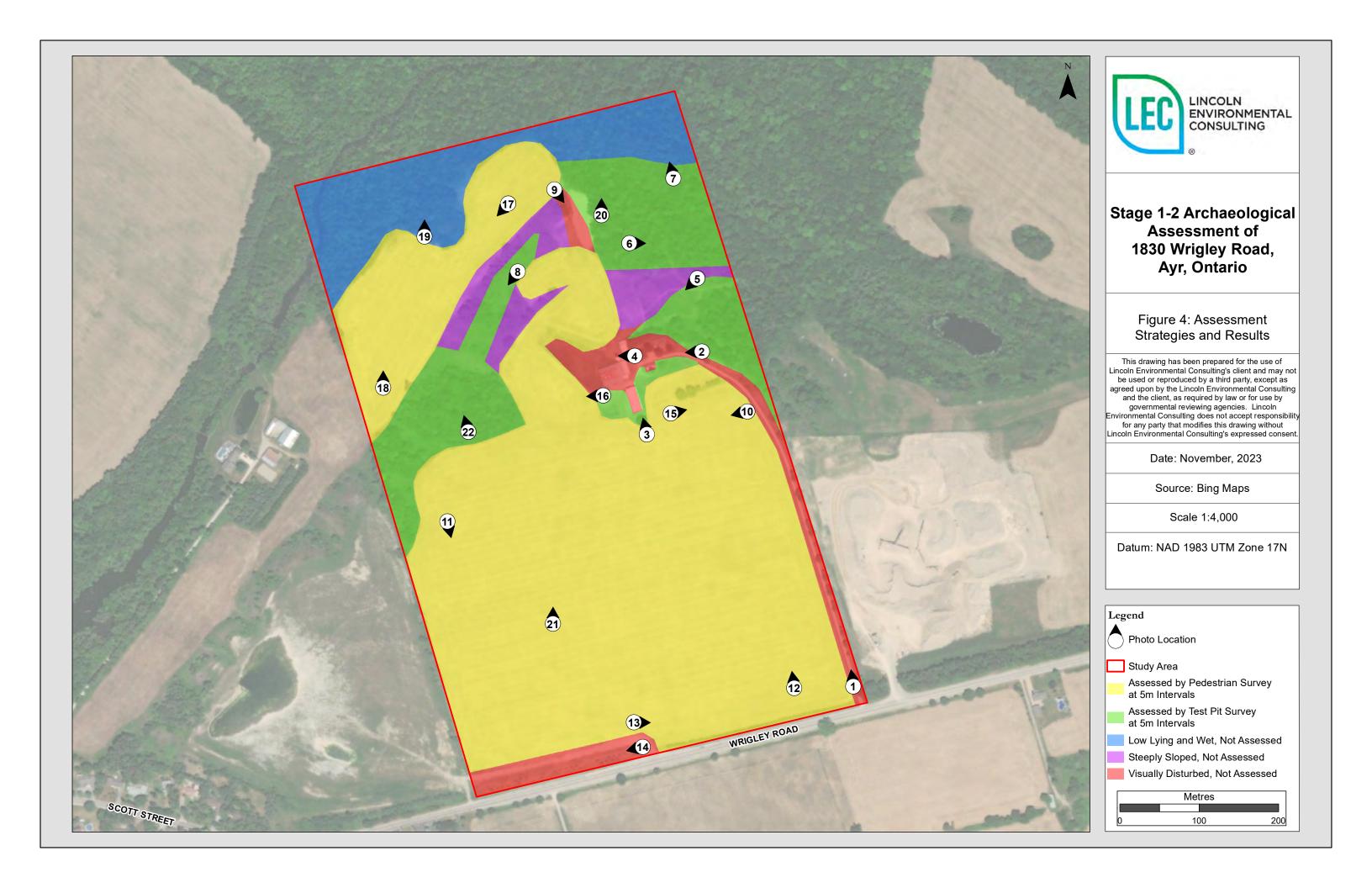
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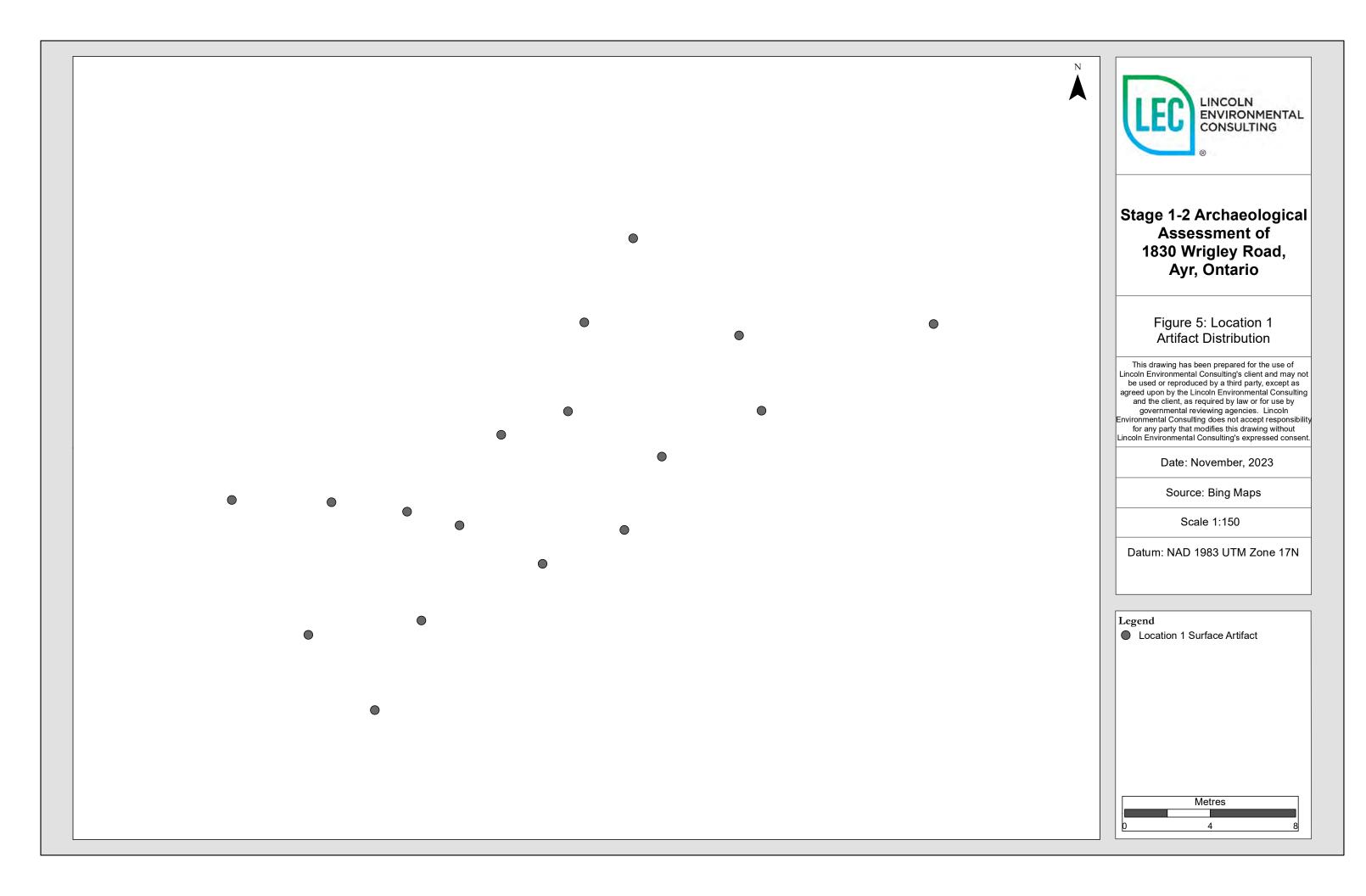
