



ORIGINAL 04 APRIL 2022

STAGE 1-2 ARCHAEOLOGICAL ASSESSMENT

Proposed Site Plan for 149 Ainslie Street North, Galt, Town Plot of Galt, Part of Lot 10, Concession 11 (Geographic Township of North Dumfries, County of Waterloo), City of Cambridge, Regional Municipality of Waterloo (Amick Corporate File #2022-727/MHSTCI File #P058-2125-2022)

SUBMITTED TO:

Ontario Ministry of Heritage, Sport, Tourism and Culture Industries
(MHSTCI)

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EXECUTIVE SUMMARY

This report describes the results of the 2022 Stage 1-2 Archaeological Property Assessment of the Proposed Site Plan for 149 Ainslie Street North, Galt, Town Plot of Galt, Part of Lot 10, Concession 11 (Geographic Township of North Dumfries, County of Waterloo), City of Cambridge, Regional Municipality of Waterloo, conducted by AMICK Consultants Limited. This assessment was undertaken as a requirement under the Planning Act (RSO 1990) and was conducted under Professional Archaeologist License #P058 issued to Michael Henry by the Minister of Heritage, Sport, Tourism and Culture Industries (MHSTCI) for the Province of Ontario. All work was conducted in conformity with Ontario Ministry of Tourism and Culture (MTC) Standards and Guidelines for Consultant Archaeologists (MTC 2011) and the Ontario Heritage Act (RSO 1990a).

The entirety of the study area is approximately 0.26 hectares (ha) in area and includes within it a commercial building and associated parking lots. The study area is bounded on the north by existing residential development, on the east by Market Street, on the south by existing residential development and on the west by Ainslie Street North. AMICK Consultants Limited was engaged by the proponent to undertake a Stage 1-2 Archaeological Property Assessment of lands potentially affected by the proposed undertaking and was granted permission to carry out archaeological fieldwork. Following the criteria outlined by MHSTCI (2011) for determining archaeological potential, portions of the study area were determined as having archaeological potential for Pre-contact and Post-contact archaeological resources. Consequently, this report is being prepared in advance of the planning process for this property.

The entirety of the study area was subject to property inspection and photographic documentation concurrently with the Stage 2 Property Assessment which consisted of test pit survey at ten-metre intervals to confirm disturbance on 1 April 2022. All records, documentation, field notes, photographs, and artifacts (as applicable) related to the conduct and findings of these investigations are held at the Lakelands District corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the MHSTCI on behalf of the government and citizens of Ontario.

As a result of the Stage 2 Property Assessment of the study area, no archaeological resources were encountered. Consequently, the following recommendations are made:

1. *No further archaeological assessment of the study area is warranted.*
2. *The Provincial interest in archaeological resources with respect to the proposed undertaking has been addressed.*
3. *The proposed undertaking is clear of any archaeological concern.*

1.0 PROJECT CONTEXT

1.1 DEVELOPMENT CONTEXT

This report describes the results of the 2022 Stage 1-2 Archaeological Property Assessment of the Proposed Site Plan for 149 Ainslie Street North, Galt, Town Plot of Galt, Part of Lot 10, Concession 11 (Geographic Township of North Dumfries, County of Waterloo), City of Cambridge, Regional Municipality of Waterloo, conducted by AMICK Consultants Limited. This assessment was undertaken as a requirement under the Planning Act (RSO 1990) and was conducted under Professional Archaeologist License #P058 issued to Michael Henry by the Minister of Heritage, Sport, Tourism and Culture Industries (MHSTCI) for the Province of Ontario. All work was conducted in conformity with Ontario Ministry of Tourism and Culture (MTC) Standards and Guidelines for Consultant Archaeologists (MTC 2011) and the Ontario Heritage Act (RSO 1990a).

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The proposed development of the study area includes an above and below-ground parking garage with associated lobby mail room. A preliminary site plan of the proposed development has been submitted together with this report to MHSTCI for review and reproduced within this report as Map 4.

1.2 HISTORICAL CONTEXT

1.2.1 PRE-CONTACT LAND-USE OUTLINE

Table 1 illustrates the chronological development of cultures within southern Ontario prior to the arrival of European cultures to the area at the beginning of the 17th century. This general cultural outline is based on archaeological data and represents a synthesis and summary of research over a long period of time. It is necessarily generalizing and is not necessarily representative of the point of view of all researchers or stakeholders. It is offered here as a rough guideline and as a very broad outline to illustrate the relationships of broad cultural groups and time periods.

TABLE 1 PRE-CONTACT CULTURAL CHRONOLOGY FOR SOUTHERN ONTARIO

Years ago	Period	Southern Ontario
250	Terminal Woodland	Ontario and St. Lawrence Iroquois Cultures
1000 2000	Initial Woodland	Princess Point, Saugeen, Point Peninsula, and Meadowood Cultures
3000 4000 5000 6000	Archaic	Laurentian Culture
7000 8000 9000 10000 11000	Palaeo-Indian	Plano and Clovis Cultures
		(Wright 1972)

What follows is an outline of Aboriginal occupation in the area during the Pre-Contact Era from the earliest known period, about 9000 B.C. up to approximately 1650 AD.

1.2.1.1 PALEO-INDIAN PERIOD (APPROXIMATELY 9000-7500 B.C.)

North of Lake Ontario, evidence suggests that early occupation began around 9000 B.C. People probably began to move into this area as the glaciers retreated and glacial lake levels began to recede. The early occupation of the area probably occurred in conjunction with environmental conditions that would be comparable to modern Sub-Arctic conditions. Due to the great antiquity of these sites, and the relatively small populations likely involved, evidence of these early inhabitants is sparse and generally limited to tools produced from stone or to by-products of the manufacture of these implements.

1.2.1.2 ARCHAIC PERIOD (APPROXIMATELY 8000-1000 B.C.)

By about 8000 B.C. the gradual transition from a post glacial tundra-like environment to an essentially modern environment was largely complete. Prior to European clearance of the landscape for timber and cultivation, the area was characterized by forest. The Archaic Period is the longest and the most apparently stable of the cultural periods identified through

archaeology. The Archaic Period is divided into the Early, Middle and Late Sub-Periods, each represented by specific styles in projectile point manufacture. Many more sites of this period are found throughout Ontario, than of the Palaeo-Indian Period. This is probably a reflection of two factors: the longer period of time reflected in these sites, and a greater population density. The greater population was likely the result of a more diversified subsistence strategy carried out in an environment offering a greater variety of abundant resources (Smith 2002:58-59).

