

City of London

Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment – Existing Transmission Main Easement

*Arva Pumping Station to Huron Street Water
Transmission Main Municipal Class Environmental
Assessment Master Plan*

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Executive Summary

AECOM Canada Ltd. (AECOM) was retained by the City of London to conduct a Cultural Heritage Report (Cultural Heritage Report) as a support document in the Arva Pumping Station to Huron Street Water Transmission Main Municipal Class Environmental Assessment (hereafter MCEA). The water transmission main study area is in the City of London and in the Municipality of Middlesex Centre. It generally transverses both rural and urban contexts. Historically, it crosses multiple lots and concessions in the former Township of London, Middlesex County, Ontario.

The City of London receives water from the Elgin Area Water Supply System (hereafter EAWSS) and the Lake Huron Water Supply System (hereafter 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 a critical asset to maintain. The City has initiated a MCEA Master Plan and preliminary design for the water transmission main between Arva Pumping Station to Huron Street. The majority of the water transmission main of the aforementioned was constructed in 1966 and ranges in condition, with some sections in deteriorated condition. Therefore, the purpose of the MCEA Master Plan is to develop a short and long-term management plan for the Arva Huron water transmission main.

The Cultural Heritage Report was undertaken to identify municipally, provincially, and federally recognized properties, as well as to identify potential cultural heritage resources or properties within the study area, in order to evaluate the potential impacts that the water transmission main improvements may have on cultural heritage resources. This study was completed according to the guidelines set out in the Ministry of Heritage, Sport, Tourism and Culture Industries (hereafter MHSTCI) *Ontario Heritage Tool Kit: Heritage Resources in the Land Use Planning Process* (2006).

The background research, data collection, and field review conducted for the water transmission main study area determined that 14 above-ground cultural heritage resources are located within and/or adjacent to the study area. Based on the results of the preliminary impact assessment, the following recommendations have been developed:

1. Consult **Table 3** for the results of the preliminary impact assessment. If necessary, if there is a detailed design for a new water transmission main within the proposed 100' easement between Fanshawe Park Rd. and Huron Street, this report should be reviewed by a Qualified Heritage Professional with a confirmation of impacts and mitigation measures of the undertaking on cultural heritage resources identified within and/or adjacent to the study area. Any changes in impacts and mitigation measures, as presented in **Table 3** of this report, will be identified.

2. Where temporary landscape disturbance may occur due to water transmission main maintenance and/or redundancy, restore landscape features associated with CHR 1, CHR 2, CHR 3, CHR 4, CHR 5, CHR 8, CHR 11, and CHR 14 to pre-construction conditions through post-construction landscape treatments to ensure there are no negative impacts to the properties. If the disturbance is substantial, a Qualified Landscape Architect should be retained to conduct a pre-repair conditions assessment and restore the landscape to pre-repair conditions.
3. Repair work, construction activities and staging related to the water transmission main should be suitably planned and undertaken to avoid negative impacts to identified cultural heritage resources (specifically remain within existing and proposed easements). Suitable mitigation measures include establishing no-go zones adjacent to the identified cultural heritage resources and issuing instructions to construction crews to prevent impacts to existing structures.
4. Should detailed design for the proposed undertaking be extended beyond the proposed limits of the 100' easements as outlined on **Figures 3-7**, this report should be updated to confirm impacts of the proposed work on previously identified and potential cultural heritage resources.
5. Should a Preferred Alternative be proposed outside the limits of the study area documented in this report, then a Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment should be completed.

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1. Introduction

1.1 Study Purpose

AECOM Canada Ltd. (AECOM) was retained by the City of London to conduct a Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment (hereafter 'Cultural Heritage Report') as a support document in the Arva Pumping Station to Huron Street Water Transmission Main MCEA (Figure 1). The water transmission main study area is in the City of London and in the Municipality of Middlesex Centre. It generally transverses both rural and urban contexts. Historically, it crosses multiple lots and concessions in the former Township of London, Middlesex County, Ontario.

The City of London receives water from the EAWSS and the 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 a critical asset to maintain. The City has initiated a MCEA Master Plan and preliminary design for the water transmission main between Arva Pumping Station to Huron Street. The majority of the water transmission main of the aforementioned was constructed in 1966 and ranges in condition, with some sections in deteriorated condition. Therefore, the purpose of the MCEA Master Plan is to develop a short and long-term management plan for the Arva Huron water transmission main.

The purpose of this Cultural Heritage Report is to:

- Provide a brief contextual overview of the study area and its development using primary and secondary source material.
- Identify the baseline cultural heritage conditions within the study area.
- Present a built heritage resources and cultural heritage landscapes inventory of known (previously identified) properties.
- Identify potential built heritage resources and cultural heritage landscapes (properties not listed or designated but which may have cultural heritage value or interest).
- Identify preliminary project-specific impacts on the known or potential built heritage resources and cultural heritage landscapes.
- Propose appropriate mitigation measures and recommendations for minimizing and avoiding negative impacts on previously identified and potential cultural heritage resources.

1.2 Study Area

The study area for this Cultural Heritage Report is based on the proposal to provide improvements for access and capacity to the transmission mains between the Arva Pumping Station and Huron Street. The existing easement between the Arva Pumping Station and Fanshawe Park Road is 30.5 m (100 feet) wide and accommodates twinned 1,050 mm prestressed concrete pipes. The easement between

Fanshawe Park Road and Huron Street ranges from 7.5 m (25 feet) to 15.2 m (50 feet) and currently can only accommodate a single 1,050 mm concrete pipe. Access to the transmission main and associated buried infrastructure in this stretch is limited by the width of the easement and proximity to other infrastructure. The proposed plan is to provide additional area between Fanshawe Park Road and Huron Street to access the existing buried transmission mains for repairs, and the possibility of providing redundancy in the Fanshawe to Huron stretch. The proposed plan is to increase the easement to 30.5 m (100 feet) for the entire length of the transmission main where appropriate.

Figure 1: Location of Study Area, City of London

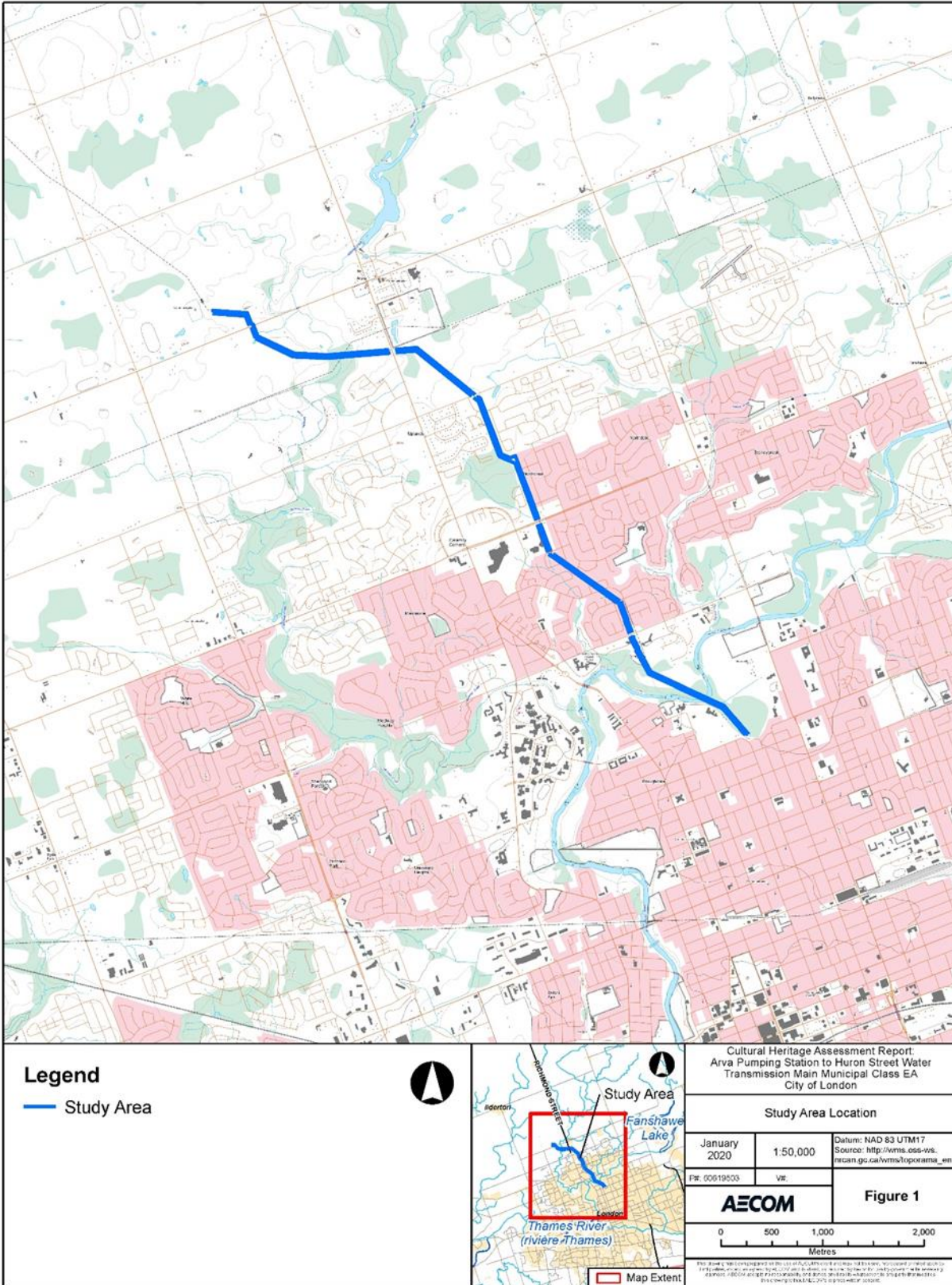


Figure 2: Location of Study Area on Aerial Photography, City of London



2. Methodology

2.1 Policy Framework

2.1.1 Provincial Policy Context

The MHSTCI is charged under Section 2 of the *Ontario Heritage Act* with the responsibility to determine policies, priorities and programs for the conservation, protection and preservation of the cultural heritage of Ontario and has published guidelines to assist in assessing cultural heritage resources as part of an Environmental Assessment. The following guideline documents have informed the preparation of this Cultural Heritage Report:

- *Guidelines for Preparing the Cultural Heritage Resource Component of Environmental Assessments* (MHSTCI 1992);
- *Guidelines on the Man-Made Heritage Component of Environmental Assessments* (MHSTCI 1980);
- *Standards and Guidelines for Conservation of Provincial Heritage Properties* (MHSTCI 2010);
- *Environmental Guide for Built Heritage and Cultural Heritage Landscapes* (MTO 2007); and
- *Ontario Heritage Tool Kit* (MHSTCI 2006).

The MHSTCI published the *Standards and Guidelines for Conservation of Provincial Heritage Properties* (MHSTCI 2010; *Standards and Guidelines* hereafter). These *Standards and Guidelines* apply to properties the Government of Ontario owns or controls that have cultural heritage value or interest. The *Standards and Guidelines* were developed to provide a series of guidelines that apply to provincial heritage properties in the areas of identification and evaluation, protection, maintenance, use, and disposal. Despite this, for the purpose of this Cultural Heritage Report and other municipal projects, the *Standards and Guidelines* provide points of reference to aid in determining heritage significance in the evaluation of properties in a wide variety of contexts.

Similarly, the *Ontario Heritage Tool Kit* (MHSTCI 2006) provides a guide to evaluate heritage properties. It states, to conserve a cultural heritage resource a municipality or approval authority may require a heritage impact assessment and/or a conservation plan to guide the approval, modification, or denial of a proposed development.

This Cultural Heritage Report considers cultural heritage resources in the context of improvements to specified areas, pursuant to the *Environmental Assessment Act*. The *Environmental Assessment Act* (EAA 1990) provides for the protection, conservation and management of Ontario's environment. Under the EAA, "environment" is defined in Subsection 1(c) to include:

- cultural conditions that influence the life of man or a community; and
- any building, structure, machine, or other device or thing made by man.

Additionally, the *Planning Act* (1990) and related *Provincial Policy Statement* (2020) make a number of provisions relating to heritage conservation. One of the general purposes of the *Planning Act* is to integrate matters of provincial interest in provincial and municipal planning decisions. In order to inform all those involved in planning activities of the scope of these matters of provincial interest, Section 2 of the *Planning Act* provides an extensive listing. These matters of provincial interest shall be regarded when certain authorities, including the council of a municipality, carry out their responsibilities under the *Act*. One of these provincial interests is directly concerned with:

- 2.(d) the conservation of features of significant architectural, cultural, historical, archaeological or scientific interest.

Part 4.7 of the *Provincial Policy Statement* states that:

The official plan is the most important vehicle for implementation of this Provincial Policy Statement. Comprehensive, integrated and long-term planning is best achieved through official plans.

Official plans shall identify provincial interests and set out appropriate land use designations and policies. To determine the significance of some natural heritage features and other resources, evaluation may be required.

Those policies of particular relevance for the conservation of heritage features are contained in Section 2- Wise Use and Management of Resources, wherein Subsection 2.6 - Cultural Heritage and Archaeological Resources, makes the following provisions:

- 2.6.1 Significant built heritage resources and significant cultural heritage landscapes shall be conserved.

Accordingly, the foregoing guidelines and relevant policy statements were used to guide the scope and methodology of this cultural heritage resource assessment.

2.1.1.1 *Ontario Regulation 9/06*

Ontario Regulation (O. Reg.) 9/06 provides the *Criteria for Determining Cultural Heritage Value or Interest* under the *Ontario Heritage Act* (R.S.O. 1990, C. O.18). This regulation was created to ensure a consistent approach to the designation of heritage properties under the *Ontario Heritage Act*. All designations under the *Ontario Heritage Act* must meet at least one of the criteria outlined in the regulation.

A property may be designated under Section 29 of the *Ontario Heritage Act* if it meets one or more of the following criteria for determining whether the property is of cultural heritage value or interest:

1. The property has design value or physical value because it
 - i. is a rare, unique, representative or early example of a style, type, expression, material or construction method;
 - ii. displays a high degree of craftsmanship or artistic merit;
 - iii. demonstrates a high degree of technical or scientific achievement.
2. The property has historical value or associative value because it
 - i. has direct associations with a theme, event, belief, person, activity, organization, or institution that is significant to a community;
 - ii. yields, or has the potential to yield, information that contributes to an understanding of a community or culture;
 - iii. demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community.
3. The property has contextual value because it
 - i. is important in defining, maintaining or supporting the character of an area;
 - ii. is physically, functionally, visually, or historically linked to its surroundings;
 - iii. is a landmark.

2.1.2 City of London Municipal Heritage Policies

2.1.2.1 City of London's London Plan (2016)

The *London Plan* is the City's Official Plan. The *London Plan* sets out an approach for planning in London which emphasizes growing inward and upward, so that the City can reduce the costs of growth, create walkable communities, revitalize urban neighbourhoods and business areas, protect farmlands, and reduce greenhouse gases and energy consumption. The plan sets out to conserve the City's cultural heritage and protect environmental areas, hazard lands, and natural resources. The plan has been approved by the Ontario Ministry of Municipal Affairs.

Specifically related to heritage conservation, the *London Plan* outlines a number of policies related to the conservation of cultural heritage resources within the City. Select policies in the Cultural Heritage section have been appealed to the Ontario Municipal Board (OMB) and are under review, however, despite under appeal, the General Cultural Heritage Policy related to Design should be given consideration:

565_ New development, redevelopment, and all civic works and projects on and adjacent to heritage designated properties and properties listed on the Register will be design to protect the heritage attributes and character of those resources, to minimize visual and physical impact on these resources. A heritage impact assessment will be

required for new development on and adjacent to heritage designated properties and properties listed on the Register to assess potential impacts, and explore alternative development approaches and mitigation measures to address any impact to the cultural heritage resource and its heritage attributes. (Subject to LPAT Appeal)

Within the context of considering potential impact on cultural heritage resources, the Glossary of Terms (Policy 1795) in *The London Plan* defines adjacency as “sites that are contiguous; sites that are directly opposite a cultural heritage resource separated by a laneway, easement, right-of-way, or street; or sites which a proposed development or site alteration has the potential to impact identified visual character, streetscapes or public views as defined within a statement explaining the cultural heritage value or interest of a cultural heritage resource”¹.

The London Plan also provides the following relevant definitions relating to its cultural heritage resources:

Cultural heritage landscape means a defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, including an Aboriginal Community. The area may involve features such as structures, spaces, archaeological sites, or natural elements that are valued together for their interrelationship, meaning or association. Such a cultural heritage landscape is valued by Londoners and is of significance to an understanding of the histories of a people or place.

Cultural heritage resource means a human work or a place that gives evidence of human activity or has spiritual or cultural meaning or value, and which has been determined to have historic value. Cultural heritage resources include both the physical and intangible resources, properties protected under the Ontario Heritage Act, built heritage resources, cultural heritage landscapes, archaeological resources, paleontological resources and both documentary and material heritage.

Conservation of cultural heritage resources means actions or processes that are aimed at safeguarding the heritage attributes of a cultural heritage resource so that it retains its cultural heritage value or interest and extends its physical life. This may involve preservation, rehabilitation, restoration or a combination of these actions or processes.

2.1.2.2 City of London’s Register of Cultural Heritage Resources

In accordance with the *Ontario Heritage Act*, in consultation with the London Advisory Committee on Heritage (LACH), City Council approves and maintains a Register listing properties of cultural heritage value or interest (London Plan 2016 557_). The Register is a living document subject to change. The City of London’s *Register of Cultural Heritage Resources* (2019), also known as the City of London Inventory of Heritage Resources, and *CityMap* (www.maps.london.ca) are reviewed in this Cultural Heritage

¹ Policy 1795 is currently subject to Local Planning Area Tribunal (LPAT) appeal PL170100.

