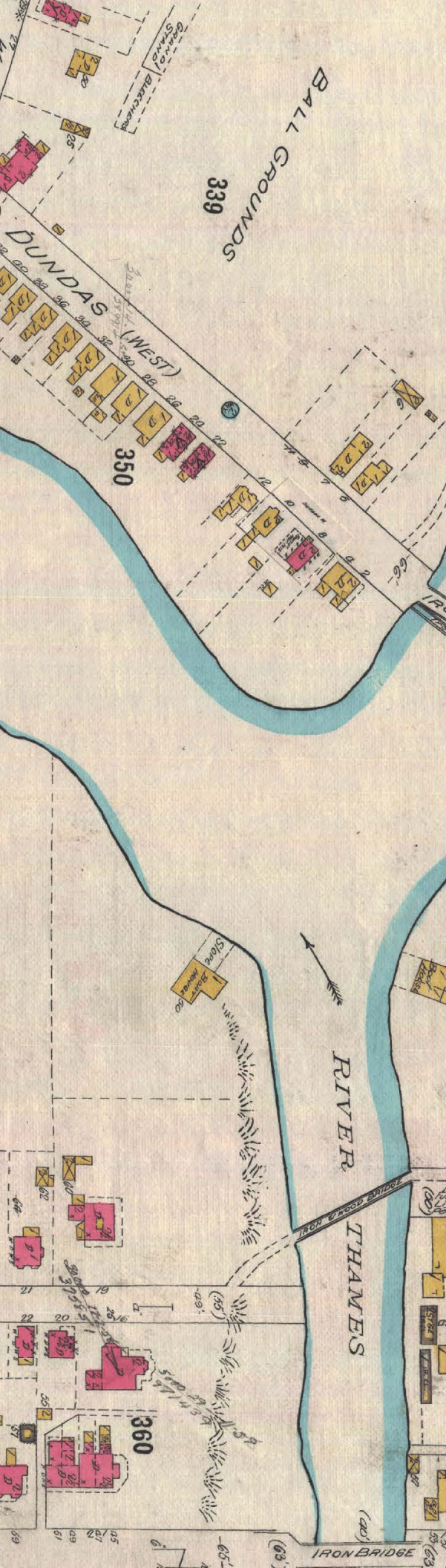


Archaeological Management Plan

June 2017



London
CANADA

ARCHAEOLOGICAL MANAGEMENT PLAN

June 2017

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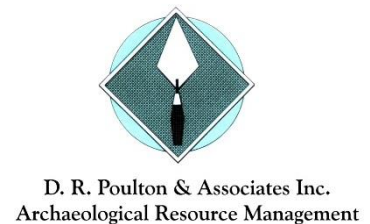


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EXECUTIVE SUMMARY

The archaeological sites that are the physical remains of the City's 13,000-year settlement history represent a fragile and non-renewable cultural heritage resource that must be conserved and protected.

There are clear precedents in law that illustrate the significant financial and political costs of ineffective protection of archaeological sites. These include recent court cases involving Indigenous interests in their archaeological records, as well as a stop work order issued when human remains are uncovered on a development site — these are two examples of the ways in which archaeological resources affect property owners and the municipalities in which they are located.

Most importantly, the Planning Policy Statement (PPS) (2014) states that “Development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved” (*Provincial Policy Statement*, Ontario Ministry of Municipal Affairs and Housing, 2014:29).

Other important policy initiatives, such as those found in the Report of the Ipperwash Inquiry (Policy Panel), one of which recommends that every municipality in Ontario adopt an Archaeological Management Plan (AMP), have also heightened public perception of the importance of these conservation efforts. The City of London was among the first municipalities in Ontario to prepare an AMP (1996), which are now referred to as Archaeological Management Plans. The AMP (1996) constituted the City's first comprehensive approach to the conservation of archaeological resources.

This document consists of a review and update of the archaeological potential model developed in the AMP (1996) and presents a new AMP (2017), which not only integrates the revised archaeological potential model but recognizes the requirements of legislation and best practices in archaeological resource management that have evolved since 1996. With an updated AMP in hand, City of London can more easily identify where archaeological assessments should be required and manage archaeological resources within the City's jurisdiction.

Once the updated AMP is in place, the risk of unfortunate surprises occurring (such as disturbing a burial site or 19th century building foundation) is further reduced, and public awareness of archaeological resources is considerably increased. City of London Planning Services and Development Services, along with property owners, developers, and prospective buyers, know beforehand whether archaeological investigations are necessary. Citizens will know their community's history better and with more cultural heritage resources identified and interpreted within London, both citizens and tourists will have a greater selection of places to visit. Indeed, careful planning for the conservation and interpretation of archaeological resources will promote economic growth and offer opportunities for improving local quality of life.

Also, the updated AMP is an invaluable tool for planners and developers to understand and follow an enhanced process for undertaking archaeology in advance of land disturbance.

More specifically, the City of London's AMP (1996) had three major objectives, which apply equally to the AMP (2017):

- the compilation of detailed, reliable inventories of registered and unregistered archaeological sites within the City;

- the development of an archaeological site potential model, based on known site locations, past and present land uses, environmental and cultural-historical data, and assessment of the likelihood for survival of archaeological resources in various urban contexts; and,
- the provision of recommendations concerning the preparation of archaeological resource conservation and management guidelines for the City of London.

One of the important tasks of this review and update of the archaeological potential model constructed during the AMP (1996) was to determine if archaeological sites documented after 1996 were located within the zone of predicted archaeological potential. Between 1996 and 2016, 2,366 hectares (approximately 5% of the geographical area of the City of London) was removed from the composite archaeological potential layer; 298 archaeological sites were documented. It was determined that the Indigenous archaeological site potential layer worked very well at capturing such sites and that with the addition of one modelling layer and adjustment of the water layer, all known Indigenous sites are now captured by the model.

The AMP (2017) also benefitted from engagement with Indigenous communities, in particular Chippewa of the Thames First Nation, who had representatives on the Steering Committee for the project. The plan recommends engagement with Indigenous communities in the City's archaeological review and planning application processes.

The identification of areas in the historic archaeological site potential layer, outside of the Early Urban Core, East Industrial District, and Core Expansion Area, defined herein, was also generally successful. With the addition of digitization of residential, commercial and industrial features from historic mapping and cemeteries, the historic archaeological potential layer now captures all of the historic archaeological sites discovered since 1996. The Early Urban Core, East Industrial District, and Core Expansion Area, defined as having archaeological potential, have been modelled for integrity such that any areas of remaining archaeological potential are now clearly defined.

The role of the City of London in the conservation of cultural heritage resources is crucial. Although a matter of provincial interest, planning and land use control are predominantly municipal responsibilities and the impact of municipal land use decisions on archaeological resources is substantial. This is particularly the case since municipally-approved developments constitute the majority of land disturbing activities in the Province. The primary means by which these resources may be protected is through the planning and development approvals process. In recognition of these facts, the final task was to update, in accordance with the new provincial legislative mandate, a series of policies within the planning and development approvals process that will ensure the conservation of these valuable cultural heritage resources within the overall process of change and growth in the City. The AMP (2017) policies are consistent with the *Provincial Policy Statement* (2014) and the revised *Ontario Heritage Act*.

It is the intent of the City of London that the AMP (2017) replaces the AMP (1996).

In summary, the City of London has made a wise choice in building on their past commitment and joining with other major municipalities in Ontario in adopting progressive policies for the wise use and conservation of its archaeological record.

1.0 INTRODUCTION

This review of the Archaeology Master Plan (AMP) (1996) and preparation of a new Archaeological Management Plan (AMP) (2017) presents the City of London's comprehensive approach to the conservation of archaeological resources. It is intended to guide City of London in making decisions that could impact the integrity of archaeological sites. This report is thus focussed on policy and its implementation and explains how the City's approach is situated within the larger provincial context.

The report is divided into two parts, the first of which presents the review and update to the archaeological potential model (1996). Part II includes outlines of the threats to archaeological features and the legislative framework at the federal, provincial, and municipal level to address those threats. That is followed by an introduction to the concept of archaeology within the context of cultural heritage planning, its role in society, and the role of Indigenous communities in the conservation of their histories. This is followed by how the City will apply the archaeological potential model across the many divisions in the City that participate in planning and development processes along with an explanation of the various roles that review agencies play in the process. The report ends with discussions of issues around emergency finds, ownership, and curation of artifacts and periodic review of the model. First, however, archaeology in the context of cultural heritage is defined.

1.1 Defining Archaeology in the Context of Cultural Heritage

Effectiveness in guiding the incorporation of archaeological resources within the overall planning and development processes fundamentally rests upon a clear understanding of the physical nature of cultural heritage resources, the variety of forms they may assume, and their overall significance and value to society.

In common usage, the word *heritage* tends to be vaguely equated with "things of the past." While it may be arguable that such an interpretation of the term is true, it is so only in the very narrowest sense. An interest in heritage does indicate an awareness of, and concern for "things of the past," yet at the same time it recognizes that these "relics" are worthy of such interest primarily because they provide insights into the processes that have helped to shape the contemporary world in which we live, and that will continue to exert an influence into the future. Examination of our cultural heritage, therefore, not only allows us to learn about our origins and our history, but it also provides a means of understanding who we are now, and a means of glimpsing who we may become.

In recognition of the essentially timeless quality of these "things of the past," Ontario's heritage has been defined as:

all that our society values and that survives as the living context — both natural and human — from which we derive sustenance, coherence and meaning in our individual and collective lives (Ontario Heritage Policy Review [OHPR] 1990:18-19).

Such an all-encompassing definition has the additional advantage of recognizing that our heritage consists of both natural and cultural elements. As human beings, we do not exist in isolation from our natural environment. On the contrary, there has always been a complex interrelationship between people and their environment and each has shaped the other, although the nature and direction of these mutual influences has never been constant. This definition further recognizes that cultural heritage not only includes that which is tangible, but also that which is intangible.

All of those elements that make up this cultural heritage are increasingly being viewed in the same manner as are “natural resources,” in that they are scarce, fragile, and non-renewable. These cultural heritage resources, therefore, must be managed in a prudent manner if they are to be conserved for the sustenance, coherence and meaning of future generations, even if their interpretations of the significance and meaning of these resources in contributing to society may be different from our own. Understanding the links between the natural heritage and cultural heritage, in particular the importance of the Thames River and associated stream corridors, is a significant objective in our effort to identify and conserve the archaeological record of the City of London.

The development of the means by which to manage these cultural heritage resources depends, in turn, on the recognition that on a practical level it is necessary to categorize them by type, yet at the same time these basic types also form a continuum. Both the distinctiveness of the individual categories of cultural resources and the overlap between these categories was recognized by the Ontario Heritage Policy Review. This work (OHPR 1990:23) defined three broad classes of cultural heritage resources:

- Immovable Heritage – land or land-based resources, such as buildings or natural areas that are “fixed” in specific locations; for example built structures, various kinds of archaeological sites, life science sites such as rare species habitats, and streetscapes and other natural, scenic, and cultural landscapes;
- Movable Heritage – resources, such as artifacts and documents, that are easily “detachable” and can be transported from place to place; for example 500 year old ceramic vessels, arrowheads, or documents; and
- Intangible Heritage – such as traditional skills and beliefs, stories and narratives, songs, and names.

Each of these categories, however, often overlaps with others. Archaeological sites, for example, are “immovable” resources, yet in most cases these sites are formed by concentrations of manufactured or modified objects that are “movable” resources. Similarly, “movable” or “immovable” resources, such as buildings or documents often derive their significance through their intangible cultural associations, as they may reflect or typify specific skills or beliefs.

Despite the fact that all cultural heritage resources should be viewed as components of a single continuum, there remains a need to distinguish between the three basic categories outlined above. This is because the approaches to the examination of resources within the different categories must be specifically tailored to their characteristics and needs. Not only does the study of the different types of resources require different and often highly specialized techniques, but the threats that these resources face are often different as well. Thus municipal decisions related to the conservation of different types of resources are informed by different sets of considerations. Likewise, the means by which such decisions are implemented will also vary.

The *Provincial Policy Statement* (PPS 2014) defines archaeological resources (Section 6.0, Definitions) as including “artifacts, archaeological sites, and marine archaeological sites.” Individual archaeological sites are distributed in a variety of locational settings across the landscape, being locations or places that are associated with past human activities, endeavours, or events. These sites may occur on or below the modern land surface, or may be submerged under water. The physical forms that these archaeological sites may take include: surface scatters of artifacts; subsurface strata which are of human origin, or incorporate cultural deposits; the remains of structural features; or a combination of these attributes.

As such, archaeological sites are both highly fragile and non-renewable. The *Ontario Heritage Act* (Ontario Regulation 170/04) defines “archaeological site” as “any property that contains an artifact or any other physical evidence of past human use or activity that is of cultural heritage value or interest;” “artifact” as “any object, material or substance that is made, modified, used, deposited or affected by human action and is of cultural heritage value or interest;” and “marine archaeological site” as “an archeological site that is fully or partially submerged or that lies below or partially below the high-water mark of any body of water.”

Archaeological fieldwork is defined as “any activity carried out on, above or under land or water for the purpose of obtaining and documenting data, recovering artifacts and remains or altering an archaeological site and includes monitoring, assessing, exploring, surveying, recovering, and excavating.”

The London Advisory Committee on Heritage (LACH) advises Municipal Council pursuant to Section 28 of the *Ontario Heritage Act* and reports to the Municipal Council, through the Planning and Environment Committee. The purpose of the LACH is to advise the Municipal Council on the conservation of cultural heritage resources in the community and to guide London in the conservation of its cultural heritage through planning, education, and stewardship. It is for this reason that LACH members from their Archaeology Sub-Committee were represented on the Steering Committee helping to oversee this AMP (1996) review and AMP (2017).

PART I: ARCHAEOLOGICAL MASTER PLAN (1996) REVIEW

1.0 REVIEW AND UPDATE TO THE ARCHAEOLOGICAL POTENTIAL MODEL (1996) - GIS

1.1 Introduction

Archaeological potential is defined in the *Provincial Policy Statement* (PPS 2014) as:

...areas with the likelihood to contain archaeological resources. Methods to identify archaeological potential are established by the Province, but municipal approaches which achieve the same objectives may also be used.

For the past twenty-five years, municipalities have created detailed archaeological potential models for their jurisdictions, for the most part within the context of carrying out archaeological management (master) plan studies. Since the mid-1990s, these models have been undertaken on a GIS (Geographic Information Systems) platform in order to best manipulate and analyse site location attribute data and create a simple to use digital map by which planners can determine the need for archaeological assessment in advance of soil disturbance.

One of the objectives of this review was to evaluate the effectiveness of the archaeological potential model developed during the AMP (1996) in capturing previously undocumented sites. To accomplish this, the locations of all new archaeological sites discovered since 1996 (298 sites) were evaluated against the modelling to discover how well the model worked at predicting those locations.

1.2 Indigenous Archaeological Site Potential Layer

Throughout most of Indigenous history, the inhabitants of the lands within the City of London were hunter-gatherers and practised an annual subsistence round to exploit a broad range of natural resources for food and raw materials for such needs as shelter construction and tool fabrication. Later populations were agriculturalists; their villages, like the Lawson site, would have been situated to accommodate hundreds of hectares of surrounding agricultural fields. Regardless of agriculture, people would have ranged throughout various terrestrial and marine environments to hunt and fish. Assuming, therefore, that access to natural resources influenced and constrained the movement and settlement of peoples, the goal of the AMP (1996) was to understand what these resources were, how they may have been distributed on the landscape, and how their use and distribution may have changed over time.

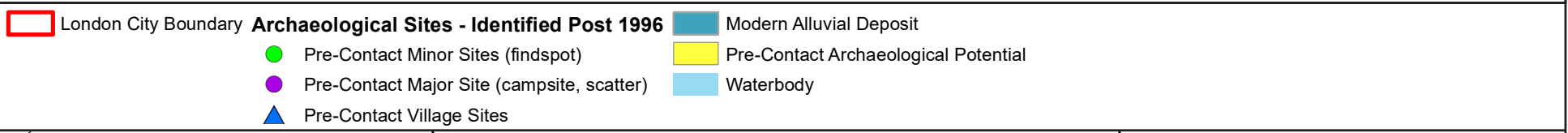
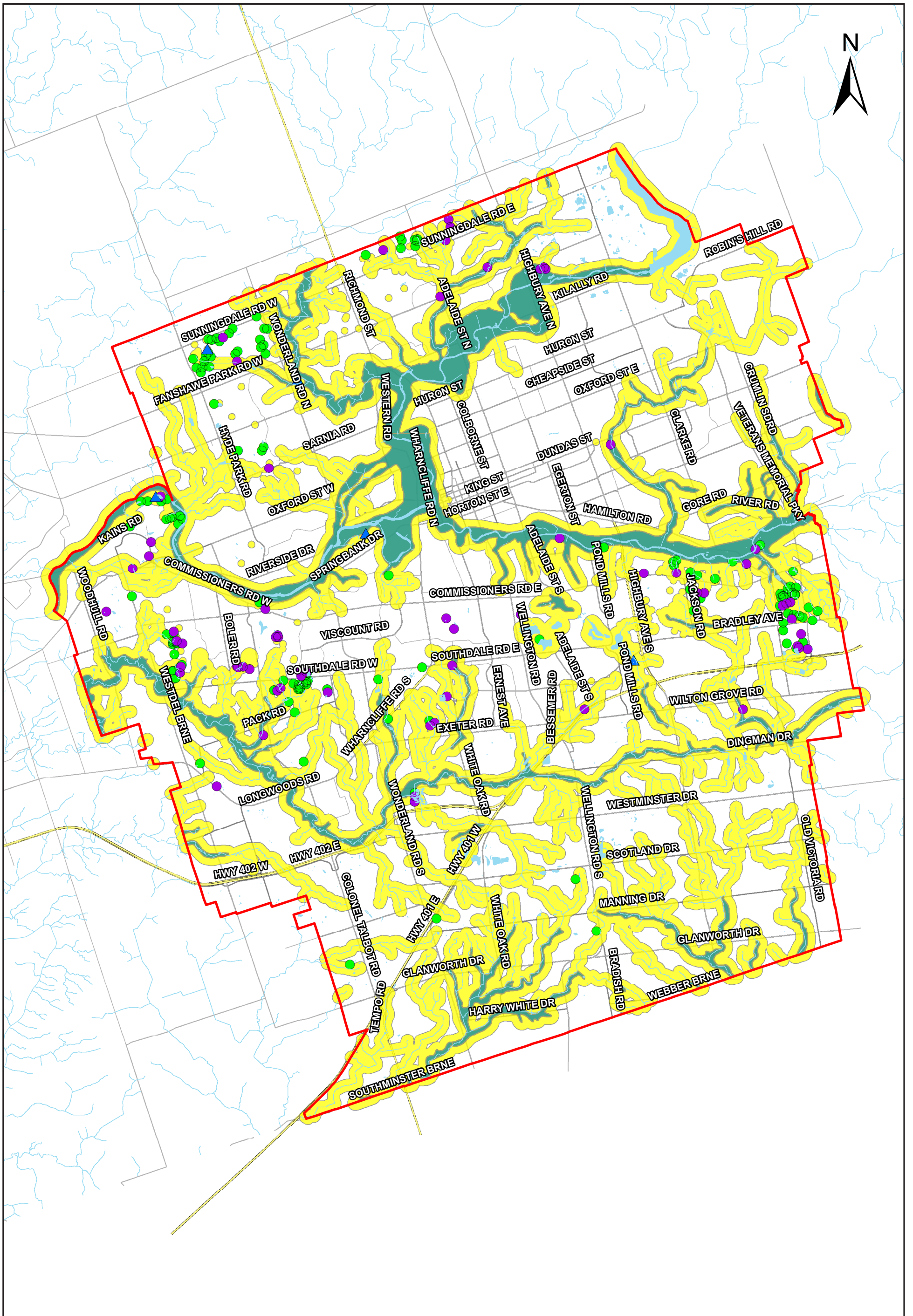
The modelling approach in the AMP (1996) included evaluation of a number of biophysical attributes including distance to various classes of water sources, soil texture and drainage, geomorphology, slope, aspect, and the general topographic variability surrounding sites. Analyses of these attributes were undertaken for 427 known Indigenous site locations and 490 randomly generated non-site locations. The proximity of water sources was considered to have been the significant factor influencing land-use patterns within the City. The 1:10,000 Ontario Base Map (OBM) was employed for base watercourse data in addition to utilizing a number of historic maps to digitize additional water courses. Buffers of 177 to 220 metres from various water sources were employed in the model — based on a statistical analysis of site proximity to water with the largest buffers allocated to feeder streams and ponds and wetlands and the smallest buffers to the Thames River and larger streams (see

Section 6.9.2 of the AMP 1996). While the other attributes were examined, none were used in the final archaeological potential model as they were not useful for predicting site locations.

The first task in the review of the archaeological potential model was to consult the Ministry of Tourism Culture and Sport (MTCS) archaeological site database as well as the reports that the City had on file to review the details and locations of those Indigenous sites found since 1996. Two hundred and twenty-three (223) Indigenous sites had been found, 78 of which were substantial enough sites (yielding >4 artifacts) that they should have been captured by the Indigenous archaeological site potential layer — typically camps or settlements. The remaining sites were find spots that cannot be modelled given their ephemeral nature. Of the 78 sites, 70 (90%) were captured by the Indigenous archaeological site potential layer in the AMP (1996). A 90% capture rate can be considered successful. In an effort to determine the reason(s) why the remaining eight sites had not been captured, it was discovered that seven would have been captured if the former courses of the Thames River and its major streams were included in the water layer. These missed sites were captured by adding alluvial soils to the Indigenous archaeological site potential layer with a 220 metre buffer, accounting for an additional 980 hectares or 3.4% of total composite archaeological potential layer (AMP 2017). This resulted in a new capture rate of 99% leaving one site.

The remaining site, the 1.3 hectare Brian Iroquoian village, was not captured because of water resolution. Although detailed 1:10,000 OBM mapping was used in the archaeological potential model developed for the AMP (1996), enhanced by historic mapping, it was not realised at that time that 1:50,000 National Topographic System (NTS) mapping often has more detail about abandoned stream courses. Once NTS maps had been consulted, it was found that the site was located a distance of 60 metres from water. Thus, the 1:50,000 NTS maps for the City were reviewed and any unmapped water courses were added to the archaeological potential model (AMP 2017).

With these minor additions, the Indigenous archaeological site potential layer can now be considered updated and functioning well in that it captures all previously identified Indigenous sites (Figure 1).