Current interpretations suggest that the Archaic Period populations followed a seasonal cycle of resource exploitation. Although similar in concept to the practices speculated for the big game hunters of the Palaeo-Indian Period, the Archaic populations utilized a much broader range of resources, particularly with respect to plants. It is suggested that in the spring and early summer, bands would gather at the mouths of rivers and at rapids to take advantage of fish spawning runs. Later in the summer and into the fall season, smaller groups would move to areas of wetlands to harvest nuts and wild rice. During the winter, they would break into yet smaller groups probably based on the nuclear family and perhaps some additional relatives to move into the interior for hunting. The result of such practices would be to create a distribution of sites across much of the landscape (Smith 2002: 59-60).

The material culture of this period is much more extensive than that of the Palaeo-Indians. Stylistic changes between Sub-Periods and cultural groups are apparent, although the overall quality in production of chipped lithic tools seems to decline. This period sees the introduction of ground stone technology in the form of celts (axes and adzes), manos and metates for grinding nuts and fibres, and decorative items like gorgets, pendants, birdstones, and bannerstones. Bone tools are also evident from this time period. Their presence may be a result of better preservation from these more recent sites rather than a lack of such items in earlier occupations. In addition, copper and exotic chert types appear during the period and are indicative of extensive trading (Smith 2002: 58-59).

1.2.1.3 WOODLAND PERIOD (APPROXIMATELY 1000 B.C.-1650 A.D.)

The primary difference in archaeological assemblages that differentiates the beginning of the Woodland Period from the Archaic Period is the introduction of ceramics to Ontario populations. This division is probably not a reflection of any substantive cultural changes, as the earliest sites of this period seem to be in all other respects a continuation of the Archaic mode of life with ceramics added as a novel technology. The seasonally based system of resource exploitation and associated population mobility persists for at least 1500 years into the Woodland Period (Smith 2002: 61-62).

The Early Woodland Sub-Period dates from about 1000-400 B.C. Many of the artifacts from this time are similar to the late Archaic and suggest a direct cultural continuity between these two temporal divisions. The introduction of pottery represents an entirely new technology that was probably acquired through contact with more southerly populations from which it likely originates (Smith 2002:62).

The Middle Woodland Sub-Period dates from about 400 B.C.-800 A.D. Within the region including the study area, a complex emerged at this time termed “Point Peninsula.” Point Peninsula pottery reflects a greater sophistication in pottery manufacture compared with the earlier industry. The paste and temper of the new pottery is finer and new decorative techniques such as dentate and pseudo-scallop stamping appear. There is a noted Hopewellian influence in southern Ontario populations at this time. Hopewell influences from south of the Great Lakes include a widespread trade in exotic materials and the presence of distinct Hopewell style artifacts such as platform pipes, copper or silver panpipe covers and shark’s teeth. The populations of the Middle Woodland participated in a trade network that extended well beyond the Great Lakes Region.

The Late Woodland Sub-Period dates from about 500-1650 A.D. The Late Woodland includes four separate phases: Princess Point, Early Ontario Iroquoian, Middle Ontario Iroquoian and Late Ontario Iroquoian.

The Princess Point phase dates to approximately 500-1000 A.D. Pottery of this phase is distinguished from earlier technology in that it is produced by the paddle method instead of coil and the decoration is characterized by the cord wrapped stick technique. Ceramic smoking pipes appear at this time in noticeable quantities. Princess Point sites cluster along major stream valleys and wetland areas. Maize cultivation is introduced by these people to Ontario. These people were not fully committed to horticulture and seemed to be experimenting with maize production. They generally adhere to the seasonal pattern of occupation practiced by earlier occupations, perhaps staying at certain locales repeatedly and for a larger portion of each year (Smith 2002: 65-66).

The Early Ontario Iroquoian stage dates to approximately 950-1050 A.D. This stage marks the beginning of a cultural development that led to the historically documented Ontario Iroquoian groups that were first contacted by Europeans during the early 1600s (Petun, Neutral, and Huron). At this stage formal semi-sedentary villages emerge. The Early stage of this cultural development is divided into two cultural groups in southern Ontario. The areas occupied by each being roughly divided by the Niagara Escarpment. To the west were located the Glen Meyer populations, and to the east were situated the Pickering people (Smith 2002: 67).

The Middle Ontario Iroquoian stage dates to approximately 1300-1400 A.D. This stage is divided into two sub-stages. The first is the Uren sub-stage lasting from approximately 1300-1350 A.D. The second of the two sub-stages is known as the Middleport sub-stage lasting from roughly 1350-1400 A.D. Villages tend to be larger throughout this stage than formerly (Smith 2002: 67).

The Late Ontario Iroquoian stage dates to approximately 1400-1650 A.D. During this time the cultural divisions identified by early European explorers are under development and the geographic distribution of these groups within southern Ontario begins to be defined.

1.2.2 POST-CONTACT LAND USE OUTLINE

Waterloo County was once one of the most densely wooded sections in North America. Prior to the arrival of the Europeans the area was located in the northerly area of the Attiwandaronk or Neutral Indian country. The area was known for excellent hunting and fishing.

Following the American Revolution, the British Government granted the Grand River valley to its allies, the Iroquois confederation refugees from central and western New York State. The grant ran the length of the Grand River from Lake Erie to the Elora falls, with the width being six miles to either side of the river. The Confederacy soon offered almost half of the upper area for sale. It was divided into four blocks.

Settlement of the area started in 1800 by Joseph Schoerg and Samuel Betzner, Jr. (brothers-in-law), Mennonites from Franklin County, Pennsylvania. Other Mennonite settlers from Pennsylvania soon followed. In 1805 a company formed in Pennsylvania purchased 60,000 acres (240 km²) (most of Block 2, Grand River Indian Lands- later known as Waterloo Township). Settlers came from Pennsylvania by overland route and typically by Conestoga wagons. Most settlers purchased land title deeds directly from Richard Beasley. However, it was later found out that Richard Beasley did not have clear title to Block 2 (he shared it with Joseph Wilson and John B. Roseau), hence the settlers deeds were invalid. The settlers were forced to ask for relief from their home country. Additional funds were raised to purchase outright the 60,000 acres (240 km²) of Block 2.