Report to locate previously identified cultural heritage resources within the study area and collect any relevant information. The Register includes heritage listed properties (Section 27 of the *Ontario Heritage Act*), individually designated heritage properties (under Part IV of the *Ontario Heritage Act*), and properties designated as part of a Heritage Conservation District (under Part V of the *Ontario Heritage Act*). All properties included on the Register are believed to have potential cultural heritage value or interest.

2.1.2.3 *Strategic Plan for the City of London*

The *Strategic Plan for the City of London* (2015-2019) sets out a broad direction for the future of London. It identifies London City Council's vision, mission, values, strategic areas for focus and the specific strategies that define how Council and Administration will respond to the needs and aspirations of Londoners. As such, as part of the City's initiative for "Building a Sustainable City," the Strategic Plan identifies the management of upgrading of transportation infrastructure such as heritage bridges, and more specifically, the Heritage Bridge Preservation Strategy (Blackfriars Bridge and Meadowlily Footbridge) as a part of its focus on robust infrastructure.

2.1.2.4 *Thames Valley Corridor Plan*

Lastly, the *Thames Valley Corridor Plan* (2011) is a key planning tool that provides recommendations on enhancing and protecting the corridors features and functions. Its vision is the following:

The Thames Valley Corridor is London's most important natural, cultural, recreational and aesthetic resource. The City and community partners will preserve and enhance the natural environment, Thames River health, vistas, beauty and cultural heritage while accommodating compatible infrastructure, accessibility and recreation.

The Plan makes recommendations on valley crossings that may be relevant to this Cultural Heritage Report and are as follows:

B-1 Maintain and enhance views from the bridges into the Thames River Valley, and views of the bridges from existing vantage points. New or reconstructed bridges or valley crossings should create new vistas into the valley and create additional vantage points where possible.

B-2 New or reconstructed bridges or valley crossings should respect and protect the adjacent natural heritage features and functions, and methods for minimizing impacts should be employed in the design and construction of all transportation, communication, sewerage or other infrastructure that cross the valley.

2.1.3 The Thames River Heritage River Designation

The Thames River was formally designated a Canadian Heritage River on August 14, 2000. The designation was announced by the Minister of Canadian Heritage, the Honourable Sheila Copps and Ontario's Minister of Natural Resources, the Honourable John Snobelen. The Thames River was recognized as a heritage river for its outstanding contributions to the country's cultural heritage, natural heritage, and recreational opportunities. The broad goal of managing the Thames as a Canadian Heritage river is: "To increase the appreciation, enjoyment and stewardship of the natural, and cultural heritage and recreational opportunities of the Thames River and its watershed through community cooperation and involvement" (Quinlan 2013:2). The water transmission main currently crosses the North Branch of the Thames River.

2.1.4 Middlesex Centre Official Plan

The Middlesex Centre *Official Plan* (OP) has policies on culture and heritage features under Section 9.5 of the OP (pp.82-83). The OP states that a goal of the cultural heritage policies is to encourage the identification, restoration, protection, maintenance, and enhancement of the Municipality's cultural heritage resources. Development adjacent to built heritage resources or cultural landscapes is encouraged to be sensitively scaled and designed relative to the heritage feature (9.5.2.b.).

2.2 Cultural Heritage Report Study Method

The Cultural Heritage Report was undertaken according to the guidelines identified in the MHSTCI *Ontario Heritage Tool Kit: Heritage Resources in the Land Use Planning Process*. While completing the Cultural Heritage Report, AECOM undertook the following tasks:

- A review of municipal, provincial, and federal heritage registers and inventories, including the City of London's *Register of Cultural Heritage Resources* (2019), and including *CityMap*;
- A review of several online resources including:
 - The inventory of Ontario Heritage Trust easements
 - The Ontario Heritage Trust's *Ontario Heritage Plaque Guide*
 - The Ontario Heritage Trust's *Ontario Heritage Act Register*
 - *Ontario's Historical Plaques* website
 - Inventory of known cemeteries/burial sites in the Ontario Genealogical Society's online databases;
 - Parks Canada's *Canada's Historic Places* website
 - Parks Canada's *Directory of Federal Heritage Designations*
 - Canadian Heritage River System
 - United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Sites.
- Preparation of a land use history of the study area based on a review of primary and secondary sources;

- Consultation with members of the community with knowledge regarding the community in general or potential cultural heritage resources;
- A field review to confirm the location of previously identified cultural heritage resources and to identify cultural heritage resources that have not been previously identified on federal, provincial, or municipal databases;
- A preliminary analysis of the cultural heritage value or interest of identified potential heritage properties according to the criteria outlined in *Ontario Regulation 9/06* (O. Reg. 9/06);
- Analysis of potential adverse impacts according to the guidelines including the MHSTCI *Ontario Heritage Tool Kit*;
- Preparation of recommendations to identify potential mitigation strategies in order to avoid or minimize impacts to identified or potential heritage properties; and
- Preparation of the Cultural Heritage Report (Cultural Heritage Report).

In addition, several investigative criteria are utilized during the field review to appropriately identify potential above-ground cultural heritage resources. These investigative criteria are derived from provincial guidelines, definitions, and professional experience. During the EA, a built structure or landscape is identified as a cultural heritage resource (hereafter CHR) if it is considered to be 40 years or older, and if the resource has potential to meet at least one of the criteria for Design/Physical Value, Historical/Associative Value, and/or Contextual Value under *Ontario Regulation 9/06* (see Section 2.2.1.1). If a resource meets one of these criteria, it will be identified as a cultural heritage resource and is subject to further research where appropriate and when feasible. The use of a 40-year-old threshold is a guiding principle when conducting a preliminary identification of cultural heritage resources (MHSTCI 2016). While identification of a resource that is 40 years old or older does not confer outright heritage significance, this threshold provides a means to collect information about resources that may retain heritage value. Similarly, if a resource is slightly younger than 40 years old, this does not preclude the resource from retaining heritage value. In addition to the 40-year rule, the *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes, a Checklist for the Non-Specialist* (MHSTCI 2016) and professional judgement also were used to screen for potential cultural heritage resources.

2.2.1 Public Consultation

The following stakeholders were contacted to gather information on potential cultural heritage resources, active and inactive cemeteries, and areas of identified Indigenous interest within and/or adjacent to the study area:

- Kyle Gonyou and Micheal Greguol, City of London Heritage Planners, were contacted to gather any information on potential cultural heritage resources or concerns within and/or adjacent to the study area in the City of London (email communication January 26 and 31, 2020). In response, they verified the cultural resources were identified through the background search and provided some additional background information on 1836 Richmond Street.

- Scott Mairs, Director of Community Services, Middlesex Centre, was contacted to gather information on previously identified cultural heritage resources within the study area in the Middlesex Centre (January 27, 2020). Mairs indicated that the municipality did not have an official Heritage Register to provide AECOM at the time of this report.
- The Ministry of Heritage, Sport, Tourism, and Culture Industries was contacted, and it was confirmed that there are no properties designated by the Ministry and MHSTCI is not aware of any provincial heritage properties within the study area (email communication January 27 and 29 2020)² .

² Contacted at registrar@ontario.ca

3. Historical Overview

3.1 Natural Environment and Physical Setting

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 approximately 12,500 years ago. The landscape of southern Ontario can be subdivided into physiographic regions based on the physiographic characteristics of the geographic areas. These characteristics have played important roles in the evolution of the landscape and settlement within the respective regions (Chapman and Putnam 1984:190).

The study area is located within the Stratford Till Plain physiographic region (Chapman & Putnam 1984:133). The region is described as a broad clay plain of 2,2205 square kilometres, extending from London in the south to Blyth and Listowel in the north with a projection toward Arthur and Grand Valley. It is an area of ground moraine interrupted by several terminal moraines. The moraines are more closely spaced in the southwestern portion of the region. Throughout the area the till is fairly uniform, being a brown calcareous silty clay whether on the ridges or the more level ground moraine. The region is a product of the Huron ice lobe. Some of the silt and clay is calcareous rock flour, probably a good deal of it coming from previously deposited varved clays of the Lake Huron Basin.

3.2 Historical Context Overview

3.2.1 Indigenous Land Use and Settlement

Southern Ontario has a cultural history that begins approximately 11,000 years ago. The land now encompassed by the City of London has a cultural history which begins approximately 10,000 years ago and continues to the present. Table 1 provides a general summary of the history of Indigenous land use and settlement of the area³.

Table 1: Cultural Chronology for Indigenous Settlement in the London Area

Archaeological Period	Time Period	Characteristics
Early Paleo	9000-8400 BC	<ul style="list-style-type: none"> Fluted Points Arctic tundra and spruce parkland, caribou hunters

³While many types of information can inform the precontact settlement of the City of London, this summary table provides information drawn from archaeological research conducted in southern Ontario over the last century. As such, the terminology used in this review relates to standard archaeological terminology for the province rather than relating to specific historical events within the region. The chronological ordering of this summary is made with respect to two temporal referents: BCE – before Common Era and CE – Common Era.

Archaeological Period	Time Period	Characteristics
Late Paleo	8400-8000 BC	<ul style="list-style-type: none"> • Holcombe, Hi-Lo and Lanceolate Points • Slight reduction in territory size
Early Archaic	8000-6000 BC	<ul style="list-style-type: none"> • Notched and Bifurcate base Points • Growing populations
Middle Archaic	6000-2500 BC	<ul style="list-style-type: none"> • Stemmed and Brewerton Points, Laurentian Development • Increasing regionalization
Late Archaic	2000-1800 BC	<ul style="list-style-type: none"> • Narrow Point • Environment similar to present
	1800-1500 BC	<ul style="list-style-type: none"> • Broad Point • Large lithic tools
	1500-1100 BC	<ul style="list-style-type: none"> • Small Point • Introduction of bow
Terminal Archaic	1100-950 BC	<ul style="list-style-type: none"> • Hind Points, Glacial Kame Complex • Earliest true cemeteries
Early Woodland	950-400 BC	<ul style="list-style-type: none"> • Meadowood Points • Introduction of pottery
Middle Woodland	400 BC – AD 500	<ul style="list-style-type: none"> • Dentate/Pseudo-scallop Ceramics • Increased sedentism
	AD 550-900	<ul style="list-style-type: none"> • Princess Point • Introduction of corn horticulture
Late Woodland	AD 900-1300	<ul style="list-style-type: none"> • Agricultural villages
	AD 1300-1400	<ul style="list-style-type: none"> • Increased longhouse sizes
	AD 1400-1650	<ul style="list-style-type: none"> • Warring nations and displacement
Contact Period	AD 1600-1875	<ul style="list-style-type: none"> • Early written records and treaties
Historic	AD 1749-present	<ul style="list-style-type: none"> • European settlement (French and English)

3.2.2 Township Survey and Settlement

Historically, the water transmission main study area was located in the former London Township, Middlesex County in part of Lots 18 and 19, Concession VII, Lots 16 and 18, Concession VI, Lot 15, Concession V, Lots 14 and 15, Concession IV, and Lots 14 and 15, Concession III. The study area is generally located in the north portion of the City of London in an area that has rapidly evolved from an agricultural area to a developed residential area.

3.2.2.1 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 4th, 5th, and 6th 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.

3.2.2.2 *City of London*

The Thames River had a profound impact on the growth of London. The city developed at the junction of the north and south branches of the river, and as a result bridge construction has been important in connecting London to the river. London underwent a number of population booms throughout its history beginning when the 32nd Regiment was stationed in London in 1838. Development of saw, cording, and grist industries powered by the Thames River and Medway Creek assisted the city's growth in the mid 1800's, bolstered by the arrival of the railways in the 1850s, including the Great Western Railway in 1853, the London Port Stanley Railway in 1856, and the Grand Trunk Railway in 1858. The railway brought an influx of immigrants and promoted community commerce and travel. Records suggested London grew by 239 percent between 1840 and 1850 as the population increased from 2,078 to 7,035 due to the entry of British immigrants to Upper Canada (Whebell 1992). 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. London was incorporated as a village in 1840 and by 1855 the population had leapt to 10,000 at which time it officially became a city (Armstrong 1986).

In 1961, a major annexation of portions of the townships surrounding the City of London, including London Township, resulted in the addition of land and close to 60,000 people to the City. A portion of the study area was included in this annexation, including the Masonville area. As a result, the City grew from approximately 28 to 160 square kilometres. In the 1970s, Richmond Street (Highway 4)⁴ and Fanshawe Park Road (Highway 22) began to serve as major arterial roads for urban London. In addition, another annexation in 1993 occurred which forms the current northern City Limit, just north of Sunningdale Road.

⁴ In 2017, Highway 4 was rerouted through London which shifted the route along Richmond Street, Sunningdale Road, and Wonderland Road. This new route maintains a connection with the north and south of the city.

3.2.3 Historical Mapping Review

The 1850 Sketch of London Township (Nath. Steevens 1850), the 1862 Tremaine map of the Middlesex County (Tremaine 1862) and the 1878 *Illustrated Historical Atlas of Middlesex County* ('Atlas Map'; H.R. Page and Co. 1878) were reviewed to determine the potential for the presence of cultural heritage resources within the study area from the 19th century (Figures 8 and 9). The historical map set is provided in **Appendix A (Figures 8-16)**.

The 1850 Sketch of London Township (Figure 8), shows the land adjacent to the study area as rural in nature with reference to roads, some farmsteads with owner's names, and wooded areas. The main thoroughfares are shown as concession lines. The 1862 Tremaine map (Figure 9) illustrates that the land in the vicinity of the study area had been surveyed into parcels, primarily for agricultural purposes. Most of the land surrounding the study area was occupied, however few structures are shown on the map. The study area intersects a portion of the settlement area of Masonville, around Proof Line Road (now Richmond Street) and Fanshawe Park Road. Masonville was a 19th century manufacturing centre that had three or four factories (Lewis 1958). Within the Masonville settlement area, the study area crosses between some rural residential lots that are shown as surveyed in 1862. Southwards, the study crosses the North Branch of the Thames River and connects to Huron Street, the edge of London's urban settlement at that time.

The 1878 Atlas Map (Figure 10) shows a similar configuration to the earlier Tremaine map. The study area corridor passes primarily through a rural landscape, most of which is under cultivation. The study area does not intersect any illustrated structures; however, a number of farmhouses and orchards are adjacent to the study area⁵.

In addition to 19th century mapping, historical topographic mapping and an aerial photograph from the twentieth century were examined. This report presents topographic maps from 1915, 1928, 1936, 1973 and an aerial photograph from 1954. These do not represent the full range of maps consulted for the purpose of this study, but were judged to cover the full range of land uses that occurred in the area during each period.

The 20th century mapping revealed that the study area retained a mostly rural agricultural character throughout the 20th century. The 1915 NTS Map (Figure 11) shows farmsteads along the major concession roads in the vicinity of the study area corridor. The study area mainly cuts through the interior of lots in a north-south direction and does not follow a transportation route. In addition, the 1915 NTS Map also shows the settlement areas of Arva, Masonville and Broughdale. It appears that the rural residential lots associated with Masonville as shown on earlier 19th century mapping had not been developed. The 1928 and 1936 NTS Maps (Figure 12 and Figure 13) and the 1954 aerial (Figure 14)

⁵ It should be noted, however, that not all features of interest were mapped systematically in the Ontario series of historical atlases. They were often financed by subscription limiting the level of detail provided on the maps. Moreover, not every feature of interest would have been within the scope of the atlases. In addition, the use of historical map sources to reconstruct/predict the location of former features within the modern landscape generally begins by using common reference points between the various sources. The historical maps are geo-referenced to provide the most accurate determination of the location of any property on a modern map. The results can be often imprecise, as there are numerous potential sources of error inherent in such a process, including differences of scale and resolution, and distortions introduced by reproduction of the sources.

shows a similar configuration to the early 20th century map thus demonstrating that there was little urban sprawl north of London.

Major development did not take place in the vicinity of the study area until well after annexations in 1961 when Masonville was annexed into the City of London. The 1973 NTS Map (Figure 15) shows some infilling of structures along Richmond Street and Fanshawe Park Road but overall minimal City development on the north side of the Thames River. The 1973 NTS Map shows the Arva Pumping Station, the footprint of the underground reservoir and the water transmission main ("Water Pipeline [underground]"). The water transmission main route in 1973 travels primarily through a rural context, some wooded areas and across the Thames River and Medway Creek. It crosses four east-west concession roads (Windemere Rd, Fanshawe Park Rd, Sunningdale Rd, and Medway Rd.). The 1973 NTS Map shows the City Limit between the north and south half of Concession V between Fanshawe Park Road to the south and Sunningdale Road to the north. The 1986 aerial photograph (Figure 16) shows a general configuration to the 1973 NTS Map (Figure 15), indication much of the development in the vicinity of the study area commenced in the later part of the 1980s.

Currently, as shown on current aerial photography (Figures 3-7), only the north portion of the study area is within the Municipality of Middlesex Centre and is still rural in land use. The current City boundary, set in 1993, is between the north and south half of lots in Concession VI, north of Sunningdale Road and south of Medway Road. The portion of the study area within the City boundary has become urban in land use since the 20th century.

In summary, a review of historical mapping reveals that the context of the study area was primarily within a rural, agricultural landscape throughout the 19th and 20th centuries.