 Archaeological & Cultural Heritage Services 528 Bathurst Street Toronto, ONTARIO M5S 2P9 416-966-1069 F416-966-9723 asiheritage.ca	BASE: Datum and Projection NAD 83 UTM 17N	0 5 Kilometres
		ASI PROJECT NO.: 15SP-079 DRAWN BY: JF DATE: 6/22/2017 FILE: 15SP079_fig1_precontact_potential_update4

Figure 1: Indigenous Archaeological Site Potential Layer

1.3 Historic Archaeological Site Potential Layer

Seventy-five (75) historical sites have been discovered in London since 1996 of which 54 (72%) were captured by the AMP (1996) historic archaeological site potential layer. This is a moderately successful capture rate and the historic archaeological site potential layer required revision in order to better capture former locations of historic sites.

Fifteen of the 21 sites that were not captured by the model are outside of the urban core areas and represent early residential sites (e.g., farmsteads), that are some distance from water, probably as a result of well technology. All of the residences that were available on the digital, spatially referenced *Illustrated Historical Atlas of Middlesex County* (1878), as well as mill locations and other industrial and commercial sites, were added to the historic archaeological site potential layer. While these were not mapped in the AMP (1996), it is now considered best practice as part of archaeological potential modelling exercises to use spatially referenced historical maps for this purpose. These point data are all buffered by 100 metres, around their known boundaries, to accommodate issues in mapping resolution and to capture ancillary structures.

All but eight properties designated under the *Ontario Heritage Act* within the City fell within the historic archaeological site potential layer; seven could be excluded on the basis that they lacked archaeological potential and one property was added to the layer. All cemeteries on the Ontario Genealogical Society database were added to the historic archaeological site potential layer. With this approach, the 15 sites are now captured by the layer increasing its effectiveness to 92%.

1.3.1 Urban Core Areas - Integrity

Six of the 21 sites that were not captured by the AMP (1996) historic archaeological site potential layer are located in the urban core areas. This section explains the approach to improving the capture of historic archaeological sites in urban core areas. Archaeological sites found in the urban cores of cities may represent significant discoveries as they are often among the earliest public administrative, industrial, and commercial enterprises and associated residential complexes within those jurisdictions (e.g., Kingston's Market Buildings, Waterloo County Gaol and Governor's House in the City of Kitchener, the First Parliament Buildings of Upper Canada in Old Town, Toronto).

The modelling for the historic archaeological site potential layer involved identifying the Early Urban Core (Figure 2) although efforts at identifying areas of remaining integrity and the requirement of assessments in advance of development was not systematic, which was typical of historic archaeological resource conservation practice in the early to mid-1990s. Within the historic archaeological site potential layer developed for the AMP (1996), the East Industrial District (Figure 2) was mapped as were historic roads (e.g., Dundas Street) that were buffered by 100 metres on either side thereby capturing many historic residential, commercial and industrial features. A number of early historic communities were also identified, the limits of which were mapped and included as areas of potential.

The integrity layer in the AMP (1996) archaeological potential model was compiled based on a review of existing land uses within the City. The objective was to distinguish between those lands upon which modern development activities had likely destroyed any archaeological resources, and those lands, such as parking lots, schoolyards, parks and golf courses, where archaeological resources could

potentially remain wholly or primarily undisturbed. This layer was compiled using the built-up layer from 1:10,000 OBM together with 1985 aerial photography. Areas deemed to have no remaining archaeological integrity were subsequently excluded from the archaeological potential model. The only exceptions to this were the settlement centres and registered archaeological sites that had not been completely excavated.

It is difficult in urban environments to determine archaeological potential through conventional models that focus on the relationships between archaeological sites and environmental features. By their very nature, urban areas represent areas of long term human habitation and therefore tend to have a rich material record of the past. Instead of determining archaeological potential, it is more important for early settlement areas to assume they have archaeological potential and systematically determine the archaeological integrity of extant open spaces by using the archival record.

Archaeological resources have been discovered accidentally since 1996 on parcels within the Early Urban Core where a Stage 1 archaeological assessment would have identified the potential for those resources to have survived in the modern landscape. Therefore the assessment of integrity within the areas defined on Figure 2 was reviewed and revised. This resulted in the identification of properties where archaeological resources may survive and eliminated those where archaeological resources are clearly no longer extant.

Areas of archaeological integrity are those that based on their current and past land uses have a high probability of the survival of archaeological material, thus retaining archaeological potential. Determining archaeological integrity across a large area involves looking at the development history through a review of historical spatial data (e.g., maps, plans, aerial photographs, etc.).

Three urban core areas were identified within which the systematic assessment of integrity would be undertaken (Figure 2). These include:

- Early Urban Core as defined in the AMP (1996) as “*Pre-1845 early historic London,*” containing 807 properties;
- East Industrial District as defined in the AMP (1996) as “*Historically significant area of oil refining and railways, and supporting industries,*” containing 1,545 properties; and,
- Core Expansion Area as defined in AMP (2017) as *the balance of the pre-1870 development area, with Military Reserve, railways and industry, commercial/institutional, etc.* containing 3,392 properties.

From a GIS/spatial analysis perspective, the initial step in the process of revising the areas of archaeological integrity for these areas was to identify all of the open spaces within them. Open spaces are any areas that currently do not have any built features on the surface (e.g., parks, yards, parking lots, alleyways, etc.). Yards were considered for all of the urban core areas and were included if they equalled or exceeded 50 square metres in extent.

Open spaces were identified by extracting building footprint data (i.e., London GIS shape file - *strctpoly.shp*) from property parcel data (i.e., London GIS shape file - *Parcels.shp*), which created a new layer that represents all the open spaces in the urban core areas. This layer became the subject area of integrity analysis. All open spaces were seen as having archaeological potential with the goal of the analysis to determine if archaeological deposits could still be intact in those areas.

Archaeological integrity was then defined in four categories:

1. Open areas that show significant development in the latter half of the 20th century are flagged as having compromised integrity and therefore no remaining archaeological potential (e.g., parcel south of South Street, Waterloo Street on the east and Wellington Street on the west – includes 319 South Street);
2. Open spaces showing structures in the late 19th or early 20th centuries but no structures in the later 20th century. These zones are flagged as having integrity and therefore having archaeological potential (e.g., parking lot at Bathurst Street and Thames Street, which is Municipal Lot 12 -199 Ridout Street North; parking lot at Fullarton Street and Talbot Street, which is a private lot for 120 Queens Avenue , Lot 107);
3. Open spaces that show no or light structures on any standard historical map are flagged as having integrity (e.g., Victoria Park); and,
4. Open spaces where historical mapping is limited are flagged as requiring Stage 1 archaeological assessments). These areas require more historical data to be able to determine the integrity status (e.g., storage parking area of London Hydro).

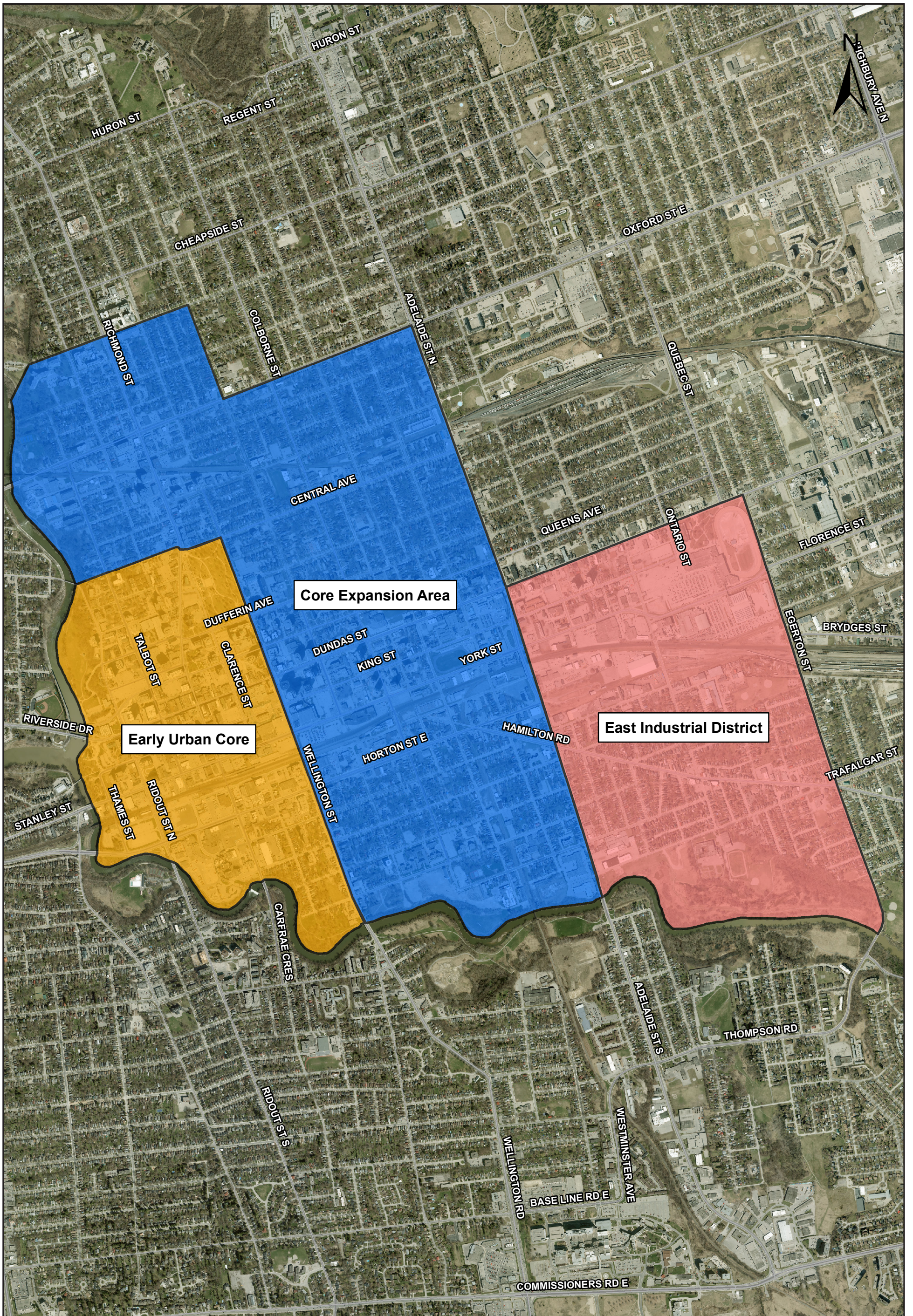
The review of archaeological integrity was then accomplished in two phases: an initial classification/spatial query phase followed by a visual inspection phase. The classification/spatial query phase was used to determine areas that fall under the third category — open spaces that show no structures on any available historical maps. These are areas where the determination of archaeological potential is achieved by running a series of geo-referenced historical maps through a supervised image classification. The supervised image classification assigns a numeric value to all of the colours on a map, similar colours are grouped into a single class, and each class is then extracted from the map and converted in a GIS layer. Image classification was used on a series of fire insurance plans for the Early Urban Core, East Industrial District, and Core Expansion Area. From the classified image, all building footprints were extracted and converted into a feature class layer. This process was done for each map set (Fire Insurance Plans – 1881, r. 1888, 1892, r. 1907, 1912, r. 1915) creating a separate building footprint layer. The historical building footprint layer is used in a spatial intersect query with the open space layer to identify current open spaces that show no structures on any historical maps. These areas are then classified as having integrity. This is only the first step in the overall integrity evaluation process.

The second step, visual inspection, involved examining the remaining parcels that were not categorized in the classification/spatial query phase; those remaining parcels were subject to a historical map review in order to determine the integrity of each parcel. This was accomplished by a visual inspection of all of the historical spatial data available for each property. As described earlier, integrity is determined by reviewing historical spatial data to get a better understanding of the development history of a property. Aerial photographs from the 1940-1960s are the primary source for understanding that construction techniques and developments in the second half of the 20th century tend to be much more aggressive than in earlier periods. Using the four criteria above as a guideline, archaeological integrity was determined on a block by block basis for the Early Urban Core, East Industrial District, and Core Expansion Area.

Thus a reliable layer of remaining integrity for the Early Urban Core, East Industrial District, and Core Expansion Area has been created. No revisions were made to integrity outside of the three urban core areas (Figure 3).

With these adjustments, the historic archaeological site potential layer can now be considered updated and functioning well in that it captures all previously identified historic sites (Figure 4).

It should be noted, that in the future, alterations to the evaluation of integrity of the archaeological potential model may result from a detailed Stage 1 archaeological assessment which demonstrates clearly that a study area has been severely disturbed thereby negating archaeological potential.



- Core Expansion Area
- Early Urban Core
- East Industrial District



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BASE:
 Datum and Projection
 NAD 83 UTM 17N



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 DATE: 6/22/2017 FILE: 15SP079_fig2_DowntownArea_update3

Figure 2: Early Urban Core, Proposed Core Expansion, & East Industrial District

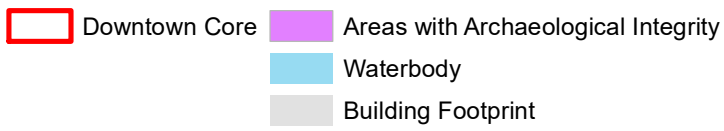
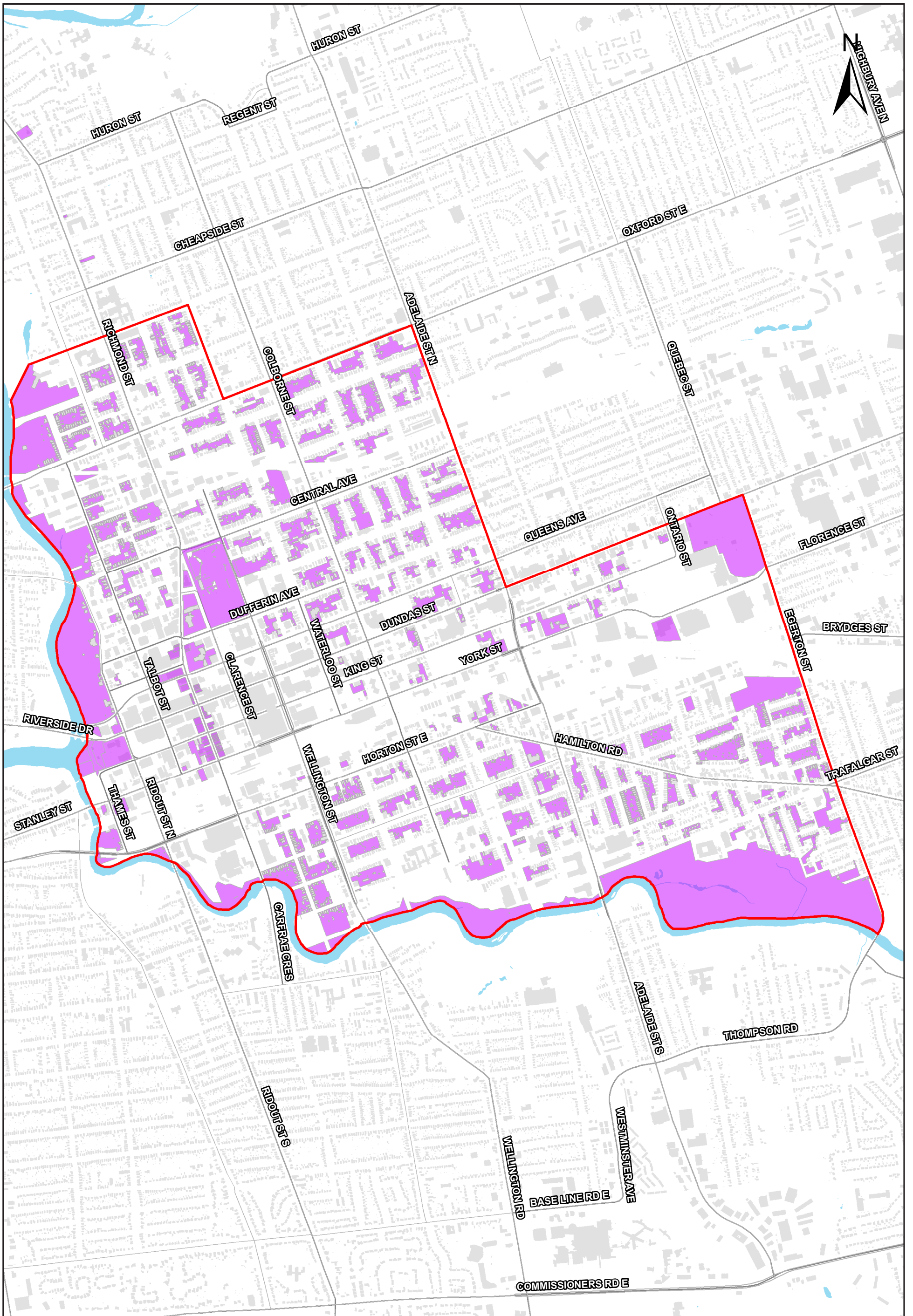
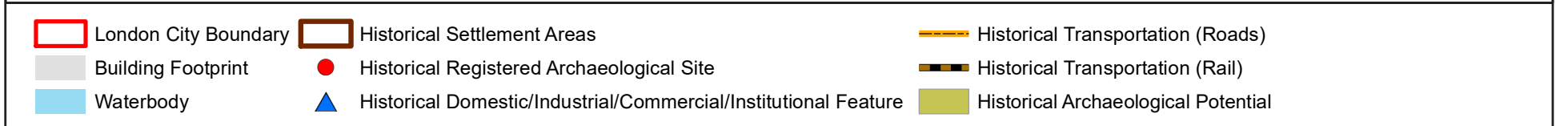
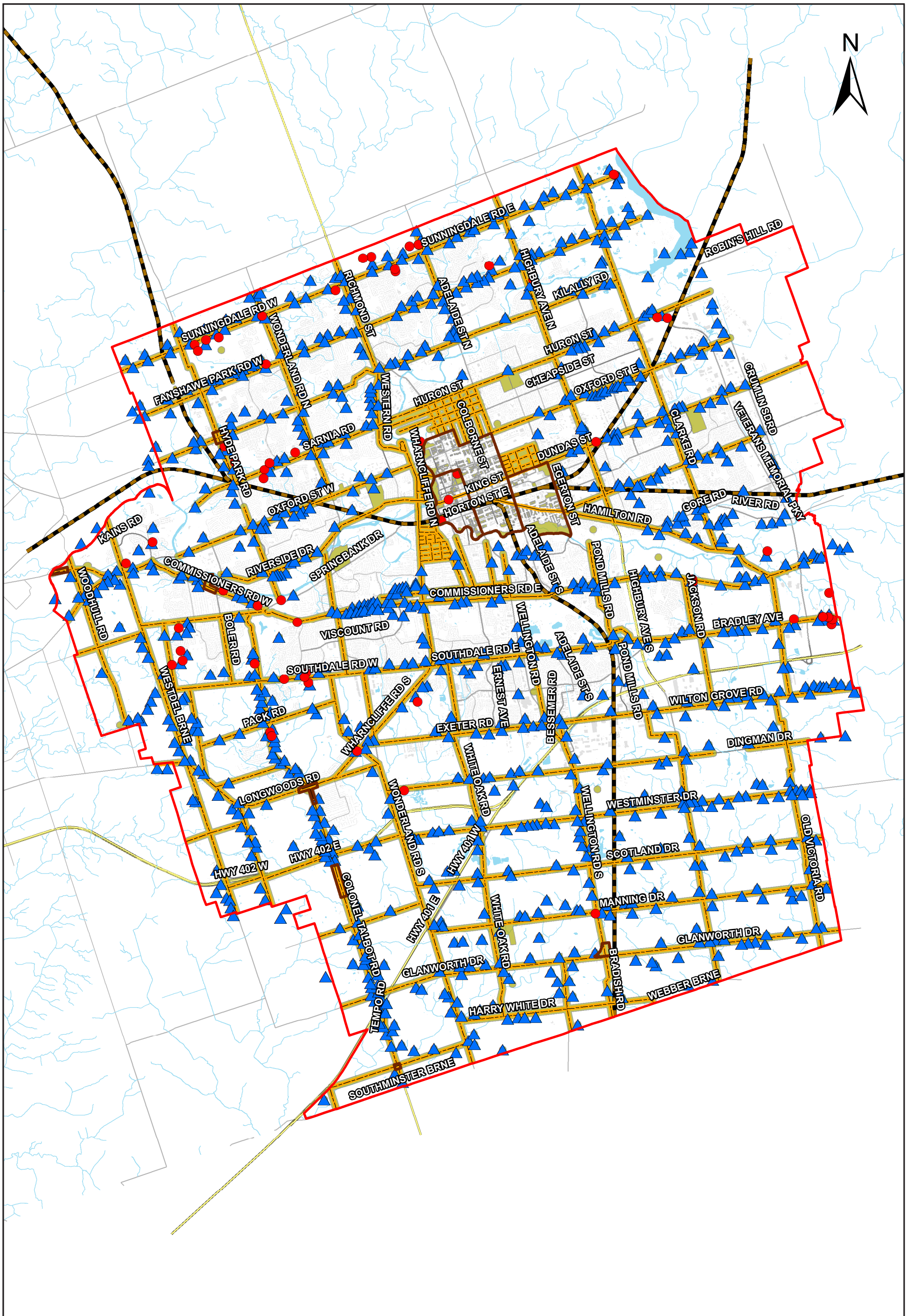


Figure 3: Early Urban Core, Proposed Core Expansion, & East Industrial District Areas with Archaeological Integrity



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	<p>ASI PROJECT NO.: 15SP-079 DRAWN BY: JF DATE: 6/22/2017 FILE: 15SP079_fig4_HistoricPoten_update3</p>	

Figure 4: Historical Archaeological Site Potential Layer

1.4 Composite Archaeological Potential Layer - Revised

The composite archaeological potential layer consolidates the Indigenous archaeological sites potential layer, the historical archaeological sites potential layer, and the integrity layer, as defined through application of the various modelling criteria (Table 1; Figure 5). All areas lacking integrity were excluded from this layer and it now captures all of the sites documented since 1996.