In 1806 Benjamin Eby (made Mennonite preacher 1809, and bishop in 1812) purchased land consisting of a large part of what would become village of Berlin (named about 1829). Eby founder of Berlin, encouraged manufactures to move to the village. Jacob Hoffman came in 1829 or 1830 and started the first furniture factory in the village.

In 1807, 45,195 acres (182.9 km²) of Block 3 (Woolwich) was purchased by Pennsylvanians John Erb, Jacob Erb and others.

The war of 1812 interrupted settlement. The Mennonite settlers refused to carry arms so were employed in camps and hospital and as teamsters in transport service during the war.

Waterloo County was established in 1853. The county seat was established in Berlin Berlin (a ratepayer's vote in 1916 changed the name from Berlin to Kitchener) when local merchant Joseph Gaukel donated a small parcel of land he owned (at the current Queen and Weber streets), in order to establish a courthouse and gaol which were requirements to hold the county seat. The courthouse and gaol were built within a few months and the county began operations.

In 1973 the provincial government restructured this layout: this formed the current cities of Kitchener (which absorbed Doon) and Waterloo; the city of Cambridge was formed from Hespeler, Preston, Galt, and Blair; as well as the townships of Wellesley, North Dumfries, Wilmot, and of Woolwich, which grew to contain the northeast corner of the former

Waterloo township. All former village, town and city councils joined into the new township or city council; and an overseeing regional council handled the former county-level responsibilities, as well as now providing police service for the region as a whole (Briethaupt, W. H., 1927: 991).

Map 2 is a facsimile segment from Tremaine's Map of the County of Waterloo (Tremaine 1861). Map 2 illustrates the location of the study area and environs as of 1861. The study area is not shown to belong to anyone, but the study area is shown to be located within the historic town of Cambridge. This demonstrates that the original property of which the study area is a part was settled by the time that the atlas data was compiled. Accordingly, it has been determined that there is potential for archaeological deposits related to early Post-contact settlement within the study area. In addition, this map illustrates the Grand River immediately west of the study area. Settlement roads are also depicted as directly adjacent to the study area on its western and eastern sides. The road along the western edge of the study area is the current Ainslie Street North and the road along the eastern edge of the study area is the current Market Street. Current satellite imagery shows that the Grand River is still situated immediately west of the study area.

Map 3 is a facsimile segment of the Township of North Dumfries map reproduced from The Illustrated Atlas of the County of Waterloo (Parsell & Co. 1881). Map 3 illustrates the location of the study area and environs as of 1881. The study area is not shown to belong to anyone, but the study area is shown to be located within the historic town of Cambridge. This demonstrates that the original property of which the study area is a part was settled by the time that the atlas data was compiled. Accordingly, it has been determined that there is potential for archaeological deposits related to early Post-contact settlement within the study area. In addition, this map illustrates the Grand River immediately west of the study area. Settlement roads are also depicted as directly adjacent to the study area on its western and eastern sides. The road along the western edge of the study area is the current Ainslie Street North and the road along the eastern edge of the study area is the current Market Street. Current satellite imagery shows that the Grand River is still situated immediately west of the study area.

A site plan of the study area is included within this report as Map 4. Current conditions encountered during the Stage 1-2 Property Assessment are illustrated in Maps 5 & 6.

1.2.3 SUMMARY OF HISTORICAL CONTEXT

The brief overview of readily available documentary evidence indicates that the study area is situated within an area that was close to historic transportation routes and in an area well populated during the nineteenth century and therefore has potential for sites relating to early Post-contact settlement in the region. Background research also indicates the property has potential for significant archaeological resources of Native origins based on proximity to a natural source of potable water in the past. The Grand River is located immediately west of the study area.

1.3 ARCHAEOLOGICAL CONTEXT

The study area is located in downtown Cambridge and is bounded on the north by existing residential development, on the east by Market Street, on the south by existing residential development and on the west by Ainslie Street North. One commercial building is located within the study area in addition to two asphalt parking lots, one on the north side of the building and the other southeast of the building. A narrow strip of grass lawn is located south of the building between it and the parking lot to the southeast.

1.3.1 *PHYSIOGRAPHIC REGION*

The study area is situated within the Guelph Drumlin Field physiographic region. For the most part, these hills are of the broad oval type with slopes less steep than the Peterborough drumlins. The till in these drumlins is loamy and calcereous and was derived mostly from dolostone of the Amabel Formation. In addition, it contains fragments of the underlying red shale which is exposed below the escarpment. It is a pale brown in colour. The till is rather stony with large surface boulders being more numerous in some localities than others (Chapman and Putnam 1984: 137-138).

1.3.2 *SURFACE WATER & VEGETATION*

The study area does not contain any surface water. The Grand River, however, is located approximately 175 metres west of the study area which is a natural source of potable water and a navigable waterway. Vegetation within the study area consists of urban grass lawn and planted trees.

1.3.3 *LITHIC SOURCES*

The study area is located approximately 27 kilometers (km) northwest of the Lockport Formation which has outcrops of Ancaster chert and approximately 33 km east of the Bois Blanc Limestone Formation which has outcrops of Bois Blanc cherty limestone (Hewitt and Karrow 1963). Lockport - Ancaster chert is a member of the Middle Silurian Lockport Formation and can be found from Niagara up the escarpment to the Hamilton area (Armstrong 2018:70; Eley and von Bitter 1989:20). It is medium grey in colouration and usually includes darker carbonate mottling with light quartz grains and “rusting” from iron oxide inclusions (Armstrong 2018:71). Ancaster chert usually has white to light grey patination and lustre varies from dull to earthy to vitreous (Armstrong 2018:71).

Bois Blanc chert is a member of the Early Devonian Bois Blanc Formation and occurs in thin beds or nodules located in several areas in the vicinity of Hagersville, Innerkip and Fort Erie Ontario (Eley and von Bitter 1989:29). This material is characterized by a diversity of textures, colours, and compositions (Eley and von Bitter 1989:19), ranging from light to dark grey, grey blue, or brown and sometimes exhibit mottling (Eley and von Bitter 1989:19). Types of chert within the Bois Blanc formation include Haldimand, Colbourne, and Saugeen (Armstrong 2018: 64). Bois Blanc and Onondaga cherts share similarities in their colours and

since this study relied on macroscopic analysis of lithic materials, there may be an error in representative chert frequencies.

