

City of London

# Stage 1 Archaeological Assessment Arva Pumping Station to Huron Street Water Transmission Main - Class EA Master Plan Multiple Lots and Concessions, Geographic Township of London, Middlesex County, City of London, Ontario

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## Revision History

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1	August 11, 2020	Samantha Markham	Addressed requested edits by Kyle Gonyou, added a property inspection
2	October 28, 2020	Samantha Markham	Addressed second round of requested edits by Kyle Gonyou

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# Quality Information

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# Executive Summary

AECOM Canada Ltd. (AECOM) was retained by the City of London to conduct a Stage 1 archaeological assessment as part of the Arva Pumping Station to Huron Street Water Transmission Main (Arva-Huron WTM) Municipal Class Environmental Assessment (EA). The WTM study area crosses multiple lots and concessions in the historic Township of London, Middlesex County, now the City of London and the Municipality of Middlesex Centre, Ontario.

The Stage 1 archaeological assessment was conducted as part of a Municipal Class EA study during the design stage of the project and was triggered by the requirements of the *Environmental Assessment Act* in accordance with subsection 11(1) (Ontario Government 1990a). This project is subject to the requirements of the *Ontario Heritage Act* (Government of Ontario 1990b) and the *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011).

AECOM's Stage 1 archaeological assessment for the Arva-Huron WTM Municipal Class EA has determined that the potential for the recovery of both pre- and post-contact Indigenous and 19<sup>th</sup> century Euro-Canadian archaeological resources within parts of the study area is moderate to high. As a result of extensive urban development, some portions of the study area have been previously disturbed and archaeological potential has been removed; however, areas of manicured lawn and woodlot within the study area limits are included as areas where archaeological integrity may remain intact. Areas of moderate to high and low archaeological potential, as well as areas that have been subject to previous assessment are illustrated on Figure 7. **Based on these findings, a Stage 2 archaeological assessment is recommended following the below stated requirements.**

The Stage 2 archaeological assessment must be conducted by a licensed archaeologist and must follow the requirements set out in the *Standards and Guidelines for Consultant Archaeologists* (Ontario Government 2011). Areas identified as having low archaeological potential (e.g. building footprints, roadways, urban development) are to be photo-documented only. The Stage 2 field survey for areas of moderate to high archaeological potential must include:

- The standard test pit survey method at 5 m intervals is to be conducted in all areas that will be impacted by the project where ploughing is not possible (e.g., woodlots, overgrown areas, manicured lawns);
- Pedestrian survey at 5 m intervals where ploughing is possible (i.e. agricultural fields). Assessment will only occur when agricultural fields have been recently ploughed, weathered, and exhibit at least 80% surface visibility; and,
- Poorly drained areas, areas of steep slope, and areas of confirmed previous disturbance (i.e. areas with identifiable land alterations below topsoil level) are to be mapped and photo-documented only.

It is pertinent to note that the Arva-Huron WTM study area evaluated in this report includes additional land that may not be impacted by the project. A large area was assessed as part of this Stage 1 archaeological assessment in order to accommodate possible infrastructure alternatives outside of the existing WTM corridor. Once the area of project impacts has been determined, only the land that will be impacted by this project will require Stage 2 archaeological assessment.

Given that there are 133 registered archaeological sites within 1 km of the study area, a comprehensive list of recommendations is not provided here. However, details for each site can be found in the Appendix A of this report, and the location of the sites is illustrated on Figure 2 of the Supplementary Documentation. Once a preferred route alternative is chosen, all archaeological sites located within the study area boundaries that require further work

must be subject to further archaeological assessment prior to ground disturbing activities. Of particular note is archaeological site AgHh-265 which will be required to be subject to Stage 4 archaeological assessment and must follow the requirements set out in the *Standards and Guidelines for Consultant Archaeologists* (Ontario Government 2011).

The Ministry of Heritage, Sport, Tourism and Culture Industries is asked to accept this report into the Ontario Public Register of Archaeological Reports thereby concurring with the recommendations presented herein. As further archaeological assessment is required, archaeological concerns for the Arva-Huron WTM in the City of London, Ontario have not yet been fully addressed.

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# Table of Contents

	page
<b>1. Project Context .....</b>	<b>1</b>
1.1 Development Context .....	1
1.1.1 Objectives .....	1
1.2 Historical Context.....	2
1.2.1 Pre-Contact Indigenous Settlement.....	3
1.2.2 Post-Contact Period Settlement .....	5
1.2.3 Euro-Canadian Settlement .....	6
1.3 Archaeological Context.....	8
1.3.1 Natural Environment.....	8
1.3.2 Previous Archaeological Work.....	9
1.3.3 Known Archaeological Sites .....	16
1.3.4 Existing Conditions.....	16
<b>2. Property Inspection .....</b>	<b>17</b>
<b>3. Analysis and Conclusions .....</b>	<b>18</b>
<b>4. Recommendations.....</b>	<b>20</b>
<b>5. Advice on Compliance with Legislation.....</b>	<b>21</b>
<b>6. Bibliography.....</b>	<b>22</b>
<b>8. Images .....</b>	<b>27</b>
<b>9. Figures.....</b>	<b>32</b>

## List of Figures

Figure 1: Location of the Study Area .....	33
Figure 2: Study Area in Detail .....	34
Figure 3: London Township Treaty – Treaty No. 6 .....	35
Figure 4: Portion of the 1810 Burwell Survey of the Township of London .....	36
Figure 5: Portion of the 1862 Tremaine’s Map of London Township.....	37
Figure 6: Portion of the 1878 H.R. Page and Co. Map of Middlesex County- London Township .....	38
Figure 7: Results of Stage 1 Archaeological Assessment.....	39



# List of Tables

Table 1: Cultural Chronology for Middlesex County ..... 2  
Table 2: Archaeological Reports with Relevant Background Information ..... 9

# Appendices

Appendix A: Table of Archaeological Sites within 1 km

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# 1. Project Context

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## 1.1 Development Context

AECOM Canada Ltd. (AECOM) was retained by the City of London to conduct a Stage 1 archaeological assessment as part of the Arva Pumping Station to Huron Street Water Transmission Main (Arva-Huron WTM) Municipal Class Environmental Assessment (EA). The WTM study area crosses multiple lots and concessions in the historic Township of London, Middlesex County, now the City of London and the Municipality of Middlesex Centre, Ontario.

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The City of London receives water from the Elgin Area Water Supply (EAWSS) and the Lake Huron Water Supply System (LHWSS). Water from the LHWSS is pumped into the City's distribution system from the north via the Arva Pumping Station and Reservoirs. Roughly 80% of the City's water supply is from LHWSS, making the water transmission mains that transport the water to the City very critical and important assets to maintain. The City has initiated a MCEA Master Plan and preliminary design for the water transmission main between the Arva Pumping Station to Huron Street. The majority of the existing water transmission main was constructed in 1966 with some areas currently identified as in a deteriorated condition.

Sections of the existing transmission line between Windermere Road and Huron Street were recently repaired; however, due to the small easement access to the line was difficult. As a result, a review of the entire existing transmission easement resulted in the determination that the repair, replacement, and/or twinning of the existing line will be difficult, if not impossible in some areas. Therefore, the purpose of this EA is to assess the feasibility of widening and access in the short term for repairs and, in the long-term, for twinning and/or replacement in existing and/or re-routed new locations. Several alternatives for re-routing the WTM are being considered; however, the locations of these alternatives have not yet been determined.

The Arva-Huron WTM study area addressed in this Stage 1 archaeological assessment includes the existing WTM corridor as well as additional land to accommodate for all potential alternatives. This includes an area generally bounded by Victoria Street to the south, Adelaide Street to the east, Richmond Street to the west, and the Arva Pumping Station, north of Medway Road, to the north (Figure 1 and Figure 2).

### 1.1.1 Objectives

The objective of the Stage 1 background study is to document the archaeological and land use history and present conditions within the Arva-Huron WTM study area. This information will be used to support recommendations regarding cultural heritage values or interests as well as assessment and mitigation strategies. The results of Stage 1 archaeological assessment presented in this report are drawn in part from:

- Recent and historical maps of the study area;
- Reports of previous archaeological assessments within 50 m of the study area;
- The Ministry of Heritage, Sport, Tourism and Culture Industries’ (MHSTCI) Archaeological Sites Database (ASDB) for a listing of registered archaeological sites within a 1 km radius of the study area; and,
- Archaeological management plans or other archaeological potential mapping, where available.

The Stage 1 archaeological assessment has been conducted to meet the requirements of the MHSTCI *Standards and Guidelines for Consultant Archaeologists* (Ontario Government 2011).

## 1.2 Historical Context

Years of archaeological research and assessments in southern Ontario have resulted in a well-developed understanding of the historic use of land in Middlesex County, from the earliest Indigenous people to the more recent Euro-Canadian settlers and farmers. Table 1 provides a breakdown of the cultural and temporal history of past occupations in Middlesex County.

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

Archaeological Period	Time Period	Characteristics
Early Paleo	9000-8400 BC	Fluted Points Arctic tundra and spruce parkland, caribou hunters
Late Paleo	8400-8000 BC	Holcombe, Hi-Lo and Lanceolate Points Slight reduction in territory size
Early Archaic	8000-6000 BC	Notched and Bifurcate base Points Growing populations
Middle Archaic	6000-2500 BC	Stemmed and Brewerton Points, Laurentian Development Increasing regionalization
Late Archaic	2000-1800 BC	Narrow Point Environment similar to present
	1800-1500 BC	Broad Point Large lithic tools
	1500-1100 BC	Small Point Introduction of bow
Terminal Archaic	1100-950 BC	Hind Points, Glacial Kame Complex Earliest true cemeteries
Early Woodland	950-400 BC	Meadowood Points Introduction of pottery
Middle Woodland	400 BC – AD 500	Dentate/Pseudo-scallop Ceramics Increased sedentism
	AD 550-900	Princess Point Introduction of corn horticulture
Late Woodland	AD 900-1300	Agricultural villages
	AD 1300-1400	Increased longhouse sizes

	AD 1400-1650	Warring nations and displacement
<b>Contact Period</b>	AD 1600-1875	Early written records and treaties
<b>Historic</b>	AD 1749-present	European settlement (French and English)

Notes: Taken from Ellis and Ferris (1990)

The following sections provide a detailed summary of the archaeological cultures that have settled in the vicinity of the study area. As Chapman and Putnam (1984) illustrate, the modern physiography of southern Ontario is largely a product of events of the last major glacial stage and the landscape is a complex mosaic of features and deposits produced during the last series of glacial retreats and advances prior to the withdrawal of the continental glaciers from the area. Southwestern Ontario was finally ice free by 12,500 years ago. With continuing ice retreat and lake regressions the land area of southern Ontario progressively increased while barriers to the influx of plants, animals, and people steadily diminished (Karrow and Warner 1990). The land within Middlesex County was extensively utilized by Indigenous people who began occupying southwestern Ontario as the glaciers receded from the land, as early as 11,000 BC.

## 1.2.1 Pre-Contact Indigenous Settlement

### *The Paleo Period*

In this area the first human settlement can be traced back to 11,000 BC; these earliest well-documented groups are referred to as Paleo which literally means old or ancient. During the Paleo period people were non-agriculturalists who depended on hunting and gathering of wild food, they moved their encampments on a regular basis to be in the locations where these resources naturally became available, and the size of the groups occupying any particular location would vary depending on the nature and size of the available food resources (Ellis and Deller 1990). The picture that has emerged for the early and late Paleo is of groups at low population densities who were residentially mobile and made use of large territories during annual cycles of resource exploitation.

### *The Archaic Period*

The next major cultural period following the Paleo is termed the Archaic, which is broken temporally into the Early, Middle, and Late Archaic periods. There is much debate on how the term Archaic is employed; general practice bases the designation off assemblage content as there are marked differences in artifact suites from the preceding Paleo and subsequent Woodland periods. As Ellis *et al.* (1990) note, from an artifact and site characteristic perspective the Archaic is simply used to refer to non-Paleo manifestations that pre-date the introduction of ceramics. Ellis *et al.* (1990) stress that Archaic groups can be distinguished from earlier groups based on site characteristics and artifact content.