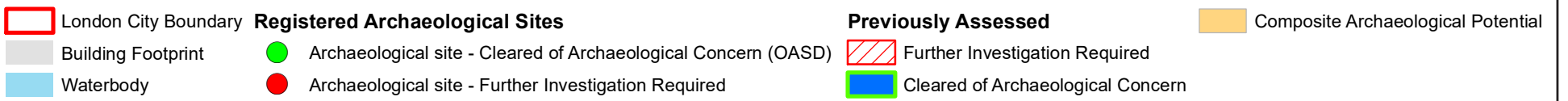
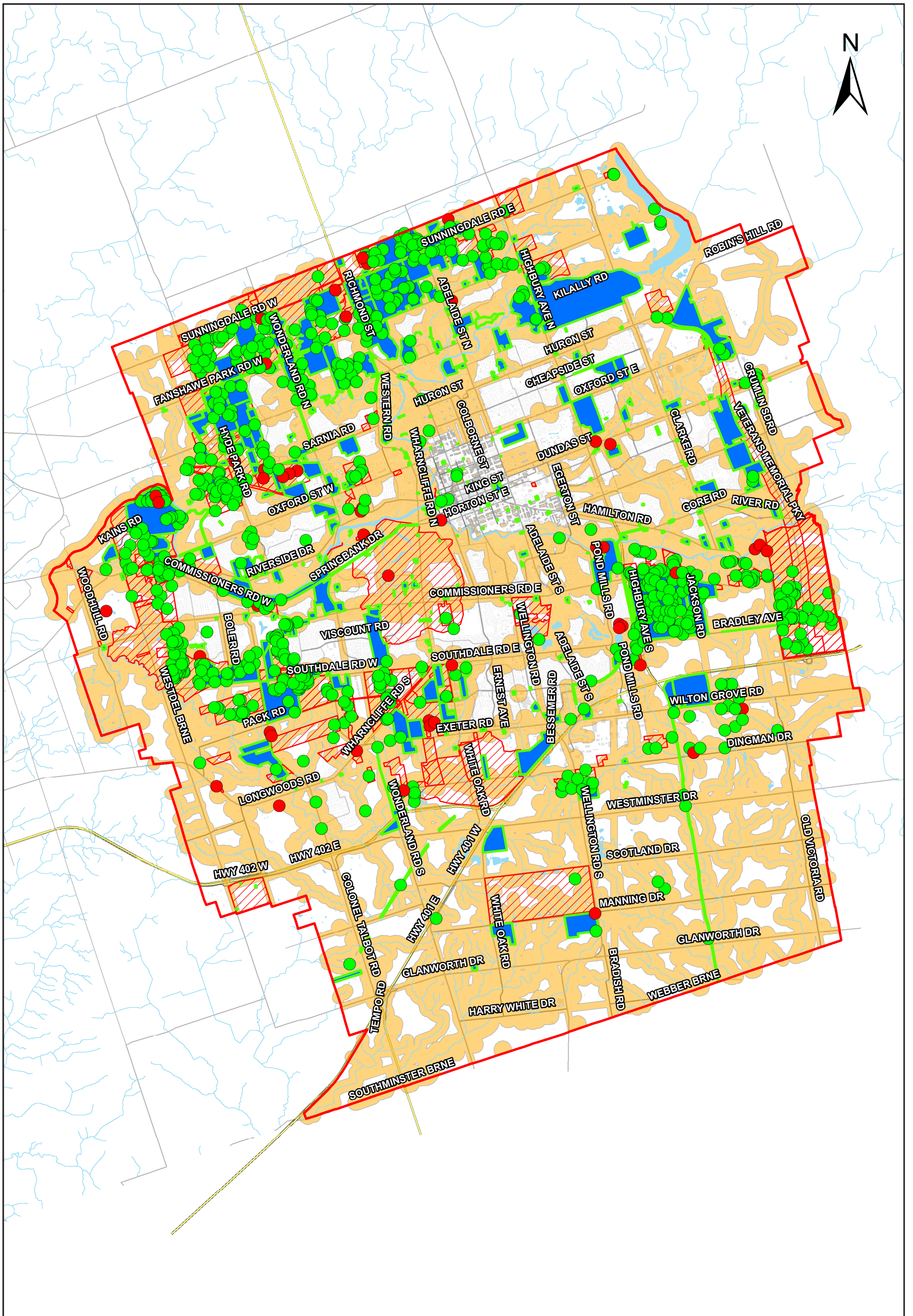
The archaeological potential planning layer (Figure 6) will be the layer that Planning Services and Development Services and any other City planner employs when assessing an application for archaeological potential. This layer is the composite archaeological potential layer minus areas that have previously been subject to archaeological assessments and require no further work, segmented by the City of London's property parcel layer. Areas that have been assessed but require further work are mapped on this layer and have been coloured red as a cautionary notice to planners. This layer will be updated annually (see Section 8.1).

Table 1: Summary of Archaeological Site Potential Modelling Criteria

Environmental or Cultural Feature	Buffer Distance (metres)	Buffer Qualifier
<i>Indigenous Site Potential</i>		
Thames River and various other water sources such as streams	177-220	
alluvial soils	220	
registered archaeological sites	100	250 metres for villages
<i>Historic Site Potential</i>		
historic settlement centres	polygon as mapped	no buffer, override integrity
domestic sites	100	none
breweries and distilleries	100	none
hotels/taverns	100	none
historic schools and churches	100	none
historic mills, forges, extraction industries	100	none
early settlement roads	100	both sides
early railways	50	both sides
cemeteries	100 around points and polygons	10 metres on modern
registered archaeological sites	100	if not completely excavated

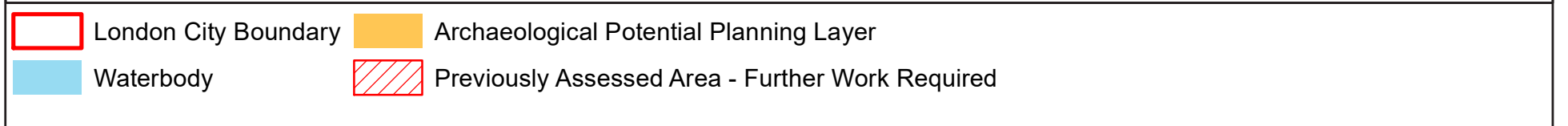
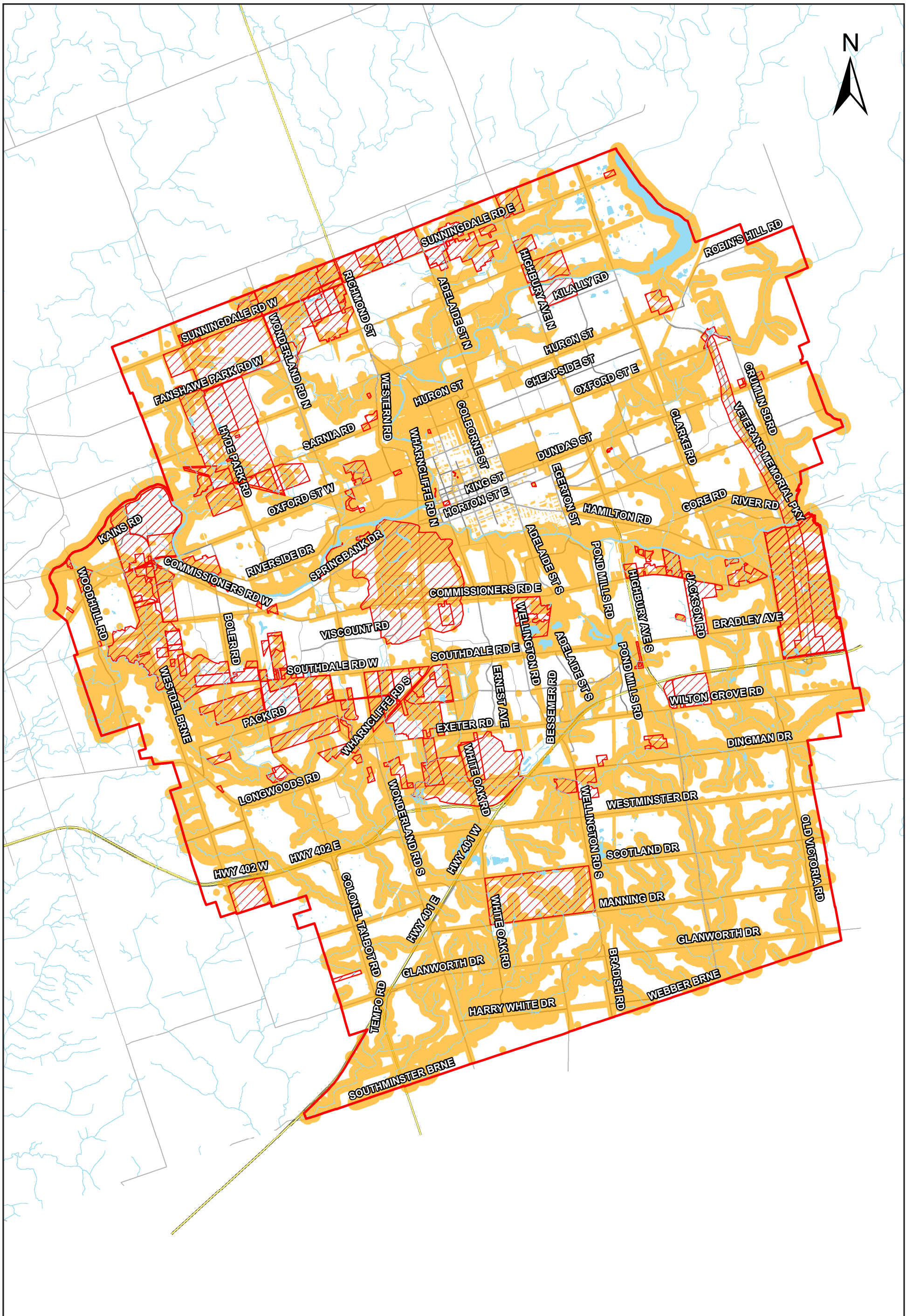
1.5 Summary

While London has employed an AMP for twenty years, the City has furthered archaeological conservation by conducting a review of the AMP (1996) and updating the archaeological potential model. It is the principal objective of London's new AMP to judiciously and uniformly apply the archaeological potential model across the City, as detailed below.



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Figure 5: Composite Archaeological Potential Layer



 Archaeological & Cultural Heritage Services 528 Bathurst Street Toronto, ONTARIO M5S 2P9 416-966-1069 F416-966-9723 asih heritage.ca	BASE: Datum and Projection NAD 83 UTM 17N	 0 5 Kilometres
	ASI PROJECT NO.: 15SP-079 DRAWN BY: JF DATE: 6/23/2017 FILE: 15SP079_fig6_ArchPlanningLayer_updates5	

Figure 6: Archaeological Potential Planning Layer

PART II: ARCHAEOLOGICAL MANAGEMENT PLAN (2017)

1.0 INTRODUCTION

The archaeological resource review and management approaches that have been designed and updated in this report are both well-reasoned and comprehensive and are consistent with any changes in provincial legislation since 1996.

London's AMP has also addressed wider issues, beyond those of site identification and mitigation through excavation, to descendant community participation, artifact care and the encouragement of greater awareness on the part of London citizens of the archaeological record of the place where they live.

2.0 PLANNING FOR ARCHAEOLOGICAL SITE CONSERVATION

In Ontario, the conservation of cultural heritage is accepted as a legitimate objective of planning activity, as it is in many other provinces and countries. As Section 2 of the *Planning Act* states, “the conservation of features of significant architectural, cultural, historical, archaeological or scientific interest” is a matter of provincial interest. This is echoed in the PPS (2014), which is issued under the authority of Section 3 of the *Planning Act*.

The Province's natural heritage resources, water resources, including the Great Lakes, agricultural lands, mineral resources, and cultural heritage and archaeological resources provide important environmental, economic and social benefits. The wise use and management of these resources over the long term is a key provincial interest. The Province must ensure that its resources are managed in a sustainable way to conserve biodiversity, protect essential processes and public health and safety, provide for the production of food and fibre, minimize environmental and social impacts, and meet its long-term needs (PPS, Ministry of Municipal Affairs and Housing 2014:4).

This provincially mandated planning requirement provides an important mechanism for protecting natural and cultural heritage resources in order to ensure that future development (e.g., residential, industrial and infrastructure construction) in London clearly respects and follows provincial policy.

Conservation planning and management is generally concerned with ensuring that valued cultural heritage resources are conserved and protected, in a sound and prudent manner, in the continuing and unavoidable process of change in the environment. A key issue is that the role of the custodian and steward of these resources generally falls to the private property owner. It is neither possible nor desirable that all resources be brought into public ownership. Therefore, conservation management is undertaken by a variety of actors, and it is necessary, through legislation and education, to bring all of these actors together in pursuit of a common goal. In many instances, it is traditional planning mechanisms that now seek to ensure that cultural heritage resources are conserved and/or maintained within the process of change. Their conservation is ensured in The London Plan, which sets the goals and priorities to shape the growth, conservation, and evolution of the City over the next 20 years.

3.0 THREATS TO CULTURAL HERITAGE AND ARCHAEOLOGICAL RESOURCES

Protecting archaeological sites has become especially important in southern Ontario, where landscape change has been occurring at an ever increasing rate since 1950, resulting in substantial losses to the non-renewable archaeological record.

The scale of the threats facing the archaeological record of southern Ontario were considered in a study in which rates of demographic and agricultural change were examined over the last century for south-central Ontario, and estimates generated of the number of archaeological sites that have been destroyed (Coleman and Williamson 1994). While the period of initial disturbance to sites was from 1826 to 1921, when large tracts of land were deforested and cultivated for the first time, that disturbance typically resulted in only partial destruction of archaeological data as most subsurface deposits remained intact. However, unprecedented population growth in the post-World War I period, resulted in large amounts of cultivated land being consumed by urban growth.

The nature and potential magnitude of the threat that continued landscape change posed to a finite and non-renewable archaeological feature base between 1951 and 1991 was significant; it is possible that more than 10,000 sites were destroyed during that period of which 25% represented significant archaeological features that merited some degree of archaeological investigation, since they could have contributed meaningfully to our understanding of the past (Coleman and Williamson 1994: Tables 2 and 3).

Archaeological sites also face a less direct, but equally serious form of threat in which man-made changes to the landscape inadvertently alter or intensify destructive natural processes. Increased run-off of surface water in the wake of forest clearance, for example, or hydrological fluctuations associated with industrial and transportation development may result in intensified rates of erosion on certain sites due to processes such as inundation. The amount of land (and hence the potential number of archaeological sites) which has been subjected to these destructive forces is impossible to quantify, but is likely to be considerable.

While there has recently been a marked reduction in the rate of archaeological site destruction throughout much of the Province, since certain municipalities adopted progressive planning policies concerning archaeological site conservation, the potential for the loss of archaeological resources in the future remains great, due to continuing growth and development.

In the process of change, cultural heritage resources may be affected in several ways. Change may be some action that is purposefully induced in the environment, such as development activities (e.g., road construction, residential building). This may result in both adverse and beneficial impacts, depending on the degree to which the change is sensitively managed. Change may also be a gradual and natural process of aging and degeneration, independent of human action, which affects artifacts, building materials, human memories or landscapes. Thus land use planning and development must ensure that change, when it does occur, is controlled. Negative impacts upon cultural heritage resources must be either averted or minimized, through either ensuring that change has no adverse impacts whatsoever, or that intervention in the process will result in the promotion of beneficial effects.

4.0 LEGISLATIVE FRAMEWORK OVERVIEW

One of the objectives of the preparation of the AMP (2017) was to review current applicable federal, provincial, and municipal policy and legislation with regards to jurisdiction over archaeological resources and make recommendations for municipal compliance including municipal obligations to protect archaeological resources. This document reflects policy and legislative changes at these levels of government since 1996.

4.1 Federal Legislation

The major federal statutes applicable to archaeology include the *Canadian Environmental Assessment Act* and the *Cultural Property Export and Import Act*. There is no federal legislation which specifically governs archaeological research and planning. In cases where archaeological issues on federal lands do not fall into the category of exports or the confines of an environmental impact assessment, federal land managers are expected to rely on federal policies applicable to all departments or to the specific directives of their own departments.

In terms of the protection of archaeological resources, the federal government's role would be confined primarily to land that it owns, such as national historic sites and parks, lands belonging to federal departments, such as National Defense (e.g., Canadian Forces Base London) where there is a federally regulated undertaking, such as railways or airports, and lands where a federally regulated development project is proposed.

The federal government's *Archaeological Heritage Policy Framework* (Department of Canadian Heritage 1990) states that:

As heritage protection is an essential element of our Canadian identity, and as our archaeological heritage is a source of inspiration and knowledge, it is the policy of the Government of Canada to protect and manage archaeological resources.

In order to realize these objectives on all lands and waters under federal jurisdiction, the Parks Canada Agency has an advisory role for the protection and management of all archaeological resources on all lands and waters under federal jurisdiction.

Several federal departments, such as the Department of National Defense and the Parks Canada Agency, have specific rules to protect archaeological resources.

4.1.1 *Canadian Environmental Assessment Act*

The Federal Archaeology Office is also recognized as an "expert department" for matters involving implementation of specific legislation in the *Canadian Environmental Assessment Act*. Specifically, the Government of Canada seeks to conserve and enhance environmental quality and to ensure that the environmental effects of projects receive careful consideration before responsible authorities take actions in connection with them. An "environmental effect," in respect of a project, is defined to include:

Any change that the project may cause in the environment, including any effect of any such change on health and socio-economic conditions, on physical and cultural heritage, on the current use of lands and resources for traditional purposes by Indigenous persons, or any structure site or thing that is of historical, archaeological, paleontological or architectural significance (Section 2(1)).

The *Reference Guide on Physical and Cultural Heritage Resources* (1996:2) for the *Canadian Environmental Assessment Act* goes on to describe a cultural heritage resource as:

...a human work or a place that gives evidence of human activity or has spiritual or cultural meaning, and that has historic value... This interpretation of cultural resources can be applied to a wide range of resources, including cultural landscapes and landscapes features, archaeological sites, structures, engineering works, artifacts, and associated records.

Legally, a project that would prompt an environmental assessment under the *Canadian Environmental Assessment Act* also triggers a requirement to undertake an archaeological assessment.

4.1.2 Cultural Property Export and Import Act

The regulations under the federal *Cultural Property Export and Import Act* offer a specific list of objects or artifacts that are protected under the Canadian Cultural Property Export Control List. The list incorporates:

archaeological object[s] of any value recovered from the soil of Canada, the territorial sea of Canada or the inland or other international waters of Canada not less than 75 years after its burial, concealment or abandonment if the object is an artifact or organic remains, including human remains, associated with or representative of historic cultures.

The *Cultural Property Export and Import Act* then goes on to list specific artifacts relating to the “Aboriginal peoples of Canada” (2a), to the “progressive exploration, occupation, defense and development of the territory that is now Canada by non-aboriginal peoples” (2b), and “organic remains associated with or representative of historic or prehistoric cultures” (2c).

4.1.3 National Energy Board Act

Under Section 52 (1) of the *National Energy Board Act*, an application for a certificate in respect of a pipeline requires that a public report be prepared and submitted to the Minister, setting out, among other things, an Environmental Assessment when the application relates to a designated project within the meaning of Section 2 of the *Canadian Environmental Assessment Act*, 2012. Archaeology would be undertaken in keeping with the *Canadian Environmental Assessment Act* outlined above.

4.1.4 Guidelines for the Management of Archaeological Resources (2005)

Using the principles and practices of the *Cultural Resource Management Policy* (1994), this document presents Parks Canada’s approach to archaeological resource management as a component of cultural resource management. It provides guidelines on the undertaking of projects and activities that may affect terrestrial or underwater archaeological resources in heritage areas under the jurisdiction of the

Parks Canada Agency. These include National Parks of Canada, National Historic Sites of Canada, National Marine Conservation Areas of Canada, National Park Reserves of Canada, and National Marine Conservation Area Reserves. These guidelines can also be used by other federal land managers seeking advice on the management of archaeological resources.

4.1.5 *Standards and Guidelines for the Conservation of Historic Places in Canada (2011)*

Standards and Guidelines for the Conservation of Historic Places in Canada serves as a guide to heritage conservation projects, including projects that have an impact on archaeological resources. It is used as a policy document by Parks Canada. Although not universally adopted by Provinces and municipalities, it is nonetheless a valuable resource and can help inform decision making processes.

Section 4.2 of the *Standards and Guidelines for the Conservation of Historic Places in Canada* provides definitions of archaeological sites, an exploration of their relationships with the natural environment and cultural landscapes, and guidelines for the conservation of sites in urban, greenfield and industrial contexts as well as situations where sites are culturally sensitive. This section, as did the rest of the document, benefited from extensive consultation with government, academic, and consulting archaeologists across Canada.

4.1.6 Other Federal and International Legislation

Under the *Canada Shipping Act* (CSA, 1985), all material recovered from a wreck (ships and aircraft) during any activity, such as fishing, diving, or during an archaeological excavation, must be reported to the district Receiver of Wreck, an officer of Transport Canada. The *Canada Shipping Act* (2001) provides for the regulation of wrecks that, on the recommendation of Parks Canada, have heritage value.

Canada also supports and/or adheres to a number of treaties which impose a duty on the governments of Canada, its provinces and territories, to take action for archaeological management, for example:

- *Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property*

Promoted by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) in 1970 and formally acceded by Canada in 1978, this Convention declares that “cultural property acquired by archaeological, ethnological or national science missions” is recognized as belonging “to the cultural heritage of each State” (Article 4). To ensure the protection of their cultural property, under article 5, participating countries are obliged to (among other obligations) contribute to the formation of draft laws and regulations designed to secure the protection of the cultural heritage; establish and keep up to date, on the basis of a national inventory of protected property, a list of important public and private cultural property; promote the development or the establishment of scientific and technical institutions (museums, libraries, archives, laboratories, workshops, etc.; organize the supervision of archaeological excavations, ensuring the preservation “in situ” of certain cultural property; and protecting certain areas reserved for future archaeological research.

- *Convention Concerning the Protection of the World Cultural and Natural Heritage* (World Heritage Convention)

Under Article 1 of this Convention, which Canada formally adhered to in 1976, “cultural heritage” consists of “sites – works of man or the combined works of nature and man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view.” To ensure the protection of their cultural property, under Article 5 participating countries are obliged to (among other obligations) adopt a general policy which aims to give cultural and natural heritage a function in the life of the community and integrate the protection of that heritage into comprehensive planning programs; develop scientific and technical studies and research to work out such operating methods as will make the State capable of counteracting the dangers that threaten its cultural or natural heritage; and take the appropriate legal, scientific, technical, administrative and financial measures necessary for the identification, protection, conservation, presentation and rehabilitation of this heritage.

Heritage professionals in Canada are also guided by principles set by international organizations such as the International Council on Monuments and Sites (ICOMOS). Four Charters in particular provide guidance on archaeological resources management:

- *Charter for the Conservation and Restoration of Monuments and Sites (Venice Charter – 1964)*, describes the principles of appropriate conservation;
- *Charter on the Conservation of Places of Cultural Significance (Burra Charter – 1979, revised 2013)*, outlines the principles and practices of conservation based on the cultural significance of historic places;
- *Charter for the Protection and Management of the Archaeological Heritage (Lausanne Charter - 1990)*, reflects basic principles and guidelines relating to the management of archaeological resources and is a reference for policies and practice; and,
- *Charter for the Protection and Management of the Underwater Cultural Heritage (1996)* outlines the principles for the appropriate protection and management of cultural sites underwater.

It should be noted that shipwrecks or debris left behind as a result of a maritime disaster, such as the Victoria steamboat disaster of 1881, near Springbank Park on the Thames River, falls under the jurisdiction of the Upper Thames River Conservation Authority (UTRCA). Shipwrecks where souls were lost with the vessel may also fall under the regulations of the *Funeral, Burial and Cremation Services Act, 2002*, Part XI (section 97) for either *irregular burial site* (section 100) and/or a *war grave* (section 101) designation.

