

# APPENDIX E



**REPORT**

## Stage 1-2 Archaeological Assessment

*Adelaide Street North Widening Environmental Assessment  
Former Geographic Township of London,  
Now City of London, Middlesex County, Ontario*

Submitted to:

**Mr. Henry Huotari, P.Eng.**

Parsons  
214 - 1069 Wellington Road South  
London, ON  
N6E 2H6

Submitted by:

**Golder Associates Ltd.**

309 Exeter Road, Unit #1  
London, Ontario, N6L 1C1 Canada

+1 519 652 0099

1898273-2000-R01-RevB

August 16, 2019

**License Holder:** Lafe Meicenheimer, M.A. (P457)

**PIF#:** P457-0072-2018

## Distribution List

1 PDF Copy - Ontario Ministry of Tourism, Culture, and Sport

1 PDF Copy - Parsons

1 PDF Copy - Golder Associated Ltd.

## Project Personnel

**Project Director** Hugh Daechsel, M.A., Principal, Senior Archaeologist

**Project Manager** Michael Teal, M.A., (P364), Senior Archaeologist

**Archaeological Licensee** Lafe Meicenheimer, M.A. (P457)

**Field Director** Lafe Meicenheimer, M.A. (P457)

**Report Production** Lafe Meicenheimer, M.A. (P457), Staff Archaeologist  
Liz Yildiz, Environmental Group Administrator

**Senior Review** Hugh Daechsel, M.A., Principal, Senior Archaeologist

## Acknowledgements

**Proponent Contacts** Tisha Doucette, Parsons

Henry Huotari, Parsons

## Executive Summary

*The Executive Summary highlights key points from the report only; for complete information and finding the reader should examine the complete report.*

Golder Associates Ltd. (“Golder”) was contracted by Parsons to conduct a Stage 1 Archaeological Assessment for the Study Area of the Adelaide Street North Widening Environmental Assessment in London, Ontario. The Study Area includes the right of way (ROW) for Adelaide Street North from Fanshawe Park Road to approximately 350 m north of Sunningdale Road East, and the ROW of Sunningdale Road East from Blackwater Road west of Adelaide Street North to the entrance to the Stoney Creek Community Centre east of Adelaide Street North (Map 1). The Adelaide Street North portion of the Study Area is approximately 1,770 m in length and 35 m in width, while the Sunningdale Road East portion is approximately 570 m in length and 35 m in width.

This Stage 1 Archaeological Assessment was conducted to meet the standard requirements of the *Environmental Assessment Act*, R.S.O 1990, c.E.18 (Government of Ontario 1990a), as required by the City of London. According to the City of London Archaeological Management Plan, the Study Area has archaeological potential, and as such must undergo an archaeological assessment by a licensed archaeologist according to established provincial standards (ASI 2017).

As part of the Stage 1 Archaeological Assessment, the entire Study Area was systematically inspected on August 16, 2018 to confirm if features of archaeological potential were present and if there were any areas of deep and extensive disturbance that have removed archaeological potential. Although the Study Area was initially determined to have archaeological potential, the property inspection revealed it has been previously subject to deep and extensive disturbance from the construction of roads, sidewalks, driveways, ditches, buried utilities, and landscaping. As such, it was concluded that the Study Area no longer retained archaeological potential.

Following the property inspection, background research revealed that a portion of a pre-contact Indigenous campsite, registered as the Adelaide-Fanshawe site (AgHh-168), had been previously documented at the southern end of the Study Area near the intersection of Adelaide Street North and Fanshawe Park Road East. As it was unknown if the site still existed within the current Study Area, the area where the site was documented was subject to Stage 2 test pit survey, as per the advice of the Ministry of Tourism, Culture, and Sport (MTCS), to determine if it was present and/or to document disturbance. The Stage 2 survey found that the entire area has been subject to previous disturbance down to natural subsoil.

Given the combined results of the Stage 1 and 2 Archaeological Assessments, it is concluded that due to complete and intensive previous disturbances there is no potential for archaeological resources within the limits of the Study Area and, as such, no further archaeological assessment is recommended.

The Ontario Ministry of Tourism, Culture and Sport is asked to review the results and recommendations presented herein, accept this report into the Provincial Register of archaeological reports and issue a standard letter of compliance with the Ministry’s 2011 Standards and Guidelines for Consultant Archaeologists and the terms and conditions for archaeological licencing.

# Table of Contents

<b>1.0 PROJECT CONTEXT .....</b>	<b>1</b>
1.1 Development Context.....	1
1.2 Historical Context .....	1
1.2.1 Paleo Period.....	2
1.2.2 Archaic Period.....	3
1.2.3 Woodland Period.....	4
1.2.4 Post-Contact Indigenous Period .....	7
1.2.5 Historical Euro-Canadian Period.....	8
1.2.5.1 London Township.....	9
1.2.5.2 Study Area Specific Historical Context .....	10
1.3 Archaeological Context .....	11
1.3.1 Study Area Overview .....	11
1.3.2 Previous Archaeological Work .....	12
1.3.3 Archaeological Potential .....	16
1.3.4 Features Indicating the Removal of Archaeological Potential .....	17
<b>2.0 FIELD METHODS .....</b>	<b>17</b>
2.1 Stage 1 Property Inspection.....	17
2.2 Stage 2 Test Pit Survey .....	17
<b>3.0 RECORD OF FINDS .....</b>	<b>18</b>
<b>4.0 ANALYSIS AND CONCLUSIONS.....</b>	<b>19</b>
<b>5.0 RECOMMENDATIONS .....</b>	<b>19</b>
<b>6.0 ADVICE ON COMPLIANCE WITH LEGISLATION.....</b>	<b>20</b>
<b>7.0 BIBLIOGRAPHY .....</b>	<b>21</b>
<b>8.0 IMAGES .....</b>	<b>28</b>
<b>9.0 MAPS .....</b>	<b>39</b>
<b>10.0 IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT .....</b>	<b>47</b>
<b>11.0 CLOSURE .....</b>	<b>48</b>

## TABLES

Table 1: Cultural Chronology for Middlesex County .....	1
Table 2: Sites within 1 km Radius of the Study Area .....	12
Table 3: Inventory of Documentary Record .....	18

## IMAGES

Image 1: A representative example of disturbances including Adelaide Street, sidewalks, and landscaping; facing north at the southwestern end of the Study Area, August 16, 2018.....	28
Image 2: A representative example of disturbances including Adelaide Street, sidewalks, buried utilities, and landscaping; facing south along the western side of Adelaide Street in the centre of the Study Area, August 16, 2018. ....	28
Image 3: A representative example of disturbances including Adelaide Street, Blackwater Road, sidewalks, buried utilities, and landscaping; facing north along the western side of Adelaide Street at Blackwater Drive, August 16, 2018. ....	29
Image 4: A representative example of disturbances including Adelaide Street, driveways, sidewalks, buried utilities, and landscaping; facing north along the western side of Adelaide Street near the intersection of Sunningdale Road, August 16, 2018. ....	29
Image 5: A representative example of a sloped area, along with disturbances including Sunningdale Road, sidewalks, a drainage ditch, and landscaping; facing west along the southern side of Sunningdale Road at the intersection of Adelaide Street, August 16, 2018. ....	30
Image 6: A representative example of a sloped area, along with disturbances including Sunningdale Road, sidewalks, buried utilities, and landscaping; facing east along the southern side of Sunningdale Road near Blackwater Drive, August 16, 2018. ....	30
Image 7: A representative example of a sloped area, along with disturbances including Sunningdale Road, a drainage ditch, and landscaping; facing east along the northern side of Sunningdale Road at Blackwater Drive, August 16, 2018. ....	31
Image 8: A representative example of a sloped area, along with disturbances including Sunningdale Road, a drainage ditch, and landscaping; facing west along the northern side of Sunningdale Road at the intersection of Adelaide Street, August 16, 2018. ....	31
Image 9: A representative example of a sloped area, along with disturbances including Adelaide Street, a drainage ditch, and landscaping; facing south along the western side of Adelaide Street north of Sunningdale Road, August 16, 2018. ....	32
Image 10: A representative example of a sloped area, along with disturbances including Adelaide Street, a drainage ditch, and landscaping; facing north along the eastern side of Adelaide Street at the intersection of Sunningdale Road, August 16, 2018. ....	32
Image 11: A representative example of disturbances including Sunningdale Road, sidewalks, a drainage ditch, buried utilities, and landscaping; facing east along the northern side of Sunningdale Road at the intersection of Adelaide Street, August 16, 2018. ....	33
Image 12: A representative example of disturbances including Sunningdale Road, sidewalks, a drainage ditch, buried utilities, and landscaping; facing west along the southern side of Sunningdale Road at the eastern end of the Study Area, August 16, 2018. ....	33

Image 13: A representative example of disturbances including Adelaide Street, sidewalks, a drainage ditch, buried utilities, and landscaping; facing south along the eastern side of Adelaide Street near the intersection of Sunningdale Road, August 16, 2018. .... 34

Image 14: A representative example of disturbances including Adelaide Street, sidewalks, buried utilities, and landscaping; facing north along the eastern side of Adelaide Street at Blackwater Road, August 16, 2018. .... 34

Image 15: A representative example of disturbances including Adelaide Street, sidewalks, buried utilities, and landscaping; facing north along the eastern side of Adelaide Street at Grenell Drive, August 16, 2018. .... 35

Image 16: A representative example of disturbances including Adelaide Street, sidewalks, buried utilities, and landscaping; facing north along the eastern side of Adelaide Street at the intersection of Fanshawe Park Road, August 16, 2018. .... 35

Image 17: Portion of the Study Area identified for test pitting; facing northwest at the northwest corner of Adelaide Street and Fanshawe Park Road, June 4, 2019. .... 36

Image 18: Test pitting area showing utility locates for buried electrical cables; facing north at the northwest corner of Adelaide Street and Fanshawe Park Road, June 4, 2019. .... 36

Image 19: Test pitting; facing northwest at the northwest corner of Adelaide Street and Fanshawe Park Road, June 4, 2019. .... 37

Image 20: Test pit showing disturbance; facing north, June 4, 2019. .... 37

Image 21: Test pit showing disturbance; facing north, June 4, 2019. .... 38

**MAPS**

Map 1: Location of Study Area. .... 40

Map 2: Pre-Contact Indigenous Culture History of Middlesex County. .... 41

Map 3: A Portion of the London Township Patent Plan. .... 42

Map 4: A Portion of Tremaine’s 1862 Map of Middlesex County. .... 43

Map 5: A Portion of Peters’ 1863 Map of London Township. .... 44

Map 6: A Portion of the 1878 *Historical Atlas Map of London Township*. .... 45

Map 7: Results of the Stage 1 Property Inspection and Stage 2 Test Pit Survey. .... 46

## 1.0 PROJECT CONTEXT

### 1.1 Development Context

Golder Associates Ltd. (“Golder”) was contracted by Parsons to conduct a Stage 1 Archaeological Assessment for the Study Area of the Adelaide Street North Widening Environmental Assessment in London, Ontario. The Study Area includes the right of way (ROW) for Adelaide Street North from Fanshawe Park Road to approximately 350 m north of Sunningdale Road East, and the ROW of Sunningdale Road East from Blackwater Road west of Adelaide Street North to the entrance to the Stoney Creek Community Centre east of Adelaide Street North (Map 1). The Adelaide Street North portion of the Study Area is approximately 1,770 m in length and 35 m in width, while the Sunningdale Road East portion is approximately 570 m in length and 35 m in width.

This Stage 1 Archaeological Assessment was conducted to meet the standard requirements of the *Environmental Assessment Act*, R.S.O 1990, c.E.18 (Government of Ontario 1990a), as required by the City of London. According to the City of London Archaeological Management Plan, the Study Area has archaeological potential, and as such must undergo an archaeological assessment by a licensed archaeologist according to established provincial standards (ASI 2017).

The Stage 1 and 2 assessments were conducted under professional archaeological license P457, issued to Lafe Meicenheimer of Golder by the Ontario Ministry of Tourism, Culture and Sport (MTCS) (PIF # P457-0072-2018). Permission to enter the Study Area to conduct all required archaeological field activities was not needed, as the Study Area consisted entirely of public lands.

### 1.2 Historical Context

Table 1 provides a general outline of the pre- and post-contact culture history for Middlesex County, drawn from Ellis and Ferris (1990), while Map 2 displays the pre-contact Indigenous culture history of Middlesex County.