Early Archaic sites have been reported throughout much of southwestern Ontario and extend as far north as the Lake Huron Basin region and as far east as Rice Lake (Deller *et al.* 1986). A lack of excavated assemblages from southern Ontario has limited understandings and inferences regarding the nature of stone tool kits in the Early Archaic and tool forms other than points are poorly known in Ontario; however, at least three major temporal horizons can be recognized and can be distinguished based on projectile point form (Ellis *et al.* 1990). These horizons are referred to as Side-Notched (*ca.* 8,000-7,700 BC), Corner-Notched (*ca.* 7,700-6,900 BC), and Bifurcated (*ca.* 6,900-6,000 BC) (Ellis *et al.* 1990). Additional details on each of these horizons and the temporal changes to tool types can be found in Ellis *et al.* (1990).

The Middle Archaic period (6,000-2,500 BC), like the Early Archaic, is relatively unknown in southern Ontario. Ellis *et al.* (1990) suggest that artifact traits that have come to be considered as characteristic of the Archaic period as a whole, first appear in the Middle Archaic. These traits include fully ground and polished stone tools, specific tool

types including banner stones and net-sinkers, and the use of local and/or non-chert type materials for lithic tool manufacture (Ellis *et al.* 1990).

The Late Archaic begins around approximately 2,000 BC and ends with the appearance of ceramics and the Meadowood Phase at roughly 950 BC. Much more is known about this period than the Early and Middle Archaic and a number of Late Archaic sites are known. Sites appear to be more common than earlier periods, suggesting some degree of population increase. True cemeteries appear and have allowed for the analysis of band size, biological relationships, social organization, and health. Narrow and Small point traditions appear as well as tool recycling wherein points were modified into drills, knives, end scrapers, and other tools (Ellis *et al.* 1990). Other tools including serrated flakes used for sawing or shredding, spokeshaves, and retouched flakes manufactured into perforators, gravers, micro-perforators, or piercers. Tools on coarse-grained rocks such as sandstone and quartz become common and include hammerstones, net-sinkers, anvils, and cobble spalls. Depending on preservation, several Late Archaic sites include bone and/or antler artifacts which likely represent fishing toolkits and ornamentation. These artifacts include bone harpoons, barbs or hooks, notched projectile points, and awls. Bone ornaments recovered have included tubular bone beads and drilled mammal canine pendants (Ellis *et al.* 1990).

Throughout the Early to Late Archaic periods the natural environment warmed and vegetation changed from closed conifer-dominated vegetation cover, to the mixed coniferous and deciduous forest in the north and deciduous vegetation in the south we see in Ontario today (Ellis *et al.* 1990). During the Archaic period there are indications of increasing populations and decreasing size of territories exploited during annual rounds; fewer moves of residential camps throughout the year and longer occupations at seasonal campsites; continuous use of certain locations on a seasonal basis over many years; increasing attention to ritual associated with the deceased; and, long range exchange and trade systems for the purpose of obtaining valued and geographically localized resources (Ellis *et al.* 1990).

### **The Woodland Period**

The Early Woodland period is distinguished from the Late Archaic period primarily by the addition of ceramic technology, which provides a useful demarcation point for archaeologists but is expected to have made less difference in the lives of the Early Woodland peoples. The settlement and subsistence patterns of Early Woodland people shows much continuity with the earlier Archaic with seasonal camps occupied to exploit specific natural resources (Spence *et al.* 1990). During the Middle Woodland well-defined territories containing several key environmental zones were exploited over the yearly subsistence cycle. Large sites with structures and substantial middens appear in the Middle Woodland associated with spring macro-band occupations focussed on utilizing fish resources and created by consistent returns to the same site (Spence *et al.* 1990). Groups would come together into large macro-bands during the spring-summer at lakeshore or marshland areas to take advantage of spawning fish; in the fall inland sand plains and river valleys were occupied for deer and nut harvesting and groups split into small micro-bands for winter survival (Spence *et al.* 1990). This is a departure from earlier Woodland times when macro-band aggregation is thought to have taken place in the winter (Ellis *et al.* 1988; Granger 1978).

The period between the Middle and Late Woodland period was both technically and socially transitional for the ethnically diverse populations of southern Ontario and these developments laid the basis for the emergence of settled villages and agriculturally based lifestyles (Fox 1990). The Late Woodland period began with some groups shifting settlement and subsistence patterns, involving an increasing reliance on corn horticulture. Corn may have been introduced into southwestern Ontario from the American Midwest as early as 600 AD. 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, Late Woodland sites are located in the uplands, on well-drained sandy soils.

In the Late Woodland period, between 900-1300 AD, villages tended to be small settlements with nearby camps and hamlets that served as temporary spaces for hunting game and gathering resources outside of the villages. At

this time, small village sites were characterized by the presence of longhouses with villages being occupied considerably longer than later in the Woodland period. Villages tended to be moved when nearby soils had been depleted by farming and conveniently collected firewood grew scarce. The Jesuits reported that the Huron moved their villages once every 10-15 years as they relied less heavily on corn than did later groups, and since their villages were much smaller, there was less demand on nearby resources. Small amounts of corn appear to have been a dietary component at this time; however, archaeological evidence suggests that its role was not as a dietary staple at this time but was possibly supplemental in nature.

Between 1300 and 1400 AD, village sizes grew significantly, resulting in the development of complex community political systems. This period also marks the emergence of fully developed horticulture, including the cultivation of corn, beans, and squash. Additionally, changes in ceramic styles may reflect increasing levels of inter-community communication and integration. This is supported by Michi Saagiig (Mississauga Anishinaabeg) oral histories, which speak to the coming of the corn growers and the symbiotic relationships that Algonkian speaking groups had with the Huron-Wendat in particular.

By the beginning of the fourteenth century, larger fortified village sites were often cleared to accommodate the cultivation of corn, beans, and squash as a result of an increasing reliance on horticulture. Longhouses also continued to grow in size until 1450 AD when a decrease in house length is observed. This decrease in house length may be partially attributed to large scale drops in population size associated with the introduction of European diseases.

After 1525 AD these communities moved further east to the Hamilton area. During the late 1600's and early 1700's, 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 to the north 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 the London area were ancestral to at least some of the Neutral Nation groups. For this reason the Late Ontario Iroquoian groups which occupied southwestern Ontario prior to the arrival of the French are often identified as "Prehistoric Neutral".

## 1.2.2 Post-Contact Period Settlement

The post-contact Indigenous occupation of southern Ontario was heavily influenced by the dispersal of Iroquoian speaking peoples, including the Six Nations of the Iroquois – Mohawk, Cayuga, Oneida, Seneca, Onondaga, and Tuscarora. This was followed by the return of Algonkian speaking groups from northern Ontario, including the Michi Saagig, who had temporarily retreated to their wintering grounds in the mid-1600s to avoid warfare and disease as a result of colonial settlement. Algonkian speaking Ojibwe (Chippewa), Odawa (Ottawa), and Pottawatomi, known as the Three Fires Confederacy, remained in their traditional territory that covered a vast area of southern Ontario as well as eastern Michigan.

As European settlers encroached on their territory the nature of Indigenous population distribution, settlement size and material culture changed. Despite these changes it is possible to correlate historically recorded villages with archaeological manifestations and the similarity of those sites to more ancient sites reveals an antiquity to documented cultural expressions that confirms a long historical continuity to systems of Indigenous ideology and thought (Ferris 2009).

It is important to note that, when discussing the historical documentation of the movement of Indigenous people, what has been documented by early European explorers and settlers represents only a very small snap-shot in time. Documentation of where Indigenous groups were residing during European exploration and settlement is

restricted to only a very short period of time and does not reflect previous and subsequent movements of these groups. This brief history does not reflect the full picture of the pre- or post-contact period occupation of Indigenous groups or cultures. As such, relying on historic documentation in regards to Indigenous occupation and movement across the landscape can lead to misinterpretation. For example, noting the movement of Indigenous groups into an area may incorrectly suggest to the reader that these groups had not occupied the area previously; however, this is not the case. It is clear from Indigenous oral histories and the archaeological record that pre-contact Indigenous populations were extremely mobile and not tied to any one specific area. Over the vast period of time prior to the arrival of Europeans, Indigenous groups, language families, and cultures were fluid across the landscape.

## 1.2.3 Euro-Canadian Settlement

### *London Township*

Working alongside Colonel Thomas Talbot, Colonel Mahlon Burwell initiated the first formal survey of London Township in 1810, one of the first townships in Middlesex County to be extensively settled. This survey initially focused on the first six concessions north to Sunningdale Road, but was suspended when war erupted in 1812. The northern section of the township was surveyed following the war, with the first settlers arriving between 1817 and 1818. The first land patent, however, dates to 1812 and relates to lands that formed part of Burwell's initial survey. Among those individuals who received the earliest patents were Burwell and the honorable John Hale. These grants were given in lieu of payment for services and loyalty, as both gentlemen did not plan to homestead on these lots, but instead intended to sell them to arriving immigrants (LTHBC 2001:11-14; H.R. Page & Co. 1878:9).

In 1818, a group of Irish settlers arrived in London Township and established homesteads on lots in the 4<sup>th</sup>, 5<sup>th</sup>, and 6<sup>th</sup> concessions. Their emigration was organized by Richard Talbot of Tipperary, Ireland, who had spent a great deal of time working on behalf of the government to find families who were interested in relocating to Upper Canada. Richard Talbot took the advice of his kinsman Colonel Thomas Talbot and brought these families to London Township which was said to be one of the most productive agricultural areas in the Thames River Valley (LTHBC 2001:13-14). By 1851, much of London Township had been settled.

### *City of London*

Following the War of 1812, a total of 3,850 acres of land was reserved to the northeast by Lieutenant Governor Simcoe for the future town of London. In 1826, the London townsite was surveyed by Mahlon Burwell with settlement beginning shortly after, around the Forks of the Thames along Ridout Street and the Talbot Block. Settlement in London began to expand rapidly after the construction of the courthouse in 1827 with the population reaching 1,000 by 1835. Concession 1 began at Dundas Street, named in honour of Henry Dundas and, moving north along Proof Line, now Richmond Street, Concession 2 was marked by a stand of pine trees which is now present-day Oxford Street. By 1840, London had become large enough to be incorporated as a town 1840 and the survey was extended include all land east to Adelaide Street, south to Trafalgar Street and north to Huron Street (Brock 1972).

London underwent a number of population booms throughout its history beginning when the 32<sup>nd</sup> Regiment was stationed in London in 1838. Development of saw, cording, and grist industry powered by the Thames River and Medway Creek burgeoned the city's growth in the mid 1800's which was bolstered by the arrival of the railways in the 1850s with the Great Western Railway in 1853, the London Port Stanley Railway in 1856, and the Grand Trunk Railway in 1858. Steady growth in London continued as the city was established as a financial centre for the surrounding regions with large manufacturing industries taking root, including the Carling and Labatt's Brewery and

the London Cigar Industry (Brock 1972). With the spread of commercial and industrial growth, Hamilton H. Killaly, a member of the Legislature, directed attention to the extension and improvement of roads to the north. In the late 1840s, merchants, including John Labatt and Thomas Carling formed the Proof Line Road Joint Stock Company in 1849 to macadamize the Proof Line (now Richmond Street and Highway 4) in order to connect London to small agriculturally based communities.

By the 1920s suburban development began to extend out from the city's core with significant urban growth towards the north end of the study area. Richmond Street (Highway 4) and Fanshawe Park Road primarily served as arterial roads to the urbanized areas of London. In 1961, a major annexation of portions of the townships surrounding the City of London, resulted in the addition of land and close to 60,000 people to the City. As a result, the City grew from approximately 28 to 160 square kilometres. In 1993 London annexed nearly the entire township of Westminster, effectively doubling the size making London one of the largest urban municipalities in Ontario.

### **Historic Map Review – Land Use within the Study Area**

Historically, the Arva-Huron WTM study area falls on parts of Lots 13-15, Concession 2; Lots 13-16, Concessions 3, 4, and 5; and, Lots 17-19, Concession 7. The 1810 Burwell survey is provided on Figure 4 and illustrates that most of the land was owned by the Crown at this time. Settlers that are noted in the township were all settled along the Thames River and its various tributaries.

The 1862 Tremaine map of the Middlesex County (Tremaine 1862) and the 1878 *Illustrated Historical Atlas of Middlesex County* (H.R. Page and Co. 1878) were also reviewed to determine the presence of 19<sup>th</sup> century settlement features within this study area as the presence of historic features elevates the potential for the recovery of 19<sup>th</sup> century archaeological resources. Nineteenth century landowners and the location of historic structures are provided on Figure 5 and Figure 6.