4. Identification of Cultural Heritage Resources

4.1 Study Area Context- Existing Conditions

On January 28, 2020, a field review of the study area was undertaken by Tara Jenkins, Cultural Heritage Specialist, to document existing conditions from the existing rights-of-way. The existing conditions are summarized below. Select photographs and identified cultural heritage resources are summarized and mapped in **Section 4.2.3** (Figures 3-7). A detailed inventory of the cultural heritage resources can be found in **Appendix B**.

Contextually, the water transmission main study area is within the urban boundary of the City of London, and just north of the City boundary in the Municipality of Middlesex Centre. For ease of description the study area will be described from a generally north to south direction.

At the most northern portion of the study area, a small section is in the Municipality of Middlesex Centre which can be characterized as a rural context. From the Arva Pumping Station, the water transmission main easement crosses rural agricultural properties (Photograph 1). The study area also crosses Medway Road, a rural roadscape with two lanes of divided vehicular traffic lined with hydro poles, vegetation, adjacent farmscapes, and active agricultural lands (Photograph 2). The farmhouses in Middlesex Centre, adjacent to the study area, are located in the vicinity of the farmhouses shown on the 1878 Atlas Map (Figure 10; Section 3.2.3). As the study area continues south, the water transmission main easement enters the City of London boundary, just north of Sunningdale Road.

At the northern end of the City, the area has undergone significant urban development. North of the Thames River, the study area, rural in 1986, has transitioned from a primarily rural context to commercial and residential land uses. Development has occurred at the historic crossroads of Masonville, at Richmond Street and Fanshawe Park Road. There is no visible sign of buildings related to the 19th century settlement of Masonville. The crossroads now largely consist of commercial structures dating from the 20th century. Within the City, the study area passes through and adjacent to modern late 20th century suburban neighbourhoods, and institutional and commercial properties. Some of the existing water transmission main easement is within designated urban pathways, such as Uplands Trail (Photograph 3). The study area within the urban boundary in general consists of paved roadways, lined with curbs and sidewalks, and landscaping associated with urban development (Photograph 5). At the south end of the easement, the study area crosses the North Branch of the Thames River and a portion falls within the wooded area associated with the Thames Valley Trail (Photograph 6).

In general, many of the existing farmhouses appear to date to the 19th century, however, most residential properties appear to have been severed more recently and represent urban growth into the 21st century.



Photograph 1: View of the Arva Pumping Station from Medway Road, looking north.

Photograph 2: Medway Road, looking east.



Photograph 3: View of water transmission main easement from Sunningdale Road E., looking south.

Photograph 4: View of water transmission main easement within the Uplands Trail corridor, looking west from Fanshawe Park Road.



Photograph 5: View of the water transmission main easement, looking east from Fanshawe Park Road.

Photograph 6: View of the water transmission main easement within the Thames Valley Trail system from Huron Street, looking northeast.

4.2 Description of Cultural Heritage Resources

Resources can be classified and defined as either built heritage resources or cultural heritage landscapes, according to the following definitions provided within the *Provincial Policy Statement* (2020):

- **Built Heritage Resource** – means a building, structure, monument, installation or any manufactured or constructed part or remnant that contributes to a property’s cultural heritage value or interest as identified by a community, including an Indigenous community. Built heritage resources are located on property that may be designated under Parts IV or V of the Ontario Heritage Act, or that may be included on local, provincial, federal and/or international registers.
- **Cultural Heritage Landscape** – means a defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, including an Indigenous community. The area may include features such as buildings, structures, spaces, views, archaeological sites or natural elements that are valued together for their interrelationship, meaning or association. Cultural heritage landscapes may be properties that have been determined to have cultural heritage value or interest under the Ontario Heritage Act, or have been included on federal and/or international registers, and/or protected through official plan, zoning by-law, or other land use planning mechanisms.

For the purpose of this Cultural Heritage Report, the term CHRs is used in order to identify a property that may contain built heritage resources and/or cultural heritage landscapes that may be considered a potential cultural heritage value or interest. These above-ground cultural heritage resources identified within this study are documented on **Figures 3-7** and described in **Appendix B**. The following explanatory notes provide additional clarification on the information contained in the Appendix:

- The cultural heritage resources are generally numbered from north to south along the study area corridor;
- Each cultural heritage resource has been assigned a CHR identification number which includes either a built heritage resource or cultural heritage landscape;
- The municipal address locates a cultural heritage resource;
- A brief description of each cultural heritage resource, general consisting of construction period, building materials, roof shape, number of storeys, architectural styles, or influence and alteration- all based on information that could be viewed from public rights-of-way; and
- Heritage status refers to a resource or property’s protection or recognition mechanisms, including designation under the *Ontario Heritage Act* or listing on a municipal heritage register.

For the purposes of resource identification, potential cultural heritage resources were identified by their property boundaries, as heritage properties are typically identified and protected under municipal or provincial designating by-laws which are formed on the basis of real property. As a result, the entire properties were identified.

All of the cultural heritage resources can be categorized as either:

- **Previously Identified Cultural Heritage Resource** – consisting of municipally, provincially, or federally designated or listed properties that have an existing level of heritage protection, designation, or recognition (Section 4.2.1);
- **Potential Cultural Heritage Resource** – consisting of properties that contain buildings or structures that appear to be older than 40 years of age, and therefore have the potential to be evaluated for their cultural heritage value or interest (Section 4.2.2).

4.2.1 Previously Identified Cultural Heritage Resources

AECOM reviewed available municipal, provincial, and federal heritage registers and inventories and conducted background research in order to identify recognized heritage properties within or adjacent to the study area. AECOM also consulted with City Heritage Planning Staff to provide input regarding the identification of recognized and potential cultural heritage resources within or adjacent to the study area. A total of eight cultural heritage resources have been previously identified and are located within and/or adjacent to the study area. Of the eight, one cultural heritage resource is designated under Part IV of the *Ontario Heritage Act*, six are Listed on the City of London's *Register of Cultural Heritage Resources (2019)* and one, the Thames River, is listed as a Canadian Heritage River. The previously identified cultural heritage resources are listed below and are more fully documented in **Appendix B**.

4.2.2 Potential Cultural Heritage Resources

In addition to previously identified cultural heritage resources, during the field review, AECOM used the MHSTCI rolling 40-year rule, and if the resource has potential to meet at least one of the criteria for Design/Physical Value, Historical/Associative Value, and/or Contextual Value under *Ontario Regulation 9/06* (see Section 2.2.1.1) to identify potential cultural heritage resources within and/or adjacent to the study area. A total of six properties were identified as containing potential cultural heritage resources within and/or adjacent to the study area during the field assessment as having potential cultural heritage value or interest.⁶ The potential cultural heritage resources are listed below and are more fully documented in **Appendix B**.

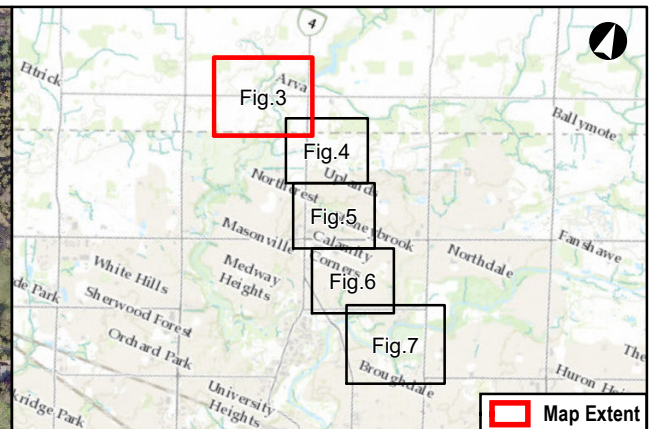
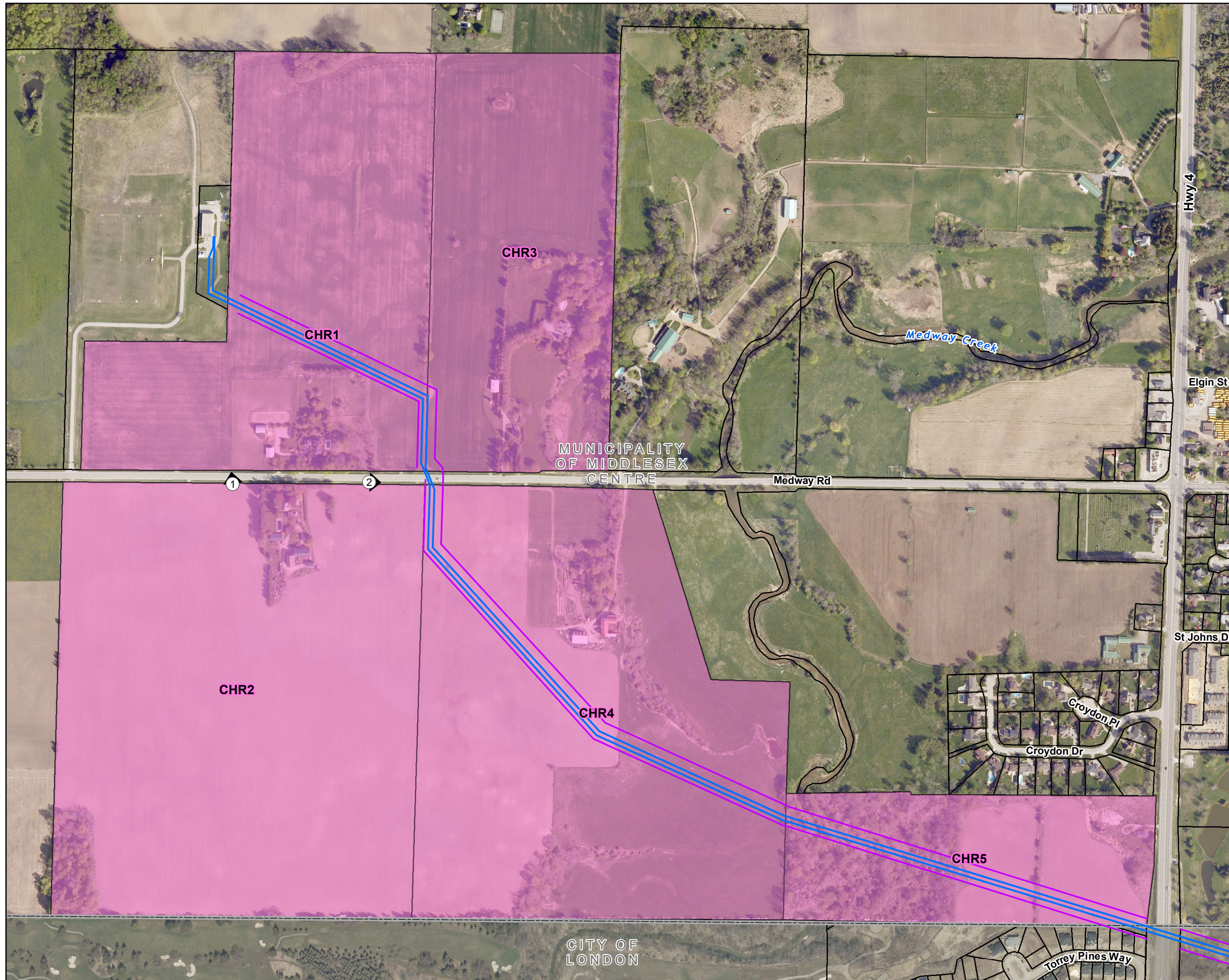
⁶ For the purposes of this study, the definition of "adjacent" provided in the London Plan, 2016, was utilized (see Section 2.1.2.1 of this report).

4.2.3 Summary of Cultural Heritage Resources

Based on the results of the background research and field review, a total of 14 above-ground CHRs were identified within and/or adjacent to the study area. These cultural heritage resources are comprised of four residences, four farmscapes, four institutions, one institution/place of worship, one place of worship, and one Canadian Heritage River (Table 2). A detailed inventory of these cultural heritage resources is presented in **Appendix B** and mapping of the features along with photographic plate locations are provided below, in **Figures 3-7**.

Table 2: Summary of CHRs within and/or adjacent to the study area

Feature ID	Location/Address	Resource Type	Heritage Recognition
CHR 1	14038 Medway Road	Farmscape	Potential Cultural Heritage Resource
CHR 2	14037 Medway Road	Farmscape	Potential Cultural Heritage Resource
CHR 3	14104 (14106) Medway Road	Farmscape	Potential Cultural Heritage Resource
CHR 4	14143 Medway Road	Farmscape	Potential Cultural Heritage Resource
CHR 5	21468 Richmond Street	Residence	Potential Cultural Heritage Resource
CHR 6	1836 Richmond Street	Residence	Heritage Listed Property
CHR 7	551 Windermere Road	Institutional	Heritage Listed Property
CHR 8	1040 Waterloo Street- St. Peter's Seminary	Institutional/Place of Worship	Designated Heritage Property
CHR 9	1070 Waterloo Street- London Diocesan Centre	Institutional	Heritage Listed Property
CHR 10	370 Huron Street/1071 Colborne Street- Aquinas House	Institutional/Place of Worship and Residence	Heritage Listed Property
CHR 11	432 Huron Street	Residence	Potential Cultural Heritage Resource
CHR 12	520 Huron Street	Residence	Heritage Listed Property
CHR 13	534 Huron Street	Place of Worship	Heritage Listed Property
CHR 14	Thames River	Watercourse	Canadian Heritage River



Legend

- Photo Location and Direction
- Designated Heritage Property
- Listed Heritage Property
- Potential Cultural Heritage Resource (CHR)
- Canadian Heritage River
- Parcel Boundary
- Municipal Boundary
- Transmission Main

Width and Type of Easement

- 100' Investigation Area
- Existing ~25' Easement Attached to Title
- Existing 50' Easement Attached to Title
- Existing 100' Easement Attached to Title
- City Owned 100' Easement
- Future ~10' Easement addition Attached to Title

0 62.5 125 250
Meters

Cultural Heritage Assessment Report:
Arva Pumping Station to Huron Street Water
Transmission Main Municipal Class EA
City of London

Previously Identified and
Potential Cultural Heritage Resources

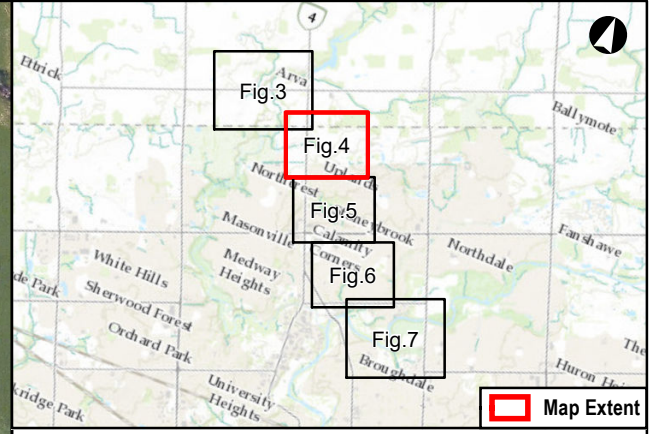
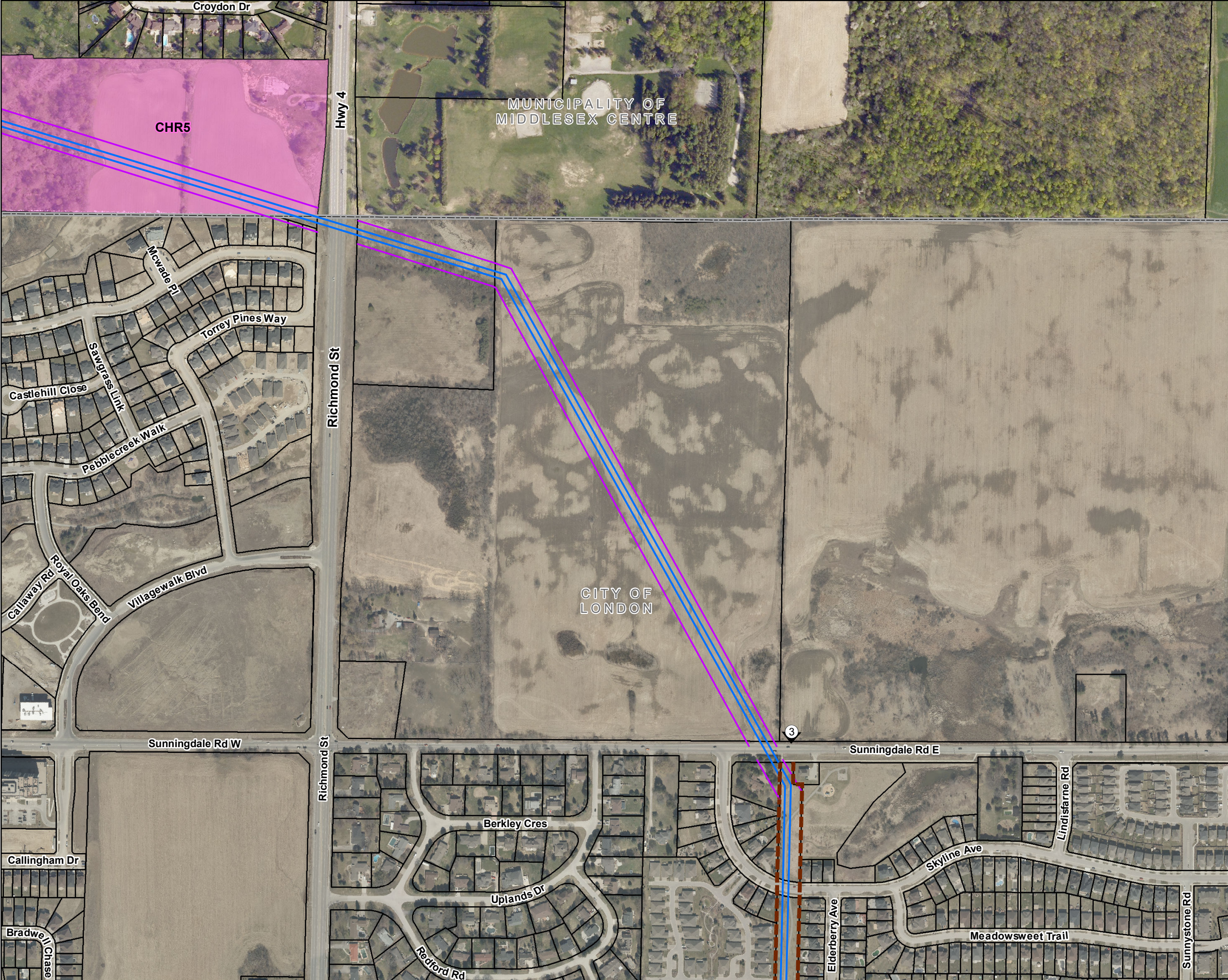
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AECOM Figure 3