**Table 1: Cultural Chronology for Middlesex County**

Period	Characteristics	Time	Comments
Early Paleo	Fluted Projectiles	9000 - 8400 BC	spruce parkland/caribou hunters
Late Paleo	Hi-Lo Projectiles	8400 – 8000 BC	smaller but more numerous sites
Early Archaic	Kirk and Bifurcate Base Points	8000 - 6000 BC	slow population growth
Middle Archaic	Brewerton-like points	6000 - 2500 BC	environment similar to present
Late Archaic	Narrow Points	2000 - 1800 BC	increasing site size
	Broad Points	1800 - 1500 BC	large chipped lithic tools
	Small Points	1500 – 1100 BC	introduction of bow hunting
Terminal Archaic	Hind Points	1100 - 950 BC	emergence of true cemeteries
Early Woodland	Meadowood Points	950 - 400 BC	introduction of pottery



Period	Characteristics	Time	Comments
Middle Woodland	Dentate/Pseudo-Scallop Pottery	400 BC – AD 500	increased sedentism
	Princess Point	AD 550 – 900	introduction of corn
Ontario Iroquoian Late Woodland	Early Ontario Iroquoian	AD 900 – 1300	emergence of agricultural villages
	Middle Ontario Iroquoian	AD 1300 – 1400	long longhouses (100m +)
	Late Ontario Iroquoian	AD 1400 – 1650	tribal warfare and displacement
Western Basin Late Woodland	Riviere au Vase	AD 500 - 900	introduction of corn
	Young Phase	AD 900 - 1200	dense storage pits, proto-settlements
	Springwell Phase	AD 1200 - 1400	emergence of agricultural villages
	Wolf Phase	AD 1400 - 1550	palisaded villages, tribal warfare and displacement
Contact Indigenous	Various Algonquian Groups	AD 1700 – 1875	early written records and treaties
Historical	Euro-Canadian	AD 1796 – present	European settlement

### 1.2.1 Paleo Period

The first human occupation of the London area, known as the Paleo Period, begins just after the end of the Wisconsin Glacial Period. Although there was a complex series of ice retreats and advances which played a large role in shaping the local London topography, southwestern Ontario was finally ice free by 12,500 years ago. The first human settlement can be traced back 11,000 years, when this area was settled by Indigenous groups that had been living south of the Great Lakes.

Our current understanding of Early Paleo settlement patterns suggests that small bands consisting of up to 25 to 35 individuals followed a pattern of seasonal mobility extending over large territories. Early Paleo sites tend to be located in elevated locations on well-drained loamy soils, and many have been found on former beach ridges associated with Lake Algonquin, the post-glacial lake occupying the Lake Huron/Georgian Bay basin.

There are a few extremely large Early Paleo sites, such as one located close to Parkhill, Ontario, which covered as much as 6 ha. It appears that these sites were formed when the same general locations were occupied for short periods of time over the course of many years.

Given their placement in locations conducive to the interception of migratory mammals such as caribou, it has been suggested that they may represent communal hunting camps. There are also smaller Early Paleo camps scattered throughout the interior of southwestern Ontario, usually situated adjacent to wetlands.

The most recent research suggests that population densities were very low during the Early Paleo Period, with all of southwestern Ontario being occupied by perhaps only 100 to 200 people (Ellis and Deller 1990:54). Because this is the case, Early Paleo sites are exceedingly rare, and within the limits of London only four locations are known. Three of these sites are isolated find spots of the distinctive fluted points or channel flakes, while one site, located near Dingman Creek, represents a rare occupation area with a good deal of potential for contributing to our knowledge of this period. To date, all of the known Early Paleo sites in Middlesex are located south of the Main and South branches of the Thames River.

While the Late Paleo Period (8400-8000 BC) is more recent, it has been less well researched, and is consequently more poorly understood. By this time the environment of southwestern Ontario was coming to be dominated by closed coniferous forests with some minor deciduous elements. It seems that many of the large game species that had been hunted in the early part of the Paleo Period had either moved further north, or as in the case of the mastodons and mammoths, become extinct.

During the late Paleo Period people continued to cover large territories as they moved about in response to seasonal resource fluctuations. On a province wide basis Late Paleo projectile points are far more common than Early Paleo materials, suggesting a relative increase in population.

The end of the Paleo Period was heralded by numerous technological and cultural innovations that appeared throughout the Archaic Period. These innovations may be best explained in relation to the dynamic nature of the post-glacial environment and region-wide population increases.

### 1.2.2 Archaic Period

During the Early Archaic Period (8000-6000 BC), the jack and red pine forests that characterized the Late Paleo environment were replaced by forests dominated by white pine with some associated deciduous trees (Ellis, Kenyon and Spence 1990:68-69). One of the more notable changes in the Early Archaic Period is the appearance of side and corner-notched projectile points. Their significant innovations include the introduction of ground stone tools such as celts and axes, suggesting the beginnings of a simple woodworking industry. The presence of these often large and not easily portable tools suggests there may have been some reduction in the degree of seasonal movement, although it is still suspected that population densities were quite low, and band territories large.

During the Middle Archaic Period (6000-2500 BC) the trend towards more diverse toolkits continued, as the presence of net-sinkers suggest that fishing was becoming an important aspect of the subsistence economy. It was also at this time that "bannerstones" were first manufactured. Bannerstones are carefully crafted ground stone devices that served as a counterbalance for "atlatls" or spear-throwers.

Another characteristic of the Middle Archaic is an increased reliance on local, often poor-quality chert resources for the manufacturing of projectile points. It seems that during earlier periods, when groups occupied large territories, it was possible for them to visit a primary outcrop of high quality chert at least once during their seasonal round.

However, during the Middle Archaic, groups inhabited smaller territories that often did not encompass a source of high quality raw material. In these instances, lower quality materials which had been deposited by the glaciers in the local till and river gravels were utilized.

This reduction in territory size was probably the result of gradual region-wide population growth which led to the infilling of the landscape. This process resulted in a reorganization of Indigenous subsistence practices, as more

people had to rely on resources from smaller areas. During the latter part of the Middle Archaic, technological innovations such as fish weirs have been documented as well as stone tools especially designed for the preparation of wild plant foods.

It is also during the latter part of the Middle Archaic Period that long distance trade routes began to develop, spanning the northeastern part of the continent. In particular, native copper tools manufactured from a source located northwest of Lake Superior were being widely traded (Ellis, Kenyon and Spence 1990:66). By 3500 BC the local environment had stabilized in a near modern form (Ellis, Kenyon and Spence 1990:69).

During the Late Archaic (2500-950 BC) the trend towards decreased territory size and a broadening subsistence base continued. Late Archaic sites are far more numerous than either Early or Middle Archaic sites, and it seems that the local population had definitely expanded. It is during the Late Archaic that the first true cemeteries appear. Before this time individuals were interred close to the location where they died. During the Late Archaic, if an individual died while his or her group happened to be at some distance from their group cemetery, the bones would be kept until they could be placed in the cemetery. Consequently, it is not unusual to find disarticulated skeletons, or even skeletons lacking minor elements such as fingers, toes or ribs, in Late Archaic burial pits.

The appearance of cemeteries during the Late Archaic has been interpreted as a response to increased population densities and competition between local groups for access to resources. It is argued that cemeteries would have provided strong symbolic claims over a local territory and its resources. These cemeteries are often located on heights of well-drained sandy/gravel soils adjacent to major watercourses such as the Thames River.

This suggestion of increased territoriality is also consistent with the regionalized variation present in Late Archaic projectile point styles. It was during the Late Archaic that distinct local styles of projectile points appear. Also, during the Late Archaic the trade networks which had been established during the Middle Archaic continued to flourish. Native copper from northern Ontario and marine shell artifacts from as far away as the Mid-Atlantic coast are frequently encountered as grave goods. Other artifacts such as polished stone pipes and banded slate gorgets also appear on Late Archaic sites. One of the more unusual and interesting of the Late Archaic artifacts is the "birdstone". Birdstones are small, bird-like effigies usually manufactured from green banded slate. While the function of these artifacts is presently poorly understood, they are especially common in the London area.

### 1.2.3 Woodland Period

The Early Woodland Period (950-400 BC) is distinguished from the Late Archaic Period primarily by the addition of ceramic technology. While the introduction of pottery provides a useful demarcation point for archaeologists, it may have made less difference in the lives of the Early Woodland peoples.

The first pots were very crudely constructed, thick walled, and friable. It has been suggested that they were used in the processing of nut oils by boiling crushed nut fragments in water and skimming off the oil (Spence, Pihl and Murphy 1990:137). These vessels were not easily portable, and individual pots must not have sustained a long use life.

There have also been numerous Early Woodland sites located at which no pottery was found, suggesting that these poorly constructed, undecorated vessels had yet to assume a central position in the day-to-day lives of Early Woodland peoples.

Other than the introduction of this rather limited ceramic technology, the life-ways of Early Woodland peoples show a great deal of continuity with the preceding Late Archaic Period.

For instance, birdstones continue to be manufactured, although the Early Woodland varieties have "pop-eyes" which protrude from the sides of their heads. Likewise, the thin, well-made projectile points which were produced during the terminal part of the Archaic Period continue in use. However, the Early Woodland variants were side-notched rather than corner-notched, giving them a slightly altered and distinctive appearance.

The trade networks which were established in the Middle and Late Archaic also continued to function, although there does not appear to have been as much traffic in marine shell during the Early Woodland Period. During the last 200 years of the Early Woodland Period, projectile points manufactured from high quality raw materials from the American Midwest begin to appear on sites in the London area.

In terms of settlement and subsistence patterns, the Middle Woodland (400 BC – AD 900) provides a major point of departure from the Archaic and Early Woodland Periods. While Middle Woodland peoples still relied on hunting and gathering to meet their subsistence requirements, fish became an even more important part of their diet. This is especially true in the nearby London area, where some Middle Woodland sites have produced literally thousands of bones from spring spawning species such as walleye and sucker. In addition, Middle Woodland peoples relied much more extensively on ceramic technology. Middle Woodland vessels are often garishly decorated with hastily impressed designs covering the entire exterior surface and upper portion of the vessel interior. Consequently, even very small fragments of Middle Woodland vessels are easily identifiable.

It is also at the beginning of the Middle Woodland Period that rich, densely occupied sites appear on the valley floor of major rivers. While the valley floors of floodplains had been utilized by earlier peoples, Middle Woodland sites are significantly different in that the same location was repeatedly occupied over several hundred years. Because this is the case, rich deposits of artifacts often accumulated.

Unlike earlier seasonally utilized locations, these Middle Woodland sites appear to have functioned as base camps, occupied off and on over the course of the year. There are also numerous small upland Middle Woodland sites, many of which can be interpreted as special purpose camps from which localized resource patches were exploited. This shift towards a greater degree of sedentism continues the trend witnessed from at least Middle Archaic times and provides a prelude to the developments that follow during the Late Woodland Period.

The Late Woodland Period began with a shift in settlement and subsistence patterns involving an increasing reliance on corn horticulture (Fox 1990:185; Smith 1990; Williamson 1990:312). Corn may have been introduced into southwestern Ontario from the American Midwest as early as AD 600. However, it did not become a dietary staple until at least three to four hundred years later.

The first agricultural villages in southwestern Ontario date to the 10th century A.D. Unlike the riverine base camps of the Middle Woodland Period, these sites are located in the uplands, on well-drained sandy soils. Categorized as "Early Ontario Iroquoian" (AD 900-1300), many archaeologists believe that it is possible to trace a direct line from the Iroquoian groups which inhabited southwestern Ontario at the time of first European contact, to these early villagers.

Village sites dating between AD 900 and 1300, share many attributes with the historically reported Iroquoian sites, including the presence of longhouses and sometimes palisades. However, these early longhouses were actually not all that large, averaging only 12.4 metres in length (Dodd et al 1990:349; Williamson 1990:304-305). It is also quite common to find the outlines of overlapping house structures, suggesting that these villages were occupied long enough to necessitate re-building.

The Jesuits reported that the Huron moved their villages once every 10-15 years, when the nearby soils had been depleted by farming and conveniently collected firewood grew scarce (Pearce 2010). It seems likely that Early Ontario Iroquoians occupied their villages for considerably longer, as they relied less heavily on corn than did later groups, and their villages were much smaller, placing less demand on nearby resources.

Judging by the presence of carbonized corn kernels and cob fragments recovered from sub-floor storage pits, agriculture was becoming a vital part of the Early Ontario Iroquoian economy. However, it had not reached the level of importance it would in the Middle and Late Ontario Iroquoian Periods. There is ample evidence to suggest that more traditional resources continued to be exploited and comprised a large part of the subsistence economy. Seasonally occupied special purpose sites relating to deer procurement, nut collection, and fishing activities, have all been identified. While beans are known to have been cultivated later in the Late Woodland Period, they have yet to be identified on Early Ontario Iroquoian sites.

The Middle Ontario Iroquoian Period (AD 1300-1400) witnessed several interesting developments in terms of settlement patterns and artifact assemblages. Changes in ceramic styles have been carefully documented, allowing the placement of sites in the first or second half of this 100-year period. Moreover, villages, which averaged approximately 0.6 ha in extent during the Early Ontario Iroquoian Period, now consistently range between one and two hectares.

House lengths also change dramatically, more than doubling to an average of 30 m, while houses of up to 45 m have been documented. This radical increase in longhouse length has been variously interpreted. The simplest possibility is that increased house length is the result of a gradual, natural increase in population (Dodd et al 1990:323, 350, 357; Smith 1990). However, this does not account for the sudden shift in longhouse lengths around AD 1300. Other possible explanations involve changes in economic and socio-political organization (Dodd et al 1990:357). One suggestion is that during the Middle Ontario Iroquoian Period small villages were amalgamating to form larger communities for mutual defense (Dodd et al 1990:357). If this was the case, the more successful military leaders may have been able to absorb some of the smaller family groups into their households, thereby requiring longer structures.

This hypothesis draws support from the fact that some sites had up to seven rows of palisades, indicating at least an occasional need for strong defensive measures. There are, however, other Middle Ontario Iroquoian villages which had no palisades present (Dodd et al 1990). More research is required to evaluate these competing interpretations.

The lay-out of houses within villages also changes dramatically by AD 1300. During the Early Ontario Iroquoian Period villages were haphazardly planned at best, with houses oriented in various directions. During the Middle Ontario Iroquoian Period villages are organized into two or more discrete groups of tightly spaced, parallel aligned, longhouses.