1.3.4 REGISTERED ARCHAEOLOGICAL SITES

The Archaeological Sites Database administered by the MHSTCI indicates that there are five (5) previously documented sites within 1 kilometre of the study area. However, it must be noted that this assumes the accuracy of information compiled from numerous researchers using different methodologies over many years. AMICK Consultants Limited assumes no responsibility for the accuracy of site descriptions, interpretations such as cultural affiliation, or location information derived from the Archaeological Sites Database administered by MHSTCI. In addition, it must also be noted that a lack of formerly documented sites does not indicate that there are no sites present as the documentation of any archaeological site is contingent upon prior research having been conducted within the study area.

1.3.4.1 PRE-CONTACT REGISTERED SITES

A summary of registered and/or known archaeological sites within a 1-kilometre radius of the study area was gathered from the Archaeological Sites Database, administered by MHSTCI. As a result, it was determined that one (1) archaeological site relating directly to Pre-contact habitation/activity has been formally registered within the immediate vicinity of the study area. However, the lack of formally documented archaeological sites does not mean that Pre-contact people did not use the area; it more likely reflects a lack of systematic archaeological research in the immediate vicinity. Even in cases where one or more assessments may have been conducted in close proximity to a proposed landscape alteration, an extensive area of physical archaeological assessment coverage is required throughout the region to produce a representative sample of all potentially available archaeological data in order to provide any meaningful evidence to construct a pattern of land use and settlement in the past. All previously registered Pre-contact sites are briefly described below in Table 2:

TABLE 2 PRE-CONTACT SITES WITHIN 1KM

Borden #	Site Name	Time Period	Affinity	Site Type
AiHb-3	Moffats Creek 1	Woodland, Middle	Aboriginal	Othercamp/campsite

None of the above noted archaeological sites are situated within 300 metres of the study area. Therefore, they have no impact on determinations of archaeological potential for further archaeological resources related to Pre-contact activity and occupation with respect to the archaeological assessment of the proposed undertaking.

1.3.4.2 POST-CONTACT REGISTERED SITES

A summary of registered and/or known archaeological sites within a 1-kilometre radius of the study area was gathered from the Archaeological Sites Database, administered by MHSTCI. As a result, it was determined that three (3) archaeological sites relating directly to Post-contact habitation/activity had been formally registered within the immediate vicinity of

the study area. All previously registered Post-contact sites are briefly described below in Table 3:

TABLE 3 POST-CONTACT SITES WITHIN 1KM

Borden #	Site Name	Time Period	Affinity	Site Type
AiHb-352		Post-Contact	Euro-Canadian	residential
AiHb-225	St. Andrews Cemetery	Post-Contact	Euro-Canadian	cemetery
AiHb-161	Cambridge City Hall	Post-Contact	Euro-Canadian	Otherbuilding, administrative, market

None of the above noted archaeological sites are situated within 300 metres of the study area. Therefore, they have no impact on determinations of archaeological potential for further archaeological resources related to Post-contact activity and occupation with respect to the archaeological assessment of the proposed undertaking.

1.3.4.3 REGISTERED SITES OF UNKNOWN CULTURAL AFFILIATION

A summary of registered and/or known archaeological sites within a 1-kilometre radius of the study area was gathered from the Archaeological Sites Database, administered by MHSTCI. As a result, it was determined that one (1) archaeological site of unknown cultural affiliation has been formally registered within the immediate vicinity of the study area. All previously registered sites of unknown cultural affiliation are briefly described below in Table 4:

TABLE 4 REGISTERED SITES OF UNKNOWN CULTURAL AFFILIATION WITHIN 1KM

Borden #	Site Name	Time Period	Affinity	Site Type
AiHb-43	Riverwalk 4			

The above noted archaeological site is not situated within 300 metres of the study area. Therefore, it has no impact on determinations of archaeological potential for further archaeological resources related to human activity and occupation with respect to the archaeological assessment of the proposed undertaking.

1.3.5 PREVIOUS ARCHAEOLOGICAL ASSESSMENTS

On the basis of information supplied by MHSTCI, no archaeological assessments have been conducted within 50 metres of the study area. AMICK Consultants Limited assumes no responsibility for the accuracy of previous assessments, interpretations such as cultural affiliation, or location information derived from the Archaeological Sites Database administered by MHSTCI. In addition, it must also be noted that the lack of formerly documented previous assessments does not indicate that no assessments have been conducted.

1.3.5.1 PREVIOUS REGIONAL ARCHAEOLOGICAL POTENTIAL MODELLING

The study area is situated within an area subject to an archaeological master plan or a similar regional overview study. The Regional Municipality of Waterloo Archaeological Facilities Master Plan was adopted by Council in September 1989. The Archaeological Master Plan contains a series of archaeological potential maps which were compiled to aid planners in determining the possibility of encountering archaeological resources. However, an archaeological potential map for the Township of North Dumfries was not included within the master plan document.

The potential maps area based on a set of specific criteria relating to the distribution of archaeological sites within the county and are as follows:

- Proximity of previously recorded sites
- Within 150 metres of a water source (edge)
- 3 kilometers concentric buffer around historic White Pine stands inferring corn fields associated with First Nation villages
- Within 100 metres of historic Concession roads, within Historic Settlement Areas
- Proximity to well-drained soils
- Proximity to glacial shorelines
- Proximity to drumlins and eskers

Based on the above modelling criteria, the current study area is within an area of archaeological potential.

1.3.6 HISTORIC PLAQUES

There are no relevant plaques associated with the study area, which would suggest an activity or occupation within, or near, the study area that may indicate potential for associated archaeological resources of significant CHVI.

1.3.7 SUMMARY OF ARCHAEOLOGICAL CONTEXT

The study area contains one commercial building in addition to two asphalt parking lots, one on the north side of the building and the other southeast of the building. A narrow strip of grass lawn is located south of the building between it and the parking lot to the southeast. The study area does not contain any surface water. However, the Grand River is located approximately 175 metres west of the study area. Vegetation within the study area consists of urban grass lawn and planted trees.

Current conditions within the study area indicate that a significant portion of the property may have no or low archaeological potential and does not require Stage 2 Property Assessment or should be excluded from Stage 2 Property Assessment. These areas would include the footprint of existing structures and areas under pavement. A small portion of the study area does exhibit archaeological potential, however. Consequently, a Stage 2 Property Assessment is required.