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Map location: \\\client\proj\150619503\150619503_Col_Arva_PSto_Huron_St_Water_Transmission_Main_Municipal_Class_EA_City_of_London\GIS\9920_9920_GIS_Graphics\Design\01_Reports\CHA\Fig3-CHR.mxd Date saved: 21/05/2021 10:26:40 PM User Name: cslaris



Legend

- Photo Location and Direction
- Designated Heritage Property
- Listed Heritage Property
- Potential Cultural Heritage Resource (CHR)
- Canadian Heritage River
- Parcel Boundary
- Municipal Boundary
- Transmission Main

Width and Type of Easement

- 100' Investigation Area
- Existing ~25' Easement Attached to Title
- Existing 50' Easement Attached to Title
- Existing 100' Easement Attached to Title
- City Owned 100' Easement
- Future ~10' Easement addition Attached to Title

0 50 100 200
Meters

Cultural Heritage Assessment Report:
Arva Pumping Station to Huron Street Water
Transmission Main Municipal Class EA
City of London

Previously Identified and
Potential Cultural Heritage Resources

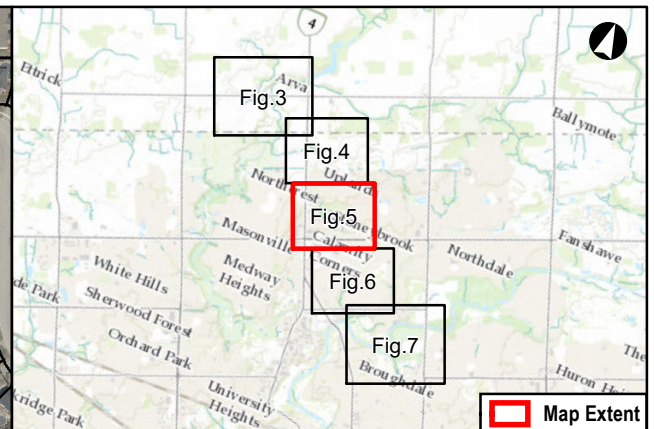
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AECOM

Figure 4

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Legend

- Photo Location and Direction
- Designated Heritage Property
- Listed Heritage Property
- Potential Cultural Heritage Resource (CHR)
- Canadian Heritage River
- Parcel Boundary
- Municipal Boundary
- Transmission Main

Width and Type of Easement

- 100' Investigation Area
- Existing ~25' Easement Attached to Title
- Existing 50' Easement Attached to Title
- Existing 100' Easement Attached to Title
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0 50 100 200
Meters

Cultural Heritage Assessment Report:
Arva Pumping Station to Huron Street Water
Transmission Main Municipal Class EA
City of London

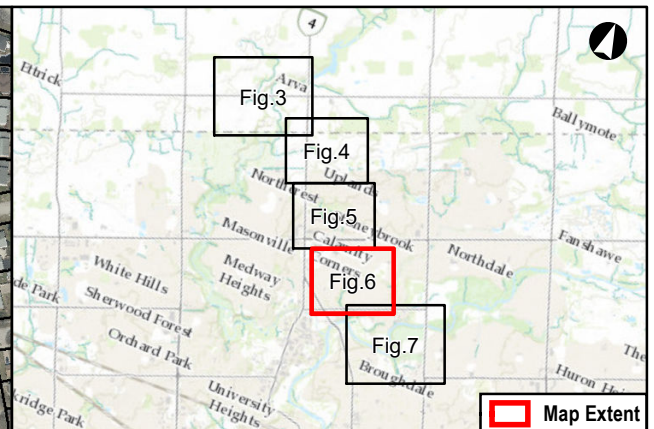
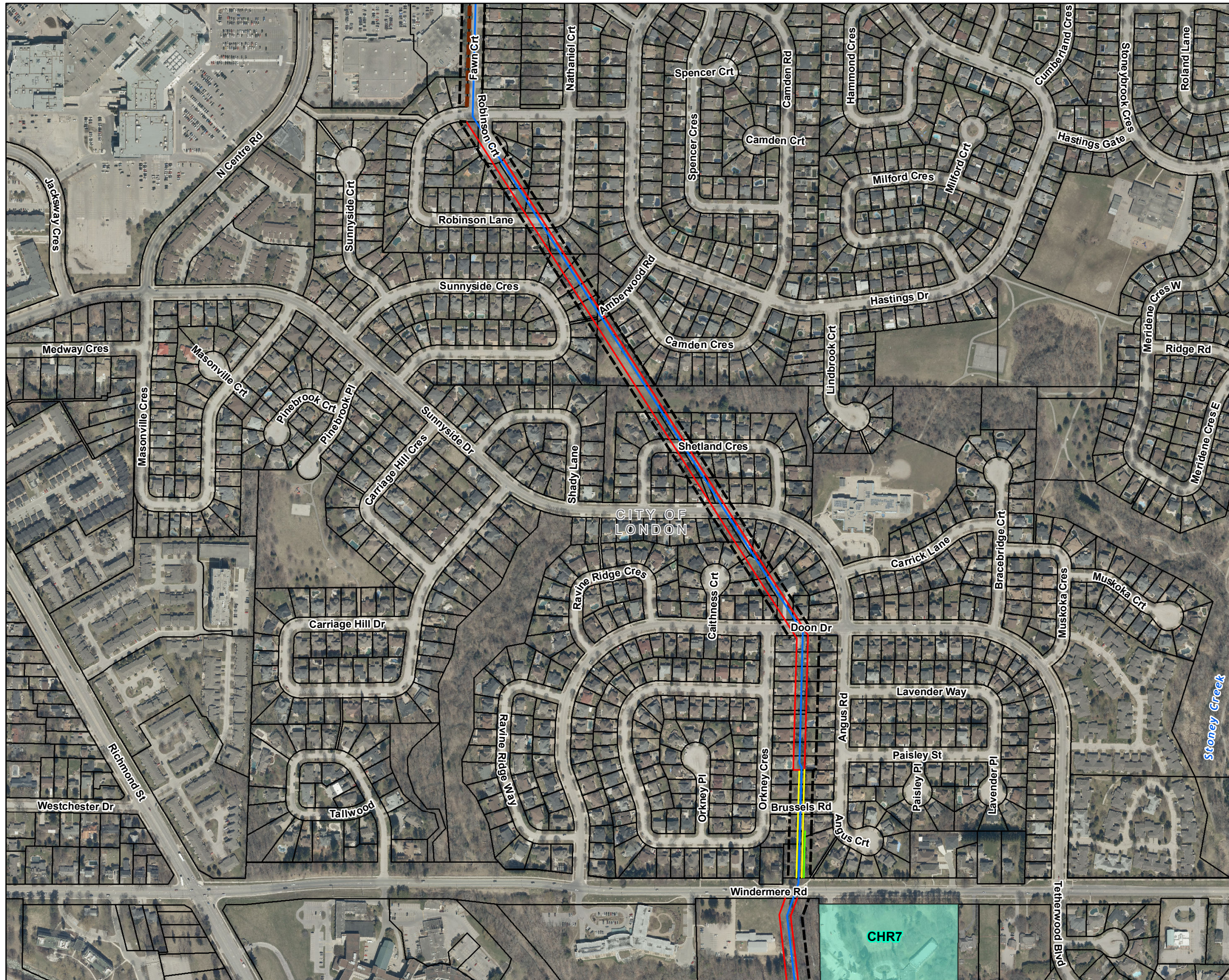
Previously Identified and
Potential Cultural Heritage Resources

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AECOM Figure 5

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Legend

- Photo Location and Direction
 - Designated Heritage Property
 - Listed Heritage Property
 - Potential Cultural Heritage Resource (CHR)
 - Canadian Heritage River
 - Parcel Boundary
 - Municipal Boundary
 - Transmission Main
- Width and Type of Easement**
- 100' Investigation Area
 - Existing ~25' Easement Attached to Title
 - Existing 50' Easement Attached to Title
 - Existing 100' Easement Attached to Title
 - City Owned 100' Easement
 - Future ~10' Easement addition Attached to Title
- 0 50 100 200
Meters

Cultural Heritage Assessment Report:
Arva Pumping Station to Huron Street Water
Transmission Main Municipal Class EA
City of London

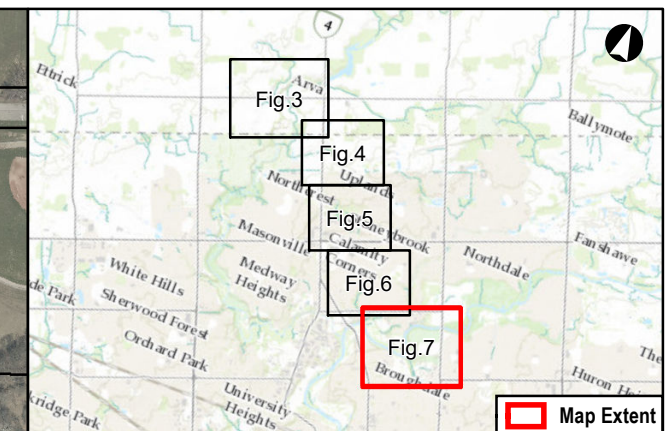
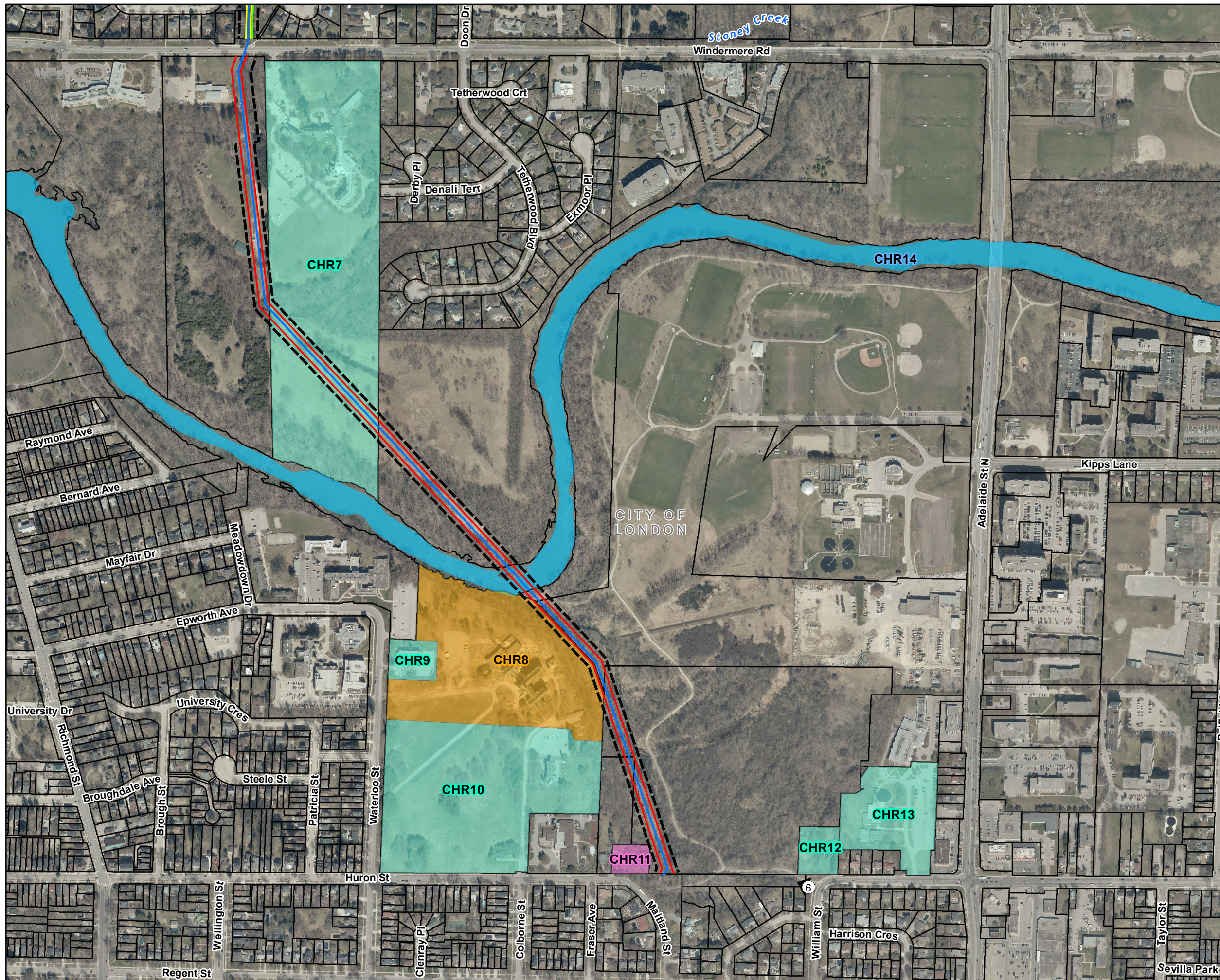
Previously Identified and
Potential Cultural Heritage Resources

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AECOM **Figure 6**

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Legend

- Photo Location and Direction
- Designated Heritage Property
- Listed Heritage Property
- Potential Cultural Heritage Resource (CHR)
- Canadian Heritage River
- Parcel Boundary
- Municipal Boundary
- Transmission Main

Width and Type of Easement

- 100' Investigation Area
- Existing ~25' Easement Attached to Title
- Existing 50' Easement Attached to Title
- Existing 100' Easement Attached to Title
- City Owned 100' Easement
- Future ~10' Easement addition Attached to Title

0 62.5 125 250
Meters

Cultural Heritage Assessment Report:
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City of London

Previously Identified and
Potential Cultural Heritage Resources

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AECOM Figure 7

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5. Proposed Undertaking and Impacts

5.1 Proposed Undertaking

The City of London has contracted AECOM to provide engineering services for the MCEA Master Plan and preliminary design for the water transmission main between the Arva Pumping Station to Huron Street. The purpose of the MCEA Master Plan for this project is to develop a short-term and long-term management plan for the water transmission main.

The current study area for this Cultural Heritage Report is based on the proposal to provide improvements for access and capacity to the transmission mains between the Arva Pumping Station and Huron Street. The existing easement between the Arva Pumping Station and Fanshawe Park Rd. is 30.5 m (100 feet) wide and accommodates twinned 1,050 mm prestressed concrete pipes. There is no proposed work, such as expansion of the existing 100' easement, between the Arva Pumping Station and Fanshawe Park Road. For this section of the study area, only general maintenance of the exiting transmission mains may be required in the future (including emergency repairs).

The easement between Fanshawe Park Rd. and Huron Street ranges from 7.5 m (25 feet) to 15.2 m (50 feet) and currently can only accommodate a single 1,050 mm concrete pipe. Access to the single transmission main and associated buried infrastructure in this stretch is limited by the width of the easement and proximity to other infrastructure. The proposed plan is to provide additional area to access the existing buried transmission main for repairs, and the possibility of providing redundancy in the Fanshawe to Huron stretch. The proposed plan is to increase the easement to 30.5 m (100 feet) for the entire length of the transmission main where appropriate. In addition, the water transmission main is buried beneath the Thames River, and any new sections, if necessary, would be tunnelled under the heritage river with no visual impacts.

5.2 Screening for Potential Impacts

To assess the potential impacts of the undertaking, identified cultural heritage resources are considered against a range of possible impacts based on the *Ontario Heritage Tool Kit, Heritage Resources in the Land Use Planning Process, InfoSheet #5 Heritage Impact Assessments and Conservation Plans* (MHSTCI 2006:3) which include, but are not limited to:

- Destruction, removal or relocation of any, or part of any, significant heritage attributes or features
- Alteration that is not sympathetic, or is incompatible, with the historic fabric or appearance
- Shadows created that alter the appearance of a heritage attribute or change the exposure or visibility of a natural feature or plantings, such as a garden

- Isolation of a heritage attribute from its surrounding environment, context, or a significant relationship
- Direct or indirect obstruction of significant views or vistas from, within, or to a built or natural heritage feature
- A change in land use such as rezoning a battlefield from open space to residential use, allowing new development or site alteration to fill in the formerly open spaces
- Land disturbances such as a change in grade that alters soils, and drainage patterns that adversely affect an archaeological resource

Several additional factors are also considered when evaluating potential impacts on identified cultural heritage resources. These are outlined in a document set out by the Ministry of Culture and Communications (now Ministry of Heritage, Sport, Tourism, and Culture Industries) and the Ministry of the Environment entitled *Guideline for Preparing the Cultural Heritage Resource Component of Environmental Assessments* (October 1992) and include:

- Magnitude: the amount of physical alteration or destruction which can be expected
- Severity: the irreversibility or reversibility of an impact
- Duration: the length of time an adverse impact persists
- Frequency: the number of times an impact can be expected
- Range: the spatial distribution, widespread or site specific, of an adverse impact
- Diversity: the number of different kinds of activities to affect a heritage resource

For the purposes of evaluating potential impacts of construction, *The London Plan's* definition on adjacency was used. It defines adjacency as “sites that are contiguous; sites that are directly opposite a cultural heritage resource separated by a laneway, easement, right-of-way, or street; or sites which a proposed development or site alteration has the potential to impact identified visual character, streetscapes or public views as defined within a statement explaining the cultural heritage value or interest of a cultural heritage resource”⁷.