It has been suggested that this change in village organization may indicate the initial development of the clans which were a characteristic of the historically known Iroquoian peoples (Dodd et al 1990:358).

Initially at least, the Late Ontario Iroquoian Period (1400-1650 A.D.) continues many of the trends which have been documented for the preceding century. For instance, between AD 1400 and 1450 house lengths continued to grow, reaching an average length of 62 m. One longhouse excavated on a site southwest of Kitchener stretched an incredible 123 m (Lennox and Fitzgerald 1990:444-445). After 1450 A.D., house lengths begin to decrease, with houses dating between AD 1500-1580 averaging only 30 m in length.

Why house lengths decrease after 1450 A.D. is poorly understood, although it is believed that the even shorter houses witnessed on historical period sites can be at least partially attributed to the population reductions associated with the introduction of European diseases such as smallpox (Lennox and Fitzgerald 1990:405, 410).

Village size also continued to expand throughout the Late Ontario Iroquoian Period, with many of the larger villages showing signs of periodic expansions. The Late Middle Ontario Iroquoian Period and the first century of the Late Ontario Iroquoian Period was a time of village amalgamation. One large village situated just north of Toronto has been shown to have expanded on no fewer than five occasions. These large villages were often heavily defended with numerous rows of wooden palisades, suggesting that defence may have been one of the rationales for smaller groups banding together.

Late Ontario Iroquoian village expansion has been clearly documented in the London area. The ongoing excavations at the Lawson site, a large Late Iroquoian village located on the grounds of the Museum of Ontario Archaeology, has shown that the original village had expanded by at least twenty percent to accommodate the construction of nine additional longhouses (Anderson 2009).

The Ontario Iroquoian and Western Basin are two archaeological traditions that characterize pre-contact Indigenous communities living in the Middlesex County area of southwestern Ontario from about AD 500 to 1650. Peoples of the Western Basin Tradition lived throughout the southwestern-most portion of the province, from the present-day Sarnia/Windsor area to about London. Iroquoian peoples, on the other hand, appear to have lived from the present-day Chatham area east to Toronto. Each of these traditions are divided into distinct temporal phases (see Table 1) defined by material cultural attributes, and settlement and subsistence patterns that exhibit a shift towards larger and more permanent villages due to an increasing reliance on cultivated plants such as corn, beans, squash, sunflower, and tobacco (Dodd et al. 1990; Foreman 2011; Fox 1990; Lennox and Fitzgerald 1990; Murphy and Ferris 1990).

After AD 1525 communities of pre-contact Indigenous peoples of the Late Ontario Iroquoian Period who had formerly lived throughout southwestern Ontario as far west as the Chatham area moved further east to the Hamilton area. During the late 1600s and early 1700s, the French explorers and missionaries reported a large population of Iroquoian peoples clustered around the western end of Lake Ontario. They called these people the "Neutral", because they were not involved in the ongoing wars between the Huron and the League Iroquois located in upper New York State.

It has been satisfactorily demonstrated that the Late Ontario Iroquoian communities which were located in southwestern Ontario as far west as the Chatham area were ancestral to at least some of the Neutral Nation groups (Lennox and Fitzgerald 1990; Smith 1990:283). For this reason, the Late Ontario Iroquoian groups which occupied southwestern Ontario prior to the arrival of the French are often identified as "Prehistorical Neutral". They occupied a large area extending along the Grand River and throughout the Niagara Peninsula as far east as Fort Erie and Niagara Falls (Lennox and Fitzgerald 1990:448).

#### **1.2.4 Post-Contact Indigenous Period**

The post-contact Indigenous occupation of southern Ontario was heavily influenced by the dispersal of various Iroquoian-speaking peoples, such as the Huron and closely related Petun, by the New York State Iroquois and the subsequent arrival of Algonkian-speaking groups from northern Ontario at the end of the 17<sup>th</sup> century and beginning of the 18<sup>th</sup> century (Schmalz 1991).

The nature of their settlement size, population distribution, and material culture shifted as European settlers encroached upon their territory. However, despite this shift, “written accounts of material life and livelihood, the correlation of historically recorded villages to their archaeological manifestations, and the similarities of those sites to more ancient sites have revealed an antiquity to documented cultural expressions that confirms a deep historical continuity to Iroquoian systems of ideology and thought” (Ferris 2009:114). First Nation peoples of Southern Ontario have left behind archaeologically significant resources throughout Southern Ontario which show continuity with past peoples, even if they have not been recorded in historical Euro-Canadian documentation.

Portions of southwestern Ontario were also occupied by Algonkian-speaking groups both before and after European contact. Generally, the pre-contact Indigenous presence in much of southern Ontario reflects occupation by northern Iroquoian speakers. During and following the Iroquois Wars of the mid-17<sup>th</sup> century and the dispersal of the Iroquoian-speaking Huron-Petun and Neutral, a considerable reduction in the extent of territory occupied by Algonkian speakers occurred in southern Ontario. Beginning about 1690, northern Algonkian speakers from northern Ontario began to move southwards and southern Iroquoian speakers began to push southern Algonkian-speakers further west (Ferris 2009; Schmalz 1991).

### 1.2.5 Historical Euro-Canadian Period

Following the Toronto Purchase of 1787, today’s southern Ontario was within the old Province of Quebec and divided into four political districts: Lunenburg, Mecklenburg, Nassau, and Hesse. These became part of the Province of Upper Canada in 1791, and renamed the Eastern, Midland, Home, and Western Districts, respectively. The Study Area is within the former Hesse District, then later the Western District, which originally included all lands lying to the west of a line running north from Long Point on Lake Erie to Georgian Bay. Each district was further subdivided into counties and townships, with the Study Area falling within Middlesex County and London Township.

The Indigenous history of the area spanning at least 10,000 years up to the end of the French colonial regime is summarized in Golder’s Stage 1 archaeological assessment for the project. The historical summary below begins at the British colonial administration, when the districts, counties and townships, some of which are retained today, were established.

Following the Toronto Purchase of 1787, today’s southern Ontario was within the old Province of Quebec and divided into four political districts: Lunenburg, Mecklenburg, Nassau, and Hesse. These became part of the Province of Upper Canada in 1791, and renamed the Eastern, Midland, Home, and Western Districts, respectively. The Study Area was within the former Hesse District, then later the Western District, which originally included all lands west of an arbitrary line running north from the end of Long Point on Lake Erie to the southernmost point of Georgian Bay. Each district was further subdivided into counties and townships. The Study Area was originally within London Township in the County of Middlesex.

Official interest in the area dates to 1792 and 1793, when Lieutenant-Governor for Upper Canada John Graves Simcoe and his wife Elizabeth visited the Forks of the Thames during an overland journey from Niagara to Detroit and back (Macleod 1972:155). For Simcoe, the area was natural strategic and administrative centre for the colony; equidistant from Detroit and Niagara and well inland from the hostile US border, it could support nearby naval bases on three of the Great Lakes and be easily defended in the event of American attack (Macleod 1972:156). He subsequently ordered the lands of the Thames River basin be surveyed for European habitation and with the Chippewa Nation negotiated a land surrender called London Township Treaty No. 6 for what would become Middlesex County. The treaty, witnessed on September 7, 1796 read:

*“NOW KNOW YE, that we the said principal Chiefs, Warriors and People of the Chippewa Nation for and in consideration of the sum of twelve hundred pounds Quebec currency value in goods estimated according to the Montreal price now delivered to us...beginning at a certain station on the north bank of the said river about nineteen miles above the Deleware [sic] Village following the windings of the said river and about twelve miles distant from the said village in a direct northerly course, being about two miles above a lime stone rock and spring on the said river which station will be more perfectly found by a line run from the main or lower fork at London six miles on a course south, sixty-eight degrees thirty miles; thence north sixty-eight degrees thirty minutes east twelve miles' thence south twenty-one degrees thirty minutes east till it intersects a right line running from the upper forks of the said river at Oxford to the main or lower forks of the said river at London; thence along the said line to the said upper forks on a course north sixty-eight degrees thirty minutes east; thence down the said River Thames following the several winding and courses with the stream to the place of beginning.”* (Indigenous & Northern Affairs Canada 2016)

Two years later, London District was formed from parts of the Home and Western Districts, with the district town established at what is now Turkey Point.

In 1801, Simcoe's former private secretary Colonel Thomas Talbot sold his commission to promote British settlement of the area, and hired surveyor Colonel Mahlon Burwell, who began his work in 1810 (Brunger 2019; Gentilcore & Donkin 1973). However, as early as 1808, a 'non-progressive' squatter named Joshua Applegarth had built a cabin at the Forks near today's Blackfriar's Bridge and attempted to grow rope hemp on the river flats (Stott 1999:13-14).

Both the surveys and settlement would be disrupted by the War of 1812, which came to the London area in 1813. After advancing up the Thames, American forces faced a combined British regular, militia, and First Nation force at Moraviantown. In the ensuing Battle of the Thames, the widely respected First Nation leader Tecumseh was killed, and the British force was routed (Troughton & Quinlan 2009:43-44). During the 1814 campaign season, the American again met the British on the Thames, and the latter were again defeated at a skirmish on the Longwoods Road, also known as 'Battle Hill' (Troughton & Quinlan 2009:44).

After the war, settlers began arriving in Middlesex County in numbers, concentrating first in the Township of Delaware, near the Thames River, then spreading to Westminster Township and London Township.

### **1.2.5.1 London Township**

Burwell's survey of London Township would not be complete until the late-1820s and it was bound on the north by the townships of McGillivray and Biddulph, on the west by Lobo Township, on the south by the Delaware and Westminster townships, and on the east by the Township of Nissouri West (Goodspeed 1889). London Township is the largest of the Middlesex townships, covering approximately 96,000 acres (H.R. Page & Co. 1876), and its earliest 'official' settlement dates to 1818, when Talbot granted land to several Irish families. Poor roads to the area prevented all but modest growth, but this changed dramatically in 1827 when London was made capital of Western District and the site for the district courthouse, which had been erected by 1829 (Troughton & Quinlan 2009:47; Stott 1999:15). Three years later the population numbered around 400 and, despite an outbreak of Asiatic cholera, had recovered by 1835 to boast over 1,000 inhabitants, surpassing the population of neighbouring towns such as St. Thomas, Port Stanley, and Delaware. During the 1837 Rebellion, London was selected as permanent garrison for the British 32nd Regiment and continued to grow, surpassing 1,800 people in 1840 when



it reached police village status. The population of the township, exclusive of the Village of London, reached 3,955 people by 1842 (Stott 1999:15; H.R. Page & Co. 1878).

The first of two devastating fires swept through a large portion of Dundas Street in 1844 while a second fire the following year, known as 'The Great Fire', burned a substantial portion of the village. These led to a by-law defining boundaries in the village where no wooden structures could be erected (H.R. Page & Co. 1878). Industries in the township at this time included three grist and six sawmills (Smith 1846).

In 1847 London incorporated as a Town and by 1850 the township's population had reached 6,034 people. London's incorporation as a city came into effect on January 1, 1855 when its population surpassed 10,000 (Smith 1850), a rapid growth spurred by arrival of the Great Western Railway in 1853 and later supported by the London-Port Stanley Railway in 1856. Two years later the township was considered fully settled, and throughout the 1870s London continued to see steady growth owing to its rich agricultural land, as well as manufacturing in industries such as brewing, oil, carriage manufacture, and foodstuffs such as confectionary (Department of Agriculture 1880). London had also experienced an 'oil fever' between 1862 to 1865, but overproduction soon drove the price down.

London Township's population had grown to 9,645 inhabitants by 1880, with several small hamlets including Birr, Elginfield, Denfield, Ilderton, Vanneck, Bryanston, and Kensington (Brock and Moon 1972: 520-522). The City by then was divided into seven wards and had several suburbs, including Kensington, Petersville, Westminster, and London East (Page and Co. 1878). In the 1880s, London annexed London East, London South, and London West, followed by Pottersburg, Ealing, and Chelsey Green in 1912 (Tourism London 2019). In 1892 the *London City and Middlesex County Directory* listed the City's population as 15,983 people (Might's Directory Co. 1892).

The City continued to grow into the first two decades of the 20<sup>th</sup> century as its industrial base developed and the Ontario shifted to an increasingly urban economy (Troughton & Quinlan 2009:54). This was stifled by the Great Depression in 1929, and in 1937 the Thames River flooded, killing one and leaving hundreds homeless (Troughton & Quinlan 2009:54; Tourism London 2019). London's manufacturing industries contributed to the war effort through 1939-1945, but agriculture dropped precipitously in the post war years while other economic activities, such as the automotive industry, diversified and expanded (Troughton & Quinlan 2009:56-58). London reached nearly a quarter of a million residents by 1976 primarily by annexing surrounding communities beginning in 1961. In 1993, London had annexed nearly all the Town of Westminster and by 2016, the population of the City had expanded to 494,069, making it one of the largest urban municipalities in Ontario (Statistic Canada 2016).

### 1.2.5.2 Study Area Specific Historical Context

Prior to its annexation by the City of London in 1993, the Study Area consisting of the ROW for Adelaide Street North and Sunningdale Road East, fell between Lots 12 and 13, Concession 5, and Lots 12 and 13, Concession 6 in the former geographic Township of London, Middlesex County, Ontario. Historical mapping shows that these two roads have been in existence since the original surveys. Though the Study Area does not fall within any lots, each lot surrounding the Study Area has been owned since the mid-19<sup>th</sup> century. The patent plan for London Township is very difficult to read but indicates that patents had been issued for each lot abutting the Study Area (Map 3).