Background research also indicates that the study area is situated in the Guelph Drumlin Field physiographic region, which is characterized by loamy and calcereous till. In addition, the study area is located approximately 27 km northwest of the Lockport Formation which has outcrops of Ancaster chert and 33 km east of the Bois Blanc Limestone Formation which has outcrops of Haldimand, Colbourne, and Saugeen chert.

A total of five (5) previously registered archaeological sites have been documented within 1km of the study area. Of these, one (1) is Pre-contact, three (3) are Post-contact and one (1) is of unknown cultural affiliation. None of these sites are located within 300m of the study area and, therefore, do not demonstrate archaeological potential for further archaeological resources of Pre-contact or Post-contact activity and occupation with respect to the archaeological assessment of the current study area. The study area is situated within an area subject to the Regional Municipality of Waterloo Archaeological Facilities Master Plan. There are no relevant plaques associated with the study area.

The study area has potential for archaeological resources of Native origins based on proximity to a source of potable water that was also used as a means of waterborne trade and communication. Background research also suggests potential for archaeological resources of Post-contact origins based on proximity to a historic roadway and proximity to areas of documented historic settlement.

2.0 FIELD WORK METHODS AND WEATHER CONDITIONS

2.1 INTRODUCTION

A property inspection was carried out in compliance with Standards and Guidelines for Consultant Archaeologists (MTC 2011) to document the existing conditions of the study area to facilitate the Stage 2 Property Assessment. All areas of the study area were visually inspected and select features were photographed as a representative sample of each area defined within Maps 5 and 6. Observations made of conditions within the study area at the time of the inspection were used to inform the requirement for Stage 2 Property Assessment for portions of the study area as well as to aid in the determination of appropriate Stage 2 Property Assessment strategies. The locations from which photographs were taken and the directions toward which the camera was aimed for each photograph are illustrated in Maps 5 & 6 of this report.

The Stage 2 Assessment of the study area was carried out on April 1, 2022 and consisted of test pit survey at a ten-metre interval to confirm disturbance which was conducted in compliance with the Standards and Guidelines for Consultant Archaeologists, section.1.8: Property Survey to Confirm Previous Disturbance (MTC 2011). Weather conditions were appropriate for the necessary fieldwork required to complete the Stage 2 Property Assessment and to create the documentation appropriate to this study.

2.2 CONFIRMATION OF DISTURBANCE

Approximately 0.04 ha of the study area was subject to test pit survey at 10m intervals to confirm disturbance. The remainder of the study area was either parking lot covered by asphalt surface or an existing structure. Areas of suspected disturbance within the study area consists of the narrow strip of grass lawn in between the existing building and the asphalt parking lot to the southeast. AMICK Consultants Limited tested the suspected disturbed area at a 10-metre interval to confirm disturbance in a manner consistent with the objectives to ensure that the area is accurately delimited and properly identified. This procedure demonstrated that the entire disturbed portion of the study area consists of fill deposited within a deeply disturbed context. There is no archaeological potential within this area.

Approximately 17 % of the study area consisted of grass lawn area that was test pit surveyed at an interval of 10 metres to confirm disturbance. The remainder of the study area, approximately 83%, was not assessable due to the presence of an existing structure and asphalt surfaces. Maps 5& 6 of this report illustrate the Stage 2 Assessment methodology within the study area.

3.0 RECORD OF FINDS

3.1 INTRODUCTION

As a result of the Stage 1-2 Assessment of the study area, no archaeological resources of any description were encountered.

The documentation produced during the field investigation conducted in support of this report includes: one sketch map, one page of photo log, one page of field notes, and 10 digital photographs.

4.0 ANALYSIS AND CONCLUSIONS

4.1 STAGE 1 ANALYSIS AND CONCLUSIONS

4.1.1 CHARACTERISTICS INDICATING ARCHAEOLOGICAL POTENTIAL

Section 1.3.1 of the Standards and Guidelines for Consultant Archaeologists specifies the property characteristics that indicate archaeological potential (MTC 2011). Factors that indicate archaeological potential are features of the local landscape and environment that may have attracted people to either occupy the land or to conduct activities within the study area. One or more of these characteristics found to apply to a study area would necessitate a Stage 2 Property Assessment to determine if archaeological resources are present. These characteristics include:

- 1) Within 300m of Previously Identified Archaeological Sites
- 2) Within 300m of Primary Water Sources (e.g., lakes, rivers, streams, and creeks)

- 3) Within 300m of Secondary Water Sources (e.g., intermittent streams and creeks, springs, marshes, and swamps)
- 4) Within 300 m of Features Indicating Past Water Sources (e.g., glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels indicated by clear dip or swale in the topography, shorelines of drained lakes or marshes, and cobble beaches)
- 5) Within 300m of an Accessible or Inaccessible Shoreline (e.g., high bluffs, swamp, or marsh fields by the edge of a lake, sandbars stretching into marsh)
- 6) Elevated Topography (e.g., eskers, drumlins, large knolls, and plateaux)
- 7) Pockets of Well-drained Sandy Soil, especially near areas of heavy soil or rocky ground.
- 8) Distinctive Land Formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases. There may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings.
- 9) Resource Areas, including:
 - food or medicinal plants (e.g., migratory routes, spawning areas, and prairie)
 - scarce raw materials (e.g., quartz, copper, ochre or outcrops of chert)
 - resources of importance to early Post-contact industry (e.g., logging, prospecting, and mining)
- 10) Within 300m of Areas of Early Post-contact Settlement, including:
 - military or pioneer settlement (e.g., pioneer homesteads, isolated cabins, and farmstead complexes)
 - early wharf or dock complexes, pioneer churches and early cemeteries
- 11) Within 100m of Early Historical Transportation Routes (e.g., trails, passes, roads, railways, portage routes)
- 12) Heritage Property – A property listed on a municipal register or designated under the Ontario Heritage Act or is a federal, provincial, or municipal historic landmark or site.
- 13) Documented Historical or Archaeological Sites – property that local histories or informants have identified with possible archaeological sites, historical events, activities, or occupations. These are properties which have not necessarily been formally recognized or for which there is additional evidence identifying possible archaeological resources associated with historic properties in addition to the rationale for formal recognition.

The study area is situated within the settlement limits of historic Cambridge as shown on the historic atlas maps of 1861 and 1881. In addition, the study area is situated approximately 175 metres east of the Grand River which is a primary water source and a navigable waterway. The study area is also situated within 100m of two (2) early settlement roads that appear on the historic atlas maps of 1861 and 1881. These historic roads correspond to the roads presently known as Ainslie Street North and Market Street, which are directly adjacent to the study area on its western side and eastern side, respectively.