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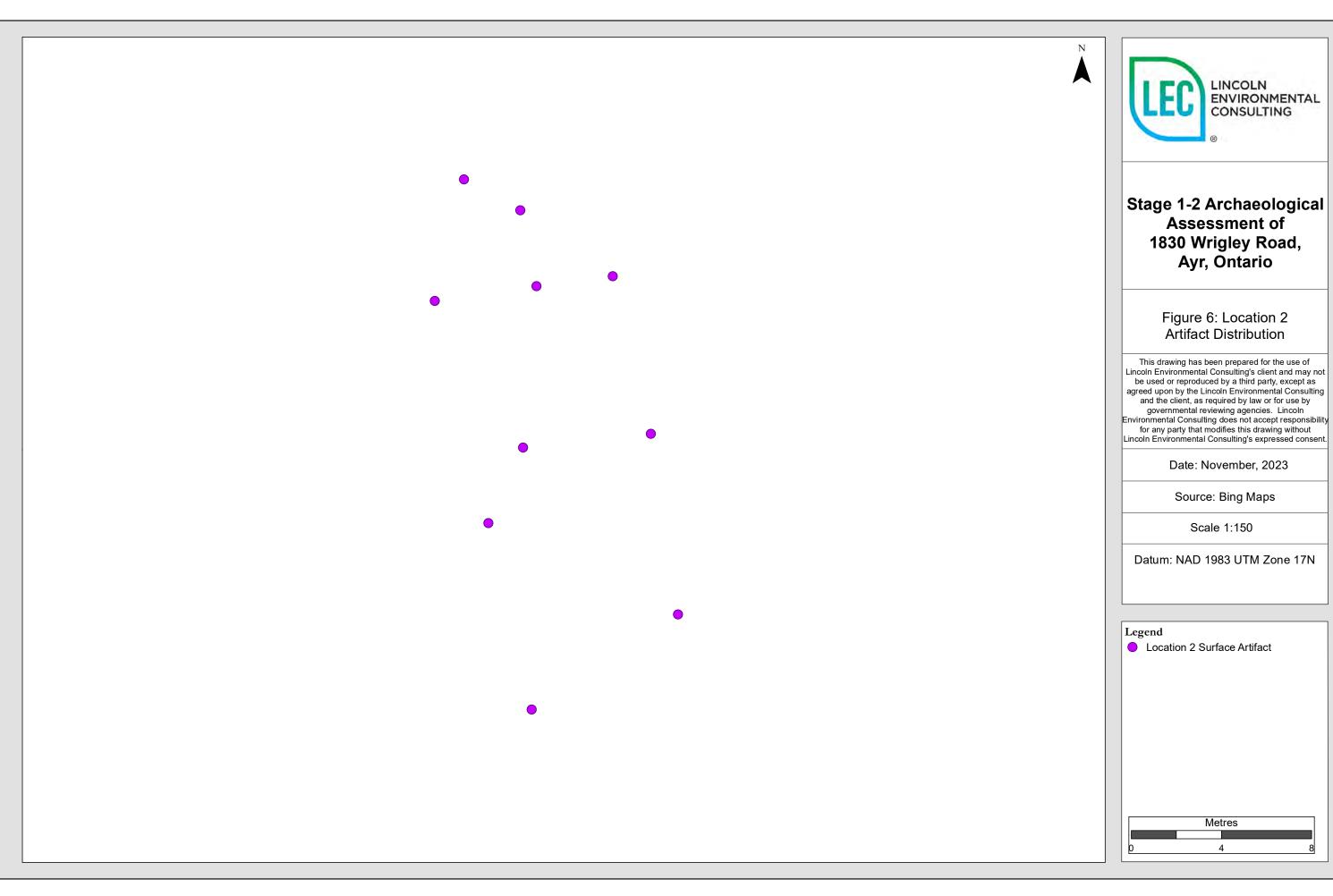
NOT TO SCALE