5.3 Potential Impacts of Proposed Work on Cultural Heritage Resources

This section provides an assessment of the potential adverse effects to the identified cultural heritage resources as a result of the proposed improvements to the water transmission main between the Arva Pumping Station and Huron Street in the City of London and Middlesex Centre. This study is being undertaken in accordance with the planning and design process for a MCEA. The City of London commenced this MCEA to identify preferred solutions for existing and future water management challenges.

⁷ Policy 1795 is currently subject to Local Planning Area Tribunal (LPAT) appeal PL170100.

The preliminary impact assessment is based on the width and type of easement plan for the project and the potential impacts are outlined in **Table 3**. As shown on **Figures 3-7**, sections of the study area include a 100' investigation area.

Table 3: Impacts to Identified Cultural Heritage Resources and Recommended Mitigation Strategies

Feature ID	Location/Address	Heritage Recognition	Type and Description of Potential/Anticipated Impact	Mitigation Measures
CHR 1	14038 Medway Road	Potential Cultural Heritage Resource	<p>The existing 100' water transmission main easement is within CHR 1.</p> <p>This section of the study area contains the existing 100' easement attached to title. There are no proposed changes in the MCEA Mater Plan to alter this easement.</p> <p>If future maintenance or emergency work is required, there may be potential for land disturbances from repair activities:</p> <ul style="list-style-type: none"> ○ If the transmission main requires repair, the easement is more than 50m from the existing structures in CHR 1. Therefore, there are no negative impacts due to vibration from repair work anticipated.⁸ ○ Since the easement is currently located in an active agricultural field within CHR 1, if a repair work is required, the repair may cause a temporary land disturbance within the existing easement. 	<p>Continued avoidance of property impacts. No further work required for this proposed undertaking.</p> <p>If future repair work is required and there are potential land disturbances from repair activities, then the following is recommended:</p> <ul style="list-style-type: none"> ○ If repair work is required within the existing easement in CHR 1, ensure the landscape is restored to pre-construction conditions – to the active agricultural field. If the disturbance is substantial, a Qualified Person should be retained to conduct a pre-repair conditions assessment and restore the landscape to pre-repair conditions.
CHR 2	14037 Medway Road	Potential Cultural Heritage Resource	<p>The existing 100' water transmission main easement is in an adjacent property to CHR 2.</p> <p>This section of the study area contains the existing 100' easement attached to title. There are no proposed changes in the MCEA Mater Plan to alter this easement.</p> <p>If future maintenance or emergency work is required, there may be potential temporary land disturbances from repair activities:</p> <ul style="list-style-type: none"> ○ If the transmission main requires repair, the easement is more than 50m from the existing structures in CHR 2. Therefore, there are no negative impacts due to vibration from repair work anticipated. ○ There will be no temporary land disturbances to CHR 2. 	<p>Continued avoidance of property impacts. No further work required for this proposed undertaking.</p>

⁸ Although the effect of traffic and construction vibration is not fully understood, vibrations may be detectible in buildings with setbacks of less than 40 m from a curbside (Crispino and D'Apuzzo 2001; Ellis 1987; Rainer 1982; Wiss 1981). For the purpose of this study a 50m buffer is used to represent a conservative approach to delineate the potential effects related to vibration.

Feature ID	Location/Address	Heritage Recognition	Type and Description of Potential/Anticipated Impact	Mitigation Measures
CHR 3	14104 (14106) Medway Road	Potential Cultural Heritage Resource	<p>The existing 100' water transmission main easement is within CHR 3.</p> <p>This section of the study area contains the existing 100' easement attached to title. There are no proposed changes in the MCEA Mater Plan to alter this easement.</p> <p>If future maintenance or emergency work is required, there may be potential temporary land disturbances from repair activities:</p> <ul style="list-style-type: none"> ○ If the transmission main requires repair, the easement is more than 50m from the existing structures in CHR 3. Therefore, there are no negative impacts due to vibration from repair work anticipated. ○ Since the easement is currently located in an active agricultural field within CHR 3, if a repair work is required, the repair may cause a temporary land disturbance within the existing easement. 	<p>Continued avoidance of property impacts. No further work required for this proposed undertaking.</p> <p>If future repair work is required and there are potential land disturbances from repair activities, then the following is recommended:</p> <ul style="list-style-type: none"> ○ If repair work is required within the existing easement in CHR 3, ensure the landscape is restored to pre-construction conditions – to the active agricultural field. If the disturbance is substantial, a Qualified Person should be retained to conduct a pre-repair conditions assessment and restore the landscape to pre-repair conditions.
CHR 4	14143 Medway Road	Potential Cultural Heritage Resource	<p>The existing 100' water transmission main easement is within CHR 4.</p> <p>This section of the study area contains the existing 100' easement attached to title. There are no proposed changes in the MCEA Mater Plan to alter this easement.</p> <p>If future maintenance or emergency work is required, there may be potential temporary land disturbances from repair activities:</p> <ul style="list-style-type: none"> ○ If the transmission main requires repair, the easement is more than 50m from the existing structures in CHR 4. Therefore, there are no negative impacts due to vibration from repair work anticipated. ○ Since the easement is currently located in an active agricultural field within CHR 4, if a repair work is required, the repair may cause a temporary land disturbance within the existing easement. 	<p>Continued avoidance of property impacts. No further work required for this proposed undertaking.</p> <p>If future repair work is required and there are potential land disturbances from repair activities, then the following is recommended:</p> <ul style="list-style-type: none"> ○ If repair work is required within the existing easement in CHR 4, ensure the landscape is restored to pre-construction conditions – to the active agricultural field. If the disturbance is substantial, a Qualified Person should be retained to conduct a pre-repair conditions assessment and restore the landscape to pre-repair conditions.

Feature ID	Location/Address	Heritage Recognition	Type and Description of Potential/Anticipated Impact	Mitigation Measures
CHR 5	21468 Richmond Street	Potential Cultural Heritage Resource	<p>The existing 100' water transmission main easement is within CHR 5.</p> <p>This section of the study area contains the existing 100' easement attached to title. There are no proposed changes in the MCEA Mater Plan to alter this easement.</p> <p>If future maintenance or emergency work is required, there may be potential temporary land disturbances from repair activities:</p> <ul style="list-style-type: none"> ○ If the transmission main requires repair, the easement is more than 50m from the existing structures in CHR 5. Therefore, there are no negative impacts due to vibration from repair work anticipated. ○ Since the easement is currently located in an active agricultural field within CHR 5, if a repair work is required, the repair may cause a temporary land disturbance within the existing easement. 	<p>Continued avoidance of property impacts. No further work required for this proposed undertaking.</p> <p>If future repair work is required and there are potential land disturbances from repair activities, then the following is recommended:</p> <ul style="list-style-type: none"> ○ If repair work is required within the existing easement in CHR 5, ensure the landscape is restored to pre-construction conditions – to the active agricultural field. If the disturbance is substantial, a Qualified Person should be retained to conduct a pre-repair conditions assessment and restore the landscape to pre-repair conditions.
CHR 6	1836 Richmond Street	Heritage Listed Property	<p>The existing 100' water transmission main easement is within a property adjacent to CHR 6.</p> <p>This section of the study area contains the existing 100' easement attached to title. There are no proposed changes in the MCEA Mater Plan to alter this easement.</p> <p>If future maintenance or emergency work is required, there may be potential temporary land disturbances from repair activities:</p> <ul style="list-style-type: none"> ○ If the transmission main requires repair, the easement is more than 50m from the existing structures in CHR 6. Therefore, there are no negative impacts due to vibration from repair work anticipated. ○ There will be no temporary land disturbances to CHR 6. 	<p>Continued avoidance of property impacts. No further work required for this proposed undertaking.</p>

Feature ID	Location/Address	Heritage Recognition	Type and Description of Potential/Anticipated Impact	Mitigation Measures
CHR 7	551 Windermere Road	Heritage Listed Property	<p>The proposed 100' water transmission main easement is adjacent to CHR 7.</p> <p>This section of the study area contains the existing 50' easement attached to title and has been proposed for easement widening to a 100' easement with the possibility of redundancy.</p> <p>If future maintenance or emergency work is required or the possibility of redundancy, there is potential for temporary land disturbances:</p> <ul style="list-style-type: none"> ○ The proposed 100' easement is more than 50m from the existing structures in CHR 7. Therefore, there are no negative impacts due to vibration from repair or construction work is anticipated. ○ There will be no temporary land disturbances to CHR 7. 	Continued avoidance of property impacts. No further work required for this proposed undertaking.
CHR 8	1040 Waterloo Street- St. Peter's Seminary	Designated Heritage Property- Part IV of the OHA	<p>The proposed 100' water transmission main easement is within CHR 8, however downslope in the Thames River Valley.</p> <p>This section of the study area contains the existing 50' easement attached to title and has been proposed for easement widening to a 100' easement with the possibility of redundancy.</p> <p>If future maintenance or emergency work is required or the possibility of redundancy, there is potential for temporary land disturbances:</p> <ul style="list-style-type: none"> ○ The proposed 100' easement is more than 50m from the existing structures in CHR 8. Therefore, there are no negative impacts due to vibration from construction or repair work anticipated. <p>Since the proposed 100' easement is currently located in an institutional urban property within CHR 8, if a repair work or new construction is required, the work will cause temporary land disturbances within the proposed easement.</p>	<p>Design the new easement to avoid the property.</p> <p>However, if avoidance is not feasible, and if future repair work or new components are required and there is potential for land disturbances from construction activities, then the following is recommended:</p> <ul style="list-style-type: none"> ○ If repair work is required within the proposed 100' easement in CHR 8, ensure the landscape is restored to pre-construction conditions. If the disturbance is substantial, a Qualified Person should be retained to conduct a pre-repair conditions assessment and restore the landscape to pre-repair conditions.

Feature ID	Location/Address	Heritage Recognition	Type and Description of Potential/Anticipated Impact	Mitigation Measures
CHR 9	1070 Waterloo Street-London Diocesan Centre	Heritage Listed Property	<p>The proposed 100' water transmission main easement is adjacent to CHR 9.</p> <p>This section of the study area contains the existing 50' easement attached to title and has been proposed for easement widening to a 100' easement with the possibility of redundancy.</p> <p>If future maintenance or emergency work is required or the possibility of redundancy, there is potential for temporary land disturbances:</p> <ul style="list-style-type: none"> ○ The proposed 100' easement is more than 50m from the existing structures in CHR 9. Therefore, there are no negative impacts due to vibration from repair or construction work is anticipated. ○ There will be no temporary land disturbances to CHR 9. 	Continued avoidance of property impacts. No further work required for this proposed undertaking.
CHR 10	370 Huron Street/1071 Colborne Street-Aquinas House	Heritage Listed Property	<p>The proposed 100' water transmission main easement is adjacent to CHR 10.</p> <p>This section of the study area contains the existing 50' easement attached to title and has been proposed for easement widening to a 100' easement with the possibility of redundancy.</p> <p>If future maintenance or emergency work is required or the possibility of redundancy, there is potential for temporary land disturbances:</p> <ul style="list-style-type: none"> ○ The proposed 100' easement is more than 50m from the existing structures in CHR 10. Therefore, there are no negative impacts due to vibration from repair or construction work is anticipated. ○ There will be no temporary land disturbances to CHR 10. 	Continued avoidance of property impacts. No further work required for this proposed undertaking.

Feature ID	Location/Address	Heritage Recognition	Type and Description of Potential/Anticipated Impact	Mitigation Measures
CHR 11	432 Huron Street	Potential Cultural Heritage Resource	<p>The proposed 100' water transmission main easement is within CHR 11, however downslope in the Thames River Valley.</p> <p>This section of the study area contains the existing 50' easement attached to title and has been proposed for easement widening to a 100' easement with the possibility of redundancy.</p> <p>If future maintenance or emergency work is required or the possibility of redundancy, there is potential for temporary land disturbances:</p> <ul style="list-style-type: none"> ○ The proposed 100' easement is more than 50m from the existing structures in CHR 11. Therefore, there are no negative impacts due to vibration from construction or repair work anticipated. ○ Since the proposed 100' easement is currently located in an institutional urban property within CHR 11, if a repair work or new construction is required, the work will cause temporary land disturbances within the proposed easement. 	<p>Design new easement to avoid the property.</p> <p>However, if avoidance is not feasible, and if future repair work or new components are required and there is potential for land disturbances from construction activities, then the following is recommended:</p> <ul style="list-style-type: none"> ○ If repair work is required within the proposed 100' easement in CHR 11, ensure the landscape is restored to pre-construction conditions. If the disturbance is substantial, a Qualified Person should be retained to conduct a pre-repair conditions assessment and restore the landscape to pre-repair conditions.
CHR 12	520 Huron Street	Heritage Listed Property	<p>The proposed 100' water transmission main easement is adjacent to CHR 12.</p> <p>This section of the study area contains the existing 50' easement attached to title and has been proposed for easement widening to a 100' easement with the possibility of redundancy.</p> <p>If future maintenance or emergency work is required or the possibility of redundancy, there is potential for temporary land disturbances:</p> <ul style="list-style-type: none"> ○ The proposed 100' easement is more than 50m from the existing structures in CHR 12. Therefore, there are no negative impacts due to vibration from repair or construction work is anticipated. ○ There will be no temporary land disturbances to CHR 12. 	<p>Continued avoidance of property impacts. No further work required for this proposed undertaking.</p>

Feature ID	Location/Address	Heritage Recognition	Type and Description of Potential/Anticipated Impact	Mitigation Measures
CHR 13	534 Huron Street	Heritage Listed Property	<p>The proposed 100' water transmission main easement is adjacent to CHR 13.</p> <p>This section of the study area contains the existing 50' easement attached to title and has been proposed for easement widening to a 100' easement with the possibility of redundancy.</p> <p>If future maintenance or emergency work is required or the possibility of redundancy, there is potential for temporary land disturbances:</p> <ul style="list-style-type: none"> ○ The proposed 100' easement is more than 50m from the existing structures in CHR 13. Therefore, there are no negative impacts due to vibration from repair or construction work is anticipated. ○ There will be no temporary land disturbances to CHR 13. 	Continued avoidance of property impacts. No further work required for this proposed undertaking.
CHR 14	Thames River	Canadian Heritage River	<p>The proposed 100' water transmission main easement crosses, CHR 14, the Thames River.</p> <p>This section of the study area contains the existing 50' easement attached to title and has been proposed for easement widening to a 100' easement with the possibility of redundancy.</p> <p>If future maintenance or emergency work is required or the possibility of redundancy, there is potential for temporary land disturbances:</p> <ul style="list-style-type: none"> ○ There are no anticipated visual impacts to the Thames River Valley Corridor. However, if a repair work or new construction is required, the work will cause temporary land disturbances within the proposed easement. 	<p>Design new easement to avoid the Thames River Valley.</p> <p>However, if avoidance is not feasible, and if future repair work or new components are required and there is potential for land disturbances from construction activities, then the following is recommended:</p> <ul style="list-style-type: none"> ○ If repair or construction work is required within the proposed easement in CHR 14, ensure the landscape is restored to pre-construction conditions. If the disturbance is substantial, a Qualified Person should be retained to conduct a pre-repair conditions assessment and restore the landscape to pre-repair conditions.

6. Conclusions and Recommendations

Generally, as a means of mitigation, infrastructure improvements should be designed to avoid impacts to properties that have been identified as cultural heritage resources in this report. The background research, data collection, and field review conducted for the water transmission main study area determined that 14 above-ground cultural heritage resources are located within or adjacent to the study area. Based on the results of the preliminary impact assessment, the following recommendations have been developed:

1. Consult **Table 3** for the results of the preliminary impact assessment. If necessary, if there is a detailed design for a new water transmission main within the proposed 100' easement between Fanshawe Park Rd. and Huron Street, this report should be reviewed by a Qualified Heritage Professional with a confirmation of impacts and mitigation measures of the undertaking on cultural heritage resources identified within and/or adjacent to the study area. Any changes in impacts and mitigation measures, as presented in **Table 3** of this report, will be identified.
2. Where temporary landscape disturbance may occur due to water transmission main maintenance and/or redundancy, restore landscape features associated with CHR 1, CHR 2, CHR 3, CHR 4, CHR 5, CHR 8, CHR 11, and CHR 14 to pre-construction conditions through post-construction landscape treatments to ensure there are no negative impacts to the properties. If the disturbance is substantial, a Qualified Landscape Architect should be retained to conduct a pre-repair conditions assessment and restore the landscape to pre-repair conditions.
3. Repair work, construction activities and staging related to the water transmission main should be suitably planned and undertaken to avoid negative impacts to identified cultural heritage resources (specifically remain within existing and proposed easements). Suitable mitigation measures include establishing no-go zones adjacent to the identified cultural heritage resources and issuing instructions to construction crews to prevent impacts to existing structures.
4. Should detailed design for the proposed undertaking be extended beyond the proposed limits of the 100' easements as outlined on **Figures 3-7**, this report should be updated to confirm impacts of the proposed work on previously identified and potential cultural heritage resources.
5. Should a Preferred Alternative be proposed outside the limits of the study area documented in this report, then a Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment should be completed.