4.2 Provincial Legislation

The specific provincial legislation governing planning decisions is complex, but provides for a number of opportunities for the integration of archaeological conservation. The two principal pieces of legislation are the *Planning Act* (1990) and the *Environmental Assessment Act* (1997), while the

Ontario Heritage Act (1990) regulates archaeological practice and conservation and protection of cultural heritage resources. Municipalities also have the opportunity for establishing their own tailor-made cultural heritage conservation policies within their official plans, the tools for which are provided in the *Planning Act* and the PPS (2014). Approximately 500 to 800 archaeological sites have been documented annually in southern Ontario since 1990 as a result of provincial legislation.

4.2.1 *Planning Act & Provincial Policy Statement (2014)*

Archaeology is a matter of Provincial Interest as identified under Section 2 of the *Planning Act*, and is reinforced through the PPS (2014), which is issued under Section 3 of the *Planning Act*. Section 3(1) of the *Planning Act* also lays out municipal responsibilities in regard to the PPS:

a decision of the council of a municipality, a local board, a planning board, a minister of the Crown and a ministry, board, commission or agency of the government, including the Municipal Board, in respect of the exercise of any authority that affects a planning matter, “shall be consistent” with this policy statement.

Thus all decisions made during the land development process, regardless of the identity of the development proponent or the relevant approval agency, must address potential impacts to cultural heritage resources. The statements in the *Planning Act* are sufficient for a municipality to require that an archaeological assessment be completed on public or private lands prior to the approval of a planning or development application.

The Province of Ontario is clear that it expects cultural heritage resources will be conserved in the review and approvals process as outlined in its recently updated vision for land-use planning:

The Province’s natural heritage resources, water resources, including the Great Lakes, agricultural resources, mineral resources, and cultural heritage and archaeological resources provide important environmental, economic, and social benefits. The wise use and management of these resources over the long term is a key provincial interest... (PPS, Ontario Ministry of Municipal Affairs and Housing 2014:4).

The PPS (2014) defines “archaeological resources” as “includes artifacts, archaeological sites, and marine archaeological sites.”

This vision and policy statement now guides all provincial and local planning authorities in their decisions. With respect to archaeological resources, the PPS (2014) states that:

Development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved.... [Conservation] “means the identification, protection, management and use of built heritage resources, cultural heritage landscapes and archaeological resources in a manner that ensures their cultural heritage value or interest is retained under the Ontario Heritage Act. This may be achieved by the implementation of recommendations set out in a conservation plan, archaeological assessment, and/or heritage impact assessment. Mitigative measures

and/or alternative development approaches can be included in these plans and assessments (PPS, Ontario Ministry of Municipal Affairs and Housing, 2014:29, 40).

For this policy statement, significant archaeological resources are defined as those “that have been determined to have cultural heritage value or interest for the important contribution they make to our understanding of the history of a place, an event, or a people.” The identification and evaluation of such resources are based on archaeological fieldwork and determined by a consultant archaeologist.

Cultural heritage landscapes are also now broadly recognized in the PPS (2014), establishing an alternative path for conserving certain types of archaeological sites. Cultural heritage landscapes are classified as “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” (PPS 2014). Examples may include, but are not limited to, “heritage conservation districts designated under the *Ontario Heritage Act*, villages, parks, gardens, battlefields, main streets and neighbourhoods, cemeteries, trailways, viewsheds, natural areas and industrial complexes of heritage significance; and areas recognized by federal or international designation authorities (e.g., a National Historic Site or District designation, or a UNESCO World Heritage Site)” (PPS, Ontario Ministry of Municipal Affairs and Housing 2014: 40).

While it had always been possible to protect cultural heritage landscapes through designation under Part IV or Part V of the *Ontario Heritage Act*, generally Part IV designations have been used to protect individual properties whereas Part V designations have been used to protect Heritage Conservation Districts – areas which may consist of several properties which together retain cultural heritage value. The PPS (2014) now provides a wider and renewed focus on establishing identification frameworks and policies for fully protecting a wide range of types of cultural heritage landscapes including those that encompass many archaeological sites.

The PPS (2014) also includes policy additions to recognize Indigenous interests in the land use planning and development process. This recognition acknowledges the importance of Indigenous peoples’ history and cultural heritage when planning decisions are made that “may affect their rights and interests” (PPS 2014:4) and the need to consult with Indigenous communities when decisions “may affect their rights and interests” (PPS 2014:4) (See Section 5 below).

The *Planning Act* also states that an archaeological assessment must be completed and submitted with an application for approval of a plan of subdivision. Section 51 (17) of the *Planning Act*, Part VI (Subdivision of Land), delineates under Schedule 1 the information and material to be provided by an applicant for approval of a plan of subdivision (O. Reg. 544/06, s. 2). This section states the applicant shall provide the approval authority with the following prescribed information and material:

23. *Whether the subject land contains any areas of archaeological potential.*

24. *If the plan would permit development on land that contains known archaeological resources or areas of archaeological potential,*

- a) an archaeological assessment prepared by a person who holds a license that is effective with respect to the subject land, issued under Part VI (Conservation of Resources of Archaeological Value) of the Ontario Heritage Act; and
- b) a conservation plan for any archaeological resources identified in the assessment.

By enacting these requirements, development proponents will have sufficient time to plan for archaeological site protection, rather than salvage excavation, by considering alternative site plan designs. A basic requirement for assessments in advance of private land development has been in place for over three decades now in Ontario and the private land development industry now accepts this requirement in the same way as they do all other legislative conditions of approval; amendments to the PPS (2014) and the timing of these assessments have eliminated some of the strains in the process as has its more uniform application in all planning jurisdictions across the Province.

4.2.2 Environmental Assessment Act

The *Environmental Assessment Act* (1997) applies to public sector projects and designated private sector projects. Private sector projects that are designated by the Province as subject to the *Environmental Assessment Act* are usually major projects such as landfills. The purpose of the *Environmental Assessment Act* is “the betterment of the people ... by providing for the protection, conservation and wise management in Ontario of the environment” (Section 2). Environment is very broadly defined to include “the social, economic and cultural conditions that influence the life of man or a community” [Section 1(c) (iii)] and “any building, structure, machine or other device or thing made by humans” [Section 1(d) (iv)]. Archaeological artifacts are “things” made by humans and the archaeological remains of residential structures, for example, are buildings and structures made by humans.

The *Environmental Assessment Act* requires the preparation of an environmental assessment document, containing inventories, alternatives, evaluations and mitigation. It is subject to formal government review and public scrutiny and, potentially, to a tribunal hearing. In Section 6.1 (2), it is noted that “the environmental assessment must consist of ,” among other things, “(i) a description of the environment that will be affected or that might reasonably be expected to be affected, directly or indirectly; (ii) the effects that will be caused or that might reasonably be expected to be caused to the environment, and (iii) the actions necessary or that may reasonably be expected to be necessary to prevent, change, mitigate or remedy the effects upon or the effects that might reasonably be expected upon the environment.” Studies of archaeological resources, as well as built heritage resources and cultural landscapes, are therefore necessary to address the requirements of the *Environmental Assessment Act*. There are also Municipal Engineers Association (MEA) Class environmental assessments for municipal projects that require similar considerations, but entail a simplified review and approval process.

The Municipal Class EA process is a streamlined environmental assessment used for proposed municipal infrastructure projects like water supply, sanitary sewage and road/transportation projects. These projects are categorized under four schedules according to their impacts on the environment; Schedule A and A+ projects are anticipated to have negligible to minimal effect on the environment and do not often require cultural heritage or archaeological assessments. Archaeological assessments are more commonly undertaken as part of Schedule B and Schedule C Municipal Class EA, where

environmental impacts range from adverse to significant. Impacts to the Cultural Environment (archaeological resources and built heritage) must be inventoried to adequately consider the effects of a project on the environment. Archaeological assessments are a critical piece in the suite of considerations that inform the Municipal Class EA process while reviewing existing conditions and developing and accessing alternatives for the infrastructure.

Various provincial ministries are establishing protocols related to activities subject to the environmental assessment process in order to ensure that cultural heritage resource conservation in their respective jurisdictions is addressed. The Ontario Ministry of Transportation, *Environmental Reference for Highway Design* (2006), for example, ensures that archaeological assessments are undertaken in advance of all new road construction in order to ensure that no archaeological sites will be unknowingly damaged or destroyed, and the Ontario Ministry of Natural Resources and Forestry prepared a guide to help protect archaeological sites, archaeological potential areas, cultural heritage landscapes, historical Aboriginal values and cemeteries during forest operations (*Forest Management Guide for Cultural Heritage Values* (Cultural Heritage Values Guide, 2014).

4.2.3 Ontario Heritage Act

The Ministry of Tourism, Culture and Sport (MTCS)¹ 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 heritage of Ontario” and so fills the lead provincial government role in terms of directing the conservation and protection of cultural heritage resources. The Minister is responsible for determining policies, priorities, and programs for the conservation, protection, and preservation of the cultural heritage of Ontario. These goals are generally accomplished through other legislated processes, such as those required by the *Planning Act* and *Environmental Assessment Act*, rather than directly through the *Ontario Heritage Act* itself.

The Program and Services Branch, Culture Division of the MTCS has the primary administrative responsibility under the *Planning Act* and *Ontario Heritage Act* for matters relating to cultural heritage resource conservation including archaeological resource identification and mitigation in advance of land development, specifically the Archaeology Programs Unit with respect to the latter.

The *Ontario Heritage Act* governs the general practice of archaeology in the province to maintain a professional standard of archaeological research and consultation. The Minister is responsible for issuing licenses to qualified individuals. All consultant archaeologists who undertake Stage 1 to 4 archaeological assessments must be licensed by MTCS. All work conducted by the consultant archaeologist must conform to the standards set forth in the most current *Standards and Guidelines for Consulting Archaeologists* (2011) authorized by the MTCS and the accompanying bulletins, such as, but not limited to, *Engaging Aboriginal Communities in Archaeology: A Draft Technical Bulletin for Consultant Archaeologists in Ontario* (2011), *Land-Based Archaeological Licensing: A Bulletin for Archaeologists in Ontario* (2017), *Archaeological Reports: An Administrative Bulletin for Archaeologists in Ontario* (2017), *The Archaeology of Rural Historical Farmsteads: A Draft Technical Bulletin for Consultant Archaeologists in Ontario* (2014), *Project Information Forms: Protocols and Support for Licensed Archaeologists using Ontario’s Past Portal* (2013), *Winter Archaeology: A*

¹ Provincial management of cultural heritage resources has been carried out by operations units attached variously to the Ministry of Citizenship, Culture and Recreation (1993-1998), the Ministry of Tourism, Culture and Recreation (1998-2002) and the Ministry of Culture (2002-2010); and Ministry of Tourism, Culture and Sport (2011 to present).

Technical Bulletin for Consultant Archaeologists in Ontario (2013) and Forest Operations on Crown land: A Draft Technical Bulletin for Consultant Archaeologists in Ontario (2009). MTCS also has numerous fact sheets and memoranda on their website for explaining the process of consulting archaeology in the Province including *Criteria for Evaluating Marine Archaeological Potential: A Checklist for Non-Marine Archaeologists* (<http://www.mtc.gov.on.ca/en/archaeology/archaeology.shtml>).

Under Section 48 (1) of the *Ontario Heritage Act*, no person shall carry out archaeological fieldwork or knowing that a site is a marine or other archaeological site, within the meaning of the regulations, alter the site or remove an artifact or any other physical evidence of past human use or activity from the site unless the person applies to the Minister and is issued a licence that allows the person to carry out the activity in question.

In changes to the *Ontario Heritage Act*, outlined in the *Government Efficiency Act* (2002), it became illegal for any person or agency to alter² an archaeological site (see Section 1.1 for definition) without a license. This in effect offers automatic protection to all archaeological sites and the City should exercise due diligence in all planning contexts to ensure that archaeological features are protected from disturbance of any nature.

Under Section 69 (1) of the *Ontario Heritage Act*, “every person who,

- (a) knowingly, furnishes false information in any application under this Act or in any statement, report or return required to be furnished under this Act or the regulations;
- (b) fails to comply with any order, direction or other requirement made under this Act; or
- (c) contravenes this Act or the regulations, and

“every director or officer of a corporation who knowingly concurs in such furnishing of false information, failure or contravention is guilty of an offence and on conviction is liable to a fine of not more than \$50,000 or to imprisonment for a term of not more than one year, or to both.” R.S.O. 1990, c. O.18, s. 69 (1).

Anyone who disturbs or alters an archaeological site or removes an artifact from a site without a licence can be fined or imprisoned. A person or a director of a corporation found in violation of the act or its regulations can face a fine of up to \$1,000,000 or imprisonment for up to one year or both. A corporation found in violation of the act or the regulations can face a fine of up to \$250,000.

While the filing of charges is at the discretion of the Ontario Provincial Police, Section 62 (1) of the *Ontario Heritage Act*, empowers the Minister, should they and the Ontario Heritage Trust be of the opinion that property is of archaeological or historical significance and is likely to be altered, damaged, or destroyed by reason of commercial, industrial, agricultural, residential or other development, to issue a stop order directed to the person responsible for such commercial, industrial, agricultural,

² The term “alteration” covers unsanctioned disturbance or destruction of archaeological resources brought about by any means (i.e., either archaeological excavation, site looting, or development). More generally, it should be noted that in recent changes to the *Ontario Heritage Act* (Bill 179, 2002), it is now an offence to knowingly alter an archaeological site without a license.

residential or other development and prohibit any work on the property for a period of no longer than 180 days. Within that period the Minister or any person authorized by the Minister in writing may examine the property and remove or salvage artifacts from the property.

All reports submitted to the MTCS, as a condition of an archaeological license are reviewed by MTCS staff to ensure that the activities conducted under a license meet current technical guidelines, resource conservation standards, and the regulations of the *Ontario Heritage Act*. The regulation of archaeological activities carried out within the development context requires that the City as approval authority must integrate the requirements of the *Ontario Heritage Act* within their land use planning and development process. Sections 6 and 7 of this report provides guidance on how the City will adhere to all provincial heritage resource conservation policy.

4.2.4 Renewable Energy Approvals Regulation

The Renewable Energy Approvals regulation (O. Reg. 359/09), issued under the *Environmental Protection Act* (2009), sets out the cultural heritage resource identification and mitigation requirements for obtaining approval to proceed with a renewable energy project. The regulation provides a streamlined approvals process, while simultaneously ensuring that the proposed project considers and avoids or mitigates impacts to the environment, including the cultural environment. O. Reg. 359/09 separates cultural heritage resources into “archaeological resources” and “heritage resources” (including both built heritage and cultural heritage landscapes), and addresses each separately (Sections 19 through 23 of O. Reg. 359/09). MTCS has also issued a bulletin entitled *Cultural Heritage Resources: An Information Bulletin for Projects Subject to Ontario Regulation 359/09 – Renewable Energy Approvals* (2013).

The REA regulation requires the development proponent to conduct archaeological and heritage assessments that identify and consider potential impacts to cultural heritage resources and propose strategies for mitigation of those impacts. Applicants may choose to undertake a self-assessment if there is reason to believe that there is low likelihood for archaeological and heritage resources to be present at the project location. The “self-assessment” is undertaken using MTCS checklists to determine if there is potential for archaeological resources present although a Stage 1 archaeological resource assessment is preferable.

4.2.5 Aggregate Resources Act

The Ministry of Natural Resources and Forestry, which administers the *Aggregate Resources Act*, recognizes the potential impact quarrying activities may have on cultural heritage resources such as archaeological sites. Furthermore, the development of a pit or quarry will often require an Official Plan Amendment (OPA) or Zoning By-law Amendment (ZBA), and thus would require involvement by the municipality. The process for addressing archaeological concerns is similar to that outlined for *Planning Act* related projects. A background study, field survey and detailed archaeological investigations are all identified as required Technical Reports under Part 2.2 of the Provincial Standards for Bill 53 under the *Aggregate Resources Act*.

4.2.6 Funeral, Burial and Cremation Services Act

The *Funeral, Burials and Cremation Services Act* (formerly the *Cemeteries Act*, which was repealed in 2012) addresses the need to protect human burials, both marked and unmarked, which is yet another valuable link to the past. Burial locations uncovered on archaeological sites constitute “unregistered cemeteries” that are, in essence, in violation of the *Funeral, Burial and Cremation Services Act*. The discovery of such burials will require further investigation in order to define the extent and number of interments, and either the registration of the burial location as a cemetery, or the removal of the remains for re-interment in an established cemetery. The actual workings of this process are complex and vary depending upon whether the burial(s) are an isolated occurrence, or part of a more formal cemetery, and whether the remains in question are Indigenous or historic (Euro-Canadian). In all cases, the success of the process is dependent upon the co-operation of the property owner, the next of kin (whether biological or prescribed), and the Registrar of Burial Sites, War Graves, Abandoned Cemeteries and Cemetery Closures in the Ministry of Government and Consumer Services. The role of the MTCS is to assist in co-ordinating contact and negotiation between the various parties, and ensuring that archaeological investigations of such burial sites meet provincial standards.

4.3 Municipal Policy

4.3.1 Official Plan

The London Plan, the Official Plan for the City of London, was adopted by Municipal Council on June 23, 2016 and approved by the Province on December 28, 2016 with modifications. The London Plan includes new policies for identifying and conserving archaeological resources and enables the implementation of the AMP (2017).

The general identification policies include ones that obligate the City to identify and designate archaeological sites in accordance with the *Ontario Heritage Act*, adhere to provincial legislation regarding the archaeological or accidental discovery of human remains, including consulting with the relevant First Nations communities, and allows for the maintenance of a confidential database of archaeological sites within the City. These policies are:

- 579_ *In cooperation with the Province, the City will identify and designate archaeological resources in accordance with the Ontario Heritage Act.*
- 581_ *Archaeological resources may be included on the City’s Register. Data relating to these resources will be kept for the purpose of heritage planning and development review. Locations of archaeological resources will be kept confidential, where possible, in accordance with the Municipal Freedom of Information and Protection Act, to protect against vandalism, disturbance, and the inappropriate removal of resources.*
- 582_ *In the event that unexpected archaeological resources, human remains or cemeteries are identified or encountered during assessment, development, or site alteration, all work must immediately cease and the site must be secured. The appropriate provincial and municipal authorities must be notified. Required provisions under the Funeral, Burial and Cremation Services Act, the Ontario Heritage Act and other applicable protocols and policies must be followed. Where there are First Nation burials, they will be addressed in consultation with the*

relevant First Nations communities. Licensed archaeologists may be required to assess and/or monitor the property and recommend conservation strategies. The City may prepare a protocol to address these matters to ensure that the appropriate measures are taken in the event that human remains or unexpected archaeological resources are discovered.

Specific policies for the protection, conservation and stewardship of archaeological resources include ones that obligate the City to conserve archaeological sites by employing a series of planning or heritage conservation tools and to engage with the relevant First Nations in their identification, management and commemoration.

They also address the AMP and the use of the revised archaeological potential model and are presumptive of protection of significant archaeological sites:

- 609_ *The City will prepare and maintain an Archaeological Management Plan that will identify archaeological resources and areas of archaeological potential and provide direction and requirements for the identification, evaluation, conservation and management of archaeological resources in accordance with the Ontario Heritage Act. The Archaeological Management Plan may be subject to review and shall be updated in conjunction with a comprehensive review of the Official Plan.*
- 610_ *The City will notify the appropriate First Nations and invite them to participate in the process during the preparation of the Archaeological Management Plan.*
- 611_ *Development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved. Preservation of the archaeological resources on site is the preferred method, but in some cases, conservation can occur by removal and documentation.*
- 612_ *Where significant archaeological resources are preserved on site, in situ, conservation may be secured through a heritage easement agreement, designation under the Ontario Heritage Act, zoning provisions and/or other planning or heritage conservation tools.*
- 613_ *Where First Nations significant archaeological resources are to be preserved on site, the proponent and consultant archaeologist shall consult with the appropriate First Nation to identify approaches to commemoration of the site.*
- 614_ *Where First Nations significant archaeological resources are identified and preservation on site is not possible, the consultant archaeologist shall consult with the appropriate First Nation to address their interest in the resource to identify interpretive and commemorative opportunities related to the resource.*
- 615_ *Where a Stage 2 and 3 archaeological assessment is being undertaken on First Nations archaeological resources, the proponent and consultant archaeologist shall notify the appropriate First Nation in advance of on-site assessment work. Provision shall also be made to include a monitor for the assessment work.*

- 616_ *An archaeological assessment is required where a proposal involves development or site alteration, and if it is determined through the application of the Archaeological Management Plan model that any part of a subject area possesses archaeological resource potential or known archaeological resources.*
- 617_ *Archaeological assessments shall be undertaken to the applicable level of assessment by a consultant archaeologist in compliance with provincial requirements and standards.*
- 618_ *All archaeological assessments shall be provided to the Ministry of Tourism, Culture and Sport in accordance with the Ontario Heritage Act. The assessment report shall be provided to the City for comment to ensure that the scope is adequate and consistent with the conservation objectives of the City.*
- 619_ *Where archaeological resources are documented and found to be First Nations or Indigenous in origin, a copy of the assessment report shall be provided by the consultant archaeologist to the appropriate First Nation.*
- 620_ *City-initiated projects and development projects involving development or site alteration on identified lands will be subject to review for their potential impact on the archaeological resource, in conformity with the policies of this Plan.*
- 621_ *The appropriate First Nations communities shall be provided notification by the consultant archaeologist in regard to the identification of burial sites and significant archaeological resources relating to the activities of their ancestors.*
- 622_ *When considering an application for development or site alteration, the City may require a marine archaeological assessment to be conducted by a qualified person pursuant to the Ontario Heritage Act if partially or fully submerged marine features such as ships, boats, vessels, artifacts from the contents of boats, old piers, docks, wharfs, fords, fishing traps, dwellings, aircraft, and other items of cultural heritage value are identified and may be impacted by shoreline and waterfront developments. Any marine archaeological resource that is identified shall be reported to the Province.*

5.0 INDIGENOUS ENGAGEMENT IN THE ARCHAEOLOGICAL PROCESS

Section 17 of the *Planning Act* requires that the Chief of every First Nation Council on a Reserve within one kilometer of proposed official plan or official plan amendments is circulated on notices for those applications, as part of the public notice process (O. Reg. 543/06, s. 3 (9); O. Reg. 467/09, ss. 2, 3).

While there are no reserves that fall within that distance of the boundaries of the City of London, planning authorities in Ontario are further encouraged to engage with Indigenous groups in the planning approvals process. This is affirmed in the most recent PPS (2014), which states that:

The Province recognizes the importance of consulting with Aboriginal communities on planning matters that may affect their rights and interests (Part IV, Vision for Ontario's Land Use Planning System, 4).