Datum: NAD 1983 UTM Zone 17N











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Appendices May 2024

# **APPENDIX A: LOCATION 1**

Cat. #	CSP#	Morphology	Qty.	Chert
1	1	Primary Knapping Flake	1	Onondaga
2	2	Secondary Knapping Flake	1	Onondaga
3	3	Secondary Knapping Flake	1	Onondaga
4	4	Secondary Knapping Flake	1	Onondaga
5	5	Secondary Knapping Flake	1	Onondaga
6	6	Secondary Knapping Flake	1	Onondaga
7	7	Primary Knapping Flake	1	Onondaga
8	8	Secondary Knapping Flake	1	Onondaga
9	9	Secondary Knapping Flake	1	Onondaga
10	10	Secondary Knapping Flake	1	Onondaga
11	11	Secondary Knapping Flake	1	Onondaga
12	12	Secondary Knapping Flake	1	Onondaga
13	13	Secondary Knapping Flake	1	Onondaga
14	14	Flake Fragment	1	Onondaga
15	15	Flake Fragment	1	Onondaga
16	16	Secondary Knapping Flake	1	Onondaga
17	17	Secondary Knapping Flake	1	Onondaga



Appendices May 2024

# **APPENDIX B: LOCATION 2**

Cat. #	CSP#	Morphology	Qty.	Chert
1	18	Secondary Knapping Flake	1	Onondaga
2	19	Secondary Knapping Flake	1	Onondaga
3	20	Secondary Knapping Flake	1	Onondaga
4	21	Secondary Knapping Flake	1	Onondaga
5	22	Secondary Knapping Flake	1	Onondaga
6	23	Secondary Knapping Flake	1	Onondaga
7	24	Primary Knapping Flake	1	Onondaga
8	25	Primary Knapping Flake	1	Onondaga
9	26	Secondary Knapping Flake	1	Onondaga
10	27	Secondary Knapping Flake	1	Onondaga
11	28	Shatter	1	Onondaga