By 1862, most of the land within and surrounding the study area was occupied by 19<sup>th</sup> century settlers; however, few structures are shown on the map. Major transportation routes constructed by 1862 include Richmond Street/Highway 4 (Proof Line), Adelaide Street North, Huron Street, Windermere Road, Fanshawe Park Road, and Sunningdale Road. Urban settlement roads in the south end of the study area include Regent Street, Victoria Street, William Street, Harrison Ave, and Maitland Street. Throughout the 19<sup>th</sup> century, several more streets and homes were added, including Ebworth Avenue (now Epworth Avenue) and Brough Street. These two streets were developed as a means to avoid a toll gate at Proof Line (Richmond Street/Highway 4) and Huron Street (Figure 5).

At this time, Huron Street marked the northern limits of urban settlement within the London townsite. The southern part of the study area crosses Huron Street into lot 13, Concession 2 and includes the northern edge of the townsite expansion. The area of London north of Huron Street and south east of the University of Western Ontario was once a separate village in the Township of London known as Broughdale. The small village took its name from Reverend Charles C. Brough, an Anglican Archdeacon of London who settled on the part of Lots 14 and 15, north of the Thames River within the study area boundaries. Brough is listed as the landowner of Lots 14 and 15, Concession 2 In the early 1860s, the Brough family moved south of the river and built a house on what is now the northeast corner of Broughdale Avenue and Richmond Street. The Brough house still stands at this intersection today (Grainger 2002).

Small areas of urban expansion are also illustrated to the north of Windermere Road along Proof Line (Richmond Street), Fanshawe Park Road, and Adelaide Street North, where portions of several lots have been severed into residential parcels. The community of St. John's (now Arva) is located to the north of the study area at the intersection of Richmond Street and Medway Road (Figure 4). Based on the review of the 1862 map, the large majority of the study area was rural and used as agricultural land; however, some areas had been developed for urban settlement. The existing WTM corridor travels mostly through undeveloped agricultural land with the exception of an area of urban settlement on Lot 15, Concession 5 (Figure 5).



The 1878 Atlas Map shows a similar configuration to the 1862 map. A number of farmsteads are illustrated on the 1878 map that were not on the 1862 map, and the study area remains primarily rural and under cultivation. The area of urban expansion through which the existing WTM corridor travels has expanded to the south onto Lot 15, Concession 4 (Figure 6).

It should be noted that not all features of interest, particularly farmhouses and smaller homesteads, were mapped systematically as this would have been beyond the intended scope of the Ontario historical atlas series. In addition, given that atlases were funded by subscription, preference with regard to the level of detail included was given to subscribers. As such, the absence of structures or other features on historic atlas maps does not preclude the presence of historic features at the time the area was surveyed.

## 1.3 Archaeological Context

### 1.3.1 Natural Environment

The Arva-Huron WTM study area falls within the Stratford Till plain physiographic region of southern Ontario. Chapman and Putnam describe this region as a broad clay plain extending from the north end of the City of London in the south to Blyth and Listowel in the north. The till is fairly uniform and is comprised of brown silty clays that are moderately to imperfectly drained (Chapman and Putnam 1984). These soils provide ideal conditions for successful cultivation and agriculture.

The single most important environmental feature necessary for extended human occupation is potable water. As such, proximity to water is regarded as a useful index for the determination of potential for the presence of archaeological resources. The Thames River is located along the southern limits of the study area and enters the study area to the south of Windermere Road. Other important water sources include Medway Creek along the western limits of the study area and Stoney Creek within the south eastern portion of the study area.

Sources of raw material for making tools, specifically chert, were focal areas for pre-contact Indigenous people. There are no primary sources of chert in the immediate area and the nearest primary chert sources are the Kettle Point Formation and the Dundee and Onondaga Formations located approximately 70 km and 150 km from the London area.

These environmental characteristics would have provided an ideal environment for both temporary and permanent settlement throughout the pre- and post-contact periods. Pre- and post-contact settlement focused along the Thames River and its various tributaries as they served as important transportation routes as well as sources of potable water and riverine resources.

During the 19<sup>th</sup> and 20<sup>th</sup> century, rapid deforestation resulted in significant land clearance across Middlesex County and, over time, the once diverse forest life and wide range of tree species and natural resources would have also been depleted as agricultural and modern residential and commercial development continued. As a result of continuing urban development, this part of southern Ontario is almost completely deforested today.

## 1.3.2 Previous Archaeological Work

To inform the current Stage 1 archaeological assessment and further establish the archaeological context of the study area, a search of the ASDB was conducted by AECOM to determine if any previous archaeological work has been completed within the current study area or within 50 m of the study area boundaries. Table 2 provides a listing of reports regarding previous archaeological work relevant to the study area with reports for land within the study area bolded. The reports for work conducted within the study area are discussed below and mapped on Figure 6.

**Table 2: Archaeological Reports with Relevant Background Information**

Year	Title	Author	PIF Number
1994	<b><i>Licence Report on the Archaeological Mitigation of Four Prehistoric Sites on the UWO/Gibbons Lands, London</i></b>	<b>Museum of Ontario Archaeology (R. Pearce)</b>	<b>PIF-94-009-15-LIC-1994-009</b>
2000	<b><i>Stage 1-2 Assessment of the North London Soccer Complex, Part of Lot 13, Geographic Township of London, City of London, Middlesex County, Ontario</i></b>	<b>Archaeologix Inc. (Archaeologix)</b>	<b>License 2000-002-086</b>
2002	<b><i>Archaeological Assessment (Stage 4) The Carapella Site (AgHh-183) and Powell Site (AgHh-185), Tricar, Uplands North Subdivision, South Half of Lot 14, Conc. 6, Geographic Township of London, City of London, Middlesex County, Ontario. Was not available in the Ministry system for review.</i></b>	<b>Golder Associates Ltd. (Golder)</b>	<b>CIF 2002-005-024</b>
2004	<b><i>Archaeological Assessment (Stage 1 &amp; 2), Richmond Heights Subdivision, Part of Lot 17, Con 6, Geographic Township of London, City of London, Middlesex County, Ontario</i></b>	<b>Archaeologix</b>	<b>CIF P001-095</b>
2007	<b><i>Archaeological Assessment (Stage 4) Applewood Subdivision, Peter Sergautis Property, 660 Sunningdale Road, Part of Lot 13, Concession 6, Geographic Township of London, now City of London, Middlesex County, Ontario. Was not available in the Ministry system for review.</i></b>	<b>Golder</b>	<b>P084-150-2007</b>
2009	<b><i>Stage 1 Archaeological Assessment of Sunningdale Road Class EA, Wonderland Road to Adelaide Street, City of London, Middlesex County</i></b>	<b>Golder</b>	<b>P001-558-2009</b>
2013a	<b><i>Stage 1 and 2 Archaeological Assessment, 2300 Richmond Street, Part of Lot 16, Concession 6, Formerly London Township, Now City of London, Middlesex County, Ontario</i></b>	<b>Golder</b>	<b>P218-335-2012</b>
2013b	<b><i>Stage 1 and 2 Archaeological Assessment, 2300 Richmond Street, Part of Lot 16, Concession 6, Formerly London Township, Now City of London, Middlesex County, Ontario</i></b>	<b>Golder</b>	<b>P218-335-2012</b>
2014	<b><i>Stage 1 and 2 Archaeological Assessment, Fuller Farm Lands, 2154 Richmond Street, Part of Lot 16, Concession 6 South, City of London, Middlesex County, Ontario</i></b>	<b>Golder</b>	<b>P218-273-2012</b>
2015	<b><i>1234-1246 Richmond Street, Part of Lot 15, Concession</i></b>	<b>Golder</b>	<b>P364-0098-2015</b>

Year	Title	Author	PIF Number
	<b>3, Former Geographic Township of London, Now City of London, Middlesex County, Ontario</b>		
2016	<b>Stage 1-2 Archaeological Assessment, St. Peter's Seminary, Part of Lot 14, Concession 3, Geographic Township of London, Now the City of London, Middlesex County, Ontario</b>	AECOM	P438-0063-2015
2016	<b>Stage 1 &amp; 2 Archaeological Assessment, Proposed Cat Adoption Centre, 756 Windermere Road, Part Lot 13, Concession 4, Geographic Township of London, City of London, Middlesex County, Ontario</b>	Timmins Martelle Heritage Consultants Inc. (TMHC)	P1075-0016-2015
2017	Stage 3 Archaeological Assessment, Partial Excavation of Location 1 (AgHh-243), Fuller Farm Lands, 2154 Richmond Street, Part of Lot 16, Concession 6 South, Geographic Township of London, Now the City of London, Middlesex County, Ontario	AECOM	P438-0025-2015
2017	<b>Stage 1: Archaeological Background Final Report (Revised), Thames Valley Parkway Class EA – Richmond Street to Adelaide Street Connection, London, Ontario</b>	Fisher Archaeological Consulting (FAC)	P042-0415-2014
2017	<b>Stage 1 and 2, 348 Sunningdale Road East, Part of Lot 15, Concession 6, Geographic Township of London, Middlesex County, Now City of London, Ontario</b>	Golder	P457-0048-2017
2018	<b>Stage 2 Archaeological Assessment, The Spruce Knoll Site (AgHh-258), 348 Sunningdale Road East, Part of Lot 15, Concession 6, Geographic Township of London, Middlesex County, Now City of London, Ontario</b>	Golder	P364-0120-2017
2018	Stage 1 Archaeological Assessment: Proposed Expansion at 1663 Richmond Street, TD Masonville Building, Part of Lot 17, Concession 4, Geographic Township of London, former Middlesex County, now City of London, Ontario	Stantec Consulting Ltd. (Stantec)	P256-0551-2018
2018	<b>Stage 1 &amp; 2 Archaeological Assessment, North London Athletic Fields, 1225 Adelaide Street North, Lot 13, Concession 3, Geographic Township of London, City of London, Middlesex County, Ontario</b>	TMHC	P324-0322-2018
2018a	<b>Stage 1-2 Archaeological Assessment of 307 Fanshawe Park Road, in part of Lot 15, Concession 4, Township of London, Now City of London, Middlesex County, Ontario</b>	Lincoln Environmental Consulting Corp. (Lincoln)	P344-0231-2018
2018b	Stage 1-2 Archaeological Assessment of 2118 Richmond Street, in part of Lot 16, Concession 6, Township of London, Now City of London, Middlesex County, Ontario	Lincoln	P344-0249-2018
2018c	<b>Stage 1-2 Archaeological Assessment of 1058 Fraser Avenue in part of Lot 14, Concession 2, Township of London, City of London, Middlesex County, Ontario</b>	Lincoln	P344-0232-2018
2018d	<b>Stage 1-2 Archaeological Assessment of 6 and 8 Christie Street, in part of Lot 14, Concession 2, Township of London, Now City of London, Middlesex County, Ontario</b>	Lincoln	P344-0208-2018

Year	Title	Author	PIF Number
2018	<i>Archaeological Stage 1: Background Study, William Street Storm Sewer Outlet and Channel Upgrades, City of London, Middlesex County, Ontario</i>	FAC	P359-0080-2017
2018	<i>Stage 1 Archaeological Assessment, Broughdale Dyke Municipal Class EA, Part of Lots 14 and 15, Concession 3, Geographic Township of London, Middlesex County, City of London, Ontario</i>	AECOM	P438-0144-2018
2018	<i>Stage 1-2 Archaeological Assessment, London Bus Rapid Transit System</i>	WSP	P365-0127-2017
2019a	<i>Archaeological Stage 2: Assessment, Final Report (Revised), Thames Valley Parkway Class EA – Richmond Street to Adelaide Street Connection – Detailed Design, Part of Lots 13, 14 &amp; 15, Concession 3, Geographic Township of London, City of London, Middlesex County, Ontario</i>	FAC	P115-0028-2018
2019b	<i>Archaeological Stage 3 Testing of AgHh-260 &amp; AgHh-261, Thames Valley Parkway Class EA – Richmond Street to Adelaide Street Connection – Detailed Design, Part of Lots 13, 14 &amp; 15, Concession 3, Geographic Township of London, City of London, Middlesex County, Ontario</i>	FAC	P115-0038-2018 P115-0039-2018
2019a	<i>Stage 1 Archaeological Assessment, Ivey Spencer Leadership Centre, 551 Windermere Road, Block B, Plan 707, Part Lot 14, Concession 3, Geographic Township of London, Now in the City of London, Middlesex County, Ontario</i>	TMHC	P316-0383-2019
2019b	<i>Stage 2 Archaeological Assessment, Ivey Spencer Leadership Centre, 551 Windermere Road, “RF” Portion of Block B, Plan 707, Part Lot 14, Concession 3, Geographic Township of London, Now in the City of London, Middlesex County, Ontario</i>	TMHC	P316-0391-2019
2019c	<i>Stage 3 Archaeological Assessment, AgHh-264, Ivey Spencer Leadership Centre, 551 Windermere Road, Block B, Plan 707, Part Lot 14, Concession 3, Geographic Township of London, Now in the City of London, Middlesex County, Ontario</i>	TMHC	P316-0398-2019
2019d	<i>Stage 1 &amp; 2 Archaeological Assessment, Proposed Retirement Development, 1589 Richmond Street, Plan 1029, Lot 12 S/S, Part of Lot 17, Concession 4, Geographic Township of London, City of London, Middlesex County, Ontario</i>	TMHC	P316-0394-2019
2019e	<i>Stage 2 and 3 Archaeological Assessment, AgHh-260, Thames Valley Parkway EA, Richmond Street to Adelaide Street Connection, Part of Lots 13, 14, 15, Concession 3, Geographic Township of London, Middlesex County, City of London, Ontario</i>	TMHC	P324-0389-2019 (Stage 2), P324-0390-2019 (Stage 3)
2019f	<i>Preliminary Stage 4 Archaeological Assessment, AgHh-260, Thames Valley Parkway EA, Richmond Street to</i>	TMHC	P324-0412-2019