The PPS (2014) also states the following:

- *Planning authorities are encouraged to coordinate planning matters with Aboriginal communities* (Policy 1.2.2, Section 1.2, Coordination, 12);
- *This Provincial Policy Statement shall be implemented in a manner that is consistent with the recognition and affirmation of existing Aboriginal and treaty rights in Section 35 of the Constitution Act, 1982* (Policy 4.3, Section 4.0, Implementation and Interpretation, 33).

The Indigenous consultation/engagement process should be distinct and separate from the general public engagement process. While Indigenous communities may be invited to the public engagement meetings, they will expect to discuss these matters on a government-to-government basis.

With respect to archaeological resources, the PPS (2014) states that:

- *Planning authorities shall consider the interests of Aboriginal communities in conserving cultural heritage and archaeological resources* (Policy 2.6.5, Section 2.6, Cultural Heritage and Archaeology, 29).

It is therefore recommended that the City adopt an administrative process for engagement with the Indigenous communities listed below for Official Plan reviews as well as Secondary Plans (also Area Specific Policies), Plans of Subdivision, Site Plan Applications and Zoning By-law Amendments undertaken in *greenfield* contexts as well as any others where an Indigenous archaeological site is or has been identified and site mitigation is contemplated (see The London Plan, Policy 1630). These applications have the greatest potential for major effects on the eventual use of the land and provide the potential for input to influence the development of plans which protect ecologically sensitive lands, significant archaeological sites, and other important areas, and to develop plans for interpretation opportunities.

Also, the MTCS's bulletin entitled *Engaging Aboriginal Communities in Archaeology: a Draft Technical Bulletin for Consultant Archaeologists* includes standards (Section 1.1) stating that "engagement" must take place:

- In Stage 3, when assessing the cultural heritage value or interest of an Aboriginal archaeological site that is known to have or appears to have sacred or spiritual importance, or is associated with traditional land uses or geographic features of cultural heritage interest, or is the subject of Aboriginal oral histories. [Section 3.4]
- At the end of Stage 3, when formulating a strategy to mitigate the impacts on the following types of Indigenous archaeological sites through avoidance and protection or excavation [Sections 3.4 and 3.5]:
 - When investigating rare Indigenous archaeological sites;
 - When dealing with sites identified as sacred or known to contain human remains;
 - When working with Woodland period Indigenous sites;
 - When working with Indigenous archaeological sites where topsoil stripping is contemplated;
 - When working with undisturbed Indigenous sites; and
 - When working with sites previously identified as of interest to an Indigenous community.

At the request of a local First Nation and approved by the Ontario Ministry of Municipal Affairs and Housing, Policy 615 of The London Plan also requires engagement with Indigenous communities in advance of Stage 2 archaeological assessment when there is an expectation that an Indigenous site might be found. It also requires monitors for that archaeological assessment work (Minister's Modification No. 13, December 28, 2016).

It is often assumed that the Indigenous community that is geographically closest to a given project is the most suitable group with whom to consult. However, the complex histories of the Indigenous peoples of London and region, both before and after European contact and colonial settlement, means that such assumptions can be simplistic and detrimental to the success of the entire engagement/consultation process. Under these circumstances there should be an effort to identify all groups that are appropriate (on culture-historical grounds) to act as the designated descendants of those who occupied the region in the past, and who are willing to participate. This identification process is best achieved through negotiation with a variety of communities in order that they may arrive at the final decision. In this way, ancient sites are represented by several communities together.

The following First Nations have self-identified as having an interest in land use planning and development process in the City of London given that the City is situated within their traditional territories:

- Chippewas of the Thames First Nation
- Oneida Nation of the Thames
- Munsee-Delaware Nation
- Chippewas of Kettle and Stony Point First Nation
- Walpole Island First Nation

5.1 Recommended Stage 4 Mitigations Based on Cultural Heritage Value of Indigenous Sites

In discussions with all of the First Nations with an interest in the archaeological record of south-central Ontario during another project focused on the preparation of archaeological policy and guidelines for York Region (2013), a discussion was held with thirteen First Nations and the Métis Nation that resulted in an outline of Stage 4 mitigative recommendations for sites of various time periods and types. Such a comprehensive discussion, carried out over several years, has not been undertaken with the First Nations with a stated interest in the City of London.

It should be noted that there is a presumption in favour of protection and preservation of any Indigenous site that has not been disturbed by ploughing or other modern land uses. It should also be noted that the indicators for cultural heritage value that Indigenous peoples communicated for sites were not based in any way on the provincial table in Section 7.2 (Table 2). In their view, any Indigenous site should be deemed to be of significant cultural heritage value. The archaeological policies for the City of London similarly encourage protection as the preferred option to mitigate the impacts of proposed development on any archaeological feature.

6.0 INTEGRATING ARCHAEOLOGICAL ASSESSMENT AND THE DEVELOPMENT REVIEW PROCESS

6.1 Archaeological Review Process in Ontario – Roles and Responsibilities

6.1.1 Provincial Role

The Archaeology Programs Unit of the MTCS has the primary administrative responsibility under the *Planning Act* for matters relating to cultural heritage including archaeological resources. When the City determines that there is potential for impacts to archaeological resources from planning or development applications, the development proponent is required to retain a consultant archaeologist to undertake an archaeological assessment, the results of which are subject to MCTS review to determine if the report is compliant with the archaeological licensing and reporting requirements of the *Ontario Heritage Act*. Such assessments should be required for Official Plan Amendments, Zoning By-Law Amendments, Secondary Plans, Plans of Subdivision, Site Plan applications, Consents or Minor Variance applications where archaeological potential is identified on all or a portion of a subject site. In these cases, a standard archaeological condition, or the use of a holding provision, may be attached to the planning or development approvals (see Section 7).

While a checklist has been prepared by MTCS entitled *Criteria for Evaluating Archaeological Potential: A Checklist for the Non-Specialist (2015)*, which provides generic criteria for municipal planners to use to assess archaeological potential, those municipalities that have undertaken detailed archaeological potential studies or archaeological management plans, like the City of London, have access to much more detailed information specific to their jurisdictions. Such plans provide more effective and accurate means of determining archaeological potential and whether or not archaeological assessments should be required.

The City of London review of site specific development applications, for the purpose of determining if archaeological resources may be present or within areas of archaeological potential are made by the City of London through the use of the AMP (2017), consisting of the archaeological potential model, explanatory text, and implementation guidelines.

Many approval authorities also rely on MTCS review of archaeological assessment reports when deciding whether or not concerns for archaeological sites have been addressed by a development proponent. After reviewing an archaeological assessment report, MTCS staff will provide the consultant archaeologist who completed the assessment with a compliance letter. If the archaeological assessment report complies with the *Ontario Heritage Act*, specifically the terms and conditions for archaeological licences and MTCS requirements for archaeological fieldwork and reporting, the letter will inform the consultant archaeologist that the archaeological assessment report has been accepted and entered in to the Ontario Public Register of Archaeology Reports. The letter, in conjunction with the archaeological assessment report, can be used by the City of London to verify that concerns for archaeological sites have been addressed for the property that was assessed or that further work is required.

The MTCS have committed to copy the approval authority and development proponent of their review. MTCS is also ultimately responsible for all matters related to the management of the resources documented, mitigation strategies proposed, and any disputes arising from the conservation of archaeological resources under the land use planning and development process.

6.1.2 Role of Consultant Archaeologists

As part of the land use planning and development process, development proponents rely on consultant archaeologists who hold a professional license issued by the MTCS. Consultant archaeologists carry out archaeological assessments to ensure that requirements for archaeological sites have been addressed and that previously unknown archaeological sites are identified. They also provide technical advice on appropriate measures for the conservation of archaeological sites.

Only consultant archaeologists may determine significance of archaeological sites or define the extent to which archaeological potential has been affected by land use on a parcel of land. **Only consultant archeologists have the skills to evaluate land disturbance and remaining integrity.**

6.1.3 Role of the Development Proponent

When an archaeological assessment is required by the City for planning or development applications, it is the responsibility of the development proponent to retain a consultant archaeologist to carry out the requisite archaeological work. In order to carry out a Stage 1 and/or 2 assessments, the consultant archaeologist will require signed consent to enter the property and carry out the fieldwork along with a copy of the most recent development plan, if available, or plan of topographic survey. The study area limits must be clearly marked, and the map should show existing conditions including contour lines, trees and treelines, fence lines, property lines, structures, driveways, watercourses, etc., together with a bar scale and north arrow. For report purposes, a digital version of the development plan in AutoCAD or editable PDF format should also be provided to the consultant archaeologist.

Development proponents should note that consultant archaeologists must follow the MTCS *Standards and Guidelines for Consultant Archaeologists* when undertaking their work. Frequent issues that often arise between development proponents, their consultant archaeologists, and MTCS include whether consultant archaeologists are able to work when there is snow on the ground (including Stage 1), whether a consultant archaeologist can provide a letter alone rather than a Stage 1 report and is there built-in flexibility in the *Standards and Guidelines for Consultant Archaeologists* for a consultant archaeologist to deviate from the provincial requirements.

The *Standards and Guidelines for Consultant Archaeologists* do not permit archaeological fieldwork in adverse weather conditions. There is a bulletin developed by the MTCS to aid consultant archaeologists in the development and implementation of appropriate measures to offset adverse weather conditions when winter fieldwork is unavoidable (*Winter Archaeology: A Technical Bulletin for Consultant Archaeologists in Ontario*). It should be noted that before proceeding with any winter fieldwork, consultant archaeologists must discuss and request confirmation of their proposed strategy with the Archaeology Programs Unit staff of the MTCS. It should also be noted that inspections of properties for Stage 1 archaeological assessments may only be conducted when weather conditions permit – when there is good visibility of land features. The *Standards and Guidelines for Consultant Archaeologists* specifically note that snow cover, frozen ground, excessive rain (or drought) may reduce the chances of observing features of archaeological potential.

There are standards in the *Standards and Guidelines for Consultant Archaeologists* for reporting and all licensed activity for which a Project Information Form (PIF) has been submitted necessitates the filing of an archaeological assessment report. Stage 1 archaeological assessments cannot be satisfied by the submission of a letter and the Approval Authority should refuse to issue clearance to a property

until such archaeological assessment report has been submitted and reviewed by MTCS and a letter of compliance issued.

Consultant archaeologists are now required to obtain utility locates in advance of undertaking archaeological fieldwork. The consultant archaeologist will therefore have public utility underground locates for the work area for all public utilities from Ontario One Call and any other public utility companies that are not members of these call centers. On behalf of the development proponent, and with their consent, the consultant archaeologist should also retain a private utility locator to have the private utilities located on the property.

Some cables or pipes (water lines, drains, etc.) may not be detectable or located accurately due to depth, lack of tracer wires, material makeup, and inability to connect properly in utility and equipment congested or confined areas. This may be compounded by lack of access or access too far from the area to be traced.

Should an archaeological resource be found during the initial field assessment in Stage 2, it must be subject to Stage 3 investigations prior to its protection or mitigative excavation. If an archaeological resource is found during a Stage 2 archaeological assessment, a Stage 3 assessment of that resource is not required should the development proponent decide to not proceed with the development that triggered the Stage 2 assessment. The archaeological resource will be protected from disturbance by Section 48(1) of the *Ontario Heritage Act*.

6.1.4 Role of City

An approval authority “is any public body (municipality, conservation authority, provincial agency, and ministry) that has the authority to regulate and approve development projects that fall under its mandate and jurisdiction (*Standards and Guidelines for Consultant Archaeologists*: 162).” It approves those applications where development proponents have met all local by-laws, other legislated requirements, and public concerns such as whether land to be developed may contain archaeological sites that merit an archaeological assessment.

For the City of London, Municipal Council is the Approval Authority. Planning and Development Services is responsible for advising and assisting Municipal Council on matters concerning the mitigation and protection of archaeological sites related to the planning and development processes. Planning Services and Development Services, in particular a Heritage Planner, will also review reports submitted by consultant archaeologists to ensure that the City’s policies have been met and guide any subsequent interpretation, commemoration, and measures taken to permanently protect archaeological sites.

If the City of London determines that a property has archaeological potential using the archaeological potential planning layer (see Section 6.1.5), it will advise the development proponent to retain a consultant archaeologist to carry out an archaeological assessment before any soil disturbance, development, and/or site alteration occurs.

The City of London must receive copies of all archaeological assessment reports and MTCS letters of compliance prior to soil disturbance, development, and/or site alteration. This is best undertaken by the consultant archaeologist immediately upon their receipt of the MTCS letter(s) of compliance.

It is also the intention of the City of London that, any City division that is involved in soil disturbance, development, and/or site alteration activities associated with project work in an area of archaeological potential will retain a consultant archaeologist to carry out an archaeological assessment before any soil disturbance occurs, which is consistent with the provisions of the AMP (2017).

6.1.5 When Does the Archaeological Potential Planning Layer Apply?

An archaeological assessment may be required for the following application types if any portion of the property is within the City's AMP (2017) archaeological potential planning layer:

- Official Plan Amendments (including Secondary Plans/ Secondary Plan Amendments) (as per *Planning Act* Part III)
- City of London Public Works (as per *Planning Act* Part III, Section 24 and The London Plan policy 32)
- Zoning By-law Amendments (as per *Planning Act* Part V)
- Site Plan (as per *Planning Act* Part V)
- Plans of Subdivision (including Plans of Condominium) (as per *Planning Act* Part VI)
- Consents or Minor Variance applications (where there is soil disturbance) (as per *Planning Act* Part VI)

At a minimum, a Stage 1 archaeological assessment is required for the above. Only a consultant archaeologist, undertaking a Stage 1 assessment, can demonstrate that no archaeological potential survives within an area identified within the archaeological potential planning layer. In some cases where archaeological potential is absolutely clear, it is recommended that the development proponent has a consultant archaeologist undertake a Stage 1-2 archaeological assessment.

6.2 Official Plan Amendments

If a property owner or development proponent wishes to use, alter or develop a property in a way that does not conform to the Official Plan, they must apply for an Official Plan Amendment. Any change to the Official Plan requires an Official Plan Amendment application. These applications require archaeological assessments of the properties if any portion of the property falls within the archaeological potential planning layer identified in the AMP (2017). The resultant report may recommend further archaeological assessment to be completed prior to soil disturbance, development, and/or site alteration.

Secondary Plans establish local development policies to guide growth and change in a defined area of a municipality. Secondary Plan policies adapt and implement the objectives, policies, land use designations and overall planning approach of the Official Plan to fit local contexts and are adopted as amendments to the Official Plan. Archaeological assessments undertaken at the Secondary Plan stage provide the best opportunity for protecting significant archaeological sites through development design.

6.3 City of London Public Works

All public works must be consistent with The London Plan; this includes its cultural heritage policies. Works must also be consistent with the PPS (2014). It is understood that there are instances where public works may have an impact on known archaeological sites or lands identified within the archaeological potential planning layer in the AMP (2017). These include the development or replacement of infrastructure (e.g., roads, sidewalks), the construction and maintenance of municipal assets, and public realm improvements including the urban core as well as in all parks and open spaces within the City.

In particular, where any soil disturbance, development, and/or site alteration is proposed, the projects should be reviewed by City of London Planning Services and Development Services to identify if any lands associated with the project are within the archaeological potential planning layer in the AMP (2017). If so, the City should schedule the time necessary to retain a consultant archaeologist to undertake the requisite archaeological assessments.

With specific reference to road construction or reconstruction and bridge replacement or rehabilitation, regardless of whether the project is subject to a Class A+ Environmental Assessment or a Municipal Class A, B or C Environmental Assessment, a Stage 1 archaeological assessment will be undertaken should the project be situated within the archaeological potential planning layer in the AMP (2017) and excavation affects land *beyond the previously disturbed portion* of the existing right-of-way or easement. For projects abutting known archaeological sites or cemeteries, a Stage 1 archaeological assessment is required.

Asset Management Plans and similar Lifecycle renewal studies/plans must ensure that areas of archaeological potential are clearly identified within the areas of their concern, and include the time and resources necessary to undertake the necessary archaeological assessments prior to any work that will result in soil disturbance, development, and/or site alteration beyond existing rights-of-way. Some infrastructure projects must therefore include adequate budgets to address any archaeological requirements.

6.4 Zoning By-law Amendments

According to Section 34 of the *Planning Act*, the City has the authority to implement land use controls through Zoning By-laws. The Zoning By-law is the legal document that implements policies and objectives described in the Official Plan and regulates the use and development of buildings and land by:

- 1) Stating what types of land uses are permitted in various areas. Examples of these uses are residential, commercial, mixed commercial-residential, institutional and industrial.
- 2) Outlining how the land can be developed by establishing precise standards for factors such as lot size and frontage, building setbacks, the height and built form of structures, the number and dimensions of parking and loading spaces and requirements for open space.

Such provisions could be used to manage a documented archaeological resource.

In order to protect archaeological resources, where an archaeological assessment cannot be undertaken immediately, a municipality can use its ability under Section 36 of the *Planning Act* (Holding provision by-law). As the Section states:

36. (1) The council of a local municipality may, in a by-law passed under section 34, by the use of the holding symbol “H” (or “h”) in conjunction with any use designation, specify the use to which lands, buildings or structures may be put at such time in the future as the holding symbol is removed by amendment to the by-law. R.S.O. 1990, c. P.13, s. 36 (1).

The wording of h-18 for the City should be consistent with the objective to ensure known or potential archaeological resources are conserved in accordance with the provision of the *Ontario Heritage Act*, the *Planning Act*, and/or the PPS, that the development proponent shall complete required archaeological assessment(s), shall conserve significant archaeological resources identified through the completed archaeological assessments, and shall complete required engagement with First Nations. No soil disturbance, development, and/or site alteration shall take place on the subject property prior to the issuance of a letter of compliance by MTCS.

6.5 Plan of Subdivision and Plans of Condominium

When a property owner wants to divide a piece of land into two or more parcels and offer one or more for sale, the provisions of the *Planning Act* are applicable and therefore the archaeological assessment provisions are mandatory. These applications therefore require archaeological assessments of the entire property if any portion of the property falls within the archaeological potential planning layer in the AMP (2017). The resultant report may recommend further archaeological assessment to be completed prior to any soil disturbance, development, and/or site alteration.

6.6 Consent Applications

Consents provide property owners with some flexibility within the subdivision control process. A consent application is required to sever land into new lots, add land to an abutting lot, establish easements or rights-of-way, and lease land or register a mortgage in excess of 21 years.

All consent applications that fall within the archaeological potential planning layer in the AMP (2017), and where soil disturbance will occur or might be reasonably anticipated, should be subject to a condition requiring that an archaeological assessment be completed prior to registration.

6.7 Minor Variance Applications

For projects that do not conform to the Zoning By-law, a site-specific by-law amendment is required. This is achieved through a Zoning By-Law Amendment application (rezoning) or a Minor Variance application. Minor variances are used, for example, for issues relating to small changes to building setback or parking requirements.

All minor variance applications that fall within the archaeological potential planning layer in the AMP (2017), and where soil disturbance will occur or might be reasonably anticipated, should be subject to a condition requiring that an archaeological assessment be completed prior to approval.

6.8 Building Permits

Section 2.6.2 of the PPS (2014) stipulates that development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved. Section 48.1 of the *Ontario Heritage Act* prohibits site alteration of an archaeological site without a license.

Site alteration is defined as activities such as grading, excavation, and the placement of fill that would change the landform and natural vegetative characteristics of a site. As a result, any activities beyond normal gardening such as landscaping, work on existing or new driveways and sidewalks, and the installation of patios, decks, pools, sheds, outbuildings and utilities may be considered as “site alterations.”

Site alteration would also include any construction activities requiring permits or approvals under legislation including the *Building Code Act*; this includes, but is not limited to, Foundation Permits and Site Alteration Permits.

While Building Permits do not require archaeological assessments given that they are not subject to applicable law, the City of London should advise the property owner of a registered archaeological site of the provincial statute prohibiting such disturbance during the Building Permit process. It is in the best interest of the City to inform such a property owner of this legal responsibility. This would protect the City from any potential litigation should such a property owner having altered an archaeological site find themselves charged under the *Ontario Heritage Act*.

7.0 ARCHAEOLOGICAL REVIEW PROCESS

7.1 City of London Planning Services and Development Services – Implementation Process

Figure 6 outlines the basic decision flow recommended for use in the development review process for all land development applications within the City. This is followed by an outline of the archaeological assessment process and its stages and the standard condition that can be applied to all planning and development applications where a portion of the property falls within the archaeological potential planning layer defined in the AMP (2017).

The archaeological review procedure, as it relates to planning and development, requires close co-operation between City of London Planning Services and Development Services and staff of the Archaeology Programs Unit of the MTCS, as well as the development and archaeological communities.

The general sequence of actions is as follows:

1. As part of the pre-application consultation process, City of London Planning Services and Development Services will determine if an archaeological assessment is required by means of review of the Archaeological Potential Planning Layer (GIS-ArchPotential_PlanningLayer). Should any portion of the property fall within that layer, a Stage 1 or Stage 1-2 archaeological assessment of the entire property is required. The archaeological assessment would be undertaken by the consultant archaeologist for the development proponent and submitted as part of the complete planning or development application. If required, City of London Planning Services and Development Services will recommend that the completion of an archaeological assessment be made a condition of approval.

2. Provincial regulations require that the development proponent must retain a consultant archaeologist. The consultant archaeologist will conduct a Stage 1 or Stage 1-2 archaeological assessment of the entire subject property, not simply the portion(s) that falls within the archaeological potential planning layer.
3. All work conducted by the consultant archaeologist must conform to the standards set forth in the most current *Standards and Guidelines for Consultant Archaeologists* and associated Bulletins issued by MTCS.
4. Once a Stage 1-2 archaeological assessment, consisting of background research and a field survey, has been completed, the consultant archaeologist will submit a report to the Archaeology Programs Unit of the MTCS. The staff of the Archaeology Programs Unit of the MTCS will review the report to determine if the assessment has met current licensing and technical standards. If this is not the case, MTCS will require the consultant archaeologist to carry out additional field work, and/or provide more extensive documentation.
5. If the archaeological assessment complies with licensing and technical standards and did not result in the identification of any intact archaeological potential within the property (in the case of a Stage 1 assessment) or did not result in the documentation of any significant archaeological resources (in the case of a Stage 1-2 assessment), the staff of the Archaeology Programs Unit of the MTCS will provide a compliance letter to the consultant archaeologist and the City in its capacity as Approval Authority, which will serve to notify them that all provincial concerns with respect to archaeological resource conservation and archaeological licensing have been met. Upon receipt of this notification of MTCS approval and copies of the archaeological assessment report(s), the City may then clear the subject property/site of any further archaeological concern.

If the Stage 1-2 assessment resulted in the documentation of one or more significant archaeological resources as determined by the consultant archaeologist, appropriate mitigation and/or preservation options must be recommended by the consultant archaeologist and approved by MTCS. Upon completion of the mitigation, the consultant archaeologist must provide a report detailing this work and its results to MTCS, which will review the work and provide the consultant archaeologist with a compliance letter that there are no further archaeological concerns, or that additional mitigations be undertaken.