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Appendix A

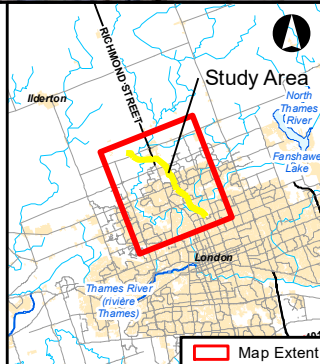
Historical Map Set

***Arva Pumping Station to Huron Street Water
Transmission Main Municipal Class Environmental
Assessment Master Plan, City of London, Ontario***



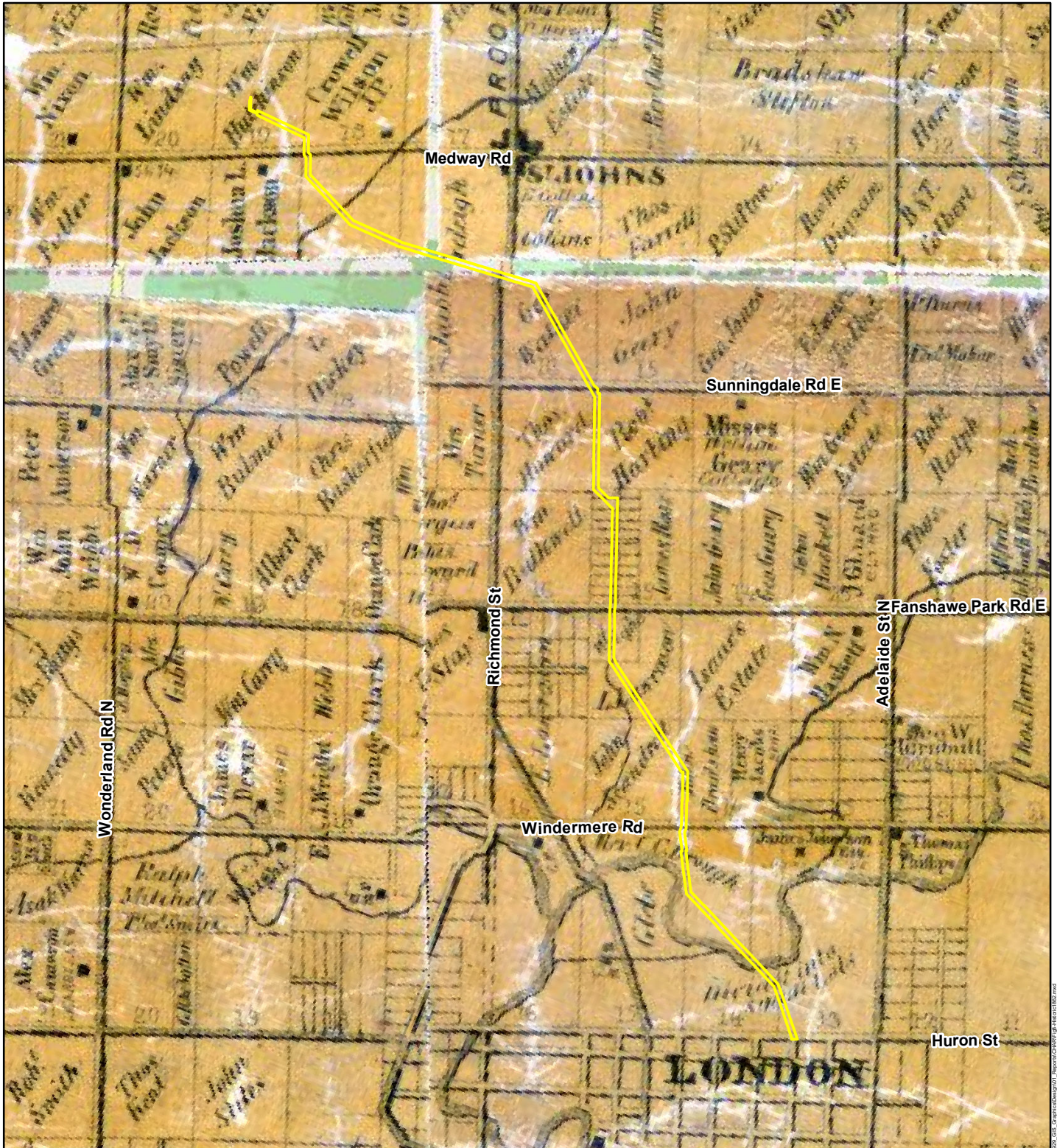
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Study Area




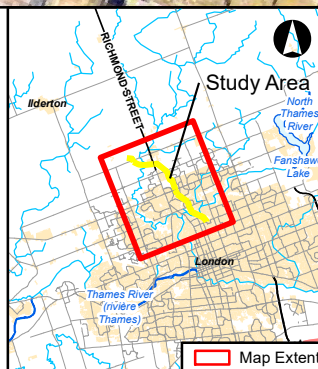
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Portion of the 1850 Sketch of London Township	
May 2020	1:35,000
P#: 60619503	V#:
AECOM	
Figure 8	
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Map Source: "City of London Sketch of London Township" (1850), L101503_3_City_of_London_Sketch_of_London_Township_1850.mxd
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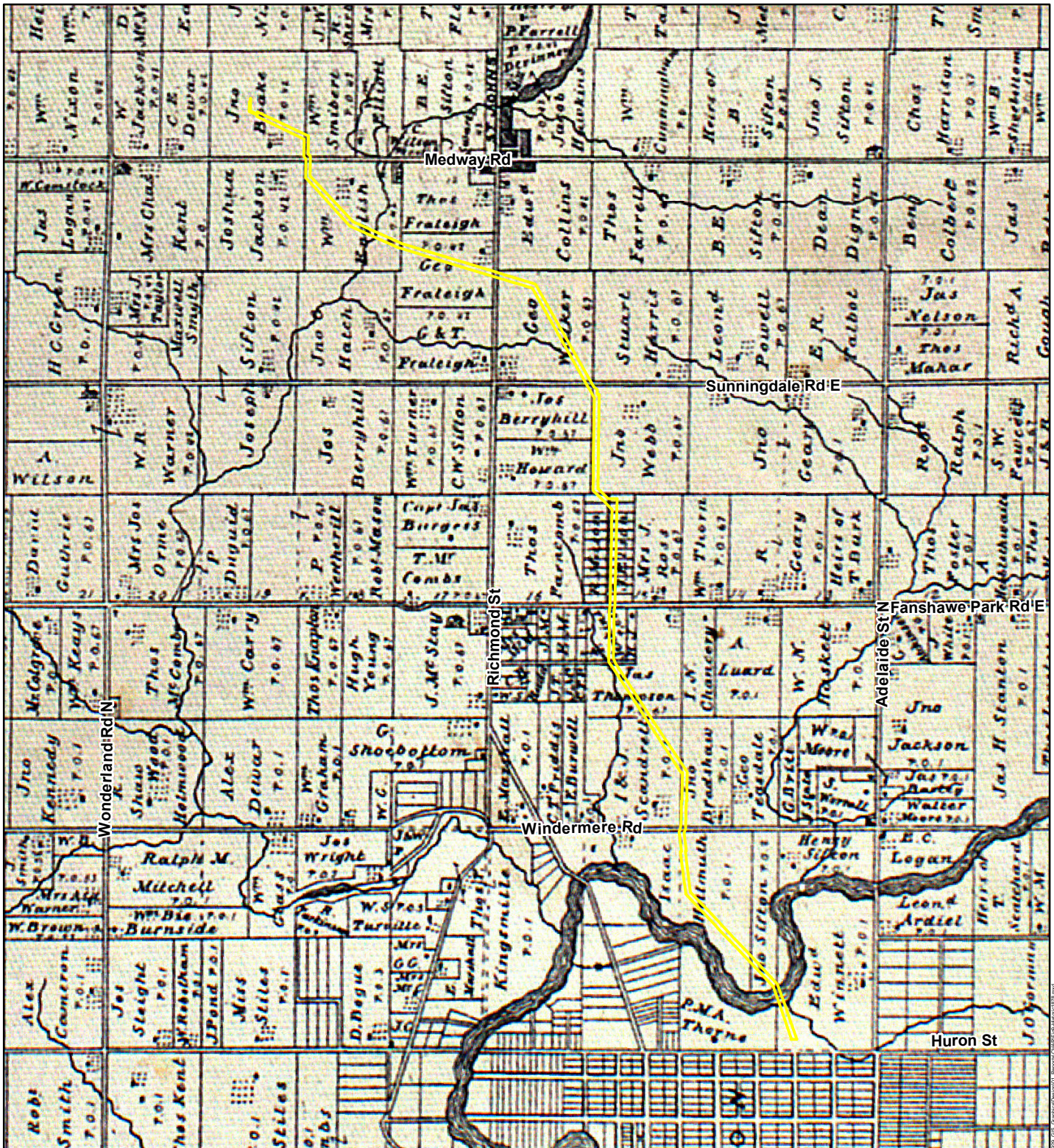
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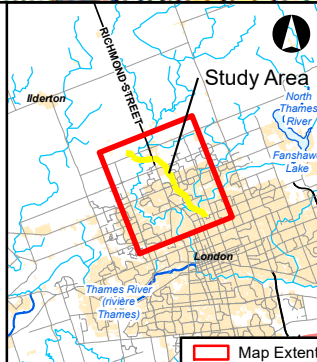
<p>Cultural Heritage Assessment Report: Arva Pumping Station to Huron Street Water Transmission Main Municipal Class EA City of London</p>		
<p>Portion of the Tremaine Map of Middlesex County</p>		
February 2020	1:35,000	Datum: NAD 83 UTM17 Source: LIO 2019, Tremaine 1862, Tremaine's Map of Middlesex County
PH: 60619503	V#:	
AECOM		Figure 9
<p>0 250 500 1,000 Metres</p>		
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Map Source: Tremaine 1862, Tremaine's Map of Middlesex County, City of London, Ontario, Canada. Date: 1862. Map Extent: 4364100, 4364100, 4364100, 4364100. Legend: 60619503, 60619503, 60619503, 60619503. Title: Cultural Heritage Assessment Report: Arva Pumping Station to Huron Street Water Transmission Main Municipal Class EA City of London. Date: February 2020. Scale: 1:35,000. Datum: NAD 83 UTM17. Source: LIO 2019, Tremaine 1862, Tremaine's Map of Middlesex County.



Legend

 Study Area



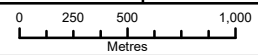
Cultural Heritage Assessment Report:
Arva Pumping Station to Huron Street Water
Transmission Main Municipal Class EA
City of London

Portion of the Illustrated Historical
Atlas of Middlesex County, 1878

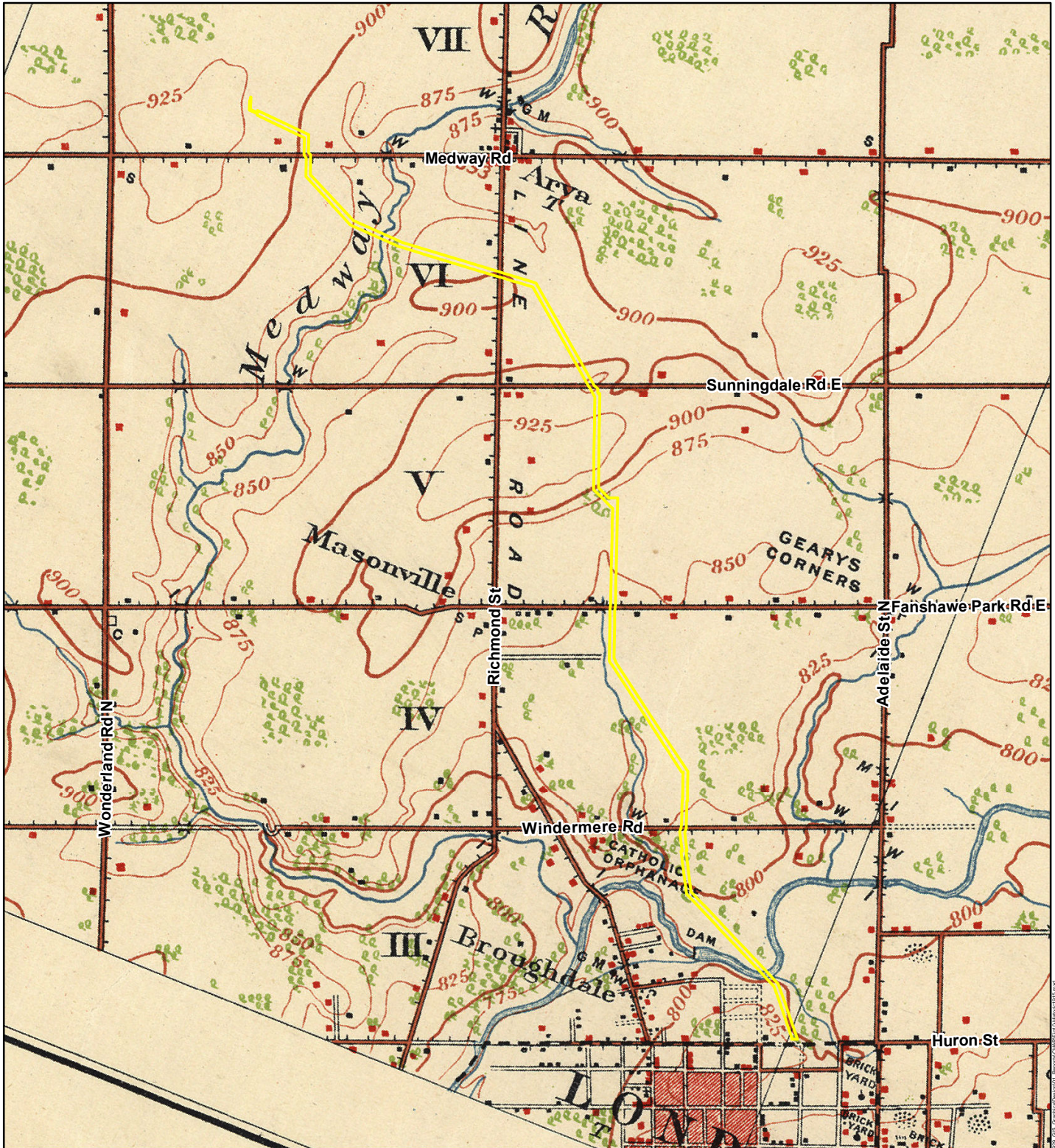
February 2020	1:35,000	Datum: NAD 83 UTM17 Source: LIO 2019, Illustrated Historic Atlas of Middlesex County (H. Belden & Co. 1878)
PH: 60619503	V#:	

AECOM


Figure 10

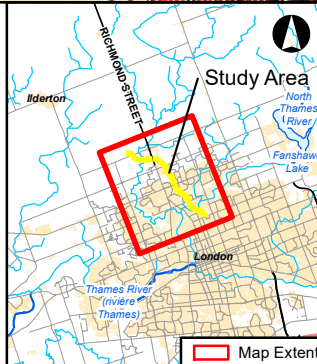


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Legend

 Study Area



Cultural Heritage Assessment Report:
Arva Pumping Station to Huron Street Water
Transmission Main Municipal Class EA
City of London