Year	Title	Author	PIF Number
	<b>Adelaide Street Connection, Part of Lots 13, 14, 15, Concession 3, Geographic Township of London, Middlesex County, City of London, Ontario</b>		
2019g	<b>Stage 1 &amp; 2 Archaeological Assessment, North London Athletic Fields, Baseball Fields Lighting Project, 1225 Adelaide Street North, Lot 13, Concession 3, Geographic Township of London, City of London, Middlesex County, Ontario</b>	TMHC	P324-0460-2019
2019	<b>Stage 1-2 Archaeological Assessment of 536 and 542 Windermere Road, in part of Lot 15, Concession 4, Township of London, Now City of London, Middlesex County, Ontario</b>	Lincoln	P344-0308-2019
2019	<i>Stage 1 Archaeological Assessment, Hyland Centre, Fanshawe Park Road-Richmond Street, Part of Lot 17, Concession 5, in the Geographic Township of London, now City of London, Middlesex County, Ontario</i>	AECOM	P438-0166-2018
2019	<b>Stage 4 Archaeological Mitigation The Spruce Knoll Site (AgHh-258), 348 Sunningdale Road East, Part of Lot 15, Concession 6, Geographic Township of London, Middlesex County, Now City of London, Ontario</b>	Golder	P457-0068-2018

In 2000, a Stage 1-2 archaeological assessment of the North London Athletic fields on Lot 13, Concession 3 was completed by Archaeologix. The 2000 study did not result in the identification of any archaeological resources. The MHSTCI does not always consider pre-2011 reports to have sufficiently met the *Standards and Guidelines for Consultant Archaeologists* (Ontario Government 2011); however, as part of a later Stage 2 archaeological assessment by FAC (2019), it was determined that the results of the 2000 report meets the current standards and no further work is required for the area assessed.

In 2002, Golder completed a Stage 4 archaeological assessment for Tricar Upland's North Subdivision of the Carapella Site (AgHh-183) and Powell Site (AgHh-185) located at 530 Sunningdale Road East. The reports could not be located in the Ministry database for review, however Kyle Gonyou, Heritage Planner with the City of London indicates that the Stage 4 was completed, and no further archaeological work was recommended (Kyle Gonyou pers. comm, 2020).

The study area land west of the Richmond Street and north of Sunningdale was subject to archaeological assessment in 2004 by Archaeologix under license P001, CIF number P001-095. A small pre-contact Aboriginal lithic scatter was identified and registered with the MHSTCI as AgHh-202. Archaeological concerns under land use planning processes were addressed prior to the construction of the residential development. No further archaeological concerns remain on the property and it now consists of a subdivision.

In 2007, Golder completed a Stage 4 archaeological assessment of site AgHh-220 for the proposed Applewood Subdivision located on the Peter Sergautis Property at 660 Sunningdale Road. The report could not be located in the Ministry database for review, however Kyle Gonyou, Heritage Planner with the City of London indicates that the Stage 4 was completed, and no further archaeological work was recommended (Kyle Gonyou pers. comm, 2020).

A Stage 1 and 2 archaeological assessment was completed by Golder in 2013 for the property at 2300 Richmond Street on part of Lot 16, Concession 6. Although the Stage 1 background study indicated that there was high potential for the presence of archaeological sites; at the completion of the field survey, no archaeological material

was found. Based on the results of the field survey, the property was considered free of archaeological concerns (Golder 2013b).

Golder conducted a Stage 1-2 archaeological assessment for the Fuller Farm Lands on part of Lot 16, Concession 6, through which the Arva-Huron WTM study area travels (Golder 2014). During the Stage 2 field survey, seven archaeological locations were identified, three of which were determined to require Stage 3 site-specific assessment. A partial Stage 3 was completed at Location 1 (AgHh-243) by AECOM in 2017 (AECOM 2017). None of these sites fall within the limits of the current study area.

In 2015, Golder conducted a Stage 1-2 archaeological assessment for the residential properties at 1234-1246 Richmond Street on part of Lot 15, Concession 6. The Stage 1 archaeological assessment determined that archaeological potential within the study area was high and that a Stage 2 field assessment would be required. Despite careful scrutiny of the study area through test pit survey, no archaeological material or sites were identified. No further archaeological work was recommended (Golder 2015).

The Stage 1-2 archaeological assessment for St. Peters Seminary, located on part of Lot 14, Concession 3 was completed in 2016 by AECOM. The Stage 1-2 assessment resulted in the identification of two pre-contact Indigenous archaeological sites. Neither Location 1 nor Location 2 fulfilled the criteria for a Stage 3 archaeological assessment and no further work was required.

The Stage 1-2 archaeological assessment at 756 Windermere Road for the construction of a proposed cat adoption centre on part of Lot 13, Concession 4 was conducted in 2016 by TMHC. Although the Stage 1 background study indicated that there was high potential for the presence of archaeological resources, no archaeological material was found during the Stage 2 field survey and no further work was recommended (TMHC 2016).

In 2017, Golder completed a Stage 1 and 2 for the property at 348 Sunningdale Road East on part of Lot 15, Concession 6. The background study indicated the property retained archaeological potential for both pre-contact Indigenous and historical Euro-Canadian sites (Golder 2017). The Stage 2 resulted in the identification of one archaeological site, Location 1 (AgHh-258), that yielded five pieces of chipping detritus and one piece of Indigenous pottery, and 165 historic Euro-Canadian artifacts, consisting of ceramic sherds, glass, metal, brick and mortar. Both pre-contact and Euro-Canadian components of the site were determined to retain cultural heritage value or interest and were recommended for further Stage 3 excavations (Golder 2017).

The subsequent Stage 3 for the Spruce Knoll Site (AgHh-258) involved the hand excavation of 19 1x1m units, where a total of 1,061 artifacts, including 15 pre-contact Indigenous artifacts, 1,018 Euro-Canadian, and 43 faunal remains, were recovered. Historical research indicated that the artifacts were likely associated with a house constructed on the property in 1867, and therefore was not recommended for further archaeological work. However, the pre-contact Indigenous component was recommended for further Stage 4 mitigation (Golder 2018).

The subsequent Stage 4 for the Spruce Knoll Site (AgHh-258) involved the hand excavation of 62 1x1m units within an area measuring approximately 9 m north-south by 11 m east-west, yielding a total of 3,680 artifacts including 99 pre-contact Indigenous artifacts, 3,260 historical Euro-Canadian artifacts, and 321 faunal fragments (Golder 2019). Based on the results of the Stage 2, 3, and 4 Assessments, the pre-contact Indigenous component of the Spruce Knoll Site (AgHh-258) appears to represent a small campsite, briefly occupied during the Middle Woodland Period. The historical Euro-Canadian artifact assemblage consists predominately of ceramics (n=1,864), metal (n=838), and glass (n=394), with smaller quantities of other materials, such as brick, mortar, coal, and clinker. In addition, 321 faunal fragments were recovered. The analysis of the Euro-Canadian material indicates that the site represents a domestic refuse deposit dating from the early- to late-19th century up into the 20th century. The Euro-Canadian component of the Spruce Knoll Site (AgHh-258) appears to be associated with the residents of that house on the property from 1867 onwards and does not have further cultural heritage value or interest. The pre-contact

Indigenous component of the Spruce Knoll Site (AgHh-258) has been fully excavated and documented, and no longer exists in the ground (Golder 2019).

In 2017, FAC completed the Stage 1 archaeological assessment on parts of Lots 12, 13, 14, and 15, Concession 3; and Lots 12 and 13, Concession 4 as part of the Thames Valley Parkway EA, Richmond Street to Adelaide Street Connection. The background research indicated that the study area assessed retained high archaeological potential (FAC 2017). As a result of the recommendations from this report, a Stage 2 archaeological assessment was completed in 2019 (FAC 2019). The Stage 2 archaeological assessment identified two archaeological sites – a 19<sup>th</sup> century domestic site (AgHh-260) and an isolated Early Archaic findspot (AgHh-261). Both of these sites were recommended for Stage 3 archaeological assessment.

Subsequent to the Stage 1 and 2 assessments archaeological sites AgHh-260 and AgHh-261 were subject to a Stage 3 archaeological assessment by FAC (FAC 2019). Only the portion of AgHh-260 that fell within the study area boundaries for the project was subject to assessment. The results of this assessment determined that AgHh-260 required a Stage 4 mitigation of impacts while AgHh-261 was considered sufficiently documented. As a result of project design changes, TMHC completed the remaining Stage 3 archaeological assessment as well as the subsequent Stage 4 mitigation of AgHh-260 in 2019 (TMHC 2019e,f).

In 2018, TMHC was retained to conduct the Stage 1 and 2 archaeological assessment of the North London Athletic Fields on part of Lot 13, Concession 3. The Stage 1 background study indicated that there may be potential for the presence of archaeological material or sites; however, the Stage 2 field survey did not result in the identification of any artifacts or sites and no further work is required (TMHC 2018).

As part of a planning application on part of Lot 15, Concession 4, Lincoln conducted a Stage 1-2 archaeological assessment. As with many of the other previous reports, the Stage 1 background study concluded that there was high potential for the presence of archaeological resources on the property. Despite careful scrutiny, no archaeological resources were identified and no further work was recommended (Lincoln 2018a).

Lincoln was retained to complete a Stage 1-2 archaeological assessment of 1058 Fraser Avenue on part of Lot 14, Concession 2 as part of the planning permit. The Stage 1 background study resulted in a recommendation for Stage 2 field survey. At the completion of the Stage 2 survey, no archaeological resources were found. No further work was required and the property is considered free of archaeological concerns (Lincoln 2018c). A similar study was also conducted for the properties at 6 and 8 Christie Street within the same lot and concession. The results of this study were the same as that completed at 1058 Fraser Avenue and no further work was recommended (Lincoln 2018d).

In 2018, a Stage 1 archaeological assessment for the William Street Storm Sewer Outlet and Channel Upgrades on part of Lot 13, Concession 3 was completed by FAC. The background study determined that portions of the study area had been previously disturbed by existing sewers, watermains, and pump stations and other portions were permanently wet marsh/swamp. Based on these findings, FAC did not recommend any further archaeological assessment (FAC 2018).

A Stage 1 archaeological assessment was completed by AECOM for the Broughdale Dyke Municipal Class EA. The land assessed is located on parts of Lots 14 and 15, Concession 3. AECOM's background study and property inspection determined that although there was significant previous disturbance related to the construction of the dyke, there were areas that retained archaeological potential. As a result of AECOM's findings, those areas were recommended for Stage 2 archaeological assessment (AECOM 2018).

A Stage 1-2 archaeological assessment was completed for the proposed Bus Rapid Transit system (BRT) located in the City of London. The Stage 1 background research found the study area to have to retain high archaeological potential for the majority of the study area. During the property inspection, a small portion of the study corridor was found to retain archaeological potential and recommended for Stage 2 archaeological assessment (WSP 2018).