4.1.2 CHARACTERISTICS INDICATING REMOVAL OF ARCHAEOLOGICAL POTENTIAL

Section 1.3.2 of the Standards and Guidelines for Consultant Archaeologists specifies the property characteristics which indicate no archaeological potential or for which archaeological potential has been removed (MTC 2011). These characteristics include:

- 1) Quarrying
- 2) Major Landscaping Involving Grading Below Topsoil
- 3) Building Footprints
- 4) Sewage and Infrastructure Development

The study area contains a commercial building and two (2) asphalt parking lots, one adjacent to the building on its north side and one directly southeast of the building. The study area also contains a narrow strip of grass lawn in between the existing building and the parking lot to the southeast. This grass lawn area was shovel tested at 10 metre intervals to confirm disturbance and was found to contain highly disturbed soils indicative of development within the area. Consequently, the entirety of the study area's archaeological potential has been removed due to previous disturbances.

4.1.3 SUMMARY OF ARCHAEOLOGICAL POTENTIAL

Table 5 below summarizes the evaluation criteria of the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) together with the results of the Stage 1 Background Study for the proposed undertaking. Based on the criteria, the property is deemed to have archaeological potential on the basis of proximity to water, proximity to areas of historic settlement, and the location of early historic settlement roads adjacent to the study area.

TABLE 5 EVALUATION OF ARCHAEOLOGICAL POTENTIAL

FEATURE OF ARCHAEOLOGICAL POTENTIAL	YES	NO	N/A	COMMENT
1 Known archaeological sites within 300m		N		If Yes, potential determined
PHYSICAL FEATURES				
2 Is there water on or near the property?	Y			If Yes, what kind of water?
2a Primary water source within 300 m. (lakeshore, river, large creek, etc.)	Y			If Yes, potential determined
2b Secondary water source within 300 m. (stream, spring, marsh, swamp, etc.)		N		If Yes, potential determined
2c Past water source within 300 m. (beach ridge, river bed, relic creek, etc.)		N		If Yes, potential determined
2d Accessible or Inaccessible shoreline within 300 m. (high bluffs, marsh, swamp, sand bar, etc.)	Y			If Yes, potential determined
3 Elevated topography (knolls, drumlins, eskers, plateaus, etc.)		N		If Yes, and Yes for any of 4-9, potential determined
4 Pockets of sandy soil in a clay or rocky area		N		If Yes and Yes for any of 3, 5-9, potential determined
5 Distinctive land formations (mounds, caverns, waterfalls, peninsulas, etc.)		N		If Yes and Yes for any of 3-4, 6-9, potential determined
HISTORIC/PREHISTORIC USE FEATURES				
6 Associated with food or scarce resource harvest areas (traditional fishing locations, agricultural/berry extraction areas, etc.)		N		If Yes, and Yes for any of 3-5, 7-9, potential determined.
7 Early Post-contact settlement area within 300 m.	Y			If Yes, and Yes for any of 3-6, 8-9, potential determined
8 Historic Transportation route within 100 m. (historic road, trail, portage, rail corridors, etc.)	Y			If Yes, and Yes for any 3-7 or 9, potential determined
9 Contains property designated and/or listed under the Ontario Heritage Act (municipal heritage committee, municipal register, etc.)		N		If Yes and, Yes to any of 3-8, potential determined
APPLICATION-SPECIFIC INFORMATION				
10 Local knowledge (local heritage organizations, Pre-contact, etc.)		N		If Yes, potential determined
11 Recent disturbance not including agricultural cultivation (post-1960-confirmed extensive and intensive including industrial sites, aggregate areas, etc.)	Y			If Yes, no potential or low potential in affected part (s) of the study area.

If **YES** to any of 1, 2a-c, or 10 Archaeological Potential is **confirmed**

If **YES** to 2 or more of 3-9, Archaeological Potential is **confirmed**

If **YES** to 11 or No to 1-10 Low Archaeological Potential is **confirmed** for at least a portion of the study area.

4.2 STAGE 2 ANALYSIS AND CONCLUSIONS

In accordance with the definitions contained within the Standards and Guidelines for Consultant Archaeologists (MTC 2011), no archaeological sites or resources were encountered during the Stage 2 archaeological assessment of the study area.

5.0 RECOMMENDATIONS

5.1 STAGE 1-2 RECOMMENDATIONS

As a result of the Stage 2 Property Assessment of the study area, no archaeological resources were encountered. Consequently, the following recommendations are made:

1. *No further archaeological assessment of the study area is warranted;*
2. *The Provincial interest in archaeological resources with respect to the proposed undertaking has been addressed;*
3. *The proposed undertaking is clear of any archaeological concern.*

6.0 ADVICE ON COMPLIANCE WITH LEGISLATION

While not part of the archaeological record, this report must include the following standard advisory statements for the benefit of the proponent and the approval authority in the land use planning and development process:

- a. *This report is submitted to the Minister of Tourism and Culture as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c. 0.18. The report is reviewed to ensure that it complies with the standards and guidelines issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism and Culture, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.*
- b. *It is an offence under Sections 48 and 69 of the Ontario Heritage Act for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeological Reports referred to in Section 65.1 of the Ontario Heritage Act.*
- c. *Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the Ontario Heritage Act. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed archaeologist to carry out archaeological fieldwork, in compliance with sec. 48 (1) of the Ontario Heritage Act.*
- d. *The Cemeteries Act, R.S.O. 1990, c. C.4 and the Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.*
- e. *Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48 (1) of the Ontario Heritage Act and may not be altered, or have artifacts removed from them, except by a person holding an archaeological licence.*