Portion of the National Topographic Series
Lucan Sheet, 1915

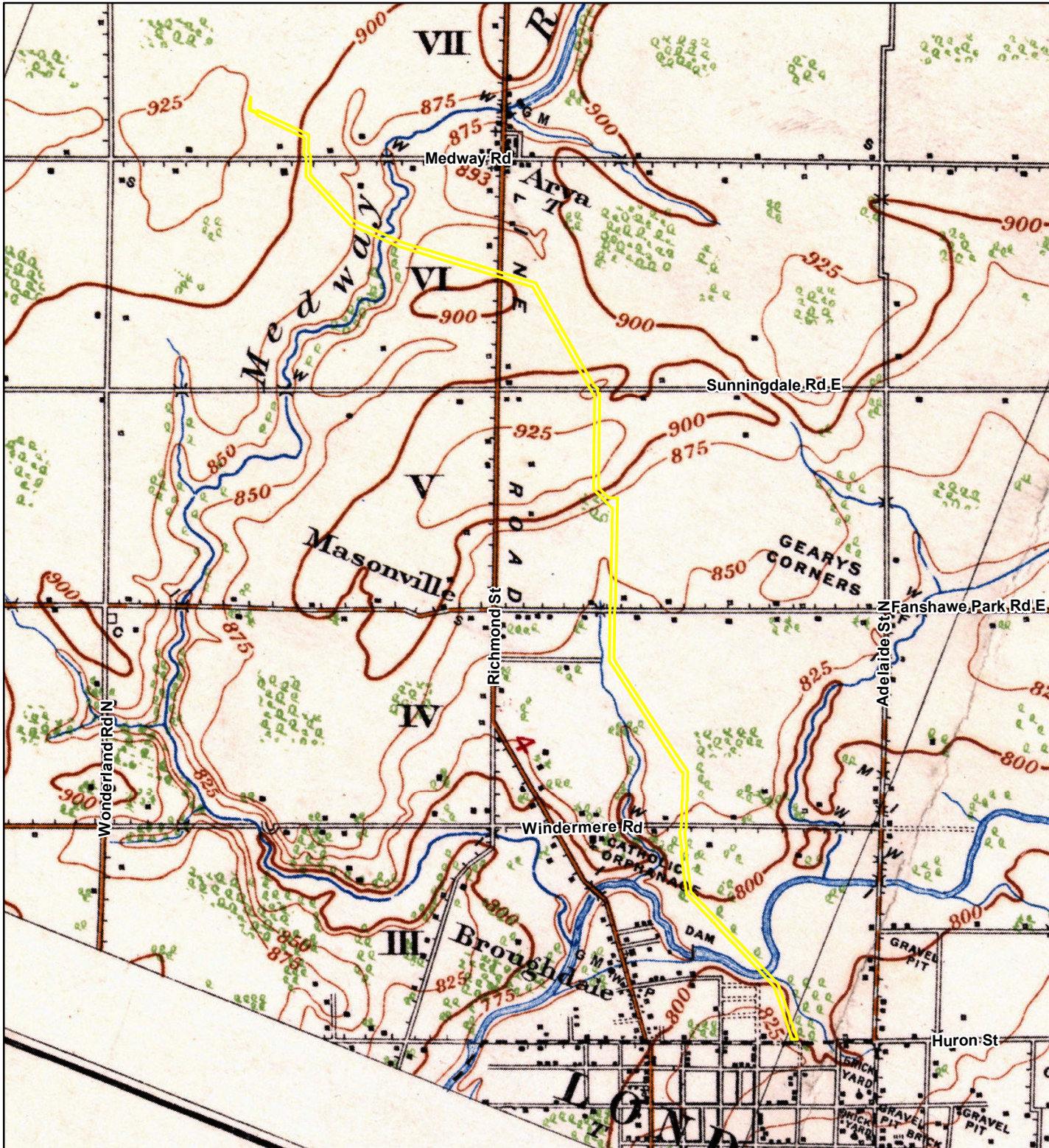
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PH: 60619503	V#:	

AECOM **Figure 11**


0 250 500 1,000
Metres

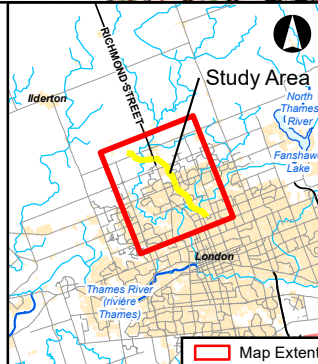
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Map Source: National Topographic Series (NAD 83 UTM17) Lucan Sheet, 1915. Source: LIO 2019, National Topographic Series Lucan Sheet, 1915. PH: 60619503. V#: 1.0.0.0. AECOM, 2020.



Legend

 Study Area



Cultural Heritage Assessment Report:
 Arva Pumping Station to Huron Street Water
 Transmission Main Municipal Class EA
 City of London

Portion of the National Topographic Series
 Lucan Sheet, 1928

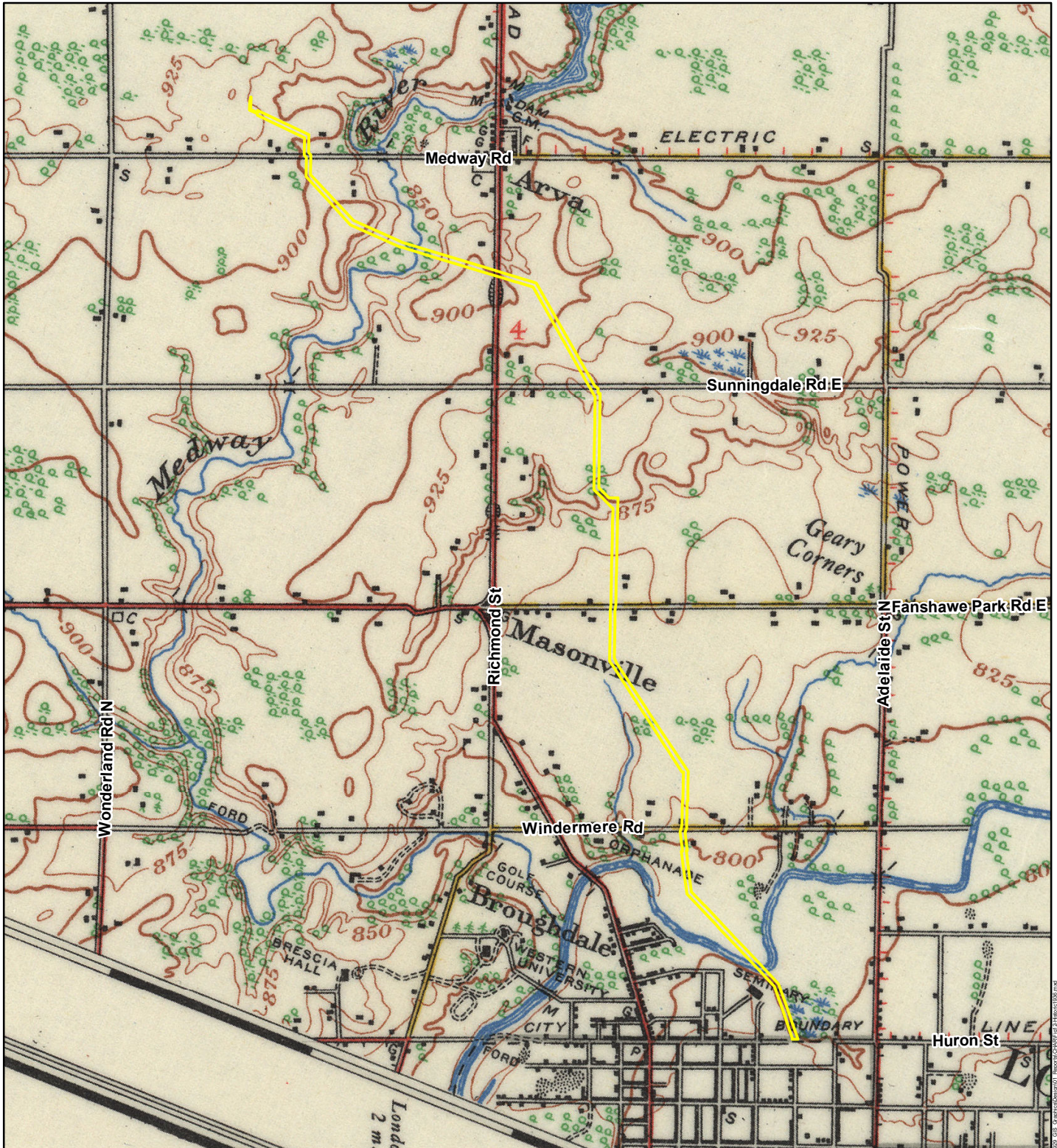
February 2020	1:35,000	Datum: NAD 83 UTM17 Source: LIO 2019, National Topographic Series Lucan Sheet, 1928
PH: 60619503	V#:	

AECOM **Figure 12**

0 250 500 1,000
Metres

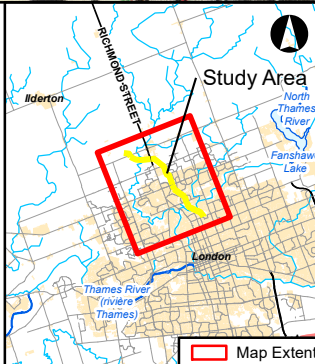
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Map Source: National Topographic Series (N.T.S.) Lucan Sheet, 1928. Source: LIO 2019, National Topographic Series Lucan Sheet, 1928. PH: 60619503, V#: 1. Date: 2020-02-11. Author: AECOM.



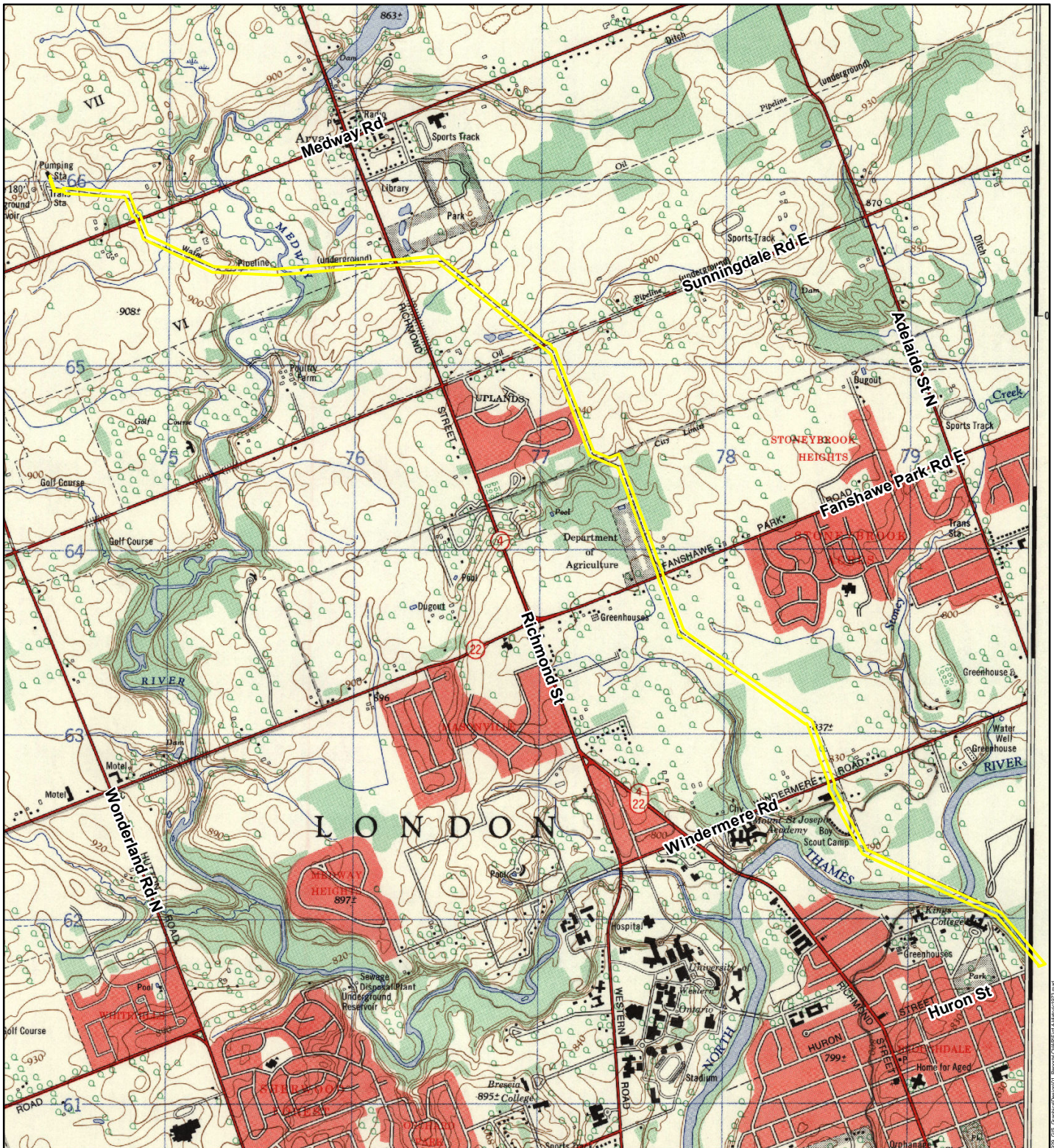
Legend

 Study Area




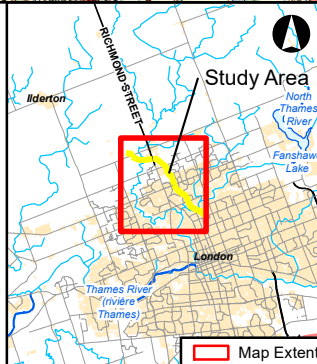
<p>Cultural Heritage Assessment Report: Arva Pumping Station to Huron Street Water Transmission Main Municipal Class EA City of London</p>		
<p>Portion of the National Topographic Series Lucan Sheet, 1936</p>		
<p>February 2020</p>	<p>1:35,000</p>	<p>Datum: NAD 83 UTM17 Source: L10 2019, National Topographic Series Lucan Sheet, 1936</p>
<p>PH: 60619503</p>	<p>V#:</p>	<p>Figure 13</p>
<p>AECOM</p>		<p>Figure 13</p>
<p>0 250 500 1,000 Metres</p>		
<p><small>This drawing has been prepared for the use of AECOM's client and may not be used, reproduced or relied upon by third parties, except as agreed by AECOM and its client, as required by law or for use by governmental reviewing agencies. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that modifies this drawing without AECOM's express written consent.</small></p>		

Map Source: National Topographic Series (N.T.S.) Lucan Sheet, 1936. Source: L10 2019, National Topographic Series Lucan Sheet, 1936. PH: 60619503. V#: 10/10/2019. Date: 10/10/2019. Author: [unreadable]



Legend

 Study Area



Cultural Heritage Assessment Report:
Arva Pumping Station to Huron Street Water
Transmission Main Municipal Class EA
City of London

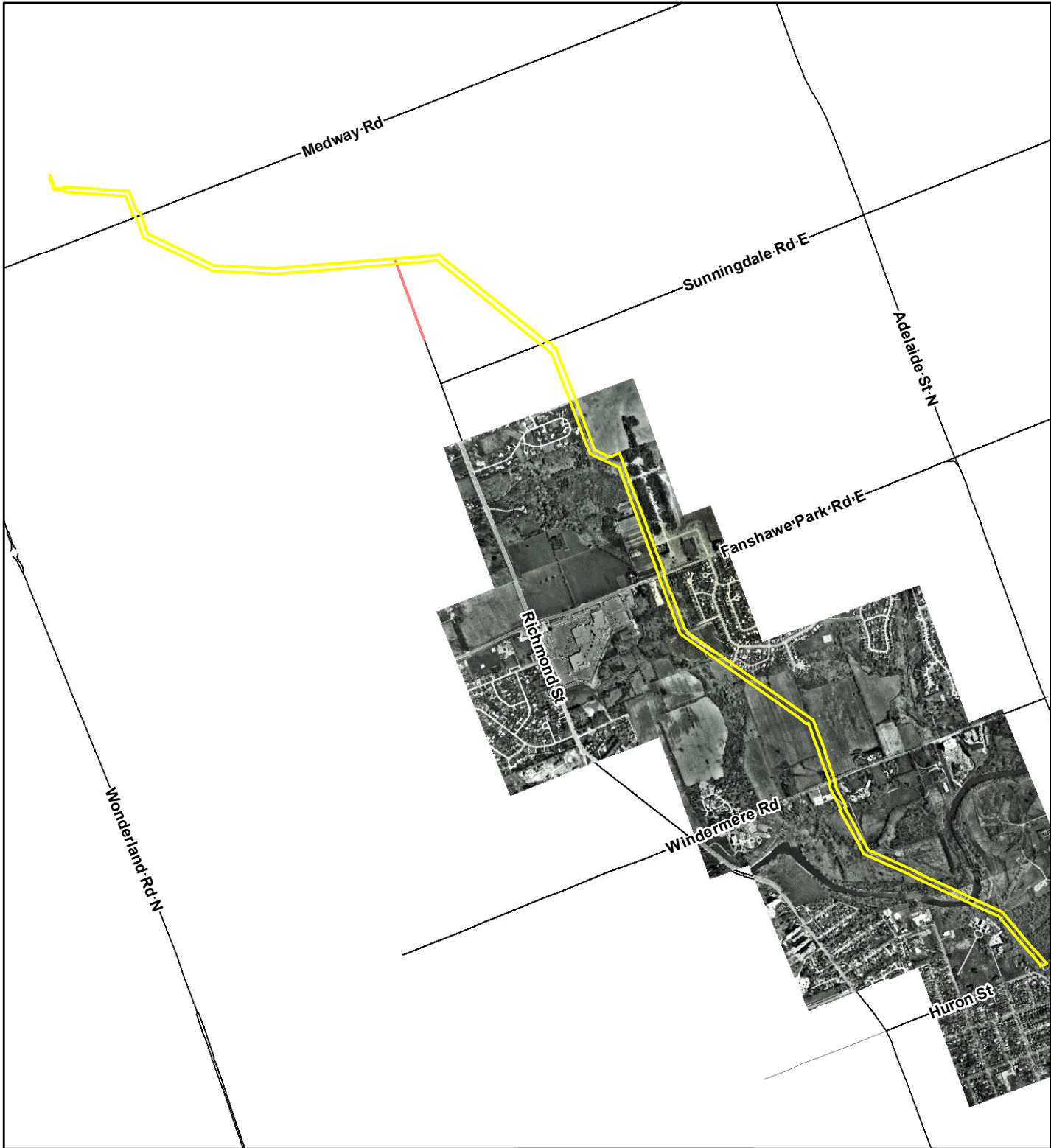
Portion of the National Topographic Series
Lucan Sheet, 1973

February 2020	1:30,000	Datum: NAD 83 UTM17 Source: LIO 2019, National Topographic Series Arva Sheet, 1973
PH: 60619503	V#:	


AECOM **Figure 15**

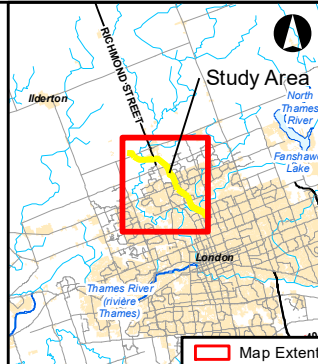
0 250 500 1,000
Metres


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Legend

 Study Area



 Map Extent

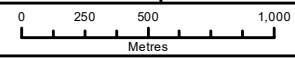
Cultural Heritage Assessment Report:
Arva Pumping Station to Huron Street Water
Transmission Main Municipal Class EA
City of London