It should be noted, in this regard, that once Stage 3 assessments have been completed on the archaeological sites requiring further investigation, it is generally possible to secure partial clearance for the property, in that the archaeological requirement may be removed from the balance of the subject lands not encompassed by the archaeological site(s) and the protective buffer zones surrounding it/them, which are defined in the *Standards and Guidelines for Consultant Archaeologists*. Similarly, although the final report of a comprehensive Stage 4 archaeological excavation may take many months to complete, final clearance for the property may be available upon the consultant archaeologist completing the fieldwork and submitting a preliminary report to MTCS.

Avoidance and protection of archaeological sites is the preferred form of mitigation. There are both short- and long-term components to the process of site protection, as outlined in the *Standards and Guidelines for Consultant Archaeologists*.

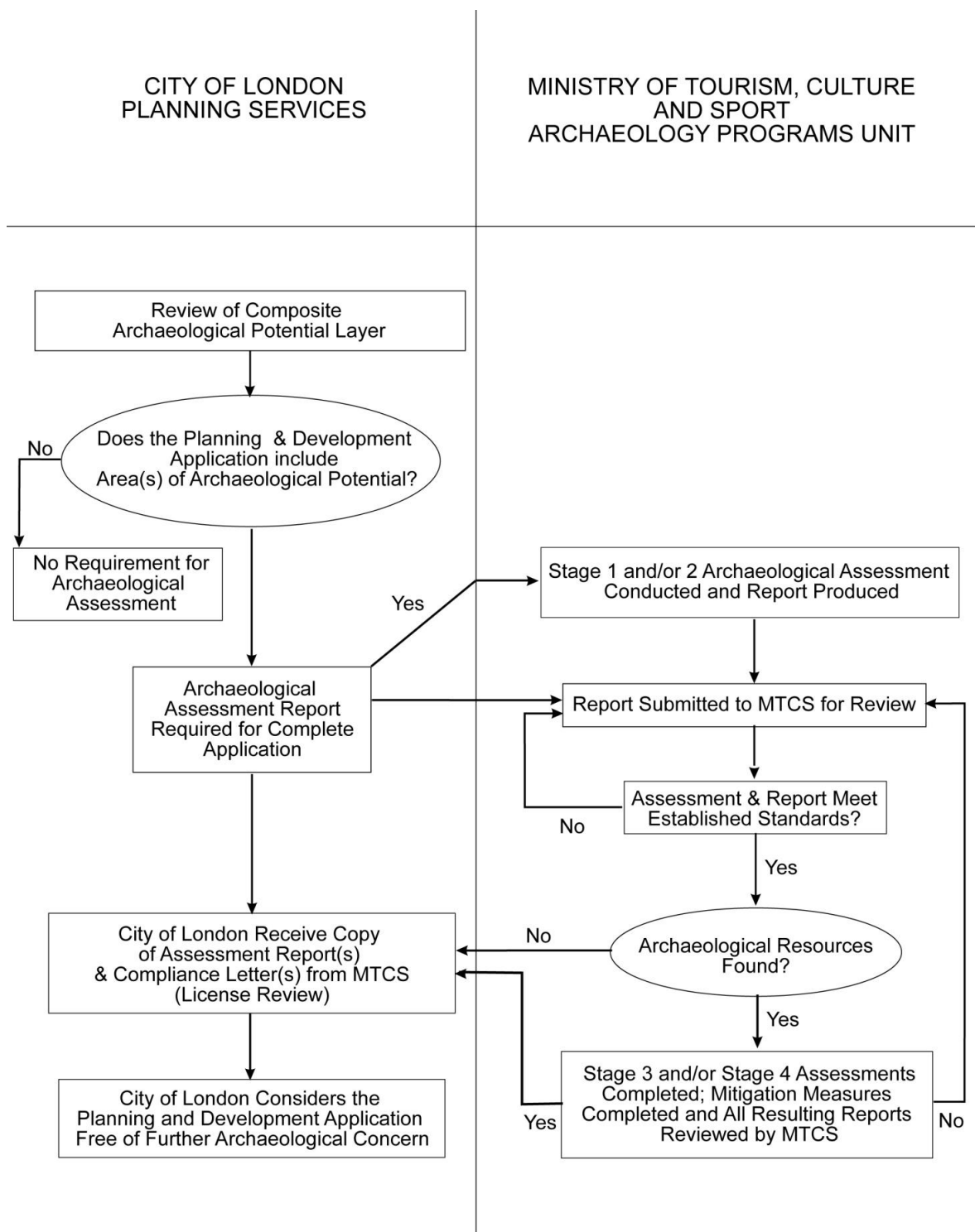


Figure 7: Archaeological review in the planning and development application process. Note that the archaeological assessment should be conducted prior to submission of the planning application.

THE ARCHAEOLOGICAL ASSESSMENT PROCESS

A **Stage 1** assessment consists of background research concerning registered sites on the subject lands or within close proximity, as well as the environmental character of the property and its land use history.

A **Stage 2** assessment consists of field survey to document any sites that may be present on a property. It should be noted that completion of an archaeological field assessment of a particular development property, no matter how rigorous, does not fully guarantee that all significant archaeological resources on that property will be identified prior to land disturbance. This is particularly the case in areas where processes such as filling, flooding or erosion have resulted in the burial of original ground surfaces, or with respect to isolated human burials that are typically small features that can escape detection.

Stage 3 investigations are designed to secure a detailed understanding of the nature and extent of a site and may involve complete or partial systematic surface collection and test excavation.

Stage 4 undertakings comprise extensive excavation; comparative analysis and interpretation of content and contextual information.

WORDING FOR THE ARCHAEOLOGICAL CONDITION

The development proponent shall retain an archaeologist, licensed by the Ministry of Tourism, Culture and Sport under the provisions of the *Ontario Heritage Act* (R.S.O 1990 as amended) to carry out a Stage 1 (or Stage 1-2) archaeological assessment of the entire property and follow through on recommendations to mitigate, through preservation or resource removal and documentation, adverse impacts to any significant archaeological resources found (Stages 3-4). The archaeological assessment must be completed in accordance with the most current *Standards and Guidelines for Consulting Archaeologists*, Ministry of Tourism, Culture and Sport.

All archaeological assessment reports, in both hard copy format and as a PDF, will be submitted to the City of London once the Ministry of Tourism, Culture and Sport has accepted them into the Public Registry.

Significant archaeological resources will be incorporated into the proposed development through either in situ preservation or interpretation where feasible, or may be commemorated and interpreted through exhibition development on site including, but not limited to, commemorative plaquing.

No demolition, construction, grading or other soil disturbances shall take place on the subject property prior to the City's Planning Services receiving the Ministry of Tourism, Culture and Sport compliance letter indicating that all archaeological licensing and technical review requirements have been satisfied.

In cases in which the avoidance and protection option is pursued, the limits of the site must have been fully defined through completion of Stage 3 archaeological assessment. The avoidance and protection area defined for the site must include the entire archaeological site and a minimum 20 metre buffer zone in the case of Late Woodland village sites or a minimum 10 metre buffer zone for all other site types. The buffer zone may be reduced in areas where pre-existing, permanent physical constraints to the extent of the site are present.

In order to ensure there are no impacts to the avoidance and protection area in the short term, during development of contiguous lands, the limits of the avoidance and protection area must be fenced (snow fencing or similar type) by the development proponent under the supervision of a consultant archaeologist prior to any soil disturbance, development, and/or site alteration. The protective fencing must remain in place for the duration of any development work resulting in land disturbance and instructions issued to all on-site contractors that there are to be no impacts of any sort within avoidance and protection area. It is a “no go” area. The avoidance and protection area must also be identified on all project mapping. Written confirmation from the development proponent regarding their commitment to implement this strategy and confirmation that any ground alterations will avoid the avoidance and protection area must be submitted to MTCS prior to initiation of any such work and copied to the City as the approval authority.

The maintenance and efficacy of the fencing must be confirmed through monitoring on the part of a consultant archaeologist and a report documenting this process must be submitted to MTCS and the City.

In terms of long-term protection, the most effective mechanisms are a restrictive covenant on title or a zoning by-law amendment, and preferably, transfer of ownership to the City or another public land-holder. The allowable uses of the protected area, under the terms of the covenant or by-law amendment, must not include any activities that would result in even minor soil disturbances or alterations, such as tree removal, minor landscaping, and installation of utilities. Should transfer of ownership be part of the long-term protection strategy, the new property owner must provide documentation to MTCS demonstrating that they are aware of their obligations with respect to the archaeological site and its protection and their ability to fulfil those obligations. It is also often recommended that this documentation include a proviso acknowledging that any future alterations or soil disturbances that may ultimately be proposed within the protection zone must be preceded by further Stage 3 archaeological assessment and Stage 4 mitigation of impacts in accordance with the MTCS *Standards and Guidelines for Consultant Archaeologists*.

6. Upon receipt of the archaeological review compliance letter from the MTCS that archaeological conservation and licensing concerns have been addressed, and receipt of the necessary copies of archaeological assessment reports from the consultant archaeologist, the City will clear the planning application of further archaeological concern.

Should the development proponent choose not to proceed with all necessary Stage 3 and Stage 4 assessments prior to submitting a planning and development application, the completion of these activities to the satisfaction of MTCS must be made a holding provision and/or a condition of approval (e.g., draft plan condition of approval for a Plan of Subdivision).

It should be noted that completion of an archaeological assessment of a particular development property, no matter how rigorous, does not fully guarantee that all significant archaeological resources on that property will be identified prior to land disturbance. This is particularly the case in areas where natural processes, such as flooding or erosion, have resulted in the burial of original ground surfaces, or with respect to isolated human burials that are typically small features that can escape detection.

Therefore, every archaeological assessment report should contain the statement that should deeply buried archaeological remains be found on a property during construction activities, the MTCS should be notified immediately. It should further specify that if human remains are encountered during construction, the development proponent must immediately contact the police, MTCS, and the Registrar of Burial Sites, War Graves, Abandoned Cemeteries and Cemetery Closures, Ministry of Government and Consumer Services.

7.2 Determining the Cultural Heritage Value of Archaeological Resources

The *Standards and Guidelines for Consultant Archaeologists* sets out criteria for determining the cultural heritage value of archaeological resources, including information value, value to a community, and value as a public resource. They define a set of indicators based on these criteria, which helps to determine which archaeological resources are significant and therefore must be preserved or conserved. Engagement with First Nations may also identify Indigenous values not captured in this Table.

Table 2: Indicators Showing Cultural Heritage Value or Interest
(reproduced from *Standards and Guidelines for Consultant Archaeologists*)

Information Value	
The archaeological site contributes to local, regional, provincial or national archaeological history.	
Criteria	Indicators
Cultural Historical Value	Information from the archaeological site advances our understanding of: <ul style="list-style-type: none"> • Cultural history – locally, regionally, provincially or nationally • Past human social organization at the family, household or community level • Past material culture – manufacture, trade, use and disposal
Historical Value	The archaeological site is associated with: <ul style="list-style-type: none"> • Oral histories of a community, Aboriginal community, or specific group or family • Early exploration, settlement, land use or other aspect of Ontario's history • The life or activities of a significant historical figure, group, organization or institution • A significant historical event (cultural, economic, military, religious, social or political)
Scientific Value	The archaeological site contains important evidence that contributes to: <ul style="list-style-type: none"> • Paleo-environmental studies • Testing of experimental archaeological techniques

Table 2: Indicators Showing Cultural Heritage Value or Interest
(reproduced from *Standards and Guidelines for Consultant Archaeologists*)

Rarity or Frequency	<p>The archaeological site is:</p> <ul style="list-style-type: none"> • Unique – locally, regionally, provincially or nationally • Useful for comparison with similar archaeological sites in other areas • A type that has not been studied or has rarely been studied, and is therefore under-represented in archaeological research
Productivity	<p>The archaeological site contains:</p> <ul style="list-style-type: none"> • Large quantities or artifacts, especially diagnostic artifacts • Exotic or rare artifacts demonstrating trade or other exchange patterns
Integrity	<ul style="list-style-type: none"> • The archaeological site is well preserved and retains a large degree of original material

Value to a Community

The archaeological site has intrinsic value to a particular community, Aboriginal community or group.

Criteria	Indicators
The archaeological site has traditional, social or religious value.	<p>The archaeological site:</p> <ul style="list-style-type: none"> • Contains human remains • Is identified as a sacred site • Is associated with a traditional recurring event in the community, aboriginal community or group (e.g., an annual celebration) • Is a known landmark

Value as a Public Resource

The archaeological site contributes to enhancing the public's understanding and appreciation of Ontario's past.

Criteria	Indicators
The archaeological site has potential for public use for education, recreation or tourism.	<p>The archaeological site:</p> <ul style="list-style-type: none"> • Is or can be made accessible to tourists, local residents or school groups • Is or can be incorporated into local education, recreation or tourism strategies and initiatives

7.3 Assessing Resource Impacts and Identifying Mitigation Strategies

If no adverse impacts to an archaeological resource will occur, then development may proceed as planned.

Should a significant Indigenous archaeological resource be discovered during the course of an archaeological assessment, provincial regulations require the development proponent, the consultant archaeologist, and the relevant First Nations to assess the potential impact(s) to it and arrive at rational decisions regarding potential mitigative options. Those may involve protection and avoidance of the archaeological site within the context of the proposed development, its mitigation by salvage excavation (salvage and removal), or a combination of these approaches. These decisions are subject to review by MTCS and MTCS must concur with them.

The relevant Indigenous community(s) must also be consulted throughout the site mitigation process. It is often assumed that the First Nation that is geographically closest to the project is the most suitable group with whom to consult, particularly when the issues at stake are those of archaeological resources and human remains. However, the complex histories of First Nations occupation of London and region, both before and after European contact and settlement, means that such assumptions can be simplistic and detrimental to the success of the entire consultation process. Under all circumstances there should be an effort to identify the group or more likely groups that are the most appropriate (on cultural-historical grounds) to act as the designated descendants of those who occupied the project area in the past, and who are willing to participate and ensure that cultural heritage remains are treated in an appropriate and seemly manner. This identification process is best achieved through negotiation with a variety of communities in order that they may themselves arrive at the final decision. It should also be noted that the MTCS has *Standards and Guidelines for Consultant Archaeologists*, which includes a Bulletin entitled *Engaging Aboriginal Communities in Archaeology* that requires Indigenous consultation between Stages 3 and 4 archaeological investigations on significant Indigenous sites and recommended consultation before Stage 2 and 3. Section 5 identifies those First Nations that might be consulted. It should also be noted that, at the request of a local First Nation and approved by the Ontario Ministry of Municipal Affairs and Housing, Policy 615 of The London Plan requires engagement with Indigenous communities in advance of Stage 2 archaeological assessment and the provision of monitors for that work.

In the case of Euro-Canadian archaeological sites, the same process is involved, there is not necessarily any requirement beyond that which occurs between the development proponent and the consultant archaeologist.

In the process of determining mitigation strategies, it is always possible that other heritage stakeholders or interest groups (e.g., LACH) may express a desire to participate. There may be circumstances where the City may want to encourage such participation.

In any situation, there are a number of mitigative options, including avoidance, modifications to construction techniques, long-term protection, and various degrees of documentation and/or excavation, as discussed below. Similarly, in all cases, appropriate options for addressing the interpretive and educational potential of the site should be documented.

It should also be noted that detailed information regarding a site is frequently required in order to make a more accurate assessment of significance and to determine the potential for adverse effects. This may involve different levels of on-site investigations.

Many of the sites routinely encountered will prove to be of little or no significance and will not require further investigation, beyond the mapping, measuring and photographing of the surface attributes of the archaeological site that has already occurred during the course of the Stage 2 archaeological assessment.

Where more extensive archaeological mitigation is required, recommended mitigative options may take numerous forms, including:

- *Preservation*: the preferred mitigative option. Preservation may involve long-term protective measures such as project design changes (archaeological site protection) that integrate the resource within the overall development plan. To further avoid both accidental impact and intentional vandalism and looting, additional protective measures may include fencing, screening, or in special circumstances, capping. The City must determine whether preservation is to occur on the landscape scale (e.g., areas of high cultural landscape heritage integrity combined with high archaeological potential are to be preserved as a whole), or at the scale of individual sites that are deemed to be particularly significant or sensitive (e.g., Late Woodland settlements that may contain human burials).

The site preservation/avoidance option has both short- and long-term components. The short-term component involves both the redesign of the development plan (e.g., lot layouts, parkland, road, and service alignments) and ensuring that the resource(s) to be preserved are physically protected during construction by means of fencing or other visible barriers. The long-term protective measures entail the use of prohibitive zoning by-laws, as permitted by subsection 34(1) of the *Planning Act*, or through other conditions or orders that prohibit any future land use activities that might result in soil disturbance for the avoidance and protection area of the site. Consideration should be given for Site Management Plans for archaeological resources retained in situ, as well as funding for perpetual care of sites transferred into public ownership.

- *Stabilization*: may be required in the case of eroding archaeological deposits. This may involve the salvage excavation of the eroding area and/or the construction of retaining walls or barriers.
- *Systematic Data Recovery*: involves the recovery of data from significant archaeological sites when other mitigative options are not feasible. It includes a complete or partial systematic surface collection, excavation, or both; a comparative analysis and interpretation of site content and contextual information; and production of an investigative report. This mitigation strategy ultimately results in the destruction of the archaeological site and the elimination of its archaeological potential.
- *Monitoring*: monitoring may be undertaken (only in specific circumstances) to ensure that adverse impacts on archaeological sites which could not be predicted or evaluated prior to construction are addressed. Monitoring requires the presence of a consultant archaeologist

during the construction phase of a project. This takes the form of scheduled site visits and on-call availability during a long term project.

All decisions regarding mitigative options or preservation strategies are subject to MTCS review and approval. This is achieved through negotiations between staff of the Archaeology Programs Unit of the MTCS and the development proponent, which may be facilitated by the consultant archaeologist.

8.0 ARCHAEOLOGICAL RESOURCE MANAGEMENT – OPERATIONAL AND ADMINISTRATIVE MATTERS

8.1 Managing Geospatial Data

The layers used to create the composite archaeological potential layer are stored in the City's geospatial database (CityMap). Access to these individual layers is granted only by permission of the City Planner. These individual layers should not be publically accessible due to the sensitivity of the information related to archaeological sites. The composite archaeological potential layer should be posted and publically accessible on CityMap. The archaeological potential planning layer should not be publically accessible.

Planning Services and Development Services should update these layers annually by adding all new archaeological sites with their Borden number and ensuring that all properties that have been subject to archaeological assessment and cleared of further archaeological concern are removed from the archaeological assessments layer as appropriate. Where archaeological sites are protected permanently, only the balance of the assessed property in which the site was found is removed from the archaeological assessments layer; the site and its avoidance and protection area retain their archaeological potential.

8.2 Contingency Planning

In any case in which deeply buried archaeological remains (including burials) are encountered, all construction activity in the vicinity of the discovery, as defined by the attending consultant archaeologist, must be suspended immediately until an appropriate mitigation strategy is identified and executed.

There exist certain situations in which unforeseen and deeply buried archaeological deposits may be discovered during construction. There are also redevelopment contexts when the City may have limited planning control, thus being restricted in its ability to implement the AMP (2017).

In light of these considerations, the City has developed a “Contingency Plan for the Protection of Archaeological Resources in Urgent Situations” (Appendix A). While a Contingency Plan is not required by legislation, it represents best planning practice.

The Contingency Plan addresses:

- Notification process, involving the City of London, relevant Indigenous communities, and MTCS;
- Investigation and reporting process undertaken by a consultant archaeologist;

- Financial responsibility, structured according to the ability to pay of public sector, private sector, and individual land owners. In the case of individual land owners, the recommendation to establish a contingency fund; and,
- A recommendation that the City establish greater latitude and flexibility in assisting individual land owners by extending inducements of various types to the private owner/developer in the community interest (e.g., rebates, temporary assessment freezes, etc.)

8.3 Reports and Site Locations – Constraints in Sharing Information

As archaeological site locations are considered sensitive information, to protect these resources from looting by unlicensed individuals, information concerning archaeological site locations can only be provided externally for a given property to an agent of the party holding title to that property. This includes consultant archaeologists retained by the owner of a property. Consultant archaeologists should be referred to the MTCS for site information in all other circumstances as should any other external requests to the City for information about site locations.

Archaeological license reports are no longer subject to the *Freedom of Information and Protection of Privacy Act*, as well as copyright restrictions, with the exception of sensitive information concerning still extant archaeological site locations. The City may use these reports for internal purposes and provide copies to consultant archaeologists.

8.4 Ownership of Artifacts

The question of ownership of archaeological resources, whether they be sites or individual artifacts remains unresolved in Ontario. Consequently, issues of ownership have often complicated the protection or conservation of the resource.

The *Ontario Heritage Act* also governs matters related to the care and curation of artifacts. Under Section 66 (1), the *Ontario Heritage Act* stipulates that, “The Minister may direct that any artifact taken under the authority of a license or a permit be deposited in such public institution as the Minister may determine, to be held in trust for the people of Ontario” (2002, c. 18, Sched. F, s. 2 (43)). Moreover, under O. Reg. 8/06, pertaining to licensing under the *Ontario Heritage Act*, “It is a term and condition of a license that the licensee keep in safekeeping all objects of archaeological significance that are found under the authority of the license and all field records that are made in the course of the work authorized by the license, except where the objects and records are donated to Her Majesty the Queen in right of Ontario or are directed to be deposited in a public institution under subsection 66 (1) of the Act.”

The application of this section of the *Ontario Heritage Act* and O. Reg. 8/06 typically involves the curation of recovered artifacts by the consultant archaeologist until such time that the analyses are complete and that a place for ultimate disposition can be arranged, usually a fully accredited public repository, such as a regional museum.

In the case of material of Indigenous origin, the Museum of Ontario Archaeology/Sustainable Archaeology has already established curation and research policies for the management of collections with a collaborative advisory committee involving relevant First Nations individuals.

8.5 Artifact Curation

There is a clear need to co-ordinate the disposition of artifacts recovered from archaeological sites within the City. Indeed, it is generally preferable that material from a particular archaeological site is ultimately deposited in a public institution located in the same community, provided that adequate storage and curatorial facilities for both artifacts and field records are available, that the institution's collections are accessible to researchers, and that the material is not transferred or disposed of without provincial approval.

While the Museum of Ontario Archaeology/Sustainable Archaeology already houses collections of material and are willing to accept additional material according to their policies, a large amount of material from sites in the City is currently curated elsewhere. Indeed, most collections derived from the activities of private archaeological consulting firms, remain in the care of those firms.

It is recommended that archaeological assemblages resulting from future archaeological investigations be curated at the Museum of Ontario Archaeology/Sustainable Archaeology facility, which would allow the City to interpret its archaeological history locally and to collaborate in the preparation of interpretive displays throughout the City.