Both Tremaine's 1862 Map of Middlesex County and Peters' 1863 Map of London Township show identical landowner information for the lots surrounding the Study Area (Map 4 and Map 5). Thomas Foster owned the southern portion of Lot 12, Concession 5, while Robert Ralph owned the northern half.

North of Sunningdale Road (Concession 6), Thomas Mahar owned the southern quarter of Lot 12, Concession 6. West of Adelaide Street, J. G. Luard owned the southeast quarter of Lot 13, Concession 6, while the W.J. Geary Estate owned the northern half. Ed Talbot owned the southern half of Lot 13, Concession 6. The only structure indicated on Tremaine's map is located on the southeast corner of Lot 13, Concession 6, owned by J.G. Luard, while Peters' map indicates structures on each lot bordering the Study Area (Map 4 and Map 5).

By 1878, the *Illustrated Historical Atlas of Middlesex County* shows that the only land abutting the Study Area that changed hands between Peters' 1863 map and 1878 was the southeast quarter of Lot 13, Concession 5, which was now owned by the heirs of T. Burk (Map 6). As with Peters' map, the 1878 *Historical Atlas* map has structures as well as orchards shown on each lot bordering the Study Area. The many structures indicated on the historical map indicate a long history of occupation and farming surrounding the Study Area.

## 1.3 Archaeological Context

### 1.3.1 Study Area Overview

The Study Area consists of the ROWs for Adelaide Street North and Sunningdale Road East, which is situated within the Stratford Till Plain physiographic region (Chapman & Putnam 1984:133).

*...broad clay plain of 1,370 square miles, extending from London in the south to Blyth and Listowel in the north with a projection toward Arthur and Grand Valley. It is an area of ground moraine interrupted by several terminal moraines. The moraines are more closely spaced in the southwestern portion of the region; consequently that part resembles the Mount Elgin Ridges... Throughout the area the till is fairly uniform, being a brown calcareous silty clay whether on the ridges or the more level ground moraine. It is a product of the Huron ice lobe. Some of the silt and clay is calcareous rock flour, probably a good deal of it coming from previously deposited varved clays of the Lake Huron Basin.*

Chapman and Putnam 1984:133

The localized topography of the Study Area is flat and sits at 250 m above sea level (ASL) at the south end, gently sloping up to approximately 265 m ASL to the north. There is a large ridge rising to approximately 270 m ASL running southwest-northeast across the Sunningdale Road East and Adelaide Street North in the northwestern portion of the Study Area. The soils of the southern portion of the Study Area have not been mapped, however soils in the northern portion consist of Brant silt loams and Bryanston silt loams. Brant and Bryanston silt loams are well- to imperfectly-drained and are suitable for common field crops, being some of the most productive soils in Middlesex County (Hagerty and Kingston 1992). The closest potable water sources are several branches of Stoney Creek, which flow through various parts of the Study Area. Stoney Creek, a tributary of the north branch of the Thames River, is part of the Stoney Creek subwatershed, which is approximately 38 km<sup>2</sup> (City of London 2007).

The bedrock deposits in the vicinity date to the Middle Devonian Period and consist of the Dundee Formation (Hewitt 1972). Selkirk chert, a moderate quality raw material, outcrops from the Dundee formation from the mouth of the Grand River along the north shore of Lake Erie, and as far west as the Chatham area (Eley and von Bitter 1989; Fox 2010).

The Study Area lies within the Mixed-wood Plains ecozone of Ontario (The Canadian Atlas Online 2015). Although largely altered by recent human activity, this ecozone once supported a wide variety of deciduous trees, such as various species of ash, birch, chestnut, hickory, oak, and walnut, as well as a variety of birds and small to

large land mammals, such as raccoon, red fox, white tailed deer, and black bear. Smith (1850:90) confirms that the timber present in the vicinity of Westminster Township during the first half of the 19<sup>th</sup> century included oak, beech, maple and chestnut, among other varieties.

Currently, the Study Area consists of existing infrastructure such as roads and road verges, sidewalks, and driveways.

### 1.3.2 Previous Archaeological Work

A search of the Ontario Archaeological Sites Database (OASD) indicated that there are 50 registered archaeological sites located within a 1 km radius of the Study Area (MTCS 2018). Table 2 presents a summary of these sites, eighteen of which are within 300 m of the Study Area. One site, AgHh-168, was located partially within the current Study Area.

**Table 2: Sites within 1 km Radius of the Study Area**

Borden #	Site Name	Cultural Affinity	Site Type
AgHh-2	Freel	Pre-Contact Indigenous; Woodland; Woodland, Early	burial; burial
AgHh-29	Mathews	Pre-Contact Indigenous; Woodland, Late	hamlet
AgHh-30		Unlisted	Unlisted
AgHh-31		Unlisted	Unlisted
AgHh-32		Unlisted	Unlisted
AgHh-62	Ridge	Pre-Contact Indigenous; Woodland, Late	cabin; cabin; hamlet; hamlet; longhouse; midden; midden; village; village
AgHh-63		Unlisted	Unlisted
AgHh-67		Pre-Contact Indigenous; Archaic, Late	findspot
AgHh-70*	Northbrook	Unlisted	Unlisted
AgHh-101	Ardshell 6	Pre-Contact Indigenous	findspot
AgHh-102	Ardshell 7	Pre-Contact Indigenous; Archaic, Late; Pre-Contact	findspot; findspot
AgHh-126	Stoney Creek 8	Pre-Contact Indigenous	findspot

Borden #	Site Name	Cultural Affinity	Site Type
AgHh-129	Stoney Creek 11	Pre-Contact Indigenous; Archaic, Early; Archaic, Early	findspot
AgHh-130	Stoney Creek 12	Euro-Canadian	house
AgHh-138*	Stoney Creek 20	Euro-Canadian	farmstead; homestead; house
AgHh-139*	Stoney Creek 21	Euro-Canadian	farmstead; homestead; house
AgHh-140*	Stoney Creek 22	Pre-Contact Indigenous; Woodland, Middle	findspot
AgHh-141	Stoney Creek 23	Pre-Contact Indigenous	findspot
AgHh-142*	Stoney Creek 24	Euro-Canadian	farmstead; homestead; house; outbuilding
AgHh-143*		Pre-Contact Indigenous	findspot
AgHh-146*	Sergautis 1	Pre-Contact Indigenous; Archaic, Late	scatter
AgHh-147*	Sergautis 2	Pre-Contact Indigenous; Archaic, Early; Pre-Contact	scatter; scatter
AgHh-148*	Sergautis 3	Pre-Contact Indigenous	findspot
AgHh-149	Sergautis 4	Pre-Contact Indigenous	findspot
AgHh-150	Sergautis 5	Pre-Contact Indigenous	findspot
AgHh-151	Sergautis 6	Pre-Contact Indigenous	findspot
AgHh-152	Old Barn	Euro-Canadian	Other: building
AgHh-153	Sunningdale Historic	Euro-Canadian	homestead
AgHh-168**	Adelaide- Fanshawe	Pre-Contact Indigenous; Archaic, Early	Other: camp/campsite
AgHh-172		Pre-Contact Indigenous	findspot
AgHh-176	Gough 1	Pre-Contact Indigenous; Archaic, Early	Other: camp/campsite

Borden #	Site Name	Cultural Affinity	Site Type
AgHh-177	Gough 2	Pre-Contact Indigenous; Archaic, Middle; Archaic, Middle	Other: camp/campsite
AgHh-178	Gough #6	Pre-Contact Indigenous; Woodland, Early	Other: camp/campsite
AgHh-181*		Pre-Contact Indigenous	Unknown
AgHh-182		Pre-Contact Indigenous; Archaic, Late	findspot
AgHh-183	Carapella	Pre-Contact Indigenous	Other: camp/campsite
AgHh-184		Pre-Contact Indigenous; Archaic	scatter
AgHh-185	Powell	Pre-Contact Indigenous; Woodland, Late	Other: camp/campsite
AgHh-186		Euro-Canadian	house
AgHh-220*		Pre-Contact Indigenous; Post- Contact; Euro-Canadian	Other: domestic, cabin; Other: domestic, cabin: homestead
AgHh-221*		Other	Other: findspot
AgHh-224*	Applewood 1	Pre-Contact Indigenous; Archaic, Late; Pre-Contact	findspot; findspot
AgHh-225*	Applewood 2	Pre-Contact Indigenous	findspot
AgHh-226*	Applewood 3	Euro-Canadian	homestead
AgHh-227*	Applewood 4	Pre-Contact Indigenous	findspot
AgHh-228	Applewood 5	Pre-Contact Indigenous; Woodland, Middle	Unlisted
AgHh-229	Applewood 6	Pre-Contact Indigenous	scatter
AgHh-230	Applewood 7	Euro-Canadian	Other: building; homestead
AgHh-234*		Other	Other: Residential; Other: Residential

Borden #	Site Name	Cultural Affinity	Site Type
AgHh-258	Spruce Knoll Site	Pre-Contact Indigenous; Woodland; Post-Contact;	camp / campsite; homestead; scatter

\*Site within 300 m of current Study Area. \*\* Site located within current Study Area

Several archaeological assessments have been conducted within 50 m of the Study Area.

In 1998, Mayer Heritage Consultants Inc. (MHCI) conducted a Stage 1-2 assessment for the widening of Adelaide Street between Windemere Road and Fanshawe Park Road (MHCI 1999), including some minor overlap with the current Study Area. One pre-contact Indigenous site was found, the Adelaide-Fanshawe Site (AgHh-168), at the northwest corner of Adelaide Street and Fanshawe Park Road. The site was subject to Stage 3 assessment in 1999 by the same consultant, involving the excavation of 19 1 m<sup>2</sup> test units across the site. The Stage 3 assessment recovered one Early Archaic bifurcate base projectile point, 16 pieces of lithic debitage and nine pieces of calcined bone. No further work was recommended for the portion of site that was subject to impacts from proposed construction, though mechanical removal of the topsoil from the core site area was recommended to be monitored by a licenced archaeologist in order to document a suspected cooking hearth if it was present within the ROW (MHCI 1999). The copy of this report that is currently available is missing the map showing the exact limits of the Stage 3 assessment, thus it is not possible to know exactly where the site limits are.

The Museum of Indian Archaeology (MIA) in London (now Museum of Ontario Archaeology) conducted a large archaeological assessment for the Stoney Creek Community Plan in 1994. The assessment identified seven archaeological sites and recommended further work for all seven before development (City of London 1998).

Another large Stage 1-2 archaeological assessment was conducted in 2006 by MHCI on approximately 100 acres of land located at the northwest corner of Sunningdale Road and Adelaide Street. This Stage 2 resulted in the discovery of 16 pre-contact Indigenous sites, nine historical Euro-Canadian sites, and two pre-contact/Euro-Canadian multi-component sites. MHCI was also able to relocate four sites identified by the MIA in 1995 (MHCI 2006).

In 2008, Archaeologix Inc. conducted a Stage 1-2 assessment of a 12.14 ha parcel located on part of Lot 12, Concession 6, located kitty-corner to the northern edge of the current Study Area. This Stage 1-2 assessment resulted in the discovery of one historical Euro-Canadian site, AgHh-234, which was then subject to Stage 3 and 4 assessments in 2008 and 2009 by Archaeologix and Golder Associates (Golder 2009)

To the best of our knowledge, no additional archaeological assessments have been conducted within 50 m of the current Study Area.

Information concerning specific site locations is protected by provincial policy and is not fully subject to the *Freedom of Information Act*. The release of such information in the past has led to looting or various forms of illegally conducted site destruction. Confidentiality extends to all media capable of conveying location, including maps, drawings, or textual descriptions of a site location. For this reason, maps and data that provide information on archaeological site locations are provided as supplementary documentation and do not form part of this public report.

The MTCS will provide information concerning site location to the party or an agent of the party holding title to a property, or to a licensed archaeologist with relevant cultural resource management interests.

### 1.3.3 Archaeological Potential

Archaeological potential is established by determining the likelihood that archaeological resources may be present within a property. In accordance with the MTCS's 2011 *Standards and Guidelines for Consultant Archaeologists* the following are features or characteristics that indicate archaeological potential:

- Previously identified archaeological sites;
- Water sources:
  - Primary water sources (lakes, rivers, streams, creeks);
  - Secondary water sources (intermittent streams and creeks; springs; marshes; swamps);
  - Features indicating past water sources (e.g. glacial lake shorelines indicated by the presence of raised gravel, sand, or beach ridges; relic river or stream channels indicated by clear dip or swale in the topography; shorelines of drained lakes or marshes; and cobble beaches);
  - Accessible or inaccessible shoreline (e.g. high bluffs, swamps or marsh fields by the edge of a lake; sandbars stretching into marsh);
- Elevated topography (eskers, drumlins, large knolls, plateaux);
- Pockets of well drained sandy soil, especially near areas of heavy soil or rocky ground; distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases (there may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings);
- Resource areas including: food or medicinal plants; scarce raw minerals (e.g. quartz, copper, ochre or outcrops of chert); and, early Euro-Canadian industry (fur trade, mining, logging);
- Areas of Euro-Canadian settlement; and,
- Early historical transportation routes.

In recommending a Stage 2 property survey based on determining archaeological potential for a Study Area, the MTCS stipulates the following:

- No areas within 300 m of a previously identified site; water sources; areas of early Euro-Canadian Settlement; or locations identified through local knowledge or informants can be recommended for exemption from further assessment;
- No areas within 100 m of early transportation routes can be recommended for exemption from further assessment; and
- No areas within the property containing an elevated topography; pockets of well-drained sandy soil; distinctive land formations; or resource areas can be recommended for exemption from further assessment.