During the Stage 2 fieldwork, no archaeological materials or sites were identified, However, some further work was recommended for land within the study area that had not been subject to test pitting during the Stage 2, specifically located around previously registered archaeological sites, and areas of deeply buried archaeological potential (WSP 2018). A portion of the current study area is included in the WSP study area, specifically along Richmond Street, where some areas have been recommended for further Stage 2 test pitting and deeply buried investigations (WSP 2018).

In 2019, TMHC conducted Stages 1, 2, and 3 archaeological assessments for the Ivey Spencer Leadership Centre located at 551 Windermere Road on part of Lot 14, Concession 3. The Stage 1 background study and property inspection suggested that the area had high potential for the presence of archaeological resources and, as such, and Stage 2 archaeological assessment was recommended to assess the property further (TMHC 2019a). The Stage 2 survey resulted in the discovery of four archaeological locations, two of which were recommended for Stage 3 archaeological assessment. Location 1 (AgHh-264) is a Woodland period Indigenous site and Location 4 (AgHh-265) is a pre-contact Indigenous site with no temporal affiliation (TMHC 2019b). Location 1 (AgHh-264) was subsequently subject to a Stage 3 archaeological assessment. At the conclusion of the site excavation, the site yielded minimal artifacts and it was determined to have been sufficiently documented. No further work was required. Location 4 (AgHh-265) was not subject to the recommended Stage 3 assessment and was, therefore, recommended for monitoring during construction activities. As such, the land has not yet been cleared of archaeological concerns (TMHCc).

A Stage 1 and 2 archaeological assessment was conducted for the proposed baseball fields lighting project on part of Lot 13, Concession 3. Areas that did not appear to have previously been disturbed were subject to test pit survey; however, no archaeological material was recovered. The remaining portions of the study area were determined to have been previously disturbed. No further work was recommended and the area is considered free of archaeological concerns (TMHC 2019g)

Finally, in 2019, Lincoln conducted a Stage 1-2 archaeological assessment at 536 and 542 Windermere Road on part of Lot 15, Concession 4 as part of a planning permit. The Stage 2 field survey did not result in the identification of any archaeological material and no further archaeological assessment was recommended.

To the best of our knowledge, beyond those listed in Table 2, there are no other reports concerning archaeological work conducted within or in close proximity (i.e. within 50 m) of the study area; however, it should be noted that the MHSTCI does not maintain a database of all properties that have had past archaeological investigations and searches of the MHSTCI's public register do not always result in a complete listing of all archaeological work conducted in a given area. In consequence, in some cases the only way a consulting archaeologist will know that a past assessment has been conducted in a given area is if they have personal knowledge of it, or if the assessment resulted in the discovery and registration of one or more archaeological sites.

### ***City of London Archaeological Master Plan***

The 2017 City of London Archaeological Management Plan was reviewed as part of this Stage 1 archaeological assessment to determine the potential for the recovery of archaeological resources within the current study area. The City of London Archaeological Master Plan was adopted by council in 1996 to ensure the identification, evaluation, and conservation of archaeological resources through long-term planning (Wilson and Horne 1995). The primary goal of the Master Plan was the development of an Archaeological Potential Model for the City of London. The model identified 19,088.6 ha of the City of London with moderate to high potential for the recovery of archaeological resources (Wilson and Horne 1995). The Archaeological Management Plan (AMP) (City of London 2018) for the City of London was completed in 2017 to replace the previous Archaeological Master Plan (Wilson and Horne 1996).



According to the archaeological potential modelling, the Arva-Huron WTM study area is situated in an area of the city that exhibits moderate to high archaeological potential. The majority of the areas exhibiting high potential are those located along the Thames River, Medway Creek, and Stoney Creek.

### 1.3.3 Known Archaeological Sites

AECOM requested a data search of the ASDB to determine if any registered archaeological sites are located within the study area as well as within 1 km of the current study area boundaries. This search resulted in the identification of 133 registered archaeological sites. The presence of 133 registered archaeological sites within 1 km supports the finding that there is high archaeological potential in this area of the city. These sites include a large number of both Indigenous sites of various temporal affiliations as well as 19<sup>th</sup> century Euro-Canadian sites. Many of the sites within the study area boundaries are concentrated between Fanshawe Park Road and Sunningdale Road. Given the large number of archaeological sites, details on the types and cultural affiliations of these sites as provided by the MHSTCI can be found in Appendix A and in Figure 2 of the Supplementary Documentation of this report.

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

### 1.3.4 Existing Conditions

The study area addressed in this Stage 1 archaeological assessment includes the existing WTM corridor as well as additional land to accommodate for all potential alternatives. This includes an area generally bounded by Victoria Street to the south, Adelaide Street to the east, Richmond Street to the west, and the Arva Pumping Station, north of Medway Road, to the north.

The portion of the study area between Windermere and Sunningdale Roads is comprised primarily of 20<sup>th</sup> century urban subdivision development and commercial businesses. The southern limits include an area of historic urban development associated with the 19<sup>th</sup> century expansion of the City of London and, finally, the portion of the study area that continues north of Sunningdale Road is undeveloped rural land comprised of agricultural fields and small woodlots.

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## 2. Property Inspection

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To assist in the evaluation of the Arva-Huron WTM study area, a property inspection was conducted by licensed archaeologist Cody McNea (R414) on August 7, 2020 under PIF number P438-0204-2020 issued to Samantha Markham. The property inspection was conducted to meet the requirements of Section 1.2 of the *Standards and Guidelines for Consultant Archaeologists* (Ontario Government 2011b) and, in accordance with Section 1.2, S.1. of the *Standards and Guidelines for Consultant Archaeologists* (Ontario Government 2011b), the study area and its periphery were subject to systematic inspection to identify the presence or absence of any features of archaeological potential.

The weather during the property inspection consisted of a temperature of 30° C with sunny conditions. At no time were weather conditions detrimental to the identification of archaeological features, and lighting conditions were excellent.

The study area is comprised primarily of the urban development of modern city's, including roadways, railways, utilities and other infrastructure. Portions of the study area also consist of undeveloped rural landscapes comprised of agricultural fields and small woodlots, specifically north of Sunningdale Road and along the existing water main.

Photographs were taken of the visible landscape features described above (Photos 1-24). Photograph locations and directions, as well as the results of the Stage 1 Property Inspection within the proposed Arva-Huron WTM study area are provided in Figure 7 of this report.

To meet the requirements of Standard 4, Section 1.2 an attempt was made to document additional features of archaeological potential not visible on the mapping. Apart from the structures mentioned in **Section 1.3.2** of this report, no additional features of archaeological potential were identified during the site inspection.

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## 3. Analysis and Conclusions

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Archaeological potential is established by determining the likelihood that archaeological resources may be present on a subject property. Criteria commonly used by the MHSTCI to determine areas of archaeological potential are listed in Section 1.3.1 of the *Standards and Guidelines for Consultant Archaeologists* (Ontario Government 2011). Distance to modern or ancient water sources is generally accepted as the most important element for past human settlement patterns and when considered alone may result in a determination of archaeological potential. In addition, any combination of two or more of the listed criteria indicates archaeological potential.

Based on a review of the historical, environmental, and archaeological context of the study area, it has been determined that potential for the recovery of pre- and post-contact Indigenous and 19<sup>th</sup> century Euro-Canadian archaeological resources within portions of the study area is high based on the presence of the following features:

- Presence of 133 previously identified archaeological sites within 1km, including both Indigenous and 19<sup>th</sup> century Euro-Canadian sites;
- Close proximity to the Thames River, Stoney Creek, and Medway Creek;
- Adequate soil texture and drainage conducive to cultivation;
- General topographic variability of the area;
- Early Euro-Canadian industry;
- Areas of early Euro-Canadian settlement (north end of the City of London, St. John's);
- Numerous early 19<sup>th</sup> century transportation routes/streets; and,
- Properties that local histories or informants have identified with possible archaeological sites, historical events, activities or occupants (e.g., the Brough House).

Certain features indicate that archaeological potential is low or has been removed. Specifically, land that has been subject to extensive and intensive deep land alterations that have severely damaged the integrity of any archaeological resources. This can include, but is not limited to, landscaping that involves grading below the topsoil level, building footprints, quarrying, and underground utility installations/infrastructure development. Areas where archaeological potential has been removed within the Arva-Huron WTM study area include 20<sup>th</sup> century subdivision and commercial developments as well as road construction. Additionally, several previous archaeological assessments have cleared various properties of archaeological concerns and these areas are considered to no longer have archaeological potential.

Based on these findings, AECOM's Stage 1 background study of the Arva-Huron WTM study area has determined that the potential for the recovery of archaeological resources in portions of the study area is high. All potentially undisturbed land within the limits of the study area must be subject to Stage 2 field survey. It should be noted that, although potentially extensively disturbed, the urban development within the study area between Victoria Street to the south and Raymond Avenue to the north occurred during the 19<sup>th</sup> century expansion of the City of London and, therefore, these areas are considered to retain moderate archaeological potential for 19<sup>th</sup> century archaeological

resources. More specifically, given the 19<sup>th</sup> century expansion of the city into this portion of the study area, the area south of the Thames River retains moderate archaeological potential for 19<sup>th</sup> century archaeological resources.

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## 4. Recommendations

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AECOM's Stage 1 archaeological assessment for the Arva-Huron WTM Municipal Class EA has determined that the potential for the recovery of both pre- and post-contact Indigenous and 19<sup>th</sup> century Euro-Canadian archaeological resources within parts of the study area is moderate to high. As a result of extensive urban development, some portions of the study area have been previously disturbed and archaeological potential has been removed; however, areas of manicured lawn and woodlot within the study area limits are included as areas where archaeological integrity may remain intact. Areas of moderate to high and low archaeological potential, as well as areas that have been subject to previous assessment are illustrated on Figure 7. Based on these findings, **a Stage 2 archaeological assessment is recommended following the below stated requirements.**

The Stage 2 archaeological assessment must be conducted by a licensed archaeologist and must follow the requirements set out in the *Standards and Guidelines for Consultant Archaeologists* (Ontario Government 2011). Areas identified as having low archaeological potential (e.g. building footprints, roadways, urban development) are to be photo-documented only. The Stage 2 field survey for areas of moderate to high archaeological potential must include:

- The standard test pit survey method at 5 m intervals is to be conducted in all areas that will be impacted by the project where ploughing is not possible (e.g., woodlots, overgrown areas, manicured lawns);
- Pedestrian survey at 5 m intervals where ploughing is possible (i.e. agricultural fields). Assessment will only occur when agricultural fields have been recently ploughed, weathered, and exhibit at least 80% surface visibility; and,
- Poorly drained areas, areas of steep slope, and areas of confirmed previous disturbance (i.e. areas with identifiable land alterations below topsoil level) are to be mapped and photo-documented only.

It is pertinent to note that the Arva-Huron WTM study area evaluated in this report includes additional land that may not be impacted by the project. A large area was assessed as part of this Stage 1 archaeological assessment in order to accommodate possible infrastructure alternatives outside of the existing WTM corridor. Once the area of project impacts has been determined, only the land that will be impacted by this project will require Stage 2 archaeological assessment.

Given that there are 133 registered archaeological sites within 1 km of the study area, a comprehensive list of recommendations is not provided here. However, details for each site can be found in the Appendix A of this report, and the location of the sites is illustrated on Figure 2 of the Supplementary Documentation. Once a preferred route alternative is chosen, all archaeological sites located within the study area boundaries that require further work must be subject to further archaeological assessment prior to ground disturbing activities. Of particular note is archaeological site AgHh-265 which will be required to be subject to Stage 4 archaeological assessment and must follow the requirements set out in the *Standards and Guidelines for Consultant Archaeologists* (Ontario Government 2011).

The Ministry of Heritage, Sport, Tourism and Culture Industries is asked to accept this report into the Ontario Public Register of Archaeological Reports thereby concurring with the recommendations presented herein. As further archaeological assessment is required, archaeological concerns for the Arva-Huron WTM in the City of London, Ontario have not yet been fully addressed.

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## 5. Advice on Compliance with Legislation

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This report is submitted to the Ontario Minister of Heritage, Sport, Tourism and Culture Industries as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the MHSTCI, a letter will be issued by the Ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

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

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48(1) of the *Ontario Heritage Act*.

Archaeological sites recommended for further archaeological fieldwork or protection remain subject to section 48 (1) of the *Ontario Heritage Act* and may not be altered, or have artifacts removed from them, except by a person holding an archaeological license.