It is recommended that the City consider preparing an accurate and comprehensive inventory of the archaeological collections recovered from archaeological sites within the City currently held by consulting archaeologists and public agencies and plan for their curation.

8.6 Periodic Update to the Plan

In order to ensure the long term viability of the AMP (2017), it should be subject to comprehensive review in co-ordination with the review of the City's Official Plan as required by the *Planning Act*. Such a review should consider any changes in MTCS criteria for site significance, any data gaps in the site inventory, changes required to the composite archaeological potential layer, and all procedures and guidelines related to the implementation of the AMP (2017).

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10.0 GLOSSARY

Aboriginal (Indigenous)

Used inclusively in this document to refer to First Nation or Indigenous communities (also known as “bands” under the *Indian Act*), Métis communities, and communities of other Aboriginal peoples who identify themselves as a community, such as those living in urban centres or those belonging to an Indigenous Nation or tribe that encompasses more than one community (e.g., the Pottawatomi, Mississauga, Mohawk).

Approval Authority

In the land use and development context, this includes any public body (e.g., municipality, conservation authority, provincial agency, ministry) that has the authority to regulate and approve development projects, that fall under its mandate and jurisdiction (e.g., *Planning Act*, *Environmental Assessment Act*, *Aggregate Resources Act*).

Archaeological Assessment

For a defined project area or property, a survey undertaken by a licensed archaeologist within those areas determined to have archaeological potential in order to identify *archaeological sites*, followed by evaluation of their cultural heritage value or interest, and determination of their characteristics. Based on this information, recommendations are made regarding the need for mitigation of impacts and the appropriate means for mitigating those impacts.

Archaeological Resources

In the context of the *Standards and Guidelines for Consulting Archaeologists*, objects, materials and physical features identified by licensed archaeologists during a Stage 2 archaeological assessment as possibly possessing cultural heritage value or interest. Analysis using the criteria set out in the *Standards and Guidelines for Consulting Archaeologists* determines whether those objects, materials and physical features meet the definition of an archaeological site under the *Ontario Heritage Act* and whether Stage 3 archaeological assessment is required. In various planning and development contexts, the term may refer to any or all of archaeological potential, artifacts and archaeological sites.

Archaeological Site

Defined in Ontario regulation (*Ontario Heritage Act*, O. Reg. 170/04) as “any property that contains an artifact or any other physical evidence of past human use or activity that is of cultural heritage value or interest.”

Artifact

Defined in Ontario regulation (*Ontario Heritage Act*, O. Reg. 170/04) as “any object, material or substance that is made, modified, used, deposited or affected by human action and is of cultural heritage value or interest.”

Avoidance

The process by which alterations to an archaeological site are preserved during the short-term time period during which development activities are undertaken.

Borden number

Since 1974, all archaeological sites for the Province of Ontario have been registered with the Ontario Archaeological Sites Database (OASD), maintained by the Heritage Branch and Libraries Branch of the Ontario Ministry of Tourism, Culture and Sport, Toronto. This database is the official, central repository of all site information for the Province collected under the *Ontario Heritage Act* (1990). An associated Geographic Information System has been developed by the Ministry of Tourism, Culture and Sport. Within the OASD, registered archaeological sites are organized within the “Borden” system and based on blocks of latitude and longitude, each measuring approximately 13 kilometres east-west by 18.5 kilometres north-south. Each block is assigned a unique four letter designator and sites within each block are numbered sequentially.

Consultant archaeologist

An archaeologist who enters into an agreement with a client to carry out or supervise archaeological fieldwork on behalf of the client, produce reports for or on behalf of the client and provide technical advice to the client. In Ontario, these people also are required to hold a valid professional archaeological license issued by the Ministry of Tourism, Culture and Sport.

Cultural heritage value or interest

For the purposes of the *Ontario Heritage Act* and its regulations, archaeological resources that possess cultural heritage value or interest are protected as archaeological sites under Section 48 of the *Ontario Heritage Act*. Where analysis of documented artifacts and physical features at a given location meets the criteria stated in the *Standards and Guidelines for Consulting Archaeologists*, that location is protected as an archaeological site and further archaeological assessment may be required.

Development Proponent

An entity, consisting of individuals, private corporations or government bodies, which is undertaking a development project.

Diagnostic artifact

An artifact that indicates by its markings, design or the material from which it is made, the time period it was made, the cultural group that made it or other data that can identify its original context.

Greenfield

Outlying locations of the city, within the city’s Urban Growth Boundary, on lands that have never previously been developed.

Marine archaeological site

An archeological site that is fully or partially submerged or that lies below or partially below the high-water mark of any body of water.

Project Information Form (PIF)

The form archaeological license-holders must submit to the Ministry of Tourism, Culture and Sport upon deciding to carry out fieldwork.

Protection

Measures put in place to ensure that alterations to an archaeological site will be prevented over the long-term period following the completion of a development project.

Restrictive covenants

Section 119 of the *Land Titles Act* (subject to imminent revision) defines restrictive covenants being placed “upon the application of the owner of land that is being registered or of the registered owner of land, the land registrar may register as annexed to the land a condition or restriction that the land or a specified part thereof is not to be built upon, or is to be or is not to be used in a particular manner, or any other condition or restriction running with or capable of being legally annexed to land. R.S.O. 1990, c. L.5, s. 119 (1).” The land registrar may register as annexed to the land a condition, restriction or covenant that is included in a transfer of registered land that the land or a specified part thereof is not to be built upon, or is to be or is not to be used in a particular manner, or any other condition, restriction or covenant running with or capable of being legally annexed to land. R.S.O. 1990, c. L.5, s. 119 (2).

APPENDIX A: CONTINGENCY PLAN FOR THE PROTECTION OF ARCHAEOLOGICAL RESOURCES IN URGENT SITUATIONS

**APPENDIX A
CONTINGENCY PLAN
FOR THE
PROTECTION OF ARCHAEOLOGICAL RESOURCES
IN URGENT SITUATIONS**

June 2017

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1.0 INTRODUCTION

The archaeological sites that are the physical remains of the City's 13,000-year settlement history represent a fragile and non-renewable cultural heritage resource that must be conserved and protected.

The City of London was among the first municipalities in Ontario to prepare an Archaeological Master Plan (AMP) (1996), which are now referred to as Archaeological Management Plans. The AMP (1996) constituted the City's first comprehensive approach to the conservation of archaeological resources.

A review and update of the archaeological potential model developed in the AMP (1996) has been undertaken and the City now has a new Archaeological Management Plan (AMP 2017), which not only integrates the revised archaeological potential model but recognizes the requirements of new legislation and best practices in archaeological resource management that have evolved since 1996.

While the AMP (2017) reduces the risk of unfortunate surprises occurring (such as disturbing a burial site or 19th century building foundation) during construction, a recommendation of the City's AMP (2017) included the preparation of a "Contingency Plan for the Protection of Archaeological Resources in Urgent Situations" intended to be an appendix to the report. While such a plan is not required by legislation, it represents best planning practice.

The Contingency Plan addresses:

- a notification process, involving the City of London, relevant Indigenous communities, and Ministry of Tourism, Culture and Sport (MTCS);
- an investigation and reporting process undertaken by a consultant archaeologist;
- Recommendations for financial responsibility, structured according to the ability to pay of public sector, private sector, and individual land owners. In the case of individual land owners, it is likely necessary to establish a contingency fund; and
- Recommendations for the consideration of greater latitude and flexibility in assisting individual land owners by extending inducements of various types to the private owner/developer in the community interest (e.g., rebates, temporary assessment freezes, etc.).

One of the underlying premises of this plan is that upon discovery of an archaeological resource in an urgent situation, it is illegal for any person or agency to alter that archaeological site, whether registered or not, without an archaeological license issued by the Province of Ontario. This offers automatic protection to all archaeological sites and the City must exercise due diligence in all contexts, including emergency situations, such as broken water mains, to ensure that archaeological features are protected from disturbance of any nature. While the nature of the emergency must obviously be balanced with the needs of archaeological resource conservation, the identification of human remains in such situations requires an immediate cessation of work in the area of the remains.

This report is divided into two parts, the first of which presents a plan for dealing with urgent situations concerning non-burial archaeological resources. Part 2 includes a best practice approach to situations involving the unanticipated discovery of human remains. A glossary is available in this report in a separate section for archaeological terms although definitions for archaeological resources, archaeological sites, artifacts and archaeological fieldwork are presented in the next section.

2.0 ARCHAEOLOGICAL RESOURCES (NON-HUMAN REMAINS)

2.1 Defining Archaeological Resources

The 2014 *Provincial Policy Statement* (PPS 2014) defines archaeological resources (Section 6.0, Definitions) as including “artifacts, archaeological sites, and marine archaeological sites.” Individual archaeological sites are distributed in a variety of locational settings across the landscape, being locations or places that are associated with past human activities, endeavours, or events. These sites may occur on or below the modern land surface, or may be submerged under water. The physical forms that these archaeological sites may take include: surface scatters of artifacts; subsurface strata which are of human origin, or incorporate cultural deposits; the remains of structural features; or a combination of these attributes.

As such, archaeological sites are both highly fragile and non-renewable. The *Ontario Heritage Act* (Ontario Regulation 170/04) defines “archaeological site” as “any property that contains an artifact or any other physical evidence of past human use or activity that is of cultural heritage value or interest;” “artifact” as “any object, material or substance that is made, modified, used, deposited or affected by human action and is of cultural heritage value or interest;” and “marine archaeological site” as “an archeological site that is fully or partially submerged or that lies below or partially below the high-water mark of any body of water.” Archaeological fieldwork is defined as “any activity carried out on, above or under land or water for the purpose of obtaining and documenting data, recovering artifacts and remains or altering an archaeological site and includes monitoring, assessing, exploring, surveying, recovering, and excavating.”

2.2 Summary of Policies and Protocols in Other Jurisdictions Regarding Contingency Plans

In developing this Contingency Plan, a search was made to see if such plans had been prepared in other jurisdictions around the world and to evaluate their usefulness as models for the City of London to adopt, either in whole or in part. Research was not undertaken on the discovery of human remains as the process to be followed in Ontario is defined in the *Funeral, Burial and Cremation Services Act*, 2002 (see Section 3.0).

General archaeological conservation policies in numerous U.S. cities and states, as well as a variety of city, county/regional, or national planning authorities in New Zealand, Asia, the United Kingdom, and continental Europe were examined. These documents are generally related to the development planning process, as this is the context in which archaeological resources, be they known or unexpected, tend to be most vulnerable to destruction by activities that are nonetheless subject to control on the part of one authority or another. This is not to suggest, however, that the City of London’s Contingency Plan is to be applicable only to the development process. Archaeological artifacts or sites may be discovered under other circumstances and elements of the protocol outlined in this document will come into play.

While many of the planning documents recognize the possibility that archaeological resources or human remains may, on occasion, be discovered late in the development process (i.e., during the actual construction phase), and that such discoveries will require an “emergency” response, detailed discussions of the mechanics of such a response are rare nor do they discuss the full range of contexts in which accidental discoveries of archaeological features are made. In large part, this seems to be a result of the general emphasis in the planning literature—whether focused on general archaeological

and development policy, or the technical aspects of archaeological practice—on ensuring that all archaeological concerns are addressed in advance of any development activity that is likely to affect archaeological resources.

Few planning documents offer guidance significantly beyond the standard conditions found within most archaeological assessments that indicate that work must cease and the appropriate authorities must be notified if deeply buried archaeological or human remains are found and the development proponent and the consulting archaeologist will have to “work out” how to proceed from thereon in, with the expectation that the development proponent will bear the costs of the archaeological mitigation and attendant project delays.

The Corporation of the City of London (U.K.) Department of Planning and Transportation’s *Planning Advice Note 3, Archaeology in the City of London: Archaeology Guidance* document contains a discussion of “Unexpected Discoveries” that is among the more detailed *general* statements of procedure:

The purpose of assessment and evaluation is to provide as much information as possible of archaeological remains on a site and to reduce the possibility of unexpected discoveries. If unforeseen archaeological remains are discovered, and there are timetable or resource issues or the remains are potentially of national importance, a site meeting will be called immediately with the client [i.e., the development proponent], the Department of Planning and Transportation and, if appropriate, the English Heritage Inspector of Ancient Monuments. A strategy for preservation in-situ or excavation will be discussed, followed by negotiations with funding agencies to fulfill the agreed strategy (n.d.: 31).

Similarly, Historic England’s *Guidelines for Archaeological Projects in Greater London.*, Greater London Archaeological Advisory Service, April 2015, Section 3.7.1 states for Unexpected Discoveries:

If the discovery of unforeseen significant archaeological remains present difficulties in fulfilling the agreed Written Scheme of Investigation a site meeting will be called immediately with the client, the Local Planning Authority, the GLAAS Advisor and the Inspector of Ancient Monuments (for discoveries of possible national importance) where a forward strategy for preservation in situ or excavation will be discussed. (2015: 20)

The key difference between the situation in the City of London, U.K. and that currently in effect in London (and Ontario as a whole) is the prospect of the development proponents having access to funding to at least partially offset the costs they will incur as a result of the discovery. The perception that development proponents are exposed to financial risk as a consequence of the unexpected discovery of archaeological remains has likely had an influence on whether or not such discoveries actually have been reported. How often this has occurred cannot be determined, but it is likely to be as significant a problem as an inability on the part of construction personnel to recognize the remains for what they are.

Relevant planning policies do exist within infrastructure agreements between environmental monitoring agencies in association with, or separately from, First Nations in Canada and large infrastructure construction corporations (e.g., TransCanada Pipelines, Enbridge). The policies in such

agreements follow a similar direction to those presented here although they are also consistent with the corporate consultation and contingency planning policies of those corporations and those of the planning jurisdiction(s) within which the project is located.

Thus, there are numerous models upon which to base the creation of *specific* emergency procedures in terms of the course of actions to take upon the discovery of archaeological resources. Such protocols are found applied to specific projects, such as state- or sometimes city-level infrastructure works in the United States (i.e., New York City, Minnesota, Wyoming and Washington State). These are all situations in which the funding and legislative context has triggered archaeological requirements. Some American state departments of transportation, such as California, also maintain a roster of contractors qualified to carry out the cultural resource management components of their development projects. It is recommended that the City of London establish a roster for archaeological services and for qualifying criteria for inclusion on their roster, include the ability to respond quickly to any situations in which unanticipated archaeological finds are uncovered.

For major projects undertaken by the City, special clauses might be inserted in agreements with the contractors to allow for emergency discoveries of archaeological resources. In New Zealand, for example, the Heritage Places Trust may require that an “Accidental Discovery Protocol” be applied to private development projects, and the protocol may form part of the original archaeological assessment report(s) completed for the initiative. Such documents are generally comparable with Ontario’s “Discovery of Human Remains – Best Practices Protocol” (see Section 3.0) in terms of the manner in which they outline the steps to be followed (e.g., stop work>secure area of concern>notify authorities>consult with relevant stakeholders and experts to evaluate significance>develop suitable mitigation plan, etc.). Such plans may also identify specific individuals who will serve as project management and supervisory personnel, agency and stakeholder contacts and archaeological experts/consultants who are responsible for implementing the procedures, should they be required during the execution of the project.

We herein recommend that such a protocol be developed for land disturbing activities undertaken in the Early Urban Core, East Industrial District, and Core Expansion Area defined in the City’s Archaeological Management Plan (2017).

2.3 Provincial Role

The Ministry of Tourism, Culture and Sport (MTCS) 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 heritage of Ontario” and so fills the lead provincial government role in terms of direct conservation and protection of cultural resources. The Minister is responsible for determining policies, priorities, and programs for the conservation, protection, and preservation of the heritage of Ontario. These goals are generally accomplished through other legislated processes, such as those required by the *Planning Act* and *Environmental Assessment Act*, rather than directly through the *Ontario Heritage Act* itself.

The Culture Division of the MTCS has the primary administrative responsibility under the *Planning Act* and *Ontario Heritage Act* for matters relating to cultural heritage resource conservation including archaeological resource identification and mitigation in advance of land development, specifically the Archaeology Programs Unit with respect to the latter.

The *Ontario Heritage Act* governs the general practice of archaeology in the province in order to maintain a professional standard of archaeological research and consultation. The Minister is responsible for issuing licenses to qualified individuals. All consultant archaeologists who undertake Stage 1 to 4 archaeological assessments must be licensed by MTCS. All work conducted by the consultant archaeologist must conform to the standards set forth in the most current *Standards and Guidelines for Consulting Archaeologists* (2011) authorized by the MTCS and the accompanying bulletins, such as *Engaging Aboriginal Communities in Archaeology*. All archaeological fieldwork in Urgent Situations must be carried out by consultant archaeologists.

In the case of the discovery of unanticipated archaeological remains, under Subsection 48(1) of the *Ontario Heritage Act*, it is illegal for any person or agency to knowingly alter an archaeological site without a license. Alteration of an archaeological site is deemed to include any form of unsanctioned disturbance or destruction of an archaeological resource brought about by any means (e.g., construction, archaeological excavation, or soil disturbance of any nature on the site). This in effect offers automatic protection to all archaeological sites and the City should help in all accidental discovery contexts to ensure that archaeological features are protected from further disturbance of any nature.

The *Ontario Heritage Act* allows the Ministry to issue a stop work order that will protect any newly discovered feature while arrangements are made by the development proponent to have the archaeological feature investigated by a consultant archaeologist. Should a significant archaeological resource be discovered, and the development proponent or property owner not stop work that may damage the resource, the City should contact the MTCS to request a stop work order.

Work ceasing is far better accomplished, however, by the contractor voluntarily stopping work in the vicinity of a find until a consultant archaeologist is on the scene. It is likely that most discoveries will be found by a contractor, a pedestrian observer, a private citizen on their own property, or a City Inspector. In any of these cases, once authorities have been alerted, any further disturbance to the archaeological resource should stop.

All reports on archaeological investigations concerning accidental discoveries will be submitted to the MTCS, as a condition of an archaeological license. These will be reviewed by MTCS staff to ensure that the activities conducted under a license meet current technical guidelines, resource conservation standards, and the regulations of the *Ontario Heritage Act*. They must also be provided to the City of London's Planning Services and Development Services. Figure 1 outlines the basic process to be followed in a development context.

2.4 Role of City

At the end of this report, there are one page instruction sheets for the discovery of archaeological resources or human remains. In the event that a municipal employee observes archaeological deposits during a property inspection, he or she should consult the one page instruction sheet and make the necessary calls to alert officials to the discovery. The person discovering or reporting the deposit can seek assistance from a Heritage Planner in Planning Services and Development Services, should they require assistance in identifying whether a feature is archaeological in nature and/or determining next steps.

It is recommended that Planning Services and Development Services offer a one-day instruction course to all City inspection officers concerning the archaeology of southern Ontario with a focus on material culture, so that these personnel might better be able to recognize deposits of potential concern or significance.

In the case of private property projects, it is recommended that municipal staff provide the landowner with a list of those consultant archaeologists capable of responding immediately. In the case of public sector projects, the roster of pre-qualified consultants can be used to secure professional help immediately.

Once a consultant archaeologist has attended to the scene, the consultant archaeologists will define the nature and extent of the deposit and direct arrangements for the protection of the precise area of concern. Should a stop work order have been placed by MTCS, arrangements can be made to have it rescinded to allow a development proponent or property owner to carry on without impact to the archaeological resource. The consultant archaeologist will then investigate the archaeological resource and assess the potential impact to the archaeological resource posed by the soil disturbance, development, and/or site alteration. The development proponent or property owner, the consultant archaeologist, the MTCS, and the City of London as the approval authority must then arrive at rational decisions regarding integration of that resource into the development plan or the implementation of mitigative options. In the case of the discovery of Indigenous archaeological resources, the consultant archaeologist is required to engage with the appropriate First Nations (see Section 5.0, AMP 2017) in this report) to seek their input into this process.

This process requires the input of the development proponent or property owner in order to make the decisions regarding potential adverse effects to the archaeological resource. Should the resource be further threatened on a construction site, the two available options available are to immediately integrate the resource into the development plan such as through the allocation of the area as non-parkland open space, or undertake mitigative procedures to salvage excavate the resource. In the case of a private property owner, the decision will generally be to either abandon the project, or undertake mitigative removal of the feature. These decisions will most likely be subject to a cost-benefit analysis where the mitigative option involves input from all of the stakeholders (i.e., the City, MTCS, First Nations, and the development proponent — either public or private sector).

In the case of a private property owner, the financial implications of an unexpected find may be onerous. It is recommended that the City of London establish an **Urgent Archaeological Conservation Grants Program** in order that private property owners might apply for financial aid in these situations. This will have the added benefit of enhancing the conservation of cultural heritage resources within the City. A fund of \$15,000 should be established (and replenished when used). The intent of the **Urban Archaeological Conservation Grants Program** should be to assist individual property owners with financial difficulty in urgent situations of unintended discovery of archaeological resources. The grant program could be managed by Planning Services and Development Services as they would also be aware of the emergency context. It would be essential that allocations from the fund be approved promptly (within one week) so as to allow timely resolution of conservation of fragile archaeological remains.

All participants in any consultation process undertaken in the event of an unexpected discovery must enter into it with the understanding that it will take some time to complete.

2.5 Mitigative Options

Sections 7.2 of the AMP (2017) sets out the criteria for determining the cultural heritage value of archaeological resources, including information value, value to a community and value as a public resource. There is also a set of indicators based on these criteria, which helps to determine which archaeological resources are significant and therefore must be preserved or conserved.

Section 7.3 of the AMP (2017) describes a number of mitigative options, including avoidance, modifications to construction techniques, long-term protection, and various degrees of documentation and/or excavation.

It should be reiterated that detailed information regarding a site is frequently required in order to make a more accurate assessment of significance and to determine the potential for adverse effects. This may involve different levels of on-site investigations.

Many of the sites routinely encountered will prove to be of little or no significance and will not require further investigation, beyond the mapping, measuring and photographing of the surface attributes of the archaeological site that has already occurred during the course of the Stage 2 archaeological assessment.

The implications of heightened health and safety concerns (e.g., brownfield sites with known or presumed environmental hazards, active construction sites, etc.) are described as are the short-term and long-term strategies for preservation.