Based on the criteria outlined above, the Study Area was determined to have archaeological potential for both pre-contact Indigenous and historical Euro-Canadian sites. This determination is based on the proximity of Stoney Creek, which runs through the Study Area in several places, as well as the presence of well-drained soils, and the fact that the Study Area is located in an area within London Township with a history of Euro-Canadian occupation

dating back to the mid-19th century. This conclusion is consistent with the City of London's *Archaeological Management Plan*, which indicates that portions of the Study Area exhibit archaeological potential (ASI 2017).

### 1.3.4 Features Indicating the Removal of Archaeological Potential

As stated in Section 1.3.2 of the *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), archaeological potential can be determined to be removed either entirely or in part when background research and property inspection confirm extensive and deep land alterations that have severely damaged the integrity of any archaeological resources that may be present. Types of disturbance that remove archaeological potential may include: quarrying; major landscaping involving grading below topsoil; building footprints; and sewage and infrastructure development.

As discussed in Section 1.3.1 above, the Study Area has been impacted by construction activities relating to the roads and road verges, sidewalks, and driveways. These areas were surveyed and documented accordingly to confirm the presence and extent of disturbance (see Section 2.1 below).

## 2.0 FIELD METHODS

### 2.1 Stage 1 Property Inspection

As part of this Stage 1 Archaeological Assessment, a property inspection was conducted on August 16, 2018, under archaeological consulting license P457, issued to Lafe Meicenheimer by the MTCS (PIF# P457-0072-2018). The inspection was undertaken to gain first-hand knowledge of the Study Area, to determine if there were any areas of disturbance that would affect archaeological potential, and to determine what survey strategies would be appropriate for a Stage 2 assessment, should it be required.

The entire Study Area was systematically inspected to confirm if features of archaeological potential were present and if there were any areas of deep and extensive disturbance, which would have removed archaeological potential. As stated in Section 1.4.2 of the *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011:22), a property may only be exempt from Stage 2 assessment once deep and extensive ground disturbance has been confirmed through a property inspection.

The weather on the day of the inspection was overcast with light rain and 25°C, permitting good visibility of land features and contributing to no reduction in the chance of observing features of archaeological potential. Field notes and photographs of the property were taken during the inspection. The photograph locations and directions can be seen on Map 7.

### 2.2 Stage 2 Test Pit Survey

Due to the uncertainty surrounding the exact location and limits of the Adelaide-Fanshawe Site (AgHh-168) (see Section 1.3.2), the MTCS recommended that Stage 2 test pitting be conducted in the portion of the Study Area where the site was documented to verify disturbance and/or the presence of the site within the current Study Area (Image 17; see Supplementary Documentation).

The Stage 2 Archaeological Assessment of this portion of the Study Area, which measured approximately 35 m north-south by 15 m east-west, was conducted on June 4, 2019, under archaeological consulting license P457, issued to Lafe Meicenheimer of Golder by the MTCS (P457-0072-2018).



The weather during the assessment was 20°C and mostly sunny. At no time were the conditions detrimental to the observation or recovery of archaeological material. Photo locations are illustrated on Map 7, Inset. All activities undertaken during the Stage 2 Assessment were in compliance with the *Ontario Heritage Act* and the *Standards and Guidelines* (Government of Ontario 1990b; Government of Ontario 2011).

In accordance with advice from the MTCS, the portion of the Study Area identified as the Adelaide-Fanshawe Site (AgHh-168) was assessed by test pit survey. Utility locates obtained before the test pit survey indicated buried electrical cables for the traffic signals in the southern portion of the test pitting area; this area was considered disturbed and not test pitted (Image 18). Test pits were placed throughout the area north of the utilities between the sidewalk and Adelaide Street according to professional judgement (Map 7, Inset; Image 19), as per *Standards and Guidelines* Section 2.1.8 (Government of Ontario 2011). Each test pit was at least 30 cm in diameter and was excavated a minimum of 5 cm into natural subsoil. Test pits were examined for stratigraphy, cultural features and fill. The stratigraphy encountered consisted of 60 to 90 cm of varying fill layers on top of natural hard-packed pale yellow silt subsoil (Image 20 and Image 21). Natural subsoil was encountered directly beneath fill layers in all test pits, indicating prior deep disturbance. All test pits were backfilled upon completion.

### 3.0 RECORD OF FINDS

The Stage 1 property inspection and Stage 2 assessment were conducted employing the methods described in Section 2.0. Map 7 illustrates the areas inspected, while Image 1 to Image 16 show the field conditions.

Table 3 provides an inventory of the documentary record generated in the field.

**Table 3: Inventory of Documentary Record**

Document Type	Current Location of Document	Additional Comments
Field Notes	Golder Office in London	Two pages from original field book. Hard copies stored in project folder and digitally in project file.
Hand Drawn Maps	Golder Office in London	Two maps in total from original field book. Hard copies stored in project folder and digitally in project file.
Maps provided by Client	Golder Office in London	One map in total stored in project folder and stored digitally in project file.
Digital Photographs	Golder Office in London	A total of 64 photos stored in project folder and digitally in project file.

Areas of perceived disturbance were inspected and documented as outlined in Section 2.1 above. The entirety of the Study Area was found to be disturbed by the prior construction of roads and road verges, sidewalks, and driveways (Image 1 to Image 16).

## 4.0 ANALYSIS AND CONCLUSIONS

The Study Area was initially determined to have archaeological potential, as indicated by the criteria laid out in Section 1.3.3, however a property inspection revealed that the Study Area has been subject to deep and extensive disturbance from the previous construction of roads, sidewalks, driveways, ditches, buried utilities, and landscaping (Image 1 to Image 16). As such, all archaeological potential has been removed and no further archaeological work is necessary.

A portion of the Adelaide-Fanshawe Site (AgHh-168) originally existed within the current Study Area (see Section 1.3.2 above). As per the advice of the MTCS, the area where the site existed was subject to Stage 2 test pit survey to determine whether the site exists within the current Study Area and/or to document disturbance. The Stage 2 survey found that the entire area has been subject to previous disturbance down to natural subsoil (Image 18 to Image 21). As such, all archaeological potential has been removed from the entire Study Area and no further archaeological work is necessary.

## 5.0 RECOMMENDATIONS

Given the combined results of the background study and property inspection, it is concluded that due to complete and intensive previous disturbances there is no potential for archaeological resources within the limits of the Study Area and, as such, no further archaeological work is recommended.

The Ontario Ministry of Tourism, Culture and Sport is asked to review the results and recommendations presented herein, accept this report into the Provincial Register of archaeological reports and issue a standard letter of compliance with the Ministry's 2011 *Standards and Guidelines for Consultant Archaeologists* and the terms and conditions for archaeological licencing

## 6.0 ADVICE ON COMPLIANCE WITH LEGISLATION

This report is submitted to the Minister of Tourism and Culture as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18 (Government of Ontario 1990b). 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 regards to alterations to archaeological sites by the proposed development.

It is an offence under Section 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alterations to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeological reports referred to in Section 65.1 of the *Ontario Heritage Act* (Government of Ontario 1990b).

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* (Government of Ontario 1990b).

The *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33, requires that any person discovering or having knowledge of a burial site shall immediately notify the police or coroner (Government of Ontario 2002). It is recommended that the Registrar of Cemeteries at the Ministry of Consumer Services is also immediately notified.

## 7.0 BIBLIOGRAPHY

Anderson, Jacob

2009 *The Lawson Site: An Early Sixteenth Century Neutral Iroquoian Fortress*. Museum of Ontario Archaeology, Special Publication No. 2. London.

Archaeological Services Incorporated (ASI)

2017 *London Archaeological Management Plan*. London, Ontario.

Brock, Daniel and Muriel Moon

1972 *The History of the County of Middlesex, Canada*. Mika Studios, Belleville, Ontario.

Brunger, Alan G.

2019 "Talbot, Thomas" in *Dictionary of Canadian Biography, Vol. 8*, University of Toronto/Université Laval. Electronic resource: [http://www.biographi.ca/en/bio/talbot\\_thomas\\_8E.html](http://www.biographi.ca/en/bio/talbot_thomas_8E.html). Last accessed August 8, 2019.

Burwell, Mahlon

n.d. *Township of London Patent Plan* Ontario Archives Reference Code RG 1-100-0-0-1288.

Canadian Atlas Online, The

2015 "Mixedwood Plains Ecozone." Electronic resource: [http://www.canadiangeographic.ca/atlas/themes.aspx?id=mixedwood&sub=mixedwood\\_basics\\_ecozones](http://www.canadiangeographic.ca/atlas/themes.aspx?id=mixedwood&sub=mixedwood_basics_ecozones) Last accessed August 8, 2019.

Chapman, Lyman John and Donald F. Putnam

1984 *The Physiography of Southern Ontario*. 3rd ed. Ontario Geological Survey Special Volume 2. Ontario Ministry of Natural Resources, Toronto.

City of London

1998 *Stoney Creek Community Plan*. London.

2007 *Status Review of Stoney Creek Subwatershed Study*. London.

---

Delaware & Westminister Townships History Book Committee (DWTH)

2006 *Delaware and Westminister Townships, Honouring Our Roots, Together in History*. The Westminister Township Historical Society, Delaware, Ontario.

Dodd, Christine F., Dana R. Poulton, Paul A. Lennox, David G. Smith and Gary A. Warrick

1990 The Middle Ontario Iroquoian Stage. In: *The Archaeology of Southern Ontario to A.D. 1650*. Occasional Publication of the London Chapter, Ontario Archaeological Society, Number 5: 321-360.

Eley, Betty E. and Peter H. von Bitter

1989 *Cherts of Southern Ontario*. Royal Ontario Museum, Toronto.

Ellis, Chris

1984 *Gainey Fluted Points*. KEWA 84-7.

Ellis, Chris J. and D. Brian Deller

1990 Paleo-Indians. In: *The Archaeology of Southern Ontario to A.D. 1650*. Occasional Publication of the London Chapter, Ontario Archaeological Society, Number 5: 37-64.

Ellis, Chris J., Ian T. Kenyon and Michael W. Spence

1990 The Archaic. In: *The Archaeology of Southern Ontario to A.D. 1650*. Occasional Publication of the London Chapter, Ontario Archaeological Society, Number 5: 65-124.

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.

Ferris, Neal

2009 *The Archaeology of Native-Lived Colonialism: Challenging History in the Great Lakes*. University of Arizona Press, Tucson.

Foreman, Lindsay Judith,

- 2011 *Seasonal Subsistence in Late Woodland Southwestern Ontario*. Unpublished thesis submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy. The School of Graduate and Postdoctoral Studies, University of Western Ontario London, Ontario, Canada.

Fox, William A.,

- 1990 The Middle Woodland to Late Woodland Transition. In: *The Archaeology of Southern Ontario to A.D. 1650*. Occasional Publication of the London Chapter, Ontario Archaeological Society, Number 5: 171-188.
- 2009 Ontario Cherts Revisited. In *Painting with A Broad Brush. Papers in Honour of James Valliere Wright Ed. David L. Keenlyside and Jean-Luc Pilon. Mercury Series Archaeology* pp. 339-354. Canadian Museum of Civilization. Gatineau

Gentilcore, R. Louis, and Kate Donkin

- 1973 *Land Surveys of Southern Ontario: An Introduction and Index to the Field Notebooks of the Ontario Land Surveyors 1784-1859*. Cartographica, Monograph No. 8. BV Gutsell, Department of Geography, York University, Toronto.

Golder Associates Ltd.

- 2009 *Stage 4 Archaeological Assessment, Sergautis Comfort Lands Subdivision, Part of Lot 12, Concession 6, Geographic Township of London, Now City of London, Ontario*. Report on file with the MTCS, Toronto.

Government of Ontario

- 1990a *The Environmental Assessment Act*. Electronic document: <https://www.ontario.ca/laws/statute/90e18>
- 1990b *The Ontario Heritage Act*. Electronic document: <https://www.ontario.ca/laws/statute/90o18>
- 2002 *Funeral, Burial and Cremation Services Act*. Electronic document: <https://www.ontario.ca/laws/statute/02f33>
- 2010 *Engaging with Aboriginal Communities in Archaeology*. Ontario Ministry of Tourism, Culture and Sport, Toronto.
- 2011 *Standards and Guidelines for Consultant Archaeologists*. Ontario Ministry of Tourism, Culture and Sport, Toronto

---

#### Hagerty, T. P. and M. S. Kingston

- 1992 *The Soils of Middlesex County, Volume 1*. Soils Report No. 56 at the Ontario Centre for Soil Resource Evaluation. Resources Management Branch, Ontario Ministry of Agriculture and Food, Guelph.

#### Heritage Property Index

- 2018 Electronic resource: <http://ontario.heritagepin.com/>. Last accessed August 8, 2019.

#### Hewitt, D.F.

- 1972 *Paleozoic Geology of Southern Ontario*. Geological Report No. 105, Ontario Division of Mines, Toronto.

#### Indigenous and Northern Affairs Canada

- 2016 "Treaty Texts - Upper Canada Land Surrenders: London Township Treaty No. 6." Electronic resource: <https://www.aadnc-aandc.gc.ca/eng/1370372152585/1370372222012#ucls9>. Last accessed August 8, 2019.