The *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force in 2012) require that any person discovering human remains must notify the police or coroner and the Registrar of Burial Sites, War Graves, Abandoned Cemeteries, and Cemetery Closures.

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# 8. Images



Photo 1: Existing conditions at the north end of the study area along Medway Rd requiring further Stage 2, facing northwest



Photo 2: Existing conditions of the existing main along Sunningdale Rd, facing south



Photo 3: Existing conditions of main line within a subdivision with low archaeological potential, facing northwest



Photo 4: Existing conditions at southern end of the study area along Windemere Rd, facing north



Photo 5: Existing conditions along Medway Rd, low archaeological potential within ROW, facing west



Photo 6: Existing conditions at Medway Rd and Adelaide St, low archaeological potential within the ROW, facing east



Photo 7: Existing conditions along Sunningdale Rd, note future development removing archaeological potential, facing west



Photo 8: Typical conditions along Sunningdale Rd, note subdivision development and ROW disturbance, facing west



Photo 9: Existing conditions of Adelaide St ROW utilities and disturbance, facing northeast



Photo 10: Typical intersection infrastructure disturbance, facing northwest



Photo 11: Typical ROW disturbance with residential sound wall along Richmond St, facing north



Photo 12: Typical park outside of the ROW retaining archaeological potential, facing north



Photo 13: Typical conditions within residential areas, facing west



Photo 14: Existing conditions on the north end of Richmond St ROW, facing south



Photo 15: Commercial development along Richmond St, facing south



Photo 16: Typical ROW disturbance along Richmond St with residential development, facing south



Photo 17: Existing conditions along Windermere Rd, facing west



Photo 18: Area retaining archaeological potential, facing southeast



Photo 19: Existing conditions along the Thames River retaining high archaeological potential, facing northwest



Photo 20: Woodlot within city park retaining archaeological potential, facing northeast



Photo 21: Typical conditions along Richmond St ROW illustrating infrastructure disturbance, facing northeast



Photo 22: Existing conditions along Richmond St ROW adjacent to residential structures, facing north



Photo 23: Existing conditions along Huron St ROW adjacent to residential structures, facing west



Photo 24: Area retaining archaeological potential outside of the Huron St ROW, facing northwest



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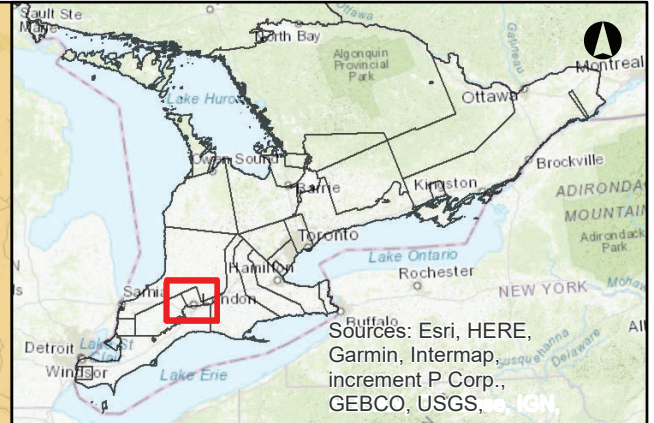
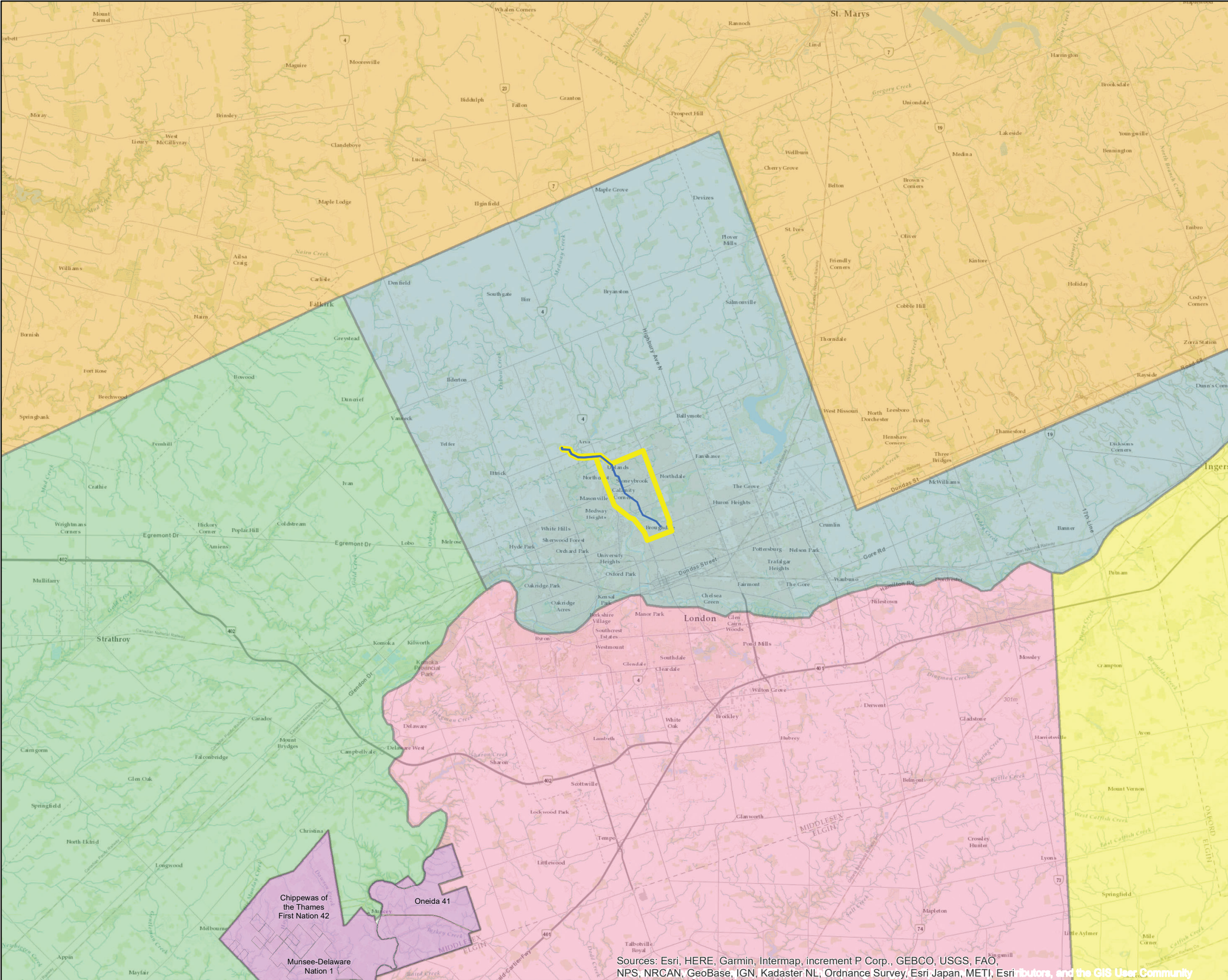
## 9. Figures

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All figures pertaining to the Stage 1 archaeological assessment for the Arva-Huron WTM Municipal Class EA in the City of London and the Municipality of Middlesex Centre, Ontario are provided on the following pages.











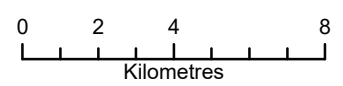




Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, IGN, etc.

### Legend

-  Existing Arva-Huron WTM
  -  Study Area
  -  First Nations Reserve Land
- ### Treaty
-  Between the Lakes Purchase, Treaty 3, December 2, 1792
  -  Huron Tract Purchase, Treaty 29, August 13, 1833
  -  London Township Purchase, Treaty 6, September 7, 1796
  -  Long Woods Purchase, Treaty 21, March 9, 1819
  -  McKee Purchase, Treaty 2, May 19, 1790



Stage 1 Archaeological Assessment  
Arva Pumping Station to Huron Street Water  
Transmission Main Municipal Class EA  
City of London, Ontario

### Ontario Treaties Map

November 2020	1:200,000	Datum: NAD83 UTM17 Source: <a href="http://www.ontario.ca/page/map-ontario-treaties-and-reserves#17">www.ontario.ca/page/map-ontario-treaties-and-reserves#17</a>
P#: 60619503	V#:	



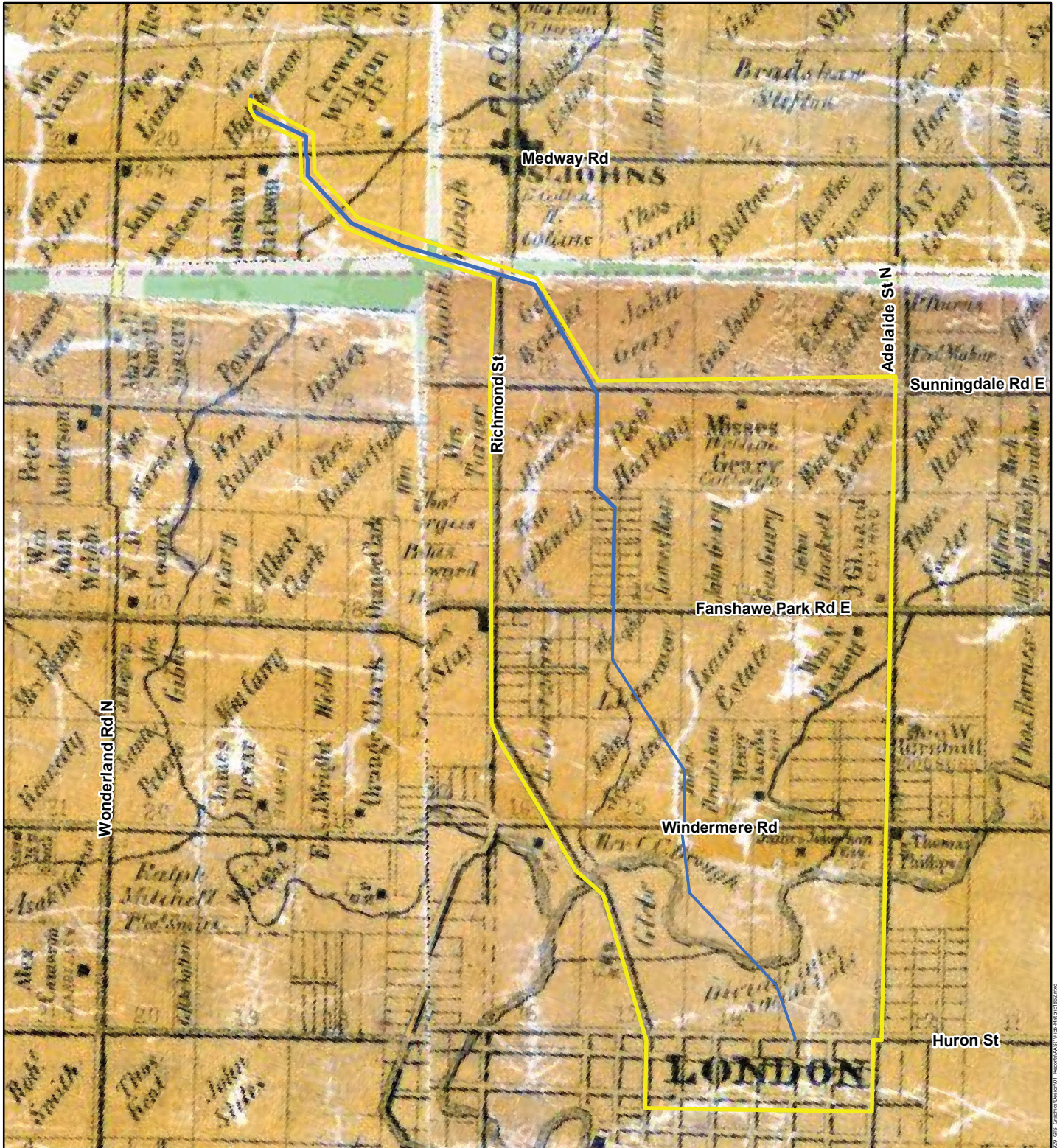
Figure 3

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri (Mapbox), Swatch, and the GIS User Community