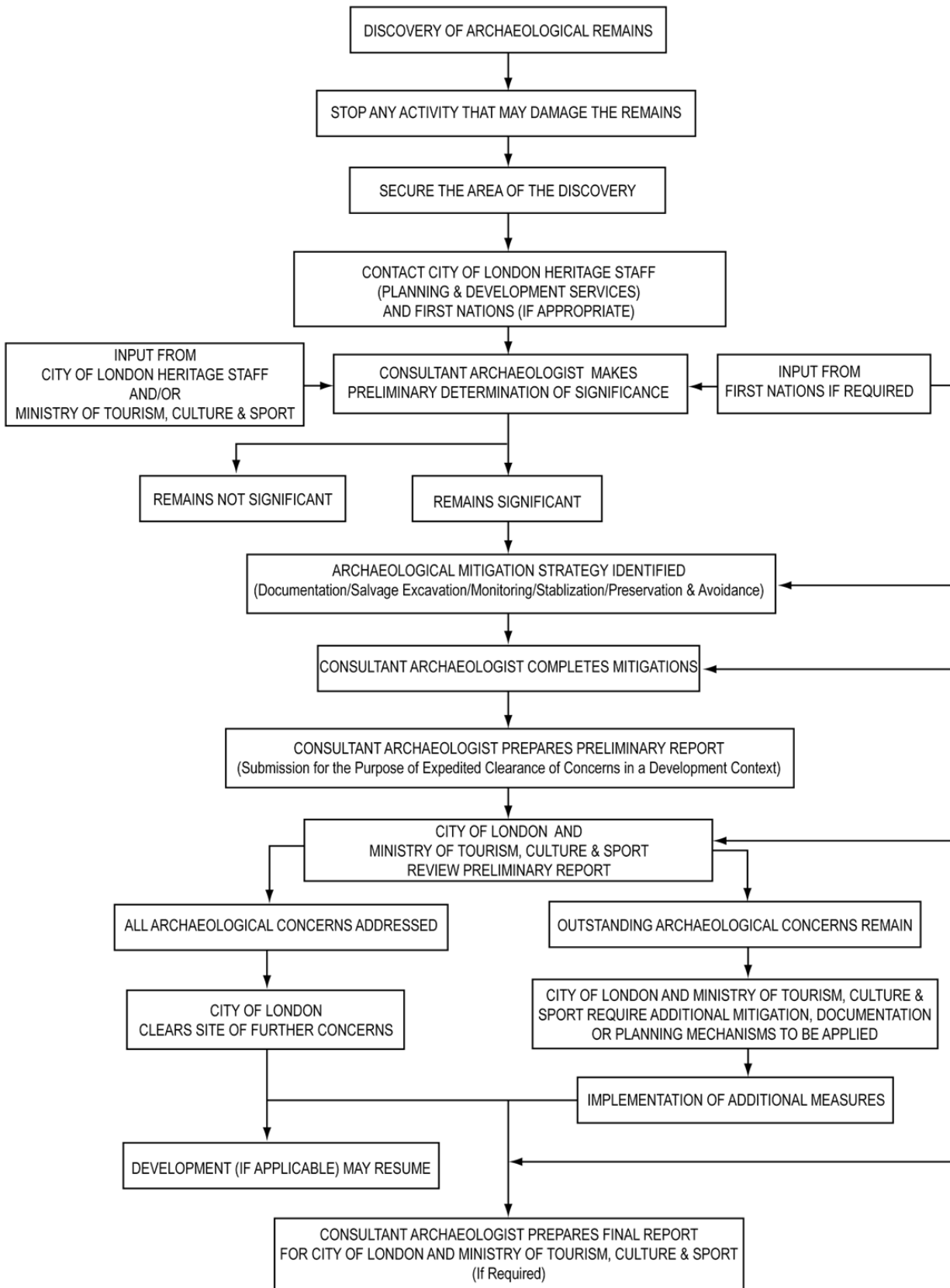


Figure 1: Emergency response process in the event of the accidental discovery of an archaeological site.

3.0 THE DISCOVERY OF HUMAN REMAINS – BEST PRACTICES PROTOCOL

3.1 Introduction

The following is designed to assist all those involved in responding to and addressing unanticipated discoveries of human skeletal remains outside of a licensed cemetery. This is presented as a series of best practices among the many overlapping interests and jurisdictions of several ministries, agencies, police services and other government bodies that are triggered when human skeletal remains are uncovered. This approach was developed originally for the Toronto Region with the support and approval of many First Nations from across Ontario and is equally applicable to discoveries of human remains across Ontario. It has been altered from its original form to meet current procedures and practice.

These best practices support the existing regulatory and statutory mechanisms in Ontario. Responsibility for a previously unknown burial passes through a number of jurisdictions (i.e., Police, Coroner, and the Registrar of Burial Sites, War Graves, Abandoned Cemeteries and Cemetery Closures in the Ministry of Government and Consumer Services) and the intent of this section is to ensure this flow is effective and as seamless as possible.

3.2 Media

Getting through the entire discovery and disposition process when human remains are found will see the authority of the issue shift among several agencies. As such, until all investigations have been carried out and the disposition resolved, formal press releases or contacting the media should only occur if all affected authorities have concurred (i.e., Police, Coroner, First Nations and Registrar of Burial Sites, War Graves, Abandoned Cemeteries and Cemetery Closures). In addition, after all investigations have been completed, the concerns of the landowner and group acting as representative for the deceased should be considered before media contact. Premature media notification, particularly prior to having accurate identification of the deceased, will lead to misinformation, misplaced concerns being raised, and potentially a hardening of attitudes. This can make a final disposition agreement more difficult to reach.

Any media interest should be directed to the agency that has authority over the burial site at the time of the media contact (i.e., Police, Coroner's Office or Registrar of Burial Sites, War Graves, Abandoned Cemeteries and Cemetery Closures). Media photography of the remains, particularly if they are of Indigenous peoples, should be avoided. A publicly displayed photograph of skeletal remains may be both disrespectful to the deceased and offensive to representatives of the deceased.

3.3 Role of Consultant Archaeologist

It is important to note that the discovery of human remains will occur in two basic contexts: either through accidental discovery by an individual in unexpected circumstances such as construction; or, through discovery as part of an archaeological examination/excavation of a locale by a consultant archaeologist, licensed by the MTCS under the *Ontario Heritage Act*. In both cases, a consultant archaeologist will possess the skills, knowledge and expertise to assist both the Police and Coroner in determining the age of the interment, as well as to assist the property owner in generating the information the Registrar of Burial Sites, War Graves, Abandoned Cemeteries and Cemetery Closures will require to determine the nature, extent and cultural affiliation of the persons buried. His or her

presence at the front end of the discovery process will greatly aid all authorities in making quick and accurate determinations, and should be relied on as much as possible in such circumstances.

3.4 Coroner Notification

A person finding any skeletal material that may be human is required to immediately report the find to the local Police or Coroner. An appropriate contact list (e.g., Police, Regional Coroner's offices, Registrar of Burial Sites, War Graves, Abandoned Cemeteries and Cemetery Closures, MTCS) should be maintained by all municipal divisions involved in or managing construction activities, including municipal law enforcement officers, property and building inspectors, and contractors working on behalf of the City who may be the first contact with such a discovery. Figure 2 outlines the process that will be followed from the time of discovery onward.

When the Police are first contacted, they will attend the scene, protect the site and contact the local Coroner. The Coroner, or the Police on behalf of the Coroner, will conduct an investigation to determine if: a) the skeletal material is human; and, b) if the site represents a crime scene. The investigator will need to obtain all the information required to make a determination. Efforts should be made at this stage to minimize site disturbance. All bone and associated grave goods still embedded in the ground should not be disturbed unless removal is essential for the Coroner to make a determination. Poking, pulling, and digging up the bone in an uncontrolled manner can quickly destroy critical data essential to making accurate identifications.

Whenever possible, the Police and Coroner should seek the assistance of a consultant archaeologist and/or biological anthropologist in conducting the investigation. Burials are archaeological deposits in their own right and are often found as part of more extensive archaeological deposits. The consultant archaeologist can help ensure that the larger cultural heritage resource is not destroyed or damaged during investigation of the skeletal material as well as determine whether or not the human remains are part of a crime scene.

Consultant archaeologists will consider issues such as the condition and discoloration of the bone, presence of artifacts around the discovery site, and knowledge of known archaeological sites in the area to determine chronological (and cultural) associations. If intact deposits are examined, features such as the presence/absence of a coffin, depth of remains, position of body, presence of grave goods, etc. will also assist the determination.

When skeletal material is found and it is not readily obvious that this material is either a burial or crime scene, Coroners will often employ the services of a physical/forensic anthropologist to examine the bone in detail. While the Coroner requires only a basic determination of age (i.e., recent vs. historic/ancient) and nature of the interment, the forensic anthropologist's examination can also determine cultural affiliation (based on the presence/absence of specific skeletal traits), age of the individual at death, sex and even funerary practices. This information will be essential for both the investigations for the Registrar of Burial Sites, War Graves, Abandoned Cemeteries and Cemetery Closures, as well as for the deceased's representative in determining the appropriate re-interment requirements. Allowing the forensic anthropologist to complete a descriptive analysis of the skeletal material as part of the Coroner's investigation will greatly aid in addressing remaining issues associated with this process.

When the Coroner is satisfied the discovery site is not a crime scene, it is essential that the Registrar of Burial Sites, War Graves, Abandoned Cemeteries and Cemetery Closures and the City of London is notified of the discovery, and pass along any relevant information (e.g., contacts, results of any analyses). The property owner is legally required to preserve and protect the site when the police are no longer involved until a disposition is made under the *Funerals, Burials and Cremation Services Act*.

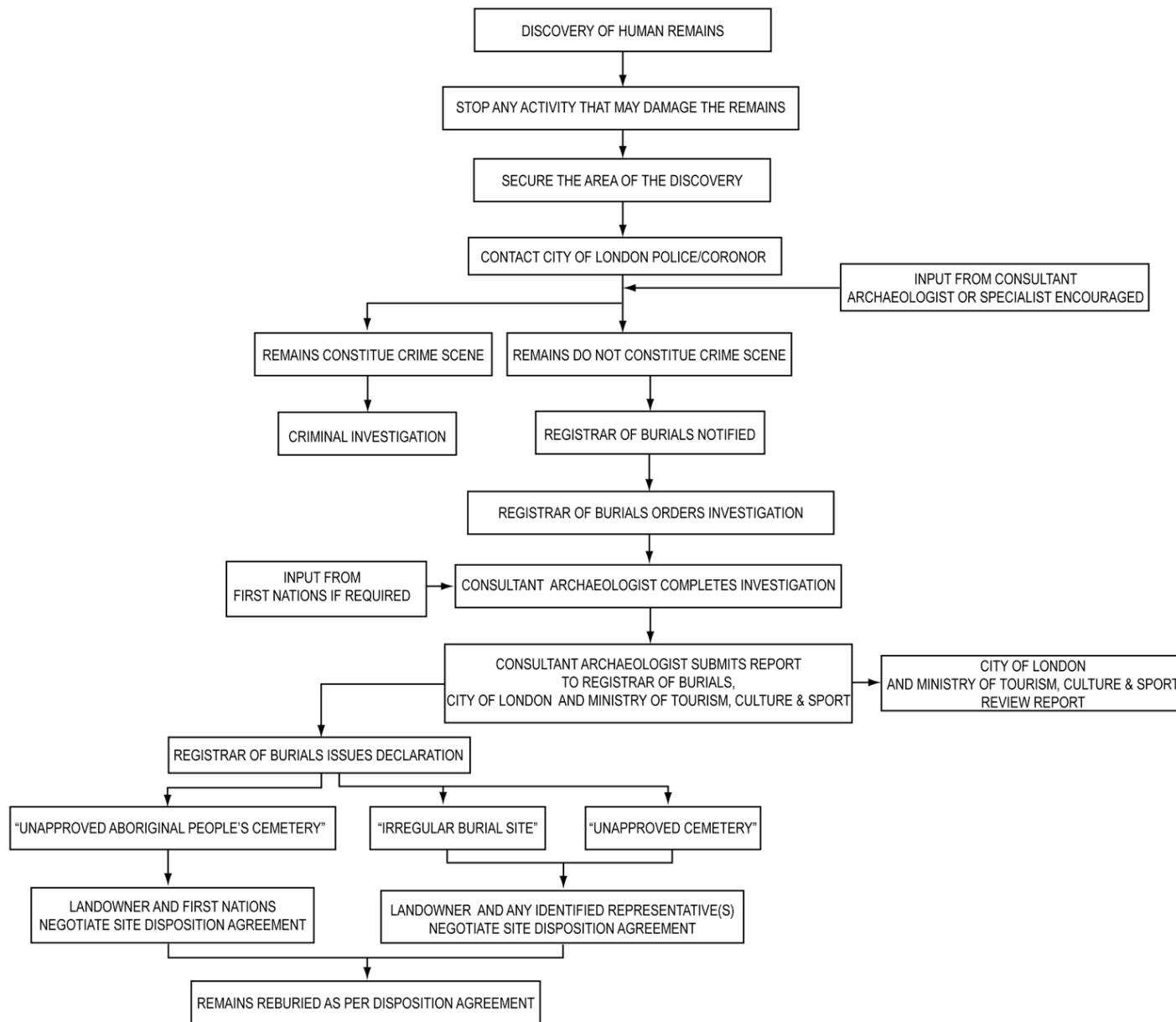


Figure 2: The emergency response process in the event of the discovery of human remains.

3.5 Funeral, Burial and Cremation Services Act Procedures

Under the *Funeral, Burial and Cremation Services Act* (Section 98), the Registrar of Burial Sites, War Graves, Abandoned Cemeteries and Cemetery Closures will be required to determine and formally declare what the locale is: an aboriginal people's burial ground, a burial ground, or an irregular burial site. When the information is not already in hand (i.e., based on archaeological findings or the results of the coroner's investigation), the property owner will be required to undertake an archaeological investigation to generate the information necessary for the Registrar of Burial Sites, War Graves, Abandoned Cemeteries and Cemetery Closures to make an accurate declaration.

Such investigations will be undertaken by a consultant archaeologist retained by the development proponent or property owner.

The intent of the investigation is to provide the Registrar of Burial Sites, War Graves, Abandoned Cemeteries and Cemetery Closures with the data necessary to make a declaration. The investigation for the Registrar must determine whether or not the interment(s) were intentional, and the basis on which this is made, the cultural affiliation of the deceased, the defined limits of the area containing burials, the style and manner in which the remains are interred, and a description of the artifacts determined to form part of the burial site. It may also be necessary to determine the exact number of discrete burials present in the area. Excavation methods should maximize recovery of these data, while minimizing disturbances to the remains. At the conclusion of the investigation, a report must be submitted to the Registrar of Burial Sites, War Graves, Abandoned Cemeteries and Cemetery Closures, the MTCS and to the Planning Services and Development Services as described in this report.

During the investigation, the remains must be treated with respect and care. All artifacts found in the burial are to be considered grave goods and should be treated as part of the burial, and kept with the skeletal remains. Burials must not be unnecessarily exposed to the elements or to casual viewing and must be covered over as soon as possible following identification. The property owner continues to be responsible for preserving and protecting the site during this investigation and until a disposition is made under the *Funeral, Burial and Cremation Services Act*.

Once the Registrar of Burial Sites, War Graves, Abandoned Cemeteries and Cemetery Closures can make a declaration, and the locale is determined to be an unapproved cemetery, attempts will be made to locate a representative for the deceased. If the locale is an Aboriginal Peoples Burial Ground, the Registrar of Burial Sites, War Graves, Abandoned Cemeteries and Cemetery Closures will contact the nearest and/or appropriate First Nation. It is often assumed that the Indigenous community that is geographically closest to a given project is the most suitable group with whom to consult. However, the complex histories of the Indigenous peoples of London and region, both before and after European contact and colonial settlement, means that such assumptions can be simplistic and detrimental to the success of the entire engagement/consultation process. Under these circumstances there should be an effort to identify all groups that are appropriate (on culture-historical grounds) to act as the designated descendants of those who occupied the region in the past, and who are willing to participate. This identification process is best achieved through negotiation with a variety of communities in order that they may arrive at the final decision. In this way, ancient sites are represented by several communities together.

The following Indigenous Nations have self-identified as having an interest in land use planning and development process in the City of London given that the City is situated within their traditional territories:

- Chippewas of the Thames First Nation
- Oneida Nation of the Thames
- Munsee-Delaware Nation
- Chippewas of Kettle and Stony Point First Nation
- Walpole Island First Nation

If the burial is non-Aboriginal, the Registrar of Burial Sites, War Graves, Abandoned Cemeteries and Cemetery Closures will attempt to find a representative through media notification. Where no descendant is found, a representative of the same religious denomination as the person buried can act for the deceased. If religious affiliation can not be determined, the Registrar of Burial Sites, War Graves, Abandoned Cemeteries and Cemetery Closures will determine the appropriate representative.

The property owner and the representative for the deceased will reach a disposition agreement outlining what is to be done with the burials. Where there is no agreement, binding arbitration is provided under the *Funeral, Burial and Cremation Services Act*. Typically there are three options:

1. leave the remains intact and establish the site as a cemetery;
2. establish a cemetery nearby, remove the remains and re-inter them there;
3. remove the remains and re-inter them in an existing cemetery in the same or adjacent municipality.

The option selected with respect to an Aboriginal Peoples Burial Ground will be negotiated between the property owner and representative for the deceased.

If the discovery is declared to be an irregular burial site, there are three options:

- 1) leave the remains intact and establish the site as a cemetery;
- 2) establish a cemetery nearby, remove the remains and re-inter them there;
- 3) remove the remains and re-inter them into an existing cemetery.

The property owner will choose the option and is responsible for all costs.

With respect to an Aboriginal Peoples Burial Ground, if a disinterment/reburial option is selected, the burials will need to be fully uncovered, removed and re-interred with a minimum of damage and time. Costs associated with a disposition agreement will be negotiated by the property owner and representative of the deceased. While the time it takes to complete this work will be subject to the wishes of the property owner and representative, factors such as the number and nature of interments, and level of observations required by the representative for re-interment purposes will affect the length of time needed to complete the removal and re-interment. In order to minimize time while ensuring appropriate care and documentation, this work is undertaken by a consultant archaeologist under the direction of the disposition agreement.

During removal, detailed observations will need to be made of the archaeological context of the burial to ensure that all associated remains and grave goods are fully recovered. Age at death and sex of the

individual should be noted. This information will assist in determining the appropriate methods of re-interment, as well as to assist in determining what specific ceremonies need to accompany the reburial. Basic mapping can be used to aid in making these observations. Scientific analyses of the skeletal remains or grave goods can occur during or after this process but only with the consent of the representative of the deceased.

4.0 RECOMMENDATIONS

The major recommendations resulting from the Contingency Plan for the Protection of Archaeological Resources in Urgent Situations include:

1. It is recommended that the City of London establish an **Urgent Archaeological Conservation Grants Program**. A fund of \$15,000 should be established (and replenished when used).
2. The City of London should develop a roster of pre-qualified archaeological consultants capable of responding immediately to contingent situations. The key criteria for the roster are the ability of the consultant archaeologist to attend a site within 24 hours or less and demonstration that the consultant archaeologist has an appropriate Health and Safety Plan in place for use under all circumstances. The roster and use of archaeologists could be accessed through a Heritage Planner in Planning Services and Development Services.

5.0 REFERENCES

City of London (U.K.) Department of Planning and Transportation's *Planning Advice Note 3, Archaeology in the City of London: Archaeology Guidance* Corporation of London, Department of Planning and Transportation

Historic England's Guidelines for Archaeological Projects in Greater London., Greater London Archaeological Advisory Service, April 2015

APPENDICES: INSTRUCTION SHEETS

Appendix A-1: Instruction Sheet – Accidental Discoveries of Archaeological Sites

As part of its AMP (2017), the City of London has developed a *Contingency Plan for the Protection of Archaeological Resources in Urgent Situations*.

Archaeological Sites

The *Ontario Heritage Act* is intended to ensure the protection of heritage buildings and archaeological sites. Under Subsection 48(1) of the act it is illegal for any person or agency to knowingly disturb an archaeological site without a license. The City must exercise due diligence in all contexts, including emergency situations, to ensure that this requirement is enforced.

Evidence of a First Nation archaeological site may include stone (flint or chert) tools or flakes, burnt and unburnt animal bone, reddish-brown unglazed earthenware-like pottery, burnt stones and spreads of charcoal. Evidence of later Euro-Canadian archaeological sites may include bottle glass, crockery, iron/metal items, old foundations, wells, drains or similar structures. Examples of some of these types of remains are provided in the photographs overleaf.

In the event that you believe that such remains have been uncovered and are being destroyed by actions not being carried out by archaeologists, you are obliged to:

1. Issue a stop work order.
2. Ensure that the area is secured.
3. Notify the appropriate authorities: the **Ministry of Tourism, Culture and Sport (MTCS)** and the **City of London Planning and Development Department** (see contact information below).

Arrangements will then be made with the development proponent or property owner to have qualified archaeological personnel investigate the remains.

If in doubt about potential archaeological remains, take a photo and send it to the Heritage Planner in the Planning and Development Department.

Contact Information

Heritage Planner
Planning Services
City of London
T: 519.661.2500 x 5344

Manager (Acting)
Archaeology Program Unit
Ministry of Tourism, Culture and Sport
Jim Sherratt
T: 416-314-7132
Email: jim.sherratt@ontario.ca

Appendix A-1: Accidental Discoveries of Archaeological Sites – Examples



Examples of Indigenous stone tools.



An example of Indigenous ceramic pottery and a charcoal and dark soil stain that is an archaeological feature.



An example of a stone foundation



An example of a stone and brick foundation



An example of a field stone foundation.



An example of a well.



An example of a wood drain



Examples of nineteenth-century ceramics

Appendix A-2: Instruction Sheet – Accidental Discoveries of Human Burials

The process to be followed regarding unanticipated discoveries of human skeletal remains outside of a licensed cemetery are laid out in the *Funeral, Burial and Cremation Services Act*. If human remains should be encountered during construction, the following must steps must be followed.

1. Work must cease immediately and the area must be secured.
2. The discovery must be reported to the **City of London Police** and the **Coroner** (note that the police may do this themselves). The police/coroner may call in specialists in forensic or biological anthropology to determine whether or not the bones are human.
3. In the event that the police/coroner determine that the remains do not constitute a crime scene, **City of London Planning Services and Development Services**, the **Ministry of Tourism, Culture and Sport** and the Registrar of Burial Sites, War Graves, Abandoned Cemeteries and Cemetery Closures (see contact information below) should be contacted.
4. The Abandoned Cemeteries and Cemetery Closures unit at the **Ministry of Government and Consumer Services**, which is the senior agency in this process, will order a formal burial investigation to be carried out by a licensed archaeologist and osteological or anthropological specialists.

If in doubt about potential human remains, take a photo and send it to the Heritage Planner in Planning Services.

Contact Information**London Police Service**

601 Dundas Street
London ON N6B 1X1
T: 519-661-5670

Provincial Coroner Dispatch

1-855-299-4100
Email: occ.london@ontario.ca
Website: www.mcscs.jus.gov.on.ca
Richmond North Office Centre
235 North Centre Rd, Suite 303
London, ON., N5X 4E7
T: 519-661-6624

Nancy Watkins

**Registrar of Burial Sites, War Graves,
Abandoned Cemeteries and Cemetery
Closures**

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Manager (Acting)

**Archaeology Program Unit
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