#### Lennox, Paul A. and William R. Fitzgerald

- 1990 The Culture History and Archaeology of the Neutral Iroquoians. In: *The Archaeology of Southern Ontario to A.D. 1650*. Occasional Publication of the London Chapter, Ontario Archaeological Society, Number 5: 405-456.

#### Mayer Heritage Consultants Inc (MHCI)

- 1999 *A.A. (Stage 3) Adelaide-Fanshawe Site (AgHh-168), Fanshawe Park Road Bus Lane, City of London, County of Middlesex, Ontario*. Report on file with the MTCS, Toronto.
- 2006 *AA (Stages 1 and 2), Applewood Subdivision, 660 Sunningdale Road, City of London, Middlesex County, Ontario*. Report on file with the MTCS, Toronto.

#### MacLeod, Malcolm

- 1972 "Fortress Ontario or Forlorn Hope? Simcoe and the Defence of Upper Canada." *Canadian Historical Review* 53(2): 149-78.

Might's Directory Co.

1892 *The London City and Middlesex County Directory 1892*. London.

Ministry of Tourism, Culture and Sport (MTCS)

2018 Sites within a One Kilometre Radius of the Project Area Provided from the Ontario Archaeological Sites Database, Jul 24, 2018.

Murphy, Carl and Neal Ferris

1990 The Late Woodland Western Basin Tradition in Southwestern Ontario. In: *The Archaeology of Southern Ontario to A.D. 1650*. Occasional Publication of the London Chapter, Ontario Archaeological Society, Number 5:189-278.

Page, H.R. and Co.

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

Pearce, Robert J.

2010 *Southwestern Ontario: The First 12,000 Years*. Web site developed by Museum of Ontario Archaeology, London with funding from Department of Canadian Heritage. Electronic document: <http://www.diggingontario.uwo.ca>. Last accessed 2016.

Peters, Samuel, P.L.S. & C.E.

1863 *Map of the Township of London, Canada West, corrected from actual survey, lithographed & published by Saml. Peters, P.L.S. & C.E.* 1863. London.

Schmalz, Peter S.

1991 *The Ojibwa of Southern Ontario*. University of Toronto Press, Toronto.

Smith, David G.

1990 Iroquoian Societies in Southern Ontario: Introduction and Historical Overview. In: *The Archaeology of Southern Ontario to A.D. 1650*. Occasional Publication of the London Chapter, Ontario Archaeological Society, Number 5: 279-290.



Smith, Wm. H.

- 1846 *Smith's Canadian Gazetteer*. H. & W. Rowsell, Toronto.
- 1850 *Canada: Past Present and Future*. Thomas Maclear, Toronto.

Spence, Michael W., Robert H. Pihl and Carl Murphy

- 1990 Cultural Complexes of the Early and Middle Woodland Periods. In: *The Archaeology of Southern Ontario to A.D. 1650*. Occasional Publication of the London Chapter, Ontario Archaeological Society, Number 5: 15-170.

Statistics Canada

- 2016 "Census Profile, London, City." Electronic resource: <https://www12.statcan.gc.ca/census-recensement/2016/>. Last accessed August 8, 2019.

Stott, Gregory K.R.

- 1999 *The Maintenance of Suburban Autonomy: The Story of the Village of Petersville-London West, Ontario, 1874-1897*. Unpublished M.A. thesis, Department of History, University of Western Ontario. Electronic resource: [http://www.collectionscanada.gc.ca/obj/s4/f2/dsk1/tape9/PQDD\\_0002/MQ42208.pdf](http://www.collectionscanada.gc.ca/obj/s4/f2/dsk1/tape9/PQDD_0002/MQ42208.pdf). Last accessed August 8, 2019.

Tourism London

- 2019 *A Brief History of London, Ontario*. Tourism London, Ontario, Canada. Electronic resource: <https://www.londontourism.ca/A-Brief-History-of-London-Ontario>. Last accessed: April 1, 2019.

Tremaine, George R.

- 1862 *Tremaine's Map of Upper Canada*. George C. Tremaine., Toronto.

Troughton, Michael & Cathy Quinlan

- 2009 *The Thames River Watershed: A Heritage Landscape Guide*. Carolinian Canada Coalition & Thames Canadian Heritage River Committee, London, Ontario.

Williamson, Ronald F.

- 1990 The Early Iroquoian Period of Southern Ontario. In: *The Archaeology of Southern Ontario to A.D. 1650*. Occasional Publication of the London Chapter, Ontario Archaeological Society, Number 5: 291-320.

## 8.0 IMAGES



**Image 1: A representative example of disturbances including Adelaide Street, sidewalks, and landscaping; facing north at the southwestern end of the Study Area, August 16, 2018.**



**Image 2: A representative example of disturbances including Adelaide Street, sidewalks, buried utilities, and landscaping; facing south along the western side of Adelaide Street in the centre of the Study Area, August 16, 2018.**



**Image 3: A representative example of disturbances including Adelaide Street, Blackwater Road, sidewalks, buried utilities, and landscaping; facing north along the western side of Adelaide Street at Blackwater Drive, August 16, 2018.**



**Image 4: A representative example of disturbances including Adelaide Street, driveways, sidewalks, buried utilities, and landscaping; facing north along the western side of Adelaide Street near the intersection of Sunningdale Road, August 16, 2018.**



**Image 5: A representative example of a sloped area, along with disturbances including Sunningdale Road, sidewalks, a drainage ditch, and landscaping; facing west along the southern side of Sunningdale Road at the intersection of Adelaide Street, August 16, 2018.**



**Image 6: A representative example of a sloped area, along with disturbances including Sunningdale Road, sidewalks, buried utilities, and landscaping; facing east along the southern side of Sunningdale Road near Blackwater Drive, August 16, 2018.**



**Image 7: A representative example of a sloped area, along with disturbances including Sunningdale Road, a drainage ditch, and landscaping; facing east along the northern side of Sunningdale Road at Blackwater Drive, August 16, 2018.**



**Image 8: A representative example of a sloped area, along with disturbances including Sunningdale Road, a drainage ditch, and landscaping; facing west along the northern side of Sunningdale Road at the intersection of Adelaide Street, August 16, 2018.**



**Image 9: A representative example of a sloped area, along with disturbances including Adelaide Street, a drainage ditch, and landscaping; facing south along the western side of Adelaide Street north of Sunningdale Road, August 16, 2018.**



**Image 10: A representative example of a sloped area, along with disturbances including Adelaide Street, a drainage ditch, and landscaping; facing north along the eastern side of Adelaide Street at the intersection of Sunningdale Road, August 16, 2018.**



**Image 11: A representative example of disturbances including Sunningdale Road, sidewalks, a drainage ditch, buried utilities, and landscaping; facing east along the northern side of Sunningdale Road at the intersection of Adelaide Street, August 16, 2018.**



**Image 12: A representative example of disturbances including Sunningdale Road, sidewalks, a drainage ditch, buried utilities, and landscaping; facing west along the southern side of Sunningdale Road at the eastern end of the Study Area, August 16, 2018.**





**Image 13: A representative example of disturbances including Adelaide Street, sidewalks, a drainage ditch, buried utilities, and landscaping; facing south along the eastern side of Adelaide Street near the intersection of Sunningdale Road, August 16, 2018.**



**Image 14: A representative example of disturbances including Adelaide Street, sidewalks, buried utilities, and landscaping; facing north along the eastern side of Adelaide Street at Blackwater Road, August 16, 2018.**



**Image 15: A representative example of disturbances including Adelaide Street, sidewalks, buried utilities, and landscaping; facing north along the eastern side of Adelaide Street at Grenell Drive, August 16, 2018.**



**Image 16: A representative example of disturbances including Adelaide Street, sidewalks, buried utilities, and landscaping; facing north along the eastern side of Adelaide Street at the intersection of Fanshawe Park Road, August 16, 2018.**



**Image 17: Portion of the Study Area identified for test pitting; facing northwest at the northwest corner of Adelaide Street and Fanshawe Park Road, June 4, 2019.**



**Image 18: Test pitting area showing utility locates for buried electrical cables; facing north at the northwest corner of Adelaide Street and Fanshawe Park Road, June 4, 2019.**



**Image 19: Test pitting; facing northwest at the northwest corner of Adelaide Street and Fanshawe Park Road, June 4, 2019.**



**Image 20: Test pit showing disturbance; facing north, June 4, 2019.**

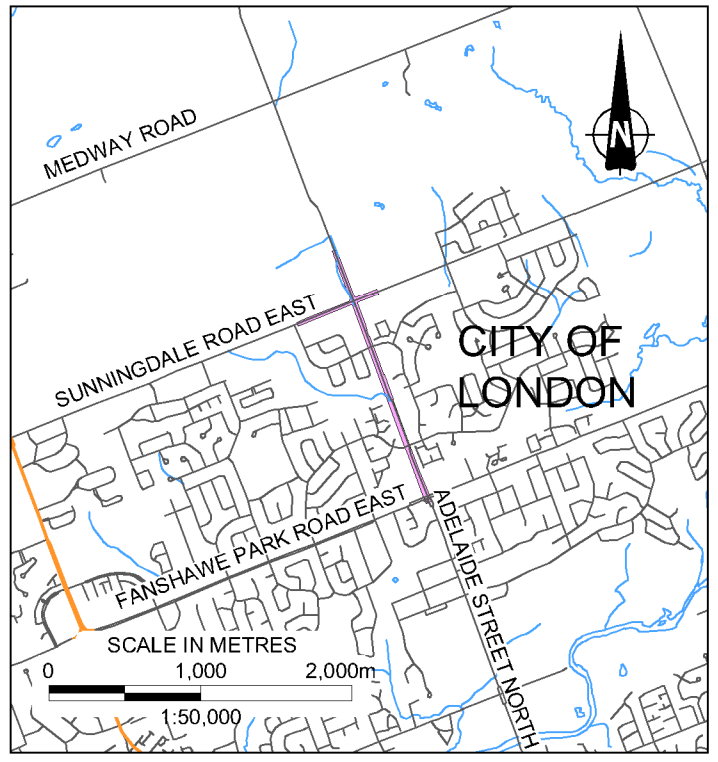
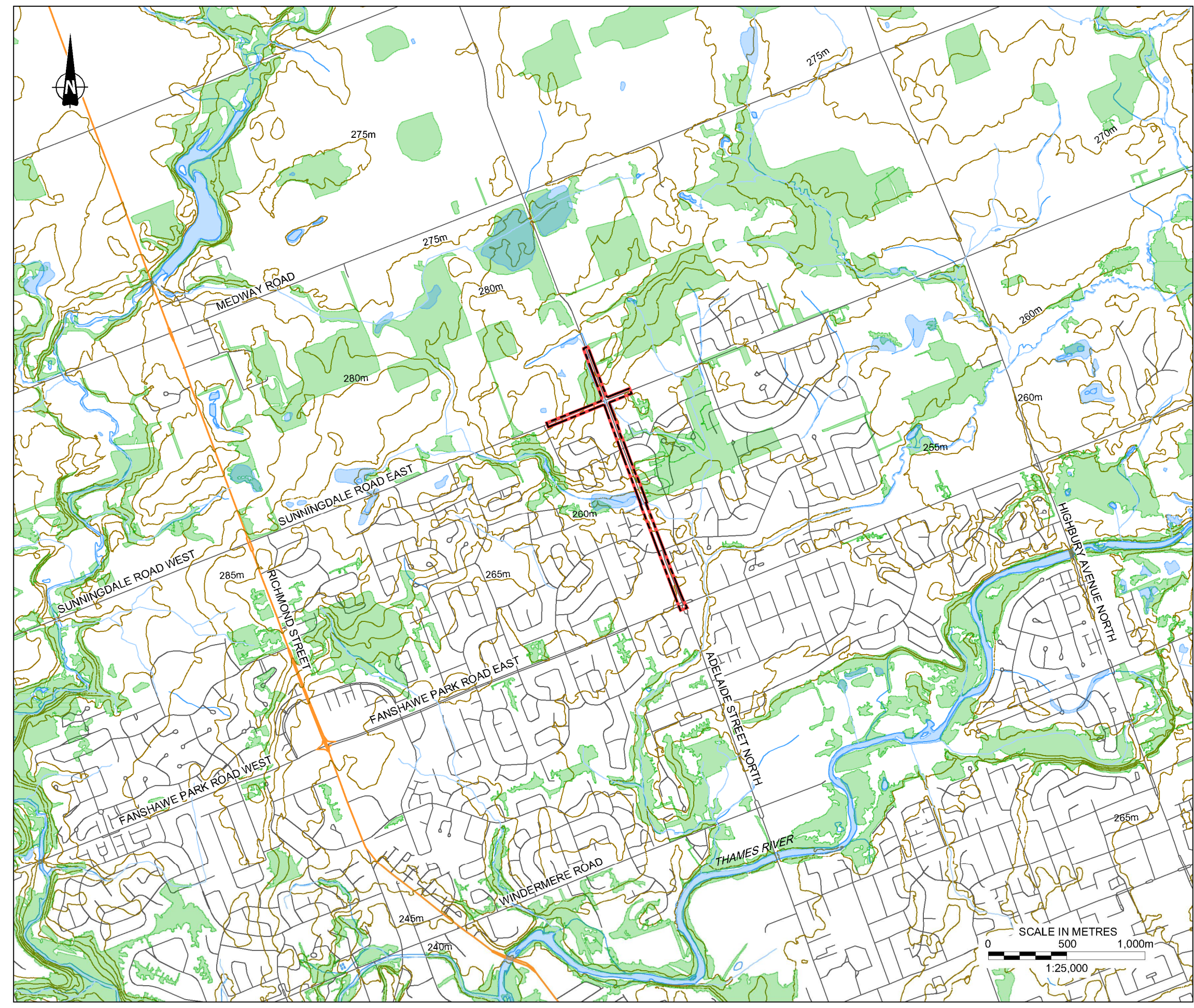


**Image 21: Test pit showing disturbance; facing north, June 4, 2019.**

## 9.0 MAPS

All maps follow on the succeeding pages.