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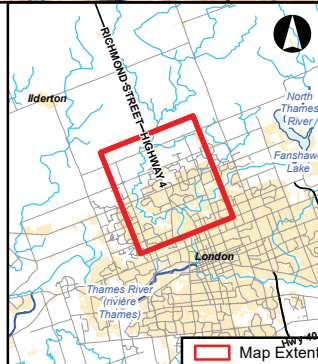
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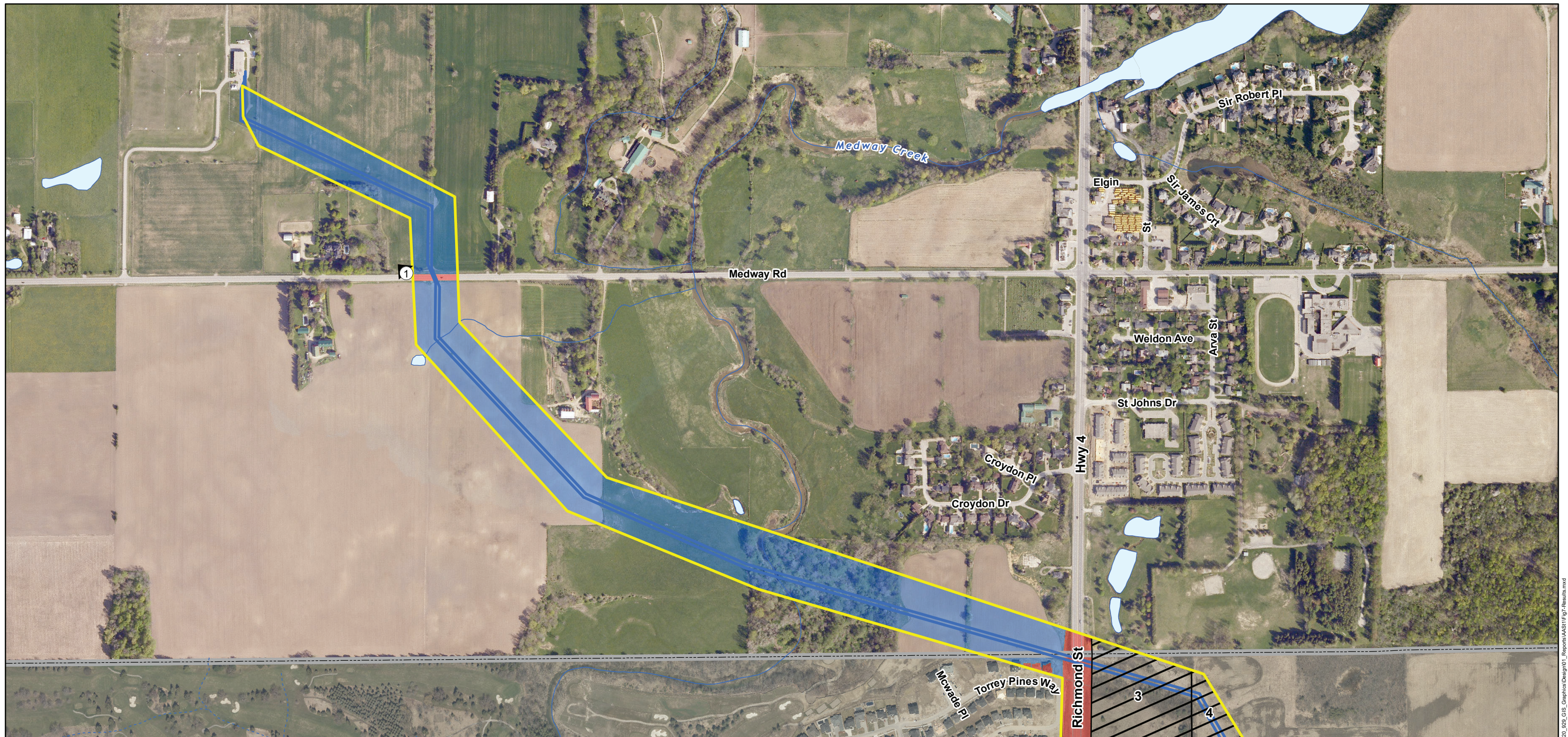
**Legend**

- Study Area
- Existing Arva-Huron WTM



Stage 1 Archaeological Assessment Arva Pumping Station to Huron Street Water Transmission Main Municipal Class EA City of London, Ontario		
Portion of the Tremaine Map of Middlesex County, 1862		
November 2020	1:35,000	Datum: NAD 83 UTM17 Source: LIO 2019, Tremaine 1862, Tremaine's Map of Middlesex County
PH: 60619503	V#:	<b>Figure 5</b>
<b>AECOM</b>		
0    250    500    1,000 Metres		
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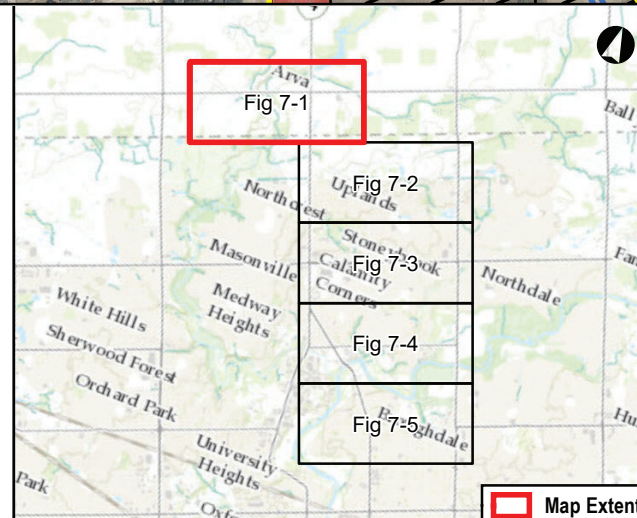
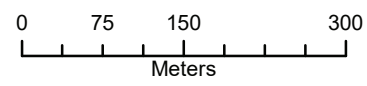




**Legend**

- Photo Location and Direction
- Existing Arva-Huron WTM
- Permanent Stream
- Intermittent Stream
- Waterbody
- Study Area
- Previously Assessed, Stage 3 Required (TMHC - 2019a)
- Previously Assessed, No Further Work Required
- Area of Low Archaeological Potential
- Area of Moderate to High Archaeological Potential
- Visually Confirmed Disturbance – Cleared of Archaeological Concerns
- Municipal Boundary

- 1 - Archaeologix (2000)
- 2 - Archaeologix (2004)
- 3 - Golder (2013)
- 4 - Golder (2014)
- 5 - Golder (2015)
- 6 - AECOM (2016)
- 7 - THMC (2016)
- 8 - THMC (2018)
- 9 - Lincoln (2018a)
- 10 - Lincoln (2018c)
- 11 - Lincoln (2018d)
- 12 - Fisher (2018)
- 13 - Fisher (2019)
- 14 - THMC (2019a-c)
- 15 - THMC (2019e,f)
- 16 - THMC (2019g)
- 17 - Lincoln (2019)



<b>Stage 1 Archaeological Assessment</b> Arva Pumping Station to Huron Street Water Transmission Main Municipal Class EA City of London, Ontario		
<b>Results of Stage 1 Background Study</b>		
November 2020	1:7,000	Datum: NAD83 UTM 17 Source: LIO 2019, City of London 2018, Middlesex County 2020
P#: 60619503	V#:	
		<b>Figure 7-1</b>
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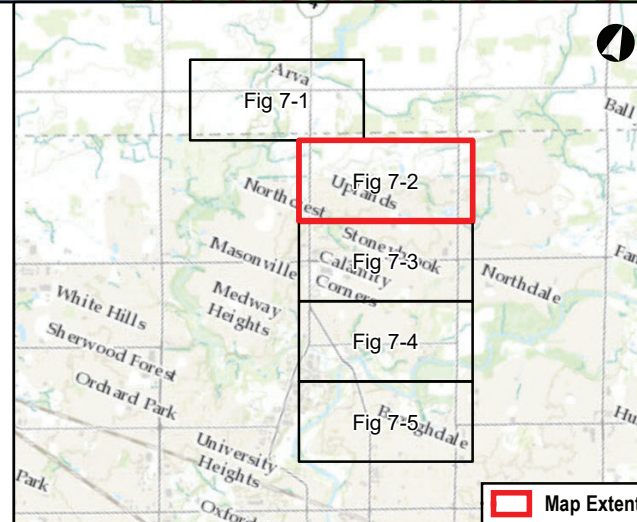
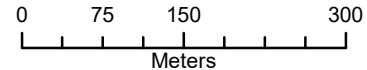




**Legend**

- ③ Photo Location and Direction
- Existing Arva-Huron WTM
- Permanent Stream
- Intermittent Stream
- Waterbody
- Study Area
- Previously Assessed, Stage 3 Required (TMHC - 2019a)
- Previously Assessed, No Further Work Required
- Area of Low Archaeological Potential
- Area of Moderate to High Archaeological Potential
- Visually Confirmed Disturbance – Cleared of Archaeological Concerns
- Municipal Boundary

- 1 - Archaeologix (2000)
- 2 - Archaeologix (2004)
- 3 - Golder (2013)
- 4 - Golder (2014)
- 5 - Golder (2015)
- 6 - AECOM (2016)
- 7 - THMC (2016)
- 8 - THMC (2018)
- 9 - Lincoln (2018a)
- 10 - Lincoln (2018c)
- 11 - Lincoln (2018d)
- 12 - Fisher (2018)
- 13 - Fisher (2019)
- 14 - THMC (2019a-c)
- 15 - THMC (2019e,f)
- 16 - THMC (2019g)
- 17 - Lincoln (2019)



<p>Stage 1 Archaeological Assessment Arva Pumping Station to Huron Street Water Transmission Main Municipal Class EA City of London, Ontario</p>		
<p>Results of Stage 1 Background Study</p>		
<p>November 2020</p>	<p>1:7,000</p>	<p>Datum: NAD83 UTM 17 Source: LIO 2019, City of London 2018, Middlesex County 2020</p>
<p>P#: 60619503</p>	<p>V#:</p>	<p><b>AECOM</b></p> <p>Figure 7-2</p>
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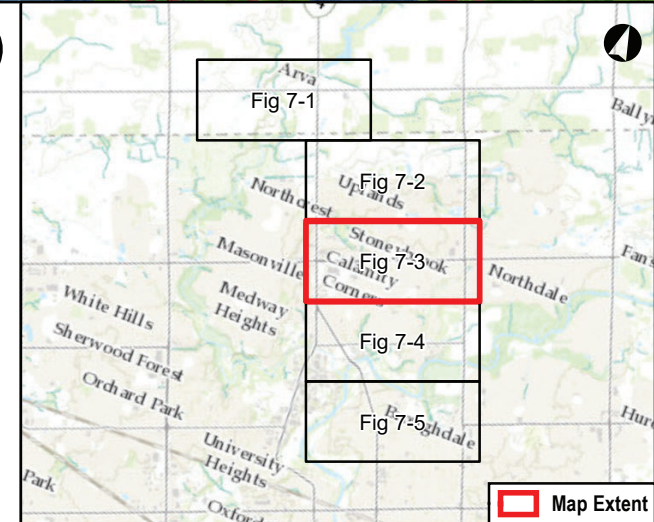
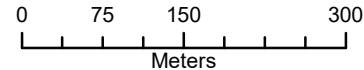
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### Legend

- Photo Location and Direction
- Existing Arva-Huron WTM
- Permanent Stream
- Intermittent Stream
- Waterbody
- Study Area
- Previously Assessed, Stage 3 Required (TMHC - 2019a)
- Previously Assessed, No Further Work Required
- Area of Low Archaeological Potential
- Area of Moderate to High Archaeological Potential
- Visually Confirmed Disturbance – Cleared of Archaeological Concerns
- Municipal Boundary

- |                         |                      |
|-------------------------|----------------------|
| 1 - Archaeologix (2000) | 10 - Lincoln (2018c) |
| 2 - Archaeologix (2004) | 11 - Lincoln (2018d) |
| 3 - Golder (2013)       | 12 - Fisher (2018)   |
| 4 - Golder (2014)       | 13 - Fisher (2019)   |
| 5 - Golder (2015)       | 14 - THMC (2019a-c)  |
| 6 - AECOM (2016)        | 15 - THMC (2019e,f)  |
| 7 - THMC (2016)         | 16 - THMC (2019g)    |
| 8 - THMC (2018)         | 17 - Lincoln (2019)  |
| 9 - Lincoln (2018a)     |                      |



Map Extent

<b>Stage 1 Archaeological Assessment</b> Arva Pumping Station to Huron Street Water Transmission Main Municipal Class EA City of London, Ontario		
<b>Results of Stage 1 Background Study</b>		
November 2020	1:7,000	Datum: NAD83 UTM 17 Source: LIO 2019, City of London 2018, Middlesex County 2020
P#: 60619503	V#:	
		<b>Figure 7-3</b>
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Appendix A