Portion of the 1986 Aerial Image
City of London

May 2020	1:30,000	Datum: NAD 83 UTM17 Source: LIO 2019, National Topographic Series Arva Sheet, 1973
P#: 60619503	V#:	

AECOM

Figure 16





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Map Source: © 2019 AECOM Infrastructure and Transportation Division, 15000 136th Ave., Edmonton, Alberta T5A 4G6. All rights reserved. 15000136_190101.mxd




Appendix B



Description of Cultural Heritage Resources




***Arva Pumping Station to Huron Street Water
Transmission Main Municipal Class Environmental
Assessment Master Plan, City of London, Ontario***


Feature ID	Location/Address	Resource Type	Heritage Recognition	Description ¹	Photos
CHR 1	14038 Medway Road	Farmscape	Potential Cultural Heritage Resource	<p><u>Historical:</u></p> <ul style="list-style-type: none"> - A farmhouse is illustrated on the property belonging to John Boake in 1878 in the vicinity of CHR 1 (Figure 9). - Historically the property is in Lot 19, Concession VII, London Township. <p><u>Design:</u></p> <ul style="list-style-type: none"> - Structure is partially obscured from the public right-of-way by vegetation. - The house is a two-storey vernacular buff brick farmhouse with Queen Anne Revival style architectural details. The front gable includes a Queen Anne style window, decorative wood bargeboard, and a projecting apex with a wood checkboard pattern. There are two buff brick chimneys. The house has a fieldstone foundation. The gated entrance includes columns constructed of fieldstone. The house is shown as a brick house on the 1915 NTS Map (Figure 5). - The property includes two small outbuildings. <p><u>Context:</u></p> <ul style="list-style-type: none"> - This agricultural property contributes to the rural nature of this portion of Medway Road, an early transportation route. -The house is set back from the north side of the road and reflects late 19th century settlement along Medway Road. 	 <p>View of CHR 1 from Medway Road (AECOM 2020)</p>
CHR 2	14037 Medway Road	Farmscape	Potential Cultural Heritage Resource	<p><u>Historical:</u></p> <ul style="list-style-type: none"> - A farmhouse is illustrated on the property belonging to Joshua Jackson in 1878 in the vicinity of CHR 2 (Figure 9). However, the 1915 NTS Map shows the farmhouse as frame structure (Figure 10), which may indicate that this house was not the original farmhouse on the property and was likely constructed in the early 20th century. <p><u>Design:</u></p> <ul style="list-style-type: none"> - This two-storey vernacular Four Square style brick farmhouse has a hipped roof and the windows have heavy (thick) concrete lintels. The house has a hipped dormer and a front addition. - The property includes four outbuildings. <p><u>Context:</u></p> <ul style="list-style-type: none"> - This agricultural property contributes to the rural nature of this portion of Medway Road, an early transportation route. -The house is set back from the south side of the road and reflects late 19th century settlement along Medway Road. 	 <p>View of 14037 from Medway Road (AECOM 2020)</p>




¹ Architectural styles are identified where information was available from secondary source materials, including the City of London's Inventory of Heritage Resources, or due to the presence of architectural details that are particularly expressive of a representative or typical characteristic of an architectural style. A detailed analysis of architectural style for each cultural heritage resource has not been undertaken.



Feature ID	Location/Address	Resource Type	Heritage Recognition	Description ¹	Photos
CHR 3	14104 (14106) Medway Road	Farmscape	Potential Cultural Heritage Resource	<p><u>Historical:</u></p> <ul style="list-style-type: none"> - A farmhouse is not illustrated on the property belonging to William Smibert in 1878 (Figure 9), however, a brick farmhouse is extent in the vicinity of CHR 3 on the 1915 NTS Map (Figure 10). <p><u>Design:</u></p> <ul style="list-style-type: none"> - The house is not visible from the public right-of-way. - The house appears to be an Ontario buff brick farmhouse with a T-shaped plan. It is shown as a brick house on the 1915 NTS Map (Figure 10). - The property contains one outbuilding. <p><u>Context:</u></p> <ul style="list-style-type: none"> - This agricultural property contributes to the rural nature of this portion of Medway Road, an early transportation route. -The house is set back from the north side of the road and reflects late 19th century settlement along Medway Road. 	 <p>View of CHR 3 from Medway Road (AECOM 2020)</p>
CHR 4	14143 Medway Road	Farmscape	Potential Cultural Heritage Resource	<p><u>Historical:</u></p> <ul style="list-style-type: none"> - The property is currently for sale and the house is listed as being built in 1887. - A farmhouse is illustrated on the 1878 Atlas Map in the vicinity of CHR 4 (Figure 9). Historically, this farm was in Lot 18, Concession VI, London Township and was owned by William English. <p><u>Design:</u></p> <ul style="list-style-type: none"> - The house is not clearly visible from the public right-of-way. - The house appears to be a vernacular frame farmhouse clad in white siding. It is shown as a frame house on the 1915 NTS Map (Figure 5). -Landscape features include two large outbuildings. <p><u>Context:</u></p> <ul style="list-style-type: none"> - This agricultural property contributes to the rural nature of this portion of Medway Road, an early transportation route. -The house is set far back from the south side of the road and reflects the 19th century settlement along Medway Road. 	 <p>View of CHR 4 from Medway Road (ASI 2020)</p>
CHR 5	21468 Richmond Street	Residence	Potential Cultural Heritage Resource	<p><u>Historical:</u></p> <ul style="list-style-type: none"> - A farmhouse is illustrated on the 1878 Atlas Map in the vicinity of CHR 5 (Figure 9). The property, Lot 17, Concession VI, former London Township, also had an orchard. The property was owned in 1878 by George Fraleigh. <p><u>Design:</u></p> <ul style="list-style-type: none"> - A one-storey buff brick house with a low-pitched hipped roof, buff brick chimney, and fieldstone foundation. <p><u>Context:</u></p> <ul style="list-style-type: none"> - This rural residential property represents 19th century settlement along Richmond Street, formally Proof Line Road. - The house sits close to the west side of Richmond Street. 	 <p>View of CHR 5 from Richmond Street (AECOM 2020)</p>


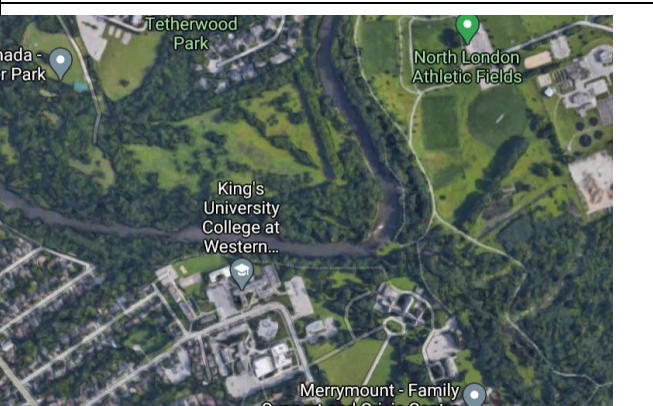
Feature ID	Location/Address	Resource Type	Heritage Recognition	Description ¹	Photos
CHR 6	1836 Richmond Street	Residence	Heritage Listed Property	<p><u>Historical:</u></p> <ul style="list-style-type: none"> -Built in 1932. Known as Gibbon's Lodge (City of London 2019). - The 1936 NTS map shows a house located at this location (Figure 12). - Today it is the official residence for the President of Western University. Initially, the property was owned by the Farncomb Family. Miss Helen Beresford Gibbons bought the property from the Farncomb's before it was acquired by the University. A white farmhouse was demolished by Miss Gibbons to make room for the present estate (Doors Open website). <p><u>Design:</u></p> <ul style="list-style-type: none"> -The house is not clearly visible from the public right-of-way. - The residence has been documented as having a Tudor Revival architectural style. -Miss Gibbons designed the house herself (Doors Open website) with help from builder Charles Oram, advice from her engineer brother-in-law, and her experiences in Bermuda. <p><u>Context:</u></p> <ul style="list-style-type: none"> -The entrance for the property is located on the east side of Richmond Street. The building is set far back from the road. The rear of the property is wooded and contains a seasonal stream. 	 <p>View of CHR 6 from Richmond Street (AECOM 2020)</p>
CHR 7	551 Windermere Road	Institutional	Heritage Listed Property	<p><u>Historical:</u></p> <ul style="list-style-type: none"> -Built in 1930, it is known as the Spencer Hall Ivey Spencer Leadership Centre (City of London 2019). - The 1936 NTS Map shows one building on the property at that time (Figure 12). The 1973 NTS Map shows two structures on the property at that time (Figure 14). <p><u>Design:</u></p> <ul style="list-style-type: none"> - The structure is not clearly visible from the public right-of-way. - The institution has been documented as a Georgian Revival style building (City of London 2019). <p><u>Context:</u></p> <ul style="list-style-type: none"> -Located on the south side of Windemere Road, the building is set back from the road. The rear of the property includes park space and trees along the bank of the Thames River. 	 <p>View of CHR 7 from Windemere Road (AECOM 2020)</p>

Feature ID	Location/Address	Resource Type	Heritage Recognition	Description ¹	Photos
CHR 8	1040 Waterloo Street - St. Peter's Seminary	Institutional/Place of Worship	Designated Heritage Property- Part IV of the OHA	<p><u>Historical:</u></p> <ul style="list-style-type: none"> - Lands in the Part IV designation include the St. Peter's Seminary. - St. Peter's Seminary was built in the former Sunshine Park, an estimated 45 acre parcel of land. The initial plan was to subdivide the Park into 66 park and villa lots in 1881. Instead, the owner, Sir Phillip Pocock, donated a portion of the park lands to the Roman Catholic Diocese in 1912 (approximately 32 acres). The cornerstone was laid in 1925 for St. Peter's Seminary. <p>(https://pub-london.escribemeetings.com/filestream.ashx?DocumentId=27669)</p> <p><u>Design:</u></p> <ul style="list-style-type: none"> - St. Peter's Seminary: Collegiate Gothic style architecture with Credit Valley and Tyndall stone. The exterior is built with stone from Credit Valley and Tyndall, Manitoba, and the roofs are copper and green slate. Architect: Windsor's Pennington and Boyde. Hamilton construction company- Piggot Brothers. <p>(https://pub-london.escribemeetings.com/filestream.ashx?DocumentId=27669)</p> <p><u>Context:</u></p> <ul style="list-style-type: none"> - Located on the bluffs overlooking the Thames River. - Located in the former area of Broughdale and Sunshine Park. - The Seminary and its contributing landscape features are a local landmark and the property is noted for its beautiful architecture. 	 <p>View of CHR 8 from Waterloo Street (AECOM 2021)</p>  <p>View of CHR 8 from Waterloo Street (AECOM 2021)</p>  <p>View of CHR 8 from Colborne Street (AECOM 2021)</p>

Feature ID	Location/Address	Resource Type	Heritage Recognition	Description ¹	Photos
CHR 9	1070 Waterloo Street - London Diocesan Centre	Institutional	Listed Heritage Property	<p><u>Historical:</u></p> <ul style="list-style-type: none"> - Listed Heritage Property include the London Diocesan Centre built 1969. - The London Diocesan Centre was built to replace the chancery office for the Roman Catholic Diocese of London on Richmond Street. (https://pub-london.escribemeetings.com/filestream.ashx?DocumentId=27669) <p><u>Design:</u></p> <ul style="list-style-type: none"> -London Diocesan Centre designed by Tilman and Lamb of London. (https://pub-london.escribemeetings.com/filestream.ashx?DocumentId=27669) <p><u>Context:</u></p> <ul style="list-style-type: none"> -Located in the former area of Broughdale and Sunshine Park. - The Diocesan Centre and its contributing landscape features are a local landmark and the property is noted for its beautiful architecture. 	 <p data-bbox="2184 641 2806 758">View of CHR 9 from Waterloo Street (AECOM 2021)</p>

Feature ID	Location/Address	Resource Type	Heritage Recognition	Description ¹	Photos
CHR 10	370 Huron Street/1071 Colborne Street – Aquinas House	Institutional/Place of Worship and Residence	Listed Heritage Property	<p><u>Historical:</u></p> <ul style="list-style-type: none"> - Listed Heritage Property include the St. Thomas Aquinas House (built 1930) and a red brick residence (built 1930's) - The St. Thomas Aquinas House was originally on a separate property from the Seminary and was constructed in 1930. Due to the Great Depression funding was limited and this resulted in the construction a very plain design. In 1983 the Diocese of London purchased the property and renovated the building for a residence and office space (https://pub-london.escibemeetings.com/filestream.ashx?DocumentId=27669) - The red brick residence has no historical relationship to the Seminary. (https://pub-london.escibemeetings.com/filestream.ashx?DocumentId=27669) <p><u>Design:</u></p> <ul style="list-style-type: none"> - St. Thomas Aquinas House designed by B. Jones of Kitchener. (https://pub-london.escibemeetings.com/filestream.ashx?DocumentId=27669) <p><u>Context:</u></p> <ul style="list-style-type: none"> - Located in the former area of Broughdale and Sunshine Park. - The St. Thomas Aquinas House and its contributing landscape features are a local landmark and the property is noted for its beautiful architecture. 	 <p data-bbox="2191 641 2750 669">View of CHR 10 from Colborne Street AECOM (2021)</p>  <p data-bbox="2191 1084 2750 1112">View of CHR 10 from Colborne Street (AECOM 2021)</p>  <p data-bbox="2191 1518 2750 1546">View of CHR 10 from Waterloo Street (AECOM 2021)</p>

Feature ID	Location/Address	Resource Type	Heritage Recognition	Description ¹	Photos
CHR 11	432 Huron Street	Residence	Potential Cultural Heritage Resource	<p><u>Historical:</u> - Likely built in the early to mid-20th century.</p> <p><u>Design:</u> - The two-storey brick Georgian Revival style house has a side gable roof and chimney on the east elevation. The symmetrical façade includes a wood door surround with a decorative pediment. There is also decorative woodwork in the cornice, including dentils. The windows appear to be 8-over-8 sash with brick headers for lintels.</p> <p><u>Context:</u> -The residence is located on the north side of the curve of Huron and William streets. The property is adjacent to the Huron Street Woods associated with the Thames Valley Trail.</p>	 <p data-bbox="2184 693 2809 727">View of CHR 11 from Huron Street (AECOM 2020)</p>
CHR 12	520 Huron Street	Residence	Heritage Listed Property	<p><u>Historical:</u> - Built in 1909 (City of London 2019).</p> <p><u>Design:</u> - The two-storey buff brick house with a hipped roof and buff brick chimney is partially obscured by vegetation. Decorative elements are representative of the Italianate style including the front gable with decorative wood bargeboard forming a pointed arch in the gable. There is a single round arched window in the gable. The house is three-bay with slightly arched windows with concrete sills. A porch spans the front façade.</p> <p><u>Context:</u> -The residence is located on the north side of the curve of Huron and William streets. The property is adjacent to the Huron Street Woods associated with the Thames Valley Trail.</p>	 <p data-bbox="2184 1245 2809 1280">View of CHR 12 from Huron Street (AECOM 2020)</p>

Feature ID	Location/Address	Resource Type	Heritage Recognition	Description ¹	Photos
CHR 13	534 Huron Street	Place of Worship	Heritage Listed Property	<p><u>Historical:</u></p> <ul style="list-style-type: none"> - Built in 1960, it is currently the Or Shalom Synagogue (City of London 2019). <p><u>Design:</u></p> <ul style="list-style-type: none"> -It is an outstanding and unique example of regional-influenced modernist style and design. - The stone and brick synagogue complex has large windows, a cantilevered entry, a glass-enclosed passageway, and stair railings, The doors and windows feature stylized Jewish motifs, and interior wood paneling. - Architect: Philip Carter Johnson, Massey Medal-winning architect (1953). Drawings held at Or Shalom Archives. - Builder: Elis-Don (https://pub-london.escribemeetings.com/filestream.ashx?DocumentId=18572) <p><u>Context:</u></p> <ul style="list-style-type: none"> -The building is set far back from Huron Street. The rear of the property is adjacent to the Huron Street Woods, associated with the Thames Valley Trail. 	 <p data-bbox="2188 641 2809 675">View of CHR 13 from Huron Street (AECOM 2020)</p>
CHR 14	Thames River	Watercourse	Canadian Heritage River	<p><u>Historical:</u></p> <ul style="list-style-type: none"> - includes more than 11,000 years of continuous occupancy by Canada's Aboriginal Peoples and a rich history of European exploration and settlement. - Played an important role in the War of 1812 where the Shawnee Chief Tecumseh died at the Battle of Moraviantown. A peace treaty later defined the Canadian-American border in what is now southwestern Ontario. - Was the terminus for the Underground Railway for fugitive American slaves prior to the American Civil War. - Recognized as the birthplace for Canadian agriculture, it remains the agricultural heartland of eastern Canada to this day. <p><u>Context:</u></p> <ul style="list-style-type: none"> - The Middle and South Thames join east of London and the North and South branches meet at the Forks in London, the city's most important historical landmark. - The river corridor remains largely unchanged and appears much as it did 300 years ago. (https://chrs.ca/en/rivers/thames-river) 	 <p data-bbox="2188 1205 2809 1239">Google Satellite view of the Thames River, City of London, 2020</p>