Drawing file: 1898273-2000-R01001.dwg Jul 04, 2019 - 8:59am 0 25mm Original Format is Tabloid 279mm x 432mm Client: Parsons



**LEGEND**

APPROXIMATE LOCATION OF STUDY AREA

**REFERENCE**

DRAWING BASED ON MNR LIO, OBTAINED 2017  
 PRODUCED BY GOLDER ASSOCIATES LTD UNDER  
 LICENCE FROM ONTARIO MINISTRY OF NATURAL  
 RESOURCES, © QUEENS PRINTER 2017, AND  
 CANMAP STREETFILES V2008.4.

**NOTES**

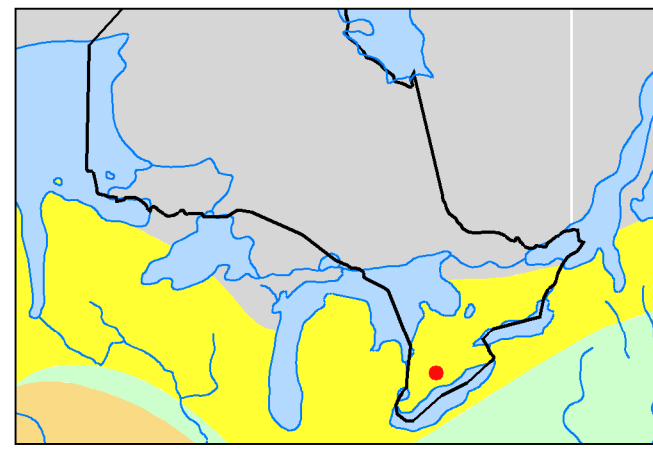
THIS DRAWING IS SCHEMATIC ONLY AND IS TO BE READ  
 IN CONJUNCTION WITH ACCOMPANYING TEXT.  
 ALL LOCATIONS ARE APPROXIMATE.

PROJECT  
**STAGE 1 & 2 ARCHAEOLOGICAL ASSESSMENT  
 ADELAIDE STREET NORTH WIDENING EA  
 LONDON, ONTARIO**

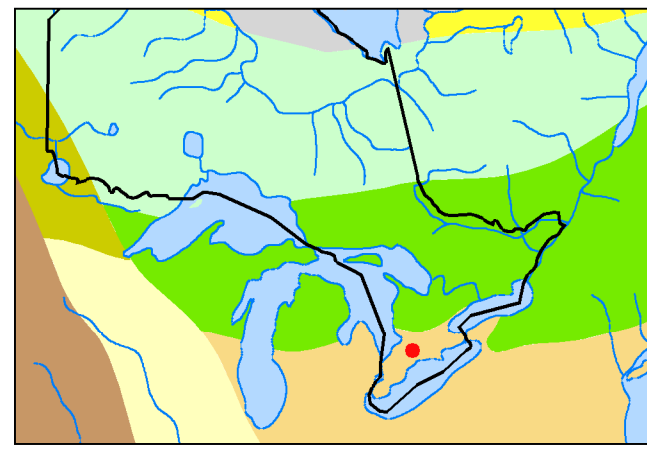
TITLE  
**LOCATION OF STUDY AREA**

	PROJECT No.	1898273	FILE No.	1898273-2000-R01001
	CADD	ZJB/MS	DATE	July 4/19
	CHECK	lem	SCALE	AS SHOWN   REV.
<b>MAP 1</b>				

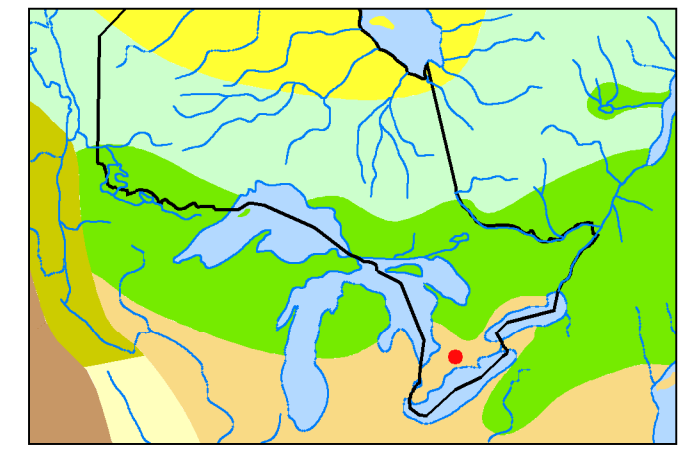
Client: Parsons  
 Drawing file: 1898273-2000-R01002.dwg  
 Jul 04, 2019 - 9:03am  
 Original Format is Tabloid 279mm x 432mm  
 25mm  
 0



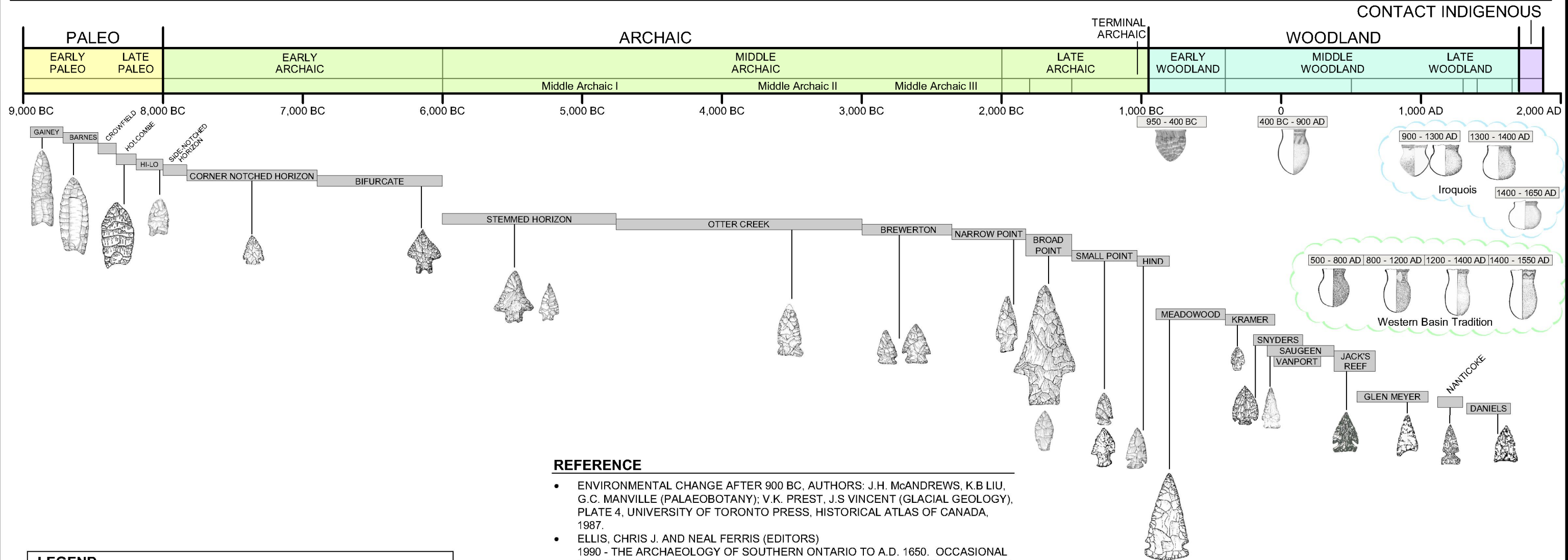
9,000 BC



5,000 BC



1,000 AD



**REFERENCE**

- ENVIRONMENTAL CHANGE AFTER 900 BC, AUTHORS: J.H. McANDREWS, K.B LIU, G.C. MANVILLE (PALAEOBOTANY); V.K. PREST, J.S VINCENT (GLACIAL GEOLOGY), PLATE 4, UNIVERSITY OF TORONTO PRESS, HISTORICAL ATLAS OF CANADA, 1987.
- 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.
- ADAMS, NICK, IAN KENYON, DENA DOROSZENKO 1994 - FIELD MANUAL FOR AVOCATIONAL ARCHAEOLOGISTS IN ONTARIO. ONTARIO ARCHAEOLOGICAL SOCIETY INC., ARCHAEOLOGICAL STEWARDSHIP PROJECT.
- KENYON, I. - 1980 MEADOWOOD POINTS. KEWA 80-5.
- MURPHY, C. - 1988 SNYDERS POINTS. KEWA 88-3.
- KENYON, I. - 1979 SAUGEEN POINTS. KEWA 79-9.
- RITCHIE, WM. 1971. A TYPOLOGY AND NOMENCLATURE FOR NEW YORK PROJECTILE POINTS. ALBANY, NEW YORK: THE UNIVERSITY OF THE STATE OF NEW YORK, THE STATE EDUCATION DEPARTMENT.
- FOX, W.A. - 1982 GLEN MEYER TANGED-TRIANGULAR. KEWA 82-1.
- FOX, W.A. - 1981 NANTICOKE NOTCHED POINTS. KEWA 81-3.
- FOX, W.A. - 1981 DANIELS TRIANGULAR POINTS. KEWA 81-1.

**LEGEND**

- PROJECT AREA

VEGETATION COVERAGE:

Tundra	Deciduous Woodlands
Boreal Forest	Grassland
Great Lakes-St. Lawrence Forest	Lichen Woodland
Deciduous Forest	Parkland

PROJECT  
**STAGE 1 & 2 ARCHAEOLOGICAL ASSESSMENT  
 ADELAIDE STREET NORTH WIDENING EA  
 LONDON, ONTARIO**

TITLE  
**PRE-CONTACT INDIGENOUS CULTURE  
 HISTORY OF MIDDLESEX COUNTY**

PROJECT No.	1898273	FILE No.	1898273-2000-R01002
CADD	ZJB/MS	DATE	July 4/19
CHECK	Len	SCALE	AS SHOWN
		<b>MAP 2</b>	





**LEGEND**

 APPROXIMATE LOCATION OF STUDY AREA


**REFERENCE**

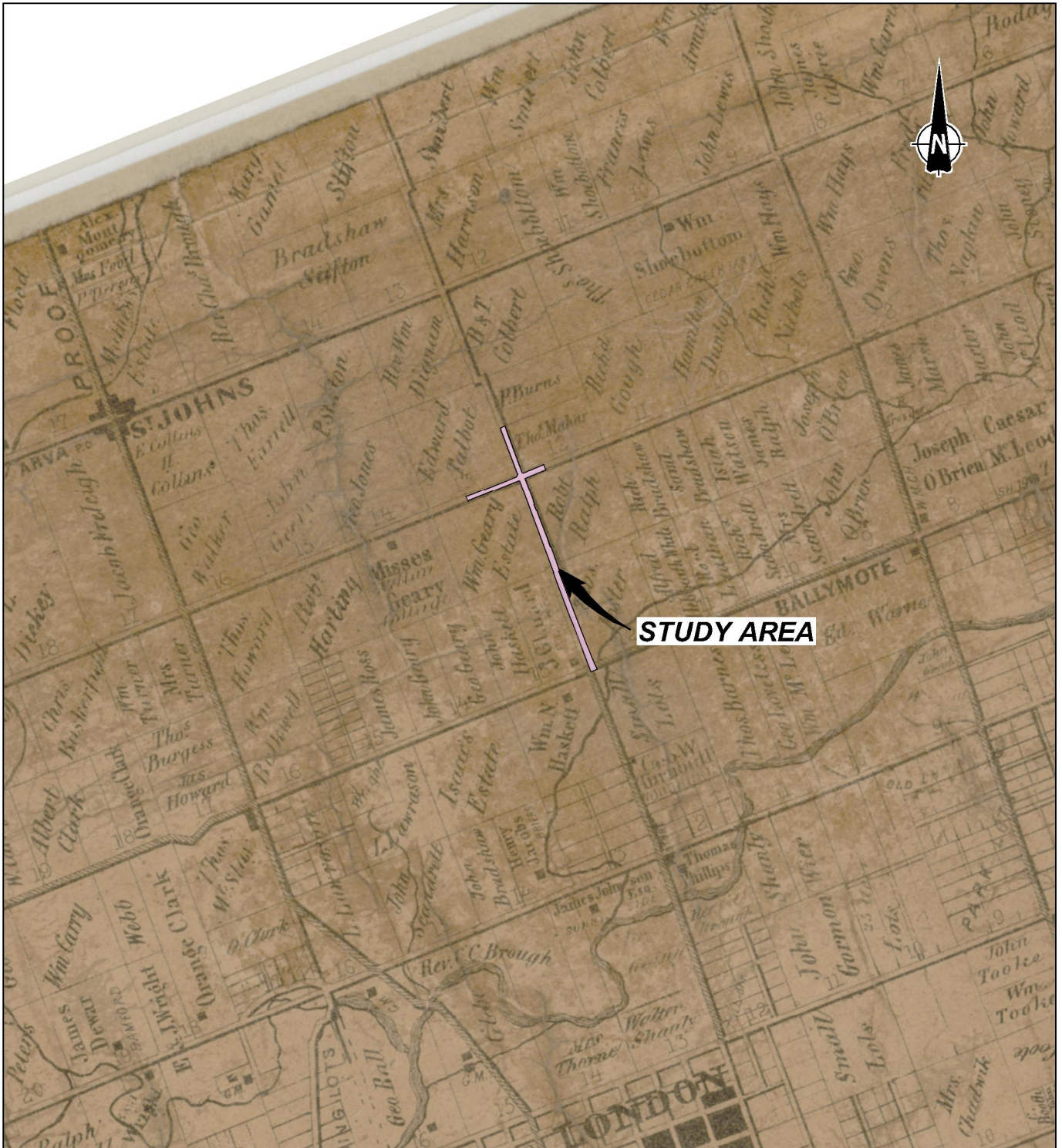
BURWELL, MAHLON, N.D. TOWNSHIP OF LONDON  
 PATENT PLAN, ONTARIO ARCHIVES REFERENCE CODE  
 RG 1-100-0-0-1288.