**Archaeological Sites within 1km**  
**Stage 1 Archaeological Assessment**  
**Arva Pumping Station to Huron Street**  
**Water Transmission Main - Class EA Master Plan**

Appendix A: Archaeological Sites within 1 km of the Arva-Huron Study Area

Site Borden #	Site Name	Time Period	Site Type	Cultural Affiliation	Development Context
AtHh-927	LEC3	Post-Contact	homestead	Euro-Canadian	No Further CHVI
AgHh-10	Ronto	Post-Contact; Woodland	hamlet; house	Euro-Canadian, Iroquoian Neutral	Not provided
AgHh-100	Ardshell 5	Pre-Contact	findspot	Indigenous	No Further CHVI
AgHh-101	Ardshell 6	Pre-Contact	findspot	Indigenous	No Further CHVI
AgHh-102	Ardshell 7	Archaic, Late	findspot	Indigenous	No Further CHVI
AgHh-115	Winder 1	Pre-Contact	findspot	Indigenous	Not provided
AgHh-116	Winder 2	Pre-Contact	findspot	Indigenous	Not provided
AgHh-117	Winder 3	Pre-Contact	findspot	Indigenous	Not provided
AgHh-118	Winder 4	Pre-Contact	findspot	Indigenous	Not provided
AgHh-126	Stoney Creek 8	Pre-Contact	findspot	Indigenous	No Further CHVI
AgHh-129	Stoney Creek 11	Archaic, Early	findspot	Indigenous	No Further CHVI
AgHh-13		Archaic, Early	camp/campsite	Indigenous	Not provided
AgHh-130	Stoney Creek 12	Post-Contact	house	Euro-Canadian	Further CHVI
AgHh-138	Stoney Creek 20	Post-Contact	farmstead; house	Euro-Canadian	No Further CHVI
AgHh-139	Stoney Creek 21	Post-Contact	farmstead; house	Euro-Canadian	No Further CHVI
AgHh-14	The Third Site	Unknown	Unknown	Unknown	Not provided
AgHh-140	Stoney Creek 22	Woodland, Middle	findspot	Indigenous	Not provided
AgHh-141	Stoney Creek 23	Pre-Contact	findspot	Indigenous	Not provided
AgHh-142	Stoney Creek 24	Post-Contact	farmstead; house; outbuilding	Euro-Canadian	No Further CHVI
AgHh-143		Pre-Contact	findspot	Indigenous	Not provided
AgHh-146	Sergautis 1	Archaic, Late	scatter	Indigenous	Not provided
AgHh-146	Sergautis 1	Pre-Contact	Unknown	Unknown	Not provided
AgHh-147	Sergautis 2	Archaic, Early	findspot	Indigenous	No Further CHVI
AgHh-148	Sergautis 3	Pre-Contact	findspot	Indigenous	Not provided
AgHh-149	Sergautis 4	Pre-Contact	findspot	Indigenous	Not provided
AgHh-15		Archaic, Early-Late	camp/campsite	Indigenous	Not provided
AgHh-150	Sergautis 5	Pre-Contact	findspot	Indigenous	Not provided
AgHh-151	Sergautis 6	Pre-Contact	findspot	Indigenous	Not provided
AgHh-152	Old Barn	Post-Contact	building	Euro-Canadian	Not provided
AgHh-153	Sunningdale Historic	Post-Contact	homestead	Euro-Canadian	Not provided
AgHh-16		Woodland, Late	camp/campsite	Indigenous	Not provided
AgHh-168	Adelaide-Fanshawe Park	Archaic, Early	camp/campsite	Indigenous	No Further CHVI
AgHh-170		Post-Contact	Temporary domestic structure ; cottage	Euro-Canadian	No Further CHVI
AgHh-171		Post-Contact	homestead	Euro-Canadian	No Further CHVI
AgHh-172	-	Pre-Contact	findspot	Indigenous	No Further CHVI
AgHh-176	Gough 1	Archaic, Early	camp/campsite	Indigenous	No Further CHVI
AgHh-177	Gough 2	Archaic, Middle	camp/campsite	Indigenous	No Further CHVI
AgHh-181		Pre-Contact	Unknown	Indigenous	Further CHVI (Stage 3)
AgHh-182		Archaic, Late	findspot	Indigenous	No Further CHVI
AgHh-183	Carapella	Pre-Contact	camp/campsite	Indigenous	No Further CHVI
AgHh-184		Archaic	scatter	Indigenous	No Further CHVI
AgHh-185	Powell	Woodland, Late	camp/campsite	Indigenous	No Further CHVI
AgHh-186		Post-Contact	house	Unknown	No Further CHVI
AgHh-19		Unknown	Unknown	Unknown	Not provided
AgHh-2	Freel	Woodland, Early	Human burial site	Indigenous	Further CHVI
AgHh-20		Unknown	Unknown	Unknown	Not provided
AgHh-202		Pre-Contact	camp/campsite	Indigenous	Further CHVI
AgHh-208		Post-Contact	house	Euro-Canadian	No Further CHVI
AgHh-209		Post-Contact	house	Euro-Canadian	Further CHVI
AgHh-21		Unknown	Unknown	Unknown	Not provided
AgHh-210		Post-Contact	house	Euro-Canadian	Further CHVI
AgHh-211		Post-Contact	house	Euro-Canadian	Further CHVI
AgHh-215		Post-Contact	house	Euro-Canadian	No Further CHVI
AgHh-216		Unknown	Unknown	Unknown	No Further CHVI
AgHh-219		Post-Contact	house	Euro-Canadian	Further CHVI
AgHh-22		Unknown	Unknown	Unknown	Not provided
AgHh-220		Post-Contact	homestead	Euro-Canadian	Further CHVI
AgHh-221		Other	findspot	Unknown	No Further CHVI
AgHh-222		Post-Contact	house	Euro-Canadian	Not provided
AgHh-223		Post-Contact	house	Euro-Canadian	No Further CHVI
AgHh-224	Applewood 1	Archaic, Late	findspot	Indigenous	
AgHh-225	Applewood 2	Pre-Contact	findspot	Indigenous	
AgHh-226	Applewood 3	Post-Contact	homestead	Euro-Canadian	
AgHh-227	Applewood 4	Pre-Contact	findspot	Indigenous	
AgHh-228	Applewood 5	Woodland, Middle	Unknown	Indigenous	
AgHh-229	Applewood 6	Pre-Contact	scatter	Indigenous	
AgHh-23		Woodland	camp/campsite	Indigenous	
AgHh-230	Applewood 7	Post-Contact	Other: building; homestead	Euro-Canadian	
AgHh-234		Other; Other	Residential	Unknown	Further CHVI (Stage 4)
AgHh-236		Post-Contact	Unknown	Euro-Canadian	
AgHh-24		Archaic, Late; Woodland, Early	Unknown	Indigenous	
AgHh-243	Fuller Farm Lands Location 1	Post-Contact	homestead	Euro-Canadian	Further CHVI (Stage 4)
AgHh-244	Fuller Farm Lands Location 2	Post-Contact	Unknown	Euro-Canadian	Further CHVI (Stage 4)
AgHh-246	Fuller Farm Lands Location 6	Pre-Contact	findspot	Indigenous	Further CHVI (Stage 3)
AgHh-247	North London Location 1	Other	homestead	Euro-Canadian	Further CHVI (Stage 3)
AgHh-25		Archaic, Late	Unknown	Indigenous	Not provided
AgHh-258	Spruce Knoll Site	Post-Contact; Woodland	camp / campsite; homestead; scatter	Indigenous	No Further CHVI
AgHh-26	Black Kat	Woodland	hamlet	Indigenous	Not provided
AgHh-260		Post-Contact	cabin	Euro-Canadian	Further CHVI (Stage 4)
AgHh-261		Archaic, Early	camp / campsite	Indigenous	No Further CHVI
AgHh-263		Woodland	camp / campsite	Indigenous	Further CHVI (Stage 3)
AgHh-264		Woodland	camp / campsite	Indigenous	No Further CHVI

Site Borden #	Site Name	Time Period	Site Type	Cultural Affiliation	Development Context
AgHh-265		Pre-Contact	camp / campsite	Indigenous	Further CHVI (Stage 3)
AgHh-27			Unknown	Unknown	Not provided
AgHh-28		Archaic, Early	Unknown	Indigenous	Not provided
AgHh-29	Mathews	Woodland, Late	hamlet	Indigenous	Not provided
AgHh-30			Unknown	Unknown	Not provided
AgHh-31			Unknown	Unknown	Not provided
AgHh-32			Unknown	Unknown	Not provided
AgHh-33			Unknown	Unknown	Not provided
AgHh-37	ALCOR-1		Unknown	Unknown	Not provided
AgHh-38	ALCOR-2	Woodland	findspot	Indigenous	Not provided
AgHh-39	ALCOR-3		Unknown	Unknown	Not provided
AgHh-40	ALCOR-4	Archaic, Early-Late	camp/campsite	Indigenous	Further CHVI
AgHh-48		Archaic, Early	camp/campsite	Indigenous	Not provided
AgHh-50			Unknown	Unknown	Not provided
AgHh-54			Unknown	Unknown	Not provided
AgHh-58	Ivey	Woodland, Late	hamlet	Indigenous, Iroquoian, Neutral	Not provided
AgHh-6			Unknown	Unknown	Not provided
AgHh-62	Ridge	Pre-Contact; Woodland, Late	cabin; hamlet ; longhouse; midden; village	Indigenous, Iroquoian, Neutral	No Further CHVI
AgHh-63			Unknown	Unknown	Not provided
AgHh-64	Labatt	Woodland	hamlet	Indigenous	Not provided
AgHh-65	Masonville	Archaic; Post-Contact	findspot	Indigenous; Euro-Canadian	Not provided
AgHh-66			Unknown	Unknown	Not provided
AgHh-67		Archaic, Late	findspot	Indigenous	Not provided
AgHh-7		Woodland	findspot	Indigenous	Not provided
AgHh-70	Northbrook		Unknown	Unknown	Not provided
AgHh-72		Post-Contact	Unknown	Unknown	Not provided
AgHh-74	AgHh-74	Woodland, Early	findspot	Indigenous	Not provided
AgHh-75			Unknown	Unknown	Not provided
AgHh-77	Orkney Crescent Ossuary	Woodland, Late	ossuary	Indigenous, Neutral	Not provided
AgHh-78	Masonville School	Post-Contact; Pre-Contact	school; unknown pre-contact	Indigenous, Euro-Canadian	Not provided
AgHh-8			Unknown	Unknown	Not provided
AgHh-83	Gopher Lodge	Pre-Contact	cabin; scatter	Indigenous	No Further CHVI
AgHh-84	Split Snake	Pre-Contact	camp/campsite; midden; scatter	Indigenous	Not provided
AgHh-85	Leaping Deer	Pre-Contact; Woodland, Late	scatter; scatter	Indigenous, Iroquoian	Not provided
AgHh-86		Pre-Contact	findspot	Indigenous	Not provided
AgHh-87		Pre-Contact	Unknown	Indigenous	Not provided
AgHh-88		Archaic, Late; Archaic, Late	findspot	Indigenous	Not provided
AgHh-89		Woodland, Middle	findspot	Indigenous	Not provided
AgHh-9	Windermere	Woodland	hamlet	Indigenous	Not provided
AgHh-90		Woodland, Middle	findspot	Indigenous	Not provided
AgHh-91		Woodland, Middle	findspot	Indigenous	Not provided
AgHh-92	Friendly Fox	Pre-Contact; Woodland, Middle	camp/campsite	Indigenous	No Further CHVI
AgHh-93		Pre-Contact	findspot	Indigenous	Not provided
AgHh-94	Thornwood	Woodland, Late	camp/campsite	Indigenous, Iroquoian	Not provided
AgHh-96	Ardshell 1	Pre-Contact	scatter	Indigenous	Further CHVI
AgHh-97	Ardshell 2	Pre-Contact	scatter	Indigenous	Further CHVI
AgHh-98	Ardshell 3	Pre-Contact	findspot	Indigenous	No Further CHVI
AgHh-99	Ardshell 4	Pre-Contact	findspot	Indigenous	No Further CHVI
Lead-0099	Jury Cat # 19088	Pre-Contact	Unknown	Indigenous	Not provided
Lead-0114		Pre-Contact	Unknown	Indigenous	Not provided