WORKS CITED

- Armstrong, Mackenzie P. (2018). The Development of a Digital Comparative Collection of Chert Types in Ontario and the Evaluation of Change in Accuracy and Confidence of Chert Type Identifications. [Master's thesis, Trent University]. Retrieved Jan 6, 2021 from URL: <http://digitalcollections.trentu.ca/islandora/search/chert?type=dismax>.
- Briethaupt, William Henry. (1927). History of Waterloo County. In Middleton, Jesse Edgar & Fred Landon (Eds.), *A History 1615 to 1927*. Dominion Publishing Company, Toronto.
- Chapman, L.J. & D.F. Putnam. (1984). *The Physiography of Southern Ontario (Third Edition)*. Ontario Geological Survey, Special Report #2. Ontario Ministry of Natural Resources, Toronto.
- Eley, B. E. and P. H. von Bitter. (1989) *Cherts of Southern Ontario*. Publications in Archaeology, Royal Ontario Museum, Toronto.
- Esri (2019). "Topographic" [basemap]. Scale Not Given. "World Topographic Map." February 16, 2021. <http://www.arcgis.com/home/item.html?id=30e5fe3149c34df1ba922e6f5bbf808f> (February 16, 2021).
- Fox, William A. (2009). *Ontario Cherts Revisited*. In Papers in Honour of James Valliere Wright, edited by David L. Keenlyside and Jean-Luc Pilon, pp. 339-354. Mercury Series Archaeological paper 170. Canadian Museum of Civilization, Gatineau.
- Goel, Tarun (2013). Road Construction: History and Procedure. Bright Hub Engineering. Retrieved 24 May 2015 from URL: <http://www.brighthubengineering.com/structural-engineering/59665-road-construction-history-and-procedure/>
- Google Earth (Version 6.2.5200.0) [Software]. (2016). Available from <http://www.google.com/earth/index.html>.
- Hewitt, D. F. and P. F. Karrow. (1963). "Distribution of chert in gravels of southern Ontario". Retrieved on 1 April 2022 from URL: <https://www.geologyontario.mndm.gov.on.ca/dtSearch/dtisapi6.dll?cmd=getdoc&DocId=191907&Index=%2a%7baa02399cc101a0e3be8aea412f6a2f9b%7d%20PUB&HitCount=2&hits=4+1e+&SearchForm=%2findex%2ehtm>
- Ontario Heritage Act, RSO 1990a, Government of Ontario. (Queen's Printer, Toronto).
- Ontario Heritage Amendment Act, SO 2005, Government of Ontario. (Queen's Printer, Toronto).
- Ontario Ministry of Tourism and Culture (MTC). (2011). *Standards and Guidelines for Consultant Archaeologist*. (Programs and Services Branch: Culture Programs Unit, Toronto).
- Ontario Planning Act, RSO 1990b, Government of Ontario. (Queen's Printer, Toronto).
- Parsell, H. & Co. (1881). *Illustrated Atlas of the County of Waterloo*. H. Parsell & Co.: Toronto, ON.
- Provincial Policy Statement (2020). Government of Ontario. (Queen's Printer, Toronto).

Regional Municipality of Waterloo. (1989). The Regional Municipality of Waterloo Archaeological Facilities Master Plan. Archaeology Division – Planning and Development Department: Waterloo, ON. Retrieved on 17 July, 2020 from URL:
https://www.regionofwaterloo.ca/en/exploring-the-region/resources/Documents/ARCHAEOLOGICAL_MASTER_PLAN.pdf.

Reinders & Law Ltd. (2022). *Proposed Site Plan New Concept*. Reinders & Law Ltd.: Milton, ON.

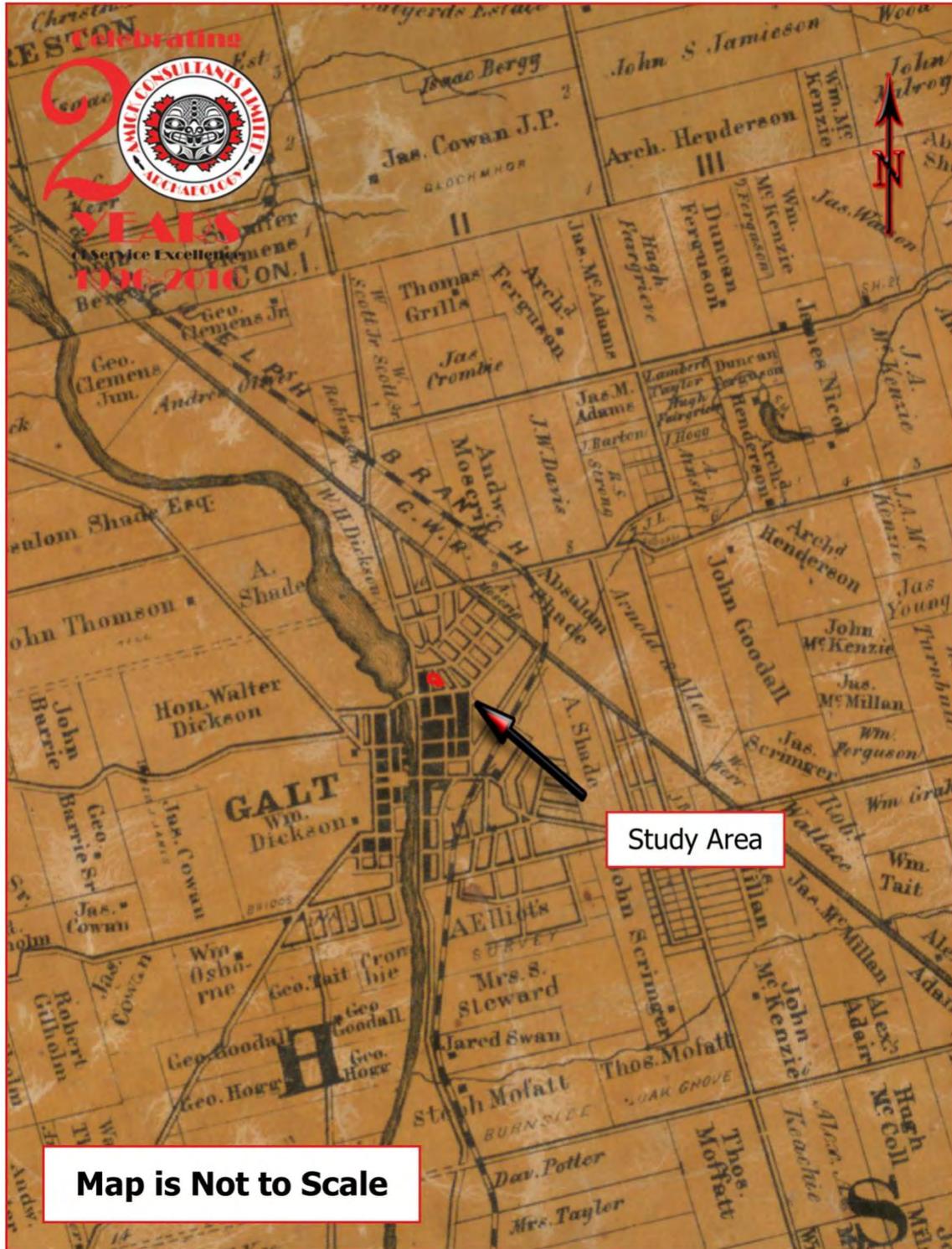
Tremaine, George. (1861). *Tremaine's Map of the County of Waterloo* [map]. George Tremaine, Toronto. Retrieved April 1 2022, from the Ontario Historical County Maps Project in association with University of Toronto Map and Data Library URL:
<http://maps.library.utoronto.ca/hgis/countymaps/waterloo/index.html>.