**NOTES**

THIS DRAWING IS SCHEMATIC ONLY AND IS TO BE  
 READ IN CONJUNCTION WITH ACCOMPANYING TEXT.

ALL LOCATIONS ARE APPROXIMATE ONLY.

PROJECT			
STAGE 1 & 2 ARCHAEOLOGICAL ASSESSMENT ADELAIDE STREET NORTH WIDENING EA LONDON, ONTARIO			
TITLE			
A PORTION OF THE LONDON TOWNSHIP PATENT PLAN			
PROJECT No.		1898273	
FILE No.		1898273-2000-R01003	
SCALE		AS SHOWN	
REV.			
CADD		ZJB/AMS	July 4/19
CHECK		LCM	
		<b>MAP 3</b>	



**LEGEND**

 APPROXIMATE LOCATION OF STUDY AREA


**REFERENCE**

TREMAINE GEORGE R., 1862, TREMAINE'S MAP OF THE COUNTY OF MIDDLESEX. GEORGE C. TREMAINE., TORONTO.

**NOTES**

THIS DRAWING IS SCHEMATIC ONLY AND IS TO BE READ IN CONJUNCTION WITH ACCOMPANYING TEXT.

ALL LOCATIONS ARE APPROXIMATE ONLY.

PROJECT			
STAGE 1 & 2 ARCHAEOLOGICAL ASSESSMENT ADELAIDE STREET NORTH WIDENING EA LONDON, ONTARIO			
TITLE			
A PORTION OF TREMAINE'S 1862 MAP OF THE COUNTY OF MIDDLESEX			
PROJECT No.		1898273	
FILE No.		1898273-2000-R01003	
SCALE		AS SHOWN	
REV.			
CADD		ZJB/AMS	July 4/19
CHECK		LCM	
 GOLDER		<b>MAP 4</b>	



**LEGEND**

APPROXIMATE LOCATION OF STUDY AREA

**REFERENCE**

PETERS SAMUEL, P.L.S. & C.E., 1863, MAP OF THE TOWNSHIP OF LONDON, CANADA WEST, CORRECTED FROM ACTUAL SURVEY, LITHOGRAPHED & PUBLISHED BY SAM'L. PETERS, P.L.S. & C.E. 1863. LONDON.

**NOTES**

THIS DRAWING IS SCHEMATIC ONLY AND IS TO BE READ IN CONJUNCTION WITH ACCOMPANYING TEXT.

ALL LOCATIONS ARE APPROXIMATE ONLY.

PROJECT			
STAGE 1 & 2 ARCHAEOLOGICAL ASSESSMENT ADELAIDE STREET NORTH WIDENING EA LONDON, ONTARIO			
TITLE			
<b>A PORTION OF PETERS' 1863 MAP OF LONDON TOWNSHIP</b>			
PROJECT No.	1898273	FILE No.	1898273-2000-R01003
CADD	ZJB/MS	July 4/19	SCALE AS SHOWN REV.
CHECK	LCM		
			<b>MAP 5</b>





**LEGEND**

APPROXIMATE LOCATION OF STUDY AREA

**REFERENCE**

PAGE, H.R. AND CO., 1878,  
ILLUSTRATED HISTORICAL ATLAS OF MIDDLESEX  
COUNTY. H.R. PAGE & CO., TORONTO.

**NOTES**

THIS DRAWING IS SCHEMATIC ONLY AND IS TO BE  
READ IN CONJUNCTION WITH ACCOMPANYING TEXT.

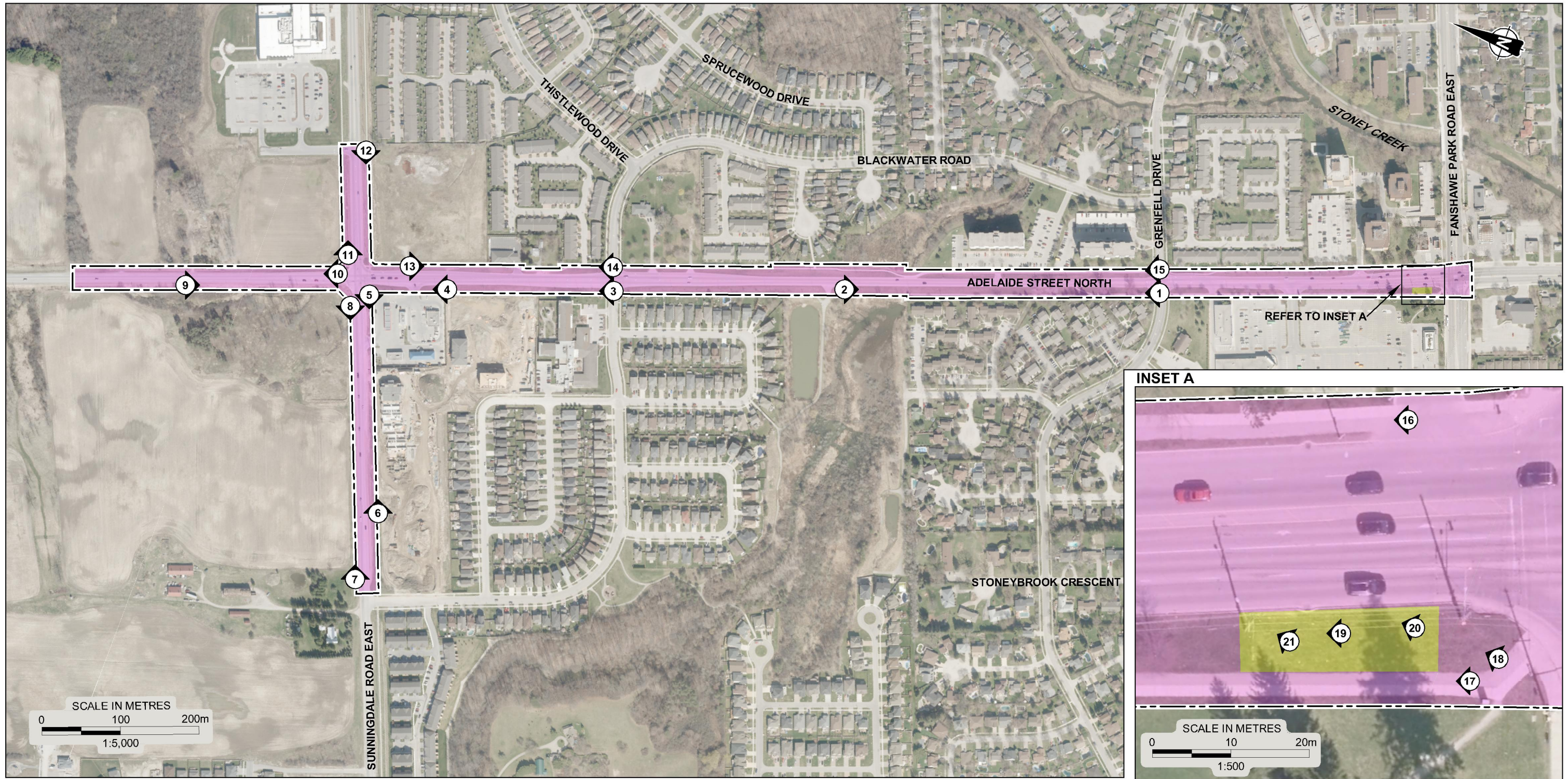
ALL LOCATIONS ARE APPROXIMATE ONLY.

PROJECT  
STAGE 1 & 2 ARCHAEOLOGICAL ASSESSMENT  
ADELAIDE STREET NORTH WIDENING EA  
LONDON, ONTARIO

TITLE  
**A PORTION OF THE 1878 HISTORICAL  
ATLAS MAP OF LONDON TOWNSHIP**

	PROJECT No. <b>1898273</b>		FILE No. <b>1898273-2000-R01003</b>
	CADD	ZB/AMS	SCALE <b>AS SHOWN</b> REV.
	CHECK	LCM	<b>MAP 6</b>

Client: Parsons  
Original Format is Tabloid 279mm x 432mm  
25mm  
0  
Jul 04, 2019 - 9:02:00  
Drawing file: 1898273-2000-R01007.dwg



**LEGEND**

- APPROXIMATE LOCATION OF STUDY AREA
- PREVIOUSLY DISTURBED, NO FURTHER ARCHAEOLOGICAL ASSESSMENT REQUIRED
- STAGE 2 TEST PIT SURVEY TO CONFIRM DISTURBANCE
- 1 PHOTOGRAPH LOCATION, VIEWING DIRECTION, AND PLATE NUMBER

**REFERENCE**

DRAWING BASED ON CITY OF LONDON OPEN DATA SET 2017.

**NOTES**

THIS DRAWING IS SCHEMATIC ONLY AND IS TO BE READ IN CONJUNCTION WITH ACCOMPANYING TEXT. ALL LOCATIONS ARE APPROXIMATE.

<small>PROJECT</small> <b>STAGE 1 &amp; 2 ARCHAEOLOGICAL ASSESSMENT          ADELAIDE STREET NORTH WIDENING EA          LONDON, ONTARIO</b>			
<small>TITLE</small> <b>RESULTS OF THE STAGE 1          PROPERTY INSPECTION          AND STAGE 2 TEST PIT SURVEY</b>			
<small>PROJECT No.</small>	1898273	<small>FILE No.</small>	1898273-2000-R01007
<small>CADD</small>	ZJB/MS	<small>July 4/19</small>	<small>SCALE AS SHOWN   REV.</small>
<small>CHECK</small>	<i>lem</i>		<b>MAP 7</b>



## 10.0 IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT

Golder has prepared this report in a manner consistent with the level of care and skill ordinary exercised by members of the archaeological profession currently practicing under similar conditions in the jurisdiction in which the services are provided, subject to the time limits and physical constraints applicable to this report. No other warranty, expressed or implied is made.

This report has been prepared for the specific site, design objective, developments and purpose described to Golder by Parsons (the Client). The factual data, interpretations and recommendations pertain to a specific project as described in this report and are not applicable to any other project or site location.

The information, recommendations and opinions expressed in this report are for the sole benefit of the Client. No other party may use or rely on this report or any portion thereof without Golder's express written consent. If the report was prepared to be included for a specific permit application process, then upon the reasonable request of the client, Golder may authorize in writing the use of this report by the regulatory agency as an Approved User for the specific and identified purpose of the applicable permit review process. Any other use of this report by others is prohibited and is without responsibility to Golder. The report, all plans, data, drawings and other documents as well as electronic media prepared by Golder are considered its professional work product and shall remain the copyright property of Golder, who authorizes only the Client and Approved Users to make copies of the report, but only in such quantities as are reasonably necessary for the use of the report by those parties. The Client and Approved Users may not give, lend, sell, or otherwise make available the report or any portion thereof to any other party without the express written permission of Golder. The Client acknowledges that electronic media is susceptible to unauthorized modification, deterioration and incompatibility and therefore the Client cannot rely upon the electronic media versions of Golder's report or other work products.

Unless otherwise stated, the suggestions, recommendations and opinions given in this report are intended only for the guidance of the Client in the design of the specific project.

Special risks occur whenever archaeological investigations are applied to identify subsurface conditions and even a comprehensive investigation, sampling and testing program may fail to detect all or certain archaeological resources. The sampling strategies incorporated in this study comply with those identified in the Ministry of Tourism, Culture and Sport's *Standards and Guidelines for Consultants Archaeologists* (Government of Ontario 2011).

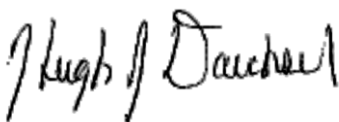
## 11.0 CLOSURE

We trust that this report meets your current needs. If you have any questions, or if we may be of further assistance, please contact the undersigned.

### **Golder Associates Ltd.**



Lafe Meicenheimer, M.A.  
*Staff Archaeologist*



Hugh Daechsel, M.A.  
*Principal, Senior Archaeologist*

LCM/HD/ly

Golder and the G logo are trademarks of Golder Associates Corporation

[https://golderassociates.sharepoint.com/sites/1898273/ph 2000st 12 archaeology/2-deliverables/1898273-2000-r01-rev0 \(final\) parsons adelaide ea st. 1-2.docx](https://golderassociates.sharepoint.com/sites/1898273/ph%202000st%2012%20archaeology/2-deliverables/1898273-2000-r01-rev0%20(final)%20parsons%20adelaide%20ea%20st.%201-2.docx)



**[golder.com](http://golder.com)**