Wright, J.V. (1972). *Ontario Prehistory: an Eleven-thousand-year Archaeological Outline*. Archaeological Survey of Canada. National Museum of Man, Ottawa.

MAPS



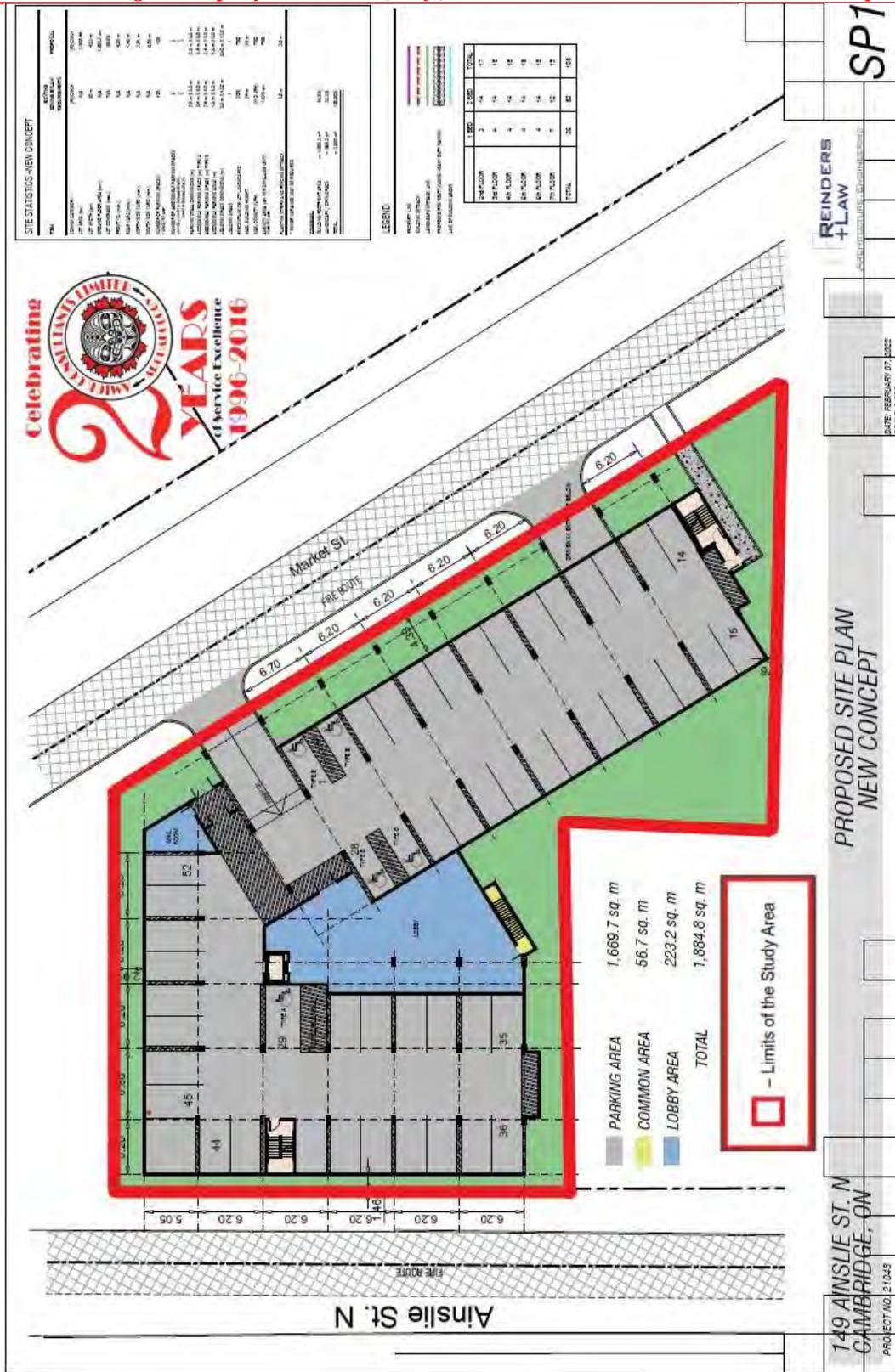
MAP 1 LOCATION OF THE STUDY AREA (ESRI 2019)



MAP 2 FACSIMILE SEGMENT OF TREMAINE'S MAP OF THE COUNTY OF WATERLOO
(TREMAINE 1861)



MAP 3 FACSIMILE SEGMENT OF THE TOWNSHIP OF NORTH DUMFRIES MAP REPRODUCED FROM THE HISTORIC ATLAS MAP OF THE COUNTY OF WATERLOO (PARSELL & Co. 1881)



MAP 4 SITE PLAN (REINDERS & LAW LTD. 2022)



MAP 5 AERIAL PHOTO OF THE STUDY AREA (GOOGLE EARTH 2016)



MAP 6 DETAILED PLAN OF THE STUDY AREA



MAP 7 ARCHAEOLOGICAL POTENTIAL

IMAGES



IMAGE 1 EXISTING STRUCTURE WITHIN STUDY AREA



IMAGE 2 GRASS LAWN AREA



IMAGE 3 GRASS LAWN AREA BEHIND EXISTING STRUCTURE WITHIN STUDY AREA



IMAGE 4 ASPHALT PARKING LOT



IMAGE 5 OVERVIEW OF STUDY AREA



IMAGE 6 OVERVIEW OF STUDY AREA



IMAGE 7 DISTURBED TEST PIT



IMAGE 8 OVERVIEW OF STUDY AREA



IMAGE 9 TEST PITTING AT 10M TO CONFIRM DISTURBANCE



IMAGE 10 EXISTING STRUCTURE WITHIN STUDY AREA